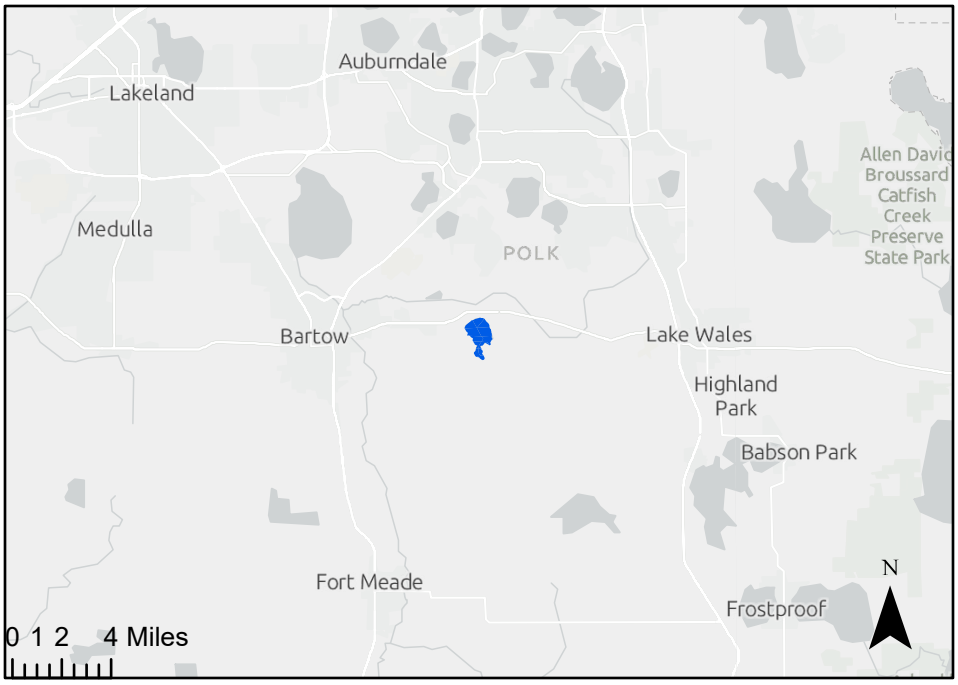
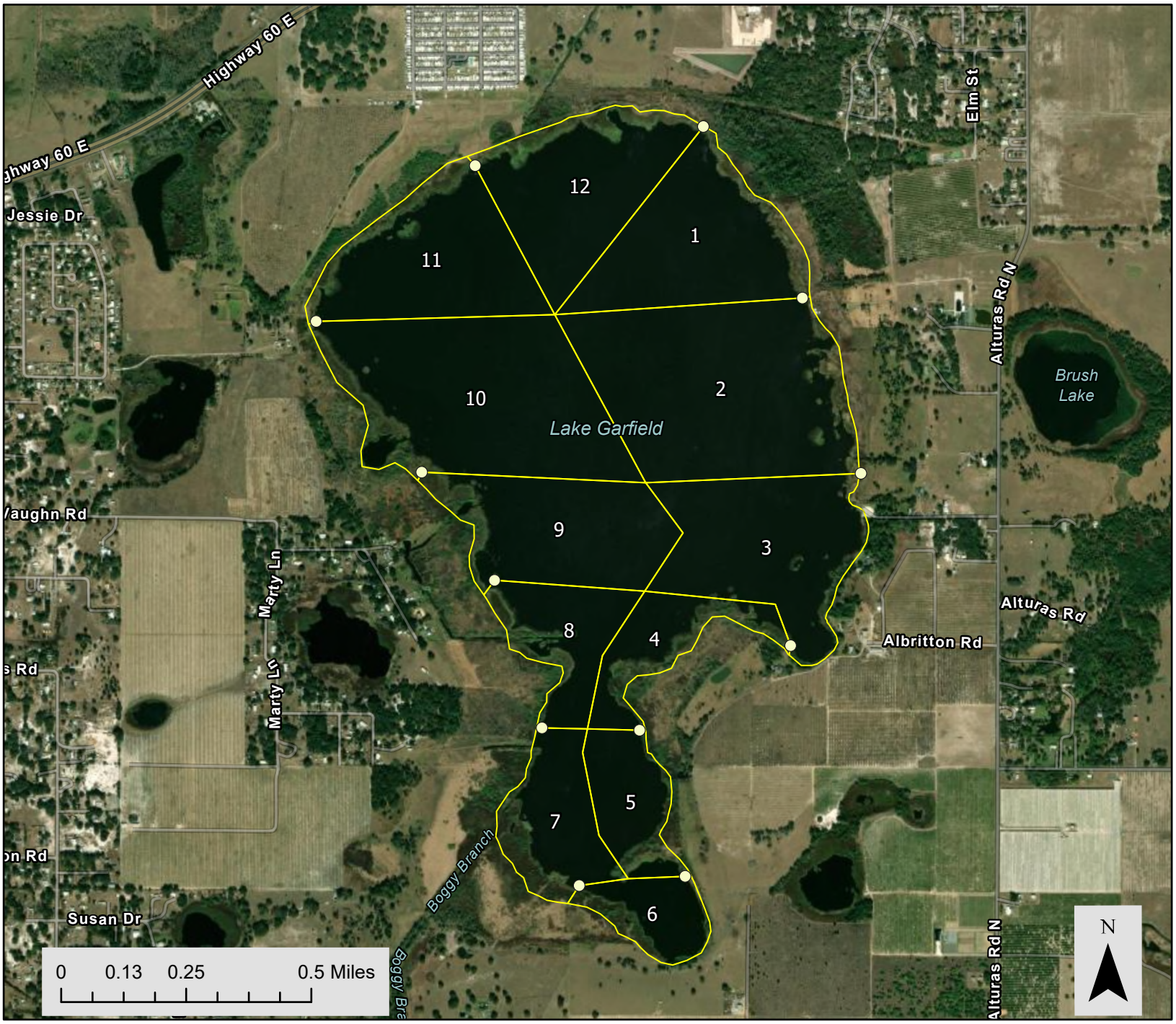


Lake Garfield
WBID 1622

Sample Date - July 13, 2026
Surface Area - 761.6 acres (27,345,930 sqft)
100m Landscape Development Intensity - 1.84
Dominant Land Use 100m Buffer -
- Forest/Natural (75.18%)
- Agricultural (16.08%)
- Residential (4.55%)
- Industrial (1.58%)

Lake Vegetation Index - 41
Lake Habitat Assessment - 73
Water Clarity - 0.25m (0.8 ft)



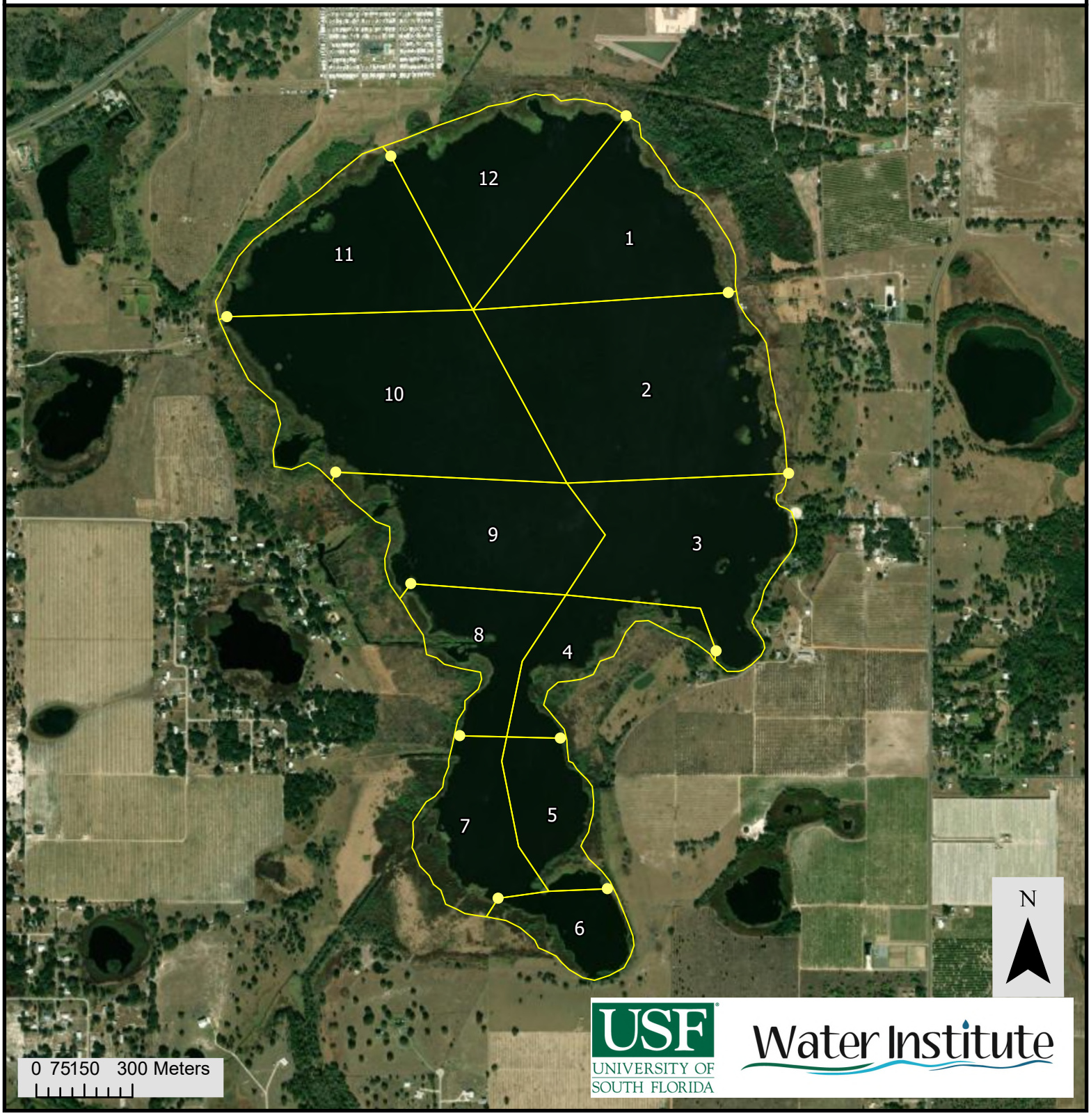
Lake Garfield
WBID 1622

LVI_Points

LVI_Regions

Sample Date - July 13, 2026
Regions Assessed - (2, 5, 8, 11)
Dominant Species Per Region -
2- Typha sp.
Panicum hemitomon
5- Pistia stratiotes
8 - Typha sp,
11- Panicum hemitomon,
Typha sp.

Lake Description
Water Clarity - 0.25 meters
(0.8 ft)
- Turbid
Color - Tannic
Sediment Types
Sandy
Organic Smooth
Lake Vegetation Index - 41



DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: Garfield | MACROPHYTE ID: | LATITUDE: 27.78267 45
COUNTY: Polk | STORET #: | LONGITUDE: -8.7317455
DATE: 7/13/26 | TIME: 11:00 | SAMPLING AGENCY: USFWS
SITE NAME: Lake Garfield | WBID: 1622
FIELD ID/NAME: Garfield | LAKE SIZE: 0.98 | 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)
75.18			16.08	4.35		1.58	

LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI: 1.84

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 13	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 15	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 16	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	30.13	7.14	3.42	71.8	1765	0.08
Mid-Depth:							
Bottom :	0.92	29.91	7.02	4.32	61.8	1768	0.8

Meter ID:

Clarity: ☐ Clear ☐ Opaque ☑ Turbid ☐ Slightly Turbid

Color: ☐ Clear ☑ Tannic ☐ Green

SECCHI (M) 0.25 | Total Station Depth (M) 1.1

VOB ☐

Sediment Type: (may check more than one) Sample Taken? ☑ Yes ☐ No

☑ Sandy ☐ Organic fibrous (peaty, CPOM) ☐ Vegetated

☐ Sand/Silt ☑ Organic smooth (muck) ☐ Other (Specify):_____

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 : Cloudy, Hot, low wind

SAMPLING TEAM: DEters L Holmes M Hicks | **SIGNATURE:** | **DATE:** 7/13/26

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Lake Garfield	County: Polk	Date: 7/15/26
Analyst: David Eilers	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						**Hydrilla verticillata**					
Alternanthera philoxeroides	1	1	1			Hydrocotyle sp.					
Andropogon sp.						Hydrocotyle umbellata	1				
Andropogon glomeratus						Hymenachne amplexicaulis		1			
Azolla filiculoides (A. caroliniana)						Ilex cassine					
Baccharis sp.						Imperata cylindrica			-		
Baccharis glomeruliflora						Ipomoea sagittata					
Bacopa monnieri						Itea virginica					
Bidens alba						Juncus effusus					
Blechnum serrulatum		1				*Juncus marginatus					
Boehmeria cylindrica						*Juncus megacephalus					
Casuarina equisitifolia						Juncus repens					
Centella asiatica						*Juncus scirpoides					
Cephalanthus occidentalis		1				Lachnanthes caroliniana					
Ceratophyllum demersum						Leersia hexandra					
Chara sp.						**Landoltia punctata** (Spirodela punctata)					
Cladium jamaicense						Lemna sp.					
Colocasia esculenta						Lemna minor					
*Commelina						**Limnophila sessiliflora**					
Crinum americanum						Liquidamber styraciflua					
Cyperus sp.						*Ludwigia sp.					
Cyperus articulatus						*Ludwigia arcuata					
***Cyperus alternifolius** (C. involucratus)						*Ludwigia erecta					
*Cyperus belephaleptos						*Ludwigia leptocarpa				1	
Cyperus haspan						*Ludwigia linearis					
*Cyperus lecontei	1					*Ludwigia octovalvis	1	1		1	
*Cyperus odoratus	1					***Ludwigia peruviana**		1	1		
*Cyperus polystachyos						*Ludwigia repens					
*Cyperus surinamensis						Luziola fluitans (Hydrochloa carolinensis)					
Diodia virginiana						Magnolia virginiana					
Dioscorea bulbifera						**Melaleuca quinquenervia**					
*Echinochloa crus-galli						Micranthemum glomeratum					
Echinochloa walteri						Micranthemum umbrosum					
Eclipta prostrata (E. alba)						Mikania scandens					
Eichhornia crassipes						**Mimosa pigra**					
*Eleocharis						Musa					
*Eleocharis baldwinii						Myrica cerifera	1	1		1	
Eleocharis cellulosa						Myriophyllum aquaticum					
Eleocharis equisetoides						**Myriophyllum spicatum**				1	
Eleocharis interstincta	1	1	1	1		*Najas guadalupensis					
Eleocharis vivipara						Nelumbo lutea					
Erechitetes hieraciifolius	1	1	1	1		Nitella sp.					
Eupatorium capillifolium		1				Aeschynomene indica		1	1	1	
*Fuirena											
Fuirena breviseta											
Fuirena pumila											
Fuirena scirpoidea				1							
Gordonia lasianthus											
Habenaria repens											
Hibiscus grandiflorus	1	1	1								

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: Garfield

Date: 7/15/26

SPECIES	2	5	8	11	Collected? (√)
Nuphar sp.		1			
Nymphaea odorata					
Nymphoides aquatica					
Nyssa sylvatica biflora					
Orontium aquaticum					
Osmunda cinnamomea					
Osmunda regalis					
Panicum hemitomon	C	1	1	C	
Panicum repens					
Parthenocissus quinquefolia					
Paspalidium geminatum	1	1	1	1	
*Paspalum repens					
Paspalum urvillei					
Peltandra sp.					
Pennisetum purpureum					
Persea sp.					
Persea palustris					
Persea glabra					
Phragmites australis					
Phyla nodiflora					
Pinus elliottii					
Pistia stratioides	1	C	1	1	
Pluchea sp.					
Pluchea baccharis		1			
Pluchae odorata					
*Polygonum					
*Polygonum glabrum (densiflorum) / Persicaria glabra		1	1	1	
*Polygonum hydropiperoides		1			
*Polygonum punctatum					
Pontederia cordata	1	1		1	
*Potamogeton illinoensis					
Ptilimnium capillaceum					
Quercus					
Quercus laurifolia					
Quercus nigra					
*Rhexia					
Rhynchospora microcephala					
Rhynchospora nitens					
Sabal palmetto					
Sacciolepis striata		1		1	
Sagittaria lancifolia		1	1		
Sagittaria latifolia					
Salix caroliniana	1	C	1	1	
Salvinia minima		1	1		
Sambucus canadensis					
Sambucus nigra					
Sapium sebiferum	1	1			
Sarcostemma clausum					
Schinus terebinthifolius		1			
*Schoenoplectus californicus	1	1	1	1	
*Schoenoplectus tabernaemontani (Scirpus validus)			1	1	
*Sesbania					
*Sesbania herbacea	1		1	1	
Solidago sp.					

SPECIES	2	5	8	11	Collected? (√)
Sparganium americanum					
Spartina bakeri					
Taxodium sp.					
Taxodium ascendens					
Taxodium distichum					
Thalia geniculata					
Thelypteris interrupta		1	1		
Thelypteris palustris					
Triadenum virginicum					
Typha sp.	C	1	D	C	
Urena lobata					
Urochloa mutica (Brachiaria mutica)					
*Utricularia					
*Utricularia floridana					
*Utricularia foliosa					
*Utricularia gibba (U. biflora)					
*Utricularia purpurea					
*Utricularia radiata					
Vallisneria americana					
Vigna luteola					
Vitis					
Vitis rotundifolia					
*Websteria confervoides					
Wedelia trilobata (Sphagneticola trilobata)					
Woodwardia virginica					
Xyris sp.					
Zizania aquatica					
Zizaniopsis milacea					

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

STORET STATION NUMBER:	DATE (M/D/Y): 7/13/26	LAKE NAME: Lake Garfield	FIELD ID / NAME: Garfield
ECO-REGION: 75c	COUNTY: Polk	SAMPLING LOCATION/DESCRIPTION: Lake Garfield	LAKE SIZE: 0.98 mi²

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 2	Secchi >3 m / Or VOB: 20 19 18 17 16	Secchi(m): 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 10	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 13	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 4	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 15	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 16	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 13	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	73	COMMENTS:

ANALYSIS DATE: 7/13/26	ANALYST: David Eikers	SIGNATURE: