

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

STRATEGIC MONITORING PLAN FIELD SHEET

January 2022

Meter Passed End

of Day CCV

☒ Yes / No

WIN Station Name: Lake Emerald @ Center

Date: 6/15/2022

WIN/Field ID: G4CE0204

WBID: 3168Y1

ENR: -

Latitude: 28.5302

County: ORANGE

Org ID: 21FLCEN

Longitude: -81.363

Receiving Body of Water: -

RQ- 2022-06-13-25

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Katie March	x		x		
☒	Charlie hoey		x		x	x
☐						
☐						

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☒ Syringe	☐ Pole
Depth measured with: Secchi	
Secchi Equipment ID: Knothead	
Collection Method	
☐ Wading	☒ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other	☐ Gasoline Motor

Water Level: ☐ Normal ☒ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# CRAW DADDY					
Photos: NA		Flow:		Tide:		Tide Times: High: Low:					
Biological Samples Collected: ☐ None ☐ HA ☐ SCI ☐ RPS ☐ Algae ID ☐ LVS ☒ LVI Other:											
SBIO ID Numbers: SBIO: 84491 Macro: 12186						LIMS: 2335171					
Notes:											

Duplicate Sample

Time Zone: EST	Time:	Field ID: N/A	(WIN ID_DUP)
WIN DMT Activity ID:			

Blank

Time Zone:	Time:	Field ID:	(Blank Type_DDMMYYYY)
DI Source:	Location:		
DI Type:	Equipment ID:		
DI Container (Name/ID):		DI Container Type:	

LIMS EVENT ID: CEN-DIST-2022-06-16-03

WIN Import ID: 35056

Enter Field Parameters, Verify Station ID In LIMS DMT: EB 6/29/22

QC Station ID, Field Parameters In LIMS DMT: KWM 7/8/22

(Initials/Date)

(Initials/Date)

Scan/Save Field Sheets KWM 8/29/22

Migrate Data to WIN: KWM 8/29/22

Verify Data In WIN:

(Initials/Date)

(Initials/Date)

(Initials/Date)



RQ-2022-06-13-25
Customer: CEN-DIST
Project ID: STRATEGIC MONITORING PLAN

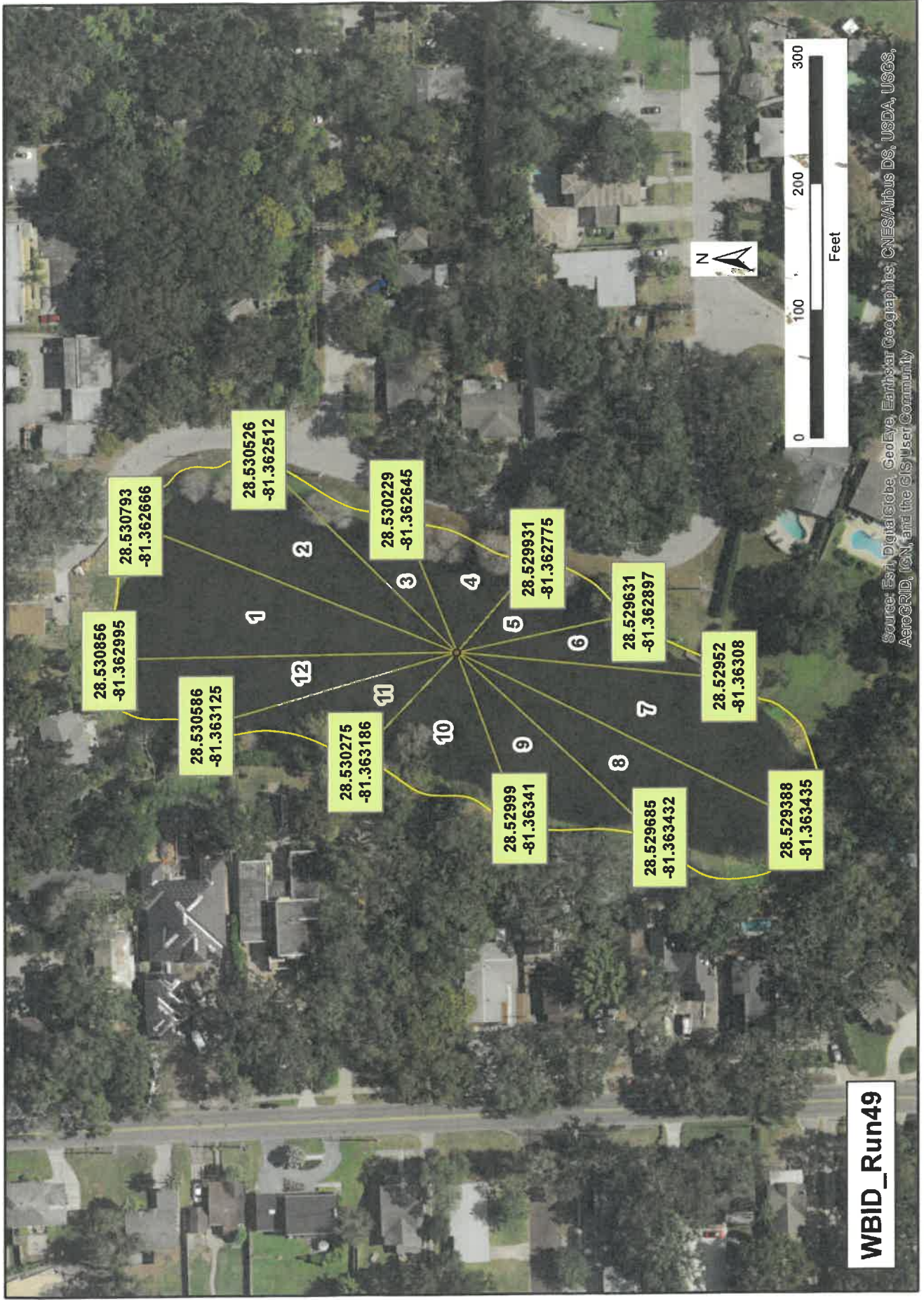
Collected By: Katie March, Other
Field Report Prepared By: Katie March
Sampling Agency: FDEP

Place Label Here WIN ID/Field ID:  G4CE0204 Location: Lake Emerald @ Center						Comments:						
Matrix: Fresh						(Check one) ☒ GRAB ☐ COMPOSITE						
Date	Time	DO (mg/L)	DO (%SAT)	Temp. (C°)	pH	Sample Depth (m)	Secchi Disk (m)	Total Depth (m)	Sp COND (µmhos/cm)	Salinity (PPT _h)		
6/15/2022	1115 EST	5.45	72.7	30.2	8.43	0.25	0.5 ☒ VOB (S)	0.5	220.6	0.1		
	EST						Central Lab please use top row for login purposes					
Parameter Suite		Parameter Methods				Preservation		pH Check	# Bottles sent to Lab	Bottle Group		
Preserved Nutrients (P-500ML)		☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP				☒ Ice ☒ H2SO4*		☐ <2	1	A		
		Lot #	130873		Exp:	11/17/22						
Metals (P-500ML)		☒ W-ICPMS ☒ W-ICP ☐ W-HARD				☒ Ice ☐ HNO3*		☒ <2	1	A		
		Lot #	NA1286110		Exp:	11/16/22						
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice			1	A		
		Filter Lot #	17413308			Syringe Lot #	1335260					
BOD (BP-1L)		☐ OV-BODUNIN				☐ Ice						
Chlorophyll (BP-1L)		☒ CHLSUITE-W				☒ Ice			1	A		
Physical/Aggregate (Fresh) (P-1L)		☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS				☒ Ice			1	A		
Physical/Aggregate (Marine) (P-1L)		☐ Alkalinity / W-F / W-TSS / TURBIDITY				☐ Ice						
Macroinvertebrates (PJ-2L)		☐ MI-FW-QLDC				☐ Formalin						
Periphyton (PT-50ML)		☐ ALGAE-ID				☐ Ice						
Microbiology (Contract Lab Bottle)		☐ E Coli ☐ F Coli ☐ Enterococci ☐ Contract Lab				☐ Ice						
Molecular (QPCR-P-500ML)		☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-DG3 ☐ PCR-GULL2 ☐ PCR-GFD ☐				☐ Ice						
Tracers (BG-500ML)		☒ W-E8321-DI ☒ W-E8321-MS				☒ Ice		MCAA Exp.	1	A		
Pesticides (BG-500ML) (BG-1L)		W-E8321-DI		WE8321-MS		☒ W-PSNP-TQ		W-CT-CL-R		MCAA Lot#	3	A
		W-PCL-TQ-R		W-CARB-AA (5 ml of MCAA** Buffer Solution)		W-TR-SQ-R						
		W-PCB-TQ-R										
Phytoplankton/Periphyton				DTY-QN-C		PKD-QN-C						
Name: Katie March Other		Signature: 				Date: 06/15/2022						

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

LVI Map for Lake Emerald, WBID 3168Y1



WBID_Run49

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: _____
COUNTY: Orange STORET #: 64E0204 LONGITUDE: _____
DATE: 6/15/22 TIME: _____ SAMPLING AGENCY: _____
SITE NAME: Lake Emerald WBID: _____
FIELD ID/NAME: _____ LAKE SIZE: _____ RQ: _____

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) ☐ <u>100</u>										LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI:											
Local Watershed Erosion (select one): ☐ None ☐ Slight ☐ Moderate ☒ Heavy										Artificially Impounded ☐ Yes ☐ No											
Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☐ Moderate ☒ Heavy										Land Use Source & Year:											
STORMWATER INPUTS <u>2</u>		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							
		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	<u>2</u>	1
LAKESIDE ALTERATIONS <u>4</u>		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)							
		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	<u>4</u>	3	2	1
BUFFER ZONE <u>3</u>		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							
		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	<u>3</u>	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 _____									
Meter Readings: Top: <u>0.25</u> <u>30.2</u> <u>8.43</u> <u>5.45</u> <u>72.7</u> <u>220.4</u> <u>0.1</u> Mid-Depth: _____ Bottom: _____										Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____									
Meter ID: <u>Craw Dredge</u>										Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid									
Sediment Type: (may check more than one) ☐ Sandy ☐ Organic fibrous (peaty, CPOM) ☐ Vegetated ☐ Sand/Silt ☒ Organic smooth (muck) ☐ Other (Specify): _____										Color: ☐ Clear ☐ Tannic ☒ Green									
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 ☐ ☐ ☐ ☐									
Sediment Odors: ☐ Normal ☐ Other (Specify): _____ ☐ Anaerobic										Additional Notes: <u>Water level low, lots of hydrilla</u>									
Weather Conditions:																			
SAMPLING TEAM: <u>Katie Marsh, Charlie Hoey</u>										SIGNATURE: <u>KMarsh</u>					DATE: <u>6/15/22</u>				

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Lake Emerald</u>		County: <u>Orange</u>		Date: <u>6/15/22</u>							
Analyst: <u>Katie March, Charlie Hoey</u>		Signature: _____		STORET:							
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): <u>1, 4, 7, 10</u> 2, 5, 8, 11 3, 6, 9, 12							
SPECIES	1	4	7	10	Collected? (✓)	SPECIES	1	4	7	10	Collected? (✓)
Acer rubrum						Fuirena scirpoides					
Alternanthera philoxeroides	X	X	X	X		Gordonia lasianthus					
Amaranthus australis						Habenaria repens					
Andropogon sp.						Hibiscus coccineus					
Azolla filiculoides (A. caroliniana)						Hibiscus grandiflora					
Baccharis sp.						Hydrilla verticillata <u>D all sections</u>	X	X	X	X	
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	X				
*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 submersa viviparous						Mikania scandens					
*Eriocaulon compressum						Mimosa pigra					
*Eriocaulon decangulare						Myrica cerifera					
Eupatorium capillifolium											
Fraxinus											

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site:						Date:					
SPECIES	1	4	7	10	Collected? (✓)	SPECIES	1	4	7	10	Collected? (✓)
Myriophyllum aquaticum						<i>Salix caroliniana</i>					
* <i>Myriophyllum heterophyllum</i>						Salvinia minima					
* <i>Myriophyllum laxum</i>						<i>Sambucus canadensis</i>					
* <i>Myriophyllum pinnatum</i>						Sapium sebiferum					
Myriophyllum spicatum						<i>Saururus cernuus</i>					
* <i>Najas filifolia</i>						Schinus terebinthifolius					
* <i>Najas guadalupensis</i>						* <i>Schoenoplectus californicus</i>					
* <i>Najas minor</i>						* <i>Schoenoplectus pungens</i>					
<i>Nelumbo lutea</i>						* <i>Schoenoplectus tabernaemontani</i> (<i>Scirpus validus</i>)					
<i>Nitella</i> spp.						<i>Scirpus cubensis</i> (<i>Oxycaryon cubense</i>)					
<i>Nuphar</i> sp.						<i>Scirpus cyperinus</i>					
<i>Nymphaea mexicana</i>						* <i>Sesbania</i>					
<i>Nymphaea odorata</i>						<i>Solidago</i> sp.					
<i>Nymphoides aquatica</i>						<i>Sparganium americanum</i>					
<i>Nyssa sylvatica</i> var. <i>biflora</i>						<i>Spartina bakeri</i>					
<i>Orontium aquaticum</i>						<i>Spirodela polyrhiza</i>					
<i>Osmunda cinnamomea</i>						<i>Taxodium</i> sp.	CH	X	X	X	X
<i>Osmunda regalis</i>						<i>Thalia geniculata</i>					
<i>Panicum hemitomon</i>						<i>Thelypteris interrupta</i>					
Panicum repens	X		X	X		<i>Thelypteris palustris</i>					
<i>Paspalidium geminatum</i>						<i>Triadenum virginicum</i>					
* <i>Paspalum repens</i>						<i>Typha</i> sp.					
<i>Paspalum urvillei</i>						Urochloa mutica (<i>Brachiaria mutica</i>)					
<i>Peltandra</i> sp.						* <i>Utricularia foliosa</i>					
<i>Persea</i> sp.						* <i>Utricularia gibba</i> (<i>U. biflora</i>)					
Pennisetum purpureum						* <i>Utricularia inflata</i>					
<i>Phragmites australis</i>						* <i>Utricularia purpurea</i>					
<i>Pinus elliotii</i>						* <i>Utricularia radiata</i>					
Pistia stratioides						* <i>Utricularia resupinata</i>					
<i>Pluchea</i> sp.						<i>Vallisneria americana</i>					
* <i>Polygonum glabrum</i> (<i>densiflorum</i>)						<i>Vigna luteola</i>					
<i>Polygonum hirsutum</i>						<i>Vitis</i> sp.					
* <i>Polygonum hydropiperoides</i>						* <i>Websteria confervoides</i>					
* <i>Polygonum punctatum</i>						Wedelia trilobata (<i>Sphagneticola trilobata</i>)					
* <i>Polygonum</i>						<i>Wolffiella</i> spp.					
<i>Pontederia cordata</i>						<i>Woodwardia virginica</i>					
* <i>Potamogeton diversifolius</i>						<i>Xyris</i> sp.					
* <i>Potamogeton illinoensis</i>						<i>Zizania aquatica</i>					
* <i>Potamogeton pusillus</i>						<i>Zizaniopsis milacea</i>					
* <i>Potamogeton pectinatus</i> (<i>Stuckenia pectinatus</i>)						<i>Polygonum lapathifolium</i>	X		X	X	X
<i>Proserpinaca pectinata</i>						<i>Phylla nodiflora</i>				X	
* <i>Rhexia</i>											
* <i>Rhynchospora corniculata</i>											
* <i>Rhynchospora inundata</i>											
<i>Rhynchospora nitens</i>											
<i>Ricciocarpus natans</i>											
<i>Sabal palmetto</i>											
<i>Sacciolepis striata</i>				X							
* <i>Sagittaria filiformis</i>											
* <i>Sagittaria graminea</i>											
* <i>Sagittaria isoetiformis</i>											
<i>Sagittaria lancifolia</i>											
<i>Sagittaria latifolia</i>											