

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV
Yes / No

WIN Station Name:	Lake Tulane				Sample Date:	7/25/2022	
WIN / Field ID:	G4SD0177	ORG ID:	21FLFTM	ENR:	-		
County:	Highlands	WBID:	1813D	LAKE	3F		
Receiving Body of Water:	-				RQ-	2022-07-25-28	
Latitude:	27.58598				Longitude:	-81.50351	

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Nicole Reistad	x		x		
Monica Jaeger		x		x	x

Sampling Equipment			
x	Sample Container	Carboy	
	Dipper	Van Dorn	
x	Syringe	Pole	
Syringe Lot# 1363442		Filter Lot# 17441866	
Secchi Equipment ID:		3312A	
Collection Method			
	Wading	Canoe/Kayak	
	From Shore	Electric Motor	
		x Gasoline Motor	
Depth Measured With Secchi			

Water Level:	Normal
Flow:	NA
Matrix:	Fresh
Tide Stage:	
High Tide:	
Low Tide:	
Photos:	Yes
Meter ID:	President Camacho

Time Zone	Time	Total Depth (m)	Sample Depth (m)	DO (mg/L)	DO (%SAT)	Temp. (°C)	pH	Secchi Disk (m)	Sp COND (µmhos/cm)	Salinity (PPTth)
EST	1050	18.7	0.3	7.99	108.1	31.2	7.72	4.5	109.9	0.05
	1052		2	8	108	31.2	7.86		109.9	0.05
	1054		8.5	6.65	81.1	28.2	7.64		108.2	0.05

Biological Samples Collected: None

SBIO Visit ID: HA ID: RPS ID: Macrophyte ID: LIMS Sample ID Entered Into The Macrophyte Module:

Parameter Suite	Parameter Methods (LIMS Test Codes)			Preservation						
				Type	Lot#	Expiration Date	pH Check			
Microbiology										
Chlorophyll	CHLSUITE-W			ICE						
Physical/Aggregate	ALKALINITY, TURBIDITY, W-F, W-TSS			ICE						
Nutrients	W-CL-IC, W-COLOR, W-SO4-IC, W-TDS			ICE						
Filtered Nutrients	W-PO4-F	Field Filtered 0.45 µm Filter		ICE						
Acid Preserved Nutrients	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP			ICE	H2SO4*	131766	12/31/22			
Metals	W-ICPMS	W-ICP	W-HARD	ICE	HNO3**	NA1286110	11/16/22			
Organics (LC)	W-E8321-DI	W-E8321-MS		Ice						
Macroinvertebrates										
Organics (GC)	W-PSNP-TQ	W-TR-SQ-R		Ice	*2.0 ml of H2SO4 Used Unless Noted Otherwise **2.0 ml of HNO3 Used Unless Noted Otherwise					
Molecular										
Periphyton										
Phytoplankton										
BOD										
Other(s)										
Field Comments:										
Comments on COC:										
Relinquish Date:	07/25/2022	Signature:								

LIMS EVENT ID: WIN Import ID:
Enter Field Parameters, Verify Station ID In LIMS DMT: QC Station ID, Field Parameters In LIMS DMT:
(Initials/Date) (Initials/Date)
Save Field Sheets on Network: Migrate Data to WIN:
(Initials/Date) (Initials/Date)

645D017

DEP FORM FD 9030-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody <u>Lake Tulane</u>		County <u>Orleans</u> <u>Highlands</u>		Date <u>07/25/22</u>							
Analyst <u>Nicole Peistad</u> <u>Nancy Jaeger</u>		Signature <u>[Signature]</u>		STORET <u>645D017</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) 1, 4, 7, 10 <u>2, 5, 8, 11</u> 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	2	5	8	11	Collected? (✓)	SPECIES	2	5	8	11	Collected? (✓)
Acer rubrum						Habenaria repens					
Alternanthera philoxeroides	X					Hydrilla verticillata					
Andropogon sp.						Hydrocotyle sp.	X	X		X	
Azolla filiculoides (A. caroliniana)						Hygrophila polysperma					
Baccharis sp.						*Hypericum fasciculatum					
Bacopa caroliniana						*Hypericum hypericoides					
Bacopa monnieri						*Hypericum myrtifolium					
Bidens laevis						Ilex cassine					
Bidens mitis						Ipomoea aquatica					
Blechnum serrulatum						Ipomoea sagittata					
Boehmeria cylindrica						Itea virginica					
Brasenia schreberi						Juncus effusus					
Cabomba caroliniana						*Juncus marginatus					
Casuarina equisetifolia	X	X				*Juncus megacephalus					
Centella asiatica		X				Juncus repens					
Cephalanthus occidentalis			X			*Juncus scirpoides					
Ceratophyllum demersum						Lachnanthes caroliniana					
Chara sp.						Leersia hexandra					
Cladium jamaicense						Landoltia punctata (Spirodela punctata)					
Cliftonia monophylla						Lemna sp.					
Colocasia esculenta						Leucothoe racemosa (Eubotrys racemosa)					
Commelina						Limnium spongia					
Crinum americanum	X	X				Limnophila sessiliflora					
* Cyperus alternifolius (C. involucratus)						Liquidambar styraciflua					
Cyperus articulatus						*Ludwigia arcuata					
Cyperus haspan						*Ludwigia leptocarpa					
*Cyperus lecontei						*Ludwigia linearis					
*Cyperus polystachyos		X		X		*Ludwigia octovalvis	X	X	X	X	
*Cyperus odoratus	X	X		X		*Ludwigia peruviana	X	X	X	X	
*Cyperus surinamensis		X				*Ludwigia repens					
Cyrilla racemiflora						*Ludwigia					
Decodon verticillatus						Luziola fluitans (Hydrochloa carolinensis)					
Diodia virginiana						Lyonia lucida					
*Echinochloa crus-galli						Magnolia virginiana					
*Echinochloa muricatum						Mayaca fluviatilis					
Echinochloa walteri						Melaleuca quinquenervia					
Eclipta prostrata (E. alba)						Micranthemum glomeratum					
Egeria densa						Micranthemum umbrosum					
Eichhornia crassipes						Mikania scandens					
*Eleocharis baldwinii	X			X		Mimosa pigra					
*Eleocharis						Myrica cerifera					
Eleocharis cellulosa						<u>upland</u> <u>(rag leaf)</u> Senecio vulgaris	X	X		X	
Eleocharis equisetoides		X	X			Coreopsis floridana	X				
Eleocharis interstincta						Bidens alba					X
*Eriocaulon compressum											
*Eriocaulon decangulare											
Eupatorium capillifolium	X	X	X	X							
*Fuirena						<u>Apple snail shell eggs</u>					
Fuirena scirpoidea	X	X	X	X							
Gordonia lasianthus											

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: <u>Lake Tulane</u>		Date: <u>07/25/22</u>									
SPECIES	7	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					
*Najas minor						*Schoenoplectus pungens					
Nelumbo lutea						*Schoenoplectus tabernaemontani (Scirpus validus)					
Nitella spp.						Scirpus cubensis (Oxycaryon cubense)					
Nuphar sp.	✓		✓	✓		Scirpus cyperinus					
Nymphaea odorata						*Sesbania <u>verbacea</u>				✓	
Nymphoides aquatica						Solidago sp.					
Nyssa sylvatica var. biflora						Sparganium americanum					
Orontium aquaticum						Spartina bakeri					
Osmunda cinnamomea						Spirodela polyrhiza					
Osmunda regalis						Taxodium sp.					
Panicum hemitomon	✓	✓	✓	✓		Thalia geniculata					
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 floridana					
Pennisetum purpureum						*Utricularia foliosa					
Phragmites australis						*Utricularia inflata					
Pinus elliotii						*Utricularia purpurea					
Pistia stratioides						*Utricularia cornuta					
Pluchea sp.	✓	✓	✓			*Utricularia radiata					
*Polygonum glabrum (densiflorum)						Vallisneria americana					
*Polygonum hydropiperoides						*Websteria confervoides					
*Polygonum punctatum						Wedelia trilobata (Sphagneticola trilobata)					
*Polygonum						Wolffiella spp.					
Pontederia cordata						Woodwardia virginica					
*Potamogeton diversifolius						Xyris sp.		✓			
*Potamogeton illinoensis						Zizania aquatica					
*Potamogeton pusillus						Zizaniopsis milacea					
*Potamogeton pectinatus (Stuckenia pectinatus)						Pinus serotina					
Proserpinaca pectinata						Australian pine					
*Rhexia						Yellow Pk (Fabaceae)	✓				
*Rhynchospora corniculata						Arena lobata		✓	✓		
*Rhynchospora inundata						Vitis Vitis		✓	✓		
Rhynchospora tracyi						A. lobata					
Ricciocarpus natans						Sesbania					
Sabal palmetto						Purple Pk (Fabaceae)					
Sacciolepis striata						Sphagneticola trilobata					
*Sagittaria filiformis						Centaurea asiatica					
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia											
Sagittaria latifolia											
Rhynchospora nitens				✓							

SAMPLE ID: 84920 MACROPHYTE ID: 12208 LATITUDE: 27.58598
 COUNTY: Polk Highlands STORET #: G4SD0177 LONGITUDE: -81.50351
 DATE: 07/25/2022 TIME: 1050 SAMPLING AGENCY: FDEP-SOROC
 NAME: G4SD0177 WBID: 1813D
 FIELD ID/NAME: Lake Tulane LAKE SIZE: LARGE RQ: 2022-07-25-28

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category - from GIS):					LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer)															
Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industrial	Other (Specify)	LDI:												
				<u>60.7%</u>	<u>10%</u>															
Local Watershed Erosion (select one): ☐ None ☒ Slight ☐ Moderate ☐ Heavy					Artificially Impounded ☐ Yes ☒ No															
Local Watershed NPS Pollution: ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy																				
STORMWATER INPUTS	Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation		Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place		Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place		Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place													
<u>4</u>	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
LAKESIDE ALTERATIONS	Very few man-made structures, roads, or other disturbance adjacent to lake (<10% lakeside affected)		Moderate disturbance visible - structures, roads or other (10%-49% lakeside affected)		Many structures, roads or other human disturbance visible (50%-70% lakeside affected)		Highly developed or disturbed (>70% of lakeside affected)													
<u>5</u>	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
BUFFER ZONE	Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer		89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer		50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer		< 29% of shoreline with >18m buffer													
<u>7</u>	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	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>131766</u> Exp. Date: <u>12/31/22</u> Alkalinity Sample Taken? ☒ Yes ☐ No Water Level ☐ Low ☒ Normal ☐ High								Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other _____							
Meter Readings: Top: <u>0.3</u> <u>31.2</u> <u>7.72</u> <u>7.99</u> <u>108.1</u> <u>109.9</u> <u>0.05</u> Mid-Depth: <u>2.0</u> <u>31.2</u> <u>7.86</u> <u>8.00</u> <u>108.0</u> <u>109.9</u> <u>0.05</u> Bottom: <u>8.5</u> <u>28.2</u> <u>7.64</u> <u>6.65</u> <u>81.1</u> <u>108.2</u> <u>0.05</u>								Water Surface Oils: ☐ None ☐ Sheen/Slick ☒ Glob ☐ Other <u>Localized</u>							
Meter ID: <u>PRESIDENT CAMACHO</u>								Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid Color: ☒ Clear ☐ Tannic ☐ Green							
Sediment Type: (may check more than one) ☒ Sandy ☐ Organic fibrous (peaty, CPOM) ☐ Vegetated ☐ Sand/Silt ☒ Organic smooth (muck) ☐ Other (Specify): _____								SECCHI (M) <u>4.5</u> Total Station Depth (M) <u>18.7</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								Sediment Odors: ☒ Normal ☐ Anaerobic ☐ Other (Specify): _____							
Abundance: Absent Rare Common Abundant Periphyton ☐ ☒ ☐ ☐ Nuisance Plants ☐ ☐ ☐ ☒ Submersed Plants ☐ ☒ ☐ ☐ Exotic Apple Snails ☐ ☐ ☒ ☐								Additional Notes: <u>LIMS ID: 2343747</u>							

Weather Conditions: slight cloud cover

SAMPLING TEAM:

MONICA JAEGER, NICOLE REISTAD

SIGNATURE:

[Signature]

DATE: 7/25/22