

CALIBRATION AND VERIFICATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)

Boldly "X" this box if there are qualified data on this page.

Meter ID: Pesi

RQ- 2019-09-09-18

Project: SCI Bend & Mills

Notes: (1) Always wait for meter to stabilize before recording any readings.

(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).

(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification _____

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Brian Davis	9/23/19	739	24.2	762.9	8.4	8.42	100.4	/	/	P / F	L / F
ICV			741	24.3	763	8.4	8.41	100.6	/	/	P / F	L / F
CCV	Jeremy Pansh	9/23/19	1538	23.6	761	8.5	8.57	101.1	-	-	P / F	L / F
CCV											P / F	L / F

DO Acceptance criteria from Table ± 0.3 mg/L.

Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.

Optical: DO gain range 0.85 to 1.15 (Pro DSS 0.75 to 1.50); DO charge N/A. Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

Spec. Cond. FT 1200	Name	Date	Time CT-ET	Lot #	Explr. Date	Standard μ mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	Brian Davis	9/23/19	745	190711B	7/20	1000	992	P / F	L / F
ICV			747	147430	12/19	147	155.6	P / F	L / F
CCV	Jeremy Pansh	9/23/19	1540	190711A	7/20	100	107.4	P / F	L / F
CCV								P / F	L / F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Explr. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Brian Davis	9/23/19	800	2902778	1/21	7.0	25.0	7.0	-26.3	P / F	L / F
Calibr.			805	2904B00	3/21	4.0	24.8	4.01	155.2	P / F	L / F
Calibr.			809	2810F55	4/20	10.0	24.9	10.0	-199.4	P / F	L / F
ICV			811	2902778	1/21	7.05	25.0	7.05	-26.0	P / F	L / F
CCV	J Pansh		1548	2904B00	3/21	9.00	24.7	4.18	143.4	P / F	L / F
CCV										P / F	L / F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 _____, slope from 4 to 7 _____ (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: _____

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	B. Davis	9/23/19	814	0.00	0.00	P / F	L / F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: BRANDY BRANCH AT CR 121

Date: 9/23/19

(mm/dd/yyyy)

WIN/ Field ID: 19010063

WBID: 2226

Latitude: 30.367555

(Decimal Degrees)

County: Nassau

ORG ID: 21 FLA

Longitude: -82.015638

(Decimal Degrees)

Receiving Body of Water: St. Marys River

RQ-2019- 09-09-18

Sampling Team Members						WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
B. Davis										
J. Parrish										
K. Appleby										

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# YSI Desi Matrix: Fresh / Marine / DI

Photos: Yes / No Flow: No Flow / Intertidal / 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	1100	0.2	0.1	0.2	1.5	17.0	6.30	0.06	123	22.6
CEN				5	1.2	14.0	5.9			

Biological Samples Collected: None HA SC RPS Algae ID LVS 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			☒ <2
Metals	☒ W-ICPMS ☒ W-ICP	☒ Ice ☒ HNO3			☒ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice			
Chlorophyll	☒ CHL-SUITE-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-BR-IC / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates	☒ MI-FW-QLDC	☒ 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-E8321-DI ☒ W-E8321-MS	☒ Ice			
Pesticides	☒ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-E8321-DI ☐ W-PCL-SQ-R ☐ W-E8321-MS ☐ W-CARB-AA	☒ Ice			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C				

Notes:

SCI-KIT

WIN ID/Field ID:



19010063

BRANDY BRANCH AT CR 121

Signature:

Jeremy Panoz

Date:

9/23/19

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:



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: MILLS CREEK AT US 301/US1

Date: 9/23/19
(mm/dd/yyyy)

WIN/ Field ID: 19020048

WBID: 2120B

Latitude: 30.6389138

(Decimal Degrees)

County: Nassau

ORG ID: 21 FLA

Longitude: -81.86308

(Decimal Degrees)

Receiving Body of Water: Nassau River

RQ-2019-

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check

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# _____ 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	1415	no	Flow							
CEN										

Biological Samples Collected: None HA SCI RPS Algae ID LVS 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			☐ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☐ W-PO4-F ☐ Field Filtered 0.45 µm Filter	☐ Ice			
Chlorophyll	☐ CHL3SUITE-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-BR-IC / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ 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-E8321-DI ☐ W-E8321-MS	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-E8321-DI ☐ W-PCL-SQ-R ☐ WE8321-MS ☐ W-CARB-AA	☐ Ice			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C	☐ Ice			

Notes:

WIN ID/Field ID:



19020048

MILLS CREEK AT US 301/US1

Signature: _____

Date: _____

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: _____

[illegible]

SCI Brandy Br and Cracker Br

Central Laboratory Submittal Form

last revised Jan 25, 2018

Customer: NE-DIST

Requester: Jeremy M. Parrish

Field Report Prepared By: Jeremy Parrish

Project ID: SMP

Collected By:

Jeremy Parrish / Brian ParisSampling Agency: FREP NE DOC

Loca	WIN ID/Field ID:  19010063		☐ Comp ☒ Grab		Collection (comp begin or grab) Date <u>9/23/19</u> Time <u>1100</u>	Eastern Central	Composite end Date _____ Time _____	Bottle Group(s) (See pg 2)
Field	BRANDY BRANCH AT CR 121		Matrix (type, e.g., Salt, Fresh, etc) <u>Fresh</u>		Diss. Oxygen <u>1.2</u>	☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	<u>A, B</u>
WIN/			Temp (C) <u>22.6</u>		pH <u>5.9</u>	Sample Depth <u>0.1</u>	☐ ft ☒ m	
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt) <u>0.06</u>		Comments		
Location			☐ Comp ☐ Grab		Collection (comp begin or grab) Date _____ Time _____	Eastern Central	Composite end Date _____ Time _____	Bottle Group(s)
Field ID			Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	
WIN/STORET #			Temp (C)		pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)		Comments		
Location			☐ Comp ☐ Grab		Collection (comp begin or grab) Date _____ Time _____	Eastern Central	Composite end Date _____ Time _____	Bottle Group(s)
Field ID			Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	
WIN/STORET #			Temp (C)		pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)		Comments		
Location			☐ Comp ☐ Grab		Collection (comp begin or grab) Date _____ Time _____	Eastern Central	Composite end Date _____ Time _____	Bottle Group(s)
Field ID			Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	
WIN/STORET #			Temp (C)		pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)		Comments		

Relinquished By: <u>B = V =</u>	Date/Time <u>9/23/19 1630</u>	Shipping Method <u>FedEx</u>	Number of Coolers Shipped: <u>1</u>	Received By:	Date/Time
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Group: A	Bottle Type:	P-1L	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	ALKALINITY TURBIDITY W-CL-IC W-COLOR W-F W-SO4-IC W-TDS W-TSS						
Group: A	Bottle Type:	BP-1L	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	CHLSUITE-W						
Group: A	Bottle Type:	P-250ML-WI-THI	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1 ALS
	NE-ALS-ECQ						
Group: A	Bottle Type:	BG-500ML	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	W-E8321-DI W-E8321-MS						
Group: A	Bottle Type:	P-500ML	# of Bottles: 2	Preservative:	HNO3	Enter Number of Bottles Sent to Lab	1
	W-ICP W-ICPMS						
Group: A	Bottle Type:	P-500ML	# of Bottles: 2	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab	1
	W-NH3 W-NO2NO3 W-S-A-TP W-TKN W-TOC						
Group: A	Bottle Type:	P-125ML	# of Bottles: 2	Preservative:	FILTER-ICE	Enter Number of Bottles Sent to Lab	1
	W-PO4-F						
Group: A	Bottle Type:	BG-1L	# of Bottles: 6	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	W-PSNP-TQ						
Group: B	Bottle Type:	PT-50ML	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	0
	ALGAL_ID						
Group: B	Bottle Type:	PJ-2L	# of Bottles: 4	Preservative:	Formalin	Enter Number of Bottles Sent to Lab	2

MI-FW-Q1DC

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

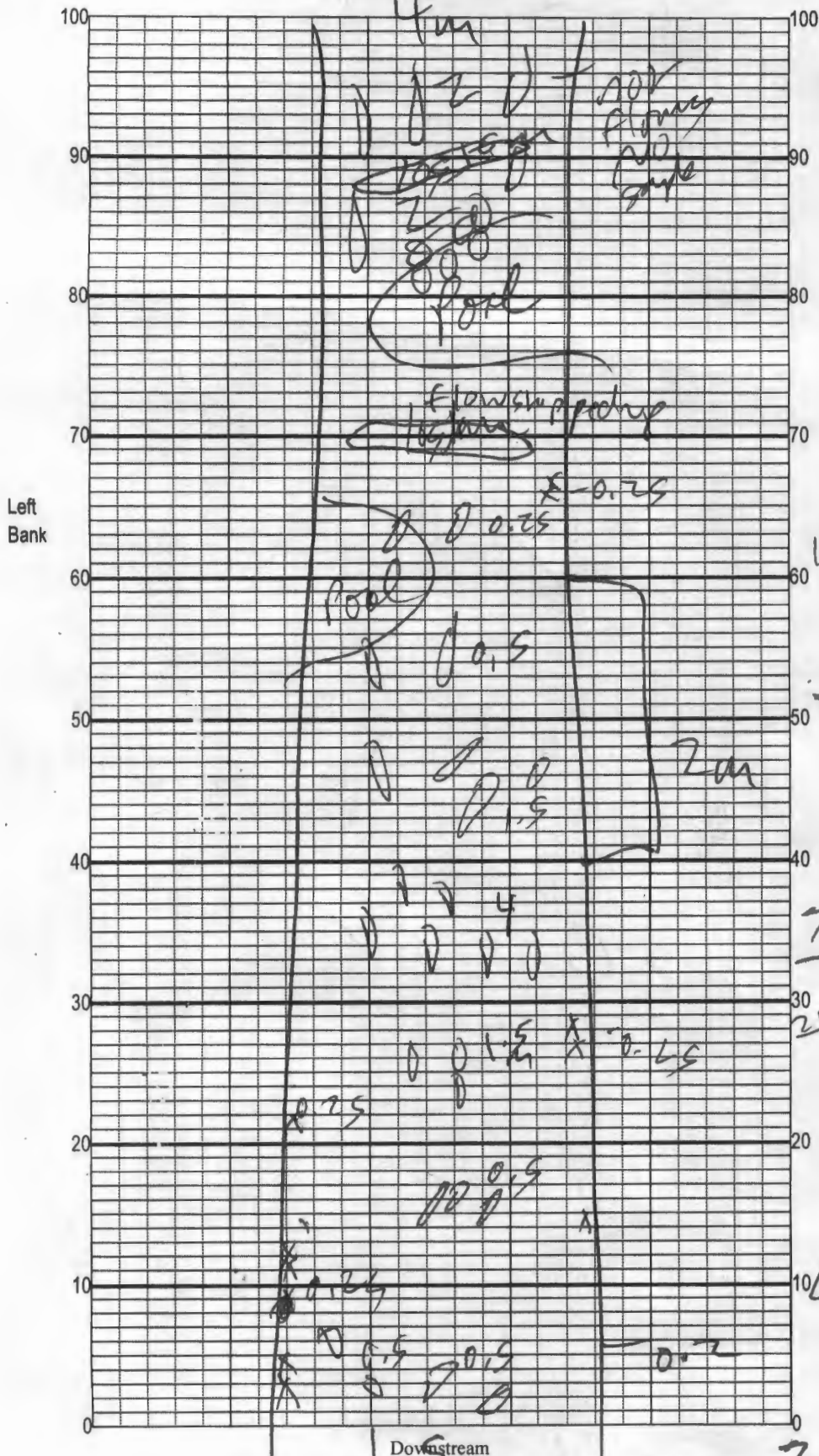
SAMPLING AGENCY: NE ROC		STORET STATION NUMBER: 19010063	DATE (MM/DD/YY): 9/23/19	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: Baker	LOCATION: Brandy Branch 301	FIELD ID/NAME:	

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>5</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	<u>5</u> 4 3 2 1
Substrate Availability <u>5</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 <u>5</u> 4 3 2 1
Water Velocity <u>9</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 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 <u>10</u> <u>9</u> 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>10</u> Primary Score <u>29</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). <u>10</u> 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>	<u>20</u> 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability <u>6</u> Right Bank <u>6</u> Left Bank <u>6</u>	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. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 <u>6</u>	Only meets 1 of the 3 requirements for optimal bank stability. <u>8</u> <u>7</u> <u>6</u>	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width <u>10</u> Right Bank <u>10</u> Left Bank <u>10</u>	Width of vegetation greater than 18 m <u>10</u> 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 <u>10</u> Right Bank <u>10</u> Left Bank <u>10</u>	Over 60% 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>10</u> 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
Secondary Score <u>72</u> <u>101</u>				

TOTAL SCORE

Date: 9/23/19	Analyst: Jeremy Carr	Signature: Jeremy Carr
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: Brady Branch
 Date: 9/23/19
 Sampler: J. Parnish

100 m: Latitude _____
 Longitude _____

0 m: Latitude _____
 Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☒	Snags	≈ 4.5
☐	Roots/undercut banks	< 1%
☐	Leaf Packs (or mats)	< 1%
☐	Aquatic Macrophytes	_____
☐	_____	_____
☐	_____	_____
☐	Pools	total # observed = _____ # range expected = _____

Average width 2.5 m
 Average depth 0.3 m

Velocity measured at 0.50 meter mark.

WQ & chemistry taken at 10 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:

< 2 M of Macrophytes was observed while doing the LVS? YES or NO

$1 = 1 + 2 + 4 + 2 + 5$
9-11 m sm

1.5-2 m root

2.5 meter

$2.5 = 1\%$
 $5 = 2\%$
 $7.5 = 3\%$
 $10 = 4\%$

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

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

SAMPLE ID _____ ORG ID 21FLA LATITUDE 30.36755
 COUNTY Nassau STORET # 19010063 LONGITUDE 82.015638
 DATE 9/23/19 TIME 1100 SAMPLING AGENCY DEP serv
 SITE NAME Brandy Branch CR 121
 FIELD ID/NAME _____ RECEIVING BODY OF WATER St Marys River

RIPARIAN ZONE / STREAM FEATURES

Meter ID: _____

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 25 m wide 0.09 m/s 0.3 m deep
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>718</u> Right Bank: <u>718</u>				Hydrologic Modification Score (per FT 3101) ☐			
High Water Mark: <u>1.5</u> + <u>0.3</u> = <u>1.9</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			WATER QUALITY			System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) _____																																																																										
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ABUNDANCE			Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) _____ Clarity Clear ☐ Slightly Turbid ☐ Turbid ☒ Opaque ☐			AMBIENT FIELD CONDITIONS / NOTES: Hydrologic Disturbance Scoring ☐ 1-2 ☐ 3-4 ☐ 5-6 ☐ 7-8 ☐ 9-10 ☐ The antecedent hydrologic conditions have been met to my best knowledge.																																																																										
SAMPLING TEAM <u>Jeremy Linn / Brian Paves</u>			SIGNATURE: <u>Jeremy Linn</u>																																																																													

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Brandy Br. @ 121</u>					County: <u>Putnam</u>		Date: <u>9/23/19</u>		Investigators: <u>J. Hainsly</u>	
STORET Station Number:										
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	N		60	1	N	N		
	2					2				
	3					3				
	4					4				
	5			96		5				96
	6					6				
	7					7				
	8					8				
	9					9				
10	1	N	N		70	1	N	N		
	2					2				
	3					3				
	4					4				
	5			92		5				96
	6					6				
	7					7				
	8					8				
	9					9				
20	1	N	N		80	1	N	N		
	2					2				
	3					3				
	4					4				
	5			96		5				96
	6					6				
	7					7				
	8					8				
	9					9				
30	1	N	N		90	1	N	N		
	2					2				
	3					3				
	4					4				
	5			95		5				96
	6					6				
	7					7				
	8					8				
	9					9				
40	1	N	N		100	1	N	N		
	2					2				
	3					3				
	4					4				
	5			96		5				96
	6					6				
	7					7				
	8					8				
	9					9				
50	1	N	N			1	N	N		
	2					2				
	3					3				
	4					4				
	5			96		5				
	6					6				
	7					7				
	8					8				
	9					9				

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%.

Secchi depth 0.25
Estimated?

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

Check accompanying data collected at same site/date.

Algal mat sample N/A
Linear Veg Survey N/A
Habitat Assessment Y
SCI/Biorecon Y
Water sample Y
RQ: 2019-09-09-14

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

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET

Waterbody: <i>Bandy Branch @ CR 121</i>	Date: <i>7/23/19</i>	County: <i>Nassau</i>	Storet Number: <i>19010063</i>
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Analyst: _____ Signature: *Gerard P. Quinn*

Comments: *g 110000*

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1m² 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.

HERBACEOUS SPECIES		Meter Mark										Specimen collected (check)	HERBACEOUS SPECIES		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		
Alternanthera philoxeroides													Micranthemum glomeratum												
Bacopa caroliniana													Micranthemum umbrosum												
Bacopa monnieri													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 kuziana												
Hydrocotyle													Sagittaria latifolia												
Hygrophila polysperma													Sagittaria latifolia												
Hymenocallis													Salvinia minima												
Lachnanthes caroliniana													Sagittaria latifolia												
Landoltia punctata													Saururus cernuus												
Lemna													Sparganium americanum												
Limnophila sessiflora													Typha												
Ludwigia leptocarpa													Vallisneria spiralis												
Ludwigia palustris													Zizania aquatica												
Ludwigia peruviana																									
Ludwigia repens																		</							