

LVI

Site Name Lake Irma Sample Date 08/27/18WBID 3017 WIN ID G2CE0104 RQ 2018-08-27-29

	Initial/Date	QC Initial/Date
Water chemistry data to LIMS	KWM SEP 21 2018	
Create SBIO station visit	KWM SEP 21 2018	n/a
Vascular Entry (add LIMS ID)	KWM SEP 21 2018	LB 10/19/18
Lake Observation Sheet Entry	KWM SEP 21 2018	LB 10/19/18
Authorize SBIO data	LB 10/19/18	n/a
Scan all sheets to 21FLCEN folder	LB 10/19/18	n/a
LIMS/WIN migration		n/a
File in cabinet		n/a

Comments/notes:

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: _____
 COUNTY: Orange STORET #: _____ LONGITUDE: _____
 DATE: 8/27/19 TIME: _____ SAMPLING AGENCY: _____
 SITE NAME: Lake Luma WBID: 3017
 FIELD ID/NAME: 62E0104 LAKE SIZE: _____ RQ: 2018-08-27-29

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) : Forest/Natural <u>15</u> Silviculture _____ Field/Pasture _____ Agricultural _____ Residential <u>85</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>3</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	
LAKESIDE ALTERATIONS <u>3</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	
BUFFER ZONE <u>4</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	
				Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place 10 9 8 7 6	
				Many structures, roads or other human disturbance visible (50%-70% lakeside affected) 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	
				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 ☒ 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: Top: <u>0.3</u> <u>30.64</u> <u>7.24</u> <u>8.00</u> <u>107.0</u> <u>134</u> <u>0.06</u> Mid-Depth: _____ Bottom: <u>3.8</u> <u>30.04</u> <u>6.96</u> <u>6.88</u> <u>91.1</u> <u>134</u> <u>0.06</u>				Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____	
Meter ID: <u>Betty67</u>				Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid	
Sediment Type: (may check more than one) ☐ Sandy ☒ Organic fibrous (peaty, CPOM) ☐ Vegetated ☒ Sand/Silt ☐ Organic smooth (muck) ☐ Other (Specify): _____				Color: ☐ Clear ☒ Tannic ☐ Green SECCHI (M) <u>2.5</u> Total Station Depth (M) <u>4.3</u> VOB ☐	
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 ☐ ☐ ☐ ☒	
Weather Conditions :				Sediment Odors: ☒ Normal ☐ Other (Specify): _____ ☐ Anaerobic	
Additional Notes:					
SAMPLING TEAM: <u>LGB, Kwm</u>				SIGNATURE: <u>Kwm</u>	
				DATE: <u>8/27/19</u>	



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2018

Data Qualified?

Yes ☒ No ☐

WIN Station Name: Lake Irma @ Center

Date: 8/27/18

(mm/dd/yyyy)

WIN ID/ Field ID G2CE0104

WBID: 3017

Latitude: 28.59028953

County: Orange

ORG ID: 21FLCEN

Longitude: -81.26698175

(Decimal Degrees)

(Decimal Degrees)

Receiving Body of Water: _____

RQ - 2018-08-27-29

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Duplicate Collection	Blank Collection
Leif Bonam			✓		✓	✓	✓	✓
Katie March		✓		✓				

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☒ Syringe	
☐ Dipper	☐ Other	
Depth Measured with: (SECCHI DISK LINE) / METER		
Equipment ID (KNOTHEAD / LEAD-FOOT)		

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</u>	Matrix: <u>Fresh</u> Marine / DI
Photos: <u>Yes</u> No	Flow: No Flow / Intertidal / Flowing <u>NA</u>	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>1055</u>	<u>4.3</u>	<u>0.3</u>	<u>2.5</u>	<u>8.00</u>	<u>107.0</u>	<u>7.24</u>	<u>0.06</u>	<u>134</u>	<u>30.64</u>
<u>CEN</u>			<u>3.8</u>		<u>6.88</u>	<u>91.1</u>	<u>6.96</u>	<u>0.06</u>	<u>134</u>	<u>30.04</u>

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

SBIO ID Numbers: SBIO-ID: 78086 HA-ID: RPS-ID: n/a Macrophyte-ID: 11072 LIMS#: 2020464

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>HA8101020</u>	<u>4/11/19</u>	☒ <2
Metals	☒ W-ICPMS ☒ W-ICP	☒ Ice ☒ HNO3	<u>NA8067020</u>	<u>3/8/19</u>	☒ <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-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-HF183 ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-GFD	☐ Ice			
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA ☐ W-AHERB-AA	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-CARB-AA ☐ W-PCL-SQ-R ☐ W-UHERB-AA ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Ice ☐ Other			

QA/QC Sample Information Duplicate

Time Zone: EST CEN Time: 1100 Field ID: G2CE0104-DUP
(WIN ID + DUP)

Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Chec
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☐ H2SO4	SA8101020	4/11/19	☐ <2
Metals	☒ W-ICPMS ☒ W-ICP	☒ Ice ☒ HNO3	NA8067020	3/6/19	☐ <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-F / W-TSS / TURBIDITY	☐ Ice			
Microbiology	☒ E Coli ☐ F Coli ☐ Enterococci	☒ Ice			
Molecular	☐ PCR-FILTER ☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-GFD				
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA ☐ W-AHERB-AA				
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-CARB-AA ☐ W-PCL-SQ-R ☐ W-UHERB-AA ☐ W-GLYPH ☐ W-SUC-AA-R				

H2SO4
LOT# SA8101020
EXP: 04/11/2019

HNO3
LOT# NA8067020
EXP: 03/08/2019

Field ID → G2CE0104_DUP
WIN → G2CE0104
Location → Lake Irma @ Center

Blank

Time Zone: EST CEN Time: 1145 Field ID: BLANK_08272018
(BLANK_MMDDYYYYY)

DI Source: WASH ROOM Location: Publix parking lot

☒ Field Blank ☐ Equipment Blank ☐ Field Cleaned Equipment Blank Equipment ID: DI #4

Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Chec
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☐ H2SO4	SA8101020	4/11/19	☐ <2
Metals	☒ W-ICPMS ☒ W-ICP	☒ Ice ☒ HNO3	NA8067020	3/6/19	☐ <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-F / W-TSS / TURBIDITY	☐ Ice			
Microbiology	☐ E Coli ☐ F Coli ☐ Enterococci	☐ Ice			
Molecular	☐ PCR-FILTER ☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-GFD				
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA ☐ W-AHERB-AA				
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-CARB-AA ☐ W-PCL-SQ-R ☐ W-UHERB-AA ☐ W-GLYPH ☐ W-SUC-AA-R				

H2SO4
LOT# SA8101020
EXP: 04/11/2019

HNO3
LOT# NA8067020
EXP: 03/08/2019

Field ID →

Field Blank
Location/DI source
Washroom

BLANK_08272018

Notes:

WIN ID / Field ID →

Lake Irma @ Center
(3017)

G2CE0104

Signature: KMander Date: 8/27/18

Waterbody: <u>LAKE IRMA</u>	County: <u>Orange</u>	Date: <u>8/27/18</u>
Analyst: <u>Katie Moore, Jeff Brown</u>	Signature: _____	STORET: _____
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 involucratus	/					Limnobia 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 hairy sheaves	/	/	/	/		* 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 submersa viviparous				/		Mimosa pigra					
*Eriocaulon compressum						Myrica cerifera	/	/	/	/	
*Eriocaulon decangulare											
Eupatorium capillifolium	/	/	/	/							

Site: <u>Lake Irma</u>					Date: <u>8/27/18</u>						
SPECIES	1	4	7	10	Collected? (✓)	SPECIES	1	4	7	10	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> <u>red punicea</u>	/	/			
<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	/	/	/	D		<i>Thelypteris palustris</i>					
<i>Paspalidium geminatum</i>						<i>Triadenum virginicum</i>					
* <i>Paspalum repens</i>						<i>Typha</i> sp.	/	/	D	/	
<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>	D	D	/	/	
<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> <u>lapath.</u>	/	/	/	/	1	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>	/	/	/	/	1	<u>Vigna luteola</u>				/	
* <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>											

Lake Irma, 3017

12/1	28.594058, -81.266681
1/2	28.594972, -81.263527
2/3	28.594486, -81.262114
3/4	28.591699, -81.263239
4/5	28.590288, -81.264210
5/6	28.588013, -81.262608
6/7	28.587348, -81.265216
7/8	28.588820, -81.268216
8/9	28.588526, -81.270941
9/10	28.590826, -81.270700
10/11	28.593161, -81.268646
11/12	28.591665, -81.267455

