

Site Name Bruce Creek upstream E Indian Creek Branch Rd Date: 2/26/19
Field ID 63NW0166 Storet 63NW0166 Project: SMP
Visit ID 79247 RO: 2019-02-25-12
RPS ID 9256 LIMS ID: _____
VPDB ID N/A
HA ID 15669

☒ ~~LVI~~ SCI

☐ RPS/LVS Only

☒ Sample Site Created in SBIO

☒ Phys/Chem entered in SBIO FB 3/11/19

☒ HA entered in SBIO Initial FB 3/11/19

☐ Date and Initial QA: _____

☒ RPS entered in SBIO Initial FB 3/11/19

☐ Date and Initial QA: _____

☐ LVI 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: _____

☐ RPS score: _____

☐ VPDB authorized in SBIO

☐ Date and Initial: _____

☐ VPDB score: _____

☐ SCI complete: _____

SCI Score: _____

☒ If SMP, scanned into database



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: Bruce Creek upstream E Indian Creek Branch Rd

Date: 2/26/19
(mm/dd/yyyy)

WIN/ Field ID: G3NW0166

WBID: 343

Latitude: 30.64310

County: Walton

ORG ID: 21FLPNS

Longitude: -86.08359
(Decimal Degrees)

Receiving Body of Water: Choctawhatchee River

RQ-2019- 02-25-12
(Decimal Degrees)

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
J. P. Jones					X	X	X	X	X
N. Mulvey					X	X	X	X	X

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# 155077

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 (PPTH)	Sp COND (µmhos/cm)	Temp. (C°)
EST	1235	0.5	0.3	0.5	9.52	96.9	6.58	0.01	33.5	16.6
CEN				(S)						

Biological Samples Collected: None (HA) (SCI) (RPS) Algae ID LVS LVI Other:

SBIO ID Numbers: SBIO-ID: 79247 HA-ID: 15669 RPS-ID: 9256 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	8101020	4/1/19	☐ <2
Metals	☒ W-ICPMS ☒ W-ICP	☒ Ice ☒ HNO3	8344050	12/10/18	☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice	1657048		
Chlorophyll	☒ CHL-SUITE-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	☒ MI-FW-QLDC	☒ Formalin			
Periphyton	☒ ALGAE-ID	☒ Ice			
Microbiology	☒ Coli ☐ F-Coli ☐ Enterococci	☒ Ice			
Molecular	☐ PCR-FILTER ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-HF183 ☐ PCR-DG3 ☐ PCR-GFD	☐ Ice			
Tracers	☒ W-E8321-DI ☒ W-E8321-MS	☒ Ice			
Pesticides	☒ W-PSNP-TQ	☒ Ice			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C				

Notes:

A/C 280A
Replacement station for 32020486

Field/WIN ID →



G3NW0166

Location:

Bruce Creek upstream E Indian Creek Branch Rd

Signature:

J. P. Jones

Date: 2/26/19

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 (Initials/Date) Migrate Data to WIN: (Initials/Date) Verify Data In WIN: (Initials/Date)

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

SAMPLE ID 72947 (R) ORG ID 21FLPNS LATITUDE 30.64310
 COUNTY Walton STORET # G3NW0166 LONGITUDE -86.08359
 DATE 2/26/19 TIME 1235 SAMPLING AGENCY FL DEP - NW RCR
 SITE NAME Bruce Creek upstream E. Indian Creek Branch Drive
 FIELD ID/NAME G3NW0166 RECEIVING BODY OF WATER Chocomahee River
Re-2019-02-25-12

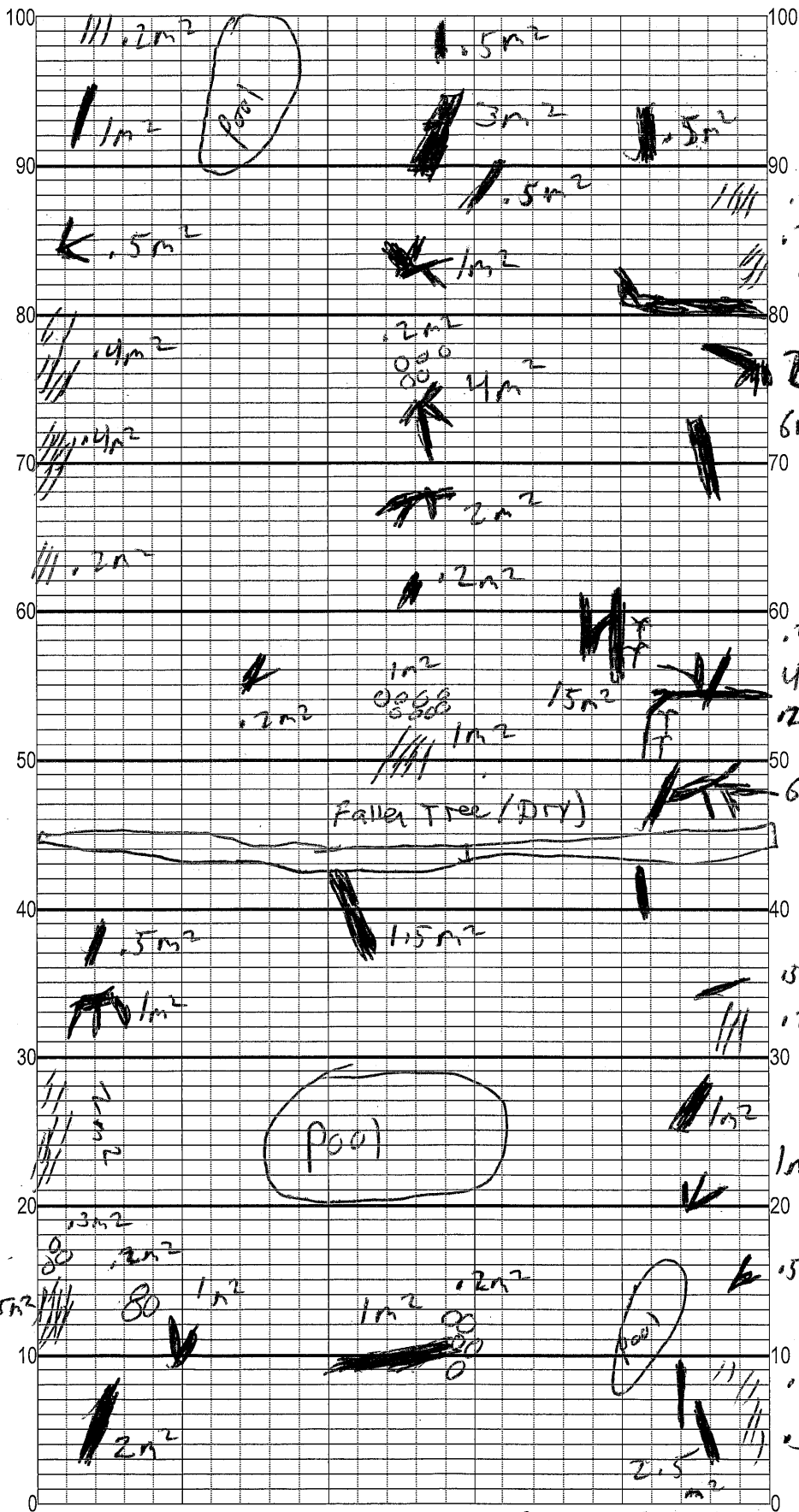
RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural ☐ Silviculture ☐ Field/Pasture ☐ Agricultural ☐ Residential ☐ Commercial ☐ Industry ☐ Other (Specify) ☐ ☐ 100 ☐ ☐ ☐ ☐ ☐ ☐ ☐								Landscape Development Intensity Index (LDI) ☐ 1.74 (Q03)	
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 ☐ m/s ☐ m/s ☐ m/s			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: ☐ 718 Right Bank: ☐ 718				Hydrologic Modification Score (per FT 3101) ☐ 1-2		☐ m/s ☐ 0.2 m/s ☐ m/s			
High Water Mark: ☐ 0.6 + ☐ 0.5 = ☐ 1.1 (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No		☐ m deep ☐ 0.5 m deep ☐ m deep			
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			WATER QUALITY <table border="1"> <thead> <tr> <th></th> <th>Depth (M)</th> <th>Temp. (°C)</th> <th>pH (SU)</th> <th>D.O. (MG/L)</th> <th>D.O. Sat (%)</th> <th>Cond. (UMHO/CM)</th> <th>Salinity (PPT)</th> <th>SECCHI (M)</th> </tr> </thead> <tbody> <tr> <td>Top:</td> <td>☐ 0.3</td> <td>☐ 16.6</td> <td>☐ 6.58</td> <td>☐ 9.52</td> <td>☐ 96.9</td> <td>☐ 33.5</td> <td>☐ 0.01</td> <td>☐ 0.5</td> </tr> <tr> <td>Mid:</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☒ VOB</td> </tr> <tr> <td>Bottom:</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> </tbody> </table>							Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)	Top:	☐ 0.3	☐ 16.6	☐ 6.58	☐ 9.52	☐ 96.9	☐ 33.5	☐ 0.01	☐ 0.5	Mid:	☐	☐	☐	☐	☐	☐	☐	☒ VOB	Bottom:	☐	☐	☐	☐	☐	☐	☐	☐
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Woody Debris (Snags) ☐ 10.2 ☐ 7 ☐ Undercut Banks / Roots ☐ 1.0 ☐ 7 ☐ Leaf Packs or Mat ☐ 0.3 ☐ 5 ☐ Aquatic Vegetation ☐ 0.1 ☐ ☐ Rock or Shell Rubble.. ☐ ☐ ☐ Sand..... ☐ 88.4 ☐ 1 ☐ Mud / Muck / Silt ☐ ☐ ☐ Other ☐ ☐ ☐ Other ☐ ☐ ☐			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐			Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐																																						
ABUNDANCE <table border="1"> <thead> <tr> <th></th> <th>Not Obs.</th> <th>Rare</th> <th>Common</th> <th>Abundant</th> </tr> </thead> <tbody> <tr> <td>Periphyton:</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Fish:</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Aquatic Plants:</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Iron/Sulfur Bacteria:</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> </tbody> </table>				Not Obs.	Rare	Common	Abundant	Periphyton:	☒	☐	☐	☐	Fish:	☐	☒	☐	☐	Aquatic Plants:	☐	☒	☐	☐	Iron/Sulfur Bacteria:	☒	☐	☐	☐	Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: _____ Exp: _____			Color Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify) ☐													
	Not Obs.	Rare	Common	Abundant																																								
Periphyton:	☒	☐	☐	☐																																								
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			Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot Number: _____ Exp: _____			Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐																																						
System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐			AMBIENT FIELD CONDITIONS / NOTES: <u>SB10 TO 79247</u> ☒ The antecedent hydrologic conditions have been met to my best knowledge.																																									
SAMPLING TEAM <u>Jared Pinn / Nathan Mulkey</u>			SIGNATURE: <u>Jr Pinn</u>			DATE: <u>2/26/19</u>																																						

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



Location: Bruce Creek
 Date: 2/26/19
 Sampler: Jim P.H.S.

100 m: Latitude 30.64333
 Longitude -86.08411
 0 m: Latitude 30.64310
 Longitude -86.08359

Substrates: Code key, draw proportionate habitat abundance. %

	Snags	<u>10.2</u>
	Roots/undercut banks	<u>1.0</u>
	Leaf Packs (or mats)	<u>0.3</u>
	Aquatic Macrophytes	<u>0.1</u>
	Pools	total # observed = <u>3</u> # range expected = <u>2-4</u>

Average width 6 m
 Average depth 0.5 m

Velocity measured at 0 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:

Heavy smothering
(sand/silt)

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

1 : 60.9m² 111 : 6.1m²
600m² 10.15 600m² 1.0

80 : 1.9m²
600
0.3

7 0.6m²
600
0.1

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

SAMPLING AGENCY: <u>21 FL PWS</u>		STORET STATION NUMBER: <u>G3NW0166</u>	DATE (MM/DD/YY): <u>2/26/19</u>	RECEIVING BODY OF WATER: <u>Chocawhatchee R.</u>
REMARKS: <u>79247</u> <u>SB1030 7243</u>	COUNTY: <u>Wabon</u>	LOCATION: <u>Bruce Creek</u>	FIELD ID/NAME: <u>G3NW0166</u>	

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components Substrate Diversity <u>8</u>	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 12 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 9 <u>8</u> 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability <u>8</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 <u>8</u> 7 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>14</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 <u>14</u> 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>11</u> ----- Primary Score <u>41</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 <u>11</u>	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 Artificial Channelization <u>14</u>	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 <u>14</u> 13 12 11	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area. 10 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 <u>5</u> Left Bank <u>5</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. 10 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. <u>8</u> 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>8</u> 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 1
Riparian Zone Vegetation Quality Right Bank <u>10</u> Left Bank <u>10</u> ----- Secondary Score <u>64</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. <u>8</u> 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

105

TOTAL SCORE

HA ID 15669

Date: <u>2/26/19</u>	Analyst: <u>Jones PWS</u>	Signature: <u>JR PWS</u>
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DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Bruce Creek</u>					County: <u>Walton</u>		Date: <u>2/26/19</u>		Investigators: <u>James Rios / Nathan Mulkey</u>	
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	STORET Station Number: <u>G3NW0166</u>
0	1	N	N	28	60	1	N	N	16	Secchi depth <u>0.5</u> Estimated? <u>N</u>
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9	N	N							
10	1	N	N	24	70	1	N	N	68	# points ranked 4-6 <u>0</u> total points assessed <u>99</u> % points ranked 4-6 <u>0</u>
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9	N	N							
20	1	N	N	30	80	1	N	N	92	Check accompanying data collected at same site/date. Algal mat sample ☐ Linear Veg Survey ☐ Habitat Assessment ☒ SCI/Biorecon ☒ Water sample ☒ RQ-2019-02-25-12
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9	N	N							
30	1	N	N	32	90	1	N	N	80	
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9	N	N							
40	1	N	N	12	100	1	N	N	48	
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9	N	N							
50	1	N	N	44		1	N	N		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%.
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9	N	N							

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

SR10 ID 79247

RPS ID 9256

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET																															
Waterbody: <u>Brace Creek</u>										Date: <u>2/26/11</u>					County: <u>Walton</u>					Storet Number: <u>63WV0160</u>											
Analyst: <u>Jim Pitts</u>										Signature: <u>[Signature]</u>																					
Comments: <u>LVS not performed due to <2m² SAV</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.																															
SB10 ZD 79247		Meter Mark										Specimen collected (check)	macro ZD N/A		Meter Mark										Specimen collected (check)						
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100				0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100							
HERBACEOUS SPECIES													HERBACEOUS SPECIES																		
Alternanthera philoxeroides													Micranthemum glomeratum																		
Bacopa caroliniana													Micranthemum umbrosum																		
Bacopa monneri													Myriophyllum aquaticum																		
Bidens mitis													Najas guadelupensis																		
Boehmeria cylindrica													Nuphar luteum																		
Centella asiatica													Orontium aquaticum																		
Ceratophyllum demersum													Panicum hemitomon																		
Chara													Panicum repens																		
Cicuta maculata													Panicum rigidulum																		
Cladium jamaicense													Pistia stratioides																		
Colocasia esculenta													Polygonum glabra																		
Commelina diffusa													Polygonum hydropiperoides																		
Commelina virginica													Polygonum punctatum																		
Crinum americanum													Pontedaria cordata																		
Diodia virginiana													Potamogeton illinoensis																		
Eichhornia crassipes													Ruellia simplex																		
Eleocharis (wispy viviparous)													Sacciolepis striata																		
Hydrilla verticillata													Sagittaria kurziana																		
Hydrocotyle													Sagittaria lancifolia																		
Hygrophila polysperma													Sagittaria latifolia																		
Hymenocallis													Salvinia minima																		
Lachnanthes caroliniana													Samolus parviflora																		
Landoltia punctata													Saururus cernuus																		
Lemna																															