

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

10/09/2023

Waterbody: <u>LOTELA</u>		County: <u>HIGHLANDS</u>		Date:	
Analyst: <u>SKAGGS WERING</u>		Signature: <u>[Signature]</u>		STORET: <u>G4SE0172</u>	
Except where noted as "sp." species level identification required. *Genera that may require lab verification*				Lake units sampled (circle one group):	
Plants in bold = FLEPPC invasive exotic.				1, 4, 7, 10 <u>2, 5, 8, 11</u>	
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.				3, 6, 9, 12	
SPECIES	2	5	8	11	Collected? (✓)
Acer rubrum					
Acrostichum danaeifolium					
Alternanthera philoxeroides					
Andropogon sp.		P			
Annona glabra					
Azolla filiculoides (A. caroliniana)					
Baccharis sp.					
Bacopa caroliniana					
Bacopa monnieri					
Bidens laevis					
Bidens mitis					
Blechnum serrulatum					
Boehmeria cylindrica					
Brasenia schreberi					
Cabomba caroliniana					
Casuarina equisetifolia					
Centella asiatica					
Cephalanthus occidentalis		P		P	
Ceratophyllum demersum					
Chara sp.					
Cladium jamaicense					
Cliftonia monophylla					
Colocasia esculenta					
*Commelina					
Crinum americanum					
* Cyperus alternifolius (C. involucratus)					
Cyperus articulatus					
Cyperus blepharoleptos					
Cyperus haspan					
*Cyperus lecontei					
*Cyperus polystachyos					
*Cyperus odoratus		P			
*Cyperus surinamensis					
Cyrtilla racemiflora					
Decodon verticillatus					
Diodia virginiana					
*Echinochloa crus-galli					
*Echinochloa muricatum					
Echinochloa walteri					
Eclipta prostrata (E. alba)					
Egeria densa					
Eichhornia crassipes					
*Eleocharis baldwinii					
Eleocharis cellulosa		P	P	P	
Eleocharis equisetoides					
Eleocharis interstincta					
Eleocharis vivipara					
*Eleocharis					
*Eriocaulon compressum					
*Eriocaulon decangulare					
Eupatorium capillifolium		P	P		
*Fuirena					
Fuirena scirpoidea					

SPECIES	2	5	8	11	Collected? (✓)
Gordonia lasianthus					
Habenaria repens					
Hydrilla verticillata					
Hydrocotyle sp.		P		P	
Hygrophila polysperma					
*Hypericum fasciculatum					
*Hypericum hypericoides					
*Hypericum myrtifolium					
Ilex cassine					
Ipomoea aquatica					
Ipomoea sagittata					
Itea virginica					
Juncus effusus					
*Juncus marginatus					
*Juncus megacephalus					
Juncus repens					
*Juncus scirpoides					
Lachnanthes caroliniana					
Leersia hexandra					
Landoltia punctata (Spirodela punctata)					
Lemna sp.					
Leucothoe racemosa (Eubotrys racemosa)					
Limnobium spongia					
Limnophila sessiliflora					
Liquidambar styraciflua					
*Ludwigia arcuata					
*Ludwigia leptocarpa					
*Ludwigia linearis					
*Ludwigia octovalvis		P		P	
*Ludwigia peruviana		P		P	
*Ludwigia repens					
*Ludwigia					
Luziola fluitans (Hydrochloa carolinensis)					
Lyonia lucida					
Magnolia virginiana					
Mayaca fluviatilis					
Melaleuca quinquenervia					
Micranthemum glomeratum					
Micranthemum umbrosum					
Mikania scandens					
Mimosa pigra					
Myrica cerifera					
<i>Seagrass</i>		P			

SBID visit: 82964

LOTELA

10/09/2023

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Site:					Date:						
SPECIES	2	5	8	11	Collected? (✓)	SPECIES	2	5	8	11	Collected? (✓)
Myriophyllum aquaticum						Sapium sebiferum					
*Myriophyllum heterophyllum						Saururus cernuus					
*Myriophyllum laxum						Schinus terebinthifolius		P	P		
*Myriophyllum pinnatum						*Schoenoplectus californicus					
Myriophyllum spicatum						*Schoenoplectus pungens					
*Najas filifolia						*Schoenoplectus tabernaemontani (Scirpus validus)					
*Najas guadalupensis						Scirpus cyperinus					
*Najas minor						*Sesbania				P	
Nelumbo lutea						Solidago sp.					
Nitella spp.						Sparganium americanum					
Nuphar sp.						Spartina bakeri					
Nymphaea odorata						Spirodela polyrhiza					
Nymphoides aquatica						Taxodium sp.			P		
Nyssa sylvatica var. biflora						Thalia geniculata					
Orontium aquaticum						Thelypteris palustris					
Osmunda cinnamomea						Triadenum virginicum					
Osmunda regalis						Typha sp.					
Panicum hemitomon						Urochloa mutica (Brachiaria mutica)					
Panicum repens		P	P	P	P	*Utricularia gibba (U. biflora)					
Paspalidium geminatum						*Utricularia floridana					
*Paspalum repens						*Utricularia foliosa					
Paspalum urvillei						*Utricularia inflata					
Peltandra sp.						*Utricularia purpurea					
Persea sp.						*Utricularia comuta					
Pennisetum purpureum						*Utricularia radiata					
Phragmites australis						Vallisneria americana					
Pinus elliotii						*Websteria confervoides					
Pistia stratioides						Wedelia trilobata (Sphagnetocola trilobata)		P	P		
Pluchea sp.						Wolffiella spp.					
*Persicaria glabrum (densiflorum)						Woodwardia virginica					
*Persicaria hydropiperoides						Xyris sp.					
*Persicaria punctatum						Zizania aquatica					
*Persicaria						Zizaniopsis milacea					
Pontederia cordata											
*Potamogeton diversifolius											
*Potamogeton illinoensis											
*Potamogeton pusillus											
*Potamogeton pectinatus (Stuckenia pectinatus)											
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											
Salix caroliniana		P	P	P							
Salvinia minima											
Sambucus canadensis											

— heavy spraying evidence
— erosion

SBio visit 87964

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

STORET STATION NUMBER:	DATE (M/D/Y) <u>10/09/2023</u>	LAKE NAME <u>Lake Lotela</u>		FIELD ID / NAME: <u>645E072</u>		
ECO-REGION:	COUNTY: <u>Highlands</u>	SAMPLING LOCATION/DESCRIPTION: <u>Lake Lotela near Center</u>		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 ☐		
HYDROLOGY				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) ☐		
	Optimal	Suboptimal		Marginal		
Secchi ☐	Secchi >3 m Secchi(m) Or VOB 20 19 18 17 16	3	2.6	2.2	1.8	1.4
		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 <u>13</u> ☒	Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants <u>13</u> ☐		Large masses (21%-40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats <u>6</u> ☐		
	20 19 18 17 16	15	14	13	12	11
		10	9	8	7	6
		5	4	3	2	1
Stormwater Inputs ☐	Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation <u>15</u> ☐	Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place <u>15</u> ☐		Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place <u>8</u> ☐		
	20 19 18 17 16	15	14	13	12	11
		10	9	8	7	6
		5	4	3	2	1
Bottom Substrate Quality ☐	Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present <u>15</u> ☐	Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present <u>15</u> ☐		Moderate layer of CPOM/mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom <u>8</u> ☐		
	20 19 18 17 16	15	14	13	12	11
		10	9	8	7	6
		5	4	3	2	1
Lakeside Adverse Human Alterations ☐	Very few man-made structures, roads, or other disturbance adjacent to lake (<10%) <u>8</u> ☐	Moderate disturbance visible (structures, roads or other), 10%-49% lakeside affected <u>8</u> ☐		Many structures, roads or other human disturbance visible (50%-70%) lakeside affected <u>8</u> ☐		
	20 19 18 17 16	15	14	13	12	11
		10	9	8	7	6
		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 <u>8</u> ☐	89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer <u>8</u> ☐		50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer <u>8</u> ☐		
	20 19 18 17 16	15	14	13	12	11
		10	9	8	7	6
		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 <u>15</u> ☐					
	20 19 18 17 16	15	14	13	12	11
		10	9	8	7	6
		5	4	3	2	1
TOTAL SCORE	COMMENTS:					
ANALYSIS DATE: <u>10/09/2023</u>	ANALYST: <u>Luping Skaggs</u>			SIGNATURE: <u>[Signature]</u>		

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 2443914 MACROPHYTE ID: _____ LATITUDE: 27.57722
 COUNTY: Highlands STORET #: _____ LONGITUDE: -81.48194
 DATE: 10/09/2022 TIME: _____ SAMPLING AGENCY: SERO/SE-Dist
 SITE NAME: 64SE0172 WBID: 1813B
 FIELD ID/NAME: Lake Lotela near Center LAKE SIZE: _____ RQ: 2023-06-26-17

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) : Forest/Natural ☐ Silviculture ☐ Field/Pasture ☐ Agricultural ☐ Residential ☒ Commercial ☐ Industrial ☐ Other (Specify) ☐ 100				LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI:			
Local Watershed Erosion (select one) : ☐ None ☐ Slight ☒ Moderate ☐ Heavy Local Watershed NPS Pollution : ☐ No evidence ☐ Slight ☒ Moderate ☐ Heavy				Artificially Impounded ☐ Yes ☒ No			
STORMWATER INPUTS <u>15</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			
LAKESIDE ALTERATIONS <u>8</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			
BUFFER ZONE <u>8</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			
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			
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			
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 ☒ 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: Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat. (%) Cond. (UMHO/CM) Salinity (PPT) Top: <u>0.3</u> <u>27.2</u> <u>7.65</u> <u>7.79</u> <u>98.2</u> <u>147.1</u> <u>0.07</u> Mid-Depth: <u>2.0</u> <u>27.3</u> <u>7.61</u> <u>7.74</u> <u>97.6</u> <u>147</u> <u>0.07</u> Bottom: <u>8.28</u> <u>27.0</u> <u>7.23</u> <u>6.84</u> <u>85.9</u> <u>147</u> <u>0.07</u>								Clarity: ☐ Clear ☒ Turbid ☐ Slightly Turbid Color: ☒ Clear ☐ Tannic ☐ Green SECCHI (M) <u>1.6</u> Total Station Depth (M) <u>8.78</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 ☐ Anaerobic ☐ Other (Specify): _____							
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 :

SAMPLING TEAM: Luering / Skaggs SIGNATURE: [Signature] DATE: 10/09/2022