

G45E0174

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Lake Hill</u>					County: <u>Highlands</u>					Date: <u>10/10/2023</u>				
Analyst: <u>Andrew Luning / Jordan Skogas</u>					Signature: <u>[Signature]</u>					STORET:				
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 2, 5, 8, 11				
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	3	6	9	12	Collected? (✓)	SPECIES	3	6	9	12	Collected? (✓)			
Acer rubrum		✓		✓		Gordonia lasianthus								
Acrostichum danaeifolium	✓					Habenaria repens								
Alternanthera philoxeroides	✓					Hydrilla verticillata								
Andropogon sp.			✓	✓		Hydrocotyle sp.	✓	✓	✓	✓				
Annona glabra						Hygrophila polysperma		✓	✓	✓	✓			
Azolla filiculoides (A. caroliniana)						*Hypericum fasciculatum								
Baccharis sp.						*Hypericum hypericoides								
Bacopa caroliniana						*Hypericum myrtifolium								
Bacopa monnieri						Ilex cassine			✓	✓				
Bidens laevis						Ipomoea aquatica								
Bidens mitis						Ipomoea sagittata								
Blechnum serrulatum						Itea virginica								
Boehmeria cylindrica						Juncus effusus								
Brasenia schreberi						*Juncus marginatus								
Cabomba caroliniana						*Juncus megacephalus								
Casuarina equisetifolia						Juncus repens								
Centella asiatica						*Juncus scirpoides								
Cephalanthus occidentalis		✓	✓			Lachnanthes caroliniana								
Ceratophyllum demersum				✓		Leersia hexandra	✓	✓	✓	✓				
Chara sp.						Landoltia punctata (Spirodela punctata)								
Cladium jamaicense						Lemna sp.								
Cliftonia monophylla						Leucothoe racemosa (Eubotrys racemosa)								
Colocasia esculenta						Limnium spongia								
*Coffea						Limnophila sessiliflora								
Crinum americanum						Liquidambar styraciflua								
*Cyperus alternifolius (C. involucreatus)						*Ludwigia arcuata								
Cyperus articulatus						*Ludwigia leptocarpa								
Cyperus blepharoleptos		✓	✓			*Ludwigia linearis								
Cyperus haspan						*Ludwigia octovalvis								
*Cyperus lecontei						*Ludwigia peruviana		✓						
*Cyperus polystachyos						*Ludwigia repens								
*Cyperus odoratus						*Ludwigia								
*Cyperus surinamensis						Luziola fluitans (Hydrochloa carolinensis)								
Cyrilla racemiflora						Lyonia lucida								
Decodon verticillatus						Magnolia virginiana								
Diodia virginiana						Mayaca fluviatilis								
*Echinochloa crus-galli						Melaleuca quinquenervia			✓	✓				
*Echinochloa muricatum						Micranthemum glomeratum	✓							
Echinochloa walteri						Micranthemum umbrosum								
Eclipta prostrata (E. alba)						Mikania scandens	✓	✓	✓	✓				
Egeria densa						Mimosa pigra								
Eichhornia crassipes						Myrica cerifera								
*Eleocharis baldwinii		✓				Hibiscus grandiflora	✓							
Eleocharis cellulosa						Hypericum	✓	✓	✓	✓				
Eleocharis equisetoides						Horridum								
Eleocharis interstincta														
Eleocharis vivipara														
*Eleocharis														
*Eriocaulon compressum														
*Eriocaulon decangulare														
Eupatorium capillifolium														
*Fuirena														
Fuirena scirpoidea														

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FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

10/10/2023

Site:					Date:						
SPECIES	3	6	9	12	Collected? (✓)	SPECIES	3	6	9	12	Collected? (✓)
Myriophyllum aquaticum						Sapium sebiferum					
*Myriophyllum heterophyllum						Saururus cernuus					
*Myriophyllum laxum						Schinus terebinthifolius					✓
*Myriophyllum pinnatum						*Schoenoplectus californicus					
Myriophyllum spicatum						*Schoenoplectus pungens					
*Najas filifolia						*Schoenoplectus tabernaemontani (Scirpus validus)					
*Najas guadalupensis						Scirpus cyperinus					
*Najas minor						*Sesbania					
Nelumbo lutea						Solidago sp.					
Nitella spp.						Sparganium americanum					
Nuphar sp.						Spartina bakeri					
Nymphaea odorata						Spirodela polyrrhiza					
Nymphoides aquatica						Taxodium sp.					
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						*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 (Sphagneticola trilobata)					
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											
Salvinia minima											
Sambucus canadensis											

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

STORET STATION NUMBER:	DATE (M/D/Y) <u>10/10/2023</u>	LAKE NAME <u>Lake Hill</u>	FIELD ID / NAME: <u>645F0174</u>
ECO-REGION:	COUNTY: <u>Highlands</u>	SAMPLING LOCATION/DESCRIPTION: <u>Hill Lake 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 <u>10</u>	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
Vegetation Quality <u>12</u>	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 <u>10</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
Bottom Substrate Quality <u>13</u>	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 <u>11</u>	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 <u>10</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
Adverse Watershed Land Use <u>15</u>	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	COMMENTS:		
ANALYSIS DATE: <u>10/10/23</u>	ANALYST: <u>Luering / Skagg</u>	SIGNATURE: <u>[Signature]</u>	

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 2444487 MACROPHYTE ID: _____ LATITUDE: 27.34995
 COUNTY: Highlands STORET #: _____ LONGITUDE: -81.43879
 DATE: 10/10/2023 TIME: _____ SAMPLING AGENCY: SEROC
 SITE NAME: Hill Lake Near Center WBID: 1860E
 FIELD ID/NAME: 64SE0174 LAKE SIZE: _____ RQ: 2023-06-05-30

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) ☐ <u>100</u>					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 Land Use Source & Year:				
STORMWATER INPUTS <u>10</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>11</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>10</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 ☐ 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>0.3</u> <u>26.8</u> <u>6.32</u> <u>6.60</u> <u>82.5</u> <u>60.6</u> <u>0.03</u> Mid-Depth: <u>2.0</u> <u>26.6</u> <u>6.32</u> <u>6.55</u> <u>81.5</u> <u>60.6</u> <u>0.03</u> Bottom: <u>5.8</u> <u>26.4</u> <u>6.29</u> <u>6.14</u> <u>76.3</u> <u>60.6</u> <u>0.03</u>						Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____											
Meter ID: <u>Hodor</u>						Clarity: ☐ Clear ☒ Turbid ☐ Opaque ☐ 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): _____						SECCHI (M) <u>1.0</u> Total Station Depth (M) <u>6.3</u> VOB ☐											
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: Luehring / Skaggs SIGNATURE: [Signature] DATE: 10/10/23