LVI

Site Name Lake Tony Sample Date 10/25/2018

WBID 2994 Y 1 WIN ID G2CE0146 RQ -2018-10-22-65

	Initial/Date	QC Initial/Date
Water chemistry data to LIMS	MKL 11/26/18	CMD 11/26/18
Create SBIO station visit ~~XT~~ 79049	MKL 12/5/18	n/a
Vascular Entry (add LIMS ID)	MKL 12/5/18	~~LG~~ 12/12/18
Lake Observation Sheet Entry	MKL 12/5/18	~~LG~~ 12/12/18
Authorize SBIO data	~~LG~~ 12/12/18	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 Tony @ Center **Date:** 10/25/2018 (mm/dd/yyyy)

WIN/ Field ID: G2CE0146 **WBID:** 2994 Y 1 **Latitude:** 28.67218 (Decimal Degrees)

County: ~~Orange~~ MKL Seminole **ORG ID:** 21 FL CEN **Longitude:** -81.28965 (Decimal Degrees)

Receiving Body of Water: **RQ-2018-** 10-22-65

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Mike Linzy	✓		✓		
Leif Boman		✓	✓	✓	

Sampling Equipment
- ☑ Sample Container ☐ Van Dorn ☐ Pole
- ☐ Carboy ☑ Syringe
- ☐ Dipper ☐ Other
- Depth Measured with SECCHI DISK LINE/ METER
- Equipment ID (KNOTHEAD/67, LEADFOOT/NON, CRUSTY/SCUD)

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

Water Level: Dry/ Pooled/ Low / (Normal) / High / Flooded **Meter ID#** Boop / Neon **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)	1122	4.8	0.3	1.8	5.13	64.4	6.77	0.06	128	26.83
CEN			4.3		4.13	50.2	6.63	0.06	128	26.17

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

SBIO ID Numbers: SBIO-ID: 79049 HA-ID: RPS-ID: Macrophyte-ID: 11130 LIMS#: 2036872

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	SA8101020	4/11/19	☑ <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-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			

H2SO4
LOT# SA8101020
EXP: 04/11/2019
Place Preservative Sticker(s) Here (If Available)

Notes:
28.67039
-81.29118

WIN ID / Field ID →
Lake Tony @ Center
(2994Y1)

G2CE0146

Signature: **Date:** 10/25/18

Enter Field Parameters, Verify Station ID In LIMS DMT: MKL ~~10/25/18~~ 11/26/18 (Initials/Date) QC Station ID, Field Parameters In LIMS DMT: LMD 11/26/18 (Initials/Date)

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

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 79049 | MACROPHYTE ID: | LATITUDE: 28.67218
COUNTY: ~~Orange~~ MCL Seminole | STORET #: 62CE0146 | LONGITUDE: -81.28965
DATE: 10/25/2018 | TIME: 1122 | SAMPLING AGENCY: FDEP CE-ROC
SITE NAME: Lake Tony @ Center | WBID: 2994 Y 1
FIELD ID/NAME: | LAKE SIZE: small | RQ: 2018-10-22-65

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)
40				60			

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 9	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 13	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 10	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	26.83	6.77	5.13	64.4	128	0.06
Mid-Depth:							
Bottom :	4.3	26.17	6.63	4.13	50.2	128	0.06

Meter ID: Boop / Non

Clarity: ☑ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid

Color: ☐ Clear ☑ Tannic ☐ Green

SECCHI (M) 1.8 | VOB ☐ | Total Station Depth (M) 4.8

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 ☐ 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:

Weather Conditions :
80's cloudy - rain approaching

SAMPLING TEAM: Mike Linger / Mike Brennan (LB) | **SIGNATURE:** | **DATE:** 10/25/18

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Lake Toney (G2CE0146)	County: Seminole	Date: 10/25/18
Analyst: Leif Bonser	Signature:	STORET: G2CE0146

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? (√)
Acer rubrum	/		/		
Alternanthera philoxeroides	/		/		
Amaranthus australis					
Andropogon sp.					
Azolla filiculoides (A. caroliniana)					
Baccharis sp.					
Bacopa caroliniana					
Bacopa monnieri					
Bidens alba					
Bidens laevis					
Bidens mitis					
Blechnum serrulatum					
Boehmeria cylindrica					
Brasenia schreberi					
Cabomba caroliniana					
Canna					
Centella asiatica	/				
Cephalanthus occidentalis	/			/	
Ceratophyllum demersum					
Chara sp.					
Cicuta maculata					
Cinnamomum camphora			/		
Cladium jamaicense					
Colocasia esculenta					
*Commelina					
Crinum americanum					
***Cyperus alternifolius (C. involucratus)**					
Cyperus articulatus					
Cyperus haspan					
*Cyperus lecontei					
*Cyperus polystachyos					
*Cyperus odoratus					
*Cyperus surinamensis					
Cyrilla racemiflora					
Decodon verticillatus					
Diodia virginiana					
*Echinochloa crus-galli					
*Echinochloa muricatum					
Echinochloa walteri					
Eclipta prostrata (E. alba)					
Eichhornia crassipes					
*Eleocharis					
Eleocharis cellulosa					
*Eleocharis elongata	C	/	/	/	
Eleocharis equisetoides					
Eleocharis interstincta		/			
Eleocharis submersed viviparous			/		
*Eriocaulon compressum					
*Eriocaulon decangulare					
Eupatorium capillifolium	/			/	

SPECIES	2	5	8	11	Collected? (√)
Fraxinus					
Fuirena scirpoides	/				
Gordonia lasianthus					
Habenaria repens					
Hibiscus coccineus					
Hibiscus grandiflora					
Hydrilla verticillata					
Hydrocotyle sp.			/		
Hygrophila polysperma					
Hymenocallis sp.					
*Hypericum fasciculatum	/				
*Hypericum hypericoides					
*Hypericum myrtifolium					
Ilex cassine	/				
Ipomoea aquatica					
Ipomoea sagittata					
Itea virginica					
Juncus effusus					
*Juncus marginatus					
*Juncus megacephalus					
Juncus repens					
*Juncus scirpoides					
Lachnanthes caroliniana	/				
Leersia hexandra	/	/	/	D	
Landoltia punctata (Spirodela punctata)					
Lemna sp.					
Leucothoe racemosa (Eubotrys racemosa)					
Limnobium spongia					
Limnophila sessiliflora					
Liquidamber styraciflua					
*Ludwigia arcuata					
*Ludwigia grandiflora					
*Ludwigia hexapetala					
*Ludwigia leptocarpa					
Ludwigia (native)			/		8
*Ludwigia octovalvis			/		
***Ludwigia peruviana**					
*Ludwigia repens					
Ludwigia suffruticosa					
Luziola fluitans (Hydrochloa carolinensis)					
Magnolia virginiana					
Mayaca fluviatilis					
Melaleuca quinquenervia					
Micranthemum glomeratum			/		
Micranthemum umbrosum					
Mikania scandens	/	/	/		
Mimosa pigra	X	UB			
Myrica cerifera	/			/	

2, 5, 8, 11

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

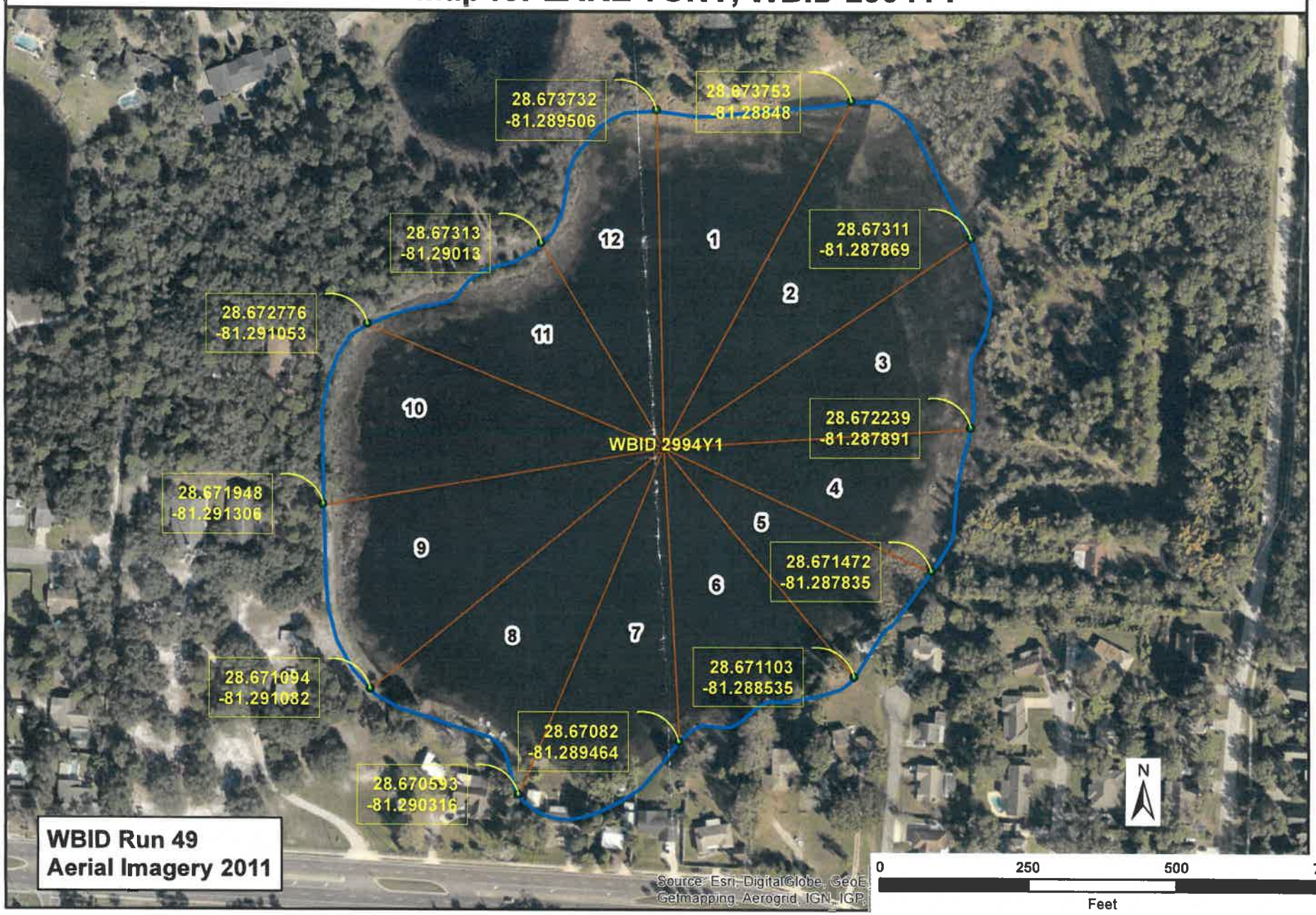
Site: Lake Tohopekaliga (62CE0146) Date: 10/25/18

SPECIES	2	5	8	11	Collected? (√)
Myriophyllum aquaticum					
*Myriophyllum heterophyllum					
*Myriophyllum laxum					
*Myriophyllum pinnatum					
Myriophyllum spicatum					
*Najas filifolia					
*Najas guadalupensis					
*Najas minor					
Nelumbo lutea					
Nitella spp.					
Nuphar sp.	/	/			
Nymphaea mexicana					
Nymphaea odorata	C	/		/	
Nymphoides aquatica					
Nyssa sylvatica var. biflora					
Orontium aquaticum					
Osmunda cinnamomea					
Osmunda regalis					
Panicum hemitomon	/	/		/	
Panicum repens	/	D			
Paspalidium geminatum					
*Paspalum repens			/		
Paspalum urvillei					
Peltandra sp.					
Persea sp.					
Pennisetum purpureum					
Phragmites australis					
Pinus elliottii					
Pistia stratioides					
Pluchea sp.					
*Polygonum glabrum (densiflorum)					
Polygonum hirsutum					
*Polygonum hydropiperoides			/		8
*Polygonum punctatum					
*Polygonum	Ae				
Pontederia cordata	D		/	/	
*Potamogeton diversifolius					
*Potamogeton illinoensis					
*Potamogeton pusillus					
*Potamogeton pectinatus (Stuckenia pectinatus)					
Proserpinaca pectinata					
*Rhexia					
*Rhynchospora corniculata					
*Rhynchospora inundata					
Rhynochospora nitens					
Ricciocarpus natans					
Sabal palmetto					
Sacciolepis striata			/		
*Sagittaria filiformis					
*Sagittaria graminea					
*Sagittaria isoetiformis					
Sagittaria lancifolia					
Sagittaria latifolia					

SPECIES	2	5	8	11	Collected? (√)
Salix caroliniana		/			
Salvinia minima	/	/	/		
Sambucus canadensis					
Sapium sebiferum	/				
Saururus cernuus					
Schinus terebinthifolius					
*Schoenoplectus californicus					
*Schoenoplectus pungens					
*Schoenoplectus tabernaemontani (Scirpus validus)					
Scirpus cubensis (Oxycaryon cubense)					
Scirpus cyperinus					
*Sesbania					
Solidago sp.					
Sparganium americanum					
Spartina bakeri					
Spirodela polyrhiza					
Taxodium sp.			/		
Thalia geniculata					
Thelypteris interrupta					
Thelypteris palustris					
Triadenum virginicum	/				
Typha sp.		/		/	
Urochloa mutica (Brachiaria mutica)					
*Utricularia gibba (U. biflora)	/		/		
*Utricularia foliosa					
*Utricularia inflata					
*Utricularia purpurea	/		/		
*Utricularia radiata	/				
*Utricularia resupinata					
Vallisneria americana					
Vitis sp.					
*Websteria confervoides					
Wedelia trilobata (Sphagneticola trilobata)			/		
Wolffiella spp.					
Woodwardia virginica					
Xyris sp.	/				
Zizania aquatica					
Zizaniopsis milacea					

2018-10-22-65

LVI Map for LAKE TONY, WBID 2994Y1



Current Date: 1/9/2018

Date Saved: 7/19/2017