

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Blue. Cypress Lake</u>		County: <u>Indian River</u>		Date: <u>10/20/22</u>									
Analyst: <u>Andrew Luering / Jordan Skagg</u>		Signature: <u>[Signature]</u>		STORET:									
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.													
SPECIES		1	4	7	10	Collected? (✓)	SPECIES		1	4	7	10	Collected? (✓)
Acer rubrum		p	p	p	p		Habenaria repens						
Alternanthera philoxeroides		p	p	p	p		Hydrilla verticillata						
Andropogon sp.		p					Hydrocotyle sp.		p		p	p	
Azolla filiculoides (A. caroliniana)							Hygrophila polysperma						
Baccharis sp.							*Hypericum fasciculatum						
Bacopa caroliniana							*Hypericum hypericoides						
Bacopa monnieri							*Hypericum myrtifolium						
Bidens laevis							Ilex cassine		p				
Bidens mitis							Ipomoea aquatica						
Blechnum serrulatum		p			p		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		p					Landoltia punctata (Spirodela punctata)						
Cliftonia monophylla							Lemna sp.						
Colocasia esculenta		p			p		Leucothoe racemosa (Eubotrys racemosa)						
*Commelina					p		Limnobia spongia						
Crinum americanum					p		Limnophila sessiliflora						
*Cyperus alternifolius (C. involucratus)							Liquidambar styraciflua						
Cyperus articulatus							*Ludwigia arcuata						
Cyperus haspan							*Ludwigia leptocarpa						
*Cyperus lecontei							*Ludwigia linearis						
*Cyperus polystachyos					p		*Ludwigia octovalvis						
*Cyperus odoratus							*Ludwigia peruviana		p				
*Cyperus surinamensis							*Ludwigia repens						
Cyrilla racemiflora							*Ludwigia						
Decodon verticillatus		p			p	✓	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		p			p	
*Eleocharis baldwinii							Mimosa pigra						
*Eleocharis							Myrica cerifera		p		p	p	
Eleocharis cellulosa							Pond apple		p	p	p	p	
Eleocharis equisetoides							Mangrove??		p	p	p	p	
Eleocharis interstincta							Grassvine		p	p	p	p	
*Eriocaulon compressum							Leather fern		p	p	p	p	
*Eriocaulon decangulare							Virginia creeper		p	p	p	p	
Eupatorium capillifolium		p	p										
*Fuirena													
Fuirena scirpoidea													
Gordonia lasianthus													

Access issues zone 4, Rough waters with
 old, authorized 11/3/22 Cypress Knees

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site:						Date:					
SPECIES	1	4	7	10	Collected? (✓)	SPECIES	1	4	7	10	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		p	p	p	
*Najas guadalupensis						*Schoenoplectus californicus		p		p	
*Najas minor						*Schoenoplectus pungens					
Nelumbo lutea						*Schoenoplectus tabernaemontani (Scirpus validus)					
Nitella spp.						Scirpus cubensis (Oxycaryon cubense)					
Nuphar sp.		p		p	p	Scirpus cyperinus					
Nymphaea odorata						*Sesbania					
Nymphoides aquatica						Solidago sp.					
Nyssa sylvatica var. biflora (Tree)		p		p	p	Sparganium americanum					
Orontium aquaticum						Spartina bakeri					
Osmunda cinnamomea		p		p		Spirodela polyrrhiza					
Osmunda regalis						Taxodium sp.		c	p	p	p
Panicum hemitomon		p		p	p	Thalia geniculata					
Panicum repens						Thelypteris palustris					
Paspalidium geminatum		p	p	p	p	Triadenum virginicum					
*Paspalum repens						Typha sp.		p	p	p	
Paspalum urvillei						Urochloa mutica (Brachiaria mutica)					
Peltandra sp.						*Utricularia gibba (U. biflora)					
Persea sp.						*Utricularia floridana					
Pennisetum purpureum						*Utricularia foliosa					
Phragmites australis						*Utricularia inflata					
Pinus elliotii						*Utricularia purpurea					
Pistia stratioides		c	p	p	p	*Utricularia cornuta					
Pluchea sp.						*Utricularia radiata					
*Polygonum glabrum (densiflorum)		p				Vallisneria americana					
*Polygonum hydropiperoides						*Websteria confervoides					
*Polygonum punctatum						Wedelia trilobata (Sphagneticola trilobata)					
*Polygonum						Wolffiella spp.					
Pontederia cordata						Woodwardia virginica					
*Potamogeton diversifolius						Xyris sp.					
*Potamogeton illinoensis						Zizania aquatica					
*Potamogeton pusillus						Zizaniopsis milacea					
*Potamogeton pectinatus (Stuckenia pectinatus)						Wild taro					
Proserpinaca pectinata						Rumex verticillatus					
*Rhexia											
*Rhynchospora corniculata											
*Rhynchospora inundata											
Rhynchospora tracyi											
Ricciocarpus natans											
Sabal palmetto											
Sacciolepis striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia											
Sagittaria latifolia											

STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
Lake Habitat Assessment Field Sheet

STORET STATION NUMBER:	DATE (M/D/Y) 10/20/22	LAKE NAME Blue Cypress Lake		FIELD ID / NAME: 635E0040
ECO-REGION:	COUNTY: Indian River	SAMPLING LOCATION/DESCRIPTION:		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 ☐ 3	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 ☐ 11	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 ☐ 15	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 ☐ 10	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 ☐ 20	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 ☐ 18	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 ☐ 20	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

COMMENTS:

ANALYSIS DATE:

ANALYST:

SIGNATURE:

LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 2364220 MACROPHYE ID: _____ LATITUDE: 27.72806
 COUNTY: Indian River STORET #: _____ LONGITUDE: -80.75333
 DATE: 10/20/2022 TIME: _____ SAMPLING AGENCY: FDEP SEROC
 SITE NAME: Blue Cypress near Center WBID: 2893V
 FIELD ID/NAME: 635E0040 LAKE SIZE: _____ RQ: 2022-09-12-5

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS): Forest/Natural <u>99</u> Silviculture _____ Field/Pasture _____ Agricultural _____ Residential _____ Commercial _____ Industrial _____ Other (Specify) _____						LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI: _____			
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: _____			
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		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>20</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 ☐ 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: Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat. (%) Cond. (UMHO/CM) Salinity (PPT) Top: <u>0.3</u> <u>22.5</u> <u>7.19</u> <u>7.68</u> <u>88.7</u> <u>159.4</u> <u>0.07</u> Mid-Depth: _____ Bottom: <u>1.7</u> <u>22.5</u> <u>7.19</u> <u>7.73</u> <u>89.2</u> <u>159.2</u> <u>0.07</u>						Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____					
Meter ID: <u>Hodor</u>						Clarity: ☐ Clear ☒ Turbid ☐ Slightly Turbid Color: ☐ Clear ☒ Tannic ☐ Green					
Sediment Type: (may check more than one) ☐ Sandy ☐ Organic fibrous (peaty, CPOM) ☐ Sand/Silt ☒ Organic smooth (muck)						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:											

Weather Conditions :

SAMPLING TEAM:

SIGNATURE:

DATE: