



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV
Yes / No

WIN Station Name:	RYALS SWAMP EAST BRANCH (MAIN) AT JTB				Sample Date:	4/17/2024	
WIN / Field ID:	20030855	ORG ID:	21FLA	ENR:	-	Latitude:	30.25098
County:	DUVAL	WBID:	2302	STREAM		Longitude:	-81.49167
Receiving Body of Water:	-				RQ-	2024-04-15-16	

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Jeremy Parrish		x		x	x
Katherine Halbert	x		x		

Sampling Equipment			
x	Sample Container		Carboy
	Dipper		Van Dorn
	Syringe	x	Pole
			NA
Syringe Lot#		Filter Lot# 00001773355	
Secchi Equipment ID:		Disco	
Collection Method			
	Wading		Canoe/Kayak
x	From Shore		Electric Motor
			Gasoline Motor
Depth Measured With		Meter	

Water Level:	Normal
Flow:	Flowing
Matrix:	Fresh
Tide Stage:	
High Tide:	
Low Tide:	
Photos:	Yes
Meter ID:	Bruce
Depth Gauge ID:	depth_gauge

Time Zone	Time	Total Depth (m)	Sample Depth (m)	DO (mg/L)	DO (%SAT)	Temp. (°C)	pH	Secchi Disk (m)	Sp COND (µmhos/cm)	Salinity (PPTth)
EST	945	0.1	0.05	6.36	68.7	19.3	7.16	0.1	411.3	0.2
								VOB (s)		

Biological Samples Collected: HA LVS RPS SCI

SBIO Visit ID: HA ID: RPS ID: Macrophyte ID: LIMS Sample ID In The Macrophyte Module:

Parameter Suite	Parameter Methods (LIMS Test Codes)	Preservation				
		Type	Lot#	Expiration Date	pH Check	
Microbiology						
Chlorophyll	CHLSUITE-W	ICE				
Physical/Aggregate Nutrients	ALKALINITY, TURBIDITY, W-F, W-TSS W-CL-IC, W-COLOR, W-SO4-IC, W-TDS	ICE				
Filtered Nutrients	W-PO4-F Field Filtered 0.45 µm Filter	ICE	Syringe Lot#; Filter Lot#:00001773355			
Acid Preserved Nutrients	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	ICE	H2SO4*	SA3340020	12/11/2024	H2SO4 pH<2
Metals	W-ICPMS W-ICP W-HARD	ICE		NA3193130	07/27/2024	
Organics (LC)	W-E8321-DI W-E8321-MS					
Macroinvertebrates	MI-FW-QLDC	Formalin	9.70623wb			
Organics (GC)	W-PSNP-TQ	Ice	*2.0 ml of H2SO4 Used Unless Noted Otherwise			
Molecular						
Periphyton						
Phytoplankton						
BOD						
DOC						
Other(s)						
Field Comments:	/ SCI Collection Time: 0945					
Comments on COC:						
Relinquish Date:	04/17/2024	Signature:				

LIMS EVENT ID: NE-DIST-2024-04-18-01

WIN Import ID: 49436

Enter Field Parameters, Verify Station ID in LIMS DMT: 7/2/24 LA
(Initials/Date)QC Station ID, Field Parameters in LIMS DMT: DB 07/09/2024
(Initials/Date)Save Field Sheets on Network: DB 08/05/2024
(Initials/Date)Migrate Data to WIN: 7/24/2024 MB
(Initials/Date)

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

88603

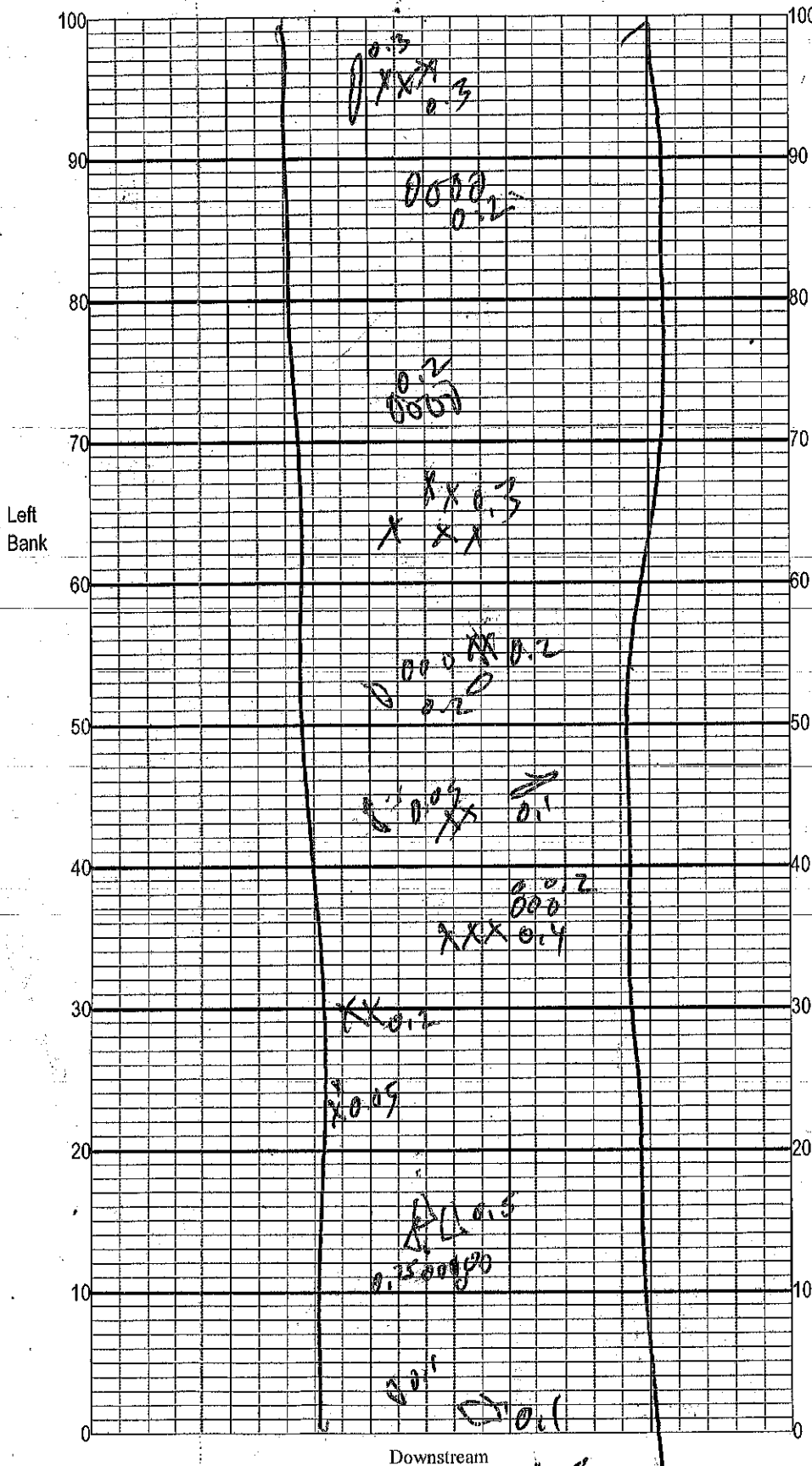
SAMPLING AGENCY:	STORET STATION NUMBER: 20030955	DATE (MM/DD/YY): 4/17/24	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: Owal	LOCATION: Ryalsnape JTB	FIELD ID/NAME:

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	5 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 5 4 3 2 1
Water Velocity <u>10</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 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>8</u> Primary Score <u>28</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 Artificial Channelization <u>16</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 14 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>4</u> Left Bank <u>4</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. 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>9</u>	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 1
Riparian Zone Vegetation Quality Right Bank <u>10</u> Left Bank <u>9</u> Secondary Score <u>62</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. 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

TOTAL SCORE

Date: 4/17/24	Analyst: JMR	Signature: JMR
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: Apal Swamp C/TB
 Date: 4/17/24

Sampler: _____

100 m: Latitude _____
 Longitude _____

0 m: Latitude _____
 Longitude _____

Substrates: Code key, draw proportionate habitat abundance: %

	Snags	<u>41</u>
	Roots/undercut banks	<u>2</u>
	Leaf Packs (or mats)	<u>1</u>
	Aquatic Macrophytes	<u>41</u>
	Pools	total # observed = _____ # range expected = _____

Average width _____ m
 Average depth _____ m

Velocity measured at _____ meter mark.

WQ & chemistry taken at _____ 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:

XX = 0.6 + 0.2 + 0.4 + 0.25 + 0.2 = 1.25
OO = 0.25 + 0.2 + 0.4 = 0.85
AA = 0.5 = 0.5
Δ = 0.3 + 0.2 + 0.15 + 0.1 = 0.75

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: 88603 ORG ID: _____ LATITUDE: _____
 COUNTY: Duval STORET #: 20030855 LONGITUDE: _____
 DATE: 4/17/24 TIME: 9:45 SAMPLING AGENCY: _____
 SITE NAME: Ryal Swamp e. JTB
 FIELD ID/NAME: _____ RECEIVING BODY OF WATER: _____

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) <u>0.1</u> Depth (m)/Velocity (m/sec) <u>1.25</u> m wide			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>18</u> Right Bank: <u>> 18</u>						Hydrologic Modification Score (per FT 3101) ☐			
High Water Mark: <u>0.3</u> + <u>0.1</u> = <u>0.4</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 Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: _____ Mid: _____ Bottom: <u>0.1</u> <u>19.3</u> <u>7.16</u> <u>6.36</u> <u>68.7</u> <u>41</u> <u>0.2</u> <u>NOB</u>					
Woody Debris (Snags) <u>1</u> <u>2</u> _____ Undercut Banks / Roots <u>240</u> <u>10</u> _____ Leaf Packs or Mat <u>1</u> <u>2</u> _____ Aquatic Vegetation <u>1</u> <u>1</u> _____ Rock or Shell Rubble.. _____ Sand..... <u>95</u> <u>5</u> _____ Mud / Muck / Silt _____ Other _____ Other _____			System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) _____ 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 ☐ Globbs ☐ 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: ☐ ☒ ☐ ☐

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

Terry Parviz / K Halbert

SIGNATURE:

Jon Parviz

4/17/24

88603

RPS - 10276

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Ryal Swamp @ JTB</u>					County: <u>Duval</u>		Date: <u>4/17/24</u>		Investigators: <u>JP / KH</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	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				70	1				
	2					2				
	3					3				
	4					4				
	5			94		5			96	
	6					6				
	7					7				
	8					8				
	9					9				
20	1				80	1				
	2					2				
	3					3				
	4					4				
	5			96		5			96	
	6					6				
	7					7				
	8					8				
	9					9				
30	1				90	1				
	2					2				
	3					3				
	4					4				
	5			94		5			96	
	6					6				
	7					7				
	8					8				
	9					9				
40	1				100	1				
	2					2				
	3					3				
	4					4				
	5			96		5			96	
	6					6				
	7					7				
	8					8				
	9					9				
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. 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			96						
	6									
	7									
	8									
	9									

STORET Station Number:

20030855

Secchi depth

Estimated?

0.03

points ranked 4-6

total points assessed

% points ranked 4-6

0

Check accompanying data collected at same site/date.

Algal mat sample

Linear Veg Survey

Habitat Assessment

SCI/Biorecon

Water sample

RQ: 2024-04-15-16

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

Waterbody: <i>Royal snape JTB</i>	Date: <i>4/17/24</i>	County: <i>Oral</i>	Storet Number: <i>2020855</i>
Analyst: <i>J Parnish</i>	Signature: <i>[Signature]</i>		

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.

Revision Date: January 2017