

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

data entry 1/12/21 SN

SAMPLE ID: 81475
 COUNTY: LEON
 DATE: 8/24/2020
 SITE NAME: MOORE LAKE
 FIELD ID/NAME: MOORE REF

MACROPHYTE ID: 11752
 STORET #: LE0139NL
 TIME: 1125AM

LATITUDE: 30.3922
 LONGITUDE: -84.4063
 SAMPLING AGENCY: EDDP/AEQA
 WBID: 889A
 LAKE SIZE: 70 acres RQ: 2020-08-24-28

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category - from GIS) : Forest/Natural <u>10</u> Silviculture <u>80</u> Field/Pasture <u> </u> Agricultural <u> </u> Residential <u> </u> Commercial <u> </u> Industrial <u> </u> Other (Specify) <u>10</u> <i>airport</i>				LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI: <u>1</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: <u>2005</u>	
STORMWATER INPUTS <u>19</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	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>18</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>18</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: Nutrient Sample Taken? ☒ Yes ☐ No Preserved? ☒ Yes ☐ No pH<2 ☐ No Color Sample Taken? ☒ Yes ☐ No Lot # <u> </u> Exp. Date: <u> </u> Alkalinity Sample Taken? ☒ Yes ☐ No Water Level ☐ Low ☒ Normal ☐ High		Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other <u> </u>	
Meter Readings: Top: <u>0.1</u> <u>27.2</u> <u>5.3</u> <u>6.9</u> <u>87</u> <u>17</u> <u> </u> Mid-Depth: <u>1</u> <u>27.1</u> <u>5.3</u> <u>6.8</u> <u>85</u> <u>17</u> <u> </u> Bottom: <u>1.8</u> <u>26.9</u> <u>5.3</u> <u>6.1</u> <u>76</u> <u>17</u> <u> </u>		Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other <u> </u>	
Meter ID: <u>154185</u>		Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid Color: ☐ Clear ☒ Tannic ☐ Green	
Sediment Type: (may check more than one) ☐ Sandy ☐ Organic fibrous (peaty, CPOM) ☐ Vegetated ☐ Sand/Silt ☒ Organic smooth (muck) ☐ Other (Specify): <u> </u>		SECCHI (M) <u>2.1</u> Total Station Depth (M) <u>2.3</u> VOB ☐	
Sediment Odors: ☒ Normal ☐ Other (Specify): <u> </u> ☐ Anaerobic		Biological Communities: LVI Conducted? ☒ Yes ☐ No Phytoplankton Sample Taken? ☒ Yes ☐ No Sample Preserved? ☐ Yes ☒ No Lot #: <u> </u> Exp Date: <u> </u> Algal Bloom/Algal ID Sample Taken? Yes ☒ No ☐ Active Vegetation Mgmt? ☐ Yes ☐ No ☒ Don't Know	
Abundance: Periphyton ☐ Absent ☐ Rare ☐ Common ☒ Abundant Nuisance Plants ☐ ☒ ☐ ☐ Submersed Plants ☐ ☐ ☐ ☒ Exotic Apple Snails ☒ ☐ ☐ ☐		Additional Notes: <u> </u>	
Weather Conditions: <u>Lots of algae on submersed veg.</u>			

SAMPLING TEAM:

S. Noble, N. Wellendorf

SIGNATURE:

S. Noble

DATE:

8/24/2020

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>MOORE Lake</u>					County: <u>Leon</u>					Date: <u>8/24/2020</u>				
Analyst: <u>S. Noble, N. Wellendorf</u>					Signature: <u>S. Noble</u>					STORET: <u>LEO139N1</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 <u>3, 6, 9, 12</u>				
SPECIES	3	6	9	12	Collected? (✓)	SPECIES	3	6	9	12	Collected? (✓)			
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								
Cyrilla racemiflora						*Ludwigia <u>leptocarpa</u>								
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						Mimosa pigra								
*Eleocharis <u>elongata</u>						Myrica cerifera								
Eleocharis cellulosa						<u>Ludwigia suffruticosa</u>								
Eleocharis equisetoides						<u>Leucothoe racemiflora</u>								
Eleocharis interstincta						<u>Cyperus</u>								
*Eriocaulon compressum						<u>Cross (baccatum/Andropogon)</u>								
*Eriocaulon decangulare						<u>See photo Canebrake</u>								
Eupatorium capillifolium						<u>Lycopodium sp.</u>								
*Fuirena						<u>Sphagnum</u>								
Fuirena scirpoidea						<u>Hymenocallis pinnatifida</u>								
Gordonia lasianthus						<u>(Hymenocallis amplexicaulis)</u>								

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: *Moore Lake*Date: *5/24/2020*

SPECIES	3	6	9	12	Collected? (v)	SPECIES	3	6	9	12	Collected? (v)
Myriophyllum aquaticum						Salix caroliniana					
*Myriophyllum heterophyllum						Salvinia minima					
*Myriophyllum laxum	<i>C</i>	<i>1</i>	<i>1</i>	<i>1</i>		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.	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>		Scirpus cyperinus					
Nymphaea odorata	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>		*Sesbania					
Nymphoides aquatica						Solidago sp.					
Nyssa sylvatica var. biflora	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>		Sparganium americanum					
Orontium aquaticum						Spartina bakeri					
Osmunda cinnamomea						Spirodela polyrhiza					
Osmunda regalis						Taxodium sp.	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	
Panicum hemitomon	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>		Thalia geniculata					
Panicum repens			<i>1</i>			Thelypteris palustris					
Paspalidium geminatum						Triadenum virginicum	<i>1</i>			<i>1</i>	
*Paspalum repens						Typha sp.	<i>1</i>			<i>1</i>	
Paspalum urvillei			<i>1</i>			Urochloa mutica (Brachiaria mutica)					
Peltandra sp.						*Utricularia gibba (U. biflora)					
Persea sp.						*Utricularia floridana	<i>C</i>	<i>C</i>	<i>D</i>	<i>D</i>	
Pennisetum purpureum						*Utricularia foliosa					
Phragmites australis						*Utricularia inflata					
Pinus elliotii						*Utricularia purpurea	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	
Pistia stratioides						*Utricularia cornuta					
Pluchea sp.						*Utricularia radiata					
*Polygonum glabrum (densiflorum)						Vallisneria americana					
*Polygonum hydropiperoides						*Websteria confervoides				<i>1</i>	
*Polygonum punctatum						Wedelia trilobata (Sphagneticola trilobata)					
*Polygonum						Wolffiella spp.					
Pontederia cordata						Woodwardia virginica					
*Potamogeton diversifolius						Xyris sp.	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	
*Potamogeton illinoensis						Zizania aquatica					
*Potamogeton pusillus						Zizaniopsis milacea					
*Potamogeton pectinatus (Stuckenia pectinatus)											
Proserpinaca pectinata											
*Rhexia											
*Rhynchospora corniculata											
*Rhynchospora inundata	<i>1</i>			<i>1</i>	<i>bristles longer than achene</i>						
Rhynchospora tracyi											
Ricciocarpus natans											
Sabal palmetto											
Sacciolepis striata			<i>1</i>								
*Sagittaria filiformis						<i>All</i>					
*Sagittaria graminea						<i>sections - lots of algae on submerged.</i>					
*Sagittaria isoetiformis											
Sagittaria lancifolia											
Sagittaria latifolia											
<i>Rhynchospora nitens</i>	<i>1</i>				<i>✓</i>						
<i>(photo)</i>											

SITE NAME: MOORE LakeDATE: 8/24/2020 TIME 1125 EST CST DEPTH: 0.1 ft m FIELD ID: MOORE REF
(military)

SAMPLING TEAM MEMBERS

	WQ MEASUREMENTS	DOCUMENTATION	SAMPLE COLLECTION	PRESERVATION	PRESERVATION CHECK
Nia Wellendorf	X		X	X	X
Sarah Noble		X	X		

SAMPLING EQUIPMENT

- ☐ Sample Container ☐ Tubing type: _____
☐ Pole ☐ Other: _____
☐ Pump ID#: _____ ☐ Other: _____

WATER QUALITY MEASUREMENTS

Instrument ID: 154185

COLLECTION MODE

- ☐ Wading ☒ Via Boat
☐ Diving ☐ Canoe
☐ From Shore ☐ Electric Motor
☐ Other: _____ ☐ Gasoline Motor

Parameter Suite	Parameter(s) Name Loc	Matrix Code	Preservative	Lot #	pH Check	Bottles
Preserved Nutrients	☐ TKN ☐ TP ☐ NOx ☐ NH3 ☐ TOC ☐ Total N ☐ Other: _____	SW	☒ Ice ☐ H2SO4		☒ <2	1
Filtered Nutrients	☐ OP ☐ Other: _____	SW	☒ Ice ☐ .45 um Filter			1
Unpreserved Nutrients	☐ NO2 ☐ NO3 ☐ SO4 ☐ Other: _____	W	☐ Ice			
Physical/Aggregate Properties	☐ TDS ☐ TSS ☐ TS ☐ Turbidity ☐ Alk ☐ Color ☐ Other: <u>CL F 604</u>	SW	☒ Ice			1
Chlorophyll	☐ CHL-PPTN-W <u>CHLQUITE-W</u>	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	☒ PKD-QN-C ☒ DTY-QN-C	SW	☐ Lugol's			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	☒ HNO3		☐ <2	1
Filtered Metals	☐ W-ICP-F ☐ W-FIAS-F ☐ W-ICPMS-F ☐ W-ICP-Tr-F	W	☐ HNO3 ☐ .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 ☐ H2SO4		☐ <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			
Purgeables	☐ W-VOC-MS ☐ W-VOC-MS-A	W	☐ Ice ☐ H2SO4			
Bioassay	Specify Test: _____	W	☐ Ice ☐ HCl			
OTHER		W	☐ Other: _____			

Notes:

SULFURIC ACID <51%
THERMO FISHER SCIENTIFIC
520 NORTH MAIN STREET
MAINE, ME 04204
1-822-656-2711
Contains: 1:1 H2SO4

May be corrosive to metals. Causes severe skin burns and eye damage. Do not breathe fumes/mist/vapors. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/face protection. Avoid contact with skin. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get inside clothing. Do not get on face. Remove/area off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. If in eyes, remove contact lenses with water for several minutes. Rinse. Store locked up. Store in a well-ventilated container with a resistant inner liner.

NITRIC ACID 20-70%
THERMO FISHER SCIENTIFIC
520 NORTH MAIN STREET
MAINE, ME 04204
1-822-656-2711
Contains: 1:1 HNO3

May severely irritate the respiratory system. May be corrosive to metals. Causes severe skin burns and eye damage. Keep away from heat/sparks/open flames. No smoking. Do not breathe fumes/vapors. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/face protection. Avoid contact with skin. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get inside clothing. Do not get on face. Remove/area off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. If in eyes, remove contact lenses with water for several minutes. Rinse. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Corrosive to the respiratory tract.

Contains: 1:1 HNO3
Lot No.: NA9354060
Expires: 12/20/20
See Safety Data Sheet (SDS)

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.)

DEP Bureau of Laboratories Water Sample Collection Record

(Use with FDEP SOP-001/01 Form FD 9000-3 Physical/Chemical Characterization Field Sheet)