



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV

Yes No

WIN Station Name:	SOLDIER CREEK AT 150M UPSTREAM OF SR HWY 419				Sample Date:	2/27/2024	
WIN / Field ID:	G2CE0071	ORG ID:	21FLCEN	ENR:	-	Latitude:	28.7186
County:	SEMINOLE	WBID:	2986	STREAM		Longitude:	-81.31033
Receiving Body of Water:	Lake Jesup				RQ-	2024-02-26-24	

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Leif Boman		x		x	x
Victoria Schwartz	x		x		

Sampling Equipment				
x	Sample Container		Carboy	
	Dipper		Van Dorn	
	Syringe		Pole	
	Syringe Lot#	3066762	Filter Lot#	17769663
	Secchi Equipment ID:	Knothead		
Collection Method				
x	Wading		Canoe/Kayak	
	From Shore		Electric Motor	
			Gasoline Motor	
	Depth Measured With	Secchi		

Water Level:	Normal
Flow:	Flowing
Matrix:	Fresh
Tide Stage:	
High Tide:	
Low Tide:	
Photos:	Yes
Meter ID:	Craw Daddy
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	1030	0.5	0.25	8.57	89.2	17.2	7.42	0.5	256.1	0.12
								VOB (s)		

Biological Samples Collected: HA RPS SCI

SBIO Visit ID: 88503 HA ID: RPS ID: 10259 Macrophyte ID: LIMS Sample ID In The Macrophyte Module: 2472083

Parameter Suite	Parameter Methods (LIMS Test Codes)	Type	Lot#	Expiration Date	pH Check	
Microbiology						
Chlorophyll	CHLSUITE-W	ICE				
Physical/Aggregate	ALKALINITY, TURBIDITY, W-F, W-TSS	ICE				
Nutrients	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#:3066762; Filter Lot#:17769663			
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	HNO3**	NA3193130	07/27/2024	HNO3 pH<2
Organics (LC)	W-E8321-DI W-E8321-MS		MCAA***			
Macroinvertebrates	MI-FW-QLDC			8.280122TR		
Organics (GC)	W-PSNP-TQ W-TR-SQ-R	Ice	*2.0 ml of H2SO4 Used Unless Noted Otherwise **2.0 ml of HNO3 Used Unless Noted Otherwise			
Molecular						
Periphyton						
Phytoplankton						
BOD						
DOC			SyringeLot#		FilterLot#	
Other(s)						
Field Comments:	Sunny with cool morning temp / SCI Collection Time: 1100					No LVS (<2m2 veg)
Comments on COC:						
Relinquish Date:	02/27/2024	Signature:				

LIMS EVENT ID: 2024-02-28-01

WIN Import ID: 48580

Enter Field Parameters, Verify Station ID In LIMS DMT: KWM 4/2/24

QC Station ID, Field Parameters In LIMS DMT: VLS 4/4/24

Save Field Sheets on Network: KWM 6/7/24 (Initials/Date)

Migrate Data to WIN: KWM 6/7/24 (Initials/Date)

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

SAMPLE ID _____ ORG ID _____ LATITUDE 28.7186
COUNTY Seminole STORET # 62CED071 LONGITUDE -81.31033
DATE 2/27/24 TIME 10:30 SAMPLING AGENCY 21PLCEN
SITE NAME Soldier Creek at 150m upstream of SR Hwy 419
FIELD ID/NAME 62CED071 RECEIVING BODY OF WATER Lake Jesup

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)
<u>50</u>				<u>45</u>	<u>30</u>		<u>20</u>

Local Watershed Erosion (select one): ☐ None ☐ Slight ☒ Moderate ☐ Heavy
Local Watershed NPS Pollution: ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy

Width of Riparian Vegetation (m) on Each Buffer Side
Left Bank: >18 Right Bank: >18

Hydrologic Modification Score (per FT 3101) _____

High Water Mark: 0.4 + 0.5 = 0.9
(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%)

Typical Width (m) Depth (m)/Velocity (m/sec) Transect
3.5 m wide
_____ m/s 0.22 m/s _____ m/s
_____ m deep 0.5 m deep _____ m deep

Landscape Development Intensity Index (LDI) _____

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 (22m²)
Assessment Tool: ☒ SCI ☒ RPS ☐ LVS
☐ LCI ☐ BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)		<u>7</u>	
Undercut Banks / Roots		<u>7</u>	
Leaf Packs or Mat		<u>4</u>	
Aquatic Vegetation		<u>1</u>	
Rock or Shell Rubble..			
Sand.....		<u>1</u>	
Mud / Muck / Silt			
Other			
Other			

WATER QUALITY

Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top: <u>0.25</u>	<u>17.2</u>	<u>7.42</u>	<u>8.57</u>	<u>89.2</u>	<u>256.1</u>	<u>0.12</u>	<u>0.5</u>
Mid: _____							
Bottom: _____							

Meter ID: Crow Daddy

Water Odors: Normal ☒ Petroleum ☐
Sewage ☐ Chemical ☐ Other ☐

Water Surface Oils: Normal ☒ Sheen ☐
Globs ☐ Slick ☐ 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: _____

Color: Tannic ☒ Green (Algae) ☐
Clear ☐ Other (Specify) ☐

Clarity: Clear ☒ Slightly Turbid ☐
Turbid ☐ Opaque ☐

System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐

ABUNDANCE

	Not Obs.	Rare	Common	Abundant
Periphyton:	☒	☐	☐	☐
Fish:	☐	☒	☐	☐
Aquatic Plants:	☐	☒	☐	☐
Iron/Sulfur Bacteria:	☒	☐	☐	☐

AMBIENT FIELD CONDITIONS / NOTES:
• Sunny. County Fire/EMS training center nearby (downstream)
• Biking + hiking trails along both shorelines (unpaved)
(Soldiers Creek Park)
☒ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM: Leif Boman / Victoria Schwartz

SIGNATURE: _____ **DATE**: 2/27/24

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

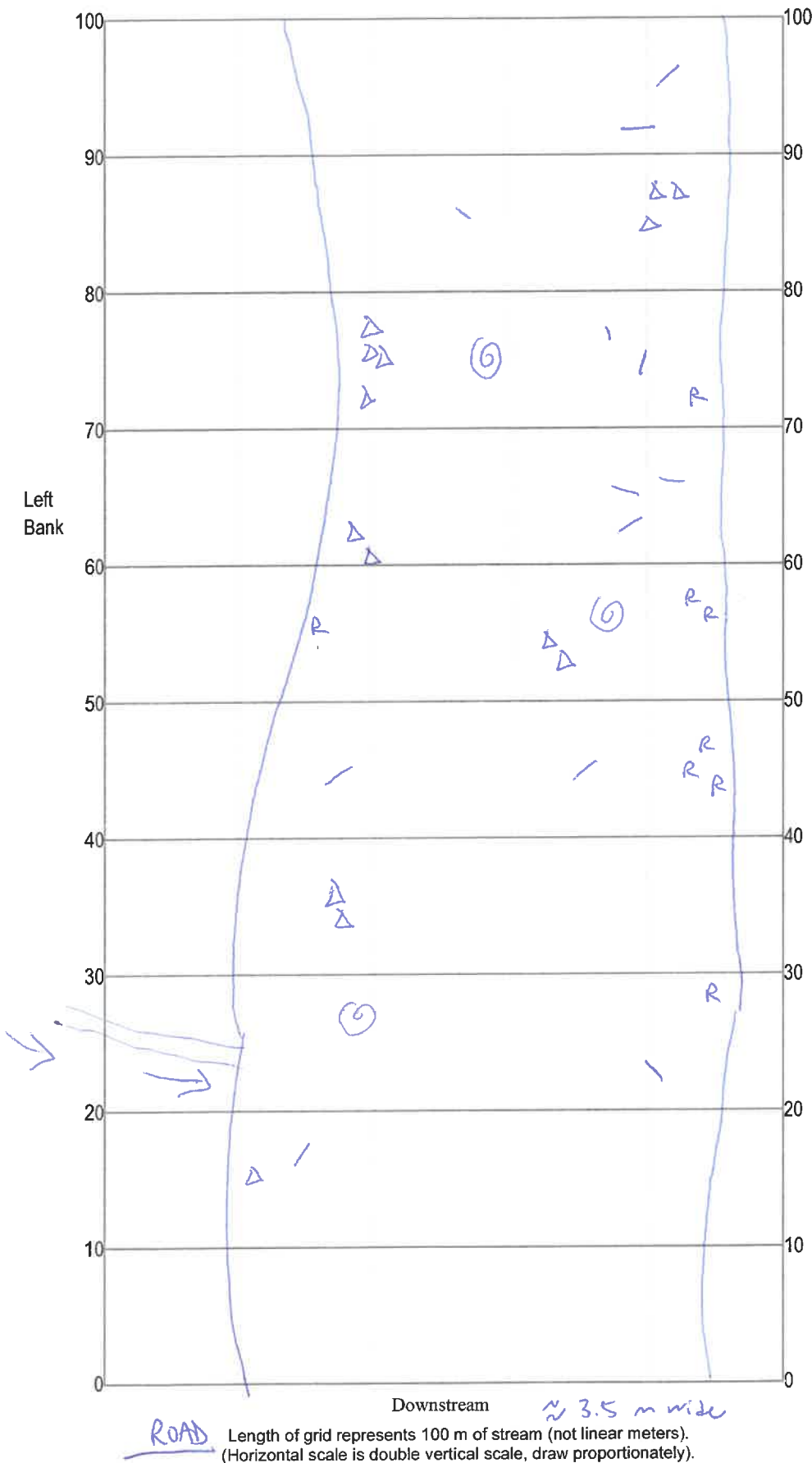
SAMPLING AGENCY: <u>21 FL CEN</u>		STORET STATION NUMBER: <u>62CE0071</u>	DATE (MM/DD/YY): <u>2/27/24</u>	RECEIVING BODY OF WATER: <u>Lake Jesup</u>
REMARKS: <u>Snags Roots Leaf packs mats</u>	COUNTY: <u>Seminole</u>	LOCATION: <u>Soldier Creek @ 150- US of SR Hwy 419</u>	FIELD ID/NAME: <u>62CE0071</u>	

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 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>3</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>14</u> <u>4.5</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> <u>3.5 wide</u> Primary Score <u>36</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>5</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>3</u> Left Bank <u>3</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>9</u> Left Bank <u>9</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>6</u> Left Bank <u>6</u>	10 9	8 7 6	5 4	3 2 1
Secondary Score <u>41</u>				

TOTAL SCORE

Date: <u>2/27/24</u>	Analyst: <u>Leif Boman / Victoria Schwartz</u>	Signature: <u>[Signature]</u>
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: Solder Creek
 Date: 2/27/24
 Sampler: Leif Boman + Victoria Schuch

100 m: Latitude	
Longitude	
0 m: Latitude	≈ 28.7186
Longitude	≈ -81.31033
Substrates: Code key, draw proportionate habitat abundance. %	
☒ Snags	≈ 2
☒ Roots/undercut banks	≈ 0.5
☒ Leaf Packs (or mats)	≈ 0.5
☒ Aquatic Macrophytes	
☐	
☐	
☒ Pools	total # observed = <u>3</u> # range expected = <u>3-6</u>
Average width <u>3.5</u> m	
Average depth <u>0.5-0.7</u> m	
Velocity measured at <u>20</u> meter mark.	
WQ & chemistry taken at <u>0</u> 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:

- Aquatic ~~fern~~^{moss}: Fontinalis
 - Shallow/unstable pools
 - Steep shorelines w/ biking and hiking dirt paths
- (Soldier Creek Park)

[illegible]

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Investigators Kef Boman / Victoria Schwark										2/27/24		County: Semihole	
STORET Station Number: WIN G2CE0071													
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				60	1							
	2					2							
	3					3							
	4					4							
	5	N		82		5	N		90				
	6					6							
	7					7							
	8					8							
	9					9							
10	1				70	1							
	2					2							
	3					3							
	4					4							
	5	N		87		5	N		84				
	6					6							
	7					7							
	8					8							
	9					9							
20	1				80	1							
	2					2							
	3					3							
	4					4							
	5	N		92		5	N		79				
	6					6							
	7					7							
	8					8							
	9					9							
30	1				90	1							
	2					2							
	3					3							
	4					4							
	5	N		89		5	N		85				
	6					6							
	7					7							
	8					8							
	9					9							
40	1				100	1							
	2					2							
	3					3							
	4					4							
	5	N		94		5	N		92				
	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	N		87									
	6												
	7												
	8												
	9												

Secchi depth 0.5 (vob)
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
Linear Veg Survey
Habitat Assessment
SCI/Biorecon
Water sample
RQ- 2024-02-26-24

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

NO periphyton observed