



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PLAN FIELD SHEET

January 2020

Meter Passed End
of Day CCV
☒ Yes / ☐ No

WIN Station Name: Gee Creek @ SR Hwy 419 **Date:** 9/29/2021
WIN/Field ID: G2CE0075 **WBID:** 2994A **ENR:** - **Latitude:** 28.7036
County: SEMINOLE **Org ID:** 21FLCEN **Longitude:** -81.29
Receiving Body of Water: Middle St. Johns **RQ:** 2021-09-27-34

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Matt Bearden		x		x	x
☒	Katie March	x		x		
☐						
☐						

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

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# CRAW DADDY					
Photos: YES		Flow: FLOW		Tide:		Tide Times: High: Low:					
Biological Samples Collected: ☐ None ☒ HA ☒ SCI ☒ RPS ☐ Algae ID ☐ LVS ☐ LVI Other:											
SBIO ID Numbers: Visit ID: 83266 RPS: 9807						LIMS: 2279630					
Notes: No LVS performed											

Duplicate Sample

Time Zone: EST	Time:	Field ID:	(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: CEN-DIST-2021-09-30-01 WIN Import ID: 30307
Enter Field Parameters, Verify Station ID In LIMS DMT: EB 10/5/21 QC Station ID, Field Parameters In LIMS DMT: KWM 11/30/21
(Initials/Date) (Initials/Date)
Scan/Save Field Sheets KWM 12/29/21 Migrate Data to WIN: KWM 12/29/21 Verify Data In WIN: _____
(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2021-09-27-34

Customer: WQAP

Project ID: SMP

Collected By: Matt Bearden, Katie March

Field Report Prepared By: Matt Bearden

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G2CE0075

Location: Gee Creek @ SR Hwy 419

Comments:

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)		
	1005 EST	6.44	77	24.4	6.93	0.3	0.4 ☒ VOB (S)	0.4	214.5	0.1		
9/29/2021												
	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:	4/30/2022						
Metals (P-500ML)		☒ W-ICPMS ☒ W-ICP ☒ W-HARD				☒ Ice ☒ HNO3*		☒ <2	1	A		
		Lot #	NA0344060		Exp:	1/4/22						
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice			1	A		
		Filter Lot #	17135566									
		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 #	10.50911HN		☒ Formalin			2	B		
Periphyton (PT-50ML)		☐ ALGAE-ID				☐ Ice						
Microbiology (Contract Lab Bottle)		☐ E Coli ☐ F Coli ☐ Enterococci				☐ Ice						
Molecular (QPCR-P-500ML)		☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-DG3				☐ Ice						
		☐ 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	A		
Phytoplankton/Periphyton		W-PCL-TQ-R		W-CARB-AA (5 ml of MCAA** Buffer Solution)								
				DTY-QN-C								
				PKD-QN-BV				☐ Ice				
Name: Matt Bearden Katie March					Signature: Kathryn March				Date: 09/29/21			

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

SAMPLE ID	ORG ID <u>21FLCEN</u>	LATITUDE <u>28.70359344</u>
COUNTY <u>Seminole</u>	STORET # <u>G2CE0075</u>	LONGITUDE <u>-81.2905439</u>
DATE <u>9/29/21</u>	TIME	SAMPLING AGENCY <u>CEN ROC</u>
SITE NAME <u>Green Creek</u>		
FIELD ID/NAME <u>G2CE0075</u>	RECEIVING BODY OF WATER <u>Lake Jessup</u>	

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>15</u> Silviculture <u>0</u> Field/Pasture <u>0</u> Agricultural <u>0</u> Residential <u>75</u> Commercial <u>10</u> Industry <u>0</u> Other (Specify) <u>0</u>							Landscape Development Intensity Index (LDI) <u>0</u>
Local Watershed Erosion (select one): ☐ None ☐ Slight ☒ Moderate ☐ Heavy Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☒ Moderate ☐ Heavy							Typical Width (m) <u>3.5</u> m wide Depth (m) <u>0.22</u> m/s Velocity (m/sec) <u>0.22</u> m/s
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>15</u> Right Bank: <u>18</u>				Hydrologic Modification Score (per FT 3101) <u>0</u>			m/s <u>0.22</u> m/s <u>0.22</u> m/s
High Water Mark: <u>1.5</u> + <u>1</u> = <u>2.5</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No			m deep <u>1</u> m deep <u>1</u> m deep <u>1</u>
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 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)					
Woody Debris (Snags) <u>1.1</u> <u>7</u> <u>0</u> Undercut Banks / Roots <u>1.7</u> <u>7</u> <u>0</u> Leaf Packs or Mat <u>0.1</u> <u>1</u> <u>0</u>			Top: <u>0.3</u> <u>24.4</u> <u>6.93</u> <u>6.44</u> <u>77</u> <u>214.5</u> <u>0.1</u> <u>0.4</u> Mid: <u>0.3</u> <u>24.4</u> <u>6.93</u> <u>6.44</u> <u>77</u> <u>214.5</u> <u>0.1</u> <u>0.4</u> Bottom: <u>0.3</u> <u>24.4</u> <u>6.93</u> <u>6.44</u> <u>77</u> <u>214.5</u> <u>0.1</u> <u>0.4</u> Meter ID: <u>Craw Daddy</u>					
Aquatic Vegetation Rock or Shell Rubble..... Sand..... <u>5</u> Mud / Muck / Silt Other Other			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ 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:					
			Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐ 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) ☐

AMBIENT FIELD CONDITIONS / NOTES:

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

SAMPLING TEAM

Matt Bearden, Katie March

SIGNATURE:

K March

DATE:

9/29/21

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

PUT STICKER UP ^ HERE <u>G2CE0075</u>		WIN STATION NUMBER: see sticker <u>G2CE0075</u>	DATE (MM/DD/YY): <u>9/29/21</u>	SAMPLING AGENCY: <u>FDEP Central Roc</u> <u>FDEP SW ROC</u>
FIELD ID/NAME: <u>Gee Creek @ SR HWY 419</u>	COUNTY: <u>Seminole</u>	LOCATION: <u>Gee Creek</u>	RECEIVING BODY OF WATER: <u>Lake Jesup</u>	

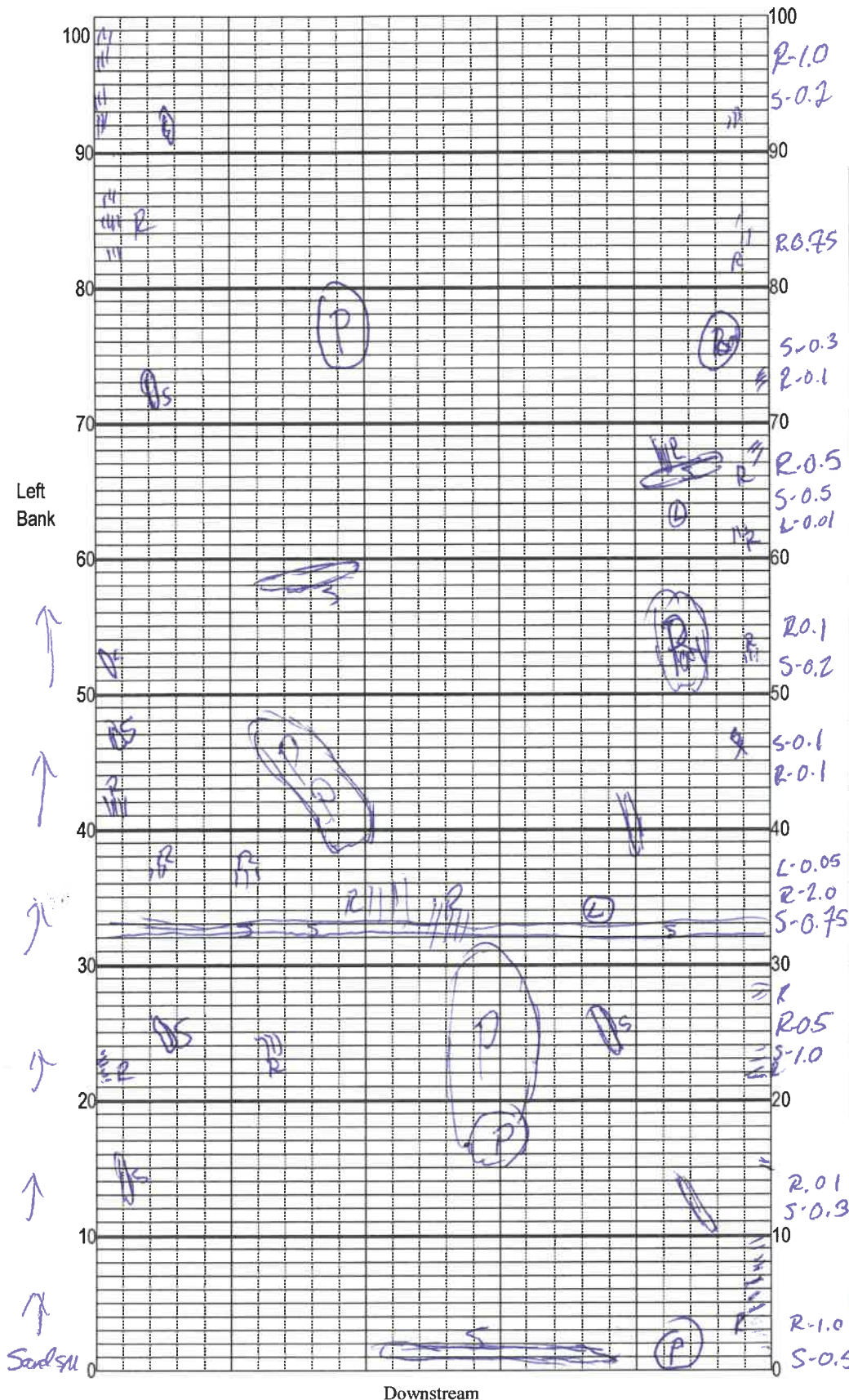
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh 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>9</u>	20 19 18 17 16	15 14 13 12 11	10 <u>9</u> 8 7 6	5 4 3 2 1
Substrate Availability <u>4</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 <u>5</u> 4 3 2 1
Water Velocity <u>14</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 <u>14</u> 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>17</u> Primary Score <u>44</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 <u>17</u> 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>19</u>	20 <u>19</u> 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability Right Bank <u>7</u> Left Bank <u>7</u>	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. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 <u>7</u> 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 root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank <u>9</u> Left Bank <u>8</u>	Width of vegetation greater than 18 m 10 <u>9</u>	Width of vegetation >12 to 18m <u>8</u> 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>8</u> Left Bank <u>7</u> Secondary Score <u>65</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. <u>8</u> <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

109

TOTAL SCORE

Date: <u>9/29/21</u>	Analyst: <u>M. Beardsley K. March</u>	Signature: <u>[Signature]</u>
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: G2CE0075
Free Creek @ SR HWY 419
 Date: 9/29/21
 Sampler: M. Bearden K. March

100 m: Latitude 28 42 12.50
 Longitude -81 17 24.44
 0 m: Latitude 28 42 11.44
 Longitude -81 17 21.55

Substrates: Code key, draw proportionate habitat abundance.		%
<u>S</u>	Snags	<u>1.1</u>
<u>R</u>	Roots/undercut banks	<u>1.7</u>
<u>L</u>	Leaf Packs (or mats)	
	Aquatic Macrophytes	
<u>P</u>	Pools	total # observed = <u>6</u> # range expected = <u>3-6</u>

Average width 3.5 m
 Average depth 1.0 m

Velocity measured at 10 meter mark. 0.22

WQ & chemistry taken at 20 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:
R-6.15m² = 1.7%
S-3.85m² = 1.1%
L-0.06m² =
10.06

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

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET

Waterbody: <u>Gee Creek</u>	Date: <u>9/24/21</u>	County: <u>Seminola</u>	Storet Number: <u>62CED0075</u>
Analyst: <u>Math Bearden, Katie March</u>	Signature: <u>K March</u>		
Comments: <u>no LVS. < 2m² vegetation</u>			

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

[illegible]

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Gee Creek</u>					County: <u>Seminole</u>		Date: <u>9/29/21</u>		Investigators: <u>Katie Munch, Matt Bearden</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	Z			
	2	X				2	Z			
	3	X				3	Z			
	4	Z				4	X			
	5	Z		86		5	X		82	
	6	Z				6	Z			
	7	Z				7	Z			
	8	Z				8	Z			
	9	Z				9	Z			
10	1	X			70	1	X			
	2	X				2	X			
	3	X				3	Z			
	4	X				4	Z			
	5	X		94		5	Z		84	
	6	Z				6	Z			
	7	Z				7	X			
	8	Z				8	X			
	9	Z				9	X			
20	1	Z			80	1	Z			
	2	Z				2	Z			
	3	Z				3	Z			
	4	Z				4	Z			
	5	Z		58		5	Z		70	
	6	Z				6	Z			
	7	Z				7	Z			
	8	Z				8	Z			
	9	Z				9	Z			
30	1	Z			90	1	Z			
	2	Z				2	Z			
	3	X				3	Z			
	4	X				4	Z			
	5	X		92		5	Z		72	
	6	X				6	Z			
	7	Z				7	Z			
	8	Z				8	Z			
	9	Z				9	Z			
40	1	Z			100	1	Z			
	2	Z				2	Z			
	3	Z				3	Z			
	4	Z				4	Z			
	5	Z		96		5	Z		64	
	6	Z				6	Z			
	7	Z				7	Z			
	8	Z				8	Z			
	9	Z				9	Z			
50	1	Z			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	Z								
	3	Z								
	4	Z								
	5	Z		92						
	6	Z								
	7	Z								
	8	Z								
	9	Z								

STORET Station Number:

GZLE0075

Secchi depth 0.4(s)
Estimated? 2

points ranked 4-6 0
total points assessed 81
% 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-

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