

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

SAMPLE ID 82655 ORG ID 21WASP LATITUDE 30.55536
 COUNTY BAY STORET # 32030023 LONGITUDE -85.43519
 DATE 6.15.21 TIME 1307 CST (1207 EST) SAMPLING AGENCY PDOP/AROA
 SITE NAME ELONFINA CREEK SCOTT BRIDGE
 FIELD ID/NAME ELON SCIRP RECEIVING BODY OF WATER DEAR POINT LAKE

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) ☐								Landscape Development Intensity Index (LDI) <u>1.62</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>0.25</u> <u>0.27</u> <u>7</u> m wide <u>0.25</u> m/s <u>0.27</u> m/s <u>0.25</u> m/s <u>0.3</u> m deep <u>1.0</u> m deep <u>0.2</u> 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) <u>1-2</u>				
High Water Mark: <u>2.0</u> + <u>1.0</u> = <u>3.0</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 <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><u>0.15</u></td> <td><u>27</u></td> <td><u>6.09</u></td> <td><u>7.33</u></td> <td><u>92.1</u></td> <td><u>19.5</u></td> <td></td> <td></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:	<u>0.15</u>	<u>27</u>	<u>6.09</u>	<u>7.33</u>	<u>92.1</u>	<u>19.5</u>			Mid:								☐ VOB	Bottom:								
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Woody Debris (Snags) <u>8</u> <u>III</u> Undercut Banks / Roots <u>41</u> <u>III</u> Leaf Packs or Mat <u>41</u> <u>I</u> Aquatic Vegetation <u>91</u> <u>III</u> Rock or Shell Rubble.. <u>91</u> <u>III</u> Sand..... <u>20</u> <u>II</u> Mud / Muck (Silt) <u>20</u> <u>II</u> Other Other		Meter ID: <u>154186</u> <u>1.0</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 ☐ Globs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ <u>SIGHT</u> Clear ☐ Other (Specify) ☐ Clarity Clear ☐ Slightly Turbid ☒ <u>SIGHT</u> Turbid ☐ Opaque ☐																																							
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:	☒	☐	☐	☐	System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐ AMBIENT FIELD CONDITIONS / NOTES: <u>LOTS OF DOWNED TREES. WATER LEVEL LOWER THAN TYPICAL. MOVED STATION UPSIDEAN 1/10m TO AVOID DAMAGE FROM HURRICANE. TURBID/SILT.</u> ☒ The antecedent hydrologic conditions have been met to my best knowledge. <u>42m² PLANTS</u>														
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SAMPLING TEAM Jessica Patronis, Joy Jackson, Chandler Hammond **SIGNATURE:** [Signature] **DATE:** 6/15/21

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

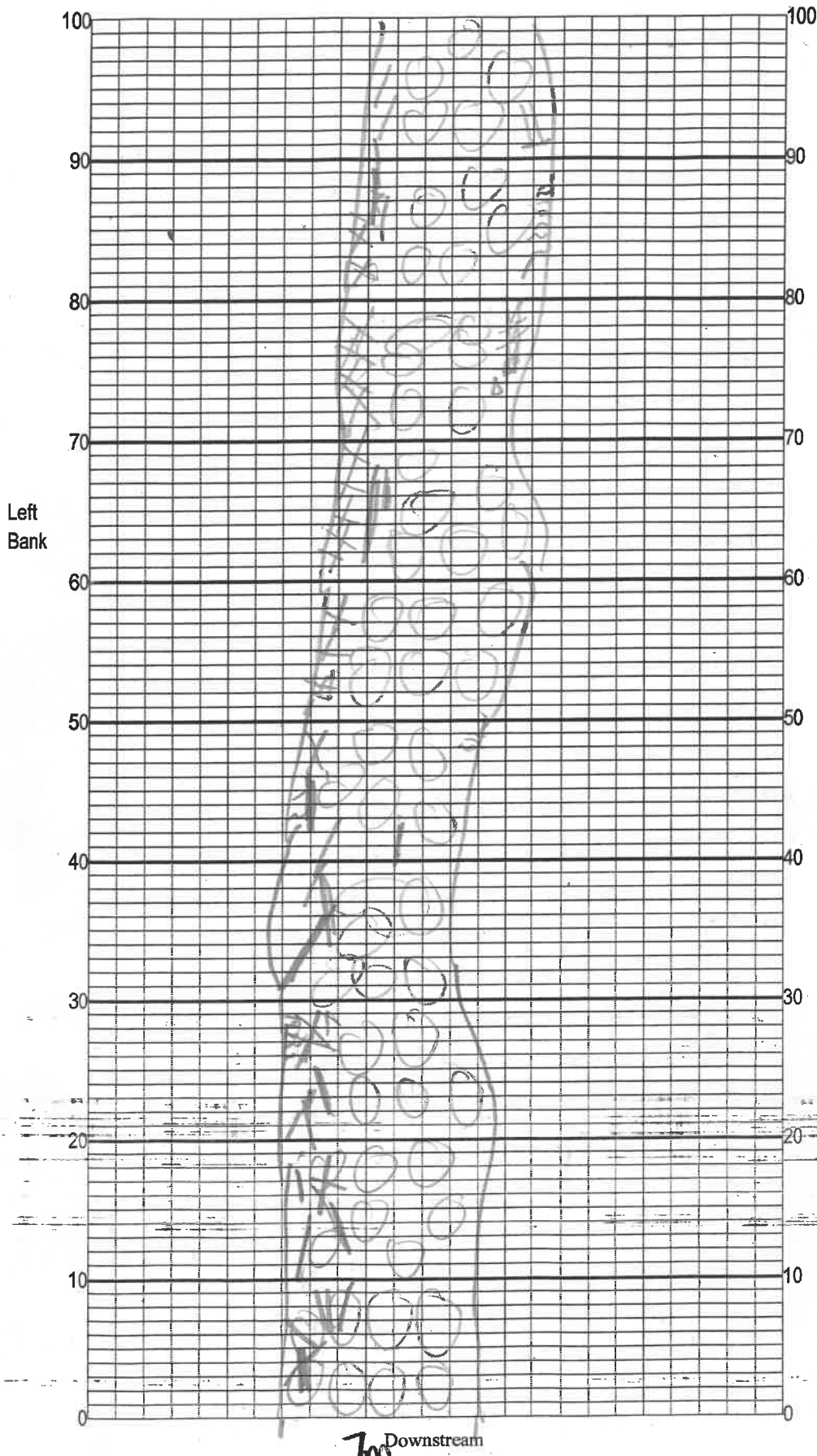
SAMPLING AGENCY: <u>FOCP / AEGA</u>		STORET STATION NUMBER: <u>32030023</u>	DATE (MM/DD/YY): <u>6.15.21</u>	RECEIVING BODY OF WATER:
REMARKS: <u>1ST EVENT POST HURRICANE MICHAEL</u>	COUNTY: <u>DADE</u>	LOCATION: <u>ECONF. NA CREEK</u>	FIELD ID/NAME: <u>ECONSCI *REF</u>	

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>11</u>	20 19 18 17 16	15 14 13 12 <u>11</u>	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>16</u>	Greater than 30% major productive habitat present at site 20 19 18 17 <u>16</u>	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>17</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 <u>17</u> 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>14</u> ----- Primary Score <u>58</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 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 <u>18</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 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 <u>5</u> Left Bank <u>6</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>69</u>	10 9	8 7 6	5 4	3 2 1

127 TOTAL SCORE

Date: <u>6.15.21</u>	Analyst: <u>JACKSON</u>	Signature: <u>[Signature]</u>
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: KONGING CREEK

Date: 6.15.21

Sampler: JACOBSON

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☒ Snags _____

☒ Roots/undercut banks _____

☒ Leaf Packs (or mats) _____

☐ Aquatic Macrophytes _____

☒ rock _____

☐ _____

☐ Pools total # observed = _____
range expected = _____

Average width 7 m

Average depth 0.9 m

Velocity measured at 30 meter mark.

WQ & chemistry taken at 5 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:

ROCK THROUGHOUT BUT SILT
SO, REDUCED AVAILABILITY TO
ACCOUNT FOR IT.

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>EOONFINA CREEK</u>					County: <u>BRX</u>		Date: <u>6-15-21</u>		Investigators: <u>JACKSON, CHAMMOND</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	N				2	N			
	3	N				3	N			
	4	N				4	N			
	5	N		106		5	N		68	
	6	N				6	N			
	7	N				7	N			
	8	N				8	N			
	9	N				9	N			
10	1	N			70	1	N			
	2	N				2	N			
	3	N				3	N			
	4	N				4	N			
	5	N		86		5	N		66	
	6	N				6	N			
	7	N				7	N			
	8	N				8	N			
	9	N				9	N			
20	1	N			80	1	N			
	2	N				2	N			
	3	N				3	N			
	4	N				4	N			
	5	N		87		5	N		83	
	6	N				6	N			
	7	N				7	N			
	8	N				8	N			
	9	N				9	N			
30	1	N			90	1	N			
	2	N				2	N			
	3	N				3	N			
	4	N				4	N			
	5	N		52		5	N		56	
	6	N				6	N			
	7	N				7	N			
	8	N				8	N			
	9	N				9	N			
40	1	N			100	1	N			
	2	N				2	N			
	3	N				3	N			
	4	N				4	N			
	5	N		48		5	N		48	
	6	N				6	N			
	7	N				7	N			
	8	N				8	N			
	9	N				9	N			
50	1	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	N								
	3	N								
	4	N								
	5	N		33						
	6	N								
	7	N								
	8	N								
	9	N								

STORET Station Number:

32030023

Secchi depth

Estimated?

points ranked 4-6

total points assessed

% points ranked 4-6

Check accompanying data collected at same site/date.

Algal mat sample

Linear Veg Survey

Habitat Assessment

SCI/Biorecon

Water sample

RQ-

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