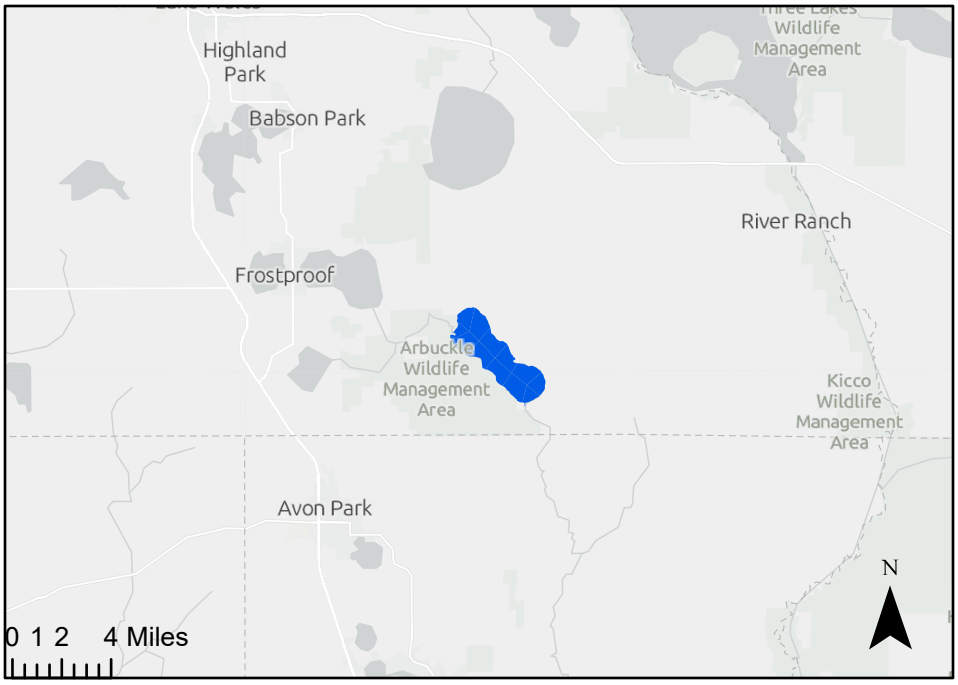
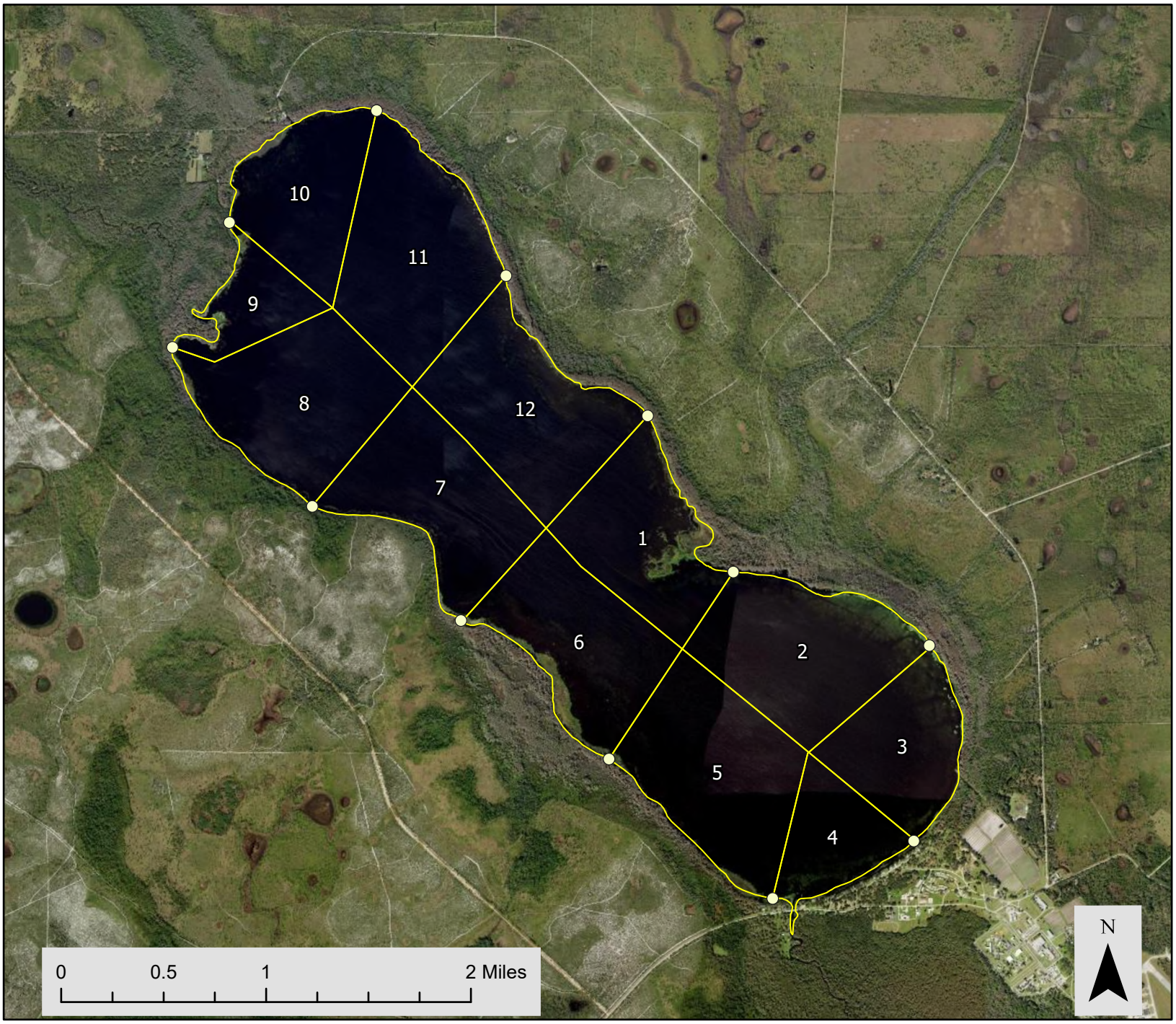


Lake Arbuckle
WBID 1685A

Sample Date - July 6, 2026
Surface Area - 3795 acres (167,775,621 sqft)
100m Landscape Development Intensity - 4.67
Dominant Land Use 100m Buffer -
Forest/Natural (48.3%)
Military (44.24%)
Lake Vegetation Index - 56
Lake Habitat Assessment - 99
Water Clarity - 0.69m (2.26 ft)



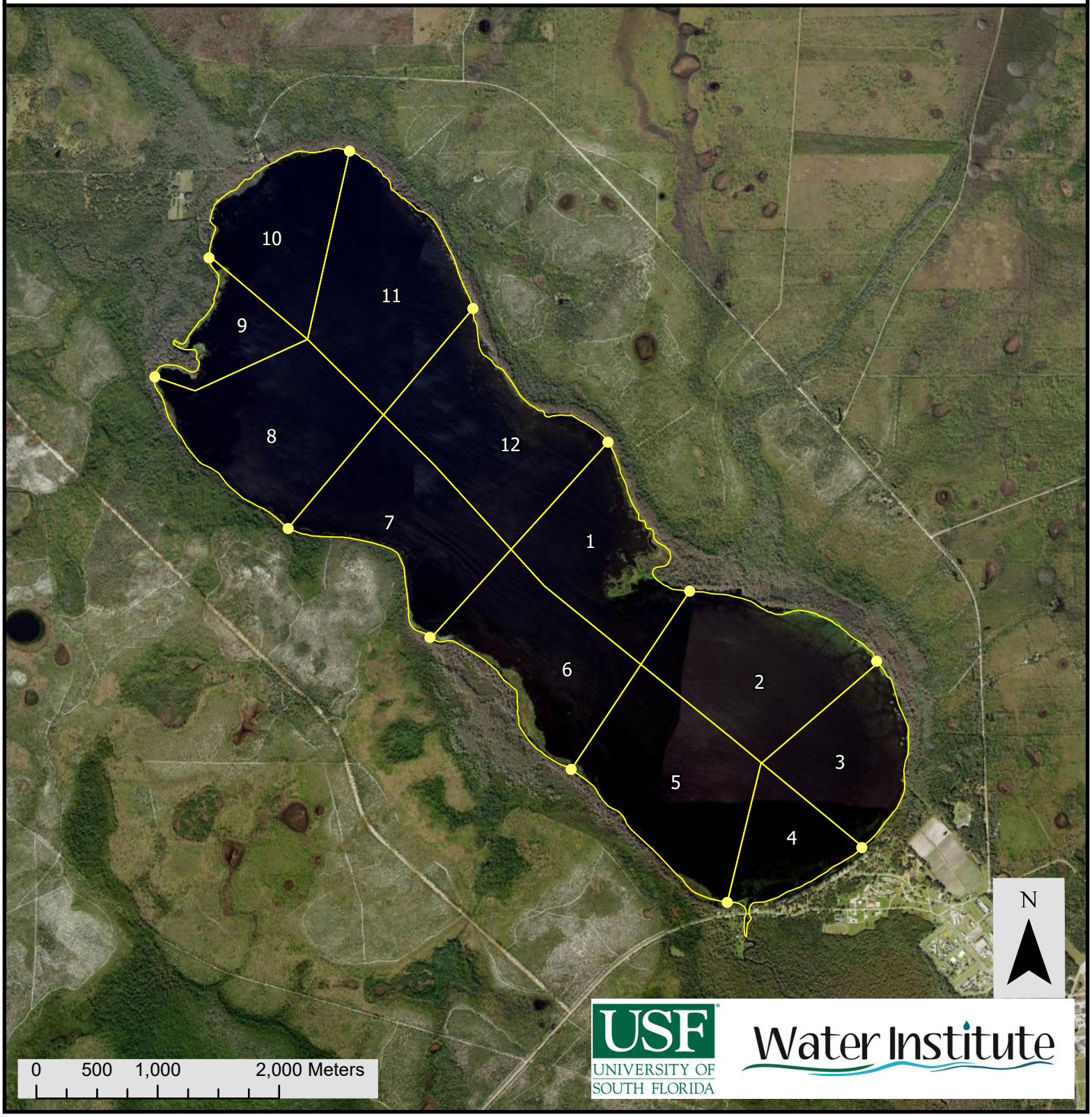
Lake Arbuckle
WBID 1685A

LVI_Points

LVI_Regions

Sample Date - July 6, 2026
Regions Assessed - (2, 5, 8, 11)
Dominant Species Per Region -
2- Nuphar sp.
5 - Nuphar,
Schoenoplectus californicus
8 - Nuphar sp.
11 - Nuphar sp.

Lake Description
Water Clarity - 0.69 meters
(2.26 ft)
- Slightly Turbid
Color - Tannic
Sediment Types
Sand/Silt
Organic Smooth
Organic fibrous
Lake Vegetation Index - 56



DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: Arbuckle
COUNTY: Polk
DATE: 7/6/26
SITE NAME: Lake Arbuckle
FIELD ID/NAME: Arbckle

MACROPHYTE ID:
STORET #:
TIME: 10:00

LATITUDE: 27.6924415 N
LONGITUDE: -81.3964519 W
SAMPLING AGENCY: USFWS
WBID: 1685A
LAKE SIZE: 3745 RQ:

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)
48.3							Military 44.24

LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer)
LDI: 4.67
Land Use Source & Year:

Local Watershed Erosion (select one) : ☑ None ☐ Slight ☐ Moderate ☐ Heavy
Local Watershed NPS Pollution : ☐ No evidence ☑ Slight ☐ Moderate ☐ Heavy

Artificially Impounded ☐ Yes ☑ No

STORMWATER INPUTS 17	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
LAKESIDE ALTERATIONS 16	Very few man-made structures, roads, or other disturbance adjacent to lake (<10% lakeside affected)					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
BUFFER ZONE 17	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

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:	0.25	32.99	8.44	6.60	91.10	201.1	0.09
Mid-Depth:	0.84	31.06	8.21	6.34	85.0	204.9	0.09
Bottom :	1.7	30.33	7.23	3.71	49.1	204.7	0.09

Meter ID:

Clarity: ☐ Clear ☐ Opaque ☐ Turbid ☑ Slightly Turbid
Color: ☐ Clear ☑ Tannic ☐ Green

SECCHI (M) 0.69
VOB ☐
Total Station Depth (M) 1.9

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 : Calm, Hot

SAMPLING TEAM: D Rivers M Hicks L Holmes
SIGNATURE:
DATE: 7/6/26

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Arbuckle	County: Polk	Date: 7/6/25
Analyst:	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	1	1	1	1		Habenaria repens					
Alternanthera philoxeroides		1	1			**Hydrilla verticillata**					
Andropogon sp.						Hydrocotyle sp.		1	1		
Azolla filiculoides (A. caroliniana)			1			**Hygrophila polysperma**					
Baccharis sp.						*Hypericum fasciculatum					
Bacopa caroliniana						*Hypericum hypericoides					
Bacopa monnieri						*Hypericum myrtifolium					
Bidens laevis						Ilex cassine					
Bidens mitis						**Ipomoea aquatica**					
Blechnum serrulatum		1		1		Ipomoea sagittata					
Boehmeria cylindrica		1	1	1		Itea virginica					
Brasenia schreberi						Juncus effusus					
Cabomba caroliniana						*Juncus marginatus					
Casuarina equisitifolia						*Juncus megacephalus					
Centella asiatica						Juncus repens					
Cephalanthus occidentalis	1	1	1	1		*Juncus scirpoides			1		
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						Limnobium spongia					
Crinum americanum						**Limnophila sessiliflora**					
***Cyperus alternifolius** (C. involucratus)						Liquidamber styraciflua					
Cyperus articulatus						*Ludwigia arcuata					
Cyperus haspan						*Ludwigia leptocarpa			1		
*Cyperus lecontei			1			*Ludwigia linearis					
*Cyperus polystachyos						*Ludwigia octovalvis	1				
*Cyperus odoratus		1	1	1		***Ludwigia peruviana**	1	1			
*Cyperus surinamensis						*Ludwigia repens					
Cyrilla racemiflora						*Ludwigia					
Decodon verticillatus						Luziola fluitans (Hydrochloa carolinensis)					
Diodia virginiana						Lyonia lucida					
*Echinochloa crus-galli						Magnolia virginiana					
*Echinochloa muricatum						Mayaca fluviatilis					
Echinochloa walteri	1	1		1		**Melaleuca quinquenervia**					
Eclipta prostrata (E. alba)						Micranthemum glomeratum		1			
Egeria densa						Micranthemum umbrosum					
Eichhornia crassipes		1				Mikania scandens					
*Eleocharis baldwinii			1			**Mimosa pigra**					
*Eleocharis						Myrica cerifera			1		
Eleocharis cellulosa						Chicken Spike	1	1	1	1	
Eleocharis equisetoides						hymenocalis ampteris			1	1	
Eleocharis interstincta						Certopteris thalictroides				1	
*Eriocaulon compressum						Fraxinus caroliniana		1			
*Eriocaulon decangulare						Hibiscus grandiflora	1		1	1	
Eupatorium capillifolium	1	1	1	1		Syngonanthus flavidulus			1		
*Fuirena											
Fuirena scirpoidea											
Gordonia lasianthus											

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: Arbuckle | Date: 7/6/16

SPECIES	2	5	8	11	Collected? (√)	SPECIES	2	5	8	11	Collected? (√)
Myriophyllum aquaticum						Salix caroliniana	1	1	1	1	
*Myriophyllum heterophyllum						**Salvinia minima**		1			
*Myriophyllum laxum						Sambucus canadensis					
*Myriophyllum pinnatum						**Sapium sebiferum**					
Myriophyllum spicatum						Saururus cernuus					
*Najas filifolia						**Schinus terebinthifolius**		1			
*Najas guadalupensis						*Schoenoplectus californicus	1	C	1	1	
*Najas minor						*Schoenoplectus pungens					
Nelumbo lutea	1	1	1	1		*Schoenoplectus tabernaemontani (Scirpus validus)					
Nitella spp.						Scirpus cubensis (Oxycaryon cubense)					
Nuphar sp.	D	C	D	D		Scirpus cyperinus					
Nymphaea odorata	1	1	1	1		*Sesbania					
Nymphoides aquatica						Solidago sp.					
Nyssa sylvatica var. biflora		1				Sparganium americanum					
Orontium aquaticum						Spartina bakeri			1		
Osmunda cinnamomea						Spirodela polyrhiza					
Osmunda regalis			1			Taxodium sp.	1	1	1	1	
Panicum hemitomon	1	1	1	1		Thalia geniculata					
Panicum repens	1	1	1	1		Thelypteris palustris					
Paspalidium geminatum	1	1	1	1		Triadenum virginicum					
*Paspalum repens		1		1		Typha sp.		1	1	1	
Paspalum urvillei						**Urochloa mutica (Brachiaria mutica)**	1				
Peltandra sp.						*Utricularia gibba (U. biflora)					
Persea sp.						*Utricularia floridana					
Pennisetum purpureum						*Utricularia foliosa					
Phragmites australis						*Utricularia inflata					
Pinus elliottii						*Utricularia purpurea					
Pistia stratioides		1				*Utricularia cornuta					
Pluchea sp. baccharis			1			*Utricularia radiata					
*Polygonum glabrum (densiflorum)						Vallisneria americana	1	1	1	1	
*Polygonum hydropiperoides						*Websteria confervoides					
*Polygonum punctatum						**Wedelia trilobata (Sphagneticola trilobata)**					
*Polygonum						Wolffiella spp.					
Pontederia cordata	1	1	1	1		Woodwardia virginica					
*Potamogeton diversifolius						Xyris sp. jupicai			1		
*Potamogeton illinoensis						Zizania aquatica					
*Potamogeton pusillus						Zizaniopsis milacea					
*Potamogeton pectinatus (Stuckenia pectinatus)											
Proserpinaca pectinata											
*Rhexia											
*Rhynchospora corniculata											
*Rhynchospora inundata											
Rhynochospora tracyi											
Ricciocarpus natans											
Sabal palmetto											
Sacciolepis striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia		1	1	1							
Sagittaria latifolia											

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

STORET STATION NUMBER:	DATE (M/D/Y): 7/6/26	LAKE NAME: Lake Arbuckle	FIELD ID / NAME: Arbuckle
ECO-REGION:	COUNTY: Polk	SAMPLING LOCATION/DESCRIPTION: Lake Arbuckle – Frostproof	LAKE SIZE:

PARAMETER				
HYDROLOGY	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 ☐
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 7	Secchi >3 m Or VOB	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
	Secchi(m)	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					
Vegetation Quality 15	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 (duck-weed, 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 17	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 12	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 Alternations 16	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 17	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 15	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: 7/6/26	ANALYST: David Filos	SIGNATURE: