



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PLAN FIELD SHEET

January 2020

Meter Passed End
of Day CCV
Yes / No

WIN Station Name: HorseshoeCanal@NW15Ter **Date:** 9/7/2021
WIN/Field ID: G2SD0050 **WBID:** 3240A3 **ENR:** - **Latitude:** 26.6841
County: LEE **Org ID:** 21FLFTM **Longitude:** -82.02
Receiving Body of Water: Charlotte Harbor **RQ:** 2021-09-06-62

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

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☐ Syringe	☐ Pole
Depth measured with: Secchi	
Secchi Equipment ID: 3312A	
Collection Method	
☐ Wading	☐ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other _____	☒ Gasoline Motor

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# OLD MAN JENKINS					
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: 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-2021-09-06-62

Customer: WQAP

Project ID: SMP

Collected By: Nicole Reistad, William Mullen

Field Report Prepared By: Nicole Reistad

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G2SD0050

Location: HorseshoeCanal@NW15Ter

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 _h)		
	1000 EST	6.11	82	30.65	7.45	0.3	1.5 ☐ VOB (S)	2.2	654	0.31		
9/7/2021												
	1000 EST	5.47	70.1	30.42	7.58	1.7			655	0.31		
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				
		Lot #			Exp:							
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice			1	A		
		Filter Lot #	17162587									
		Syringe Lot #	0079931									
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						
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 William Mullen					Signature:				Date:			

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

[illegible]

Revision Date: January 2017

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Horseshoe Canal County: Lee Date: 09/07/21 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					5				
	6					6				
	7					7				
	8					8				
	9					9				
10	1	N	✓		70	1	N	✓		
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
20	1	N	✓		80	1	N	✓		
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
30	1	N	✓		90	1	N	✓		
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
40	1	N	✓		100	1	N	✓		
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
50	1	N	✓		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.					
	2				Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.					
	3				Record canopy cover as the number of small densimeter quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6.					
	4				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%.					
	5									
	6									
	7									
	8									
	9									

STORET Station Number:

G25DC0050

Secchi depth

Estimated?

points ranked 4-6

total points assessed

% points ranked 4-6

Check accompanying data collected at same site/date.

Algal mat sample

Linear Veg Survey

Habitat Assessment

SCI/Biorecon

Water sample

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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

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

SAMPLE ID G2SD0050 ORG ID ZIFLFTM LATITUDE _____
 COUNTY Lee STORET # _____ LONGITUDE _____
 DATE 09/07/2021 TIME _____ SAMPLING AGENCY 4DEP-SROC
 SITE NAME Horseshoe Canal FIELD ID/NAME _____ RECEIVING BODY OF WATER Charlotte Harbor

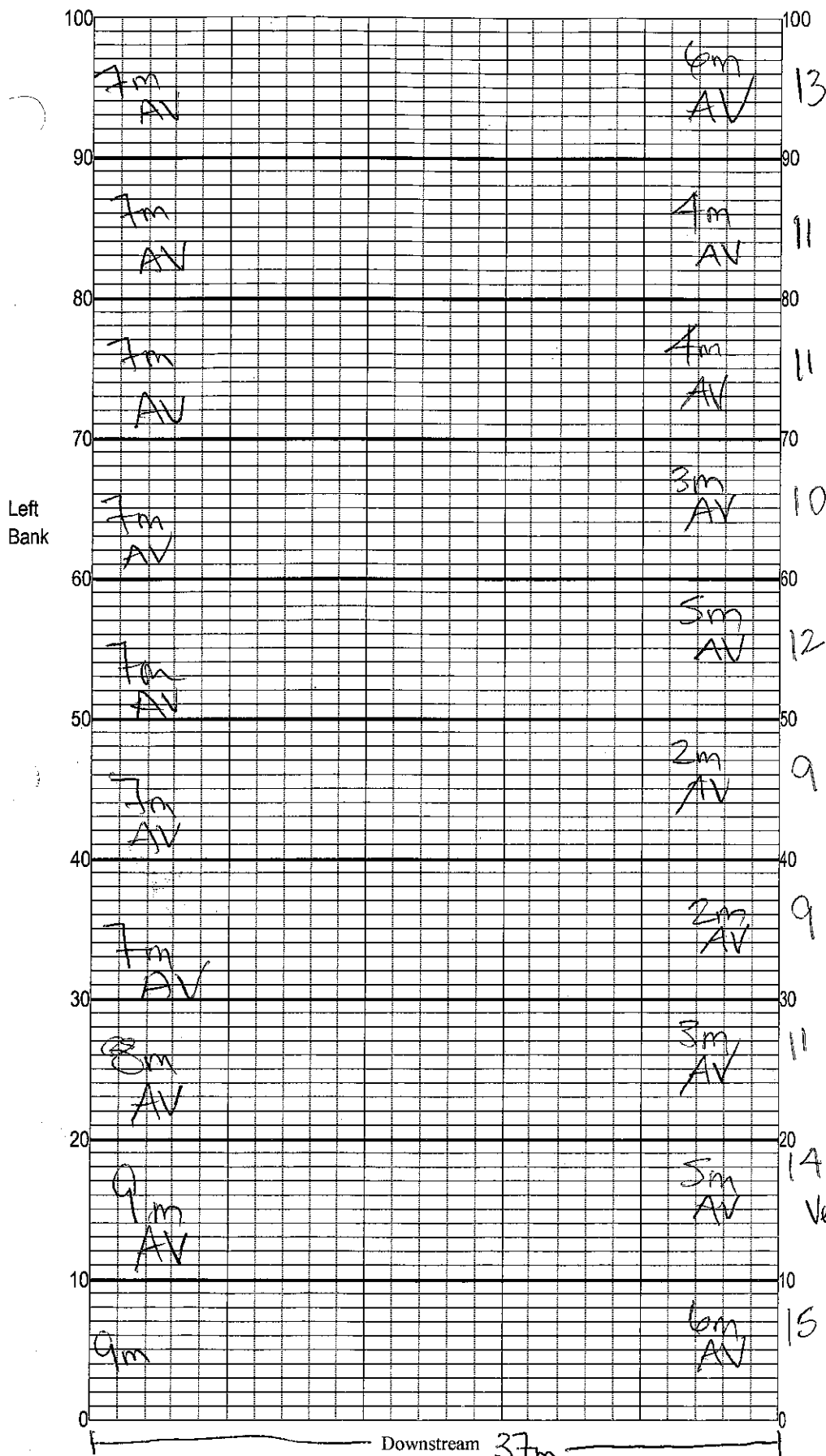
RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural ☐ Silviculture ☐ Field/Pasture ☐ Agricultural ☐ Residential ☒ 100% Commercial ☐ Industry ☐ Other (Specify) ☐								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) <u>37</u> Depth (m)/Velocity (m/sec) <u>0.08</u> m/s <u>0.08</u> m/s ☐ m/s		
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>9.64</u> Right Bank: <u>9.54</u>				Hydrologic Modification Score (per FT 3101) ☐		High Water Mark: ☐ + <u>2</u> = ☐ (m) (above present water level) (present depth) (above bed)		
Artificially Impounded ☐ Yes ☒ No				Canopy Cover % ☒ Open ☐ Lightly Shaded (11-45%) ☐ Heavily Shaded ☐ Moderate Shaded (46-80%)				
Artificially ☐ No ☐ Mostly recovered, more sinuous Channelized: ☐ Some recovery ☒ Recent, severe								

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 Invert ☐ Peri ☐ % Coverage # Times Sampled # 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>30.65</u> <u>7.45</u> <u>6.4</u> <u>82</u> <u>654</u> <u>0.31</u> <u>1.5</u> Mid: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Bottom: <u>1.7</u> <u>30.42</u> <u>7.58</u> <u>5.47</u> <u>70.1</u> <u>655</u> <u>0.31</u> <u>2.2</u> Meter ID: _____					
Woody Debris (Snags) <u>0</u> Undercut Banks / Roots <u>0</u> Leaf Packs or Mat <u>0</u> Aquatic Vegetation <u>3.10</u> Rock or Shell Rubble.. <u>0</u> Sand..... Mud / Muck / Silt 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>SA1105060</u> Exp: <u>4/30/22</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				SIGNATURE :		DATE :		

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: G2SD0050
Harvesting Canal
Date: 09/07/2021
Sampler: Nicole Reistad

100 m: Latitude 26.6844462
Longitude -82.0144110
0 m: Latitude 26.6840610
Longitude -82.0158584

Substrates: Code key, draw proportionate habitat abundance.	%
Snags	<u>0</u>
Roots/undercut banks	<u>0</u>
Leaf Packs (or mats)	<u>0</u>
Aquatic Macrophytes	<u>3.1%</u>
Rocks	<u>NR</u>
Pools	<u>0</u>
total # observed = <u>0</u>	
# range expected = <u>1-2</u>	

Average width 37 m
Average depth 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 $0m = 12.5s = 0.08m/s$
3 115m² AM

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

SAMPLING AGENCY: <u>4-DEP - SPROC</u>		STORET STATION NUMBER: <u>G2SD0050</u>	DATE (MM/DD/YY): <u>09/07/21</u>	RECEIVING BODY OF WATER: <u>Charlotte Harbor</u>
REMARKS:	COUNTY: <u>Lee</u>	LOCATION:	FIELD ID/NAME:	

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components Substrate Diversity <u>3</u>	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 12 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 9 8 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 <u>3</u> 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 <u>3</u> 2 1
Water Velocity <u>8</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 <u>8</u> 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>3</u> ----- Primary Score <u>17</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 <u>3</u> 2 1
Secondary Habitat Components Artificial Channelization <u>3</u>	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. 20 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging or straightening in the past (>25 yrs) but mostly recovered. 15 14 13 12 11	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area. 10 9 8 7 6	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks. 5 4 <u>3</u> 2 1
Bank Stability Right Bank <u>4</u> Left Bank <u>NR</u> <u>4</u> <u>NR</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 <u>4</u> <u>NR</u> <u>NR</u>	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the woody root zone with raw, eroded areas. <u>NR</u> <u>NR</u> <u>NR</u> <u>NR</u> <u>NR</u>
Riparian Buffer Zone Width Right Bank <u>2</u> Left Bank <u>2</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 <u>2</u> 1
Riparian Zone Vegetation Quality Right Bank <u>2</u> Left Bank <u>2</u> ----- Secondary Score <u>19</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). <u>NR</u> <u>NR</u> <u>NR</u> <u>NR</u> <u>NR</u>

NR 34 36 TOTAL SCORE

Date: <u>09/07/21</u>	Analyst: <u>Nicole Reistad</u>	Signature: <u>[Signature]</u>
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