

Scanned 1/29/2019 SEP

data entry 9/13/2018 SEP

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 78842 MACROPHYTE ID: 11050 LATITUDE: 29.810473
 COUNTY: Gulf STORET #: 53803 LONGITUDE: -85.179233
 DATE: 5/23/18 TIME: 1000 AM SAMPLING AGENCY: FDEP
 SITE NAME: 21-LL-12008 WBID: 1259A
 FIELD ID/NAME: Lake Wimico LAKE SIZE: 4053 acres RQ: None

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>1</u>												
<u>100%</u>								Land Use Source & Year: <u>2016</u>												
Local Watershed Erosion (select one): ☒ None ☐ Slight ☐ Moderate ☐ Heavy						Artificially Impounded ☐ Yes ☒ No														
Local Watershed NPS Pollution: ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy																				
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>20</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: <u>WQ collected different day - NWHMD</u> 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: _____ Mid-Depth: _____ Bottom: _____ Meter ID: _____						Clarity: ☐ Clear ☐ Opaque ☐ Turbid ☒ Slightly Turbid Color: ☒ Clear ☐ Tannic ☐ Green SECCHI (M) <u>0.4m</u> Total Station Depth (M) <u>1.8</u> VOB ☐					
Sediment Type: (may check more than one) ☐ Sandy ☐ Organic fibrous (peaty, CPOM) ☐ Vegetated ☐ Sand/Silt ☒ Organic smooth (muck) ☐ Other (Specify): _____						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: <u>2018 status LL</u>											

Weather Conditions :

SAMPLING TEAM: B. Spencer, S. Raneck, M. Eckles SIGNATURE: [Signature] DATE: 5/23/18

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <i>Lake Winico</i> 21-LL-12008				County: <i>Gulf</i>				Date: <i>5/23/18</i>					
Analyst: <i>B. Spencer, S. Brock, M. Fekkes</i>				Signature: <i>Barbara C. Parker</i>				STORET: <i>53803</i>					
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		1	1	1	1		Habenaria repens						
Alternanthera philoxeroides					1		Hydrilla verticillata						
Andropogon sp.							Hydrocotyle sp.						
Azolla filiculoides (A. caroliniana)							Hygrophila polysperma						
Baccharis sp.					1		*Hypericum fasciculatum					1	
Bacopa caroliniana							*Hypericum hypericoides						
Bacopa monnieri							*Hypericum myrtifolium					1	
Bidens laevis							Ilex cassine						
Bidens mitis							Ipomoea aquatica						
Blechnum serrulatum							Ipomoea sagittata						
Boehmeria cylindrica							Itea virginica						
Brasenia schreberi							Juncus effusus						
Cabomba caroliniana							*Juncus marginatus					1	✓
Casuarina equisetifolia							*Juncus megacephalus						
Centella asiatica							Juncus repens						
Cephalanthus occidentalis		1	1	1	1		*Juncus scirpoides						
Ceratophyllum demersum							Lachnanthes caroliniana						
Chara sp.							Leersia hexandra						
Cladium jamaicense		1	1	1	1		Landoltia punctata (Spirodela punctata)						
Cliftonia monophylla							Lemna sp.		1	1	1		
Colocasia esculenta							Leucothoe racemosa (Eubotrys racemosa)						
*Commelina							Limnium spongia						
Crinum americanum					1		Limnophila sessiliflora						
*Cyperus alternifolius (C. involucratus)							Liquidambar styraciflua				1	1	
Cyperus articulatus							*Ludwigia arcuata						
Cyperus haspan							*Ludwigia leptocarpa						
*Cyperus lecontei							*Ludwigia linearis						
*Cyperus polystachyos							*Ludwigia octovalvis						
*Cyperus odoratus							*Ludwigia peruviana						
*Cyperus surinamensis							*Ludwigia repens						
Cyrilla racemiflora		1	1	1	1		*Ludwigia						
Decodon verticillatus							Luziola fluitans (Hydrochloa carolinensis)						
Diodia virginiana							Lyonia lucida						
*Echinochloa crus-galli							Magnolia virginiana					1	
*Echinochloa muricatum							Mayaca fluviatilis						
Echinochloa walteri							Melaleuca quinquenervia						
Eclipta prostrata (E. alba)							Micranthemum glomeratum						
Egeria densa							Micranthemum umbrosum						
Eichhornia crassipes			1				Mikania scandens						
*Eleocharis baldwinii							Mimosa pigra						
*Eleocharis							Myrica cerifera		1	1	1	1	
Eleocharis cellulosa													
Eleocharis equisetoides													
Eleocharis interstincta													
*Eriocaulon compressum													
*Eriocaulon decangulare													
Eupatorium capillifolium													
*Fuirena													
Fuirena scirpoidea													
Gordonia lasianthus													

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: <u>Lake Wimico</u>						Date: <u>5/23/2018</u>					
SPECIES	2	5	8	11	Collected? (✓)	SPECIES	2	5	8	11	Collected? (✓)
Myriophyllum aquaticum				1		Salix caroliniana					
*Myriophyllum heterophyllum						Salvinia minima	1	1	1		
*Myriophyllum laxum						Sambucus canadensis					
*Myriophyllum pinnatum						Sapium sebiferum					
Myriophyllum spicatum						Saururus cernuus				1	
*Najas filifolia						Schinus terebinthifolius					
*Najas guadalupensis	0	0	0	0		*Schoenoplectus californicus					
*Najas minor						*Schoenoplectus pungens					
Nelumbo lutea				1		*Schoenoplectus tabernaemontani (Scirpus validus)	1	1		1	
Nitella spp.						Scirpus cubensis (Oxycaryon cubense)					
Nuphar sp.				1		Scirpus cyperinus					
Nymphaea odorata						*Sesbania					
Nymphoides aquatica						Solidago sp.					
Nyssa sylvatica var. biflora	1	1	1	1		Sparganium americanum					
Orontium aquaticum						Spartina bakeri					
Osmunda cinnamomea						Spirodela polyrhiza					
Osmunda regalis						Taxodium sp.	1	1	1	1	
Panicum hemitomon						Thalia geniculata					
Panicum repens						Thelypteris palustris					
Paspalidium geminatum						Triadenum virginicum					
*Paspalum repens						Typha sp.			1	1	
Paspalum urvillei				1		Urochloa mutica (Brachiaria mutica)					
Peltandra sp.						*Utricularia gibba (U. biflora)					
Persea sp.						*Utricularia floridana					
Pennisetum purpureum						*Utricularia foliosa					
Phragmites australis	1	1	1	1		*Utricularia inflata					
Pinus elliotii						*Utricularia purpurea					
Pistia stratioides						*Utricularia cornuta					
Pluchea sp.						*Utricularia radiata				5	
*Polygonum glabrum (densiflorum)						Vallisneria americana	1	1	1	1	
*Polygonum hydropiperoides						*Websteria confervoides					
*Polygonum punctatum						Wedelia trilobata (Sphagneticola trilobata)					
*Polygonum						Wolffia spp.					
Pontederia cordata	1	1	1	1		Woodwardia virginica	1	1	1	1	
*Potamogeton diversifolius						Xyris sp.					
*Potamogeton illinoensis						Zizania aquatica					
*Potamogeton pusillus						Zizaniopsis milacea	1	1			
*Potamogeton pectinatus (Stuckenia pectinatus)						Yucca sp.					
Proserpinaca pectinata						Yucca sp.					
*Rhexia	1	1	1	1		Yucca sp.					
*Rhynchospora corniculata						<i>Nyssa ogechee</i>	1	1	1	1	
*Rhynchospora inundata						<i>Fraxinus caroliniana</i>	1	1	1	1	
Rhynchospora tracyi											
Ricciocarpus natans											
Sabal palmetto	1	1	1	1							
Sacciolepis striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia	1	1	1	1							
Sagittaria latifolia											

DEP Form FD 9000-6: Lake Habitat Assessment Field Sheet

STORET STATION NUMBER: 53803	DATE (M/D/Y) 5/23/14	LAKE NAME Lake Winico		FIELD ID / NAME:	
ECO-REGION:	COUNTY: Gulf	SAMPLING LOCATION/DESCRIPTION: 21-LL-12008		LAKE SIZE:	
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 ☐	
HYDROLOGY					
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	Poor	
Secchi ☐	Secchi >3 m Or VOB 20 19 18 17 16	3 2.6 2.2 1.8 1.4 15 14 13 12 11	1.0 0.9 0.8 0.7 0.6 10 9 8 7 6	0.5 0.4 0.3 0.2 0.1 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 ☐	119				
COMMENTS:					
ANALYSIS DATE: 5/23/2018	ANALYST: Rick Spencer		SIGNATURE: 		

