

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

SAMPLE ID _____ ORG ID 21FLWQSP LATITUDE 30.627192
COUNTY GADSDEN STORET # 31010142 LONGITUDE -84.834197
DATE 1-21-2020 TIME 1100 SAMPLING AGENCY FDEP / AEDB
SITE NAME FLAT CREEK
FIELD ID/NAME FLAT & REF RECEIVING BODY OF WATER Apalachicola River

RIPARIAN ZONE / STREAM FEATURES

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) <u>1.16</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>7</u> m wide <u>0.17</u> m/s <u>0.17</u> m/s <u>0.17</u> m/s <u>0.1</u> m deep <u>0.2</u> m deep <u>0.2</u> m deep			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>718</u> m Right Bank: <u>718</u> m Hydrologic Modification Score (per FT 3101) <u>1-2</u>				High Water Mark: <u>0.4</u> + <u>0.2</u> = <u>0.6</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 % Coverage INVERT # Times Sampled PERI # Times Sampled Woody Debris (Snags) <u>2</u> <u>4</u> Undercut Banks / Roots <u>0.4</u> <u>4</u> Leaf Packs or Mat <u>2</u> <u>4</u> Aquatic Vegetation <u>1</u> <u>4</u> Rock or Shell Rubble..... Sand..... <u>94.6</u> <u>4</u> 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: <u>0.1</u> <u>7.7</u> <u>7.04</u> <u>11.64</u> <u>97.5</u> <u>50.4</u> <u>0.2</u> Mid: <u>0.2</u> <u>7.7</u> <u>7.04</u> <u>11.64</u> <u>97.5</u> <u>50.4</u> <u>0.2</u> Bottom: <u>0.2</u> <u>7.7</u> <u>7.04</u> <u>11.64</u> <u>97.5</u> <u>50.4</u> <u>0.2</u> Meter ID: <u>154185</u>			
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: _____ 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 Periphyton: ☒ Not Obs. ☐ Rare ☐ Common ☐ Abundant Fish: ☐ ☒ ☐ ☐ Aquatic Plants: ☐ ☐ ☒ ☐ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐		System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐			
AMBIENT FIELD CONDITIONS / NOTES: <u>Cold!! 36F. Clear. "J" qualified pH</u> ☒ The antecedent hydrologic conditions have been met to my best knowledge.					
SAMPLING TEAM <u>JACKSON, PONEAR, J PLACENTE</u>			SIGNATURE: <u>[Signature]</u>		DATE: <u>1-21-2020</u>

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

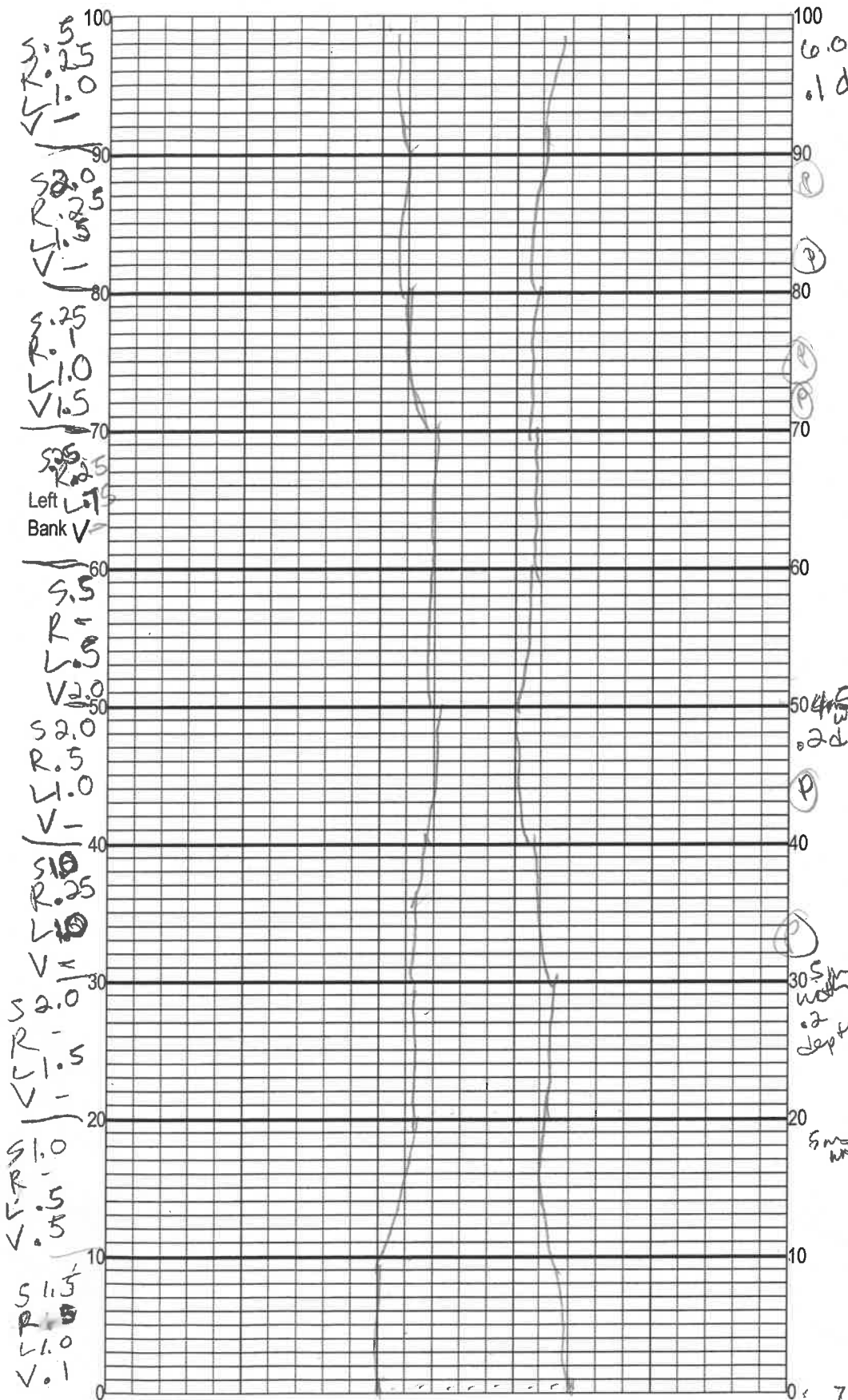
SAMPLING AGENCY: FDEP		STORET STATION NUMBER: 31010142	DATE (MM/DD/YY): 1/21/2020	RECEIVING BODY OF WATER:
REMARKS: FDEP	COUNTY: GADSDEN	LOCATION: PLAT CREEK	FIELD ID/NAME: Flat Ref	

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>18</u>	20 19 <u>18</u> 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>5</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 <u>5</u> 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 <u>13</u> 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>12</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 <u>12</u> 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 Right Bank <u>10</u> Left Bank <u>10</u>	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. <u>10</u> 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 woody 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 <u>10</u> 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>9</u> Left Bank <u>10</u> Secondary Score <u>79</u> <u>127</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

TOTAL SCORE

Date: 1/21/2020	Analyst: Ashley Oneal	Signature: Ashley Oneal
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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: Flat Creek
Date: 1/21/2020
Sampler: 40 Neale, T. Aicente

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☐ S Snags 2

☐ R Roots/undercut banks 41

☐ L Leaf Packs (or mats) 2

☒ V Aquatic Macrophytes 1

☐ _____

☐ _____

☐ P Pools total # observed = 6
range expected = _____

Average width 7 m

Average depth 0.2 m

Velocity measured at _____ meter mark.

WQ & chemistry taken at 0 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:

5 sed

7m width
15m depth

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Flat Creek County: Gadsden Date: 1-21-2020 Investigators: A. Ornel + J. Piacente

STORET Station Number: 31010142

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					2				
	3					3				
	4					4				
	5			20		5			40	10
	6					6				
	7					7				
	8					8				
	9					9				
10	1				70	1				
	2					2				
	3					3				
	4					4				
	5			44		5				20
	6					6				
	7					7				
	8					8				
	9					9				
20	1				80	1				
	2					2				
	3					3				
	4					4				
	5			36		5				40
	6					6				
	7					7				
	8					8				
	9					9				
30	1				90	1				
	2					2				
	3					3				
	4					4				
	5			56		5				60
	6					6				
	7					7				
	8					8				
	9					9				
40	1				100	1				
	2					2				
	3					3				
	4					4				
	5			40		5				40
	6					6				
	7					7				
	8					8				
	9					9				
50	1					1				
	2					2				
	3					3				
	4					4				
	5			40		5				
	6					6				
	7					7				
	8					8				
	9					9				

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%.

Secchi depth
 Estimated? ☒

points ranked 4-6 8
 total points assessed 99
 % points ranked 4-6 8

Check accompanying data collected at same site/date.
 Algal mat sample ☐
 Linear Veg Survey ☒
 Habitat Assessment ☒
 SCI/Biorecon ☒
 Water sample ☒
 RQ- 2020-01-20-40

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

Waterbody: <u>FLAT CREEK</u>	Date: <u>1-21-20</u>	County: <u>Gadsden</u>	Storet Number: <u>31010142</u>
Analyst: <u>A. ONEAL</u>	Signature: <u>Ashley Oneal</u>		

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1m² 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.

Revision Date: January 2017

Florida Department of Environmental Protection
Central Laboratory Submittal Form

Reference Stream Sampling

Customer: BSSP

Requester: Joy Jackson

Field Report Prepared By: J. JACKSON

Project ID: SCIREF

Collected By: Jval

Sampling Agency: FDER AEA

Location		Flat Creek		Bottle Group(s) (See pg 2)		A, B	
Field ID	WIN/STORET #	31010142		Composite end Date		Time	
Latitude	Longitude	30.627192 -84.834197		Diss. Oxygen		Total Res. Chlorine	
Location	Field ID	CROOKED CREEK		mg/L		mg/L	
Field ID	WIN/STORET #	CRK * REF		%		%	
Latitude	Longitude	31010050		ft		ft	
Location	Field ID	30.583196 -84.880574		umho/cm		umho/cm	
Field ID	WIN/STORET #	W-004-F		Composite end Date		Time	
Latitude	Longitude	31010050		mg/L		mg/L	
Location	Field ID	W-004-F		%		%	
Field ID	WIN/STORET #	W-004-F		ft		ft	
Latitude	Longitude	31010050		umho/cm		umho/cm	
Location	Field ID	W-004-F		Composite end Date		Time	
Field ID	WIN/STORET #	W-004-F		mg/L		mg/L	
Latitude	Longitude	31010050		%		%	
Location	Field ID	W-004-F		ft		ft	
Field ID	WIN/STORET #	W-004-F		umho/cm		umho/cm	
Latitude	Longitude	31010050		Composite end Date		Time	
Location	Field ID	W-004-F		mg/L		mg/L	
Field ID	WIN/STORET #	W-004-F		%		%	
Latitude	Longitude	31010050		ft		ft	
Location	Field ID	W-004-F		umho/cm		umho/cm	

Relinquished By: Jval	Date/Time: 1/22/2020 10:52 AM	Shipping Method: hand	Number of Coolers Shipped: 3	Received By: [Signature]	Date/Time: 1/22/2020 10:52 AM
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