



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV☒ Yes ☐ No

WIN Station Name:	Lake Minnehaha @ Center of Lake				Sample Date:	6/28/2022		
WIN / Field ID:	G1CE0072	ORG ID:	21FLCEN	ENR:			Latitude:	28.5312119
County:	Lake	WBID:	2839N	LAKE			Longitude:	-81.76444704
Receiving Body of Water:	Palatka River					RQ-	2022-06-27-16	

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Terry Riordan		x		x	x
Victoria Schwartz	x		x		

Sampling Equipment			
x	Sample Container	Carboy	
	Dipper	Van Dorn	
x	Syringe	Pole	
Syringe Lot# 1335260		Filter Lot# 17413308	
Secchi Equipment ID:		Light	
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:	Shrimp Trap

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 (PPT)
EST	1455	3.7	0.3	7.51	103.4	32.4	6.72	0.9	84	0.04
	1502		2	7.4	97.4	29.7	6.41		83.2	0.04
	1505		3.2	7.14	93.5	29.4	5.88		83.1	0.04

Biological Samples Collected:

LVI

SBIO Visit ID: 84989 HA ID: RPS ID: Macrophyte ID: 12215 LIMS ID: 2337857

Parameter Suite	Parameter Methods (LIMS Test Codes)			Preservation				
				Type	Lot#	Expiration Date	pH Check	
Microbiology								
Chlorophyll	CHLSUITE-W			ICE				
Physical/Aggregate Nutrients	ALKALINITY, TURBIDITY, W-F, W-TSS			ICE				
	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*	SA130873	11/22	H2SO4 pH<2
Metals	W-ICPMS	W-ICP	W-HARD	ICE	HNO3**	NA1286110	11/16/22	HNO3 pH<2
Organics (LC)	W-E8321-DI	W-E8321-MS						
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:	Sunny							
Comments on COC:								
Relinquish Date:	06/28/2022	Signature:						

LIMS EVENT ID: CEN-DIST-2022-06-29-02

WIN Import ID: 35071

Enter Field Parameters, Verify Station ID in LIMS DMT: KWM 7/29/22

QC Station ID, Field Parameters in LIMS DMT: EB 8/11/22

Save Field Sheets on Network: KWM 8/29/22 (Initials/Date)

Migrate Data to WIN: KWM 8/29/22 (Initials/Date)

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: 28.5312119
 COUNTY: Lake STORET #: _____ LONGITUDE: -81.76444704
 DATE: 6/28/22 TIME: 14:55 SAMPLING AGENCY: 21FLCEN
 SITE NAME: Lake Minnetonka @ Center of Lake WBID: 2839N
 FIELD ID/NAME: GICE0072 LAKE SIZE: _____ RQ: 2022-06-27-16

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)														
<u>10</u>				<u>90</u>																	
Local Watershed Erosion (select one) : ☐ None ☒ Slight ☐ Moderate ☐ Heavy										Artificially Impounded											
Local Watershed NPS Pollution : ☐ No evidence ☐ Slight ☒ Moderate ☐ Heavy										☐ Yes ☒ No											
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>8</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>5</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>54130873</u> Exp. Date: <u>11/22</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: <table border="1"> <thead> <tr> <th>Meter</th> <th>Depth (M)</th> <th>Temp. (°C)</th> <th>pH (SU)</th> <th>D.O. (MG/L)</th> <th>D.O. Sat. (%)</th> <th>Cond. (UMHO/CM)</th> <th>Salinity (PPT)</th> </tr> </thead> <tbody> <tr> <td>Top:</td> <td><u>0.3</u></td> <td><u>32.4</u></td> <td><u>6.72</u></td> <td><u>7.51</u></td> <td><u>103.4</u></td> <td><u>84</u></td> <td><u>0.04</u></td> </tr> <tr> <td>Mid-Depth:</td> <td><u>2.0</u></td> <td><u>29.7</u></td> <td><u>6.41</u></td> <td><u>7.4</u></td> <td><u>97.4</u></td> <td><u>83.2</u></td> <td><u>0.04</u></td> </tr> <tr> <td>Bottom :</td> <td><u>3.2</u></td> <td><u>29.4</u></td> <td><u>5.88</u></td> <td><u>7.14</u></td> <td><u>93.5</u></td> <td><u>83.1</u></td> <td><u>0.04</u></td> </tr> </tbody> </table>										Meter	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat. (%)	Cond. (UMHO/CM)	Salinity (PPT)	Top:	<u>0.3</u>	<u>32.4</u>	<u>6.72</u>	<u>7.51</u>	<u>103.4</u>	<u>84</u>	<u>0.04</u>	Mid-Depth:	<u>2.0</u>	<u>29.7</u>	<u>6.41</u>	<u>7.4</u>	<u>97.4</u>	<u>83.2</u>	<u>0.04</u>	Bottom :	<u>3.2</u>	<u>29.4</u>	<u>5.88</u>	<u>7.14</u>	<u>93.5</u>	<u>83.1</u>	<u>0.04</u>	Clarity: ☐ Clear ☒ Turbid ☐ Slightly Turbid Color: ☐ Clear ☒ Tannic ☐ Green SECCHI (M) <u>0.9</u> Total Station Depth (M) <u>3.7</u> VOB ☐												
Meter	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat. (%)	Cond. (UMHO/CM)	Salinity (PPT)																																															
Top:	<u>0.3</u>	<u>32.4</u>	<u>6.72</u>	<u>7.51</u>	<u>103.4</u>	<u>84</u>	<u>0.04</u>																																															
Mid-Depth:	<u>2.0</u>	<u>29.7</u>	<u>6.41</u>	<u>7.4</u>	<u>97.4</u>	<u>83.2</u>	<u>0.04</u>																																															
Bottom :	<u>3.2</u>	<u>29.4</u>	<u>5.88</u>	<u>7.14</u>	<u>93.5</u>	<u>83.1</u>	<u>0.04</u>																																															
Meter ID: <u>Shrimp Trap</u>										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: <table border="1"> <thead> <tr> <th></th> <th>Absent</th> <th>Rare</th> <th>Common</th> <th>Abundant</th> </tr> </thead> <tbody> <tr> <td>Periphyton</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Nuisance Plants</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☒</td> </tr> <tr> <td>Submersed Plants</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Exotic Apple Snails</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> </tbody> </table>											Absent	Rare	Common	Abundant	Periphyton	☐	☒	☐	☐	Nuisance Plants	☐	☐	☐	☒	Submersed Plants	☒	☐	☐	☐	Exotic Apple Snails	☒	☐	☐	☐	Additional Notes:									
	Absent	Rare	Common	Abundant																																																		
Periphyton	☐	☒	☐	☐																																																		
Nuisance Plants	☐	☐	☐	☒																																																		
Submersed Plants	☒	☐	☐	☐																																																		
Exotic Apple Snails	☒	☐	☐	☐																																																		
Weather Conditions : <u>Sunny/cloudy</u>																																																						
SAMPLING TEAM: <u>Terry Riordan/Victoria Schwab</u>										SIGNATURE: <u>[Signature]</u>										DATE: <u>6/28/22</u>																																		

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

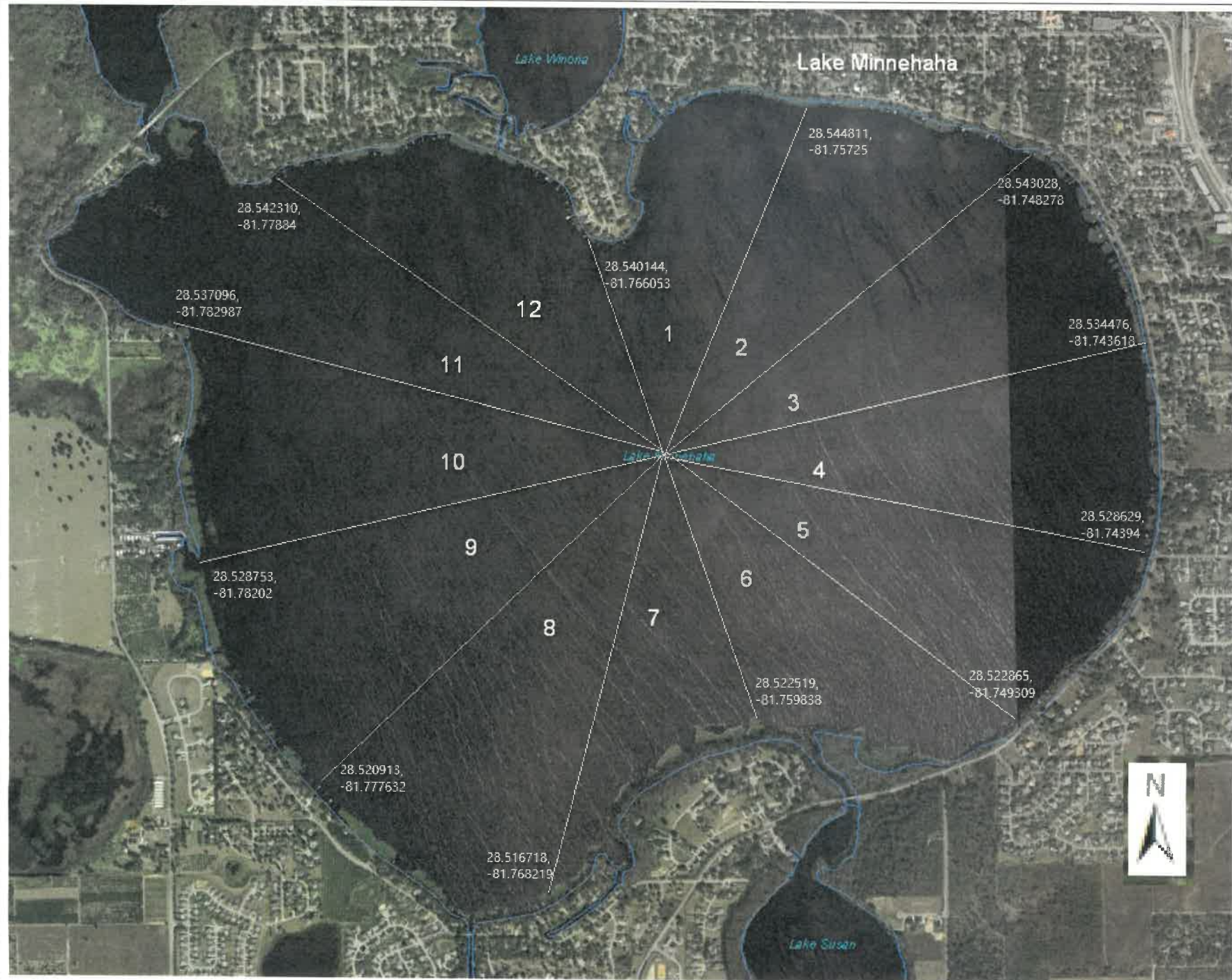
Waterbody: <u>Lake Minnehaha</u>		County: <u>Lake</u>		Date: <u>6/28/22</u>							
Analyst: <u>Tony Riordan + Victoria Schwartz</u>		Signature: <u>[Signature]</u>		STORE: <u>GICE0072</u>							
Except where noted as "sp." species level identification required. *Genera that may require lab verification* 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						Fuirena scirpoides					
Alternanthera philoxeroides						Gordonia lasianthus					
Amaranthus australis						Habenaria repens					
Andropogon sp.						Hibiscus coccineus					
Azolla filiculoides (A. caroliniana)						Hibiscus grandiflora					
Baccharis sp.						Hydrilla verticillata					
Bacopa caroliniana						Hydrocotyle sp.					
Bacopa monnieri						Hygrophila polysperma					
Bidens alba						Hymenocallis sp.					
Bidens laevis						*Hypericum fasciculatum					
Bidens mitis						*Hypericum hypericoides					
Blechnum serrulatum						*Hypericum myrtifolium					
Boehmeria cylindrica						Ilex cassine					
Brasenia schreberi						Ipomoea aquatica					
Cabomba caroliniana						Ipomoea sagittata					
Canna						Itea virginica					
Centella asiatica						Juncus effusus					
Cephalanthus occidentalis						*Juncus marginatus					
Ceratophyllum demersum						*Juncus megacephalus					
Chara sp.						Juncus repens					
Cladium jamaicense						*Juncus scirpoides					
Colocasia esculenta						Lachnanthes caroliniana					
*Commelina						Leersia hexandra					
Crinum americanum						Landoltia punctata (Spirodela punctata)					
* Cyperus alternifolius (C. involucratus)						Lemna sp.					
Cyperus articulatus						Leucothoe racemosa (Eubotrys racemosa)					
Cyperus haspan						Limnium spongia					
*Cyperus lecontei						Limnophila sessiliflora					
*Cyperus polystachyos						Liquidambar styraciflua					
*Cyperus odoratus						*Ludwigia arcuata					
*Cyperus surinamensis						*Ludwigia grandiflora					
Cyrtilla racemiflora						*Ludwigia hexapetala					
Decodon verticillatus						*Ludwigia leptocarpa					
Diodia virginiana						Ludwigia (native)					
*Echinochloa crus-galli						*Ludwigia octovalvis					
*Echinochloa muricatum						*Ludwigia peruviana					
Echinochloa walteri						*Ludwigia repens					
Eclipta prostrata (E. alba)						Ludwigia suffruticosa					
Eichhornia crassipes						Luziola fluitans (Hydrochloa carolinensis)					
*Eleocharis						Magnolia virginiana					
Eleocharis cellulosa						Mayaca fluviatilis					
*Eleocharis elongata						Melaleuca quinquenervia					
Eleocharis equisetoides						Micranthemum glomeratum					
Eleocharis interstincta						Micranthemum umbrosum					
Eleocharis submersed viviparous						Mikania scandens					
*Eriocaulon compressum						Mimosa pigra					
*Eriocaulon decangulare						Myrica cerifera					
Eupatorium capillifolium											
Fraxinus											

★ Sesbania - no pods/flowers

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: Lake Minnehaha					Date: 6/28/22						
SPECIES	1	4	7	10	Collected? (✓)	SPECIES	1	4	7	10	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.	/	X	/	/		Scirpus cyperinus					
Nymphaea mexicana						*Sesbania sp. (can't reach)	/	/	/	/	
Nymphaea odorata						Solidago sp.					
Nymphoides aquatica						Sparganium americanum					
Nyssa sylvatica var. biflora	/	/	/	/		Spartina bakeri					
Orontium aquaticum						Spirodela polyrhiza					
Osmunda cinnamomea						Taxodium sp.	/	/	/	/	
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 foliosa					
Persea sp.						*Utricularia gibba (U. biflora)					
Pennisetum purpureum						*Utricularia inflata					
Phragmites australis						*Utricularia purpurea					
Pinus elliotii						*Utricularia radiata					
Pistia stratioides						*Utricularia resupinata					
Pluchea sp.			/			Vallisneria americana					
*Polygonum glabrum (densiflorum)						Vigna luteola	/	/			
Polygonum hirsutum						Vitis sp.					
*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)											
Proserpinaca pectinata						Ludwigia peruviana	/	/	/	/	X
*Rhexia						↳ grandiflora					
*Rhynchospora corniculata											
*Rhynchospora inundata						Cyperus sp. (can't reach)	/	/			
Rhynchospora nitens											
Ricciocarpus natans						mystic red stem (pic)					VS
Sabal palmetto						climbing aster		X			VS
Sacciolepis striata	/	/	/	/		climbing aster		/	/	/	
*Sagittaria filiformis						Aster carolinianus		/	/	/	
*Sagittaria graminea						Symphyotrichum carolinianum					
*Sagittaria isoetiformis											
Sagittaria lancifolia	/	/	/	/							
Sagittaria latifolia											

LVI MAP FOR WBID-2839N_LAKE_MINNEHAHA



01/2/11