



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

February 2016

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STORET Station Name: Lake Charles @ 400m S. of Center Date: 09/28/2016
STORET Station ID: 20020395 (G1CE0030) Latitude: 29.2283889
WBID: 2775 F RQ - 2016-09-26-35 ORG ID: 21FLLEN Longitude: -81.9065278
Receiving Body of Water: N/A Field ID: G1CE0030 County: Marion

Sampling Team Members						WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Mike Linger						/	/	/	/	/
Mike Drennan						/	/	/	/	/

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# <u>11C / AB</u>			Photos: <u>Yes</u> / <u>No</u> <u>NK</u>			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 (umhos/cm)	Temp. (C°)	
EST	12:53	0.3	1.9	6.5	85	6.9	0.05	0.6	106	29.6	
CEN		1.4		5.7	<u>mla</u> 74	6.7	0.05		106	28.5	

Biological Samples Collected: None HA SCI LVS RPS <u>LVI</u> 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	7/27/17	☒ <2	
Metals	☒ W-ICPMS ☒ W-ICP						☒ Ice ☒ HNO3	6218060	8/5/17	☒ <2	
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um Filter						☒ Ice				
Chlorophyll	☒ CHLSUITE-W						☒ Ice				
BOD	☐ BOD-UNIN						☐ Ice				
Physical/Aggregate (Kit A/C)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-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 ☐ Enterococcus ☐ 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				

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

Stative Sticker(s) Here
if Available

Notes:	Lake Charles @ 400 m S. of Center	G1CE0030
	Date: 09/28/16 RQ-2016-09-26-35	Field ID ↑ STORET ↓ 20020395
Signature: <u>[Signature]</u>	Date: <u>9/28/16</u>	



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February 2016

Data Qualified?
Yes / No

STORET Station Name: Lake Charles @ 400m S. of Center Date: 09/28/2016
(mm/dd/yyyy)

STORET Station ID: 20020395 Latitude: 29.2283889
(Decimal Degrees)

WBID: 2775 F RQ - 2016-09-26-34 ORG ID: 21 FL CEN Longitude: -81.9065278
(Decimal Degrees)

Receiving Body of Water: N/A Field ID: G1CE0030 County: Marion

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Mike Linger									
At Terry Riordan									
Mike Orennan									

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 Matrix: Fresh / Marine / DI

Meter ID# 11C / AB 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°)
<u>EST</u>	<u>12:53</u>	<u>0.3</u>	<u>1.9</u>	<u>6.5</u>	<u>85</u>	<u>6.9</u>	<u>0.05</u>	<u>0.6</u>	<u>106</u>	<u>29.6</u>
<u>CEN</u>		<u>1.4</u>		<u>5.7</u>	<u>74</u>	<u>6.7</u>	<u>0.05</u>		<u>106</u>	<u>28.5</u>

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	<u>6209120</u>	<u>7/27/17</u>	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice			
Chlorophyll	☒ CHL SUITE-W	☐ Ice			
BOD	☐ BOD-UNIN	☐ Ice			
Physical/Aggregate (Kit A/C)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CHIC / 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 ☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other			

Place Preservative
(if available)

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

Notes:

Lake Charles @ 400 m S. of Center

Date: 09/28/16
RQ-2016-09-26-34

G1CE0030
Field ID ↑
STORET ↓
20020395

Signature: [Signature] Date: 9/28/16

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 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 77229 MACROPHYTE ID: _____ LATITUDE: 29.2283889
COUNTY: Marion STORET #: 20020395 LONGITUDE: -81.9065278
DATE: 9/22/16 TIME: 12:53 SAMPLING AGENCY: FDEP CE ROC
SITE NAME: Lake Charles @ 400m S. of Center WBID: 2775 F
FIELD ID/NAME: G7 CE0030 LAKE SIZE: Med RQ: 2016-09-26-35

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) : Forest/Natural <u>100</u> Silviculture _____ Field/Pasture _____ Agricultural _____ Residential _____ Commercial _____ Industrial _____ Other (Specify) _____				LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI: _____ Land Use Source & Year: _____	
Local Watershed Erosion (select one) : ☒ None ☐ Slight ☐ Moderate ☐ Heavy Artificially Impounded ☐ Yes ☒ No					
Local Watershed NPS Pollution : ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy					
STORMWATER INPUTS <u>20</u> Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation 20 19 18 17 16		Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place 15 14 13 12 11		Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place 10 9 8 7 6	
LAKESIDE ALTERATIONS <u>20</u> Very few man-made structures, roads, or other disturbance adjacent to lake (<10% lakeside affected) 20 19 18 17 16		Moderate disturbance visible - structures, roads or other (10%-49% lakeside affected) 15 14 13 12 11		Many structures, roads or other human disturbance visible (50%-70% lakeside affected) 10 9 8 7 6	
BUFFER ZONE <u>20</u> Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer 20 19 18 17 16		89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer 15 14 13 12 11		50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer 10 9 8 7 6	
				Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place 5 4 3 2 1	
				Highly developed or disturbed (>70% of lakeside affected) 5 4 3 2 1	
				< 29% of shoreline with >18m buffer 5 4 3 2 1	

WATER / SUBSTRATE / BIOLOGICAL: SAMPLES AND OBSERVATIONS

Water: Nutrient Sample Taken? ☒ Yes ☐ No Preserved? ☒ Yes ☐ No pH<2 ☐ No Color Sample Taken? ☒ Yes ☐ No Lot # _____ Exp. Date: _____ Alkalinity Sample Taken? ☒ Yes ☐ No Water Level ☐ Low ☒ Normal ☐ High						Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other _____ Water Surface Oils: ☒ None ☐ Sheen/Slack ☐ Glob ☐ Other _____					
Meter Readings: Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat. (%) Cond. (UMHO/CM) Salinity (PPT) Top: <u>0.3</u> <u>29.6</u> <u>6.9</u> <u>6.5</u> <u>85</u> <u>106</u> <u>0.05</u> Mid-Depth: _____ Bottom: <u>1.4</u> <u>28.5</u> <u>6.7</u> <u>5.7</u> <u>74</u> <u>106</u> <u>0.05</u>						Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid Color: ☒ Tannic ☐ Clear ☐ Green SECCHI (M) <u>0.6</u> Total Station Depth (M) <u>1.9</u> VOB ☐					
Sediment Type: (may check more than one) ☒ Sandy ☐ Organic fibrous (peaty, CPOM) ☐ Vegetated ☐ Sand/Silt ☐ Organic smooth (muck) ☐ Other (Specify): _____ Sample Taken? ☐ Yes ☒ No						Sediment Odors: ☒ Normal ☐ Anaerobic ☐ Other (Specify): _____					
Biological Communities: LVI Conducted? ☒ Yes ☐ No Phytoplankton Sample Taken? ☒ Yes ☐ No Sample Preserved? <u>In Lab</u> ☐ Yes ☐ No Lot #: _____ Exp Date: _____ Algal Bloom/Algal ID Sample Taken? Yes ☒ No ☐ Don't Know Active Vegetation Mgmt? ☐ Yes ☒ No ☐ Don't Know						Abundance: Absent Rare Common Abundant Periphyton ☐ ☒ ☐ ☐ Nuisance Plants ☐ ☐ ☐ ☒ Submersed Plants ☐ ☒ ☐ ☐ Exotic Apple Snails ☐ ☒ ☐ ☐					
Weather Conditions: <u>80's</u> <u>Rain present</u>						Additional Notes:					
SAMPLING TEAM: <u>Mike Linger, Mike Drennan, Terry Ribordan</u>						SIGNATURE: <u>[Signature]</u>					
DATE: <u>9/28/16</u>											

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Lake Charles @ 400m S. of center</u>		County: <u>Marion</u>		Date: <u>9/28/16</u>							
Analyst: <u>M. Linger, M. Drennan, T. Rueden</u>		Signature: <u>[Signature]</u>		STORET: <u>20020395</u>							
Except where noted as "sp." species level identification required. *Genera that may require lab verification* Plants in bold= FLEPPC invasive exotic.				Lake units sampled (circle one group): 1, 4, 7, 10 2, 5, 8, 11 3, 6, 9, 12							
It is important to note dominant or co-dominant taxa (by areal extent) for each unit. Use "D" to denote dominant taxon, or "C" for the 2 co-dominant taxa.											
SPECIES	2	5	8	11	Collected? (✓)	SPECIES	2	5	8	11	Collected? (✓)
Acer rubrum	/	/	/	/		Fuirena scirpoides					
Alternanthera philoxeroides	/	/	/	/		Gordonia lasianthus	/		/	/	
Amaranthus australis						Habenaria repens					
Andropogon sp.	/					Hibiscus coccineus					
Azolla filiculoides (A. caroliniana)						Hibiscus grandiflora					
Baccharis sp.						Hydrilla verticillata					
Bacopa caroliniana						Hydrocotyle sp.	/	/		/	
Bacopa monnieri						Hygrophila polysperma					
Bidens alba						Hymenocallis sp.					
Bidens laevis						*Hypericum fasciculatum					
Bidens mitis						*Hypericum hypericoides					
Blechnum serrulatum			/			*Hypericum myrtifolium					
Boehmeria cylindrica		/				Ilex cassine	/	/			
Brasenia schreberi						Ipomoea aquatica					
Cabomba caroliniana						Ipomoea sagittata					
Canna						Itea virginica					
Centella asiatica			/			Juncus effusus				/	
Cephalanthus occidentalis	/	/	/	/		*Juncus marginatus					
Ceratophyllum demersum						*Juncus megacephalus					
Chara sp.						Juncus repens					
Cinnamomum camphora			/			*Juncus scirpoides					
Cladium jamaicense	/	/	/	/		Lachnanthes caroliniana					
Colocasia esculenta						Leersia hexandra					
*Commelina						Landoltia punctata (Spirodela punctata)					
Crinum americanum	/	/	/	/		Lemna sp.					
*Cyperus alternifolius (C. involucratus)						Leucothoe racemosa (Eubotrys racemosa)					
Cyperus articulatus						Limnium spongia					
Cyperus haspan						Limnophila sessiliflora					
*Cyperus lecontei						Liquidambar styraciflua					
*Cyperus polystachyos						*Ludwigia arcuata					
*Cyperus odoratus						Ludwigia hex-grand-uruguayensis complex**					
*Cyperus surinamensis						*Ludwigia leptocarpa					
Cyrilla racemiflora						Ludwigia (native)					
Decodon verticillatus						*Ludwigia octovalvis					
Diodia virginiana						*Ludwigia peruviana		/			
*Echinochloa crus-galli						*Ludwigia repens					
*Echinochloa muricatum						Ludwigia suffruticosa					
Echinochloa walteri						Luziola fluitans (Hydrochloa carolinensis)	/	/	/		
Eclipta prostrata (E. alba)						Magnolia virginiana					
Eichhornia crassipes	D	D	D	D		Mayaca fluviatilis					
*Eleocharis						Melaleuca quinquenervia					
Eleocharis cellulosa						Micranthemum glomeratum					
*Eleocharis elongata						Micranthemum umbrosum					
Eleocharis equisetoides						Mikania scandens		/	/	/	
Eleocharis interstincta						Mimosa pigra		/	/	/	
Eleocharis submersa viviparous						Myrica cerifera	/	/	/	/	
*Eriocaulon compressum											
*Eriocaulon decangulare											
Eupatorium capillifolium											
Fraxinus	/	/	/	/							

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: LK. Charles

Date: 9/28/16

SPECIES	2	5	8	11	Collected? (✓)	SPECIES	2	5	8	11	Collected? (✓)
Myriophyllum aquaticum						Salix caroliniana					
*Myriophyllum heterophyllum						Salvinia minima	✓	✓	✓	✓	
*Myriophyllum laxum						Sambucus canadensis					
*Myriophyllum pinnatum						Sapium sebiferum					
Myriophyllum spicatum						Saururus cernuus					
*Najas filifolia						Schinus terebinthifolius					
*Najas guadalupensis						*Schoenoplectus californicus					
*Najas minor						*Schoenoplectus pungens					
Nelumbo lutea						*Schoenoplectus tabernaemontani (Scirpus validus)					
Nitella spp.						Scirpus cubensis (Oxycaryum cubense)	✓	✓	✓	✓	
Nuphar sp.	✓	✓	✓	✓		Scirpus cyperinus					
Nymphaea mexicana						*Sesbania					
Nymphaea odorata						Solidago sp.					
Nymphoides aquatica						Sparganium americanum					
Nyssa sylvatica var. biflora	✓	✓		✓		Spartina bakeri					
Orontium aquaticum						Spirodela polyrhiza					
Osmunda cinnamomea	✓					Taxodium sp.	✓	✓	✓	✓	
Osmunda regalis						Thalia geniculata					
Panicum hemitomon	✓	✓	✓	✓		Thelypteris interrupta					
Panicum repens						Thelypteris palustris					
Paspalidium geminatum	✓	✓		✓		Triadenum virginicum					
*Paspalum repens						Typha sp.	✓	✓	✓	✓	
Paspalum urvillei						Urochloa mutica (Brachiaria mutica)					
Peltandra sp.						*Utricularia gibba (U. biflora)					
Persea sp.	✓	✓				*Utricularia foliosa					
Pennisetum purpureum						*Utricularia inflata					
Phragmites australis						*Utricularia purpurea					
Pinus elliotii	✓			✓		*Utricularia radiata					
Pistia stratioides						*Utricularia resupinata					
Pluchea sp.						Vallisneria americana					
*Polygonum glabrum (densiflorum)						Vitis sp.	✓	✓	✓	✓	
Polygonum hirsutum						*Websteria confervoides					
*Polygonum hydropiperoides						Wedelia trilobata (Sphagneticola trilobata)					
*Polygonum punctatum						Wolffiella spp.					
*Polygonum						Woodwardia virginica					
Pontederia cordata		✓				Xyris sp.					
*Potamogeton diversifolius						Zizania aquatica					
*Potamogeton illinoensis						Zizaniopsis milacea					
*Potamogeton pusillus											
*Potamogeton pectinatus (Stuckenia pectinatus)											
Proserpinaca pectinata											
*Rhexia											
*Rhynchospora corniculata	✓	✓	✓	✓							
*Rhynchospora inundata											
Rhynchospora nitens											
Ricciocarpos natans											
Sabal palmetto											
Sacciolepis striata				✓							
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia	✓	✓	✓	✓							
Sagittaria latifolia											

Lake Charles

