

Site Name Big Escambia Creek downstream of Fannie Rd.

Date: 06/19/2019

Field ID G4NW0421

Storet G4NW0421

Project: TMDL Studies

Visit ID 79841

RQ: 2019-06-10-34

RPS ID 9376

LIMS ID: 2097183

VPDB ID N/A

HA ID 16097

WBID 10

☒ SCI

☐ RPS/LVS Only

☒ Sample Site Created in SBIO

☒ Phys/Chem entered in SBIO

☒ HA entered in SBIO

Initial FB, 6/20/2019

☒ Date and Initial QA: 6/24/19 JS

☒ RPS entered in SBIO

Initial FB, 6/20/2019

☒ Date and Initial QA: 6/24/19 JS

☐ LVS entered in SBIO

Initial _____

☐ Date and Initial QA: _____

☒ < 2 m² vegetation

☐ Plants getting verified

Date submitted: _____

☐ Plants verified

Date returned: _____

☒ RPS authorized in SBIO

☒ Date and Initial: 6/24/2019 FB

☒ RPS score: 4

☐ Macro authorized in SBIO

☐ Date and Initial: _____

☐ Macro score: N/A

☒ SCI complete: 10/31/2019 T.Risk

SCI Score: 64

☒ If SMP, scanned into database



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes

No

WIN Station Name:

Big Escambia Creek downstream of Fannie Rd

Date:

06/19/2019
(mm/dd/yyyy)

WIN/Field ID: **G4NW0421**

WBID: **10**

Latitude: **30.98369**

(Decimal Degrees)

County: **Escambia**

ORG ID: **21FLPNS** Longitude: **-87.23347**

(Decimal Degrees)

Receiving Body of Water: **Escambia River**

RQ: **2019-06-10-324**

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Mr. Mulkey									
F. Butera									
M. Clark									

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

Water Level: Dry/ Pooled/ Low / Normal / High / Flooded

Meter ID# **15424** Matrix: Fresh / Marine / DI

Photos: Yes No Flow: No Flow / Intestinal Flowing / NA Tide: Rising/ Falling/ Slack NA Tide Times: High Low

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	12:50	0.4	0.2	0.4	8.22	99.9	6.01	0.01	33.9	25.3
<u>CEN</u>				"5"						

Biological Samples Collected: HA SCI RPS Algae ID LVS LVI Other:

SBIO ID Numbers: SBIO-ID: **79841** HA-ID: **16097** RPS-ID: **9376** Macrophyte-ID: **N/A** LIMS#: **2097183**

Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / ☒ W-NO2NO3 / ☒ W-TKN / ☒ W-TOC / ☒ W-S-A-TP	☒ Ice ☒ H2SO4	8197000	7/16/19	☒ <2
Metals	☒ W-ICPMS ☒ W-ICP	☒ Ice ☒ HNO3	8344050	12/10/19	☒ <2
Filtered Nutrients	☒ W-P04-F ☒ Field Filtered 0.45 µm Filter	☒ Ice	10976633		
Chlorophyll	☒ CHLSUITE-W	☐ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / ☒ W-F / ☒ W-TSS / ☒ TURBIDITY / ☒ W-CH-IC / ☒ W-COLOR / ☒ W-SO4-IC / ☒ W-TDS	☐ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / ☐ W-BR-IC / ☐ W-F / ☐ W-TSS / ☐ TURBIDITY	☐ Ice			
Macroinvertebrates	☒ NW-FW-QUDC	☒ Formalin			
Periphyton	☐ ALGAE-ID	☐ Ice			
Microbiology	☒ E Coli ☐ F Coli ☐ Enterococci	☐ Ice			
Molecular	☐ PCR-FILTER ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-HF183 ☐ PCR-DG3 ☐ PCR-GFD	☐ Ice			
Tracers	☒ W-B8321-MS ☒ W-B8321-MS	☒ Ice NA			
Pesticides	☒ W-PSNP-TQ ☐ W-CY-CL-R ☒ W-B8321-DI ☐ W-PCL-SQ-R ☒ W-B8321-MS ☐ W-CARB-AA	☐ Ice			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C				

Notes: **65 miles upstream from 33020114**
Stream moved back into re-engineered historic channel early 2000's.

Field/WIN ID **G4NW0421**

Location: **Big Escambia Creek downstream of Fannie Rd**

Signature:

[Signature]

Date:

6/19/19

LIMS EVENT ID:

WIN Import ID:

Enter Field Parameters, Verify Station ID in LIMS DMT:

QC Station ID, Field Parameters in LIMS DMT:

Scan/Save Field Sheets

Migrate Data to WIN:

Verify Data in WIN:

(Initials/Date)

(Initials/Date)

(Initials/Date)

(Initials/Date)

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

SAMPLE ID 79841 ORG ID 21FLPNS LATITUDE 30.98369
 COUNTY ESCAMBIA STORET # 64NW0421 LONGITUDE 87.23347
 DATE 6/19/2019 TIME 1250 SAMPLING AGENCY FL DEP - NW ROC
 SITE NAME Big Escambia Creek below downstream of Fannie Rd
 FIELD ID/NAME 64NW0421 RECEIVING BODY OF WATER _____

RIPARIAN ZONE / STREAM FEATURES

RQ-2019-06-10-34

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>N/A</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>34</u> m wide <u>1.25</u> m/s <u>0.33</u> m/s <u>—</u> m/s <u>0.5</u> m deep <u>0.8</u> m deep <u>—</u> m deep <i>Two Deep</i>			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>0</u> Right Bank: <u>0</u>		Hydrologic Modification Score (per FT 3101) <u>3-4</u>					
High Water Mark: <u>2.0</u> + <u>71.5</u> = <u>73.5</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 ☐ PERI # Times Sampled # Times Sampled		WATER QUALITY Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: <u>0.2</u> <u>25.3</u> <u>6.01</u> <u>8.22</u> <u>99.9</u> <u>339</u> <u>0.01</u> <u>—</u> Mid: <u>—</u> <u>—</u> <u>—</u> <u>—</u> <u>—</u> <u>—</u> <u>—</u> <u>—</u> Bottom: <u>—</u> <u>—</u> <u>—</u> <u>—</u> <u>—</u> <u>—</u> <u>—</u> <u>—</u> Meter ID: <u>154129</u> <u>71.5</u>			
Woody Debris (Snags) <u>1.3</u> <u>10</u> Undercut Banks / Roots <u>0.1</u> <u>5</u> Leaf Packs or Mat <u>0.1</u> <u>42</u> Aquatic Vegetation <u>1</u> Rock or Shell Rubble.. <u>—</u> Sand..... <u>98.5</u> <u>2</u> Mud / Muck / Silt <u>—</u> Other <u>—</u> Other <u>—</u>		Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐ Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: _____ Exp: _____ Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot Number: _____ Exp: _____		Water Surface Oils Normal ☒ Sheen ☐ Glob. ☐ Slick ☐ Other ☐ Color Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify) ☐ Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐	
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: <u>Stream Restoration project returned flow to original, re-engineered channel which is ending.</u> ☒ The antecedent hydrologic conditions have been met to my best knowledge.			

SAMPLING TEAM

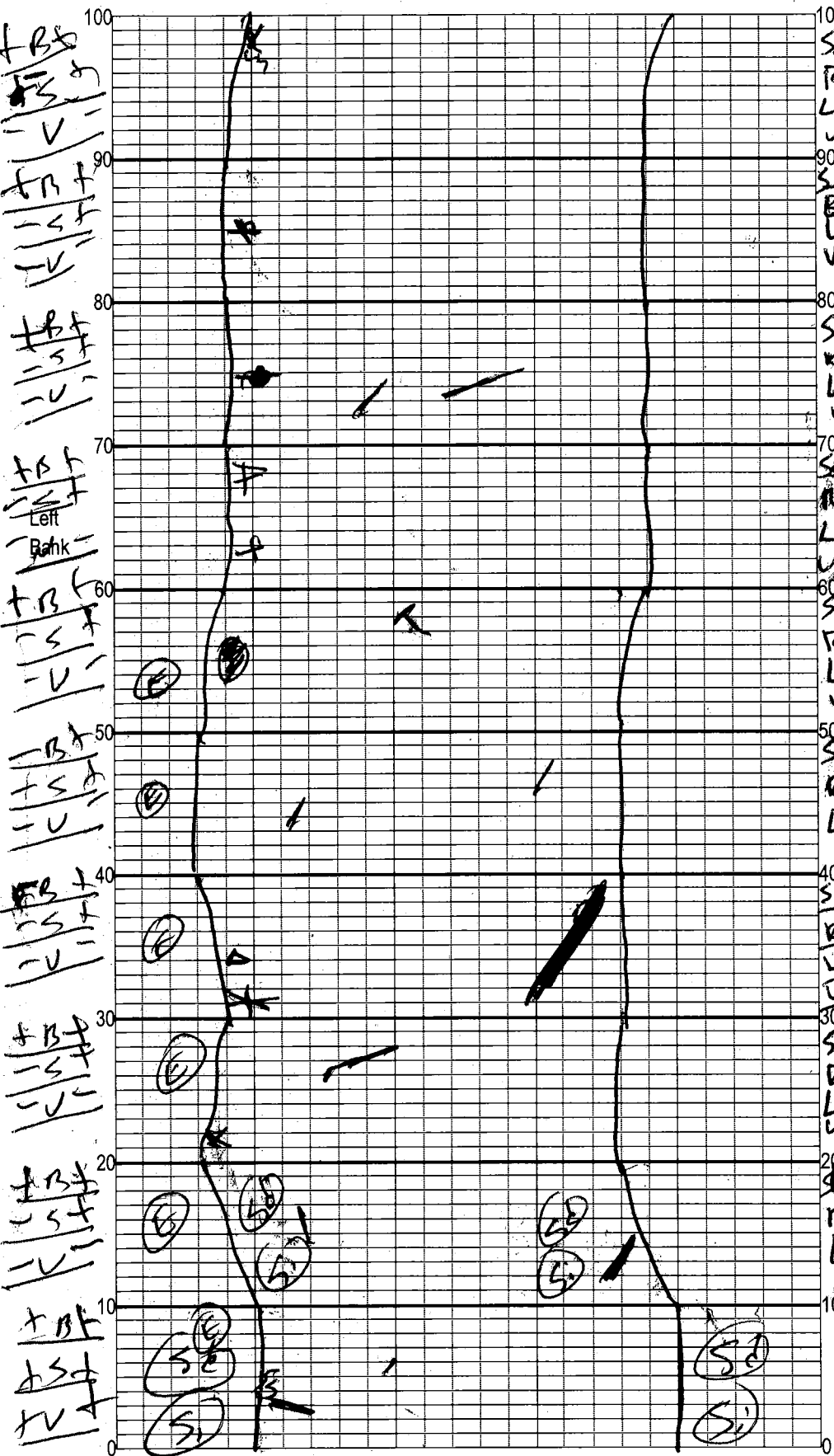
F. Butler, N. Mulkey, M. Clark

SIGNATURE:

[Signature]

DATE:

06/19/2019



Station 64NW0421

Location: Big Escambia Cr
Date: 06/19/2019
Sampler: F. Butler, M. Clark

100 m: Latitude 30.98351
Longitude 87.23343
0 m: Latitude 30.98347
Longitude 87.23244

Substrates: Code key, draw proportionate habitat abundance. 1.3 %

☒ Snags 38/300 1.3 %
☒ Roots/undercut banks 1.1/300
☒ Leaf Packs (or mats) 0.9/300
☒ Aquatic Macrophytes
☐ Pools total # observed = 0
range expected = 01

Average width 30 m
Average depth 71.5 m

Velocity measured at 30 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: 0
Note areas (on map) where natural vegetation is altered or eliminated.

Plants observed / other notes:

SL10 SP 79/41
Popcorn Tree
Panicum hemitumens
red Maple

Downstream

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

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

SAMPLING AGENCY: <i>M/ROC</i>		STORET STATION NUMBER: <i>GENW0421</i>	DATE (MM/DD/YY): <i>06/19/19</i>	RECEIVING BODY OF WATER: <i>Escambia River</i>
REMARKS:	COUNTY: <i>ESCAMBA</i>	LOCATION: <i>Below Big Escambia ch Fannie Rd</i>	FIELD ID/NAME: <i>GENW0421</i>	

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 <i>1</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 <i>1</i>
Substrate Availability <i>1</i>	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 <i>1</i>
Water Velocity <i>2.4</i>	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 <i>4</i> ----- Primary Score <i>26</i>	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 <i>4</i> 3 <i>2</i> 1
Secondary Habitat Components Artificial Channelization <i>10</i>	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 or straightening 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. <i>10</i> 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 <i>7</i> Left Bank <i>3</i>	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. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 <i>7</i> 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. <i>3</i> 2 1
Riparian Buffer Zone Width Right Bank <i>1</i> Left Bank <i>1</i>	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 <i>1</i>
Riparian Zone Vegetation Quality Right Bank <i>2</i> Left Bank <i>2</i> ----- Secondary Score <i>26</i>	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 <i>2</i> 1

5052 TOTAL SCORE *SB102D 79841* *HA2D 16097*

Date: <i>6/19/2019</i>	Analyst: <i>F. Butler</i>	Signature: <i>[Signature]</i>
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DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Big Escambia ck County: Escambia Date: 06/19/19 Investigators:

Transect t (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	Transect t (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	X	X		60	1	X	X	
	2	X	X			2	X	X	
	3	X	X			3	X	X	
	4	X	X			4	X	X	
	5	X	X			5	X	X	
	6	X	X			6	X	X	
	7	X	X			7	X	X	
	8	X	X			8	X	X	
	9	X	X			9	X	X	
10	1	X	X		70	1	X	X	
	2	X	X			2	X	X	
	3	X	X			3	X	X	
	4	X	X			4	X	X	
	5	X	X			5	X	X	
	6	X	X			6	X	X	
	7	X	X			7	X	X	
	8	X	X			8	X	X	
	9	X	X			9	X	X	
20	1	X	X		80	1	X	X	
	2	X	X			2	X	X	
	3	X	X			3	X	X	
	4	X	X			4	X	X	
	5	X	X			5	X	X	
	6	X	X			6	X	X	
	7	X	X			7	X	X	
	8	X	X			8	X	X	
	9	X	X			9	X	X	
30	1	X	X		90	1	X	X	
	2	X	X			2	X	X	
	3	X	X			3	X	X	
	4	X	X			4	X	X	
	5	X	X			5	X	X	
	6	X	X			6	X	X	
	7	X	X			7	X	X	
	8	X	X			8	X	X	
	9	X	X			9	X	X	
40	1	X	X		100	1	X	X	
	2	X	X			2	X	X	
	3	X	X			3	X	X	
	4	X	X			4	X	X	
	5	X	X			5	X	X	
	6	X	X			6	X	X	
	7	X	X			7	X	X	
	8	X	X			8	X	X	
	9	X	X			9	X	X	
50	1	X	X		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	X	X		Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.				
	3	X	X		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.				
	4	X	X		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%.				
	5	X	X						
	6	X	X						
	7	X	X						
	8	X	X						
	9	X	X						

STORET Station Number: GUNW0421

Secchi depth 2.5
Estimated? ☒

points ranked 4-6 0
total points assessed 56
% points ranked 4-6 0

Check accompanying data collected at same site/date.
Algal mat sample ☒
Linear Veg Survey ☒
Habitat Assessment ☒
SCD Biorecon ☒
Water sample ☒
RQ-2019-06-19-34

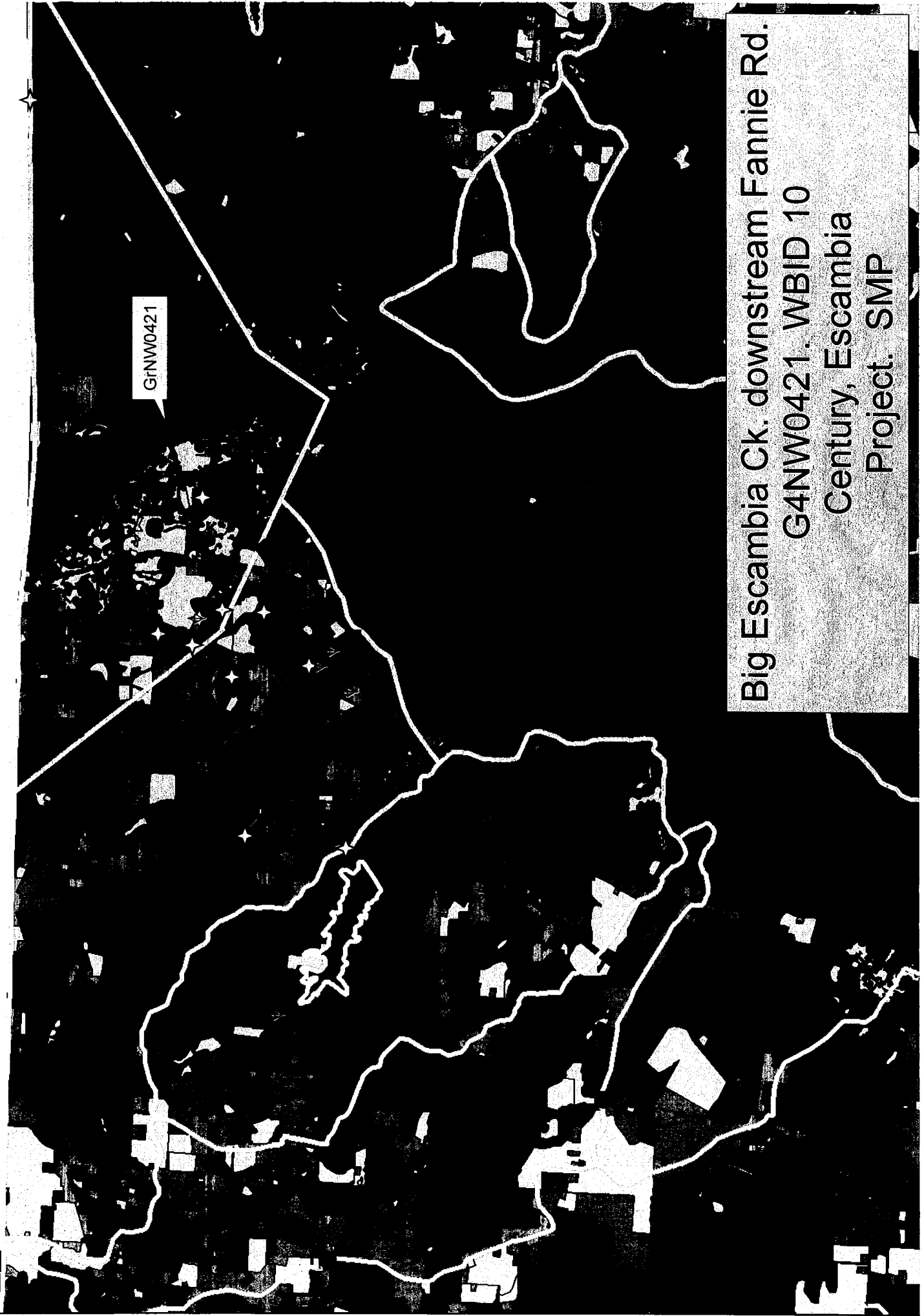
Algal Thickness Rank	
N	rough, no algae, slimy, algae up to 1mm
3	>1mm - 6mm
4	>6mm - 20mm
5	>20mm - 10 cm
6	>10 cm

SB10 ID 79841
RPS ID 9376

Waterbody: <u>Big Escambia Ck</u>	Date: <u>6/12/19</u>	County: <u>Escambia</u>	Storet Number: <u>64NW0421</u>
Analyst: <u>F. Butera</u>	Signature: <u>[Signature]</u>		
Comments: <u><2m² Vegetation. Vegetation Absent</u>			
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.			

[illegible]

Lims ZD



GrNW0421

Big Escambia Ck. downstream Fannie Rd.
G4NW0421. WBID 10
Century, Escambia
Project. SMP