



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2017

PAGE ____ OF ____

Data Qualified?

Yes / No

STORET Station Name: Williamson Creek James Rd. Date: 5 / 2 / 2017

STORET Station ID: 20030618 WBID: 2316 Latitude: 30 16 19

County: Duval RQ: 2017-04-24-28 ORG ID: 21FLA Longitude: 81 41 52.1

Receiving Body of Water: Cedar River Field ID: G2NE 00910502017

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment		
<u>J. Parnish</u> <u>P. O'Connor</u>					☒	☒	☒	☒	☒	☒ Sample Container	☐ Van Dorn	☐ Pole
										☐ Carboy	☐ Syringe	
										☐ Dipper	☐ Other	
										Equipment ID	Orthokit #	<u>3</u>
										Collection Method		
					☒	☐	☐	☐	☐	☒ Wading	☐ Via Boat	
										☐ From Shore	☐ Canoe/Kayak	
										☐ Other (note below)	☐ Electric Motor	
										☐ Gasoline Motor		

Water Level: Dry / Pooled / Low / Normal / High / Flooded Matrix: Fresh / Marine / DI

Meter ID# QUANTA #1 Photos: Yes / No Tide Falling: Yes / No / NA

Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Secchi Disk (m)	Sp COND (µmhos/cm)	Temp. (C°)
EST	0810	0.1	0.5	4.3	50.6	7.3	0.13	0.35	267	23.8
CEN								VOD		

Biological Samples Collected: None NA SCI RPS Algae ID LVS LVI Other

SBIO ID Numbers: SBIO-ID: RPS-ID: Macrophyte-ID: LIMS#:

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4	<u>6302030</u>	<u>10/28/17</u>	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO2			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm 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 Coli ☐ F Coli ☐ Enter ☐ PCR-FILTER	☐ Ice			
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PCL-SQ-R ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other			

Warning! See SDS
Sulfuric Acid
SA-6302030
EXP: 10/28/17
Warning! See SDS

Notes: _____
Place Label Here (If Available)

Signature: John Parnish Date: 5 / 2 / 2017

Field Parameters Entered into LIMS: JP 5/3/17 (Initials/Date) Field Parameters QC in LIMS: _____

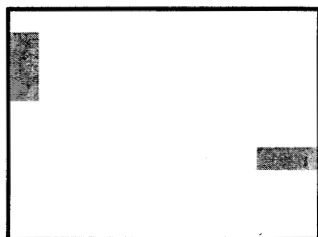
Date Migrated to STORET: _____ (Initials/Date) Field Sheets Scanned/Saved: NF 5/11/17 (Initials/Date)

[illegible]

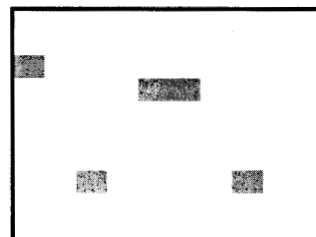
NE 5/11/17

Percent Cover Categories for macrophytes in a 10 m segment of a stream 5 m wide

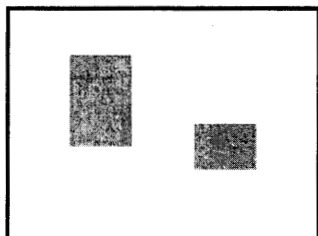
5% Macrophyte Coverage



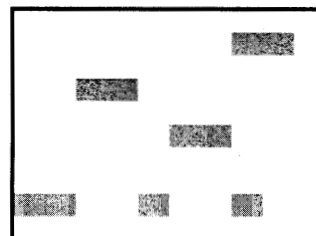
5% Macrophyte Coverage



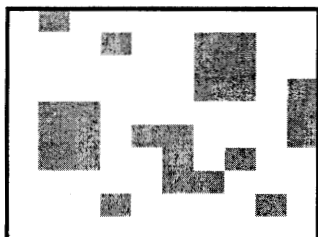
10% Macrophyte Coverage



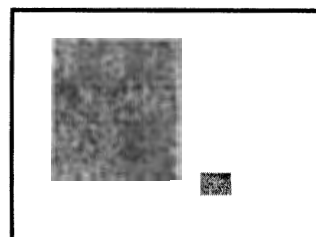
10% Macrophyte Coverage



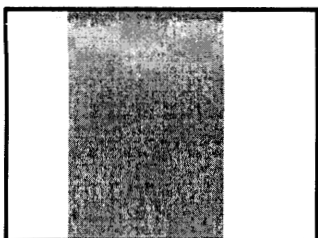
25% Macrophyte Coverage



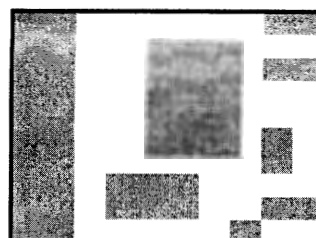
25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage



Sho 77589

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

SAMPLING AGENCY: NE ROC		STORET STATION NUMBER: <u>20030618</u>	DATE (MM/DD/YY): <u>05-02-17</u>	RECEIVING BODY OF WATER: <u>CEDAR River</u>
REMARKS:	COUNTY: <u>Duval</u>	LOCATION: <u>Fishery Cr @ JAMES</u>	FIELD ID/NAME:	

Williamson

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>7</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 <u>7</u> 6	5 4 3 2 1
Substrate Availability <u>14</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 <u>14</u> 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>12</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 <u>12</u> 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 space occurring: > 1 m/sec <0.05 0.04 0.03 0.01 <0.01 5 4 3 2 1
Habitat Smothering <u>12</u> Primary Score <u>45</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 <u>12</u> 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 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>11</u>	20 19 18 17 16	15 14 13 12 <u>11</u>	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 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 root zone with raw, eroded areas.
Right Bank <u>4</u> Left Bank <u>4</u>	10 9	8 7 6	5 <u>4</u>	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>	<u>10</u> 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>8</u> Left Bank <u>8</u> Secondary Score <u>55</u>	10 9	<u>8</u> 7 6	5 4	3 2 1

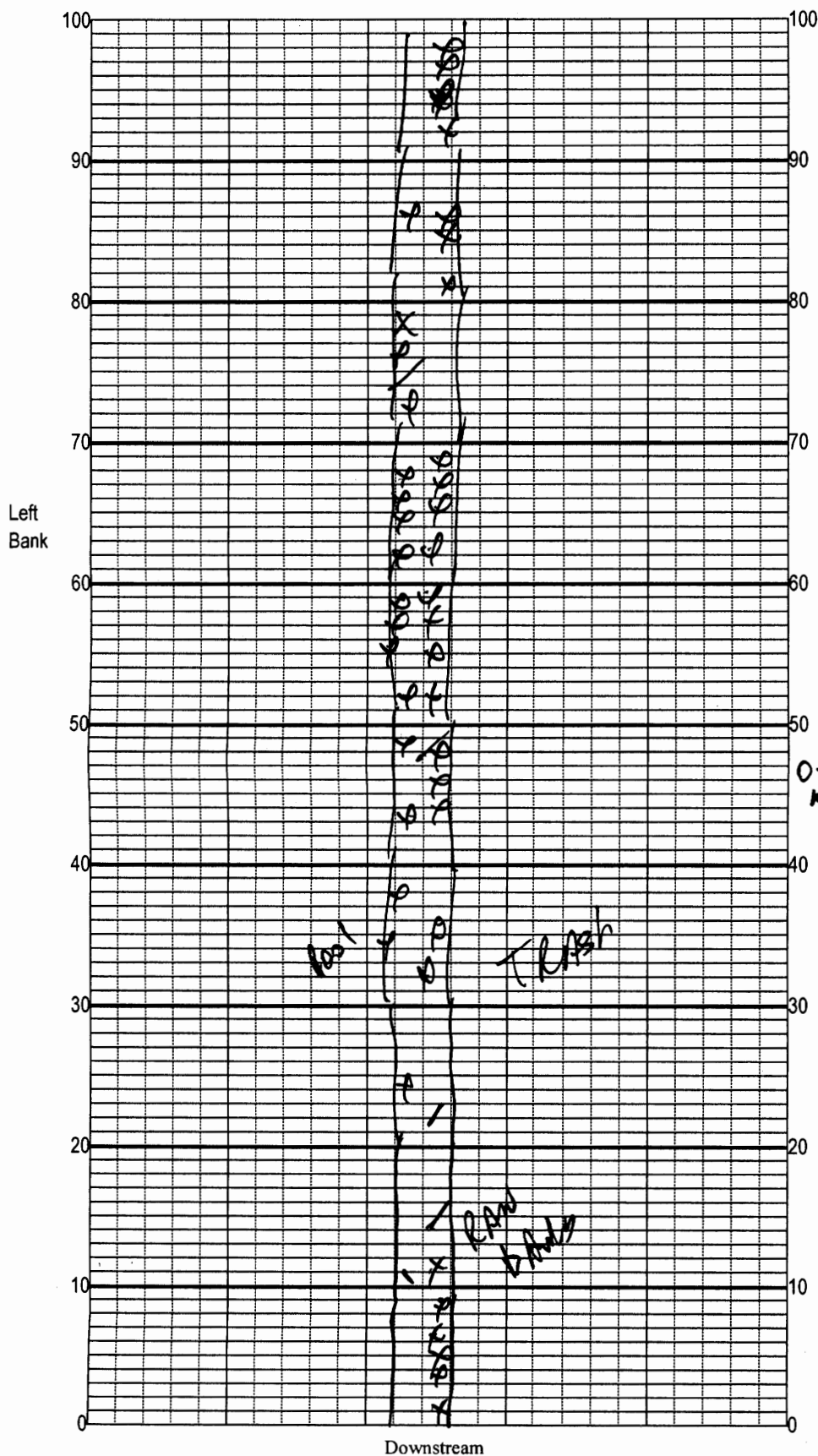
100

TOTAL SCORE

Date: <u>05-02-17</u>	Analyst: <u>PV Commor</u>	Signature: <u>Pahle n Dm</u>
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NF 5/11/17

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



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

Williamson

Location: Fishing Cr @ Sennetts

Date: 05-02-07

Sampler: P.O. Connor

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 _____

☐ _____

☐ _____

☐ Pools total # observed = _____
range expected = _____

Average width 2 m

Average depth _____ m

Velocity measured at 50 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:

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

22% Root
4% Snags

sho 77589

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

SAMPLE ID _____ ORG ID 21FLA LATITUDE 30 16 19
 COUNTY Duval STORET # 20030618 LONGITUDE 81 44 52
 DATE 5/2/17 TIME 8:10 SAMPLING AGENCY FD Rep NE
 SITE NAME Williamson e James
 FIELD ID/NAME _____ RECEIVING BODY OF WATER Cedar R

RIPARIAN ZONE / STREAM FEATURES

Meter ID: _____

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	Other (Specify)		
<u>15</u>				<u>45</u>	<u>40</u>				
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								<u>2</u> m wide	
Width of Riparian Vegetation (m) on Each Buffer Side				Hydrologic Modification Score (per FT 3101)					
Left Bank: <u>18m</u> Right Bank: <u>18m</u>									
High Water Mark: <u>0.8</u> + <u>0.3</u> = <u>1.1</u>				Artificially Impounded					
(m) (above present water level) (present depth) (above bed)				☒ Yes ☐ No					
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			Sediment Odors			Smothering of Substrates					
☒ Absent ☐ Slight			☒ Normal ☐ Sewage ☐ Petroleum			Sand Smothering: None ☐ Slight ☐ Moderate ☒ Severe ☐					
☐ Moderate ☐ Profuse			☐ Chemical ☐ Anaerobic			Silt Smothering: None ☐ Slight ☐ Moderate ☒ Severe ☐					
			☐ Other (Specify):			Algae Smothering: None ☒ Slight ☐ Moderate ☐ Severe ☐					
SUBSTRATE TYPE			WATER QUALITY								
Assessment Tool: ☒ SCI ☒ RPS ☒ LVS			Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M)								
☐ LCI ☐ BioRecon			Top: <u>0.1</u> <u>23.8</u> <u>7.3</u> <u>4.3</u> <u>50.6</u> <u>267</u> <u>0.13</u> <u>0.3</u>								
			Mid: _____								
			Bottom: <u>0.3</u> _____								
			System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐								
Woody Debris (Snags) <u>4</u> <u>7</u> <u>—</u>			Water Odors Normal ☒ Petroleum ☐			Water Surface Oils Normal ☒ Sheen ☐					
Undercut Banks / Roots <u>22</u> <u>7</u> <u>—</u>			Sewage ☐ Chemical ☐ Other ☐			Globs ☐ Slick ☐ Other ☐					
Leaf Packs or Mat _____			Water Sample Taken? ☒ Yes ☐ No			Color Tannic ☐ Green (Algae) ☐					
Aquatic Vegetation _____			Sample Preserved? ☒ Yes ☐ No			Clear ☒ Other (Specify) ☐					
Rock or Shell Rubble _____			Lot Number: _____ Exp: _____			Clarity Clear ☒ Slightly Turbid ☐					
Sand <u>74</u> <u>6</u> <u>—</u>			Algae Sample Taken? ☐ Yes ☒ No			Turbid ☐ Opaque ☐					
Mud / Muck / Silt _____			Sample Preserved? ☐ Yes ☐ No								
Other _____			Lot Number: _____ Exp: _____								
Other _____											

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

SIGNATURE:

Jay Carr

5/2/17

NF 5/11/17

5110 77564

R15-8684

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Willow Son @ Journey</u>					County: <u>Orin</u>		Date: <u>5/2/2017</u>		Investigators: <u>JP/PO</u>												
Transect (m)					Transect (m)					STORET Station Number: <u>20030618</u>											
Point 1=right 9=left					Point 1=right 9=left																
Algal Thickness Rank (N-6, X)					Algal Thickness Rank (N-6, X)																
Estimated					Estimated																
Canopy Cover					Canopy Cover																
0					60					Secchi depth											
										Estimated?											
										# points ranked 4-6											
										total points assessed											
										% points ranked 4-6											
										10					70					Check accompanying data collected at same site/date	
																				Algal mat sample	
																				Linear Veg Survey	
																				Habitat Assessment	
SCI/Biorecon																					
Water sample																					
RQ- 2017-04-24-28																					
20					80															Algal Thickness Rank	
																				N	
										3											
										4											
										5											
										6											
										30					90						
40					100																
										50										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%.																					