

LVI

Site Name Lake Adair @ 170m NW of Center Sample Date 7/17/18
WBID 2997R WIN ID G2CE 0148 RQ-2018-07-16-43

	Initial/Date	QC Initial/Date
Water chemistry data to LIMS	LMD 8/3/18	8/14/18
Create SBIO station visit 78683	LMD 8/3/18	n/a
Vascular Entry (add LIMS ID)	LMD 8/3/18	8/14/18
Lake Observation Sheet Entry	LMD 8/3/18	8/14/18
Authorize SBIO data	AKL 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: No Dom 1,7



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

April 2018

Data Qualified?

Yes / No

WIN Station Name: Lake Adair @ 170m NW of Center Date: 07/17/2018
WIN/ Field ID: G2CE0148 WBID: 2997R Latitude: 28.560277
County: Orange ORG ID: 21 FL CEN Longitude: -81.392469
Receiving Body of Water: _____ RQ-2018- 07-16-43

Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment			
Mike Linger				/	/	/	/	/	☒ Sample Container	☐ Van Dorn	☐ Pole	
Mike Deppa				/	/	/	/	/	☐ Carboy	☐ Syringe		
									☐ Dipper	☐ Other		
									Depth Measured with <u>SECCHI DISK LINE/ METER</u>			
									Equipment ID (KNOTHEAD/67, LEADFOOT/NON, RUSTY/SCUD)			
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>Boop / non</u>				Matrix: <u>Fresh</u> Marine / DI				
Photos: <u>Yes</u> No				Flow: No Flow / Intestinal / Flowing <u>NA</u>				Tide: Rising/ Falling/ Slack/ <u>NA</u>				
Tide Times: High 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	1021	4.1	0.3	1.0	10.01	135.5	8.81	0.10	220	31.24		
CEN			3.6		0.25	3.2	6.61	0.11	237	28.84		
Biological Samples Collected: None HA SCI RPS Algae ID LVS <u>LVI</u> Other:												
SBIO ID Numbers: SBIO-ID: <u>78683</u> HA-ID: RPS-ID: Macrophyte-ID: <u>1006</u> LIMS#: <u>2008487</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>SA8085170</u>	<u>3/26/19</u>	☒ <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-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 ☐ W-E8321-MS ☐ W-CARB-AA				☐ Ice ☐ Other							

Notes:

LVI Event associated with this WIN ID

WIN ID / Field ID →

Lake Adair @ 170m NW of Center (2997R)



G2CE0148

Signature: Chris Lin

Date: 7/17/18

Enter Field Parameters, Verify Station ID In LIMS DMT: LMD 7/19/18

QC Station ID, Field Parameters In LIMS DMT: ML 8/14/18

Scan/Save Field Sheets

Migrate Data to WIN:

Verify Data In WIN:

(Initials/Date)

(Initials/Date)

(Initials/Date)



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

April 2018

Data Qualified?

Yes / No

WIN Station Name: Lake Adair @ 130m SE of Center Date: 07/17/2018
WIN/ Field ID: G2 CE 0 149 WBID: 2997R Latitude: 28.559253
County: Orange ORG ID: 21 FL CEN Longitude: -81.389635
Receiving Body of Water: _____ RQ-2018- 07-16-43

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 <u>SECCHI DISK LINE/ METER</u>									
Equipment ID (KNOTHEAD/67, LEADFOOT/NON, RUSTY/SCUD)									

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

Water Level: Dry/ Pooled/ Low ☒ Normal / High / Flooded Meter ID# Boop/non Matrix: Fresh / Marine / DI

Photos: ☒ Yes / No Flow: No Flow / Intestinal / 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 (PPT)	Sp COND (umhos/cm)	Temp. (C°)
<u>EST</u>	<u>1012</u>	<u>4.4</u>	<u>0.3</u>	<u>1.0</u>	<u>10.82</u>	<u>146.4</u>	<u>8.95</u>	<u>0.10</u>	<u>219</u>	<u>31.24</u>
<u>CEN</u>			<u>3.9</u>		<u>0.56</u>	<u>6.6</u>	<u>6.57</u>	<u>0.11</u>	<u>244</u>	<u>28.42</u>

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

SBIO ID Numbers: SBIO-ID: HA-ID: RPS-ID: Macrophyte-ID: 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>SA8085170</u>	<u>3/26/18</u>	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um Filter	☒ Ice	<u>13615055</u>		
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CI-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			

H2S04
LOT# SA8085170
EXP: 03/26/19

Here

Notes:

WIN ID / Field ID →

Lake Adair @ 130m SE
of Center (2997R)



G2CE0149

Signature: [Signature]

Date: 7/17/18

Enter Field Parameters, Verify Station ID In LIMS DMT: LM 7/19/18

QC Station ID, Field Parameters In LIMS DMT: ML 8/14/18

Scan/Save Field Sheets

Migrate Data to WIN:

Verify Data In WIN:

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Lake Adair</u>		County: <u>Orange</u>		Date: <u>7/17/18</u>							
Analyst: <u>Mike Linger / Mike Drennan</u>		Signature: <u>[Signature]</u>		STORET: <u>62CE0148</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						Limnobia 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 submersa viviparous	/	/	/	/		Mimosa pigra					
*Eriocaulon compressum						Myrica cerifera					
*Eriocaulon decangulare											
Eupatorium capillifolium											

No Dom: 1,7

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: Lake Adair					Date: 7/17/18						
SPECIES	1	4	7	10	Collected? (v)	SPECIES	1	4	7	10	Collected? (v)
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.	/	D	/	/	
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											

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 78683 MACROPHYTE ID: 11006 LATITUDE: 28.560277
 COUNTY: Orange STORET #: 62CE0148 LONGITUDE: -81.392469
 DATE: 7/17/18 TIME: 1021 SAMPLING AGENCY: FDEP - CEROC
 SITE NAME: LK Adair @ 170M NW of center WBID: 2997R
 FIELD ID/NAME: 62CE0148 LAKE SIZE: 24.3 Acres RO: 2018-07-16-43

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) ☐					LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI:				
Local Watershed Erosion (select one): ☒ None ☐ Slight ☐ Moderate ☐ Heavy Local Watershed NPS Pollution: ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy					Artificially Impounded ☐ Yes ☒ No Land Use Source & Year:				
STORMWATER INPUTS <u>4</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>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		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>2</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 # <u>SA8085170</u> Exp. Date: <u>3/26/19</u> 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: <u>0.3</u> <u>31.24</u> <u>8.81</u> <u>10.01</u> <u>135.5</u> <u>220</u> <u>0.00</u> Mid-Depth: _____ Bottom: <u>3.6</u> <u>28.84</u> <u>6.61</u> <u>0.25</u> <u>3.2</u> <u>237</u> <u>0.11</u>					Clarity: ☐ Clear ☐ Opaque ☐ Turbid ☒ Slightly Turbid Color: ☐ Clear ☐ Tannic ☒ 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): _____					Sediment Odors: ☒ Normal ☐ Anaerobic ☐ Other (Specify): _____				
Biological Communities: <u>LMP</u> 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: <u>90's clear</u>					Additional Notes: <u>No Dom 1,7</u>				
SAMPLING TEAM: <u>Mike Linger / Mike Drennon</u>					SIGNATURE: <u>[Signature]</u>				
DATE: <u>7/17/18</u>									

Lake Adair (Orange County)

