LVI

Site Name Lake Wekiva @ Center (aka Lake Orlando) Sample Date 8/1/18

WBID 3004 K WIN ID 62CE0092 RQ-2018-07-30-39

	Initial/Date	QC Initial/Date
Water chemistry data to LIMS	LMD 8/3/18	MKL 8/14/18
Create SBIO station visit 78684	LMD 8/3/18	n/a
Vascular Entry (add LIMS ID) 11007	LMD 8/3/18	MKL 8/14/18
Lake Observation Sheet Entry	LMD 8/3/18	MKL 8/14/18
Authorize SBIO data	MKL 8/14/18	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

April 2018

Data Qualified? Yes / (No)

WIN Station Name: Lake Wekiva @ Center aka Lake Orlando **Date:** 8/1/18 (mm/dd/yyyy)

WIN/ Field ID: G2CE0092 **WBID:** 3004K **Latitude:** 28.59739 (Decimal Degrees)

County: Orange **ORG ID:** 21FLCEN **Longitude:** -81.43279 (Decimal Degrees)

Receiving Body of Water: **RQ-2018-** 07-30-39

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Mike Linger	✓		✓		
Mike Drennan		✓	✓	✓	

Sampling Equipment
- ☑ Sample Container ☐ Van Dorn ☐ Pole
- ☐ Carboy ☑ Syringe
- ☐ Dipper ☐ Other
- Depth Measured with
- Equipment ID

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

Water Level: Dry/ Pooled/ Low / (Normal) / High / Flooded **Meter ID#** SCUD **Matrix:** (Fresh) / Marine / DI

Photos: (Yes) No **Flow:** No Flow / Intestital / 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)	1101	2.7	0.3	1.1	5.30	69.5	7.13	0.07	147.7	29.4
CEN			2.2		5.43	71.2	7.19	0.07	147.8	29.3

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

SBIO ID Numbers: SBIO-ID: 74684 HA-ID: RPS-ID: Macrophyte-ID: 11067 LIMS#: 20125Z0

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_2SO_4	SA8085170	3/26/19	☑ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO_3			☐ <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-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-E8321-DI ☐ W-E8321-MS	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-E8321-DI ☐ W-PCL-SQ-R ☐ WE8321-MS ☐ W-CARB-AA	☐ Ice ☐ Other			

Place Preservative Sticker(s) Here (If Available)

H2SO4
LOT# SA8085170
EXP: 03/26/19

Notes:

28.6004, -81.434C

WIN ID / Field ID →

Lake Wekiva @ Center
aka Lake Orlando (3004K)

G2CE0092

Signature: Mike Linger **Date:** 8/1/18

Enter Field Parameters, Verify Station ID In LIMS DMT: MD 8/3/18 (Initials/Date) QC Station ID, Field Parameters In LIMS DMT: MKL 8/14/18 (Initials/Date)

Scan/Save Field Sheets (Initials/Date) Migrate Data to WIN: (Initials/Date) Verify Data In WIN: (Initials/Date)

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Lake WeKiva	County: Orange	Date: 8/1/18
Analyst: Mike Linger / Mike Drennan	Signature:	STORET: 62CE0092

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	/	/				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 campgora	/					*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				/		Limnobium spongia					
Cyperus haspan				/		**Limnophila sessiliflora**					
*Cyperus lecontei						Liquidamber 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											
Eupatorium capillifolium											

No Dom 5

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: Lake Wekiva | Date: 8/1/18

SPECIES	2	5	8	11	Collected? (√)	SPECIES	2	5	8	11	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	/		/	/ C	
*Najas minor						*Schoenoplectus pungens					
Nelumbo lutea						*Schoenoplectus tabernaemontani (Scirpus validus)					
Nitella spp.						Scirpus cubensis (Oxycaryon cubense)					
Nuphar sp.	/	/	/	/ C		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.	/	/	/ D	/	
Osmunda regalis						Thalia geniculata					
Panicum hemitomon	/			/		Thelypteris interrupta					
Panicum repens	/		/	/		Thelypteris palustris					
Paspalidium geminatum						Triadenum virginicum					
*Paspalum repens						Typha sp.	/ D	/	/		
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 elliottii						*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						Phyla nodiflora	/				
*Potamogeton pectinatus (Stuckenia pectinatus)						Rumex sp.			/		
Proserpinaca pectinata						Ludwigia leptocarpa		/		/	
*Rhexia											
*Rhynchospora corniculata											
*Rhynchospora inundata											
Rhynochospora nitens											
Ricciocarpus natans											
Sabal palmetto	/		/	/							
Sacciolepis striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia			/	/							
Sagittaria latifolia											

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 78684 MACROPHYTE ID: 11007 LATITUDE: 28.59739
COUNTY: Orange STORET #: 62CE0092 LONGITUDE: -81.43275
DATE: 8/1/18 TIME: 1101 SAMPLING AGENCY: FDEP CE-ROC
SITE NAME: Lake Wekiva @ center aka Lake Orlando WBID: 3004 K
FIELD ID/NAME: 62CE0092 LAKE SIZE: Medium RQ: 2018-07-30-39

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)
5				75			20 (Golf Course)

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: 8	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: 4	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: 7	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 ☐ 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:	0.3	29.4	7.13	5.30	69.5	147.7	0.07
Mid-Depth:							
Bottom:	2.2	29.3	7.19	5.43	71.2	147.8	0.07

Meter ID: SCUD

Clarity: ☐ Clear ☐ Opaque ☐ Turbid ☑ Slightly Turbid

Color: ☑ Clear ☐ Tannic ☐ Green

SECCHI (M): 1.1 VOB ☐

Total Station Depth (M): 2.7 / 3.2 avg

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:
90's cloudy
wind = 15 mph

Weather Conditions :

SAMPLING TEAM: Mike Linger / Mike Drennan **SIGNATURE:** [signature] **DATE:** 8/1/18

Lake Wekiva (Orlando) 3004K