

FDEP FORM FD 9000-3: PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

SAMPLE ID 74276 ORG ID 2IFLWOSP LATITUDE 30.627192
COUNTY Gadsden County STORET # 31010142 LONGITUDE -84.834197
DATE 4/2/15 TIME 10AM Grab sample SAMPLING AGENCY FDEP
SITE NAME Flat Creek
FIELD ID/NAME FLTRC RECEIVING BODY OF WATER Apalachicola River

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category):							Landscape Development Intensity Index (LDI)
Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)
☐	☐	☐	☐	☐	☐	☐	☐
Local Watershed Erosion (select one): ☒ None ☐ Slight ☐ Moderate ☐ Heavy							Typical Width (m) Depth (m)/Velocity (m/sec) Transect
Local Watershed NPS Pollution: ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy							
Width of Riparian Vegetation (m) on Each Buffer Side				Hydrologic Modification Score (per FT 3101)			
Left Bank: <u>718</u>		Right Bank: <u>718</u>		<u>1</u>			
High Water Mark: <u>0.8</u> + <u>0.4</u> = <u>1.2</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No			
Artificially ☒ No ☐ Mostly recovered, more sinuous				Canopy Cover % ☐ Open ☐ Lightly Shaded (11-45%)			
Channelized: ☐ Some recovery ☐ Recent, severe				☒ 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 Depth (M) <u>0.4</u> Temp. (°C) <u>17.9</u> pH (SU) <u>6.40</u> D.O. (MG/L) <u>8.55</u> D.O. Sat (%) <u>89.9</u> Cond. (UMHO/CM) <u>48.8</u> Salinity (PPT) <u></u> SECCHI (M) <u></u> Top: <u>AO</u> Mid: <u></u> Bottom: <u></u> Meter ID: <u></u>	
Woody Debris (Snags) <u>11</u> <u>5</u> <u></u>	Water Odors Normal ☐ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐	Water Surface Oils Normal ☒ Sheen ☐ Globs ☐ Slick ☐ Other ☐
Undercut Banks / Roots <u>9.5</u> <u>5</u> <u></u>	Water Sample Taken? ☒ Yes ☐ No	Color Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify) ☐
Leaf Packs or Mat <u>7</u> <u>5</u> <u></u>	Sample Preserved? ☒ Yes ☐ No	Clarity Clear ☐ Slightly Turbid ☐ Turbid ☒ Opaque ☐
Aquatic Vegetation <u>-</u> <u></u> <u></u>	Lot Number: <u>SA-5015039</u> Exp: <u>1/15/16</u>	
Rock or Shell Rubble <u>-</u> <u></u> <u></u>	Algae Sample Taken? ☐ Yes ☒ No	
Sand <u></u> <u>5</u> <u></u>	Sample Preserved? ☐ Yes ☐ No	
Mud / Muck / Silt <u>-</u> <u></u> <u></u>	Lot Number: <u></u> Exp: <u></u>	
Other <u></u> <u></u> <u></u>		
Other <u></u> <u></u> <u></u>		

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:

fog clearing to sun, 70s

☒ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM

O'Neal, Olney, Summerfield

SIGNATURE:

Billy O'Neal

DATE:

4/2/15

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

SAMPLING AGENCY: <u>FDEP</u>		STORET STATION NUMBER: <u>31010142</u>	DATE (MM/DD/YY): <u>2/15/15</u>	RECEIVING BODY OF WATER: <u>Apalachicola R.</u>
REMARKS: <u>Eco Reg Ref</u>	COUNTY: <u>Gadsden</u>	LOCATION: <u>Flat Creek</u>	FIELD ID/NAME: <u>Flt Ref</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>14</u>	20 19 18 17 16	15 (14) 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>7</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 <u>33</u> 3 sec. (20) 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>12</u> ----- Primary Score <u>53</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>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>10</u> Left Bank <u>10</u> ----- Secondary Score <u>80</u>	(10) 9	8 7 6	5 4	3 2 1

133

TOTAL SCORE

Date: <u>4/2/15</u>	Analyst: <u>Ashley O'Neal</u>	Signature: <u>Ashley O'Neal</u>
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DEP-SOP-001/01 Form FD 9000-4
Stream/River Habitat Sketch Sheet

pools = 3 good
1 marginal

Location: Flat Creek
Date: 4/2/15
Sampler: AO, KS

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

Substrates: Code key, draw proportionate habitat abundance. %

<u>S</u>	Snags	<u>11</u>
<u>R</u>	Roots/undercut banks	<u>9.5</u>
<u>L</u>	Leaf Packs (or mats)	<u>7</u>
<u> </u>	Aquatic Macrophytes	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u>P</u>	Pools	total # observed = <u> </u> # range expected = <u> </u>

Average width 4 m
Average depth 0.3-0.4 m center

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:

350 m²

5-5-5

S 11
R 9.5
L 7

27.5 m²
400 m²

Downstream

Senecio gabellus
blooming
throughout
floodplain

Ligustrum sinense - IN floodplain

all common

Viburnum dentatum
Cornus foemina
Taxodium sp.
Carpinus caroliniana
Toxicodendron radicans, Cicuta, Onoclea sensibilis

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

Revision Date: June 2, 2011

FDEP FORM 9000-25: RAPID PERIPHYTON SURVEY FIELD SHEET

Site: <u>FLAT CREEK</u>						County: <u>GADSDEN</u>						Date: <u>4/2/15</u>						Investigators: <u>AD, KO, KS</u>					
Transect (m)	Point	Algal Thickness Rank (N - 6, X)	Estimated	Canopy Cover	Transect (m)	Point	Algal Thickness Rank (N - 6, X)	Estimated	Canopy Cover	Transect (m)	Point	Algal Thickness Rank (N - 6, X)	Estimated	Canopy Cover									
0	1				40	1				80	1												
	2					2					2												
	3					3					3												
	4					4					4												
	5					5					5												
	6					6					6												
	7					7					7												
	8					8					8												
	9					9					9												
10	1				50	1				90	1												
	2					2					2												
	3					3					3												
	4					4					4												
	5					5					5												
	6					6					6												
	7					7					7												
	8					8					8												
	9					9					9												
20	1				60	1				100	1												
	2					2					2												
	3					3					3												
	4					4					4												
	5					5					5												
	6					6					6												
	7					7					7												
	8					8					8												
	9					9					9												
30	1				70	1					1												
	2					2					2												
	3					3					3												
	4					4					4												
	5					5					5												
	6					6					6												
	7					7					7												
	8					8					8												
	9					9					9												

# points ranked 4-6	0
total points assessed	99
% points ranked 4-6	0

Secchi depth:

Check accompanying data collected at same site/date.

Algal mat sample ☒

Habitat Assessment ☒

Linear Veg. Survey ☒

SC/Biorecon (circle 1) ☒

Water sample ☒

RO: ☒

Algal Thickness Rank
1 rough, no algae; slimy; algae to 1 mm
2 >1 mm - 6 mm
3 >6 - 20 mm
4 >20 mm - 10 cm
5 >10 cm
6

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 densimeter quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6.

Collect an 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%.

Waterbody: FLAT CREEK	Date: 4/2/15	County: GADSDEN	Storet Number: 31010142
Analyst: AO, LO, KS	Signature:		
Comments: NO PLANTS IN WATER			

Storet Number: 31010142

Signature: _____

Comments: No PLANTS IN WATER

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]

NO PLANTS IN WATER

SITE NAME:

Flat Creek

DATE:

2/15/15

TIME

1000

(military)

EST CST

DEPTH:

0.4

ft

m

FIELD ID:

sample depth = 0.1

total

SAMPLING TEAM MEMBERS	WQ MEASUREMENTS	DOCUMENTATION	SAMPLE COLLECTION	PRESERVATION	PRESERVATION CHECK
O'Neal		X	X	X	
Olney	X				
Summerfield		X	X		X

SAMPLING EQUIPMENT	
☒ Sample Container	☐ Tubing type: _____
☐ Pole	☐ Other: _____
☐ Pump ID#: _____	☐ Other: _____
WATER QUALITY MEASUREMENTS	
Instrument ID: 451 # 8	
COLLECTION MODE	
☒ Wading	☐ Via Boat
☐ Diving	☐ Canoe
☐ From Shore	☐ Electric Motor
☐ Other: _____	☐ Gasoline Motor

Parameter Suite	Parameter(s)/Method	Matrix Code*	Preservation**	Preservative Lot #	pH Check	# Bottles ***
Preserved Nutrients	☒ IKN ☒ TP ☒ NOx ☒ NH3 ☒ TOC ☐ Total N ☐ Other: _____	SW	☒ Ice ☒ H2SO4	5015030	☒ <2	1
Filtered Nutrients	☐ OP ☐ Other: _____	W	☐ Ice ☐ .45 um Filter			
Unpreserved Nutrients	☐ NO2 ☐ NO3 ☐ SO4 ☐ Other: _____	W	☐ Ice			
Physical/Aggregate Properties	☒ TDS ☒ TSS ☐ TS ☒ Turbidity ☒ Alk ☒ Color ☐ Other: _____	SW	☒ Ice			1
Chlorophyll	☒ CHL-PPTN-W	SW	☒ Ice			1
BOD	☐ BOD-INHB ☐ BOD-UNIN	W	☐ Ice			
Microbiology	MF: ☒ (E coli) ☐ T Coli ☒ (F Coli) ☐ Enteroc ☐ F Strep	SW	☒ Ice			2
Macroinvertebrates	☒ MI-FW-QLDC ☐ MI-FW-QLBR ☐ MI-FW-QNNC ☐ MI-MN-QNNC	SW	☒ Formalin			3
Phytoplankton	☐ PKD-QN-C ☐ DTY-QN-C	W	☐ Lugol's			
Periphyton	☐ PRN-QL-C ☐ DTM-QL-C ☐ PRN-QN-C ☐ DTM-QN-C	W	☐ Formalin			
AGP	☐ AA-AGP ☐ AA-LIM-NUT	W	☐ Ice			
Metals	☐ W-ICP ☐ W-FIAS ☐ W-ICPMS ☐ W-ICP-Tr	W	☐ HNO3		☐ <2	
Filtered Metals	☐ W-ICP-F ☐ W-FIAS-F ☐ W-ICPMS-F ☐ W-ICP-Tr-F	W	☐ HNO3 ☐ .45 um Filter		☐ <2	
Mercury	☐ W-HG-AF	W				
Base/Neutral / Acid Extractable	☐ W-BNA ☐ W-AE ☐ W-BN ☐ W-PAH ☐ W-FL-PRO ☐ W ☐ Other: _____	W	☐ Ice ☐ H2SO4		☐ <2	
Pesticides	☐ W-PEST-CL ☐ W-PCB ☐ W-PEST-NP ☐ W-PSCL-PCB ☐ W-NP-AA-SF ☐ W-PC-AA-SF ☐ W-PSHRB-NP ☐ W-SLFN-UREA ☐ W-SULFN-LC ☐ Other: _____ ☐ W-ACIDHERB ☐ W-CARB	W	☐ Ice ☐ H2SO4 ☐ Ice ☐ MCAA ☐ Ice ☐ HCl			
Purgeables	☐ W-VOC-MS ☐ W-VOC-MS-A	W	☐ Ice			
Bioassay	Specify Test: _____	W	☐ Ice			
OTHER	Sucralose	SW	☐ Other: ice			1

Notes:

lat/long 30.627192 (DD) / -84.834196 (DD)

fog am clearing to sun + 70s

Schecio glabellus Packera glabella in full bloom

Use one line for each set of sample (as supplied by the laboratory) containers. Use separate sheet for field or laboratory duplicate or blank or different water depth

*Enter "S" for surface if collected at a depth less than or equal to 1 foot

*Matrix Codes (Insert prefix): SW = Surface Water GW = Groundwater DW = Drinking Water WW = Wastewater O = Other: _____

**PRESERVATIVES: 1 ml added unless otherwise noted

***Enter number of containers supplied by the laboratory for the test (e.g., 3 for volatile organics, etc.)

DEP Bureau of Laboratories Water Sample Collection Record

(Use with FDEP SOP-001/01 Form FD 9000-3 Physical/Chemical Characterization Field Sheet)

Request Number: RQ-2015-02-16-40
SCI Reference sites

Florida Department of Environmental Protection
Central Laboratory Sample Submittal Form

Event ID *

Customer: BSSP
Project ID: SCIREF
PMAS:

Requester: Larry Olney
Collected By: DINEAL, OLNEY, SUMNERFIELD
Sampling Agency: FDEP

Field Report Prepared By: L. OLNEY
Send Final Report To: Joy Jackson

Lab ID *	Location	Field ID	Matrix (include type e.g. Salt, Fresh, etc)	Latitude	Longitude	Temp (C)	pH	Sample Depth	Collection (comp begin or grab)	Eastern	Central	Composite end	Eastern	Central	Bottle Group(s)**
	FLAT CREEK	F1R2	FRESH-SW	30.627192	-84.834196	17.9	6.40	0.1	Grab	48.8	8.55	31010142			A, B
Lab ID *	Location	Field ID	Matrix (include type e.g. Salt, Fresh, etc)	Latitude	Longitude	Temp (C)	pH	Sample Depth	Collection (comp begin or grab)	Eastern	Central	Composite end	Eastern	Central	Bottle Group(s)**
Lab ID *	Location	Field ID	Matrix (include type e.g. Salt, Fresh, etc)	Latitude	Longitude	Temp (C)	pH	Sample Depth	Collection (comp begin or grab)	Eastern	Central	Composite end	Eastern	Central	Bottle Group(s)**
Lab ID *	Location	Field ID	Matrix (include type e.g. Salt, Fresh, etc)	Latitude	Longitude	Temp (C)	pH	Sample Depth	Collection (comp begin or grab)	Eastern	Central	Composite end	Eastern	Central	Bottle Group(s)**

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
	4/2/15 15:40							

Group: A	Bottle Type:	PJ-2L	# of Bottles: 4	Preservative:	Formalin	Enter Number of Bottles Sent to Lab	3
	MI-FW-QLDC						
Group: B	Bottle Type:	BP-1L	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	/
	CHLSUITE-W						
Group: B	Bottle Type:	P-250ML-WO-THI	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	/
	ECOLI-QT						
Group: B	Bottle Type:	P-120ML-OC	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	/
	FCOLI-MF						
Group: B	Bottle Type:	P-1L	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	/
	TURBIDITY						
	W-ALK						
	W-COLOR						
	W-TDS						
	W-TSS						
Group: B	Bottle Type:	P-500ML	# of Bottles: 2	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab	/
	W-NH3						
	W-NO2NO3						
	W-S-A-TP						
	W-TKN						
	W-TOC						
Group: B	Bottle Type:	BG-1L	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	/
	W-SUC-AA-R						