

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

SAMPLE ID 79849 ORG ID 21FLWQSP LATITUDE 30.53422
 COUNTY Gadsden STORET # 22020017 LONGITUDE -84.77132
 DATE 4/23/2019 TIME 1015 SAMPLING AGENCY AEQA
 SITE NAME YONCreek
 FIELD ID/NAME YONCKRE FK RECEIVING BODY OF WATER _____

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) ☐
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 _____ 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>1-2</u>			
High Water Mark: <u>0.7</u> + <u>0.3</u> = <u>1.0</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%)			
Typical Width (m) Depth (m)/Velocity (m/sec) Transect <u>0.22</u> m/s <u>0.22</u> m/s <u>0.22</u> m/s <u>0.3</u> m deep <u>0.3</u> m deep <u>0.2</u> m deep							

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							
	% Coverage	INVERT # Times Sampled	PERI # Times Sampled	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Woody Debris (Snags)	<u>2.0</u>	<u>5</u>	<u>—</u>	Top: <u>0.1</u>	<u>16.8</u>	<u>6.3</u>	<u>8.33</u>	<u>85.9</u>	<u>28.1</u>		
Undercut Banks / Roots	<u>1.0</u>	<u>5</u>	<u>—</u>	Mid:							☒ VOB
Leaf Packs or Mat	<u>.5</u>	<u>5</u>	<u>—</u>	Bottom:							
Aquatic Vegetation				Meter ID: <u>154185</u>							<u>0.403</u>
Rock or Shell Rubble..				Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐				Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐			
Sand.....	<u>96.0</u>	<u>5</u>	<u>—</u>	Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: <u>46504/101232</u> Exp: <u>10.13.19</u>				Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐			
Mud / Muck / Silt	<u>1.5</u>			Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot Number: <u>11N03/101246</u> Exp: <u>8.20.20</u>				Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐			
Other				System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐							
Other				AMBIENT FIELD CONDITIONS / NOTES: <u>I qualify pH-meter would not verify.</u> <u>LOTS OF DOWN TREES FROM HURRICANE MICHAEL. ACCESS DIFFICULT.</u> <u>LVS = < 2m²</u> ☒ The antecedent hydrologic conditions have been met to my best knowledge.							

ABUNDANCE Not Obs. Rare Common Abundant				SAMPLING TEAM <u>A. O'Neal, J. Jackson, S. Noble</u>				SIGNATURE: <u>J. Jackson</u>				DATE: <u>4/23/2019</u>			
Periphyton:	☒	☐	☐	☐											
Fish:	☒	☐	☐	☐											
Aquatic Plants:	☒	☐	☐	☐											
Iron/Sulfur Bacteria:	☒	☐	☐	☐											

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

SAMPLING AGENCY: FDEP AERQ		STORET STATION NUMBER: 22020017	DATE (MM/DD/YY): 4/23/2019	RECEIVING BODY OF WATER:
REMARKS: still significant hurricane debris - H. Michael 10/2012	COUNTY: Gadsden	LOCATION: Yon Creek	FIELD ID/NAME: YONCKREF	

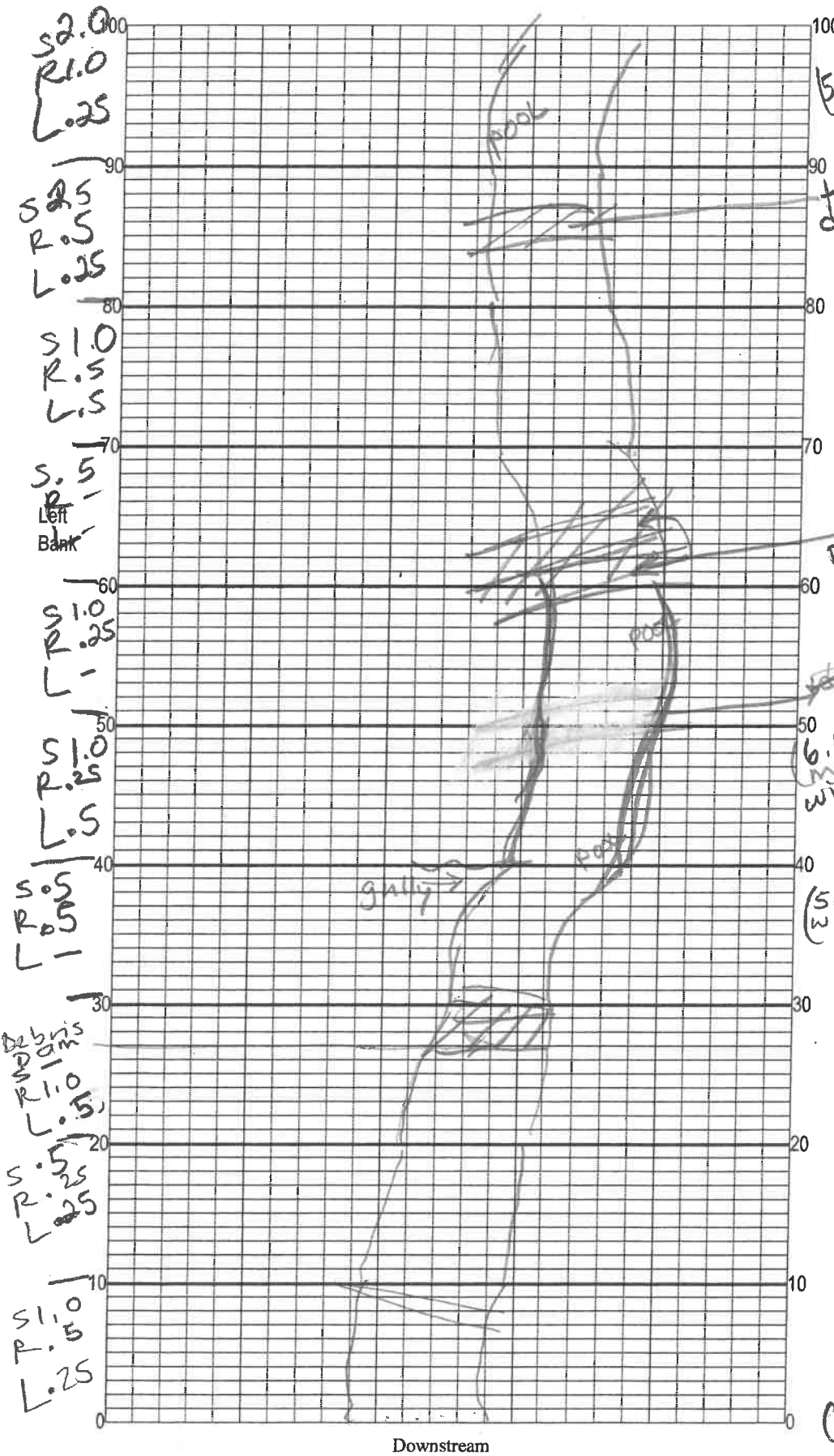
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present (snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock)	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh 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 3 13	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability 4	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 14	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 .22 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 14 ----- Primary Score 45	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 20	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 9 Left Bank 9	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 10 Left Bank 10	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 10 Left Bank 10 ----- Secondary Score 78	10 9	8 7 6	5 4	3 2 1

123

TOTAL SCORE

Date: 4/23/2019	Analyst: Ashley O'Neal	Signature: Ashley O'Neal
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: Yon Creek
 Date: 4/23/2019
 Sampler: A O Neal

100 m: Latitude _____	Longitude _____
0 m: Latitude _____	Longitude _____
Substrates: Code key, draw proportionate habitat abundance. %	
☐ S	Snags <u>2.0</u>
☐ R	Roots/undercut banks <u>1.0</u>
☐ L	Leaf Packs (or mats) <u>.5</u>
☐	Aquatic Macrophytes _____
☐	_____
☐ pool	Pools total # observed = <u>3</u> # range expected = <u>1-4</u>
Average width <u>5</u> m	
Average depth <u>.25</u> m	
Velocity measured at _____ 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:
 lots of tree fall (H. Michael)
 + debris Ilex opaca
 Cynilla Ilex cornica
 Carpinus
 Magnolia gra
 Vib nud
 clethraalni
 Lig. sty
 Wee are
 Itea
 virginica

(width 5m)
 banks pretty stable
 some uprooted trees
 from H. Michael.

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

10 m² snag
 5 m² root
 2.5 m² leaf
 $\frac{18}{500} = 3.6$

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Yon Creek County: Gadsden Date: 4/23/2019 Investigators: A. O'Neal, T. Jackson, S. Able

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	2			60	1	2	X	
	2	2				2	2	X	
	3	2				3	2	X	
	4	2				4	2	X	
	5	2		94		5	2	X	80
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		
10	1	2			70	1	2		
	2	2				2	2		
	3	2				3	2		
	4	2		95		4	2		24
	5	2				5	2		
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		
20	1	2			80	1	2	X	
	2	2				2	2	X	
	3	2				3	2	X	
	4	2		90		4	2	X	
	5	2				5	2	X	82
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		
30	1	2			90	1	2		
	2	2				2	2		
	3	2				3	2		
	4	2		93		4	2		90
	5	2				5	2		
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		
40	1	2			100	1	2		
	2	2				2	2		
	3	2				3	2		
	4	2		40		4	2		79
	5	2				5	2		
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		
50	1	2				1	2		
	2	2				2	2		
	3	2				3	2		
	4	2		52		4	2		
	5	2				5	2		
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		

STORET Station Number:

Secchi depth
Estimated?

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

Check accompanying data collected at same site/date.
Algal mat sample
Linear Veg Survey
Habitat Assessment
SCI/Biorecon
Water sample
RQ-

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%.