



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

PAGE 1 OF 1
Data Qualified?
Yes / No

June 2016

ORET Station Name: _____ Date: _____
STORET Station ID: _____ 10/19/2016 3258F G3SD101916-5
County: Lee RQ - Oak Creek @ Oak Creek Preserve G3SD0056
Receiving Body of Water: Imperial River Field ID: _____

Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment			
Ben Paswater									☒ Sample Container	☐ Van Dorn	☐ Pole	
Veronica Ronge									☐ Carboy	☒ Syringe		
Chase Conley / Kaitlin									☐ Dipper	☐ Other		
Rosemary Murphy									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								Matrix: Fresh / Marine / DI				
Meter ID#				Photos: Yes / No				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°)		
EST	0930	03	0.5	7.3	90	6.7	0.3	0.5	746	23.8		
EST	0935											
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 ☐ H2SO4		6209120		7/17	<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 (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 ☐ Enteroc ☐ 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: _____ Date: 10/19/2016

Field Parameters Entered into LIMS: _____ (Initials/Date)

Date Migrated to STORET: _____ (Initials/Date)

Field Parameters QC in LIMS: _____ (Initials/Date)

Field Sheets Scanned/Saved: _____ (Initials/Date)

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

Waterbody: Oak Creek Date: 10/19/16 County: Lee
Analyst: Ben Paswater Signature: Ben Paswater

RQ-2016-10-10-11
10/19/2016
3258F
Oak Creek @ Oak
Creek Preserve
G3SD101916-5
Field ID
STORET
G3SD0056

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. **bold is exotic invasive**

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												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 sp.												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											
Cyperus uncultus <u>inducatus</u>						✓			✓			Potamogeton illinoensis											
Diodia virginiana												Ruellia simplex											
Eichhornia crassipes												Sacciolepis striata											
Eleocharis (wispy viviparous)												Sagittaria kurziana											
Hydrilla verticillata												Sagittaria lancifolia											
Hydrocotyle sp.				✓				✓				Sagittaria latifolia											
Hygrophila polysperma			✓	✓								Salvinia minima											
Hymenachne amplexicaulis												Samolus parviflora											
Hymenocallis												Saururus cernuus											
Lachnanthes caroliniana												Sparganium americanum											
Landoltia punctata												Sphagneticola trilobata (Wedelia)											
Lemna sp.												Typha											
Limnophila sessiflora												Urochloa mutica (Brachiaria)											
Ludwigia leptocarpa												Vallisneria americana											
Ludwigia palustris												Zizania aquatica											
Ludwigia peruviana																							
Ludwigia repens																							
Luziola fluitans																							
<u>Giant reed form</u>										✓													
<u>Acrostichum daniciforme</u>						✓																	
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																							

10/19/2016
3258F

G3SD101916-5

Field ID

STORET
G3SD0056Oak Creek @ Oak
Creek Preserve

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

County: Lee		Investigators BP				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		90	60	1	N		91
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
10	1			90	70	1			93
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
20	1			88	80	1			92
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
30	1			90	90	1			92
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
40	1			90	100	1			90
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
50	1	V		89	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								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
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%.									

Secchi depth	1.5
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-	

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 9000-5 Stream/River Habitat Assessment Field Sheet

PUT STICKER UP ^ HERE		STORET STATION NUMBER:	RQ-2016-10-10-11 10/19/2016 3258F Oak Creek @ Oak Creek Preserve G3SD101916-5 Field ID STORET G3SD0056
FIELD ID/NAME:	COUNTY: <u>Lee</u>	LOCATION:	

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>5</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	<u>5</u> 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>11</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 <u>11</u>	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>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 <u>11</u>	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	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>19</u>	20 <u>19</u> 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 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>10</u> Left Bank <u>10</u>	<u>LR</u> <u>10</u> 9	8 7 6	5 4	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>5</u> Left Bank <u>4</u>	10 <u>9</u>	8 7 6	<u>5</u> 4	3 2 1
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>7</u> Left Bank <u>7</u> ----- Secondary Score <u>67</u>	10 9	<u>LR</u> 8 <u>7</u> 6	5 4	3 2 1

99 TOTAL SCORE

Date: <u>10/19/16</u>	Analyst: <u>Ben Paswater</u>	Signature: <u>Ben Paswater</u>
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DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

RQ-2016-10-10-11

10/19/2016
3258F

G3SD101916-5

STORET
G3SD0056SAMPLE ID see sticker upper rightORG ID 21FLETM

LATITUDE

STORET # see sticker upper right

COUNTY

LONGITUDE

DATE see sticker upper right

TIME

SAMPLING

Oak Creek @ Oak
Creek Preserve

SITE NAME

FIELD ID/NAME see sticker upper right RECEIVING BODY OF WATERImperial River

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>10</u>		<u>10</u>		<u>70</u>	<u>10</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>3</u> m wide
Width of Riparian Vegetation (m) on Each Buffer Side				Hydrologic Modification Score (per FT 3101)				
Left Bank: <u>9</u> Right Bank: <u>5</u>								
High Water Mark: <u>.2</u> + <u>.5</u> = <u>.7</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ 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		Sediment Odors		Smothering of Substrates			
☒ Absent ☐ Slight	☐ Moderate ☐ Profuse	☐ Normal ☒ Sewage ☐ Petroleum	☐ Chemical ☐ Anaerobic	Sand Smothering: ☐ None ☐ Slight ☐ Moderate ☒ Severe	☐ Silt Smothering: ☐ None ☐ Slight ☐ Moderate ☒ Severe		
		☐ Other (Specify):		Algae Smothering: ☐ None ☒ Slight ☐ Moderate ☐ Severe			
SUBSTRATE TYPE							
Assessment Tool: ☒ SCI ☒ RPS ☒ LVS							
☐ LCI ☐ BioRecon							
Woody Debris (Snags) <u>4</u> <u>10</u>							
Undercut Banks / Roots <u>1</u>							
Leaf Packs or Mat							
Aquatic Vegetation							
Rock or Shell Rubble							
Sand							
Mud / Muck / Silt							
Other <u>10</u>							
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>.3</u>	<u>23.8</u>	<u>6.7</u>	<u>7.3</u>	<u>90</u>	<u>746</u>	☒	<u>.5</u>
Mid:							☒ VOB
Bottom:							
Meter ID: <u>A</u>							
Water Odors: Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐				Water Surface Oils: Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐			
Water Sample Taken? ☒ Yes ☐ No				Color: Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify) ☐			
Sample Preserved? ☒ Yes ☐ No				Clarity: Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐			
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:							
☒ The antecedent hydrologic conditions have been met to my best knowledge.							
SAMPLING TEAM				SIGNATURE		DATE	
<u>Ben Paswater, Chase Conley, Veronica Ruge</u>				<u>Ben Paswater</u>		<u>10/19/2016</u>	

