

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

boldly "X" this box if there are qualified data on this page.

Meter ID: 154177

RQ: 2021-03-01-19

Project: SMP

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 4-21

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.	Paul Blair	4-5-21	7:45	19.8	261.7	9.14	9.18	100.6	/	1.57	P/F	L/F
ICV	"	"	7:46	19.9	261.5	9.14	9.19	100.6	/	"	P/F	L/F
CCV	"	4-5-21	15:05	20.5	259.9	9.00	9.01	100.1	/	"	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 mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	Paul Blair	4-5-21	7:49	201207	12-21	1000	1000	P/F	L/F
ICV	"	"	7:49	2905F63	5-21	100	102.0	P/F	L/F
CCV	"	"	15:06	201209	12-21	1000	1012	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.	Paul Blair	4-5-21	7:55	201209E	6-22	7.01	20.7	7.01	27.2	P/F	L/F
Calibr.	"	"	7:56	201112A	5-22	4.01	20.9	4.01	149.7	P/F	L/F
Calibr.	"	"	7:57	200407A	10-21	10.05	20.9	10.05	192.5	P/F	L/F
ICV	"	"	7:58	"	"	10.05	20.8	10.01	192.5	P/F	L/F
CCV	"	"	15:07	201112A	5-22	4.01	21.6	4.06	145.5	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 -169.3; slope from 4 to 7 176.9 (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? *Secchi Disk* / *Soonar* Unique ID: 6 / 1 / ; Date of last verification: 12-31-20

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:



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End
of Day CCV
Yes / No

WIN Station Name: Horseshoe Creek 100m upstream from Intercoastal/Lake Wimico **Date:** 4/5/2021
WIN/Field ID: G2TLHR0033 **WBID:** 1272 **ENR:** - **Latitude:** 29.844
County: GULF **Org ID:** 21FLTLHR **Longitude:** -85.2123
Receiving Body of Water: Apalachicola - Chipola **RQ:** 2021-02-22-38

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Paul Blair	x		x		
☒	Ben Harden		x		x	x
☐						
☐						

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☒ Syringe	☐ Pole
Depth measured with: Sonar	
Secchi Equipment ID:	
Collection Method	
☐ Wading	☐ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other _____	☒ Gasoline Motor

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# 154177				
Photos: NO	Flow: FLOW		Tide: N/A		Tide Times: High: _____ Low: _____					
Biological Samples Collected: ☒ None ☐ HA ☐ SCI ☐ RPS ☐ Algae ID ☐ LVS ☐ LVI Other: _____										
SBIO ID Numbers:										
Notes:										

Duplicate Sample

Time Zone: EST	Time: _____	Field ID: N/A	(WIN ID_DUP)
WIN DMT Activity ID: _____			

Blank

Time Zone: _____	Time: _____	Field ID: _____	(Blank Type_DDDMMYY)
DI Source: _____	Location: _____		
DI Type: _____	Equipment ID: _____		
DI Container (Name/ID):		DI Container Type:	

LIMS EVENT ID: _____ WIN Import ID: _____
Enter Field Parameters, Verify Station ID In LIMS DMT: _____ QC Station ID, Field Parameters In LIMS DMT: _____
(Initials/Date) (Initials/Date)
Scan/Save Field Sheets _____ Migrate Data to WIN: _____ Verify Data In WIN: _____
(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2021-02-22-38

Customer: WQAP

Project ID: SMP

Collected By: Paul Blair, Ben Harden

Field Report Prepared By: Paul Blair

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G2TLHR0033

Location: Horseshoe Creek 100m upstream from Intercoastal/Lake Wimico

Comments:

Matrix: Fresh

(Check one)

☒ GRAB☐ COMPOSITE

Date	Time	DO (mg/L)	DO (%SAT)	Temp. (C°)	pH	Sample Depth (m)	Secchi Disk (m)	Total Depth (m)	Sp COND (µmhos/cm)	Salinity (PPT _h)
4/5/2021	1110 EST	9.52	101.6	18.4	7.02	0.3	0.8 ☐ VOB (S)	2.8	158	0.7
	1115 EST	8.13	85.2	17.5	6.58	2.3	Central Lab please use top row for login purposes		209.2	0.1

Parameter Suite	Parameter Methods	Preservation	pH Check	# Bottles sent to Lab	Bottle Group
Preserved Nutrients (P-500ML)	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP Lot # 0293040 Exp: 10-19-21	☒ Ice ☒ H2SO4*	☒ <2	1	A
Metals (P-500ML)	☐ W-ICPMS ☐ W-ICP ☐ W-HARD Lot # Exp:	☐ Ice ☐ HNO3*	☐ <2		
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter Filter Lot # N/A Syringe Lot # 0079900	☒ Ice		1	A
Chlorophyll (BP-1L)	☒ CHLSUITE-W	☒ Ice		1	A
Physical/Aggregate (Fresh) (P-1L)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice		1	A
Physical/Aggregate (Marine) (P-1L)	☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates (PJ-2L)	☐ MI-FW-QLDC	☐ Formalin			
Periphyton (PT-50ML)	☐ ALGAE-ID	☐ Ice			
Microbiology (Contract Lab Bottle)	☒ E Coli ☐ F Coli ☐ Enterococci ☐ Contract Lab	☒ Ice		1	A
Molecular (QPCR-P-500ML)	☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-DG3 ☐ PCR-GULL2 ☐ PCR-GFD	☐ Ice			
Tracers (BG-500ML)	☐ W-E8321-DI ☐ W-E8321-MS	☐ Ice			
Pesticides (BG-500ML) (BG-1L)	☐ W-E8321-DI ☐ WE8321-MS ☐ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-PCL-SQ-R ☐ W-CARB-AA (5 ml of MCAA** Buffer Solution) ☐ W-DIELDRIN	☐ Ice			
Phytoplankton/Periphyton	DTM-QL-C PEN-QL-C DTY-QN-C PKD-QN-C DTM-QN-C PRN-QN-C PKD-QN-BV	☐ Ice			

Name:
Paul Blair
Ben Harden

Signature:

Date:

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

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

SAMPLE ID G2TLH0033 ORG ID 8034 LATITUDE
 COUNTY Franklin STORET # LONGITUDE
 DATE 04/05/21 TIME 1110 SAMPLING AGENCY 8034
 SITE NAME Horseshoe Creek 100m upstream from Intercoastal/Lake Wm. Co
 FIELD ID/NAME RECEIVING BODY OF WATER Intercoastal

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>50</u> Silviculture <u>20</u> Field/Pasture <u> </u> Agricultural <u> </u> Residential <u>30</u> Commercial <u> </u> Industry <u> </u> Other (Specify) <u> </u>								Landscape Development Intensity Index (LDI) <u> </u>	
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>2.8</u> m wide <u>0.1</u> m/s <u>0.1</u> m/s <u>0.8</u> m/s <u>0.1</u> m deep <u>2.8</u> m deep <u>0.8</u> m deep			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>218</u> Right Bank: <u>718</u>				Hydrologic Modification Score (per FT 3101) <u> </u>					
High Water Mark: <u>0</u> + <u>2.8</u> = <u>2.8</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): <u> </u>	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 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> <u>18.4</u> <u>7.02</u> <u>9.52</u> <u>101.6</u> <u>158</u> <u>0.7</u> <u>0.8</u> Mid: <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> Bottom: <u>2.3</u> <u>17.5</u> <u>6.58</u> <u>8.13</u> <u>85.2</u> <u>209.2</u> <u>0.1</u> <u>2.8</u> Meter ID: <u>154127</u>							
Woody Debris (Snags) <u> </u> <u> </u> <u> </u> Undercut Banks / Roots <u> </u> <u> </u> <u> </u> Leaf Packs or Mat <u> </u> <u> </u> <u> </u> Aquatic Vegetation <u>30</u> <u> </u> <u> </u> Rock or Shell Rubble <u> </u> <u> </u> <u> </u> Sand <u> </u> <u> </u> <u> </u> Mud / Muck / Silt <u>70</u> <u> </u> <u> </u> Other <u> </u> <u> </u> <u> </u> Other <u> </u> <u> </u> <u> </u>				Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐ Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: <u> </u> Exp: <u> </u>				Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐			
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☐ ☒ ☐ ☐ Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☐ ☐ ☐ ☒ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐				System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐ AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.				Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐			

SAMPLING TEAM Paul Blair / Ben Harden SIGNATURE: [Signature] DATE: 5/8/21

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

SAMPLING AGENCY: <u>8034</u>		STORET STATION NUMBER:	DATE (MM/DD/YY): <u>04/05/21</u>	RECEIVING BODY OF WATER: <u>Intercoastal</u>
REMARKS:	COUNTY: <u>Franklin</u>	LOCATION: <u>Horseshoe Creek</u>		FIELD ID/NAME: <u>GZTLHR0033</u>

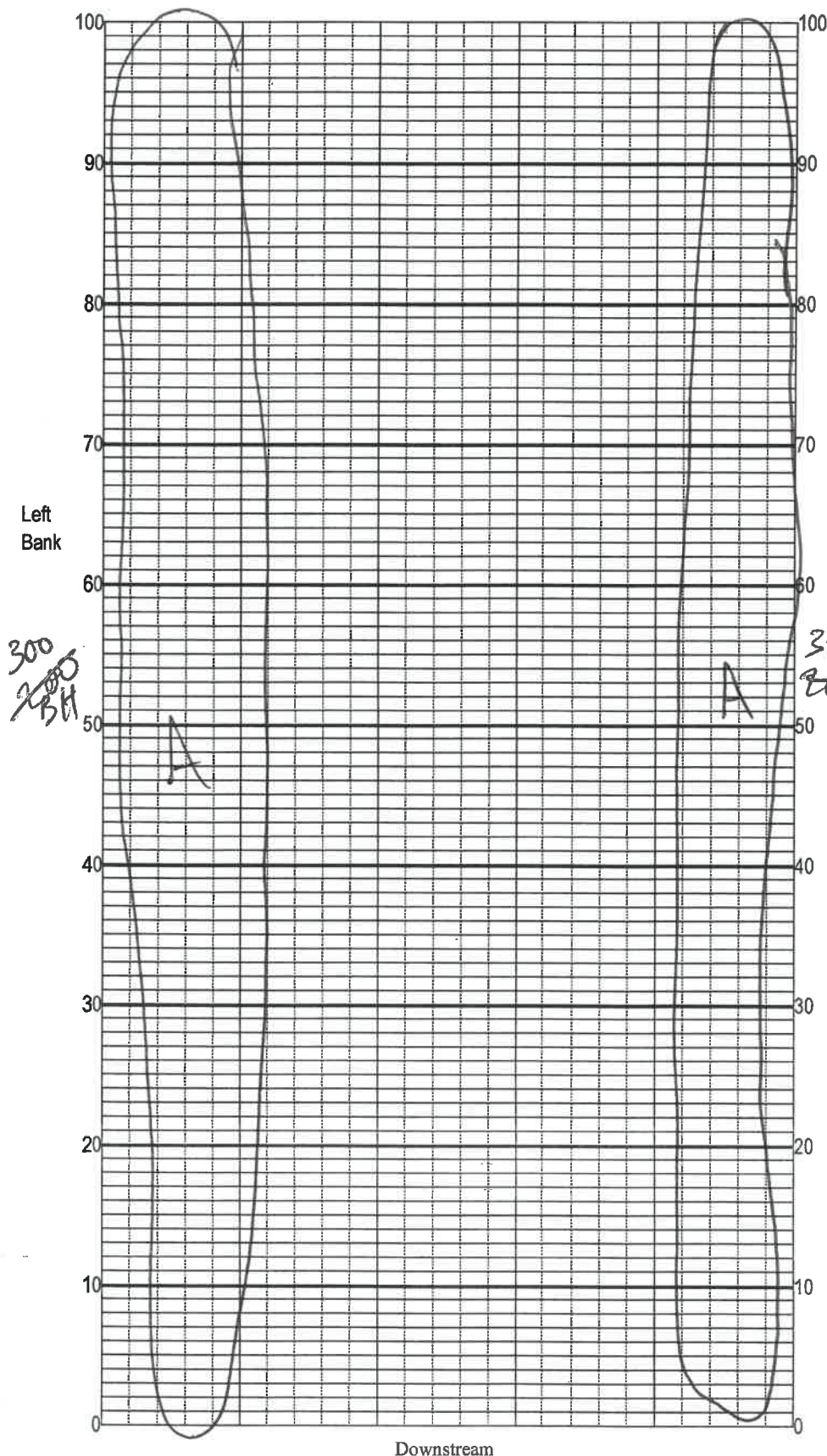
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present (snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock)	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh 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>5</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	(5) 4 3 2 1
Substrate Availability <u>20</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>10</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>13</u> ----- Primary Score <u>48</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 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>	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 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>	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>10</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>9</u> Left Bank <u>9</u> ----- Secondary Score <u>78</u>	10 9	8 7 6	5 4	3 2 1

126

TOTAL SCORE

Date: <u>04/05/21</u>	Analyst: <u>Harden, Blar</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: Horseshoe Creek
Date: 07/05/21
Sampler: Harden

100 m: Latitude _____	
Longitude _____	
0 m: Latitude _____	
Longitude _____	
Substrates: Code key, draw proportionate habitat abundance. %	
☐	Snags _____
☐	Roots/undercut banks _____
☐	Leaf Packs (or mats) _____
☒ A	Aquatic Macrophytes <u>30% BH</u>
☐	_____
☐	_____
☐	Pools total # observed = _____ # range expected = _____
Average width <u>20</u> m	
Average depth <u>2.8</u> m	
Velocity measured at <u>0</u> meter mark.	
WQ & chemistry taken at <u>0</u> 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: <u>Horseshoe Creek</u>	County: <u>Franklin</u>	Date: <u>04/05/21</u>	Investigators: <u>Paul Blair / Ben Harden</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	N				3	N		
	4	N				4	N		
	5	N		96		5	N		96
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
10	1	N			70	1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		96		5	N		96
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
20	1	N			80	1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		96		5	N		96
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
30	1	N			90	1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		96		5	N		96
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
40	1	N			100	1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		96		5	N		96
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
50	1	N				1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		96		5	N		96
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		

Secchi depth	<u>0.8</u>
Estimated?	<u>2.5</u>

# points ranked 4-6	<u>1</u>
total points assessed	<u>99</u>
% points ranked 4-6	<u>1%</u>

Check accompanying data collected at same site/date.	
Algal mat sample	
Linear Veg Survey	☒
Habitat Assessment	☒
SCI/Biorecon	
Water sample	☒
RQ- <u>2021-02-22-38</u>	

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 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET																								
Waterbody: <u>Horse shoe Creek</u>										Date: <u>04/05/21</u>					County: <u>Franklin</u>					Storet Number:				
Analyst: <u>Paul Blair</u>										Signature: <u>Paul Blair</u>														
Comments:																								
Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1m ² 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.																								
HERBACEOUS SPECIES												HERBACEOUS SPECIES												
Meter Mark												Meter Mark												
0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)			
Alternanthera philoxeroides											Micranthemum glomeratum													
Bacopa caroliniana											Micranthemum umbrosum													
Bacopa monnieri											Myriophyllum aquaticum													
Bidens bitis											Najas guadelupensis													
Boehmeria cylindrica											Nuphar luteum													
Centella asiatica											Orontium aquaticum													
Ceratophyllum demersum											Panicum hemitomon													
Chara											Panicum repens													
Cicuta maculata											Panicum rigidulum													
Cladium jamaicense	D	D	D	D	D	D	D	D	D		Pistia stratioides													
Colocasia esculenta											Polygonum glabra													
Commelina diffusa											Polygonum hydropiperoides													
Commelina virginica											Polygonum punctatum													
Crinum americanum											Pontedaria cordata	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Diodia virginiana											Potamogeton illinoensis													
Eichhornia crassipes						✓			✓		Ruellia simplex													
Eleocharis (wispy viviparous)											Sacciolepis striata													
Hydrilla verticillata											Sagittaria kurziana													
Hydrocotyle											Sagittaria lancifolia													
Hygrophila polysperma											Sagittaria latifolia													
Hymenocallis											Salvinia minima													
Lachnanthes caroliniana											Samolus parviflora													
Landoltia punctata											Saururus cernuus													
Lemna											Sparganium americanum													
Limnophila sessiflora											Typha													
Ludwigia leptocarpa											Vallisneria americana	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Ludwigia palustris											Zizania aquatica													
Ludwigia peruviana											Taxodium	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Ludwigia repens											Utricularia													
Luziola fluitans											Nymphaea										✓			
If no Dominant or Co-Dominant were selected, indicate with "X"																								
Indicate % cover macrophytes per section																								
0-5% Macrophyte Coverage																								
>5 and ≤10% Macrophyte Coverage																								
>10 and ≤25% Macrophyte Coverage																								
>25 and ≤50% Macrophyte Coverage																								
> 50% Macrophyte Coverage																								

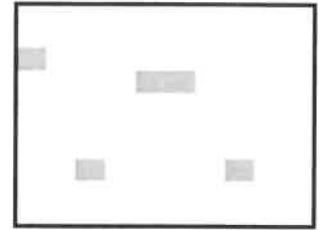
FDEP FORM FD 9000-32 LINEAR VEGETATION SURVEY FIELD SHEET

Percent Cover Categories for macrophytes in a 10 m segment of a stream 5 m wide

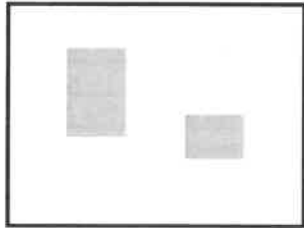
5% Macrophyte Coverage



5% Macrophyte Coverage



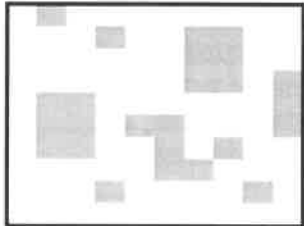
10% Macrophyte Coverage



10% Macrophyte Coverage



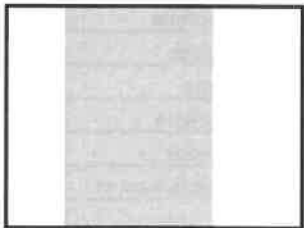
25% Macrophyte Coverage



25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage

