



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PLAN FIELD SHEET

January 2020

Meter Passed End
of Day CCV
Yes / No

WIN Station Name: Owl Creek @ SR78

Date: 12/16/2021

WIN/Field ID: G3SD0207

WBID: 3240N

ENR: -

Latitude: 26.7401

County: LEE

Org ID: 21FLFTM

Longitude: -81.76

Receiving Body of Water: Caloosahatchee

RQ: 2021-12-13-48

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Nicole Reistad	x		x		
☒	Thomas Baker		x		x	x
☐						
☐						

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

Water Level: ☐ Normal ☒ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# FRIDAY					
Photos: YES		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_DDDMMYYY)
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: _____ (Initials/Date) QC Station ID, Field Parameters In LIMS DMT: _____ (Initials/Date)

Scan/Save Field Sheets _____ (Initials/Date) Migrate Data to WIN: _____ (Initials/Date) Verify Data In WIN: _____ (Initials/Date)



RQ-2021-12-13-48

Customer: WQAP

Project ID: SMP

Collected By: Nicole Reistad, Thomas Baker

Field Report Prepared By: Nicole Reistad

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G3SD0207

Location: Owl Creek @ SR78

Comments: Microbiology sample(s) submitted to contract laboratory

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 (PPT)		
	1000 EST	2.63	29.5	20.9	7.25	0.1	0.2 ☒ VOB (S)	0.2	727	0.36		
12/16/2021												
	EST											
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 #	SA1105060		Exp:	04/30/22						
Metals (P-500ML)		☒ W-ICPMS ☒ W-ICP ☒ W-HARD				☒ Ice ☒ HNO3*		☐ <2	1	A		
		Lot #	NA1105100		Exp:	06/07/22						
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice			1	A		
		Filter Lot #	17162587									
		Syringe Lot #	1091364									
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 Lot #			☐ Formalin						
Periphyton (PT-50ML)		☐ ALGAE-ID				☐ Ice						
Microbiology (Contract Lab Bottle)		☒ E Coli ☐ F Coli ☐ Enterococci				☒ 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						
Pesticides (BG-500ML) (BG-1L)		☒ W-E8321-DI	☒ WE8321-MS	☒ W-PSNP-TQ	W-CT-CL-R	☒ Ice			5 or 3	A		
Phytoplankton/Periphyton		W-PCL-TQ-R	W-CARB-AA (5 ml of MCAA** Buffer Solution)	DTY-QN-C	PKD-QN-BV	☐ Ice						
Name: Nicole Reistad Thomas Baker					Signature:				Date:			

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

SAMPLE ID _____ ORG ID 21FLFTM LATITUDE _____
COUNTY Lee STORET # _____ LONGITUDE _____
DATE 12/16/2021 TIME 1000 SAMPLING AGENCY DEP-SROC
SITE NAME Owl Creek @ SR78
FIELD ID/NAME G38D0203 RECEIVING BODY OF WATER Caloosahatchee River

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>20</u>		<u>80</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 : 113 Right Bank : 146 87

Hydrologic Modification Score (per FT 3101)

High Water Mark: 0.7 + 0.2 = 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

0.02 m/s 0.04 m/s 0.02 m/s

0.1 m deep 0.3 m deep 0.1 m deep

SEDIMENT / SUBSTRATE

Sediment Oils
☒ Absent ☐ Slight
☐ Moderate ☐ Profuse

Sediment Odors
☐ Normal ☐ Sewage ☐ Petroleum
☐ Chemical ☐ Anaerobic
☒ Other (Specify) : Iron

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>1.0</u>	<u>—</u>	<u>—</u>
Undercut Banks / Roots	<u>8.15</u>	<u>—</u>	<u>—</u>
Leaf Packs or Mat	<u>0</u>	<u>—</u>	<u>—</u>
Aquatic Vegetation	<u>0</u>	<u>—</u>	<u>—</u>
Rock or Shell Rubble..	<u>0</u>	<u>—</u>	<u>—</u>
Sand.....	<u>90</u>	<u>—</u>	<u>—</u>
Mud / Muck / Silt	<u>—</u>	<u>—</u>	<u>—</u>
Other	<u>—</u>	<u>—</u>	<u>—</u>
Other	<u>—</u>	<u>—</u>	<u>—</u>

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top :	<u>0.1</u>	<u>20.9</u>	<u>7.25</u>	<u>2.63</u>	<u>29.5</u>	<u>727</u>	<u>0.36</u>	<u>0.2</u>
Mid:								☒ VOB
Bottom								

Meter ID: FRIDAY **TOTAL DEPTH** 0.2

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: _____

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
Nicole Reistad, Thomas Baker

SIGNATURE: Nicole Reistad **DATE:** 12/16/2021

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: NRG3SD0207 Owl Creek County: Lee Date: 12/16/21 Investigators: Nicole Reistad

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					2				
	3					3				
	4					4				
	5			96		5			96	
	6					6				
	7					7				
	8					8				
	9	X				9	X			
10	1	N			70	1	N			
	2					2				
	3					3				
	4					4				
	5			96		5			93	
	6					6				
	7					7				
	8					8				
	9	X				9	X			
20	1	N			80	1	N			
	2					2				
	3					3				
	4					4				
	5			91		5			96	
	6					6				
	7					7				
	8					8				
	9	X				9	X			
30	1	N			90	1	N			
	2					2				
	3					3				
	4					4				
	5			95		5			93	
	6					6				
	7					7				
	8					8				
	9	X				9	X			
40	1	N			100	1	N			
	2					2				
	3					3				
	4					4				
	5			96		5			96	
	6					6				
	7					7				
	8					8				
	9	X				9	X			
50	1	N				1	N			
	2					2				
	3					3				
	4					4				
	5			96		5				
	6					6				
	7					7				
	8					8				
	9	X				9	X			

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%.

STORET Station Number: G3SD0207

Secchi depth 0.2
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	<u><2m</u>
Habitat Assessment	<u>✓</u>
SCI/Biorecon	
Water sample	<u>✓</u>

RQ- 2021-12-13-48

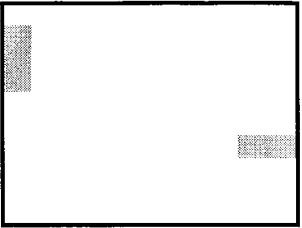
Algal Thickness Rank	
N	rough, no algae, slimy, algae up to 1mm
3	>1mm - 6mm
4	>6mm - 20mm
5	>20mm - 10 cm
6	>10 cm

[illegible]

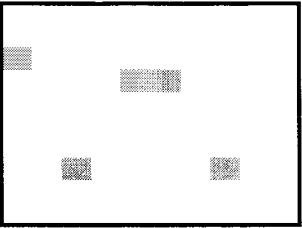
NO VEGETATION —

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

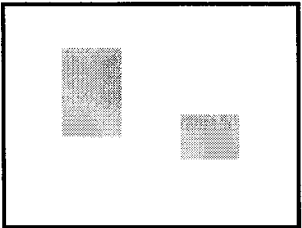
5% Macrophyte Coverage



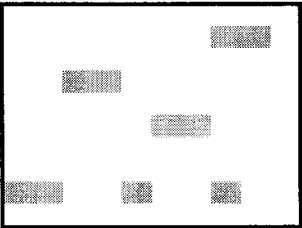
5% Macrophyte Coverage



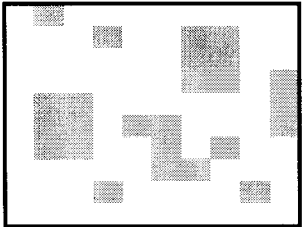
10% Macrophyte Coverage



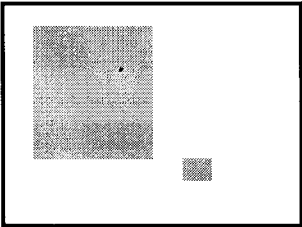
10% Macrophyte Coverage



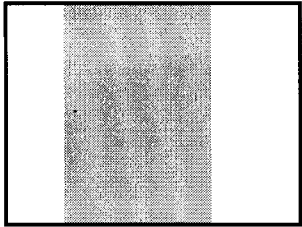
25% Macrophyte Coverage



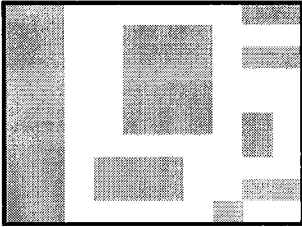
25% Macrophyte Coverage



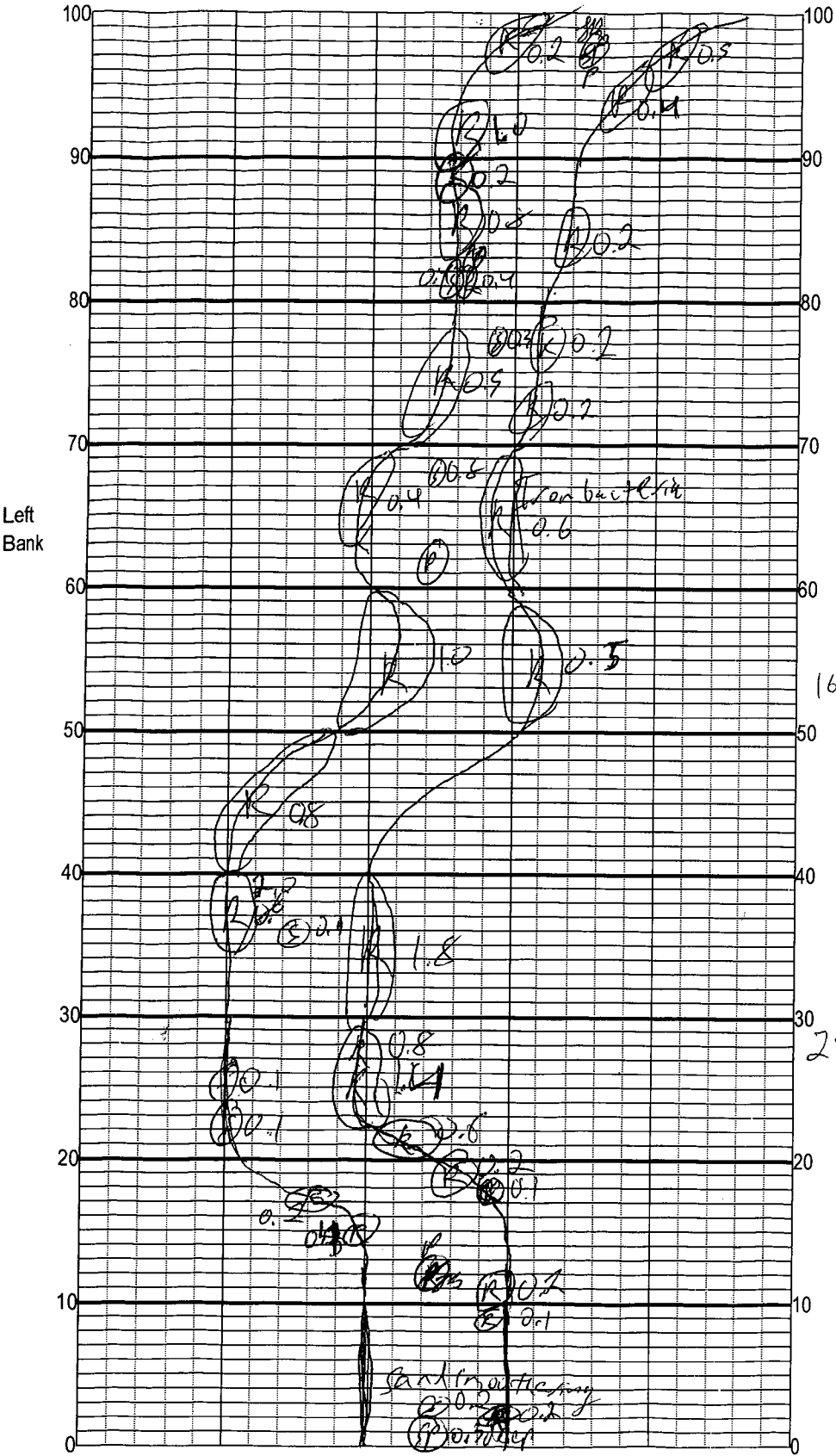
50% Macrophyte Coverage



50% Macrophyte Coverage



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).

Location: Owl Creek

Date: 12/16/21

Sampler: Thomas Baker, Nicole Reiff

100 m: Latitude 26.7410606
Longitude -81.7563134

0 m: Latitude 26.740577
Longitude -81.7558483

Substrates: Code key, draw proportionate habitat abundance. %

S Snags 1

R Roots/undercut banks 8.15

LP Leaf Packs (or mats) 0

Am Aquatic Macrophytes 0

SP Slow Pools

P Pools total # observed = 4
range expected = 4-8

Average width 2 m

Average depth 0.2 m

Velocity measured at 0 meter mark.

WQ & chemistry taken at 0 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:

velocity 9m
1/26 m/s = 0.038 m/s
0.04

velocity = 0.04

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

SAMPLING AGENCY: <u>FDNR SRO</u>		STORET STATION NUMBER: <u>638207</u>	DATE (MM/DD/YY): <u>12/16/21</u>	RECEIVING BODY OF WATER: <u>Culpeper Creek</u>
REMARKS:	COUNTY: <u>Lee</u>	LOCATION: <u>On Creek</u>	FIELD ID/NAME: <u>On Creek</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>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>7</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 <u>7</u> 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>4</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 <u>4</u> 3 2 1
Habitat Smothering <u>11</u> ----- Primary Score <u>29</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 <u>11</u>	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>	<u>20</u> 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability Right Bank <u>9</u> Left Bank <u>9</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 <u>9</u>	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>9</u> Left Bank <u>9</u>	Width of vegetation greater than 18 m 10 <u>9</u>	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>97</u> Left Bank <u>97</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 <u>9</u>	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed. 8 <u>7</u> 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

210399 TOTAL SCORE

Date: <u>12/16/21</u>	Analyst: <u>Nicole Reistad, Thomas Baker</u>	Signature: <u>[Signature]</u>
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