



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

STRATEGIC MONITORING PLAN FIELD SHEET

January 2022

Meter Passed End
of Day CCV
Yes / No

WIN Station Name: Crooked River @ Post 46 **Date:** 4/20/2022
WIN/Field ID: G2TLHR0038 **WBID:** 1251 **ENR:** - **Latitude:** 29.9
County: FRANKLIN **Org ID:** 21FLTLHR **Longitude:** -84.65
Receiving Body of Water: New River Marine Segment **RQ:** 2022-01-03-58

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Jonathan Woods	x		x		
☒	Jade Burtchett		x		x	x
☐						
☐						

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☒ Syringe	☐ Pole
Depth measured with: Sonar	
Secchi Equipment ID:	
Collection Method	
☐ Wading	☐ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other	☒ Gasoline Motor

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# 21K100690	
Photos: NO	Flow: FLOW			Tide:		Tide Times: High: Low:	
Biological Samples Collected:		☒ None	☐ HA	☐ SCI	☐ RPS	☐ Algae ID	☐ LVS ☐ LVI Other:
SBIO ID Numbers:							
Notes:							

Duplicate Sample

Time Zone: EST	Time:	Field ID: N/A	(WIN ID_DUP)
WIN DMT Activity ID:			

Blank

Time Zone:	Time:	Field ID:	(Blank Type_DDMMYYYY)
DI Source:	Location:		
DI Type:	Equipment ID:		
DI Container (Name/ID):		DI Container Type:	

LIMS EVENT ID: WIN Import ID:
Enter Field Parameters, Verify Station ID In LIMS DMT: QC Station ID, Field Parameters In LIMS DMT:
(Initials/Date) (Initials/Date)
Scan/Save Field Sheets Migrate Data to WIN: Verify Data In WIN:
(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2022-01-03-58
Customer: TLH-DIST
Project ID: STRATEGIC MONITORING PLAN

Collected By: Jonathan Woods, Jade Burtchett
Field Report Prepared By: Jonathan Woods
Sampling Agency: FDEP

Place Label Here						Comments:					
WIN ID/Field ID: G2TLHR0038											
Location: Crooked River @ Post 46											
Matrix: Fresh						(Check one) ☒ GRAB ☐ COMPOSITE					
Date	Time	DO (mg/L)	DO (%SAT)	Temp. (C°)	pH	Sample Depth (m)	Secchi Disk (m)	Total Depth (m)	Sp COND (µmhos/cm)	Salinity (PPTH)	
4/20/2022	1210 EST	5.43	62.4	22.2	6	0.3	☐ VOB (S)	0.8	118	0.05	
	EST						Central Lab please use top row for login purposes				
Parameter Suite		Parameter Methods				Preservation		pH Check	# Bottles sent to Lab	Bottle Group	
Preserved Nutrients (P-500ML)		☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP				☒ Ice ☒ H2SO4*		☒ <2	1	A	
		Lot #	1308030		Exp:	12/1/22					
Metals (P-500ML)		☒ W-ICPMS ☒ W-ICP ☒ W-HARD				☒ Ice ☒ HNO3*		☒ <2	1	A	
		Lot #	1105100		Exp:	6/7/22					
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice			1	A	
		Filter Lot #	17347262			Syringe Lot #	1091364				
BOD (BP-1L)		☐ OV-BODUNIN				☐ Ice					
Chlorophyll (BP-1L)		☒ CHLSUITE-W				☒ Ice			1	A	
Physical/Aggregate (Fresh) (P-1L)		☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS				☒ Ice			1	A	
Physical/Aggregate (Marine) (P-1L)		☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY				☐ Ice					
Macroinvertebrates (PJ-2L)		☐ MI-FW-QLDC				☐ Formalin					
Periphyton (PT-50ML)		☐ ALGAE-ID				☐ Ice					
Microbiology (Contract Lab Bottle)		☒ E Coli ☐ F Coli ☐ Enterococci ☐ Contract Lab				☒ Ice			1	A	
Molecular (QPCR-P-500ML)		☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-DG3 ☐ PCR-GULL2 ☐ PCR-GFD				☐ Ice					
Tracers (BG-500ML)		☐ W-E8321-DI ☐ W-E8321-MS				☐ Ice		MCAA Exp.			
Pesticides (BG-500ML) (BG-1L)		☒ W-E8321-DI	☒ WE8321-MS	☒ W-PSNP-TQ	W-CT-CL-R		☒ Ice	MCAA Lot#	5 or 3	A	
		W-PCL-TQ-R		W-CARB-AA (5 ml of MCAA** Buffer Solution)		W-TR-SQ-R					
		W-PCB-TQ-R									
Phytoplankton/Periphyton		DTY-QN-C PKD-QN-C				☐ Ice					
Name: Jonathan Woods Jade Burtchett					Signature:					Date: 04/20/2022	

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

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

84030

SAMPLE ID _____ ORG ID _____ LATITUDE _____
 COUNTY Franklin STORET # _____ LONGITUDE _____
 DATE 04/20/22 TIME 1210 SAMPLING AGENCY _____
 SITE NAME Crooked River @ Post 46
 FLD ID/NAME G2TLHPC038 RECEIVING BODY OF WATER _____

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>10</u>	<u>80</u>			<u>10</u>			

Landscape Development Intensity Index (LDI) _____

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: 718 Right Bank: 718

Hydrologic Modification Score (per FT 3101) _____

High Water Mark: 0.2 + 0.8 = 1.0
 (m) (above present water level) (present depth) (above bed)

Artificially Impounded
☐ Yes ☒ No

Typical Width (m) Depth (m)/Velocity (m/sec) Transect

<u>0.14</u> m/s	<u>0.14</u> m/s	<u>0.14</u> m/s
<u>0.5</u> m deep	<u>0.6</u> m deep	<u>0.3</u> m deep

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

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	<u>0.3</u>		
Undercut Banks / Roots			
Leaf Packs or Mat			
Aquatic Vegetation	<u>2.9</u>		
Rock or Shell Rubble..			
Sand.....			
Mud / Muck / Silt	<u>96.72</u>		
Other	<u>96.72</u>		
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>0.3</u>	<u>22.2</u>	<u>6</u>	<u>5.43</u>	<u>62.4</u>	<u>118</u>	<u>0.05</u>	
Mid:								☐ VOB
Bottom								

Meter ID: 21K100690 **TOTAL DEPTH** 0.8

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

Water Surface Oils Normal ☒ Sheen ☐
 Globbs ☐ Slick ☐ Other ☐

Water Sample Taken? ☒ Yes ☐ No
Sample Preserved? ☒ Yes ☐ No
 Lot Number: _____ Exp: _____

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

Algae Sample Taken? ☐ Yes ☒ No
Sample Preserved? ☐ Yes ☒ No
 Lot Number: _____ Exp: _____

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:
☒ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM J. Bortchert, J. Woods **SIGNATURE:** Gabe **DATE:** 04/20/20

Downstream

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

Plants observed / other notes:

Revision Date: January 2017

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

17312 ✓

SAMPLING AGENCY: <u>21 FTLHR</u>		STORET STATION NUMBER: <u>G2TLHR0038</u>	DATE (MM/DD/YY): <u>04/20/22</u>	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: <u>Franklin</u>	LOCATION: <u>Crooked River @ Post 46</u>		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>9</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>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	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 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>15</u> Primary Score <u>39</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>20</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability Right Bank <u>10</u> Left Bank <u>10</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>10</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>7</u> Left Bank <u>7</u> Secondary Score <u>74</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

113

TOTAL SCORE

Date: <u>04/24/22</u>	Analyst: <u>Woods / Butchett</u>	Signature: <u>[Signature]</u>
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9930

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Crooked River @ Post 46</u>					County: <u>Franklin</u>		Date: <u>04/20/20</u>		Investigators: <u>J. Burchett, J. Woods</u>	
									STORET Station Number: <u>G2TLH20038</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	X			60	1	X		
	2	N	Y			2	N	Y	
	3					3			
	4					4			
	5			0		5			0
	6					6			
	7					7			
	8					8			
	9	X				9	X		
10	1	X			70	1	X		
	2	N	Y			2	N	Y	
	3					3			
	4					4			
	5			0		5			0
	6					6			
	7					7			
	8					8			
	9	X				9	X		
20	1	X			80	1	X		
	2	N	Y			2	N	Y	
	3					3			
	4					4			
	5			0		5			0
	6					6			
	7					7			
	8					8			
	9	X				9	X		
30	1	X			90	1	X		
	2	N	Y			2	N	Y	
	3					3			
	4					4			
	5			0		5			0
	6					6			
	7					7			
	8					8			
	9	X				9	X		
40	1	X			100	1	X		
	2	N	Y			2	N	Y	
	3					3			
	4					4			
	5			0		5			0
	6					6			
	7					7			
	8					8			
	9	X				9	X		
50	1	X				1	X		
	2	N	Y			2	N	Y	
	3					3			
	4					4			
	5			0		5			0
	6					6			
	7					7			
	8					8			
	9	X				9	X		

Secchi depth	0.8
Estimated?	

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

Check accompanying data collected at same site/date.	
Algal mat sample	
Linear Veg Survey	X
Habitat Assessment	X
SCI/Biorecon	
Water sample	X
RQ-2022-01-03-56	

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

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%.

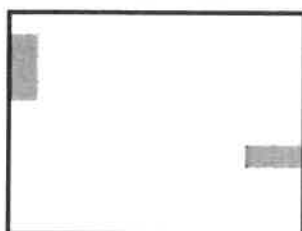
12152

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET																								
Waterbody: Crooked River @ Post #6						Date: 6/20/22		County: Franklin				Storet Number: G-2TLH20038												
Analyst: J. Burchett, J. Woods						Signature: [Handwritten Signature]																		
Comments:																								
Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1m ² 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.																								
	Meter Mark												Meter Mark											
HERBACEOUS SPECIES	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)	HERBACEOUS SPECIES	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)	
Alternanthera philoxeroides	✓	✓		✓				✓	.	✓		Micranthemum glomeratum												
Bacopa caroliniana												Micranthemum umbrosum												
Bacopa monnieri												Myriophyllum aquaticum											✓	
Bidens bitis												Najas guadelupensis												
Boehmeria cylindrica								✓	✓			Nuphar luteum	✓											
Centella asiatica												Orontium aquaticum												
Ceratophyllum demersum												Panicum hemitomon												
Chara												Panicum repens												
Cicuta maculata								✓				Panicum rigidulum												
Cladium jamaicense	D	D	D	D	D	D	D	D	D	D		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 kurziana												
Hydrocotyle												Sagittaria lancifolia	✓	✓	✓	✓	✓		✓	✓	✓			
Hygrophila polysperma												Sagittaria latifolia												
Hymenocallis												Salvinia minima									✓	✓		
Lachnanthes caroliniana												Samolus parviflora												
Landoltia punctata												Saururus cernuus												
Lemna												Sparganium americanum												
Limnophila sessiflora												Typha	✓	✓	✓	✓		✓	✓					
Ludwigia leptocarpa												Vallisneria americana												
Ludwigia palustris												Zizania aquatica												
Ludwigia peruviana												Mercurialis annua												
Ludwigia repens												Unknown 1 (lg)	✓	✓	✓	✓	✓			✓	✓	✓		
Luziola fluitans																								

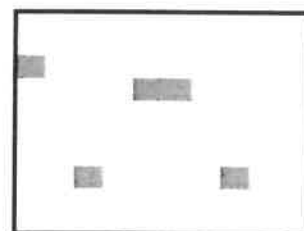
FDEP FORM FD 9000-32 LINEAR VEGETATION SURVEY FIELD SHEET

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

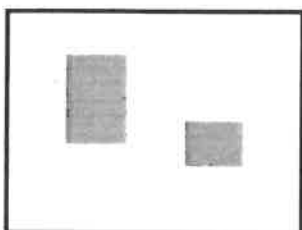
5% Macrophyte Coverage



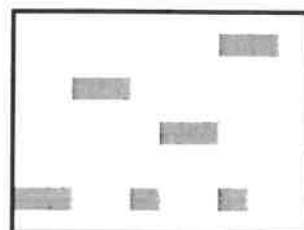
5% Macrophyte Coverage



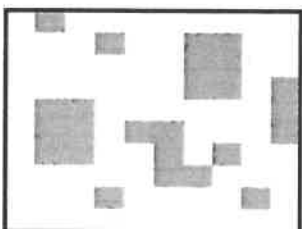
10% Macrophyte Coverage



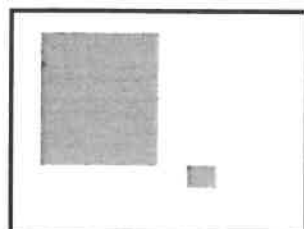
10% Macrophyte Coverage



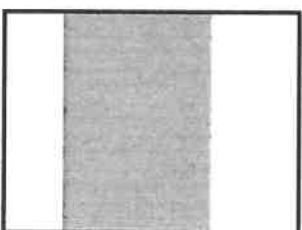
25% Macrophyte Coverage



25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage

