



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: Robert's Canal @ SR 80

Date: 10/21/2019

WIN/ Field ID: G3SD0146

WBID: 3235N

Latitude: 26.71279246

(Decimal Degrees)

County: Hendry

ORG ID: 21FLFTM

Longitude: -81.504321822

(Decimal Degrees)

Receiving Body of Water: Caloosahatchee

RQ-2019-10-21-70

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment			
Gary Snorek			X		X		☒ Sample Container	☐ Van Dorn	☐ Pole	
John Barrington		X		X		X	☐ Carboy	☒ Syringe		
							☐ Dipper	☐ Other		
							Depth Measured with <u>SECCHI</u>			
							Equipment ID <u>DEB BLUE</u>			
							Collection Method			
							☒ Wading			☐ Canoe/Kayak
							☐ From Shore			☐ Electric Motor
							☐ Other			☐ Gasoline Motor

Water Level: Dry/ Pooled/ Low / <u>Normal</u> / High / Flooded		Meter ID# <u>PRO MOVE</u>	Matrix: <u>Fresh</u> / Marine / DI
Photos: Yes / <u>No</u>	Flow: No Flow / Interstitial / <u>Flowing</u> / NA	Tide: Rising/ Falling/ Slack/ <u>NA</u>	Tide Times: High Low

Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPT)	Sp COND (umhos/cm)	Temp. (C°)
<u>EST</u>	<u>1115</u>	<u>0.8</u>	<u>0.3</u>	<u>0.8</u>	<u>4.30</u>	<u>54.4</u>	<u>7.38</u>	<u>0.23</u>	<u>189.2</u>	<u>27.1</u>
CEN	<u>-</u>	<u>-</u>	<u>-</u>	<u>"S"</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

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

SPIO ID Numbers: SBIO-ID: 80500 HA-ID: 16398 RPS-ID: 9493 Macrophyte-ID: 11550 LIMS#: 2130206

Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / ☐ W-NO2NO3 / ☐ W-TKN / ☐ W-TOC / ☐ W-S-A-TP	☒ Ice ☒ H2SO4	<u>SA7163030</u>	<u>RECENT</u>	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3		<u>10/30/19</u>	☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um Filter	☒ Ice			
Chlorophyll	☒ CHLSUITE-W	☐ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / ☐ W-F / ☐ W-TSS / ☐ TURBIDITY / ☐ W-CHC / ☐ W-COLOR / ☐ W-SO4-IC / ☐ W-TDS	☒ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / ☐ W-BR-IC / ☐ W-F / ☐ W-TSS / ☐ TURBIDITY	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Periphyton	☐ ALGAE-ID	☐ Ice			
Microbiology	☒ E Coli ☐ F Coli ☐ Enterococci	☒ Ice			
Molecular	☐ PCR-FILTER ☒ PCR-BacR ☐ PCR-GULL2	☒ Ice			
	☒ PCR-HF183 ☐ PCR-DG3 ☐ PCR-GFD				
Tracers	☒ W-E8321-DI ☒ W-E8321-MS	☒ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-E8321-DI	☐ Ice			
	☐ W-PCL-SQ-R ☐ W-E8321-MS ☐ W-CARB-AA				
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C	☐ Ice			

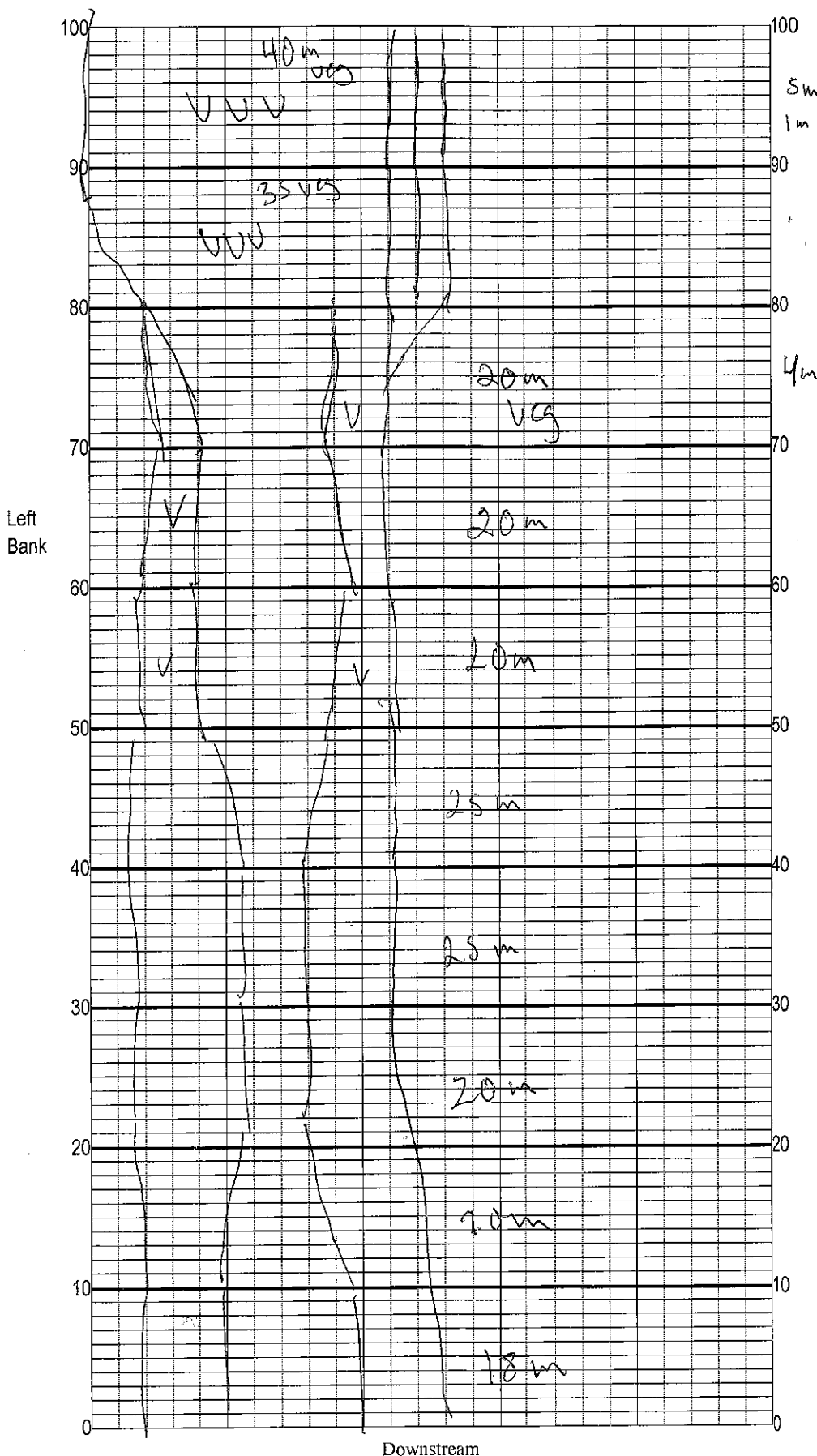
Notes: <u>SECCHI VISIBLE ON BOTTOM</u>	Field ID/WIN ID <u>G3SD0146</u>
Signature: <u>[Signature]</u>	Location <u>Robert's Canal @SR80</u>
	Date: <u>10/21/19</u>

LIMS EVENT ID: SO-DIST-2019-10-22-02 WIN Import ID: _____

Enter Field Parameters, Verify Station ID in LIMS DMT: CA 12/13/19 QC Station ID, Field Parameters in LIMS DMT: _____

Scan/Save Field Sheets YAR 11/26/19 Migrate Data to WIN: _____ Verify Data in WIN: _____

(Initials/Date) (Initials/Date) (Initials/Date)

Left
Bank

62-160.800, F.A.C

Plants observed / other notes:

Revision Date: March 1, 2014

G3SD0146 ROBERTS BRANCH

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD

Storet Number: * put sticker here

Date: 10/21/19

County: HENRY

Waterbody: ROBERTS CREEK

Analyst: JOHN BARRINGTON

Signature: 

Comments:

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m² 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. **bold is exotic invasive**

HERBACEOUS SPECIES	Meter Mark										Specimen collected (check)	HERBACEOUS SPECIES	Meter Mark										Specimen collected (check)
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100			0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	
Alternanthera philoxeroides	X	X	X	X					X	X		Micranthemum glomeratum											
Bacopa caroliniana												Micranthemum umbrosum	X										
Bacopa monnieri												Myriophyllum aquaticum											
Bidens mitis												Najas guadelupensis											
Boehmeria cylindrica												Nuphar luteum											
Centella asiatica												Orontium aquaticum											
Ceratophyllum demersum												Panicum hemitomon											
Chara sp.												Panicum repens											
Cicuta maculata												Panicum rigidulum											
Cladium jamaicense												Pistia stratioides	C	C	X	X	X	X	X	X	X	X	
Colocasia esculenta			X	X	X	X	X	X	X	X		Polygonum glabra											
Commelina diffusa												Polygonum hydropiperoides				X	X	X	X	X	X	X	
Commelina virginica												Polygonum punctatum											
Crinum americanum												Pontedaria cordata											
Cyperus ODORATUS	X											Potamogeton illinoensis											
Diodia virginiana												Ruellia simplex											
Eichhornia crassipes	X	X	X	X	X	X	X	X	X	X		Sacciolepis striata											
Eleocharis (wispy viviparous)												Sagittaria kurziana											
Hydrilla verticillata												Sagittaria lancifolia											
Hydrocotyle sp.	X	X	X	X	X	X	X	X	X	X		Sagittaria latifolia											
Hygrophila polysperma	X	X	X	X	X	X	X	X	X	X		Salvinia minima											
Hymenachne amplexicaulis	X	X	X	X	X	X	X	X	X	X		Samolus parviflora											
Hymenocallis												Saururus cernuus											
Lachnanthes caroliniana												Sparganium americanum											
Landoltia punctata												Sphagneticola trilobata (Wedelia)											
Lemna sp.	X	X										Typha sp.											
Limnophila sessiflora												Urochloa mutica (Brachiaria)	C	C	X	X	X	X	X	X	X	X	
Ludwigia leptocarpa												Vallisneria americana											
Ludwigia palustris												Zizania aquatica											
Ludwigia peruviana			X	X	X	X	X	X	X	X		SHINUS TERBINTHACEA										X	
Ludwigia repens												EUPATORIUM CAPRILLUM										X	
Luziola fluitans												POTAMOGETON DROSRUPES										X	
If no Dominant or Co-Dominant were selected, indicate with "X"			X	X	X	X	X	X	X	X													
Indicate % cover macrophytes per section																							
0-5% Macrophyte Coverage																							
>5 and ≤10% Macrophyte Coverage																							
>10 and ≤25% Macrophyte Coverage		X	X	X				X	X	X													
>25 and ≤50% Macrophyte Coverage					X	X				X													
> 50% Macrophyte Coverage																							

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: ROBERTS CREEK County: HENRY Date: 10/21/19 Investigators: 16HAI BURLINGTON GARY SWOREK

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		
	2	X		
	3	X		
	4	X		
	5	X		0
	6	X		
	7	X		
	8	X		
	9	X		
10	1	X		
	2	X		
	3	X		
	4	X		
	5	X		0
	6	X		
	7	X		
	8	X		
	9	X		
20	1	X		
	2	X		
	3	X		
	4	X		
	5	X		0
	6	X		
	7	X		
	8	X		
	9	X		
30	1	X		
	2	X		
	3	X		
	4	X		
	5	X		0
	6	X		
	7	X		
	8	X		
	9	X		
40	1	X		
	2	X		
	3	X		
	4	X		
	5	X		0
	6	X		
	7	X		
	8	X		
	9	X		
50	1	X		
	2	X		
	3	X		
	4	X		
	5	X		0
	6	X		
	7	X		
	8	X		
	9	X		
60	1	X		
	2	X		
	3	X		
	4	X		
	5	X		0
	6	X		
	7	X		
	8	X		
	9	X		
70	1	X		
	2	X		
	3	X		
	4	X		
	5	X		0
	6	X		
	7	X		
	8	X		
	9	X		
80	1	X		
	2	X		
	3	X		
	4	X		
	5	X		0
	6	X		
	7	X		
	8	X		
	9	X		
90	1	X		
	2	X		
	3	X		
	4	X		
	5	X		0
	6	X		
	7	X		
	8	X		
	9	X		
100	1	X		
	2	X		
	3	X		
	4	X		
	5	X		0
	6	X		
	7	X		
	8	X		
	9	X		

STORET Station Number: G3SD0146

Secchi depth 0.3
Estimated? "5"

points ranked 4-6 0
total points assessed 10
% points ranked 4-6 0

Check accompanying data collected at same site/date
Algal mat sample
Linear Veg Survey X
Habitat Assessment X
SCI/Biorecon
Water sample X
RQ-2019-10-21-70

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%.

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

SAMPLE ID RA-2019-10-21-70 ORG ID 8052 21FLFTM LATITUDE 26.71279246
 COUNTY Henry STORET # NR LONGITUDE -81.504321822
 DATE 10/21/2019 TIME 1115 SAMPLING AGENCY FDEPSROC
 SITE NAME Roberts Canal @ SR 80
 FIELD ID/NAME 435004 G35D0146 RECEIVING BODY OF WATER Calooshathee 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>10</u> <u>85</u> <u>5</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u>								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) Depth (m)/Velocity (m/sec) Transect <u>8</u> m wide <u>0.10</u> m/s <u>0.10</u> m/s <u>0.10</u> m/s			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>5</u> Right Bank: <u>3</u>						Hydrologic Modification Score (per FT 3101) ☐			
High Water Mark: <u>1.0</u> + <u>1.5</u> = <u>2.5</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 ☒ HA % Coverage ☐ INVERT # Times Sampled ☐ PERI # Times Sampled			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>27.1</u> <u>7.38</u> <u>4.30</u> <u>54.4</u> <u>489.2</u> <u>0.23</u> <u>0.8</u> Mid: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☒ VOB Bottom: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Meter ID: <u>Profloure</u> TOTAL DEPTH <u>0.8</u>					
Woody Debris (Snags) <u>0</u> Undercut Banks / Roots <u>0</u> Leaf Packs or Mat <u>0</u> Aquatic Vegetation <u>33</u> Rock or Shell Rubble <u>0</u> Sand <u>0</u> Mud / Muck / Silt <u>0</u> Other ☐ Other ☐			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: <u>SA7163030</u> Exp: <u>10/24/18</u>			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 ☐		
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☒ ☐ ☐ ☐ Fish: ☐ ☒ ☐ ☐ Aquatic Plants: ☐ ☐ ☐ ☒ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐			System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☒ <u>Canal</u>					
AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.								

SAMPLING TEAM John Berenboon Gary Sworen SIGNATURE: [Signature] DATE: 11/25/19

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

PUT STICKER UP ^ HERE		STORET STATION NUMBER:	DATE (MM/DD/YY): 10/21/19	SAMPLING AGENCY: FDEP South ROC
FIELD ID/NAME: C3500146	COUNTY: Charlotte	LOCATION: Roberts Canal		RECEIVING BODY OF WATER: Catawba River

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>16</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>11</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>7</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 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>2</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 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 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>2</u> Left Bank <u>3</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>2</u> Left Bank <u>2</u> ----- Secondary Score <u>19</u>	10 9	8 7 6	5 4	3 2 1

58 TOTAL SCORE

Date: 10/21/19	Analyst: Gary Snodgrass	Signature: 
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