

LVI

Site Name Prairie Lake Sample Date 10/10/2019

WBID 3002N WIN ID GZCE0218 RQ -2019-10-14-42

	Initial/Date	QC Initial/Date
Water chemistry data to LIMS	MKL 12/2/19	HO 12/17/19
Create SBIO station visit 80508	MKL 12/2/19	n/a
Vascular Entry (add LIMS ID)	MKL 12/2/19	HO 12/18/19
Lake Observation Sheet Entry	MXL 12/2/19	HO 12/18/19
Authorize SBIO data	HO 12/18/19	n/a
Scan all sheets to 21FLCEN folder		n/a
LIMS/WIN migration		n/a
File in cabinet		n/a

Comments/notes:



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: Prairie Lake @ Center

Date: 10/10/2019

(mm/dd/yyyy)

WIN/ Field ID: G2CE02018

WBID: 3002N

Latitude: 28.59306

(Decimal Degrees)

County: Orange

ORG ID: 21FLCEN

Longitude: -81.50833

(Decimal Degrees)

Receiving Body of Water: _____

RQ-2019- 10-14-42

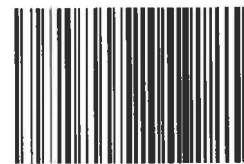
Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment			
Mike Linger				☒	☒	☒	☒	☒	☒ Sample Container	☐ Van Dorn	☐ Pole	
				☐	☐	☐	☐	☐	☐ Carboy	☒ Syringe		
				☐	☐	☐	☐	☐	☐ Dipper	☐ Other		
									Depth Measured with <u>Secchi Disk Line / Meter</u>			
									Equipment ID <u>Leadfoot, Knothead, Crusty/Bucket, Mucky/Trap</u>			
									Collection Method			
									☐ Wading	☒ Canoe/Kayak		
									☐ From Shore	☐ Electric Motor		
									☐ Other	☐ Gasoline Motor		
Water Level: <u>Dry</u> / Pooled / Low / Normal / High / Flooded				Motor ID# <u>Craw Daddy</u>				Matrix: <u>Fresh</u> / Marine / DI				
Photos: <u>Yes</u> / No				Flow: <u>No Flow</u> / Intestinal / Flowing / NA				Tide: <u>Rising</u> / Falling / Slack / NA				
Tide Times: <u>High</u> / Low												
Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPT)	Sp COND (µmhos/cm)	Temp. (C°)		
(EST)	1124		0.3		4.09	51.4	6.48	0.06	123.6	27.0		
CEN		5.6	5.1	1.6	2.73	34.1	6.28	0.06	124.2	26.7		
Biological Samples Collected: <u>None</u> HA SCI RPS Algae ID LVS <u>LVI</u> Other:												
SBIO ID Numbers: SBIO-ID: <u>80508</u> HA-ID: RPS-ID: Macrophyte-ID: <u>11554</u> LIMS#: <u>2127255</u>												
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>SA7163030</u>	<u>10/30/19</u>	☒ <2				
Metals	☐ W-ICPMS ☐ W-ICP				☐ Ice ☐ HNO3			☐ <2				
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice	<u>16930280</u>						
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-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				☐ Ice							
	☐ 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				☐ Ice							
	☐ W-PCL-SQ-R ☐ W-E8321-MS ☐ W-CARB-AA				☐ Other							
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C				☐ Ice							

Notes: _____

Signature: [Signature] Date: 10/10/19

WIN ID / Field ID →

Prairie Lake @ Center



G2CE0218

LIMS EVENT ID: CENT-DIST-2019-10-11-01

Enter Field Parameters, Verify Station ID in LIMS DMT: MKL 12/2/19

QC Station ID, Field Parameters in LIMS DMT: LG 12/17/19

Scan/Save Field Sheets

Migrate Data to WIN:

Verify Data in WIN:

(Initials/Date)

(Initials/Date)

(Initials/Date)

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Lake Pairie</u>	County: <u>Orange</u>	Date: <u>10/10/19</u>
Analyst: <u>Leif Bannan Mike Lingen</u>	Signature: <u>[Signature]</u>	STORET: <u>G2CE0218</u>
Except where noted as "sp." species level identification required. *Genera that may require lab verification* Plants in bold= FLEPPC invasive exotic.		Lake units sampled (circle one group): 1, 4, 7, 10 2, 5, 8, 11 3, 6, 9, 12
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	2	5	8	11	Collected? (✓)	SPECIES	2	5	8	11	Collected? (✓)
Acer rubrum						Fraxinus					
Alternanthera philoxeroides	/	/	/	/		Fuirena scirpoides					
Amaranthus australis						Gordonia lasianthus					
Andropogon sp.						Habenaria repens					
Azolla filiculoides (A. caroliniana)						Hibiscus coccineus					
Baccharis sp.						Hibiscus grandiflora					
Bacopa caroliniana						Hydrilla verticillata					
Bacopa monnieri						Hydrocotyle sp.	/	/	/	/	
Bidens alba						Hygrophila polysperma					
Bidens laevis						Hymenocallis sp.					
Bidens mitis						*Hypericum fasciculatum					
Blechnum serrulatum						*Hypericum hypericoides					
Boehmeria cylindrica						*Hypericum myrtifolium					
Brasenia schreberi						Ilex cassine					
Cabomba caroliniana						Ipomoea aquatica					
Canna						Ipomoea sagittata					
Centella asiatica						Itea virginica					
Cephalanthus occidentalis	/		/			Juncus effusus					
Ceratophyllum demersum						*Juncus marginatus					
Chara sp.						*Juncus megacephalus					
Cicuta maculata						Juncus repens					
Cinnamomum camphora		/				*Juncus scirpoides					
Cladium jamaicense						Lachnanthes caroliniana					
Colocasia esculenta						Leersia hexandra					
*Commelina						Landoltia punctata (Spirodela punctata)					
Crinum americanum						Lemna sp.	/	/	/	/	
* Cyperus alternifolius (C. involucratus)						Leucothoe racemosa (Eubotrys racemosa)					
Cyperus articulatus						Limnium spongia					
Cyperus haspan						Limnophila sessiliflora					
*Cyperus lecontei						Liquidambar styraciflua					
*Cyperus polystachyos						*Ludwigia arcuata					
*Cyperus odoratus						*Ludwigia grandiflora					
*Cyperus surinamensis						*Ludwigia hexapetala					
Cyrilla racemiflora						*Ludwigia leptocarpa	/	/	/	/	
Decodon verticillatus						Ludwigia (native)					
Diodia virginiana						*Ludwigia octovalvis	/	/	/	/	
*Echinochloa crus-galli						* Ludwigia peruviana	/	/	/	/	
*Echinochloa muricatum						*Ludwigia repens					
Echinochloa walteri						Ludwigia suffruticosa					
Eclipta prostrata (E. alba)		/	/	/		Luziola fluitans (Hydrochloa carolinensis)					
Eichhornia crassipes	/	/	/	/		Magnolia virginiana					
*Eleocharis						Mayaca fluviatilis					
Eleocharis cellulosa						Melaleuca quinquenervia					
*Eleocharis elongata						Micranthemum glomeratum					
Eleocharis equisetoides						Micranthemum umbrosum					
Eleocharis interstincta						Mikania scandens	/	/	/	/	
Eleocharis submersed viviparous						Mimosa pigra					
*Eriocaulon compressum						Myrica cerifera					
*Eriocaulon decangulare						<u>Ceratopteris sp</u>	/				
Eupatorium capillifolium	/										

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: <u>Prairie Lake</u>						Date: <u>10/10/2019</u>					
SPECIES	2	5	8	11	Collected? (✓)	SPECIES	2	5	8	11	Collected? (✓)
Myriophyllum aquaticum						<i>Salix caroliniana</i>	/	/	/	/	
* <i>Myriophyllum heterophyllum</i>						Salvinia minima	/	/	/	/	
* <i>Myriophyllum laxum</i>						<i>Sambucus canadensis</i>					
* <i>Myriophyllum pinnatum</i>						Sapium sebiferum			/		
Myriophyllum spicatum						<i>Saururus cernuus</i>			/		
* <i>Najas filifolia</i>						Schinus terebinthifolius			/		
* <i>Najas guadalupensis</i>						* <i>Schoenoplectus californicus</i>					
* <i>Najas minor</i>						* <i>Schoenoplectus pungens</i>					
<i>Nelumbo lutea</i>						* <i>Schoenoplectus tabernaemontani</i> (<i>Scirpus validus</i>)	/	/	/	/	
<i>Nitella</i> spp.	/			/		<i>Scirpus cubensis</i> (<i>Oxycaryon cubense</i>)	/	/	/	/	
<i>Nuphar</i> sp.	/			/		<i>Scirpus cyperinus</i>					
<i>Nymphaea mexicana</i>						* <i>Sesbania</i>					
<i>Nymphaea odorata</i>	/			/		<i>Solidago</i> sp.					
<i>Nymphoides aquatica</i>						<i>Sparganium americanum</i>					
<i>Nyssa sylvatica</i> var. <i>biflora</i>						<i>Spartina bakeri</i>					
<i>Orontium aquaticum</i>						<i>Spirodela polyrhiza</i>					
<i>Osmunda cinnamomea</i>						<i>Taxodium</i> sp.					
<i>Osmunda regalis</i>						<i>Thalia geniculata</i>					
<i>Panicum hemitomon</i>						<i>Thelypteris interrupta</i>					
Panicum repens	/	/	/	/		<i>Thelypteris palustris</i>					
<i>Paspalidium geminatum</i>						<i>Triadenum virginicum</i>					
* <i>Paspalum repens</i>						<i>Typha</i> sp.	/	/	/	/	
<i>Paspalum urvillei</i>						Urochloa mutica (<i>Brachiaria mutica</i>)					
<i>Peltandra</i> sp.						* <i>Utricularia gibba</i> (<i>U. biflora</i>)					
<i>Persea</i> sp.						* <i>Utricularia foliosa</i>					
Pennisetum purpureum						* <i>Utricularia inflata</i>					
<i>Phragmites australis</i>						* <i>Utricularia purpurea</i>					
<i>Pinus elliotii</i>						* <i>Utricularia radiata</i>					
Pistia stratioides						* <i>Utricularia resupinata</i>					
<i>Pluchea</i> sp.						<i>Vallisneria americana</i>					
* <i>Polygonum glabrum</i> (<i>densiflorum</i>)		/	/	/		<i>Vitis</i> sp.					
<i>Polygonum hirsutum</i>	/		/	/		* <i>Websteria confervoides</i>					
* <i>Polygonum hydropiperoides</i>			/			Wedelia trilobata (<i>Sphagneticola trilobata</i>)					
* <i>Polygonum punctatum</i>			/			<i>Wolffiella</i> spp.					
* <i>Polygonum</i>						<i>Woodwardia virginica</i>					
<i>Pontederia cordata</i>	/	/	/			<i>Xyris</i> sp.					
* <i>Potamogeton diversifolius</i>						<i>Zizania aquatica</i>					
* <i>Potamogeton illinoensis</i>						<i>Zizaniopsis milacea</i>					
* <i>Potamogeton pusillus</i>						<i>Urena lobata</i>			/		
* <i>Potamogeton pectinatus</i> (<i>Stuckenia pectinatus</i>)											
<i>Proserpinaca pectinata</i>											
* <i>Rhexia</i>											
* <i>Rhynchospora corniculata</i>											
* <i>Rhynchospora inundata</i>											
<i>Rhynchospora nitens</i>											
<i>Ricciocarpus natans</i>	/	/	/								
<i>Sabal palmetto</i>											
<i>Sacciolepis striata</i>	/		/	/							
* <i>Sagittaria filiformis</i>											
* <i>Sagittaria graminea</i>											
* <i>Sagittaria isoetiformis</i>											
<i>Sagittaria lancifolia</i>											
<i>Sagittaria latifolia</i>											

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

STORET STATION NUMBER: GZCE0218	DATE (M/D/Y) 10/10/2019	LAKE NAME Prairie Lake		FIELD ID / NAME:		
ECO-REGION:	COUNTY: Orange	SAMPLING LOCATION/DESCRIPTION: @ Center		LAKE SIZE: Medium		
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	Secchi >3 m Or VOB	Secchi(m)		Poor		
12	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6		
Vegetation Quality	Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa 10	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		
	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6		
Stormwater Inputs	Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation 7	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		
	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6		
Bottom Substrate Quality	Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present 11	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		
	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6		
Lakeside Adverse Human Alterations	Very few man-made structures, roads, or other disturbance adjacent to lake (<10%) 9	Moderate disturbance visible (structures, roads or other), 10%-49% lakeside affected		Many structures, roads or other human disturbance visible (50%-70%) lakeside affected		
	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6		
Upland Buffer Zone	Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer 11	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		
	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6		
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 11					
	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6		
TOTAL SCORE	71	COMMENTS:				

ANALYSIS DATE: 10/10/19	ANALYST: Mike Linger	SIGNATURE: 
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DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: 28.59306
 COUNTY: Orange STORET #: 62CE0218 LONGITUDE: -81.50833
 DATE: 10/10/19 TIME: 1124 SAMPLING AGENCY: FDEP CE-ROC
 SITE NAME: Prairie Lake @ Center WBID: 3002 N
 FIELD ID/NAME: _____ LAKE SIZE: med RQ: -2019-10-14-42

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category - from GIS) :										LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer)											
Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industrial	Other (Specify)														
<u>48</u>				<u>60</u>																	
Local Watershed Erosion (select one) : ☒ None ☐ Slight ☐ Moderate ☐ Heavy								Artificially Impounded													
Local Watershed NPS Pollution : ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy								☐ Yes ☒ No													
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										
<u>7</u>		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
LAKESIDE ALTERATIONS		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)										
<u>9</u>		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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										
<u>11</u>		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 _____							
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>27.0</u> <u>6.48</u> <u>4.09</u> <u>51.4</u> <u>123.6</u> <u>0.06</u> Mid-Depth: _____ Bottom: <u>5.1</u> <u>26.7</u> <u>6.28</u> <u>2.73</u> <u>34.1</u> <u>124.2</u> <u>0.06</u>								Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____							
Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid								Color: ☒ Clear ☐ Tannic ☐ Green							
SECCHI (M) <u>1.6</u>								Total Station Depth (M) <u>5.6</u>							
VOB ☐								Sediment Odors: ☒ Normal ☐ Other (Specify): _____ ☐ Anaerobic							
Sediment Type: (may check more than one) ☒ Sandy ☒ Organic fibrous (peaty, CPOM) ☐ Vegetated ☐ Sand/Silt ☐ Organic smooth (muck) ☐ Other (Specify): _____								Sample Taken? ☐ Yes ☒ No							
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 : <u>80's overcast</u>															
SAMPLING TEAM:								SIGNATURE:				DATE:			

G2CE0218

LVI Map for Prairie Lake , WBID 3002N

