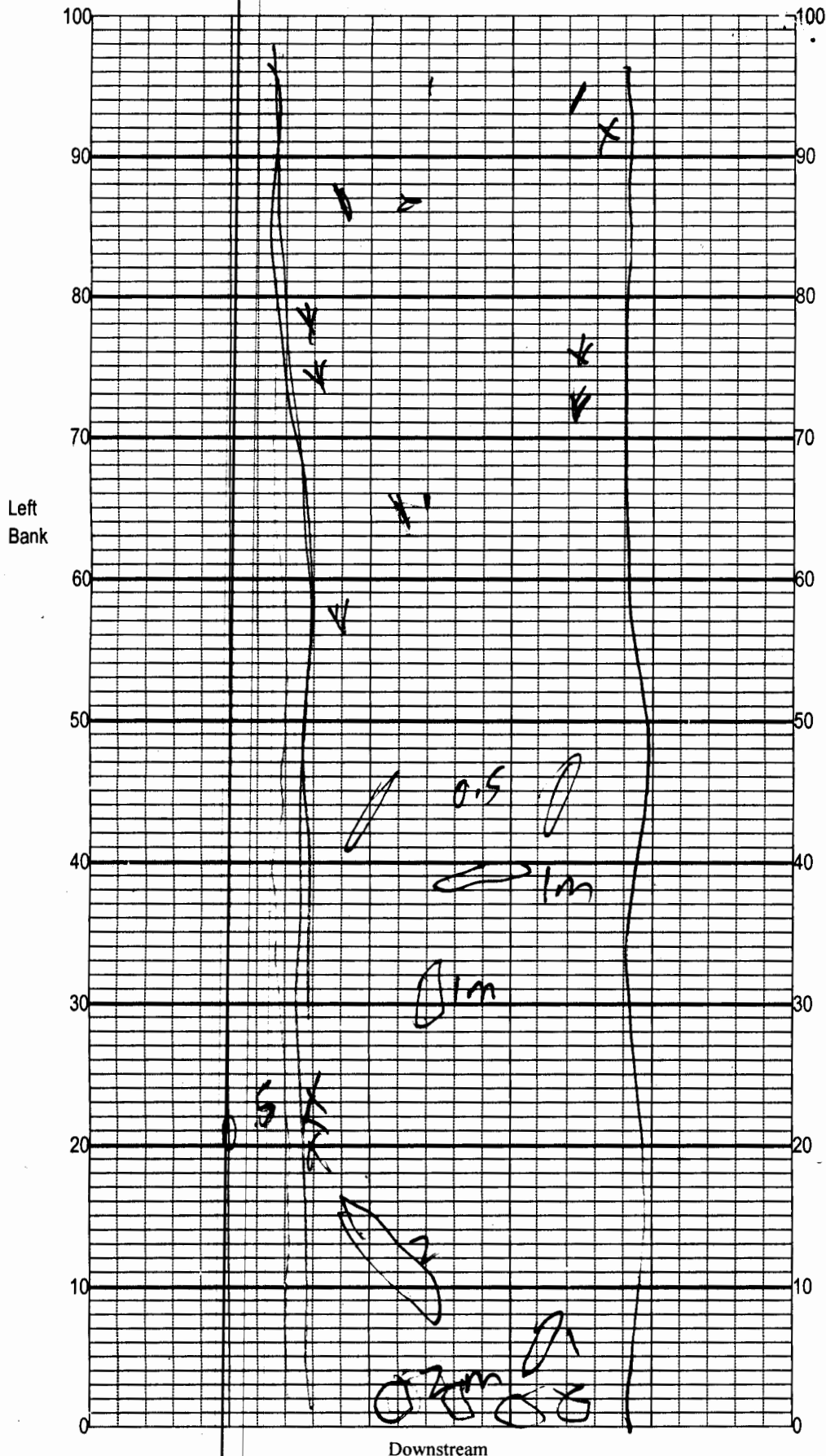


DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



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

Location: _____
Date: _____
Sampler: _____

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

- | | | |
|-------------------------------------|----------------------|--|
| ☐ | Snags | _____ |
| ☐ | Roots/undercut banks | _____ |
| ☐ | Leaf Packs (or mats) | _____ |
| ☒ | Aquatic Macrophytes | _____ |
| ☐ | _____ | _____ |
| ☐ | _____ | _____ |
| ☐ | Pools | total # observed = _____
range expected = _____ |

Average width _____ m

Average depth _____ m

Velocity measured at _____ 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

3% plant
4% SNags
1% Rock
2% Root

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

SAMPLING AGENCY: NE ROC
 STORET STATION NUMBER: 20030304
 DATE (MM/DD/YY): 06-21-18
 RECEIVING BODY OF WATER: Black Cr
 REMARKS: Solite Ditch
 COUNTY: Clay
 LOCATION: Black Cr Down From New FIA, INC
 FIELD ID/NAME:

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components Substrate Diversity <u>16</u>	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 <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 8 7 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>13</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>8</u> Primary Score <u>45</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 Artificial Channelization <u>10</u>	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 <u>4</u> Left Bank <u>4</u>	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. 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 <u>10</u> Left Bank <u>10</u>	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 activities 3 2 1
Riparian Zone Vegetation Quality Right Bank <u>10</u> Left Bank <u>10</u> Secondary Score <u>58</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. 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

103

TOTAL SCORE

Date: 06-21-18 Analyst: P. O'Connor, J. Parrish Signature:

184724

Waterbody: Black Cr Down From New Filter 06/21/14

County: CLAY

Storet Number: 20030304

Analyst: _____

Signature:

Comments: Black Cr Down From New Fla. Inc

Solite Ditch

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]

Blackwater

(A)

78474

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Z0070704 Blackwater County: Franklin Date: 6/21/18 Investigators:

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: <u>20330304</u>
0	1	N	N		60	1	N	N		Secchi depth Estimated?
	2					2				
	3					3				
	4					4				
	5			96		5			96	
	6					6				
	7					7				
	8					8				
	9					9				
10	1	N	N		70	1	N	N		# points ranked 4-6 total points assessed % points ranked 4-6
	2					2				
	3					3				
	4					4				
	5			96		5			96	
	6					6				
	7					7				
	8					8				
	9					9				
20	1	N	N		80	1	N	N		Check accompanying data collected at same site/date: Algal mat sample Linear Veg Survey Habitat Assessment SCI/Biorecon Water sample RQ-
	2					2				
	3					3				
	4					4				
	5			96		5			25	
	6					6				
	7					7				
	8					8				
	9					9				
30	1	N	N		90	1	N	N		Algal Thickness Rank
	2					2				
	3					3				
	4					4				
	5			96		5			96	
	6					6				
	7					7				
	8					8				
	9					9				
40	1	N	N		100	1	N	N		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.
	2					2				
	3					3				
	4					4				
	5			86		5			96	
	6					6				
	7					7				
	8					8				
	9					9				
50	1	N	N			1	N	N		Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.
	2					2				
	3					3				
	4					4				
	5			80		5				
	6					6				
	7					7				
	8					8				
	9					9				
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%.										

Count 0

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

SAMPLE ID 18474 ORG ID 21FIA LATITUDE _____
 COUNTY CLAY STORET # 20030304 LONGITUDE _____
 DATE 06-21-18 TIME 1245 SAMPLING AGENCY _____
 SITE NAME BLACK Cr DOWN From New Elm Inc. Soite Ditch
 FIELD ID/NAME _____ RECEIVING BODY OF WATER _____

RIPARIAN ZONE / STREAM FEATURES

Meter ID: YSI 7

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>80</u> Silviculture _____ Field/Pasture _____ Agricultural _____ Residential _____ Commercial _____ Industry _____ Other (Specify) <u>RR 20</u>								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>2-3</u> m wide _____ m/s <u>0.17</u> m/s _____ m/s _____ m deep <u>0.2</u> m deep _____ m deep	
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>78</u> Right Bank: <u>78</u>				Hydrologic Modification Score (per FT 3101) _____					
High Water Mark: <u>0.5</u> + <u>0.2</u> = <u>0.7</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): _____			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 ☐ BioRecon			WATER QUALITY							
			Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Woody Debris (Snags)			<u>4</u>	<u>4</u>						
Undercut Banks / Roots			<u>2</u>	<u>4</u>						
Leaf Packs or Mat				<u>4</u>						
Aquatic Vegetation			<u>3</u>	<u>4</u>						
Rock or Shell Rubble..			<u>1</u>	<u>4</u>						
Sand			<u>90</u>	<u>4</u>						
Mud / Muck / Silt										
Other										
Other										
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☐ ☒ ☐ ☐ Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☐ ☒ ☐ ☐ Iron/Sulfur Bacteria: ☐ ☐ ☒ ☐			System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) _____ Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐ Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☐ Yes ☐ No Lot Number: <u>SA7341020</u> Exp: <u>12-07-18</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 ☐							
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 <u>J. Parrish, P. O'Connor</u>			SIGNATURE: _____							



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

Data Qualified?

Yes / No

WIN Station Name:

Black Cr. Down New Fla Inc

Date:

6/21/2018

WIN/Field ID:

20030304

WBID:

2415A

Latitude:

30.07917

County:

Clay

ORG ID:

21FLA

Longitude:

81.76083

Receiving Body of Water:

Black Cr.

RQ-2018-

06-18-58

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment				
J. Parnish		X	X	X	X		☒ Sample Container	☐ Van Dorn	☐ Pole		
B. Parnish			X		X		☐ Carboy	☐ Syringe			
							☐ Dipper	☐ Other			
							Depth Measured with <u>4.57 T</u>				
							Equipment ID <u>0416 H44</u>				
							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>457 T</u>		Matrix: <u>Fresh</u> / Marine / DI		
Photos: <u>Yes</u> / No		Flow: No Flow / Interstitial / <u>Flowing</u> / NA		Tide: Rising / Falling / Slack / <u>NA</u>		Tide Times: High <u>NA</u> / Low <u>NA</u>					
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	1245	0.2	0.1	0.25	3.4	42.0	5.42	0.06	140	25.25	
CEN											
Biological Samples Collected: None <u>HA</u> <u>SCI</u> <u>RPS</u> Algae ID LVS LVI Other:											
SBIO ID Numbers:		SBIO-ID:	HA-ID:	RPS-ID:	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 ☒ H ₂ SO ₄	SA7341020	12-01-18	☒ <2			
Metals	☒ W-ICPMS ☒ W-ICP				☒ Ice ☒ HNO ₃			☐ <2			
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice	R7HA24559					
Chlorophyll	☒ CHLSUITE-W				☒ Ice						
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-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				☐ Ice						
	☐ W-PCL-SQ-R ☐ W-PYR-AA-R ☐ W-GLYPH ☐ W-SUC-AA-R				☐ Other						

Notes:

30.07916
81.7609

Field ID:

Win ID:



20030304

Black Cr Down New Fla Inc

Signature:

J. Parnish

Date:

6/21/18

Enter Field Parameters, Verify Station ID in LIMS DMT:

6/25/18

QC Station ID, Field Parameters in LIMS DMT:

7/12/18

Scan/Save Field Sheets

157 7/12/18

Migrate Data to WIN:

Verify Data in WIN:

(Initials/Date)

(Initials/Date)

(Initials/Date)