FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PLAN FIELD SHEET

January 2020

Meter Passed End of Day CCV Yes / No

WIN Station Name: MOCCASSIN BRANCH AT WINFORD MASTERS RD **Date:** 12/28/2021

WIN/Field ID: 20030557 **WBID:** 2540 **ENR:** **Latitude:** 29.7714722

County: ST. JOHNS **Org ID:** 21FLA **Longitude:** -81.475305

Receiving Body of Water: - **RQ-** 2021-09-20-18

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
[x] Kimberly Appleby	x		x		
[x] Brian Davis		x			
[x] Jeremy Parrish				x	x
[ ]					

Sampling Equipment

- [x] Sample Container
- [ ] Dipper
- [ ] Syringe
- [ ] Carboy
- [ ] Van Dorn
- [ ] Pole

Depth measured with: Meter

Secchi Equipment ID:

Collection Method

- [x] **Wading**
- [ ] **From Shore**
- [ ] **Other** _____
- [ ] **Canoe/Kayak**
- [ ] **Electric Motor**
- [ ] **Gasoline Motor**

Water Level: [x] Normal [ ] Low [ ] High [ ] Dry [ ] Pooled [ ] Flooded

Meter ID# DESI

Photos: NO **Flow:** FLOW **Tide:** **Tide Times:** High: Low:

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

SBIO ID Numbers:

Notes:

WEATHER: SUNNY

Duplicate Sample

Time Zone: EST **Time:** **Field ID:** (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: (Initials/Date) **QC Station ID, Field Parameters In LIMS DMT:** (Initials/Date)

Scan/Save Field Sheets BD 12/28/2021 (Initials/Date) **Migrate Data to WIN:** (Initials/Date) **Verify Data In WIN:** (Initials/Date)

RQ-2021-09-20-18
Customer: WQAP
Project ID: SMP

Collected By: Kimberly Appleby, Brian Davis
Field Report Prepared By: Kimberly Appleby
Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID: 20030557

Location: MOCCASSIN BRANCH AT WINFORD MASTERS RD

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 (PPTh)
	1215 EST	7.15	74.9	17.5	6.79	0.3	0.587 ☒ VOB (S)	0.587	421.1	0.2
12/28/2021										
	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 ☒ H_2SO_4*	☒ <2	1	A
	Lot #	SA1105060	**Exp:**	4/30/22			
Metals (P-500ML)	☒ W-ICPMS ☒ W-ICP ☒ W-HARD			☒ Ice ☒ HNO_3*	☐ <2	1	A
	Lot #	NA1105100	**Exp:**	6/7/22			
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter			☒ Ice		1	A
	Filter Lot #	R1EB01329					
	Syringe Lot #						
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 #**	~~N/A~~ 9280918189tr	☒ Formalin		3	B
Periphyton (PT-50ML)	☐ ALGAE-ID			☐ Ice			
Microbiology (Contract Lab Bottle)	☐ E Coli ☐ F Coli ☐ Enterococci ☐ Contract Lab			☐ Ice			
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)	x W-E8321-DI x WE8321-MS x W-PSNP-TQ W-CT-CL-R W-PCL-TQ-R W-CARB-AA (5 ml of MCAA** Buffer Solution)			☒ Ice		4	A
Phytoplankton/Periphyton	DTY-QN-C PKD-QN-BV			☐ Ice			

Name: Kimberly Appleby, Brian Davis

Signature: B. D.

Date: 12/28/2021

*2.0 ml of Preservative used unless noted otherwise.
**MCAA: Monochloroacetic acid buffer solution

3610-83593

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

SAMPLING AGENCY:	STORET STATION NUMBER: 20030557	DATE (MM/DD/YY): 12/28/21	RECEIVING BODY OF WATER: LSJR
REMARKS: COUNTY: St Johns Putnam	LOCATION: Moccasin Branch at MAGL		FIELD ID/NAME:

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 10	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 3 2 1
Substrate Availability 11	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 20	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 16 Primary Score 57	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 **Artificial Channelization** 20	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 3 2 1
Bank Stability Right Bank 9 Left Bank 9	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful 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 10 Left Bank 10	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 6 Left Bank 6 Secondary Score 70	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

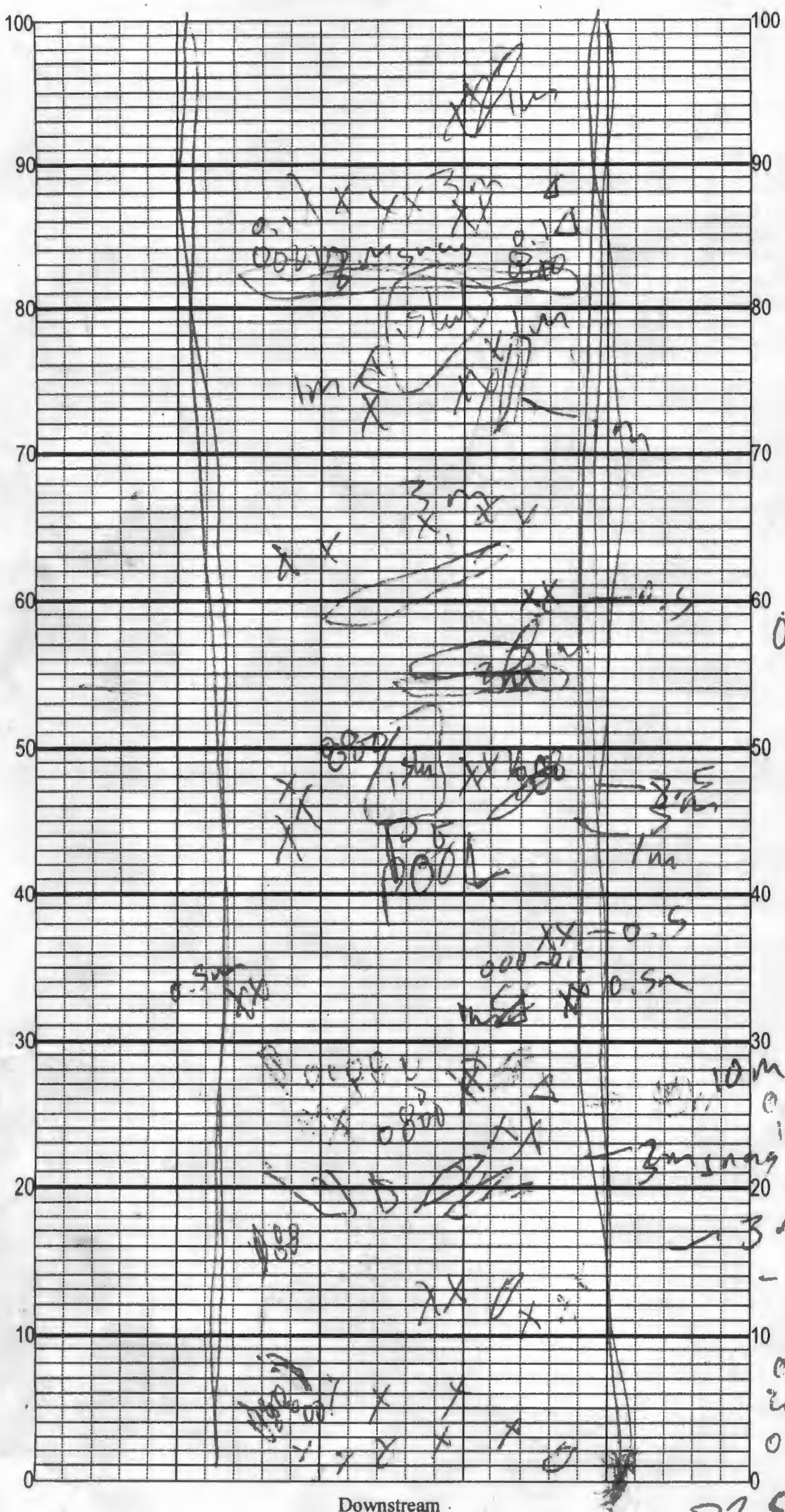
46 11 / 57 55

127 **TOTAL SCORE**

Date: 12/28/21	Analyst: Jerry [signature] / Kim Bonvis	Signature: [signature]

62-160.800, F.A.C. Revision Date: January 2017

DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Downstream

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

Location: Morrusinic winhed masky

Date: 12/2812

Sampler: OP/ BD/ KA

100 m:	Latitude	
	Longitude	
0 m:	Latitude	
	Longitude	

Substrates: Code key, draw proportionate habitat abundance.

	Substrate	%
	Snags	5
	Roots/undercut banks	10.5
	Leaf Packs (or mats)	<1 not 2 sq. m
	Aquatic Macrophytes	<1
	Pools	total # observed = ; # range expected =

Average width 3.25 m

Average depth 0.6 m

Velocity measured at 10 & 60 meter mark.

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:

Snag = 1m + 3 + 1 + 1 + 5
A1 + 3 + 1 x 1.5m

Root 2 - 20 - 10 + 3.5 + 3.5 + 5.5 = 40 m

leaf - 0.2 + 0.2 + 0.1 + 0.1 + 0.2 | -2m

7.3 m sec

3.25 wide

3, 25, 65 23

62-160.800, F.A.C

Revision Date: January 2017

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

SAMPLE ID ______ ORG ID 21FLA LATITUDE 29.771472
COUNTY St. Johns STORET # 20030557 LONGITUDE -81.475305
DATE 12/28/21 TIME 1215 SAMPLING AGENCY FDEP NE ROC
SITE NAME Mollassin Branch at Winford Masters Rd
FIELD ID/NAME ______ 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)	Landscape Development Intensity Index (LDI)
10			85	5				

Local Watershed Erosion (select one): [ ] None [X] Slight [ ] Moderate [ ] Heavy

Local Watershed NPS Pollution: [X] No evidence [ ] Slight [ ] Moderate [ ] Heavy

Typical Width (m) Depth (m)/Velocity (m/sec) Transect: 3.25 m wide

___ m/s	0.33 m/s	___ m/s
___ m deep	0.6 m deep	___ m deep

Width of Riparian Vegetation (m) on Each Buffer Side: Left Bank: >18 Right Bank: >18

Hydrologic Modification Score (per FT 3101): 5

High Water Mark: 0.5 + 0.6 = 1.1
(m) (above present water level) (present depth) (above bed)

Artificially Impounded: [ ] Yes [X] No

Artificially Channelized: [X] No [ ] Some recovery [ ] Mostly recovered, more sinuous [ ] Recent, severe

Canopy Cover %: [ ] Open [X] Heavily Shaded [ ] Lightly Shaded (11-45%) [ ] Moderate Shaded (46-80%)

SEDIMENT / SUBSTRATE

Sediment Oils: [X] Absent [ ] Slight [ ] Moderate [ ] Profuse

Sediment Odors: [X] Normal [ ] Sewage [ ] Petroleum [ ] Chemical [X] ~~Anaerobic~~ [ ] Other (Specify):

Smothering of Substrates

	None	Slight	Moderate	Severe
Sand Smothering:	[ ]	[X]	[ ]	[ ]
Silt Smothering:	[ ]	[X]	[ ]	[ ]
Algae Smothering:	[X]	[ ]	[ ]	[ ]

SUBSTRATE TYPE

Assessment Tool: [X] SCI [X] RPS [X] LVS [ ] LCI [ ] BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	5	7	
Undercut Banks / Roots	10.5	7	
Leaf Packs or Mat	>1	2	
Aquatic Vegetation	>1		
Rock or Shell Rubble			
Sand	42	1	
Mud / Muck / Silt	40	3	
Other			
Other			

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top:	0.3	17.5	6.79	7.15	74.9	421.1	0.2	0.587
Mid:								[X] VOB
Bottom								TOTAL DEPTH 0.587

Meter ID: Desi

Water Odors Normal [X] Petroleum [ ] Sewage [ ] Chemical [ ] Other [ ]

Water Surface Oils Normal [X] Sheen [ ] Globs [ ] Slick [ ] Other [ ]

Water Sample Taken? [X] Yes [ ] No
Sample Preserved? [X] Yes [ ] No
Lot Number: ______ Exp: ______

Color Tannic [X] Green (Algae) [ ] Clear [ ] Other (Specify) [ ]

Algae Sample Taken? [ ] Yes [X] No
Sample Preserved? [ ] Yes [ ] No
Lot Number: ______ Exp: ______

Clarity Clear [X] Slightly Turbid [ ] Turbid [ ] Opaque [ ]

ABUNDANCE

	Not Obs.	Rare	Common	Abundant
Periphyton:	[ ]	[X]	[ ]	[ ]
Fish:	[X]	[ ]	[ ]	[ ]
Aquatic Plants:	[ ]	[X]	[ ]	[ ]
Iron/Sulfur Bacteria:	[ ]	[X]	[ ]	[ ]

System Type: Stream [X] Lake [ ] Wetland [ ] Estuary [ ] Other(Specify) [ ]

AMBIENT FIELD CONDITIONS / NOTES:

[illegible handwriting]

[X] The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM: Kim Appleby, Jeremy Parrish, Brian Davis

SIGNATURE: [signature]

DATE: 12-28-21

62-160.800, F.A.C.

Revision Date: January 2017

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Moccassin Branch at Winford Masters Rd | County: St. Johns | Date: 12/28/21 | Investigators: Kim Appleby + Brian Davis

STORET Station Number: 20030557

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	N		
	2			
	3			
	4			
	5			96
	6			
	7			
	8			
	9			
10	1	N		
	2			
	3			
	4			
	5			95
	6			
	7			
	8			
	9			
20	1	N		
	2			
	3			
	4			
	5			91
	6			
	7			
	8			
	9			
30	1	N+3		
	2	N		
	3			
	4			
	5			94
	6			
	7			
	8			
	9			
40	1	N		
	2			
	3	X		
	4			96
	5			
	6			
	7			
	8			
	9	N		
50	1	N		
	2	X		
	3	N		
	4			
	5			96
	6			
	7			
	8			
	9			

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
60	1	N		
	2			
	3			
	4	X		
	5	X		90
	6	N		
	7			
	8			
	9			
70	1	N		
	2			
	3			
	4			
	5			93
	6			
	7	X		
	8	N		
	9			
80	1	N		
	2			
	3			
	4			
	5			96
	6			
	7			
	8			
	9			
90	1	N		
	2			
	3			
	4			
	5	X		96
	6	X		
	7	N		
	8			
	9			
100	1	N		
	2			
	3			
	4			
	5	X		91
	6	N		
	7			
	8			
	9			

Secchi depth	0.58 ft (s)
Estimated?	No
# points ranked 4-6	1
total points assessed	99
% points ranked 4-6	1.2

86

Check accompanying data collected at same site/date.	
Algal mat sample	–
Linear Veg Survey	✓
Habitat Assessment	✓
SCI/Biorecon	✓
Water sample	✓

RQ-2021-09-20-18

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%.

62-160.800, F.A.C. Revision Date: January 2017

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

Waterbody: Moccasin Branch at winter Haven, FL Date: 12/28/2 County: St. Johns Storet Number: 20030557

Analyst: Brian Davis + Kim Appleby Signature: B D

Comments: >2m of vegetation within 100m stretch

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

HERBACEOUS SPECIES	Meter Mark 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											
Bacopa caroliniana											
Bacopa monneri											
Bidens mitis											
Boehmeria cylindrica											
Centella asiatica											
Ceratophyllum demersum											
Chara											
Cicuta maculata											
Cladium jamaicense											
Colocasia esculenta			✓		✓		✓	✓	✓	✓	
Commelina diffusa	✓					✓	✓	✓	✓	✓	
Commelina virginica											
Crinum americanum											
Diodia virginiana											
Eichhornia crassipes											
Eleocharis (wispy viviparous)											
Hydrilla verticillata											
Hydrocotle			✓		✓		✓	✓			
Hygrophila polysperma											
Hymenocallis											
Lachnanthes caroliniana											
Landoltia punctata											
Lemna											
Limnophila sessiflora											
Ludwigia leptocarpa											
Ludwigia palustris											
Ludwigia peruviana											
Ludwigia repens											
Luziola fluitans											
If no Dominant or Co-Dominant were selected, indicate with "X"											
Indicate % cover macrophytes per section											
0-5% Macrophyte Coverage	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
>5 and ≤10% Macrophyte Coverage											
>10 and ≤25% Macrophyte Coverage											
>25 and ≤50% Macrophyte Coverage											
> 50% Macrophyte Coverage											

HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Micranthemum glomeratum											
Micranthemum umbrosum											
Myriophyllum aquaticum											
Najas guadelupensis											
Nuphar luteum											
Orontium aquaticum						✓	✓	✓			
Panicum hemitomon											
Panicum repens											
Panicum rigidulum											
Pistia stratioides											
Polygonum glabra											
Polygonum hydropiperoides											
Polygonum punctatum											
Pontederia cordata											
Potamogeton illinoensis											
Ruellia simplex											
Saeciolepis striata											
Sagittaria kurziana											
Sagittaria lancifolia											
Sagittaria latifolia											
Salvinia minima											
Samolus parviflora											
Saururus cernuus											
Sparganium americanum											
Typha											
Vallisneria americana											
Zizania aquatica											
Sambucus sp							✓			✓	