



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

February 2016

PAGE ____ OF ____

Data Qualified?
Yes / No

STORET Station Name: South Canal @ US1

Date: 10/31/16
(mm/dd/yyyy)

STORET Station ID: G5SE0044

Latitude: 27.605317°

(Decimal Degrees)

WBID: 3185

RQ - 2016-10-24-73

ORG ID: 21FLWPB

Longitude: -80.382334°

(Decimal Degrees)

Receiving Body of Water:

Field ID: G5SE0044

County: Indian River

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Seal the water in					☒	☒	☒	☒	☒
					☐	☐	☐	☐	☐
					☐	☐	☐	☐	☐
					☐	☐	☐	☐	☐

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 / <u>Normal</u> / High / Flooded								Matrix: <u>Fresh</u> / Marine / DI		
Meter ID# 11623				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°)
EST	1315	0.8	0.4	7.6	96	7.2	0.65	0.4(s)	1301	25.1
CEN										

Biological Samples Collected:		None	HA	SCI	LVS	RPS	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 ☐ H ₂ SO ₄			☐ <2			
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO ₂			☐ <2			
Filtered Nutrients	☐ W-PO4-F ☐ Field Filtered 0.45 µm Filter	☐ Ice						
Chlorophyll	☐ CHLSUITE-W	☐ Ice						
BOD	☐ BOD-UNIN	☐ Ice						
Physical/Aggregate (Fresh)	☐ Alkalinity / W-F / W-TSS / TURBIDITY / W-CI-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:	Place Label Here (If Available)
Signature: <u>[Signature]</u>	Date: 10/31/16

Field Parameters Entered into LIMS: <u>12/11/16</u> (Initials/Date)	Field Parameters QC in LIMS: <u>4/13/17</u> (Initials/Date)
Date Migrated to STORET: <u>12/11/16</u> (Initials/Date)	Field Sheets Scanned/Saved: <u>52</u> (Initials/Date)
STORET ID: 77448	

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

Waterbody: Vero S. Canal Date: 10/31/16 County: IRL Storet Number: 655FW all
Analyst: T WIPER Signature: Tom W
Comments: 655E0904M

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	X	X					X	X			Micranthemum glomeratum																
Bacopa caroliniana												Micranthemum umbrosum																
Bacopa monnieri					X							Myriophyllum aquaticum																
Bidens mitis												Najas guadelupensis																
Boehmeria cylindrica												Nuphar luteum																
Centella asiatica												Orontium aquaticum																
Ceratophyllum demersum												Panicum hemitomon	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Chara												Panicum repens																
Cicuta maculata												Panicum rigidulum																
Cladium jamaicense												Pistia stratioides				X												
Colocasia esculenta							X	X	X	X		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												Sagittaria lancifolia																
Hygrophila polysperma												Sagittaria latifolia																
Hymenocallis												Salvinia minima																
Lachnanthes caroliniana												Samolus parviflora																
Landoltia punctata												Saururus cernuus																
Lemna												Sparganium americanum																
Limnophila sessiflora												Typha																
Ludwigia leptocarpa												Vallisneria americana																
Ludwigia palustris												Zizania aquatica																
Ludwigia peruviana																												
Ludwigia repens																												
Luziola fluitans																												
Water spinach																												
Phragmites	X	X	X	X	X	X	X	X	X	X																		
Scirpus californ	X	X	X	X	X	X	X	X	X	X																		
Polygonum	X	X	X	X	X	X	X	X	X	X																		
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																												

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Sathy canal County: Dublin Co Date: W. 10/24/04 Investigators: P. 178

STORET Station Number: 655ECU44

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

Secchi depth 0.5
Estimated?

points ranked 4-6 0
total points assessed 99
% 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- 206-10-24-73

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

VISIT ID: 77448

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site:

County:

Date:

Investigators:

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

Secchi depth

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
SCUBA/Recon
Water sample
RO.

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

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				0	1			
	2					2			
	3					3			
	4					4			
	5					5			
	6					6			
	7					7			
	8					8			
	9					9			
10	1				10	1			
	2					2			
	3					3			
	4					4			
	5					5			
	6					6			
	7					7			
	8					8			
	9					9			
20	1				20	1			
	2					2			
	3					3			
	4					4			
	5					5			
	6					6			
	7					7			
	8					8			
	9					9			
30	1				30	1			
	2					2			
	3					3			
	4					4			
	5					5			
	6					6			
	7					7			
	8					8			
	9					9			
40	1				40	1			
	2					2			
	3					3			
	4					4			
	5					5			
	6					6			
	7					7			
	8					8			
	9					9			
50	1				50	1			
	2					2			
	3					3			
	4					4			
	5					5			
	6					6			
	7					7			
	8					8			
	9					9			

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 diameter quadrants (out of 80) that HAVE canopy cover. Measure along 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%.

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

SAMPLE ID _____ ORG ID 21FLUPIS LATITUDE _____
 COUNTY _____ STORET # 6550044 LONGITUDE _____
 DATE _____ TIME _____ SAMPLING AGENCY DEP SE
 SITE NAME _____
 FIELD ID/NAME _____ RECEIVING BODY OF WATER FRL

RIPARIAN ZONE / STREAM FEATURES

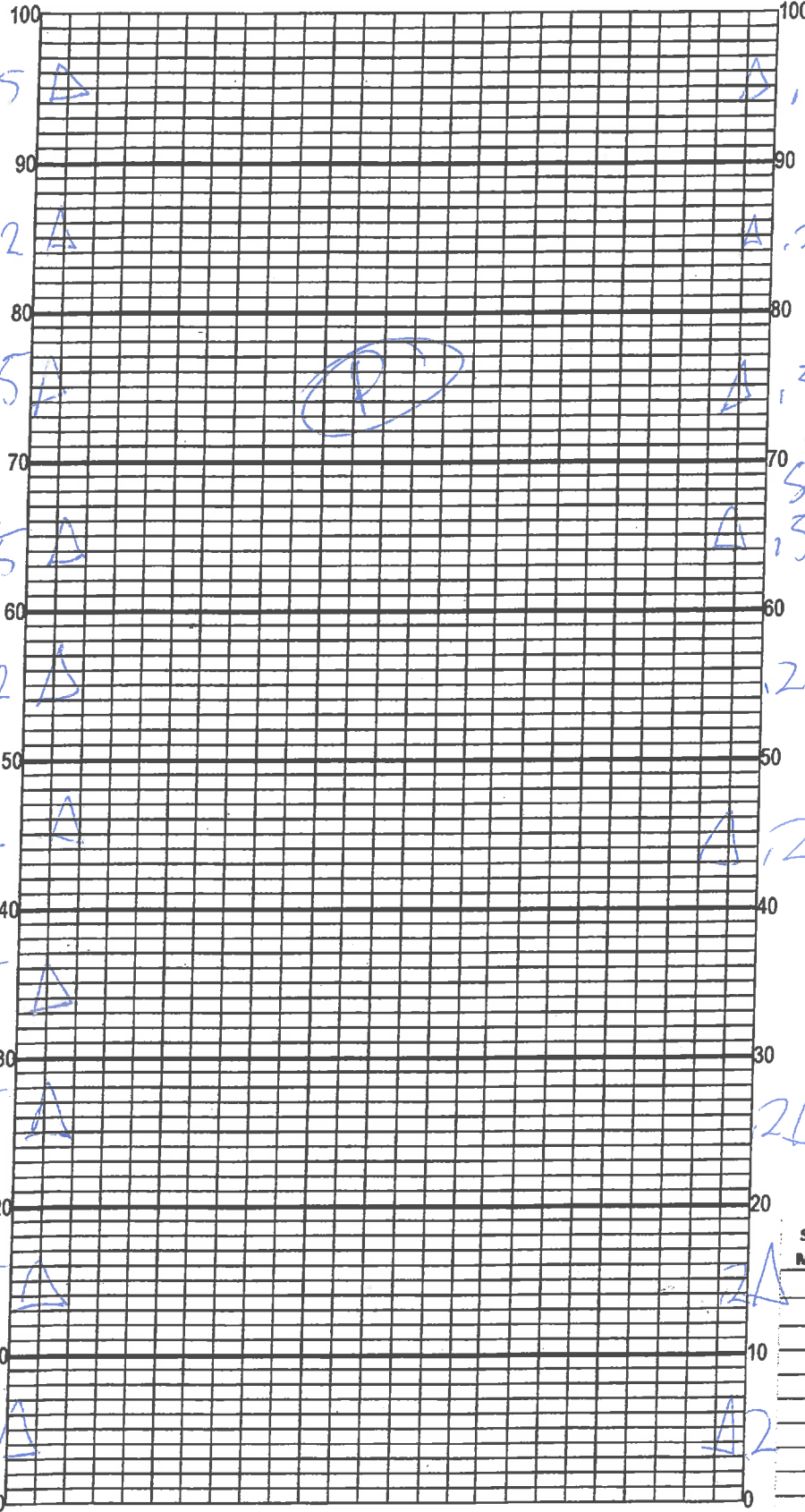
PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category):								Landscape Development Intensity Index (LDI)	
Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)		
				<u>70</u>	<u>30</u>				
Local Watershed Erosion (select one): ☐ None ☐ Slight ☐ Moderate ☐ Heavy						Typical Width (m) Depth (m)/Velocity (m/sec) Transect			
Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☐ Moderate ☐ Heavy						<u>15</u> m wide			
Width of Riparian Vegetation (m) on Each Buffer Side				Hydrologic Modification Score (per FT 3101)					
Left Bank: <u>0</u>		Right Bank: <u>5</u>							
High Water Mark: <u>0.3</u> + <u>0.4</u> = <u>0.7</u>				Artificially Impounded					
(m) (above present water level) (present depth) (above bed)				☐ Yes ☐ No					
Artificially ☐ No ☐ Mostly recovered, more sinuous				Canopy Cover %		☒ Lightly Shaded (11-45%)			
Channelized: ☐ Some recovery ☒ Recent, severe				☐ Open ☐ Heavily Shaded		☐ Moderate Shaded (46-80%)			

SEDIMENT / SUBSTRATE

Sediment Oils			Sediment Odors			Smothering of Substrates					
☒ Absent ☐ Slight			☒ Normal ☐ Sewage ☐ Petroleum			Sand Smothering: None ☐ Slight ☐ Moderate ☒ Severe ☐					
☐ Moderate ☐ Profuse			☐ Chemical ☐ Anaerobic			Silt Smothering: None ☐ Slight ☐ Moderate ☒ Severe ☐					
			☐ Other (Specify):			Algae Smothering: None ☐ Slight ☐ Moderate ☒ Severe ☐					
SUBSTRATE TYPE				WATER QUALITY							
Assessment Tool: ☐ SCI ☐ RPS ☐ LVS				Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M)							
☐ LCI ☐ BioRecon				Top: <u>0.2</u> <u>25.1</u> <u>7.2</u> <u>7.6</u> <u>92</u> <u>1301</u> <u>0.65</u> <u>0.4</u>							
				Mid: <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u>4</u> VOB							
				Bottom: <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> TOTAL DEPTH							
				<u>0.4</u>							
				Meter ID: <u>101 623</u>							
				Water Odors Normal ☒ Petroleum ☐				Water Surface Oils Normal ☒ Sheen ☐			
				Sewage ☐ Chemical ☐ Other ☐				Globs ☐ Slick ☐ Other ☐			
				Water Sample Taken? ☒ Yes ☐ No				Color Tannic ☒ Green (Algae) ☐			
				Sample Preserved? ☒ Yes ☐ No				Clear ☐ Other (Specify) ☐			
				Lot Number: _____ Exp: _____							
				Algae Sample Taken? ☐ Yes ☐ No				Clarity Clear ☐ Slightly Turbid ☒			
				Sample Preserved? ☐ Yes ☐ No				Turbid ☐ Opaque ☐			
				Lot Number: _____ Exp: _____							
				System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☒							
ABUNDANCE				AMBIENT FIELD CONDITIONS / NOTES:							
Not Obs. Rare Common Abundant											
Periphyton: ☐ ☒ ☐ ☐											
Fish: ☐ ☐ ☒ ☐											
Aquatic Plants: ☐ ☐ ☒ ☐											
Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐				☒ The antecedent hydrologic conditions have been met to my best knowledge.							
SAMPLING TEAM				SIGNATURE				DATE			
<u>Sevel</u> <u>wagner</u>				<u>Sevel</u>				<u>10/31/16</u>			

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

Vero
south canal 655E0044



Location: _____
Date: 10/31/16
Sampler: T WIPPIK

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

- ☒ Snags _____
- ☒ Roots/undercut banks _____
- ☒ Leaf Packs (or mats) _____
- ☒ Aquatic Macrophytes _____
- ☐ _____
- ☐ _____
- ☒ Pools total # observed = _____
range expected = _____

Average width 8 m
Average depth _____ m

Velocity measured at _____ meter mark.

WQ & chemistry taken at _____ 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.

Secs/ Meter	Flow m/s	Secs/ Meter	Flow m/s
1	1	12	0.08
2	0.5	13	0.076
3	0.33	14	0.071
4	0.25	15	0.066
5	0.2	16	0.062
6	0.16	17	0.058
7	0.14	18	0.055
8	0.12	19	0.052
9	0.11	20	0.052
10	0.1	21	0.047
11	0.09	22	No Flow

Plants observed /
other notes:

Prod. Habitat	1	2	3	4	5
Sweeps Major	10	7	5	4	3
Sweeps Minor	10	6	5	4	5

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