



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2016

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Check box if data
qualified

RQ-2016-01-11-39

1/20/2016

Time:

Winkler Canal @
Princeton St.



SD012016-1

Field ID

STORET
G3SD0055



Date: 1/20/2016
(mm/dd/yyyy)

WBID: 3240

ORG ID: 37X

Latitude:

Longitude:

(Decimal Degrees)

(Decimal Degrees)

Receiving Body of Water: Caloosahatchee River

County: Lee

Sampling Agency: SROC

Sampling Team Members				WQ Measurements	Documentation	Sample Collection	Preservation	Preservation Check
Ben Paswater					✓			
Danny Berger				✓				
Chris Link						✓	✓	✓

Sampling Equipment	
Sample Container	Van Dorn
Dipper	Other
Equipment ID:	

Collection Method	
Wading	Via Boat
From Shore	Canoe/Kayak
Other	Electric Motor
	Gasoline Motor

Water Level:	Dry / Low / Normal / High / Flooded	Matrix:	Fresh / Marine / DI
Meter ID#	A	Photos:	Yes / No
Tide Falling:	Yes / No		

Time Zone	Time	Sample Depth (m)	Total Depth (m)	Temp (°C)	DO (mg/L)	DO (%SAT)	COND (µmhos/cm)	Salinity (ppt)	pH	Secchi Disk (m)
EST	Top	1000	0.3	0.7	19.0	3.6	39	697	NA	6.7
	Bottom									0.7
CST	Blank or Duplicate		Duplicate	Field Blank	Equipment Blank	Equipment ID#				

Biological Samples Collected: None HA SCI LVS RPS LVI Other

Parameter Suite	Parameter Methods	Preservation
Preserved Nutrients	TKN TP NOx NH3 TOC Other	H2SO4
Metals	W-ICPMS W-ICP	HNO3
Filtered Nutrients	OP Field Filtered 0.45 µm Filter	
Macroinvertebrates	BP HA only	Formalin
Microbiology	E Coli F Coli Enterococcus QPCR	Nitric Acid Lot
Periphyton	ALGAE-ID	
Pesticides	W-PSNP-TQ W-PC-AA-SF W-AHERB-AA W-UHERB-AA	Other
Other	All Other Samples Unless Otherwise Noted	

All Samples Placed in Wet Ice ≤ 6° C? Yes No

Notes:

HA: RPS + LVS including

RQ-2016-01-11-39

1/20/2016

Time:

Field Blank

SD012016-2

Field ID

STORET

Blank

Contains 1:1 Sulfuric Acid SA-5259020 EXP: 09/16/16 Warning! See MSDS

Sampler Signatures: Ben Paswater, Chris Link, Danny Berger

Field Parameters Entered into LIMS: Date Field Parameters QC in LIMS: Date

1/20/2016

Time:

DEP-SOP-001/01: Form FD 9000-5
STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL
STREAM/RIVER HABITAT ASSESSMENT FIELD SI

Winkler Canal @
Princeton St.

SD012016-1

Field ID

STORET
G3SD0055

SUBMITTING AGENCY CODE:		STORET STATION NUMBER:		DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
SUBMITTING AGENCY NAME:				1/20/2016	Caloosahatchee
REMARKS:	COUNTY:	LOCATION:			FIELD ID/NAME:
	Lee	Winkler Canal			

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>6</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 <u>6</u>	5 4 3 2 1
Substrate Availability <u>5</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>6</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 <u>6</u>	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>3</u> ----- Primary Score <u>20</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>4</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 <u>4</u> 3 2 1
Bank Stability	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.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank <u>4</u> Left Bank <u>4</u>	10 9	8 7 6	5 <u>4</u> LR	3 2 1
Riparian Buffer Zone Width	Width of vegetation greater than 18 m	Width of vegetation >12 to 18m	Width of vegetation 6 to 12 m. human activities close to system	Less than 6 m of buffer zone due to intensive human activities
Right Bank <u>2</u> Left Bank <u>2</u>	10 9	8 7 6	5 4	3 <u>2</u> 1 LR
Riparian Zone Vegetation Quality	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.	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed.	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious.	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).
Right Bank <u>2</u> Left Bank <u>2</u> ----- Secondary Score <u>20</u>	10 9	8 7 6	5 4	3 <u>2</u> 1 LR

40

TOTAL SCORE

Date: 1/20/2016	Analyst: Ben Paswater	Signature: Ben Paswater
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SD012016-1
Field ID ▲
STORET ▼
G3SD0055

Comments:

Revision Date: March 1, 2014

SAMPLE ID see sticker upper rightORG ID 21FLFTMLA 1/20/2016
Time:STORET # see sticker upper rightCOUNTY LeeLC Winkler Canal @DATE see sticker upper right

TIME

SA Princeton St.

SITE NAME

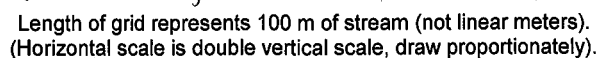
FIELD ID/NAME see sticker upper right RECEIVING BODY OF WATER Caloosahatchee

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)		
		5		55	40				
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>2</u> Right Bank: <u>2</u>									
High Water Mark: <u>2</u> + <u>7</u> = <u>9</u>				Artificially Impounded					
(m) (above present water level) (present depth) (above bed)				☒ Yes ☐ No					
Artificially ☐ No ☒ Some recovery				Canopy Cover % ☒ Open ☐ Lightly Shaded (11-45%)					
☐ Mostly recovered, more sinuous				☐ Heavily Shaded ☐ Moderate Shaded (46-80%)					
Channelized: ☒ Recent, severe									

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)
Woody Debris (Snags)			<u>0.3</u>	<u>19.0</u>	<u>6.7</u>	<u>3.6</u>	<u>39</u>	<u>647</u>	<u>NA</u>	<u>0.7</u>
Undercut Banks / Roots										☒ VOB
Leaf Packs or Mat										
Aquatic Vegetation			<u>4</u>							
Rock or Shell Rubble			<u><1</u>							
Sand										
Mud / Muck / Silt										
Other										
Other										
ABUNDANCE Not Obs. Rare Common Abundant										
Periphyton: ☒ ☐ ☐ ☐										
Fish: ☐ ☒ ☐ ☐										
Aquatic Plants: ☐ ☐ ☒ ☐										
Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐										
SAMPLING TEAM <u>paswater, Berger, Link</u>			SIGNATURE: <u>Ben Parker</u>			DATE: <u>1/20/2016</u>				
			System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☒ <u>Canal</u>							
			AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.							



DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

RQ-2016-01-11-39

1/20/2016

Time:

Winkler Canal @
Princeton St.



County: Lee Investigators: BP, CH, DB

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		84	60	1	N		2
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
10	1			52	70	1			1
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
20	1			16	80	1			0
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
30	1			0	90	1			0
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
40	1			8	100	1			4
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
50	1			2		1			
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								

Secchi depth 0.7
Estimated? no

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-2016-01-11-39

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

No Algae
seen
very clear
water

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%.