

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: N 30.86403
 COUNTY: Holmes (Bonifay) STORET #: _____ LONGITUDE: W -85.97157
 DATE: 5/16/2019 TIME: 12:00 CTZ SAMPLING AGENCY: FL DEP - NWROC
 SITE NAME: Z1-LL-13001 (Andrew's Lake) WBID: 146
 FIELD ID/NAME: Z1-LL-13001 LAKE SIZE: 42.6 RQ: 2019-04-29-13

WATERSHED / LAKESIDE FEATURES West Pitman Cr. - Chertaw. L.

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category - from GIS): Forest/Natural ☐ Silviculture ☐ Field/Pasture ☐ Agricultural ☐ Residential ☐ Commercial ☐ Industrial ☐ Other (Specify) ☐						LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI: <u>N/A</u>			
Local Watershed Erosion (select one): ☐ None ☒ Slight ☐ Moderate ☐ Heavy						Artificially Impounded ☐ Yes ☒ No			
Local Watershed NPS Pollution: ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy						Land Use Source & Year:			
STORMWATER INPUTS <u>18</u>		Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation 20 19 <u>18</u> 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	
LAKESIDE ALTERATIONS <u>19</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		Highly developed or disturbed (>70% of lakeside affected) 5 4 3 2 1	
BUFFER ZONE <u>24</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		< 29% of shoreline with >18m buffer 5 4 3 2 1	

WATER / SUBSTRATE / BIOLOGICAL: SAMPLES AND OBSERVATIONS

Water: <u>*</u> 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 _____					
Meter Readings: Top: <u>12.05</u> <u>0.3</u> <u>26.8</u> <u>5.31</u> <u>7.25</u> <u>90.9</u> <u>15</u> Mid-Depth: _____ Bottom: <u>12.05</u> <u>2.5</u> <u>25.23</u> <u>5.16</u> <u>6.05</u> <u>73.5</u> <u>15</u> Meter ID: <u>NWFLWMD</u>						Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____					
Sediment Type: (may check more than one) ☐ Sandy ☒ Organic fibrous (peaty, CPOM) ☐ Vegetated ☐ Sand/Silt ☐ Organic smooth (muck) ☐ Other (Specify): _____						Clarity: ☐ Clear ☒ Turbid ☐ Opaque ☐ Slightly Turbid					
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 ☐ ☐ ☐ ☐					
Sediment Odors: ☒ Normal ☐ Other (Specify): _____ ☐ Anaerobic						Additional Notes: <u>WATER, sed, YSI by NWFLWMD</u> <u>- Spring in lake for owner</u>					

Weather Conditions:

SAMPLING TEAM: Frank Butera, Mike King

SIGNATURE: [Signature]

DATE: 5/16/2019

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

STORET STATION NUMBER:	DATE (M/D/Y) 05/16/2019	LAKE NAME Z11-LL-13001 (Andrew's Lake)	FIELD ID / NAME: Z11-LL-13001
ECO-REGION: W31D 146	COUNTY: Holmes	SAMPLING LOCATION/DESCRIPTION: Andrew's Lake	LAKE SIZE: 42
PARAMETER HYDROLOGY	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 ☐
Color	Very clear, uncolored water (benthic sampling appropriate) ☐	Water somewhat tannin stained (benthic sampling appropriate) ☒	Dark, discolored water (water color 20 PCU or higher) ☐
	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
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6
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
Stormwater Inputs	Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation. From just upstream of slope 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
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
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
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
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		
TOTAL SCORE	116	COMMENTS: % = 82%	

ANALYSIS DATE: 05/16/2019

ANALYST: F Butler

SIGNATURE: [Signature]

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Z1-LL-13001 (Andrew's Lake)				County: Holmes (Benifay) Ponce De Leon				Date: 5/16/19			
Analyst: F. Butera				Signature: <i>[Signature]</i>				STORET:			
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.											
SBIO ID		14710		Collect	Macro ID		14710		Collect		
SPECIES				ed? (✓)	SPECIES				ed? (✓)		
Acer rubrum					Habenaria repens						
Alternanthera philoxeroides					Hydrilla verticillata						
Andropogon sp.					Hydrocotyle sp.						
Azolla filiculoides (A. caroliniana)					Hygrophila polysperma						
Baccharis sp.					*Hypericum fasciculatum		C / I / I			✓	
Bacopa caroliniana		I			*Hypericum hypericoides						
Bacopa monnieri					*Hypericum myrtifolium						
Bidens laevis					Ilex cassine						
Bidens mitis					Ipomoea aquatica						
Blechnum serrulatum					Ipomoea sagittata						
Cahneria cylindrica					Itea virginica		I / I / I / I				
Carenia schreberi		I / I / I			Juncus effusus *						
Cabomba caroliniana					*Juncus marginatus						
Casuarina equisetifolia					*Juncus megacephalus						
Centella asiatica					Juncus repens						
Cephalanthus occidentalis		I / I / I / I			*Juncus scirpoides						
Ceratophyllum demersum					Lachnanthes caroliniana						
Chara sp.					Leersia hexandra		I / I / I / I				
Cladium jamaicense					Landoltia punctata (Spiro. punctata)						
Cliftonia monophylla		I			Lemna sp.						
Colocasia esculenta					Leucothoe racemosa (E. racemosa)						
Commelina					Limnium spongia						
Cyperus americanus					Limnophila sessiliflora						
Cyperus alternifolius (C. involucratus)					Liquidambar styraciflua						
Cyperus articulatus					*Ludwigia arcuata						
Cyperus asper					*Ludwigia leptocarpa						
*Cyperus lecontei					*Ludwigia linearis						
*Cyperus polystachyos					*Ludwigia octovalvis						
*Cyperus odoratus					*Ludwigia peruviana						
*Cyperus surinamensis					*Ludwigia repens						
Cyrilla racemiflora		I			*Ludwigia <i>SP (No flower)</i>		I			I	
Decodon verticillatus					Luziola fluitans (H. carolinensis)						
Diodia virginiana					Lyonia lucida						
*Echinochloa crus-galli					Magnolia virginiana						
*Echinochloa muricatum					Mayaca fluviatilis		C / I / I / I				
Echinochloa walteri					Melaleuca quinquenervia						
Eclipta prostrata (E. alba)					Micranthemum glomeratum						
Egeria densa					Micranthemum umbrosum						
Eichhornia crassipes					Mikania scandens						
*Eleocharis baldwinii					Mimosa pigra						
*Eleocharis					Myrica cerifera						
Eleocharis cellulosa					<i>Mag. grand</i>		I				
Eleocharis equisetoides		I			<i>Smilax laevifolia</i>		I / I / I / I				
Eleocharis interstincta											
*Eriocaulon compressum											
*Eriocaulon decangulare											
Eupatorium capillifolium											
*Fuirena											
Fuirena scirpoides											
Gordonia lasianthus											

Waterbody: Z1-SL-13001 (Andrew's Lake) Storet:					Date:	SBIO ID	Macro ID				
SPECIES	1	4	7	10	Collect ed? (✓)	SPECIES	1	4	7	10	Collect ed? (✓)
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					
Nitella spp.						Scirpus cubensis (Oxycaryon cubense)					
Nuphar sp.						Scirpus cyperinus					
Nymphaea odorata						*Sesbania					
Nymphoides aquatica						Solidago sp.					
Nyssa sylvatica var. biflora						Sparganium americanum					
Orontium aquaticum						Spartina bakeri					
Osmunda cinnamomea						Spirodela polyrhiza					
Osmunda regalis						Taxodium sp.					
Panicum hemitomon						Thalia geniculata					
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 floridana					
Pennisetum purpureum						*Utricularia foliosa					
Phragmites australis						*Utricularia inflata					
Pinus elliotii						*Utricularia purpurea					
Pistia stratioides						*Utricularia cornuta					
Pluchea sp.						*Utricularia radiata					
*Polygonum glabrum (densiflorum)						Vallisneria americana					
*Polygonum hydropiperoides						*Websteria confervoides					
*Polygonum punctatum						Wedelia trilobata (Sphag. trilobata)					
*Polygonum						Wolffiella spp.					
Pontederia cordata						Woodwardia virginica					
*Potamogeton diversifolius						Xyris sp.					
*Potamogeton illinoensis						Zizania aquatica					
*Potamogeton pusillus						Zizaniopsis milacea					
*Potamogeton pectinatus (Stuck. pectinatus)						<i>Nymphaea sp.</i>					
Proserpinaca pectinata						<i>Utricularia sp.</i>					
*Rhexia											
*Rhynchospora corniculata											
*Rhynchospora inundata											
Rhynchospora tracyi											
Ricciocarpus natans											
Sabal palmetto											
Sacciolepis striata											
*Sagittaria filiformis						<i>Nymphoides aquatica</i>					
*Sagittaria graminea						<i>Viburnum nudum</i>					

DEP-SOP-001/01
FS 7000 General Biological Community Sampling

Form FD 9000-2: COMPOSITE LAKE SAMPLING SHEET (< 1000 ACRES)

Date: 5/14/2019		Name of Lake: Oyster Lake		Gear used: <u>PONAR</u> <u>EKMAN</u> <u>OTHER</u>	
Comments: Z1LL-13001 Andrew's Lake					
Drop #	Depth (m)	Sediment Type (circle all that apply)	Drop #	Depth (m)	Sediment Type (circle all that apply)
1	2.7	<u>sand</u> , silt/clay, CPOM, <u>muck</u> , SAV	7		sand, silt/clay, CPOM, muck, SAV
2		sand, silt/clay, CPOM, muck, SAV	8		sand, silt/clay, CPOM, muck, SAV
3		sand, silt/clay, CPOM, muck, SAV	9		sand, silt/clay, CPOM, muck, SAV
4		sand, silt/clay, CPOM, muck, SAV	10	1.8	<u>sand</u> , silt/clay, CPOM, <u>muck</u> , SAV
5		sand, silt/clay, CPOM, muck, SAV	11		sand, silt/clay, CPOM, muck, SAV
6		sand, silt/clay, CPOM, muck, SAV	12		sand, silt/clay, CPOM, muck, SAV

CPOM = coarse particulate organic matter; SAV = submerged aquatic vegetation

~~Storet 32010054~~
~~WBID 9990~~

~~Field ID OYSTERTOT~~

~~Project: USFWS Special Proj.~~

SBI0 ID:

Storet: _____ Field ID Z1LL13001

Project: ~~Status Lure Lakes 2019~~ Ambient Status monitoring

SBI0 ID: _____

Paste map here and show location of each dredge drop and where water chemistry parameters were collected.

Photo Log

Storet

Station Name: Z1-LL-13001. Andrew's Lake

Date: 05/16/2019

Samplers. F. Butera, M. King

- 1 Hypericum Habit
- 2 Hypericum Flower
- 3 Hypericum Stem
- 4 Seet 1
- 5 Seet 10
- 6 Nymphoides sp? Flower
- 7 Nymphoides sp? Bottom Leaf
- 8 Nymphoides Habit 1
- 9 Nymphoides Habit 2
- 10 Sambucus habit
- 11 Sambucus flower
- 12 Sambucus Leaf
- 13 North from 7 6
- 14 East from 6
- 15 West from 6
- 16 Section 4 shoreline
- 17 South from 3.

Notes.

Z1-LL-13001
WBID 146
Bonifay, Holmes Co.
30.86403 x -86.97157

A.
30.8646 x -85.97234

B.
30.86418 x -85.97111

C.
30.86335 x -85.97006

D.
30.86243 x -85.96917

E.
30.86146 x -85.96977

F.
30.86106 x -85.97097

G.
30.86066 x -85.97212

H.
30.86095 x -85.9734

I.
30.86183 x -85.97413

J.
30.86252 x -85.975

L.
30.86439 x -85.97372

K.
30.86366 x -85.97465

Pleasant Rd

187



Z1-LL-13001. Andrew's Lake

WIN ID TBD

Receiving Water

Basin / WBID / 146

City, County Bonifay, Holmes

Lake Acreage 42.6

Circumference (M) 1628

Seg. Length (M) 136

Location	Dec. Latt.	Dec. Long.
Storet	30.86403	-85.97157
A	30.86460	85.97234
B	30.86418	85.97111
C	30.86335	85.97006
D	30.86243	85.96917
E	30.86146	85.96977
F	30.86106	85.97097
G	30.86066	85.97212
H	30.86095	85.97340
I	30.86183	85.97413
J	30.86252	85.97500
K	30.86366	85.97465
L	30.86439	85.97372