



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

February 2016

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Data Qualified?

Yes / No

STORET Station Name:

RQ-2016-04-11-54

Date:

(mm/dd/yyyy)

STORET Station ID:

4/12/2016
WBID 32011

G4SD041216-1
Field ID

WBID:

32011

RQ-

Bootheel Creek @
End of Price Rd

FISSCR0014FTM
STORET

Receiving Body of Water:

Fish-eating Cr.

County:

Highland

Sampling Team Members						WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment				
Ben Paswater											☒ Sample Container	☐ Van Dorn	☐ Pole		
Danny Berger											☐ 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>A</u> Photos: Yes / 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>0940</u>	<u>0.3</u>	<u>0.4</u>	<u>8.2</u>	<u>91</u>	<u>5.1</u>	<u>-</u>	<u>0.3</u>	<u>101</u>	<u>20.4</u>					
CEN															
Biological Samples Collected: None <u>HA</u> SCI <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				☒ <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									
BOD		☒ BOD-UNIN				☒ Ice									
Physical/Aggregate (Kit A/C)		☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CH-IC / W-COLOR / W-SO4-IC / W-TDS				☒ Ice									
Physical/Aggregate (Kit B/D)		☐ Alkalinity / W-F / W-TSS / TURBIDITY				☐ Ice									
Macroinvertebrates		☐ MI-FW-QLDC				☐ Formalin									
Microbiology		☐ E Coli ☐ F Coli ☐ Entero ☐ QPCR				☐ Ice									
Periphyton		☐ ALGAE-ID				☐ Ice									
Pesticides		☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R				☐ Ice									
		☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH				☐ Other									

Notes:

Place Label Here
(If Available)

Signature:

Ben Paswater

Date:

4/12/16

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)

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET		
Waterbody: <u>Boothell Creek</u>	Date:	County: <u>Highland</u>
Analyst: <u>Ben Paswater</u>		Signature: <u>Ben Paswater</u>
Comments:		


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 Field ID ▲
 STORET ▼
FISSCR0014FTM


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.

Revision Date: March 1, 2014

4/12/2016

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Field ID

Bootheel Creek @

FISCR0014FTM

End of Price Rd

STORET

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

County:
HighlandsInvestigators
Paswater, Berger

STORET Station Number:

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		16	60	1	N		12	
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
10	1			86	70	1			37	
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
20	1			88	80	1			68	
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
30	1			74	90	1			72	
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
40	1			94	100	1			84	
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
50	1	✓		26	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 densiometer 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									

Secchi depth	0.4
Estimated?	N

# points ranked 4-6	0
total points assessed	90
% 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

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

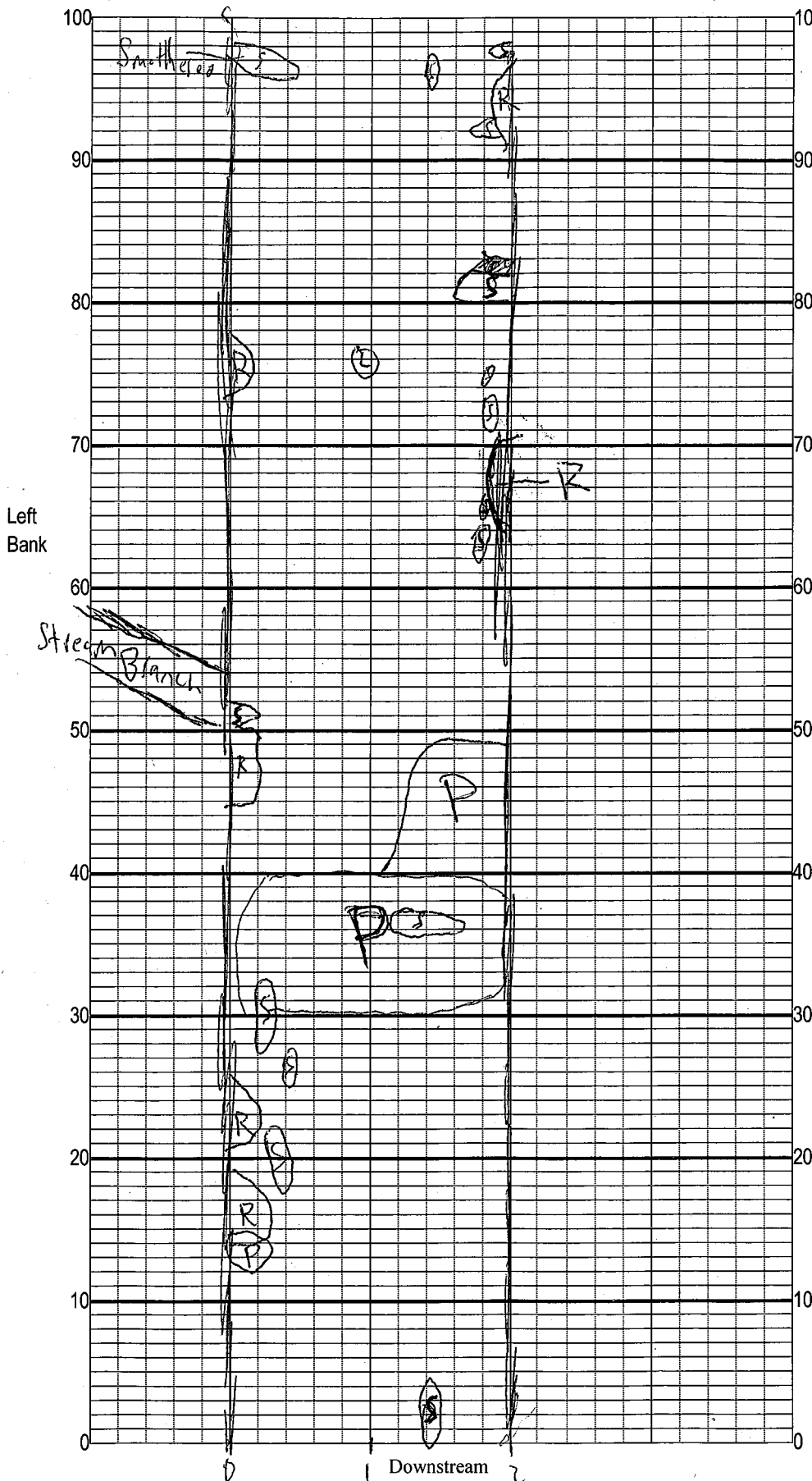
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Length of grid represents 100 m of stream (not linear meters).
(Horizontal scale is double vertical scale, draw proportionately).

Sampler:

100 m: Latitude 27.10233°N
Longitude -81.43959°W

0 m: Latitude 27.10135°N
Longitude -81.43990°W

Substrates: Code key, draw
proportionate habitat abundance.

S Snags <1 %

R Roots/undercut banks <1 %

L Leaf Packs (or mats) few %

V Aquatic Macrophytes few %

 %

 %

P Pools total # observed = 3
range expected =

Average width 2 m

Average depth 0.3 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:

Heavy Sand Smothering
throughout

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

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Field ID

SAMPLE ID see sticker upper rightORG ID 21FLETMSTORET # see sticker upper rightCOUNTY HighlandsDATE see sticker upper rightTIME 1030-1130

SITE NAME

FIELD ID/NAME see sticker upper right RECEIVING BODY OF WATERFishing Creek

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category):								Landscape Development Intensity Index (LDI)	
Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)		
Local Watershed Erosion (select one): ☐ None ☐ Slight ☒ Moderate ☐ Heavy								Typical Width (m) Depth (m)/Velocity (m/sec) Transect	
Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☒ Moderate ☐ Heavy									
Width of Riparian Vegetation (m) on Each Buffer Side				Hydrologic Modification Score (per FT 3101)					
Left Bank: <u>18</u> Right Bank: <u>18</u>									
High Water Mark: <u>1.5</u> + <u>.3</u> = <u>1.8</u>				Artificially Impounded					
(m) (above present water level) (present depth) (above bed)				☐ Yes ☒ No					
Artificially ☒ No ☐ Mostly recovered, more sinuous				Canopy Cover % ☐ Open ☐ Lightly Shaded (11-45%)					
Channelized: ☐ Some recovery ☐ Recent, severe				☐ 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 % Coverage Woody Debris (Snags) ☐ Undercut Banks / Roots ☐ Leaf Packs or Mat ☐ Aquatic Vegetation ☐ Rock or Shell Rubble ☐ Sand ☐ Mud / Muck / Silt ☐ 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: <u>0.3</u> <u>20.4</u> <u>18.2</u> <u>8.2</u> <u>91</u> <u>101</u> <u>0.4</u> Mid: ☐ ☐ <u>5.1</u> ☐ ☐ ☐ ☒ VOB Bottom: ☐ ☐ ☐ ☐ ☐ ☐ ☐ TOTAL DEPTH <u>0.4</u> Meter ID: <u>A</u>			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐ Water Surface Oils Normal ☒ Sheen ☐ Globs ☐ Slick ☐ 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: _____ System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐		
ABUNDANCE Periphyton: ☒ Not Obs. ☐ Rare ☐ Common ☐ Abundant Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☐ ☒ ☐ ☐ Iron/Sulfur Bacteria: ☒ ☒ ☐ ☐			AMBIENT FIELD CONDITIONS / NOTES: <u>Stream was low very few suitable habitats in the water/underwater</u> ☒ The antecedent hydrologic conditions have been met to my best knowledge.					
SAMPLING TEAM <u>Ben Paswater</u> <u>Danny Berger</u>			SIGNATURE: <u>Ben Paswater</u>			DATE:		

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

RQ-2016-04-11-54

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WBID 32011

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Field ID

Bootheel Creek @
End of Price Rd

FISSCR0014FTM

SAMPLING AGENCY:
FDEP South ROC

STORET STATION NUMBER:

RECEIVING BODY OF WATER:

COUNTY:

LOCATION:

Fisheating Creek

Highlands

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components Substrate Diversity <u>4</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 2 1
Substrate Availability <u>2</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>16</u> shallow and quick	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>11</u> ----- Primary Score <u>33</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 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 ①⑥	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> <u>6</u> Left Bank	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. RL 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 root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank <u>9</u> <u>9</u> Left Bank	Width of vegetation greater than 18 m RL 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 <u>8</u> <u>8</u> Left Bank ----- Secondary Score <u>62</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. RL 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

95

Date: <u>4/12/16</u>	Analyst: <u>Ben Paswater</u>	Signature: <u>Ben Paswater</u>
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