



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2018

Data Qualified?

Yes / No

Location/STORET Station Name: Little Alaqua Creek Below 282 Bridge

Date: 05/21/2018
(mm/dd/yyyy)

WIN ID G3NW0065

WBID: 432

Latitude: 30.554540

County: Walton

RQ - 2018-04-16-29

ORG ID: 21FLPNS

Longitude: -86.184600

Receiving Body of Water: Alaqua Creek

Field ID: G3NW0065

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment		
						☒ Sample Container	☐ Van Dorn	☐ Pole
						☐ Carboy	☒ Syringe	
						☐ Dipper	☐ Other	
						Equipment ID		
						Collection Method		
						☒ Wading	☐ Canoe/Kayak	
						☐ From Shore	☐ Electric Motor	
						☐ Other	☐ Gasoline Motor	

Water Level: Dry / <u>Low</u> / Normal / Above Normal / Flooded				Meter ID# 1352				Matrix: <u>Fresh</u> / Marine / DI			
Photos: <u>Yes</u> / No		Flow: No Flow / Intestinal / <u>Flowing</u> / NA				Tide: Rising / Falling / Slack / <u>NA</u>		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 (umhos/cm)	Temp. (C°)	
EST	1145	1.0	0.3	VOB	7.56	89.0	5.57	0.00	13	23.62	
CEN											

Biological Samples Collected: None <u>HA</u> <u>SCI</u> <u>RPS</u> Algae ID <u>MS</u> 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 ☒ H2SO4	225010	10/2/18	☐ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☐ W-PO4-F ☒ Field Filtered 0.45 um Filter	☒ Ice			
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 Coll ☐ F Coll ☐ 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: A/M/10/SCI/RPS/LUS	Field/WIN ID G3NW0065
Signature: [Signature]	Location: Little Alaqua Creek Below 282 Bridge
	5/21/18

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

SAMPLE ID 78418 ORG ID 21FLPNLS LATITUDE 30.55493
COUNTY Walton STORET # 63NW0065 LONGITUDE 86.18477
DATE 5/21/18 TIME 1145 SAMPLING AGENCY FL DEP NWROC
SITE NAME Little Alafia Creek Below 282 Bridge
FIELD ID/NAME 63NW0065 RECEIVING BODY OF WATER Alafia Creek

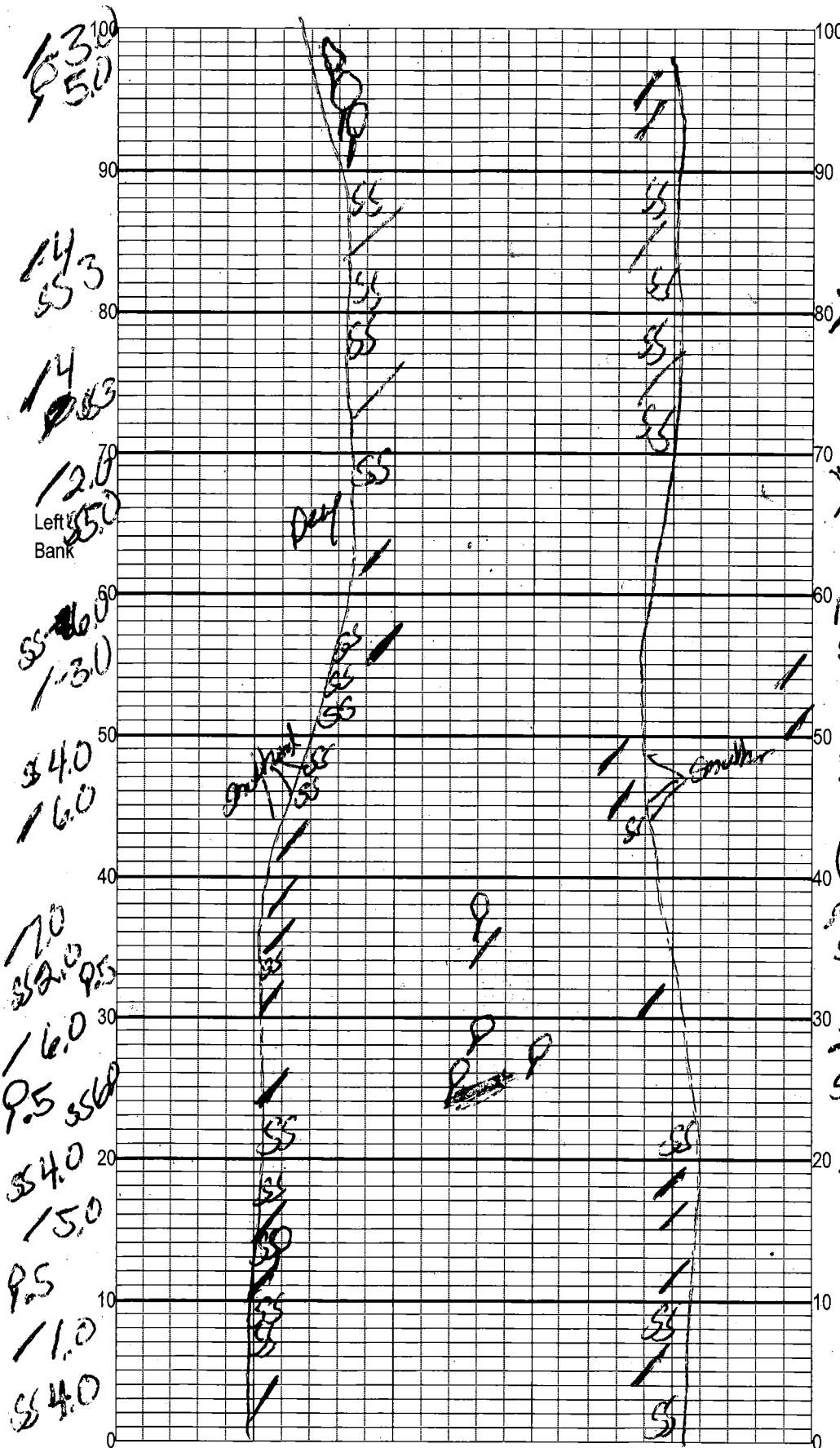
RIPARIAN ZONE / STREAM FEATURES

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	
☐	☐	☐	☐	☐	☐	☐	☐
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)			50 m wide
Left Bank: <u>518</u>		Right Bank: <u>518</u>		☐			
High Water Mark: ☐ + ☐ = ☐ (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☒ Yes ☐ No			1.0 m deep 1.0 m deep 1.0 m deep
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 ☐	
SUBSTRATE TYPE Assessment Tool: ☒ SCI ☒ RPS ☒ LVS ☐ LCI ☐ BioRecon			WATER QUALITY		
Woody Debris (Snags) <u>8.2</u> <u>5</u> <u></u>			Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M)		
Undercut Banks / Roots <u>7.4</u> <u>5</u> <u></u>			Top: <u>0.3</u> <u>23.62</u> <u>5.57</u> <u>7.56</u> <u>89.0</u> <u>13</u> <u>0.00</u> <u>4</u>		
Leaf Packs or Mat <u>1.3</u> <u>5</u> <u></u>			Mid: <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u>		
Aquatic Vegetation <u></u> <u></u> <u></u>			Bottom: <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u>		
Rock or Shell Rubble.. <u></u> <u></u> <u></u>			Meter ID: <u>113529</u>		
Sand..... <u></u> <u>5</u> <u></u>			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐		
Mud / Muck / Silt <u></u> <u></u> <u></u>			Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: _____ Exp: _____		
Other <u></u> <u></u> <u></u>			Water Surface Oils Normal ☒ Sheen ☐ Globs ☐ Slick ☐ Other ☐		
Other <u></u> <u></u> <u></u>			Color Tannic ☒ Green (Algae) ☐ Clear ☒ Other (Specify) ☐		
ABUNDANCE Not Obs. Rare Common Abundant			Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐		
Periphyton: ☐ ☒ ☐ ☐			System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐		
Fish: ☐ ☒ ☐ ☐			AMBIENT FIELD CONDITIONS / NOTES:		
Aquatic Plants: ☒ ☐ ☐ ☐			☒ The antecedent hydrologic conditions have been met to my best knowledge.		
Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐					
SAMPLING TEAM <u>Nathan Malky / Stephen Stale</u>			SIGNATURE: <u>Phil Hult</u>		DATE: <u>5/21/18</u>

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



Location: Little Apple Creek
 Date: 5/21/18
 Sampler: Nathan Melkey

100 m: Latitude 30.55473
 Longitude 86.18474
 0 m: Latitude 30.55687
 Longitude 86.18477

Substrates: Code key, draw proportionate habitat abundance.		%
☒	41 Snags	8.2
☒	37 Roots/undercut banks	7.4
☒	65 Leaf Packs (or mats)	1.3
☐	Aquatic Macrophytes	
☐	Pools	
total # observed =		
# range expected =		

Average width 5.0 m
 Average depth 1.0 m

Velocity measured at 30 meter mark 1/4

WQ & chemistry taken at 100 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:

**siltation along banks*

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

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Little Pigeon Creek</u>					County: <u>Walton</u>		Date: <u>5/2/18</u>		Investigators: <u>Nathan Mulkey</u>	
									STORET Station Number: <u>63NW0065</u>	

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			78		5			82	
	6					6				
	7					7				
	8	✓	✓			8	✓	✓		
	9	✓	✓			9	✓	✓		
10	1	N	✓		70	1	N	✓		
	2					2				
	3					3				
	4					4				
	5			78		5			82	
	6					6				
	7					7				
	8	✓	✓			8	✓	✓		
	9	✓	✓			9	✓	✓		
20	1	N	✓		80	1	N	✓		
	2					2				
	3					3				
	4					4				
	5			78		5			82	
	6					6				
	7					7				
	8	✓	✓			8	✓	✓		
	9	✓	✓			9	✓	✓		
30	1	N	✓		90	1	N	✓		
	2					2				
	3					3				
	4					4				
	5			78		5			82	
	6					6				
	7					7				
	8	✓	✓			8	✓	✓		
	9	✓	✓			9	✓	✓		
40	1	N	✓		100	1	N	✓		
	2					2				
	3					3				
	4					4				
	5			78		5			82	
	6					6				
	7					7				
	8	✓	✓			8	✓	✓		
	9	✓	✓			9	✓	✓		
50	1	N	✓			1	N	✓		
	2					2				
	3					3				
	4					4				
	5			78		5				
	6					6				
	7					7				
	8	✓	✓			8	✓	✓		
	9	✓	✓			9	✓	✓		

Secchi depth	<u>1.0</u>
Estimated?	<u>Y</u>

# points ranked 4-6	<u>1</u>
total points assessed	<u>79</u>
% points ranked 4-6	<u>1</u>

Check accompanying data collected at same site/date.	
Algal mat sample	
Linear Veg Survey	<u>X</u>
Habitat Assessment	<u>X</u>
SCI/Biorecon	<u>X</u>
Water sample	<u>X</u>
RQ: <u>208-04-16-29</u>	

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

50	1			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			
	3			
	4			Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.
	5			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.
	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%.
	7			
	8			
	9			

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

SAMPLING AGENCY: <i>FDEP NW/ROC</i>		STORET STATION NUMBER: <i>63NW0065</i>	DATE (MM/DD/YY): <i>05/21/18</i>	RECEIVING BODY OF WATER: <i>Alafia Creek</i>
REMARKS: <i>SMP BIO</i>	COUNTY: <i>Walton</i>	LOCATION: <i>Little Alafia Creek</i>	FIELD ID/NAME: <i>63NW0065</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>13</i>	20 19 18 17 16	15 14 <i>13</i> 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <i>12</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 1
Water Velocity <i>15</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 <i>15</i> 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>10</i> ----- Primary Score <i>50</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). <i>10</i> 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 <i>8</i>	20 19 18 17 16	15 14 13 12 11	10 9 <i>8</i> 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 woody 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 woody root zone with raw, eroded areas.
Right Bank <i>8</i> Left Bank <i>8</i>	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 <i>10</i> Left Bank <i>9</i>	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 <i>9</i> Left Bank <i>9</i> ----- Secondary Score <i>61</i>	10 9	8 7 6	5 4	3 2 1

111 TOTAL SCORE

Date: <i>5/21/18</i>	Analyst: <i>Nathan Mulkey</i>	Signature: <i>Nathan Mulkey</i>
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