

data entry 8/5/2019 SN

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 80050 MACROPHYTE ID: 11436
 COUNTY: Wakulla STORET #: WAK17FIS1
 DATE: 7/11/2019 TIME: 1220-1215
 SITE NAME: Fishing Fool Lake
 FIELD ID/NAME: FISHFOOLLK

LATITUDE: 30° 17.5"
 LONGITUDE: 84° 24' 8.1"
 SAMPLING AGENCY: FDEP
 WBID: 1223A
 LAKE SIZE: 10 RQ: 2019-07-08-80
acres

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)														
<u>80</u>				<u>20</u>																	
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>17</u>		20	19	18	<u>17</u>	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>16</u>		20	19	18	<u>17</u>	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>18</u>		20	19	<u>18</u>	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 ☐ No pH < 2 ☐ No Color Sample Taken? ☒ Yes ☐ No Lot # <u>101232</u> Exp. Date: <u>10/13/19</u> Alkalinity Sample Taken? ☒ Yes ☐ No Water Level ☐ Low ☐ Normal ☒ High <u>8/20/20 # 101246</u> Nitric acid (metals)										Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other _____ Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____ <u>AO</u>									
Meter Readings: Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat. (%) Cond. (UMHO/CM) Salinity (PPT) Top: <u>.2</u> <u>30.4</u> <u>4.92</u> <u>16.00</u> <u>82.3</u> <u>901</u> <u>4.99</u> Mid-Depth: _____ Bottom: _____										Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid Color: ☒ Clear ☒ Tannic ☐ Green SECCHI (M) <u>0.7</u> Total Station Depth (M) _____ VOB ☒ <u>L.O</u>									
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 ☒ ☐ ☐ ☐									
Weather Conditions: <u>intermittent thunderstorms; tropical depression moving through to west; send Jeff Lundy (adj. homeowner) data.</u>										Additional Notes: <u>conductivity very high. Possible salt water intrusion from 2018 hurricane season (Michael)</u>									
SAMPLING TEAM: <u>A O Neal, J Patronis</u>										SIGNATURE: <u>Ashley O Neal</u>									
DATE: <u>7/11/2019</u>																			

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Fishing Foot Lake</u>	County: <u>Wakulla</u>	Date: <u>7/11/2019</u>									
Analyst: <u>O'Neal, Patricia</u>	Signature: <u>Ashley O'Neal</u>	STORET: <u>WAK17</u>									
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									
SPECIES	2	5	8	11	Collected? (Y)	SPECIES	2	5	8	11	Collected? (Y)
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						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						*Juncus scirpoides					
Ceratophyllum demersum						Lachnanthes caroliniana					
Chara sp.						Leersia hexandra					
Cladium jamaicense						Landoltia punctata (Spirodela punctata)					
Cliftonia monophylla						Lemna sp.					
Colocasia esculenta						Leucothoe racemosa (Eubotrys 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						*Ludwigia peruviana					
*Cyperus surinamensis						*Ludwigia repens					
Cyrtilla racemiflora						*Ludwigia native					
Decodon verticillatus						Luziola fluitans (Hydrochloa 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 sub. vivip						Mimosa pigra					
*Eleocharis elongata (sort of) <u>longicauda</u> (larger)						Myrica cerifera					
Eleocharis cellulosa						Bacteria <u>Aster</u>					
Eleocharis equisetoides						rhynchospora corniculata					
Eleocharis interstincta						Eleocharis ovalis					
*Eriocaulon compressum						Rhexia sp. cubensis					
*Eriocaulon decanulare						Juncus sp. marginatus					
Eupatorium capillifolium						Solidago sp. (leaves at sp)					
*Fuirena											
Fuirena scirpoidea											
Gordonia lasianthus											

fascicularis
 Eleocharis
 olivacea

AO Symphyotrichum
 tenuifolium

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: Fishing Pool Lake						Date: 7/11/2019					
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 (Oxycaryon cubense)					
Nuphar sp.						Scirpus cyperinus					
Nymphaea odorata	1	1	1	1		*Sesbania					
Nymphoides aquatica						Solidago sp.					
Nyssa sylvatica var. biflora						Sparganium americanum					
Orontium aquaticum						Spartina bakeri	1	1	1	1	
Osmunda cinnamomea						Spirodela polyrhiza					
Osmunda regalis						Taxodium sp.					
Panicum hemitomon	1	1	1			Thalia geniculata					
Panicum repens						Thelypteris palustris					
Paspalidium geminatum						Triadenum virginicum	1				
*Paspalum repens						Typha sp.				1	
Paspalum urvillei						Urochloa mutica (Brachiaria mutica)					
Peltandra sp.						*Utricularia gibba (U. biflora)					
Persea sp. palustris		1				*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 (Sphagneticola trilobata)					
*Polygonum sp. hydropiperoides					✓	Wolffiella spp.					
Pontederia cordata						Woodwardia virginica		1			
*Potamogeton diversifolius						Xyris sp.	1		1		
*Potamogeton illinoensis						Zizania aquatica					
*Potamogeton pusillus						Zizaniopsis milacea					
*Potamogeton pectinatus (Stuckenia pectinatus)						Phyla nodiflora	1				
Proserpinaca pectinata											
*Rhexia											
*Rhynchospora corniculata											
*Rhynchospora inundata											
Rhynchospora tracyi											
Ricciocarpus natans											
Sabal palmetto											
Sacciolepis striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia											
Sagittaria latifolia											

SITE NAME: Fishing Foot DATE: 7/11/19 TIME 1215 EST CST DEPTH: 02 ft 11 FIELD ID: FISHFOOLK
 (military)

SAMPLING TEAM MEMBERS	WQ MEASUREMENTS	DOCUMENTATION	SAMPLE COLLECTION	PRESERVATION	PRESERVATION CHECK
Ashley O'Neal		X	X		
Jessica Patronis	X			X	X

SAMPLING EQUIPMENT	
☒ Sample Container	☐ Tubing type: _____
☐ Pole	☐ Other: _____
☐ Pump ID#: _____	☐ Other: _____
WATER QUALITY MEASUREMENTS	
Instrument ID: <u>YS1 154185/186</u>	
COLLECTION MODE	
☐ Wading	☒ Via Boat
☐ Diving	☒ Canoe
☐ From Shore	☐ Electric Motor
☐ Other	☐ Gasoline Motor

Parameter Suite	Parameter(s)/Method	Matrix Code*	Preservation**	Preservative Lot #	pH Check	# Bottles ***
Preserved Nutrients	☒ NTKN ☒ TR ☒ NO _x ☒ NH ₃ ☐ TOC ☐ Total N ☐ Other: _____	SW	☒ Ice ☒ H ₂ SO ₄	101232	☒	1
Filtered Nutrients	☒ OP ☐ Other: _____	SW	☒ Ice ☒ 45 um Filter			1
Unpreserved Nutrients	☐ NO ₂ ☐ NO ₃ ☐ SO ₄ ☐ Other: _____	W	☐ Ice			
Physical/Aggregate Properties	☐ TDS ☐ TSS ☐ TS ☐ Turbidity ☒ Alk ☒ Color ☒ Other: <u>504, F, CL</u>	SW	☒ Ice			1
Chlorophyll	☒ CHL-PPTN-W	SW	☒ Ice			1
BOD	☐ BOD-INHB ☐ BOD-UNIN	W	☐ Ice			
Microbiology	MF: ☐ E coli ☐ T Coli ☐ F Coli ☐ Entero ☐ F Strep	W	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC ☐ MI-FW-QLBR ☐ MI-FW-QNNC ☐ MI-MN-QNNC	W	☐ Formalin			
Phytoplankton	☒ RKD-QN-C ☒ STY-QN-C	SW	☐ Lugol's LAB			1
Periphyton	☐ PRN-QL-C ☐ DTM-QL-C ☐ PRN-QN-C ☐ DTM-QN-C	W	☐ Formalin			
AGP	☐ AA-AGP ☐ AA-LIM-NUT	W	☐ Ice			
Metals	☒ W-ICP ☐ W-FIAS ☒ W-ICPMS ☐ W-ICP-Tr	SW	☒ HNO ₃	101246	☒	1
Filtered Metals	☐ W-ICP-F ☐ W-FIAS-F ☐ W-ICPMS-F ☐ W-ICP-Tr-F	W	☐ HNO ₃ ☐ 45 um Filter		☐ <2	
Mercury	☐ W-HG-AF	W				
Base/Neutral / Acid Extractable	☐ W-BNA ☐ W-AE ☐ W-BN ☐ W-PAH ☐ W-FL-PRO ☐ W ☐ Other: _____	W	☐ Ice ☐ H ₂ SO ₄		☐ <2	
Pesticides	☐ W-PEST-CL ☐ W-PCB ☐ W-PEST-NP ☐ W-PSCL-PCB ☐ W-NP-AA-SF ☐ W-PC-AA-SF ☐ W-PSHRB-NP ☐ W-SLFN-UREA ☐ W-SULFN-LC ☐ Other: _____ ☐ W-ACIDHERB ☐ W-CARB	W	☐ Ice ☐ H ₂ SO ₄			
Purgeables	☐ W-VOC-MS ☐ W-VOC-MS-A	W	☐ Ice ☐ MCAA			
Bioassay	Specify Test: _____	W	☐ Ice ☐ HCl			
OTHER		W	☐ Other: _____			

 Notes: 10 NS W-504-1C
W-F
W-CL-1C

Use one line for each set of sample (as supplied by the laboratory) containers. Use separate sheet for field or laboratory duplicate or blank or different water depth

*Enter "S" for surface if collected at a depth less than or equal to 1 foot

*Matrix Codes (Insert prefix): SW = Surface Water GW = Groundwater DW = Drinking Water WW = Wastewater O = Other: _____

**PRESERVATIVES: 1 ml added unless otherwise noted

***Enter number of containers supplied by the laboratory for the test (e.g., 3 for volatile organics, etc.)

Customer: BSSP
Project ID: LAKESREF

Requester: Sarah Panek
Collected By: AONEAL, D Pateronis

Field Report Prepared By: AONEAL
Sampling Agency: FDEP

Location		Fishing Foot Reference Lake		☒ Comp		Collection (comp begin or grab)		1215		☒ Eastern		Composite end		Time		Bottle Group(s)	
Field ID		Fishing Foot Ref FISHPOLK		☒ Grab		Date 7/11/2019		1220		☒ Central		Date				(See pg 2)	
WIN/STORET #		WAK17FISI		Matrix (type, e.g., Salt, Fresh, etc)		Fresh (Brackish)		Diss. Oxygen		82.3		☒ mg/L Total Res. Chlorine					
Latitude		30° 17.5'		Longitude		84° 24' 8.1"		Temp (C)		30.4		pH		4.92		Sample Depth	
Location				Salinity (ppt)		4.99		Comments		Fresh water lake w/ salt water intrusion from stream		ft		Sp. Conductance (umho/cm)		9011	
Field ID				☒ Comp		Collection (comp begin or grab)		Time		☒ Eastern		Composite end		Time		Bottle Group(s)	
WIN/STORET #				☒ Grab		Date				☒ Central		Date					
Latitude				Temp (C)				pH				Sample Depth					
Location				Salinity (ppt)				Comments				ft		Sp. Conductance (umho/cm)			
Field ID				☒ Comp		Collection (comp begin or grab)		Time		☒ Eastern		Composite end		Time		Bottle Group(s)	
WIN/STORET #				☒ Grab		Date				☒ Central		Date					
Latitude				Temp (C)				pH				Sample Depth					
Location				Salinity (ppt)				Comments				ft		Sp. Conductance (umho/cm)			
Field ID				☒ Comp		Collection (comp begin or grab)		Time		☒ Eastern		Composite end		Time		Bottle Group(s)	
WIN/STORET #				☒ Grab		Date				☒ Central		Date					
Latitude				Temp (C)				pH				Sample Depth					
Location				Salinity (ppt)				Comments				ft		Sp. Conductance (umho/cm)			
Field ID				☒ Comp		Collection (comp begin or grab)		Time		☒ Eastern		Composite end		Time		Bottle Group(s)	
WIN/STORET #				☒ Grab		Date				☒ Central		Date					
Latitude				Temp (C)				pH				Sample Depth					
Location				Salinity (ppt)				Comments				ft		Sp. Conductance (umho/cm)			
Field ID				☒ Comp		Collection (comp begin or grab)		Time		☒ Eastern		Composite end		Time		Bottle Group(s)	
WIN/STORET #				☒ Grab		Date				☒ Central		Date					
Latitude				Temp (C)				pH				Sample Depth					
Location				Salinity (ppt)				Comments				ft		Sp. Conductance (umho/cm)			
Field ID				☒ Comp		Collection (comp begin or grab)		Time		☒ Eastern		Composite end		Time		Bottle Group(s)	
WIN/STORET #				☒ Grab		Date				☒ Central		Date					
Latitude				Temp (C)				pH				Sample Depth					
Location				Salinity (ppt)				Comments				ft		Sp. Conductance (umho/cm)			
Field ID				☒ Comp		Collection (comp begin or grab)		Time		☒ Eastern		Composite end		Time		Bottle Group(s)	
WIN/STORET #				☒ Grab		Date				☒ Central		Date					
Latitude				Temp (C)				pH				Sample Depth					
Location				Salinity (ppt)				Comments				ft		Sp. Conductance (umho/cm)			

Relinquished By: Ashley Deal		Date/Time: 7/11/2019 2:59 pm		Shipping Method: hand delivery		Number of Coolers Shipped:		Received By: ABE		Date/Time: 07-11-19 4:59	
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Group: A	Bottle Type: ALKALINITY W-CL-IC W-COLOR W-F W-SO4-IC	P-500ML	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab
Group: A	Bottle Type: CHLSUITE-W	BP-1L	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab
Group: A	Bottle Type: DTY-QN-C PKD-QN-C	BP-1L	# of Bottles: 2	Preservative:	Lugols	Enter Number of Bottles Sent to Lab
Group: A	Bottle Type: W-ICP W-ICPMS	P-500ML	# of Bottles: 2	Preservative:	HNO3	Enter Number of Bottles Sent to Lab
Group: A	Bottle Type: W-NH3 W-NO2NO3 W-S-A-TP W-TKN	P-500ML	# of Bottles: 2	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab
Group: A	Bottle Type: W-PO4-F	P-125ML	# of Bottles: 2	Preservative:	FILTER-ICE	Enter Number of Bottles Sent to Lab