

LVI

Site Name Lake Drawdy Sample Date 6/12/19
WBID 30330 WIN ID GZCE0079 RQ 2019-05-20-23

	Initial/Date	QC Initial/Date
Water chemistry data to LIMS	KWM JUN 13 2019	LB 07/05/19
Create SBIO station visit	KWM JUN 20 2019	n/a
Vascular Entry (add LIMS ID)	KWM JUN 25 2019	LB 07/05/19
Lake Observation Sheet Entry	KWM JUN 25 2019	
Authorize SBIO data	LB 07/05/19	n/a
Scan all sheets to 21FLCEN folder	LB 07/05/19	n/a
LIMS/WIN migration	LMD 9/13/19	n/a
File in cabinet		n/a

Comments/notes:

~~6/14 - station not yet created in WIN, cannot create
- in SBIO - km~~



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: Lake Drawdy @ 150m NNE of Center

Date: 06/12/2019
(mm/dd/yyyy)

WIN ID/ Field ID G2CE0079

WBID: 3033D

Latitude: 28.59283

County: Orange

ORG ID: 21FLCEN

Longitude: -81.12448
(Decimal Degrees)

Receiving Body of Water: _____

RQ 2019 - 05-20-23
(Decimal Degrees)

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Duplicate Collection	Blank Collection
Katie March		☒	☒	☒	☒	☒	☒	☒
Leif Boman		☒	☒	☒	☒	☒	☒	☒

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☒ Syringe	
☐ Dipper	☐ Other	
Depth Measured with: <u>Secchi Disk Line / Meter</u>		
Equipment ID: <u>Leadfoot, Knochthead, Scud/ Bucket, Shrimp/Trap</u>		

Collection Method		
☐ Wading	☐ Canoe/Kayak	
☐ From Shore	☒ Electric Motor	
☐ Other	☐ Gasoline Motor	

Water Level: Dry/ Pooled/ Low/ <u>Normal</u> / High/ Flooded	Meter ID# <u>Betty 67</u>	Matrix: <u>Fresh</u> / Marine / DI
Photos: Yes / <u>No</u>	Flow: No Flow / Intestinal / Flowing/ NA	Tide: Rising/ Falling/ Slack/ <u>NA</u>
Tide Times: High		Low

Field Sample

(Bracket Sample Time)

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°)
<u>EST</u>	<u>1138</u>	<u>4.1</u>	<u>0.3</u>	<u>1.0</u>	<u>7.10</u>	<u>92.3</u>	<u>6.35</u>	<u>0.06</u>	<u>140</u>	<u>29.04</u>
CEN			<u>3.6</u>		<u>0.44</u>	<u>5.3</u>	<u>5.83</u>	<u>0.06</u>	<u>133</u>	<u>23.40</u>

Biological Samples Collected:	None	HA	SCI	RPS	Algae ID	LVS	<u>LVI</u>	Other:
SBIO ID Numbers:	SBIO-ID: <u>29837</u>	HA-ID:	RPS-ID: _____	Macrophyte-ID: <u>11395</u>	LIMS#: <u>2095153</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			☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice	<u>13615055</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-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-E3821-MS ☐ W-E3821-DI	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-E3821-MS ☐ W-CT-CL-R ☐ W-PCL-SQ-R ☐ W-E3821-DI ☐ W-CARB-AA	☐ Ice			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C	☐ Ice			

H2SO4
LOT# SA9010030
EXP: 04/10/2020

QA/QC Sample Information
Duplicate

Time Zone: (EST) CEN		Time: 1143	Field ID: G2CE0079 DUP		(WIN ID_DUP)
WIN DMT Activity ID:					
Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H ₂ SO ₄			☒ < 2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO ₃			☐ < 2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice	13615055		
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			
Microbiology	☐ E Coli ☐ F Coli ☐ Enterococci	☐ Ice			
Molecular	☐ PCR-FILTER ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-HF183 ☐ PCR-DG3 ☐ PCR-GFD				
Tracers	☐ W-E3821-MS ☐ W-E3821-DI				
Pesticides	☐ W-PSNP-TQ ☐ W-E3821-DI ☐ W-CT-CL-R ☐ W-PCL-SQ-R ☐ W-E-3821-MS ☐ W-CARB-AA				

H2SO4
 LOT# SA9010030
 EXP: 04/10/2020
 Place Preservative Sticker Here

Field ID → G2CE0079_DUP
WIN → G2CE0079
 Location → Lake Drawdy @ 150m NNE of Center

Blank

Time Zone: (EST) CEN		Time: 1050	Field ID: FB 06122019		(Blank Type_DDMMYYYY)
DI Source: lab		Location: Lake Drawdy			
☒ Field Blank	☐ Equipment Blank	☐ Field Cleaned Equipment Blank	Equipment ID: D1#6		
WIN DMT Blank Batch ID:					
Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H ₂ SO ₄			☒ < 2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO ₃			☐ < 2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice	13615055		
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				
Tracers	☐ W-E3821-MS ☐ W-E3821-DI				
Pesticides	☐ W-PSNP-TQ ☐ W-E3821-DI ☐ W-CT-CL-R ☐ W-PCL-SQ-R ☐ W-E3821-MS ☐ W-CARB-AA				

H2SO4
 LOT# SA9010030
 EXP: 04/10/2020

Field ID → FB_06122019

Notes:

Signature: *K March*
Date: 6/12/19

Place or Type Label Here

 WIN ID / Field ID →
 Lake Drawdy @ 150m
 NNE of Center


 G2CE0079

LIMS EVENT ID: CENT-DIST-2019- 06-13-01		WIN Import ID:
Enter Field Parameters, Verify Station ID In LIMS DMT: KWM JUN 13 2019		QC Station ID, Field Parameters In LIMS DMT: LB 7/5/19
Scan/Save Field Sheets LB 7/5/19	Migrate Data to WIN: LMD 9/13/19	Verify Data In WIN:
(Initials/Date)	(Initials/Date)	(Initials/Date)

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: 11395 LATITUDE: 28.59283
 COUNTY: Orange STORET #: 62150079 LONGITUDE: -81.12448
 DATE: 6/12/19 TIME: 11:38 SAMPLING AGENCY: FDEP-COROL
 SITE NAME: Lake Orangety WBID: 30330
 FIELD ID/NAME: _____ LAKE SIZE: _____ RQ: 2019-05-20-23

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) : Forest/Natural <u>15</u> Silviculture _____ Field/Pasture <u>10</u> Agricultural <u>5</u> Residential <u>70</u> Commercial _____ Industrial _____ Other (Specify) _____				LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI: _____ 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 <u>5</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 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 <u>5</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) 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 <u>5</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 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 _____ Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____											
Meter Readings: Top: <u>0.3</u> <u>29.04</u> <u>6.35</u> <u>7.10</u> <u>923</u> <u>140</u> <u>0.06</u> Mid-Depth: _____ Bottom: <u>3.6</u> <u>23.40</u> <u>5.83</u> <u>0.44</u> <u>5.3</u> <u>133</u> <u>0.06</u> Meter ID: <u>Betty 67</u>						Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid Color: ☒ Tannic ☐ Clear ☐ Green SECCHI (M) <u>1.0</u> Total Station Depth (M) <u>4.1</u> VOB _____											
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 ☐ Anaerobic ☐ Other (Specify): _____											
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 ☒ Don't Know 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>hot, windy, mostly sunny</u>																	
SAMPLING TEAM: <u>Leif Boman, Katie March</u>						SIGNATURE: <u>KMarch</u>			DATE: <u>6/12/19</u>								

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Lake Powdery</u>	County: <u>Orange</u>	Date: <u>6/12/2019</u>									
Analyst: <u>Bonnie March</u>	Signature: <u>Bonnie March</u>	STORET: <u>GZEE0079</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): <u>1, 4, 7, 10</u> 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	1	4	7	10	Collected? (✓)	SPECIES	1	4	7	10	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 <u>prolifer</u>	/	/	/	/		Limnium spongia					
Cyperus haspan						Limnophila sessiliflora					
*Cyperus lecontei						Liquidambar styraciflua					
*Cyperus polystachyos						*Ludwigia arcuata					
*Cyperus odoratus						*Ludwigia grandiflora					
*Cyperus surinamensis						*Ludwigia hexapetala					
Cyrtilla 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											
Eupatorium capillifolium				/							

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site:						Date:					
SPECIES	1	4	7	10	Collected? (✓)	SPECIES	1	4	7	10	Collected? (✓)
Myriophyllum aquaticum						Salix caroliniana					
*Myriophyllum heterophyllum						Salvinia minima					
*Myriophyllum laxum						Sambucus canadensis					
*Myriophyllum pinnatum						Sapium sebiferum					
Myriophyllum spicatum						Saururus cernuus					
*Najas filifolia						Schinus terebinthifolius					
*Najas guadalupensis						*Schoenoplectus californicus					
*Najas minor						*Schoenoplectus pungens					
Nelumbo lutea						*Schoenoplectus tabernaemontani (Scirpus validus)					
Nitella spp.						Scirpus cubensis (Oxycaryon cubense)					
Nuphar sp.						Scirpus cyperinus					
Nymphaea mexicana						*Sesbania					
Nymphaea odorata						Solidago sp.					
Nymphoides aquatica						Sparganium americanum					
Nyssa sylvatica var. biflora						Spartina bakeri					
Orontium aquaticum						Spirodela polyrhiza					
Osmunda cinnamomea						Taxodium sp.					
Osmunda regalis						Thalia geniculata					
Panicum hemitomon						Thelypteris interrupta					
Panicum repens						Thelypteris palustris					
Paspalidium geminatum						Triadenum virginicum					
*Paspalum repens						Typha sp.					
Paspalum urvillei						Urochloa mutica (Brachiaria mutica)					
Peltandra sp.						*Utricularia gibba (U. biflora)					
Persea sp.						*Utricularia foliosa					
Pennisetum purpureum						*Utricularia inflata					
Phragmites australis						*Utricularia purpurea					
Pinus elliotii						*Utricularia radiata					
Pistia stratioides						*Utricularia resupinata					
Pluchea sp.						Vallisneria americana					
*Polygonum glabrum (densiflorum)						Vitis sp.					
Polygonum hirsutum						*Websteria confervoides					
*Polygonum hydropiperoides						Wedelia trilobata (Sphagneticola trilobata)					
*Polygonum punctatum						Wolffiella spp.					
*Polygonum						Woodwardia virginica					
Pontederia cordata						Xyris sp.					
*Potamogeton diversifolius						Zizania aquatica					
*Potamogeton illinoensis						Zizaniopsis milacea					
*Potamogeton pusillus											
*Potamogeton pectinatus (Stuckenia pectinatus)											
Proserpinaca pectinata											
*Rhexia											
*Rhynchospora corniculata											
*Rhynchospora inundata											
Rhynchospora nitens											
Ricciocarpus natans											
Sabal palmetto											
Sacciolepis striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia											
Sagittaria latifolia											

LVI Map for LAKE DRAWDY, WBID 3033D

