



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: Lake Isabell Center

Date: 05/15/2019

(mm/dd/yyyy)

WIN/ Field ID: Lake Isabell Center

WBID: 1958F

Latitude: 27.65024

(Decimal Degrees)

County: Polk

ORG ID: 21FLTPA

Longitude: -81.47638

(Decimal Degrees)

Receiving Body of Water: NA

RQ-2019- 05-13-75

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Kelby Callahan						X	X	X	X
Sarah Meyer						X	X	X	X

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☐ Syringe	
☐ Dipper	☐ Other	
Depth Measured with: Secchi		
Equipment ID: Secchi #1		
Collection Method		
☐ Wading	☐ Canoe/Kayak	
☐ From Shore	☐ Electric Motor	
☐ Other	☒ Gasoline Motor	

Water Level: Dry/ Pooled/ Low Normal/ High / Flooded

Meter ID# Leia

Matrix: Fresh Marine / DI

Photos: Yes / No

Flow: No Flow / Interstitial / Flowing NA

Tide: Rising/ Falling/ Slack NA

Tide Times: High ——— Low ———

Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPTH)	Sp COND (µmhos/cm)	Temp. (C°)
EST	1205	1.4	0.3	1.2	5.23	66.4	6.00	0.09	197.0	27.6

Biological Samples Collected: None HA SCI RPS Algae ID LVS LVI Other:

SBIO ID Numbers: SBIO-ID: 80414 HA-ID: 80 16345 RPS-ID: ———— Macrophyte-ID: 11520 LIMS#:

Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4	<u>SA8344070</u>	<u>12/10/19</u>	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice			
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Periphyton	☐ ALGAE-ID	☐ Ice			
Microbiology	☐ E Coli ☐ F Coli ☐ Enterococci	☐ Ice			
Molecular	☐ PCR-FILTER ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-HF183 ☐ PCR-DG3 ☐ PCR-GFD	☐ Ice			
Tracers	☐ W-E8321-DI ☐ W-E8321-MS	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-E8321-DI ☐ W-PCL-SQ-R ☐ W-E8321-MS ☐ W-CARB-AA	☐ Ice			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C	☐ Ice			

Notes: LVI entered as part of Status Program
A-Kit 24-LL-13008 WIN 56174

Field ID/WIN

G4SW0095

Site Name:

Lake Isabell Center

Signature:

Sarah Meyer

Date:

05/15/2019

LIMS EVENT ID: 2019-05-16-02

WIN Import ID: 14380

Enter Field Parameters, Verify Station ID In LIMS DMT: SM 08/28/2019

QC Station ID, Field Parameters In LIMS DMT: SM 09/05/2019

Scan/Save Field Sheets: SM 01/15/2020

Migrate Data to WIN: SM 09/05/2019

Verify Data In WIN: SM 01/15/2020

(Initials/Date)

(Initials/Date)

(Initials/Date)

Analyst: <u>Sarah Meyer</u>		Waterbody: <u>Lake Isabell</u>		County: <u>Polk</u>							
STORET:		Signature: <u>Sarah Meyer</u>		Date: <u>05/15/2019</u>							
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 <u>3, 6, 9, 12</u>							
SPECIES	3	6	9	12	Collected? (✓)	SPECIES	3	6	9	12	Collected? (✓)
Acer rubrum		X	X			Habenaria repens					
Alternanthera philoxeroides	X	X	X	X		Hymenachne amplexicaulis					
Andropogon sp.						Hydrilla verticillata					
Azolla filiculoides (A. caroliniana)			X			Hydrocotyle sp.	X	X	X		
Baccharis sp.						Hygrophila polysperma					
Bacopa caroliniana						*Hypericum fasciculatum					
Bacopa monnieri						*Hypericum hypericoides					
Bidens laevis						*Hypericum myrtifolium					
Bidens mitis						Ilex cassine					
Blechnum serrulatum						Ipomoea aquatica					
Boehmeria cylindrica						Ipomoea sagittata					
Brasenia schreberi						Itea virginica					
Cabomba caroliniana						Juncus effusus					
Casuarina equisetifolia						*Juncus marginatus					
Centella asiatica						*Juncus megacephalus					
Cephalanthus occidentalis	X	X	X	X		Juncus repens					
Ceratophyllum demersum	X	X	X	X		*Juncus scirpoides					
Chara sp.						Lachnanthes caroliniana					
Cladium jamaicense				X		Leersia hexandra					
Cliftonia monophylla						Landoltia punctata (Spirodela punctata)					
Colocasia esculenta						Lemna sp.			X	X	
*Commelina						Leucothoe racemosa (Eubotrys racemosa)					
Crinum americanum						Limnium spongia					
* Cyperus alternifolius (C. involucratus)						Limnophila sessiliflora					
Cyperus articulatus						Liquidambar styraciflua					
Cyperus haspan						*Ludwigia arcuata					
*Cyperus lecontei						*Ludwigia leptocarpa	X				
*Cyperus polystachyos						*Ludwigia linearis					
*Cyperus odoratus						*Ludwigia octovalvis			X		
*Cyperus surinamensis						*Ludwigia peruviana	X		X	X	
Cyrilla racemiflora						*Ludwigia repens					
Decodon verticillatus						*Ludwigia					
Diodia virginiana						Luziola fluitans (Hydrochloa carolinensis)					
*Echinochloa crus-galli						Lyonia lucida					
*Echinochloa muricatum											
Echinochloa walteri											
Eclipta prostrata (E. alba)											
Egeria densa											
Eichhornia crassipes	X	X	X	X							
*Eleocharis baldwinii		X	X	X							
*Eleocharis											
Eleocharis cellulosa											
Eleocharis equisetoides	X	X	X	X							
Eleocharis interstincta											
*Eriocaulon compressum											
*Eriocaulon decangulare											
Eupatorium capillifolium		X									
*Fuirena											
Fuirena scirpoidea											
Gordonia lasianthus											

Site: Lake Isabell					Date: 05/15/2019						
SPECIES	3	6	9	12	Collected? (✓)	SPECIES	3	6	9	12	Collected? (✓)
Magnolia virginiana						Sabal palmetto					
Mayaca fluviatilis						Sacciolepis striata		X	X	X	
Melaleuca quinquenervia						*Sagittaria filiformis					
Micranthemum glomeratum						*Sagittaria graminea					
Micranthemum umbrosum						*Sagittaria isoetiformis					
Mikania scandens	X		X	X		Sagittaria lancifolia	X	X	X	X	
Mimosa pigra						Sagittaria latifolia					
Myrica cerifera						Salix caroliniana	Xc	Xc	X	X	
Myriophyllum aquaticum						Salvinia minima	X	X	X	X	
*Myriophyllum heterophyllum						Sambucus canadensis					
*Myriophyllum laxum						Sapium sebiferum					
*Myriophyllum pinnatum						Saururus cernuus					
Myriophyllum spicatum						Schinus terebinthifolius					
*Najas filifolia						*Schoenoplectus californicus (Cali bulrush)					
*Najas guadalupensis				X		*Schoenoplectus pungens (three square)					
*Najas minor						*Schoenoplectus tabernaemontani (softstem)					
Nelumbo lutea						Scirpus cubensis (Oxycaryon cubense)	X	X	X	X	
Nitella spp.						Scirpus cyperinus					
Nuphar sp.	X	X	X	Xc		*Sesbania					
Nymphaea odorata	Xc	X	X	Xc		Solidago sp.					
Nymphoides aquatica						Sparganium americanum					
Nyssa sylvatica var. biflora						Spartina bakeri					
Orontium aquaticum						Sphagneticola trilobata (Wedelia)					
Osmunda cinnamomea						Spirodela polyrhiza					
Osmunda regalis						Taxodium sp.					
Panicum hemitomon	X	X	X	X		Thalia geniculata					
Panicum repens	X	X	X	X		Thelypteris palustris					
Paspalidium geminatum						Triadenum virginicum					
*Paspalum repens						Typha sp.	X	X	X	X	
Paspalum urvillei						Urochloa mutica (Brachiaria mutica)					
Peltandra sp.						*Utricularia gibba (U. biflora)	X			X	
Persea sp.						*Utricularia floridana					
Pennisetum purpureum						*Utricularia foliosa					
Phragmites australis						*Utricularia inflata					
Pinus elliotii		X				*Utricularia purpurea					
Pistia stratioides						*Utricularia cornuta					
Pluchea sp.						*Utricularia radiata					
*Polygonum glabrum (densiflorum)						Vallisneria americana					
*Polygonum hydropiperoides						*Websteria confervoides					
*Polygonum punctatum	X		X	X		Wolffiella spp.					
*Polygonum sp.			X	X		Woodwardia virginica					
Pontederia cordata	X		X	X		Xyris sp.					
*Potamogeton diversifolius						Zizania aquatica					
*Potamogeton illinoensis						Zizaniopsis milacea					
*Potamogeton pusillus						Eleocharis vivipera				X	
*Potamogeton pectinatus						deer paw (Ricciocarpus natans)	X			X	
Proserpinaca pectinata						Vitis				X	
*Rhexia											
*Rhynchospora corniculata											
*Rhynchospora inundata											
Rhynchospora tracyi											
Ricciocarpus natans	X		X								

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

Field ID/WIN

G4SW0095



SAMPLE ID: see sticker in upper right MACROPHYTE ID: 11520
 COUNTY: Polk WBID: 1958F
 LAKE SIZE: Large TIME: 1205
 SAMPLING AGENCY: FLDEP SW ROC

Site Name: Lake Isabell Center

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) : Forest/Natural <u>10</u> Silviculture <u> </u> Field/Pasture <u>45</u> Agricultural <u>45</u> Residential <u> </u> Commercial <u> </u> Industrial <u> </u> Other (Specify) <u> </u>				LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI: <u> </u>			
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>SM 18 11</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 <u>13</u> 12 <u>11</u>		Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place 10 9 8 7 6	
LAKESIDE ALTERATIONS <u>15</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) <u>15</u> 14 13 12 11		Many structures, roads or other human disturbance visible (50%-70% lakeside affected) 10 9 8 7 6	
BUFFER ZONE <u>11</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 <u>11</u>		50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer 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	

WATER / SUBSTRATE / BIOLOGICAL: SAMPLES AND OBSERVATIONS

Water: Nutrient Sample Taken? ☒ Yes ☐ No Preserved? ☐ Yes ☐ pH<2 ☐ No Color Sample Taken? ☒ Yes ☐ No Lot # <u> </u> Exp. Date: <u> </u> Alkalinity Sample Taken? ☒ Yes ☐ No Water Level ☐ Low ☒ Normal ☐ High						Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other <u> </u>					
Meter Readings: Top: <u>0.3</u> <u>27.6</u> <u>6.00</u> <u>5.33</u> <u>66.4</u> <u>197</u> <u>.09</u> Mid-Depth: <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> Bottom: <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u>						Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other <u> </u>					
Meter ID: <u> </u>						Clarity: ☐ Clear ☒ Slightly Turbid ☐ Opaque ☐ Turbid					
Sediment Type: (may check more than one) ☐ Sandy ☒ Organic fibrous (peaty, CPOM) ☐ Vegetated ☐ Sand/Silt ☐ Organic smooth (muck) ☐ Other (Specify): <u> </u>						Sediment Odors: ☒ Normal ☐ Anaerobic ☐ Other (Specify): <u> </u>					
Biological Communities: LVI Conducted? ☒ Yes ☐ No Phytoplankton Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot #: <u> </u> Exp Date: <u> </u> 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 ☐ ☒ ☐ ☐					
Weather Conditions: <u>hot ~ 90 Sunny</u>						Additional Notes:					
SAMPLING TEAM: <u>Kelby Callahan</u> <u>Saran Meyer</u>						SIGNATURE: <u>Kelby Callahan</u> DATE: <u> </u>					

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

STORET STATION NUMBER: SEE STICKER UPPER RIGHT	LAKE SIZE: <i>Large</i>	LAKE NAME: <i>Isabelle</i>	FIELD ID / NAME: PUT STICKER ^
ECO-REGION:	COUNTY: <i>Polk</i>	SAMPLING LOCATION/DESCRIPTION: <i>(a) Center</i>	<i>G4SW0095</i>
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 <i>11</i>	Secchi >3 m Or VOB 20 19 18 17 16	3 2.6 2.2 1.8 1.4 15 14 13 12 <i>11</i>	1.0 0.9 0.8 0.7 0.6 10 9 8 7 6
Vegetation Quality <i>12</i>	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 <i>12</i> 11	Large masses (21%-40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats 10 9 8 7 6
Stormwater Inputs <i>11</i>	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 <i>3</i>	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	Thick deposits of CPOM, or fine detritus and anaerobic muck/mud/silt, or algal growth or nuisance plants (Hydrilla) cover bottom 10 9 8 7 6
Lakeside Adverse Human Alternations <i>15</i>	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 <i>11</i>	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 <i>15</i>	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	<i>15</i> 14 13 12 11	10 9 8 7 6
TOTAL SCORE <i>78</i>	COMMENTS:		

 ANALYSIS DATE: *05/15/2019*

 ANALYST: *Sarah Meyer & Kelby Callahan*

 SIGNATURE: *Sarah Meyer*

Florida Department of Environmental Protection

Central Laboratory Submittal Form

Lake Isabell LVI

Customer: SW-DIST

Requester: Judy Ashton

Field Report Prepared By: S Meyer

Project ID: SMP

Collected By: Kelby Callahan & Sarah Meyer

Sampling Agency: FDEP SW ROC

Location		☐ Comp ☒ Grab	Collection (comp begin or grab) Date 05/15/2019 Time 1205		Eastern Central	Composite end Date _____ Time _____		Bottle Group(s) (See pg 2) A
Field ID/WIN G4SW0095 		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen 5.23	☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L) _____		
WIN Site Name: Lake Isabell Center		Temp (C) 27.6	pH 6.00	Sample Depth 0.3	☐ ft ☒ m	Sp. Conductance (umho/cm) 197.0		
Lat/Long _____ dms		Salinity (ppt) 0.09		Comments				

Location		☐ Comp ☐ Grab	Collection (comp begin or grab) Date _____ Time _____		Eastern Central	Composite end Date _____ Time _____		Bottle Group(s)
Field ID		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L) _____		
WIN/STORET #		Temp (C) _____	pH _____	Sample Depth _____	☐ ft ☐ m	Sp. Conductance (umho/cm) _____		
Latitude _____ dms		Longitude _____ dms		Salinity (ppt) _____				

Location		☐ Comp ☐ Grab	Collection (comp begin or grab) Date _____ Time _____		Eastern Central	Composite end Date _____ Time _____		Bottle Group(s)
Field ID		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L) _____		
WIN/STORET #		Temp (C) _____	pH _____	Sample Depth _____	☐ ft ☐ m	Sp. Conductance (umho/cm) _____		
Latitude _____ dms		Longitude _____ dms		Salinity (ppt) _____				

Location		☐ Comp ☐ Grab	Collection (comp begin or grab) Date _____ Time _____		Eastern Central	Composite end Date _____ Time _____		Bottle Group(s)
Field ID		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L) _____		
WIN/STORET #		Temp (C) _____	pH _____	Sample Depth _____	☐ ft ☐ m	Sp. Conductance (umho/cm) _____		
Latitude _____ dms		Longitude _____ dms		Salinity (ppt) _____				

Relinquished By: Sarah Meyer	Date/Time 05/15/2019 1700	Shipping Method FedEx	Number of Coolers Shipped: 1	Received By:	Date/Time
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Group: A	Bottle Type:	# of Bottles: 0	Preservative:	Enter Number of Bottles Sent to Lab	<u>1</u>
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ALKALINITY
CHLSUITE-W
TURBIDITY
W-CL-IC
W-COLOR
W-F
W-NH3
W-NO2NO3
W-PO4-F
W-S-A-TP
W-SO4-IC
W-TDS
W-TKN
W-TOC
W-TSS