



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

PAGE 1 OF 1

Data Qualified?

Yes / No

October 2016

STORET Station Name: 12/7/2016 WBID 3201F G4SD120716-5 Date: _____
STORET Station ID: Bootheel Creek @ FISSCR0014FTM STORET Field ID
County: Glades RQ - end of Price Rd. titide: _____
Receiving Body of Water: _____ Field ID: _____

Latitude: _____ (Decimal Degrees)
Longitude: _____ (Decimal Degrees)

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment		
<u>Ben Paswater</u> <u>Corey Anderson</u> <u>Rosemary Murphy</u>					☒	☒	☒	☒	☒	☒ Sample Container	☐ Van Dorn	☐ Pole
										☐ Carboy	☒ Syringe	
										☐ Dipper	☐ Other	
										Equipment ID _____		
										Collection Method		
										☒ Wading	☐ Via Boat	
										☐ From Shore	☐ Canoe/Kayak	
										☐ Other (note below)	☐ Electric Motor	
											☐ Gasoline Motor	

Water Level: Dry / <u>Low</u> / Normal / High / Flooded										Matrix: <u>Fresh</u> / Marine / DI	
Meter ID# <u>7</u> <u>50A</u>			Photos: <u>Yes</u> / No			Tide Falling: Yes / No / <u>NA</u>					
Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Secchi Disk (m)	Sp COND (µmhos/cm)	Temp. (C°)	
<u>EST</u>	<u>940</u>	<u>0.3</u>	<u>0.6</u>	<u>7.8</u>	<u>98</u>	<u>6.25</u>	<u>/</u>	<u>0.6</u>	<u>153</u>	<u>22.9</u>	
<u>CEN</u>											

Biological Samples Collected: None <u>HA</u> <u>SCI</u> <u>LVS</u> <u>RPS</u> LVI Other _____									
Parameter Suite	Parameter Methods					Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP					☒ Ice ☒ H2SO4	Contains 1:1 Sulfuric Acid SA-6209120 EXP: 07/27/17 Warning! See SDS Contains 1:1 Sulfuric Acid SA-6209120 EXP: 07/27/17 Warning! See SDS	Here	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP					☐ Ice ☐ HNO2			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter					☒ Ice			
Chlorophyll	☒ CHLSUITE-W					☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS					☒ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / W-F / W-TSS / TURBIDITY					☐ Ice			
Macroinvertebrates	☒ MI-FW-QLDC					☒ Formalin			
Microbiology	☐ E Coli ☐ F Coli ☐ Enterococcus ☐ QPCR					☐ Ice			
Periphyton	☐ ALGAE-ID					☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH					☐ Ice ☐ Other			

Notes:		RQ-2016-12-05-16 12/7/2016 Field Blank	
<u>Blank: 9:45</u>		<u>G4SD120716-6</u> <u>Field ID</u> <u>STORET</u> <u>Field Blank</u>	
Signature: <u>[Signature]</u>		Date: <u>12-7-16</u>	

Field Parameters Entered into LIMS: _____ (Initials/Date) Field Parameters QC in LIMS: _____ (Initials/Date)
Date Migrated to STORET: _____ (Initials/Date) Field Sheets Scanned/Saved: _____ (Initials/Date)

Bootheel Creek @
end of Price Rd.

FISSCR0014FTM

21FLFTM

LATITUDE

LONGITUDE

SAMPLING AGENCY FDEP South ROC

SITE NAME see sticker

RECEIVING BODY OF WATER

Fisheating Creek

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) ☐ 20 50 30								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 2 m wide			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: 18+ Right Bank: 18+				Hydrologic Modification Score (per FT 3101) 				0.1 m/s 0.15 m/s 0.1 m/s	
High Water Mark: 1.2 + 0.2 = 1.4 (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No				0.1 m deep 0.2 m deep 0.1 m deep	
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			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 22.9 6.3 7.8 98 153 0.2 Mid: ☒ VOB Bottom: TOTAL DEPTH Meter ID: ysi 7 0.2					
Woody Debris (Snags) 1 Undercut Banks / Roots 3 Leaf Packs or Mat 2 Aquatic Vegetation Rock or Shell Rubble 2 Sand 12 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: 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 ☐		
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 C. Anderson, B. Paswater, R. Murphy					SIGNATURE: 		DATE: 12-7-16	

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

RQ-2016-12-05-16

12/7/2016
WBID 3201F

G4SD120716-5

Field ID

Waterbody:

Date:

County:

Glades

Analyst:

Corey Anderson

Signature:

Bootheel Creek @
end of Price Rd.

FISSCR0014FTM

STORET

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.

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

vegetation
2m²

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

County: Glades Investigators: R. Murphy, C. Anderson, B. PaswaterSTORET Station Number: 0.16

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				60	1			
	2					2			
	3					3			
	4					4			
	5	N	N	32		5	N	N	78
	6					6			
	7					7			
	8					8			
	9					9			
10	1				70	1			
	2					2			
	3					3			
	4					4			
	5			96		5			84
	6					6			
	7					7			
	8					8			
	9					9			
20	1				80	1			
	2					2			
	3					3			
	4					4			
	5			82		5			40
	6					6			
	7					7			
	8					8			
	9					9			
30	1				90	1			
	2					2			
	3					3			
	4					4			
	5			93		5			71
	6					6			
	7					7			
	8					8			
	9					9			
40	1				100	1			
	2					2			
	3					3			
	4					4			
	5			57		5			95
	6					6			
	7					7			
	8					8			
	9					9			
50	1					1			
	2					2			
	3					3			
	4					4			
	5			40		5			
	6					6			
	7					7			
	8					8			
	9					9			

Secchi depth 0.16
Estimated? NO# points ranked 4-6 0
total points assessed 90
% points ranked 4-6 0Check accompanying data
collected at same site/date.Algal mat sample NO
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

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%.

RQ-2016-12-05-16

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

12/7/2016

WBID 3201F

Bootheel Creek @
end of Price Rd.

G4SD120716-5

FISSCR0014FTM

STORET STATION
NUMBER:DATE
(MM/DD/YY):

SAMPLING AGENCY:

FDEP South ROC

FIELD ID/NAME:

LOCATION:

RECEIVING BODY OF WATER:

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components Substrate Diversity <u>2</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 3 <u>2</u> 1
Substrate Availability <u>1</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 <u>1</u>
Water Velocity <u>12</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 <u>12</u> 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>10</u> ----- Primary Score <u>25</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). <u>10</u> 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 <u>16</u>	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. 20 19 18 17 <u>16</u>	Good sinuosity within old channelized area. Evidence of dredging 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 <u>6</u> Left Bank <u>6</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 7 <u>6</u> LR	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>9</u>	Width of vegetation greater than 18 m LR 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>9</u> Left Bank <u>9</u> ----- Secondary Score <u>64</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. LR 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 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

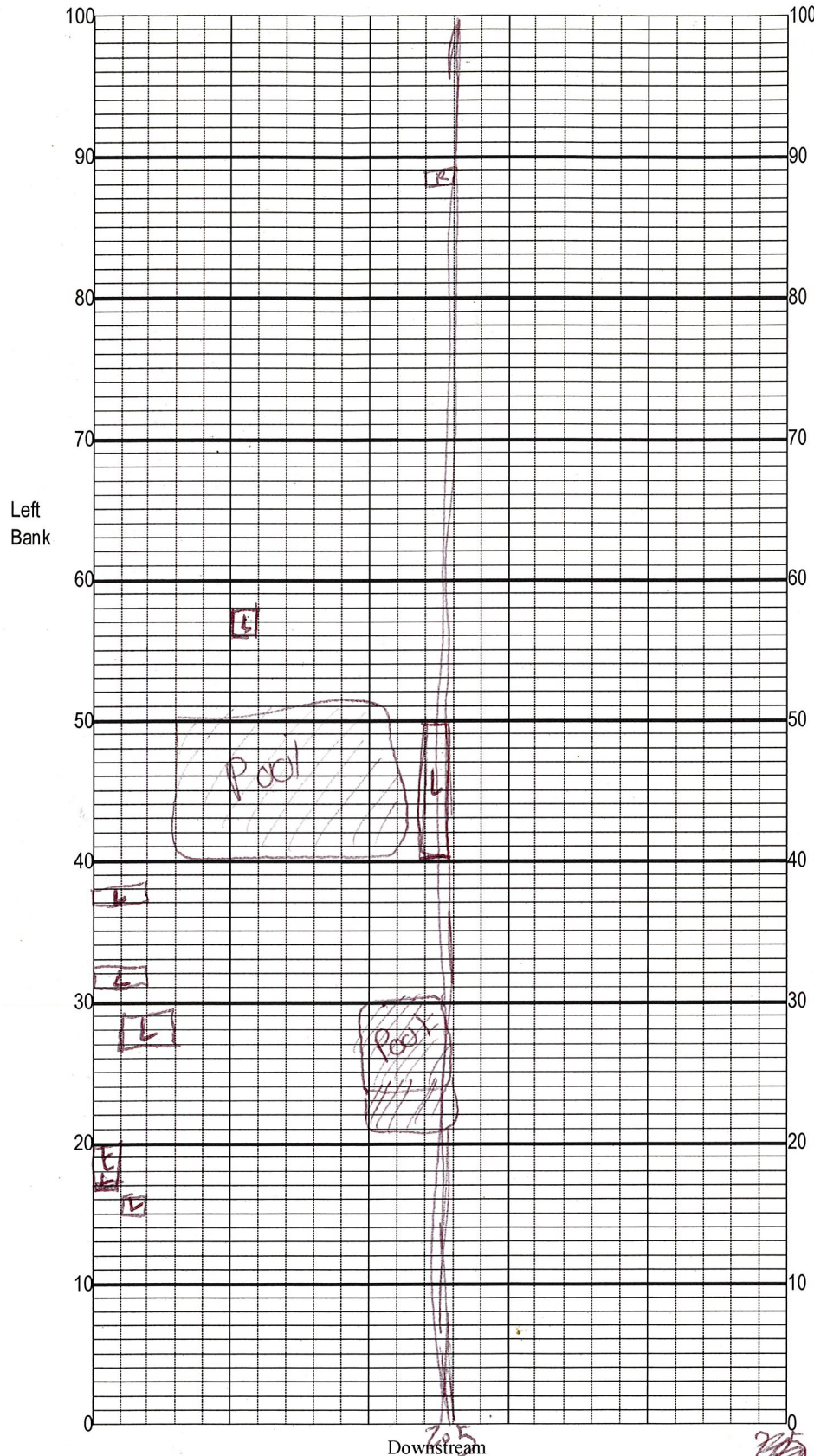
TOTAL SCORE

Date:

Analyst:

Signature:

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: _____

Date: 12-7-16

Sampler: Rosemary Murphy

100 m: Latitude 27.102261
 Longitude -81.439482
 0 m: Latitude N27.101390
 Longitude W-81.439911

Substrates: Code key, draw proportionate habitat abundance. %

☐	Snags	<u>1.50</u>
☐	Roots/undercut banks	<u>Few</u>
☐	Leaf Packs (or mats)	_____
☐	Aquatic Macrophytes	_____
☐	_____	_____
☐	_____	_____
☐	Pools	total # observed = <u>2</u> # range expected = <u>3-6</u>

Average width 2.5 m
 Average depth 0.3 m

Velocity measured at 0 meter mark. 0.15 m/sec

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: 18+ 18+
 Note areas (on map) where natural vegetation is altered or eliminated.

Plants observed / other notes:
Natural buffer area, forested.
Some Lygodium + Caesar's weed
but mainly natural.
Bank full = 100% of bank height.



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 1R