

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Dinner Lake					County: Highlands					Date: 6/27/2023				
Analyst: J. Skaggs, A. Luring, C. Hoey, T. Chichester					Signature:					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.										Lake units sampled (circle one group): 1, 4, 7, 10 2, 5, 8, 11 3, 6, 9, 12				
SPECIES	2	5	8	11	Collected? (✓)	SPECIES	2	5	8	11	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				X		Juncus repens								
Centella asiatica						*Juncus scirpoides								
Cephalanthus occidentalis	X	X	X			Lachnanthes caroliniana								
Ceratophyllum demersum	X					Leersia hexandra								
Chara sp.						Landoltia punctata (Spirodela punctata)								
Cladium jamaicense	X	X				Lemna sp.								
Cliftonia monophylla						Leucothoe racemosa (Eubotrys racemosa)								
Colocasia esculenta						Limnium spongia								
*Commelina						Limnophila sessiliflora								
Crinum americanum						Liquidambar styraciflua								
*Cyperus alternifolius (C. involucratus)						*Ludwigia arcuata								
Cyperus articulatus						*Ludwigia leptocarpa								
Cyperus blepharoleptos						*Ludwigia linearis								
Cyperus haspan						*Ludwigia octovalvis								
*Cyperus lecontei						*Ludwigia peruviana		X	X					
*Cyperus polystachyos						*Ludwigia repens								
*Cyperus odoratus						*Ludwigia								
*Cyperus surinamensis						Luziola fluitans (Hydrochloa carolinensis)								
Cyrtilla 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														
Eleocharis cellulosa														
Eleocharis equisetoides	X	X	X	X										
Eleocharis interstincta														
Eleocharis vivipara														
*Eleocharis														
*Eriocaulon compressum														
*Eriocaulon decangulare														
Eupatorium capillifolium	X	X	X											
*Fuirena														
Fuirena scirpoidea	X	X	X	X										

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Site:						Date:					
SPECIES	2	5	8	11	Collected? (✓)	SPECIES	2	5	8	11	Collected? (✓)
Myriophyllum aquaticum						Sapium sebiferum (Triadeca sebifera)					
*Myriophyllum heterophyllum						Saururus cernuus					
*Myriophyllum laxum						Schinus terebinthifolius		X			
*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.	X			X		Sparganium americanum					
Nuphar sp.	X	X	X			Spartina bakeri					
Nymphaea odorata	X	X	X	X		Spirodela polyrhiza					
Nymphoides aquatica						Taxodium sp.			X	X	
Nyssa sylvatica var. biflora						Thalia geniculata					
Orontium aquaticum						Thelypteris palustris					
Osmunda cinnamomea						Triadenum virginicum					
Osmunda regalis						Typha sp.	X	X	X		
Panicum hemitomon						Urochloa mutica (Brachiaria mutica)					
Panicum repens		X	X			*Utricularia gibba (U. biflora)					
Paspalidium geminatum	X	D	X	X		*Utricularia floridana					
*Paspalum repens						*Utricularia foliosa					
Paspalum urvillei						*Utricularia inflata					
Peltandra sp.						*Utricularia purpurea					
Persea sp.						*Utricularia cornuta					
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	X	X	X			Cupaniopsis anacardioides		X			
*Potamogeton diversifolius											
*Potamogeton illinoensis	D	X	D	D	✓						
*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	X	X	X								
Salvinia minima											
Sambucus canadensis	X										

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: Dinner Lake MACROPHYTE ID: _____ LATITUDE: _____
 COUNTY: Highlands STORET #: _____ LONGITUDE: _____
 DATE: 6/27/23 TIME: _____ SAMPLING AGENCY: _____
 SITE NAME: _____ WBID: _____
 FIELD ID/NAME: _____ LAKE SIZE: _____ RQ: _____

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) : Forest/Natural <u>30</u> Silviculture _____ Field/Pasture _____ Agricultural _____ Residential <u>70</u> Commercial _____ Industrial _____ Other (Specify) _____								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 _____		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 _____		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 _____		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 # _____ 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>29.7</u> <u>7.68</u> <u>7.51</u> <u>98.8</u> <u>155</u> <u>0.07</u> Mid-Depth: <u>2.0</u> <u>29.7</u> <u>7.49</u> <u>7.39</u> <u>96.9</u> <u>155</u> <u>0.07</u> Bottom: <u>6.9</u> <u>28.3</u> <u>6.83</u> <u>2.45</u> <u>33.3</u> <u>159</u> <u>0.07</u>								Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____															
Meter ID: _____								Clarity: ☐ Clear ☒ Slightly Turbid ☐ Opaque ☐ 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): _____								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 ☐ ☐ ☒ ☐								Additional Notes: _____							
Weather Conditions : _____																							
SAMPLING TEAM: _____								SIGNATURE: _____				DATE: _____											

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

STORET STATION NUMBER:	DATE (M/D/Y) 6/27/23	LAKE NAME Dinner Lake		FIELD ID / NAME:
ECO-REGION:	COUNTY:	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 ☐	Secchi >3 m Or VOB	3 2.6 2.2 1.8 1.4	1.0 0.9 0.8 0.7 0.6	0.5 0.4 0.3 0.2 0.1
	20 19 18 17 16	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	Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants	Large masses (21%- 40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats	Lake choked (>40%) with nuisance macrophytes (duckweed, hyacinth, etc.) or algal mats, or few plants present at all (e.g., plants removed)
	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	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
	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	Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present	Moderate layer of CPOM/ mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom	Thick deposits of CPOM, or fine detritus and anaerobic muck/mud/silt, or algal growth or nuisance plants (Hydrilla) cover bottom
	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%)	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)
	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	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
	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			
	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:		