



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

PAGE 1 OF 6

RQ-2016-12-05-17

12/19/2016
WBID 3201K
Fence Line Drain at
Blue Head Ranch
SE

G4SD121916-1

SC35382812

Data Qualified?
Yes / No

Date: _____
(mm/dd/yyyy)

(Decimal Degrees)

(Decimal Degrees)

STORET Station Name: _____

STORET Station ID: _____

WBID: _____ RQ: _____

Receiving Body of Water: Fisheating Creek

Field ID: _____

County: Highlands

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
<u>Corey Anderson</u>		X	X			
<u>Ben Paswater</u>			X	X	X	

Sampling Equipment		
☒ 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>4515</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>1045</u>	<u>0.3</u>	<u>0.4</u>	<u>6.0</u>	<u>72</u>	<u>7.7</u>	<u>-</u>	<u>0.4</u>	<u>341</u>	<u>24.7</u>
CEN										

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	☒ TKN / TP / Nox / NH3 / TOC Other _____	☒ Ice ☒ H ₂ SO ₄			☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO ₂			☐ <2
Filtered Nutrients	☒ oP ☒ Field Filtered 0.45 µm Filter	☒ Ice			
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
BOD	☐ BOD-INHB ☐ BOD-UNIN	☐ Ice			
Physical/Aggregate	☒ TSS / Turbidity / Alkalinity / Color ☐ Other _____	☒ 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 ☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other _____			

Notes:	Place Label Here (If Available)
Signature: <u>[Signature]</u>	Date: <u>12-19-16</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)

12/19/2016

WBID 3201K

Fence Line Drain at

Blue Head Ranch

SE

G4SD121916-1

Field ID

STORET
SC35382812

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

1FLFTM

LATITUDE

LONGITUDE

SAMPLING AGENCY FDEP South ROCSITE NAME see sticker

RECEIVING BODY OF WATER

Fishing 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) ☐ ☐ ☐ <u>100</u> ☐ ☐ ☐ ☐ ☐ ☐							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 <u>3</u> m wide		
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>1</u> Right Bank: <u>3</u>				Hydrologic Modification Score (per FT 3101) ☐				<u>0.03</u> m/s <u>0.05</u> m/s <u>0.03</u> m/s	
High Water Mark: <u>1.0</u> + <u>0.4</u> = ☐ (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No				<u>0.1</u> m deep <u>0.4</u> m deep <u>0.1</u> 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 % Coverage INVERT # Times Sampled PERI # Times Sampled Woody Debris (Snags) ☐ ☐ ☐ Undercut Banks / Roots ☐ ☐ ☐ Leaf Packs or Mat ☐ ☐ ☐ Aquatic Vegetation <u>0.06</u> ☐ ☐ 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>24.7</u> <u>7.7</u> <u>6.0</u> <u>72</u> <u>341</u> <u>/</u> <u>0.4</u> Mid: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☒ VOB Bottom: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Meter ID: <u>5</u> <u>0.4</u>					
Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐			Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐			Color Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify) ☐		
Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: _____ Exp: _____			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 <u>C. Anderson, B. Paswater</u>					SIGNATURE: <u>[Signature]</u>		DATE: <u>12-19-16</u>	

12/19/2016

WBID 3201K

Fence Line Drain at

Blue Head Ranch

SE

G4SD121916-1

Field ID

SC35382812

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

STORET STATION NUMBER:		DATE (MM/DD/YY):	SAMPLING AGENCY:
FIELD ID/NAME:		COUNTY:	RECEIVING BODY OF WATER:
Highlands		LOCATION:	Fishing Creek
		FDEP South ROC	

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>2</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 <u>2</u> 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 <u>2</u> 1
Water Velocity <u>5</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 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 <u>5</u> 4 3 2 1
Habitat Smothering <u>3</u> ----- Primary Score <u>32</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	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>3</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 <u>3</u> 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>	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>3</u> Left Bank <u>3</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 <u>3</u> 2 1 <i>Cattle</i>
Riparian Zone Vegetation Quality Right Bank <u>4</u> Left Bank <u>3</u> ----- Secondary Score <u>24</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 <u>4</u>	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). <u>3</u> 2 1

TOTAL SCORE

40

Date: <u>12-19-16</u>	Analyst: <u>Corey Anderson</u>	Signature: <u>[Signature]</u>
-----------------------	--------------------------------	-------------------------------

12/19/2016

WBID 3201K

Fence Line Drain at

Blue Head Ranch

SE

G4SD121916-1

Field ID

STORET

SC35382812

Left
Bank

Date:

Sampler:

Ben Paswater

100 m: Latitude

27.1314

Longitude

-81.4868

0 m: Latitude

27.1308

Longitude

-81.4858Substrates: Code key, draw
proportionate habitat abundance.

%



Snags



Roots/undercut banks



Leaf Packs (or mats)



Aquatic Macrophytes

0.6%

Pools

total # observed = 0
range expected = 3-6

Average width

3 m

Average depth

0.4 mVelocity measured at 100 meter mark.20.05WQ & chemistry taken at 100 meter mark.

Habitat Smothering:

sand, siltNote 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:

0-1, 3-6mNote areas (on map) where natural vegetation
is altered or eliminated.

Plants observed / other notes:

V = 9Alternanthera philoxeroides

1 2 Downstream 3m

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

at

G4SD121916-1
Field ID ▲
STORET ▼
SC35382812

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.

Meter Mark												Specime n collected (check)	Meter Mark												Specime n collected (check)
0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	HERBACEOUS SPECIES	0-10		10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100				
HERBACEOUS SPECIES											HERBACEOUS SPECIES														
Alternanthera philoxeroides											Micranthemum glomeratum														
Bacopa caroliniana											Micranthemum umbrosum														
Bacopa monneri											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														
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																									
									</																

12/19/2016

WBID 3201K

Fence Line Drain at

Blue Head Ranch

SE

G4SD121916-1

Field ID

STORET
SC35382812

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

County:

Investigators

Andersen
Paswater

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				60	1			
	2					2			
	3					3			
	4					4			
	5					5			
	6					6			
	7					7			
	8					8			
	9					9			
10	1				70	1			
	2					2			
	3					3			
	4					4			
	5					5			
	6					6			
	7					7			
	8					8			
	9					9			
20	1				80	1			
	2					2			
	3					3			
	4					4			
	5					5			
	6					6			
	7					7			
	8					8			
	9					9			
30	1				90	1			
	2					2			
	3					3			
	4					4			
	5					5			
	6					6			
	7					7			
	8					8			
	9					9			
40	1				100	1			
	2					2			
	3					3			
	4					4			
	5					5			
	6					6			
	7					7			
	8					8			
	9					9			
50	1					1			
	2					2			
	3					3			
	4					4			
	5					5			
	6					6			
	7					7			
	8					8			
	9					9			

Secchi depth 0.4
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 ☒

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 densimeter 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%.



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

PAGE 1 OF 6

STORET Station Name: _____

STORET Station ID: _____

WBID: _____ RQ - _____

RQ-2016-12-05-17

12/19/2016

WBID 3201K

Fence Line Drain at
Blue Head Ranch
SE

G4SD121916-1

Field ID

STORET
SC35382812

Data Qualified?
Yes / No

Date: _____

(mm/dd/yyyy)

(Decimal Degrees)

(Decimal Degrees)

Receiving Body of Water: Fisheating Creek

Field ID: _____

County: Highlands

Sampling Team Members

Corey Anderson
Ben Paswater

WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
X	X			
		X	X	X

Sampling Equipment		
☒ 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 / Low / Normal / High / Flooded

Meter ID# 4515

Photos: Yes / No

Matrix: Fresh / Marine / DI

Tide Falling: Yes / No / NA

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>1045</u>	<u>0.3</u>	<u>0.4</u>	<u>6.0</u>	<u>72</u>	<u>7.7</u>	<u>-</u>	<u>0.4</u>	<u>341</u>	<u>24.7</u>
CEN										

Biological Samples Collected:

None

HA

SCI

LVS

RPS

LVI

Other

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☒ TKN / TP / Nox / NH3 / TOC	☒ Ice ☒ H ₂ SO ₄			☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO ₂			☐ <2
Filtered Nutrients	☒ oP ☒ Field Filtered 0.45 µm Filter	☒ Ice			
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
BOD	☐ BOD-INHB ☐ BOD-UNIN	☒ Ice			
Physical/Aggregate	☒ TSS / Turbidity / Alkalinity / Color	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☒ Ice			
Microbiology	☐ E Coli ☐ F Coli ☐ Entero ☐ QPCR	☐ Formalin			
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	☐ Ice			
		☐ Other			

Contains
1:1
Sulfuric Acid
SA-6209120
EXP: 07/27/17
Warning!
See SDS

Preservative Sticker(s) Here
(If Available)

Notes:

SB10 Visit 77220
Entered VR HA, RPS, LVS, Potem
QC BP HAV RPS ✓ BP
1/10/17

Place Label Here
(If Available)

Signature: [Signature]

Date: 12-19-16

Field Parameters Entered into LIMS: RM 4/4/17

Date Migrated to STORET: RM 10/17

Field Parameters QC in LIMS: 01/09/17 VR

Field Sheets Scanned/Saved: _____