



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2018

Data Qualified?
Yes ☒ No ☐

Location/STORET Station Name: Fuller Lake (Middle)

Date: 07/30/2018
(mm/dd/yyyy)

WIN ID G3NW0084

WBID: 959G

Latitude: 30.37284634

County: Walton

RQ - 2018-07-30-57

ORG ID: 21FLPNS

Longitude: -86.31743107

Receiving Body of Water: Gulf of Mexico

Field ID: G3NW0084

Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Frank Butera					☒			☒
Jimmy Pitts					☒			☒

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☒ Syringe	
☐ Dipper	☐ Other	
Equipment ID		
Collection Method		
☐ Wading	☒ Canoe/Kayak	
☐ From Shore	☐ Electric Motor	
☐ Other	☐ Gasoline Motor	

Water Level: Dry / Low / <u>Normal</u> / Above Normal / Flooded				Meter ID# 154179		Matrix: <u>Fresh</u> Marine / DI				
Photos: Yes / <u>No</u>		Flow: No Flow / Intestinal / Flowing / <u>NA</u>		Tide: Rising / Falling / Slack / <u>NA</u>		Tide Times: High Low				
Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPTH)	Sp COND (µmhos/cm)	Temp. (C°)
EST	1130	2.6	0.3	0.7	6.38	85.9	5.21	0.04	92.3	31.0
<u>CEN</u>			2.1		1.19	15.3	5.00	0.04	93.6	29.5

Biological Samples Collected: None <u>HA</u> SCI RPS Algae ID LVS <u>LVI</u> Other:					
SBIO ID Numbers: SBIO-ID: 78657 HA-ID: 15303 RPS-ID: N/A Macrophyte-ID: 11141 LIMS#: 2011960					
Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4	SA7233030	8/21/2018	☐ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice	16570048		
Chlorophyll	☒ CHLSUITE-W	☒ 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			
Periphyton	☐ ALGAE-ID	☒ Ice			
Microbiology	☒ E Coli ☐ F Coli ☐ Enterococci	☒ Ice			
Molecular	☐ PCR-FILTER ☐ PCR-HFI83 ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-GFD	☐ Ice			
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA ☐ W-AHERB-AA	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-UHERB-AA ☐ W-AHERB-AA ☐ W-CARB-AA ☐ W-PCL-SQ-R ☐ W-PYR-AA-R ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Ice ☐ Other			

Notes: Fed Delivered 7/31/2018/10:06ETZ TLK	Field/WIN ID → G3NW0084
Location → FULLER LAKE (MIDDLE)	Date: 7/30/18
Signature: [Signature]	

Enter Field Parameters, Verify Station ID In LIMS DMT:	QC Station ID, Field Parameters In LIMS DMT:
Scan/Save Field Sheet: [Signature] 7/31/18	Verify Data In WIN:
(Initials/Date)	(Initials/Date)

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 78657 MACROPHYTE ID: _____ LATITUDE: N 30.37284634
 COUNTY: Walton (Miramar Beach) STORET #: G3NW0084 LONGITUDE: W -86.31743107
 DATE: 7/30/2018 TIME: 11:30 CTZ SAMPLING AGENCY: FL DEP - NWROC (21FLPNS)
 SITE NAME: Fuller Lake (Middle) WBID: 959G
 FIELD ID/NAME: G3NW0084 LAKE SIZE: 45 RQ: 2018-07-30-57

WATERSHED / LAKESIDE FEATURES

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

WATER / SUBSTRATE / BIOLOGICAL: SAMPLES AND OBSERVATIONS

Water: Nutrient Sample Taken? ☒ Yes ☐ No Preserved? ☒ Yes ☒ 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/Slick ☐ Glob ☐ Other _____							
Meter Readings: Top: <u>0.3</u> <u>31.0</u> <u>5.21</u> <u>6.38</u> <u>85.9</u> <u>92.3</u> <u>0.04</u> Mid-Depth: _____ Bottom: <u>2.1</u> <u>29.5</u> <u>5.00</u> <u>1.19</u> <u>15.3</u> <u>93.8</u> <u>0.04</u> Meter ID: <u>154179</u>								Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☒ Tannic ☐ Green ☐ Slightly Turbid SECCHI (M) <u>0.7</u> Total Station Depth (M) <u>2.6</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 ☐ Other (Specify): _____ ☐ Anaerobic							
Biological Communities: LVI Conducted? ☒ Yes ☐ No Phytoplankton Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot #: _____ Exp Date: _____ Algal Bloom/Algal ID Sample Taken? Yes ☒ No Active Vegetation Mgmt? ☐ Yes ☐ No ☒ Don't Know								Abundance: Absent Rare Common Abundant Periphyton ☐ ☐ ☒ ☐ Nuisance Plants ☐ ☒ ☐ ☐ Submersed Plants ☐ ☐ ☐ ☒ Exotic Apple Snails ☒ ☐ ☐ ☐							
Additional Notes:															

Weather Conditions: Rain AM, clouds after.

SAMPLING TEAM: Frank Butera, Jimmy Pitts

SIGNATURE: Frank Butera

DATE: 07/30/2018

STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
Lake Habitat Assessment Field Sheet

Storet/ WIN ID NUMBER: G3NW0084	DATE (M/D/Y) 7/30/2018	LAKE NAME: Fuller Lake (Middle)		FIELD ID / NAME: G3NW0084												
WBID: 959G	COUNTY: Walton	SAMPLING LOCATION/DESCRIPTION: Miramar Beach, FL		LAKE SIZE: 45 Acres												
PARAMETER	No surface inflow or outflow present, very long water residence time, groundwater seepage dominates ☒	Surface water inflow present, but flow is rare, moderate to long water residence time ☐	Surface water inflow and outflow present (or outflow only), sometimes with visible flow, short water residence time ☐	Impounded, hydrology of system artificially controlled ☐												
Color	Very clear, uncolored water (benthic sampling appropriate) ☐	Water somewhat tannin stained (benthic sampling appropriate) ☐	Dark, discolored water (water color 20 PCU or higher) ☐	Visibility extremely reduced due to high color ☒												
	Optimal	Suboptimal		Marginal												
Secchi ☐	Secchi >3 m Or VOB	3	2.6	2.2	1.8	1.4	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1
	20 19 18 17 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Vegetation Quality ☐	Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa 20 19 18 17 16	Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants 15 14 13 12 11		Large masses (21%-40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats 10 9 8 7 6		Lake choked (>40%) with nuisance macrophytes (duckweed, hyacinth, etc.) or algal mats, or few plants present at all (e.g., plants removed) 5 4 3 2 1										
Stormwater Inputs ☐	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		Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place 5 4 3 2 1										
Bottom Substrate Quality ☐	Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present 20 19 18 17 16	Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present 15 14 13 12 11		Moderate layer of CPOM/mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom 10 9 8 7 6		Thick deposits of CPOM, or fine detritus and anaerobic muck/mud/silt, or algal growth or nuisance plants (Hydrilla) cover bottom 5 4 3 2 1										
Lakeside Adverse Human Alterations ☐	Very few man-made structures, roads, or other disturbance adjacent to lake (<10%) 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		Highly developed or disturbed (>70% of lakeside affected) 5 4 3 2 1										
Upland Buffer Zone ☐	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		< 29% of shoreline with >18m buffer 5 4 3 2 1										
Adverse Watershed Land Use ☐	Score the potential effects from adverse human land uses, based on a continuum of amount and type, with least to most adverse as follows: Native vegetation, Silviculture, Pasture or Citrus, Low Density Residential, Row Crops, Commercial, High Density Residential, Urban, Industrial 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1															

TOTAL SCORE

114

COMMENTS:

ANALYSIS DATE:

07/30/2018

ANALYST: Frank Butera, Jimmy Pitts

SIGNATURE:



SBIO ID:

78657

HA ID:

15303

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Fuller Lake (Middle)		County: Walton (Miramar Beach)		Date: 7/30/2018	
Analyst: F. Butera		Signature: <i>[Signature]</i>		STORET: G3NW0084	
Except where noted as "sp." species level identification required. *Genera that may require lab verification* Plants in bold= FLEPPC invasive exotic. 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.				Lake units sampled (circle one group): 1, 4, 7, 10 2, 5, 8, 11 3, 6, 9, 12	
SBIO ID 78657	8	5	2	Collect ed? (✓)	Macro ID 11141
SPECIES					SPECIES
Acer rubrum					Habenaria repens
Alternanthera philoxeroides					Hydrilla verticillata
Andropogon sp.					Hydrocotyle sp.
Azolla filiculoides (A. caroliniana)					Hygrophila polysperma
Baccharis sp.					*Hypericum fasciculatum
Bacopa caroliniana					*Hypericum hypericoides
Bacopa monnieri					*Hypericum myrtifolium
Bidens laevis					Ilex cassine
Bidens mitis	1				Ipomoea aquatica
Blechnum serrulatum					Ipomoea sagittata
Boehmeria cylindrica					Itea virginica
Brasenia schreberi					Juncus effusus
Cabomba caroliniana					*Juncus marginatus
Casuarina equisetifolia					*Juncus megacephalus
Centella asiatica					Juncus repens
Cephalanthus occidentalis		1	1	1	*Juncus scirpoides
Ceratophyllum demersum					Lachnanthes caroliniana
Chara sp.					Leersia hexandra
Cladium jamaicense	1		1	1	Landoltia punctata (Spiro. punctata)
Cliftonia monophylla					Lemna sp.
Colocasia esculenta					Leucothoe racemosa (E. racemosa)
*Commelina					Limnium spongia
Crinum americanum					Limnophila sessiliflora
*Cyperus alternifolius (C. involucratus)					Liquidambar styraciflua
Cyperus articulatus					*Ludwigia arcuata
Cyperus haspan					*Ludwigia leptocarpa
*Cyperus lecontei					*Ludwigia linearis
*Cyperus polystachyos					*Ludwigia octovalvis
*Cyperus odoratus	1	1			*Ludwigia peruviana
*Cyperus surinamensis					*Ludwigia repens
Cyrilla racemiflora	1	C	1	1	*Ludwigia <i>[Handwritten: Cyperus alternifolius]</i>
Decodon verticillatus					Luziola fluitans (H. carolinensis)
Diodia virginiana					Lyonia lucida
*Echinochloa crus-galli					Magnolia virginiana
*Echinochloa muricatum					Mayaca fluviatilis
Echinochloa walteri					Melaleuca quinquenervia
Eclipta prostrata (E. alba)					Micranthemum glomeratum
Egeria densa					Micranthemum umbrosum
Eichhornia crassipes					Mikania scandens
*Eleocharis baldwinii					Mimosa pigra
*Eleocharis <i>[Handwritten: vivipara]</i>	1	1	1	1	Myrica cerifera
Eleocharis cellulosa					<i>[Handwritten: Hypericum brachy]</i>
Eleocharis equisetoides			1	1	
Eleocharis interstincta					<i>[Handwritten: Ludwigia alternifolia]</i>
*Eriocaulon compressum					<i>[Handwritten: Ludwigia sp.]</i>
*Eriocaulon decangulare					
Eupatorium capillifolium					
*Fuirena	4				
Fuirena scirpoidea	1	1	1	1	
Gordonia lasianthus					

RQ-2018-07-30-57

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

[illegible]