

LVI

Site Name Lake Jane Sample Date 10/31/2019WBID 2994L WIN ID GZCE0225 RQ -2019-10-28-59

	Initial/Date	QC Initial/Date
Water chemistry data to LIMS	MKL 12/2/19	LB 12/17/19
Create SBIO station visit 80512	MKL 12/2/19	n/a
Vascular Entry (add LIMS ID)	MKL 12/2/19	LB 12/17/19
Lake Observation Sheet Entry	MKL 12/2/19	LB 12/18/19
Authorize SBIO data	LB 12/17/19	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

January 2019

Data Qualified?
Yes / No

WIN Station Name: Lake Jane @ 20m West of fountain

Date: 10/31/2019

WIN/ Field ID: G2CE0225

WBID: 2994 L

Latitude: 28.69508168

County: Seminole

ORG ID: 21FLCEN

Longitude: -81.33947309

Receiving Body of Water: _____

RQ-2019- 10-28-59

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment				
Mike Linger					☒	☒	☒	☒	☒	☒ Sample Container	☐ Van Dorn	☐ Pole		
Leif Boman					☒	☒	☒	☒	☒	☐ Carboy	☒ Syringe			
					☒	☒	☒	☒	☒	☐ Dipper	☐ Other			
										Depth Measured with Secchi Disk Line / Meter				
										Equipment ID <u>Leadfoot, Knothead, Crusty/ Bucket, Mucky/ Trap</u>				
										Collection Method				
					☐ Wading	☒ Canoe/Kayak								
					☐ From Shore	☒ Electric Motor								
					☐ Other	☐ Gasoline Motor								
Water Level: <u>Dry</u> / Pooled / Low / <u>Normal</u> / High / Flooded					Motor ID# <u>Shrimp Trap</u>					Matrix: <u>Fresh</u> / Marine / DI				
Photos: Yes / <u>No</u>					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)	1233	1.8	0.3	1.1	8.82	113.9	7.50	0.08	164.4	28.6				
GEN			1.3		7.90	100.5	7.26	0.08	164.2	28.3				
Biological Samples Collected: None HA SCI RPS Algae ID LVS <u>LVI</u> Other: _____														
SBIO ID Numbers: SBIO-ID: <u>80512</u> HA-ID: _____ RPS-ID: _____ Macrophyte-ID: <u>115599</u> LIMS#: <u>2133023</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>SA9010030</u>	<u>4/10/20</u>	☒ <2					
Metals	☐ W-ICPMS ☐ W-ICP					☐ Ice ☐ HNO3			☐ <2					
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter					☒ Ice	<u>16930280</u>							
Chlorophyll	☒ CHLSUITE-W					☒ Ice								
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SD4-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-BacR ☐ PCR-GULL2					☐ Ice								
	☐ PCR-HF183 ☐ PCR-DG3 ☐ PCR-GFD					☐ Ice								
Tracers	☐ W-E8321-DI ☐ W-E8321-MS					☐ Ice								
Pesticides	☐ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-E8321-DI					☐ Ice								
	☐ W-PCL-SQ-R ☐ WE8321-MS ☐ W-CARB-AA					☐ Other								
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C					☐ Ice								

Notes:

Signature: [Signature]

Date: 10/31/19

WIN ID / Field ID →

Lake Jane @ 20m
West of fountain



G2CE0225

LIMS EVENT ID: CENT-DIST-2019- 11-01-01

Enter Field Parameters, Verify Station ID In LIMS DMT: MLK 11/2/19

QC Station ID, Field Parameters In LIMS DMT: 16 12/17/19

Scan/Save Field Sheets

Migrate Data to WIN:

Verify Data In WIN:

(Initials/Date)

(Initials/Date)

(Initials/Date)

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: 28.69508168
COUNTY: Seminole STORET #: G2CE0225 LONGITUDE: -81.33947309
DATE: 10/31/2019 TIME: 1233 SAMPLING AGENCY: FDEP CE-ROC
SITE NAME: Lake Jane @ 20m West of fountain WBID: 2994 L
FIELD ID/NAME: _____ LAKE SIZE: Small RQ: -2019-10-28-59

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>100</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>3</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>3</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>2</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

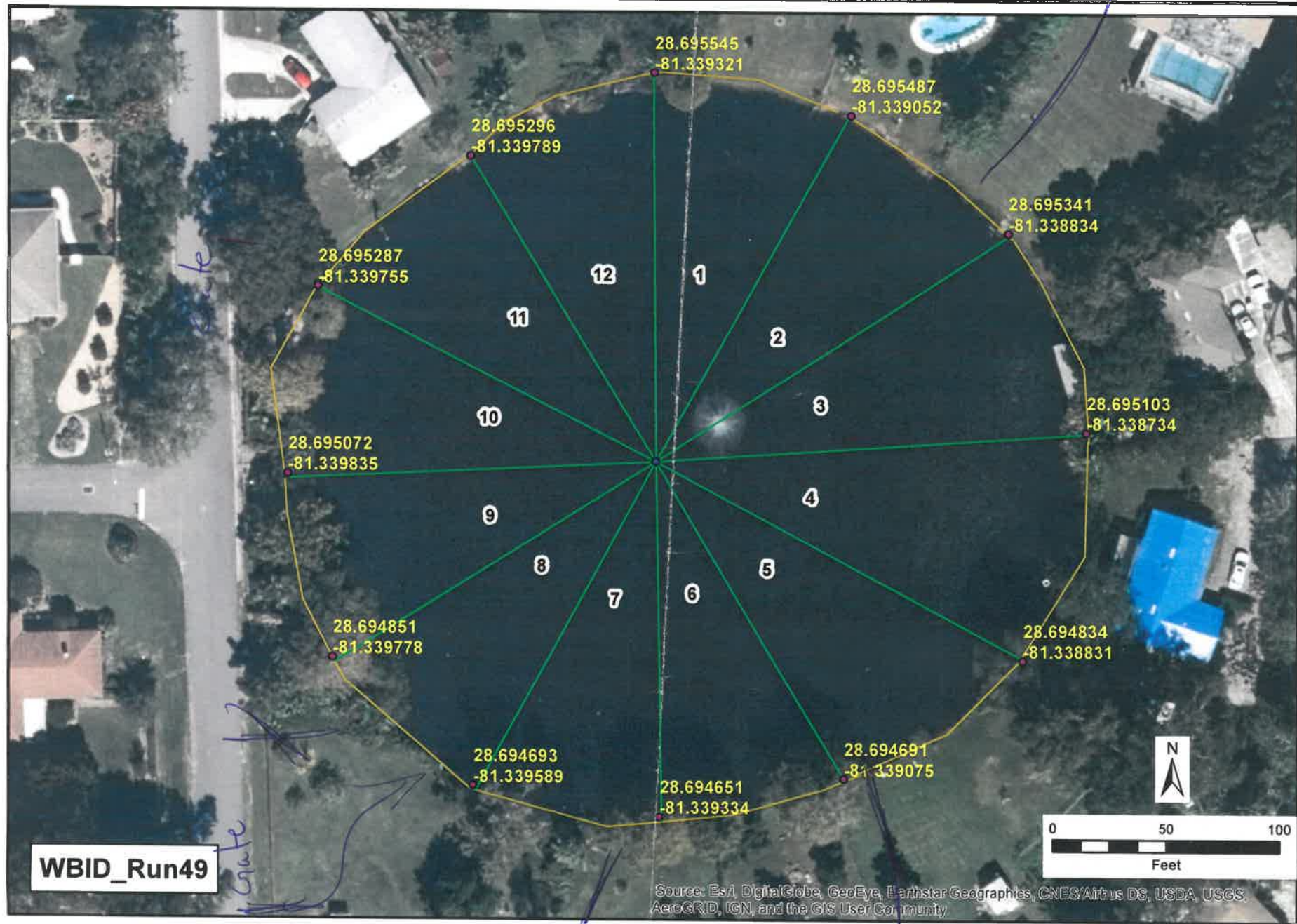
Water: Nutrient Sample Taken? ☒ Yes ☐ No Preserved? ☐ Yes ☐ No pH < 2 ☐ No Color Sample Taken? ☒ Yes ☐ No Lot #: _____ Exp. Date: _____ Alkalinity Sample Taken? ☒ Yes ☐ No Water Level ☐ Low ☒ Normal ☐ High										Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other _____									
Meter Readings: Top: <u>0.3</u> <u>28.6</u> <u>7.50</u> <u>8.82</u> <u>164.2</u> <u>164.4</u> <u>0.08</u> Mid-Depth: _____ Bottom: <u>1.3</u> <u>28.3</u> <u>7.26</u> <u>7.90</u> <u>100.5</u> <u>164.2</u> <u>0.08</u>										Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____									
Meter ID: <u>Shrimp Trap</u>										Clarity: ☐ Clear ☒ Slightly Turbid ☐ Opaque ☐ 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										SECCHI (M) <u>1.1</u> Total Station Depth (M) <u>1.8</u> VOB _____									
Abundance: Absent Rare Common Abundant Periphyton ☐ ☐ ☐ ☒ Nuisance Plants ☐ ☐ ☒ ☐ Submersed Plants ☐ ☐ ☒ ☐ Exotic Apple Snails ☒ ☐ ☐ ☐										Sediment Odors: ☒ Normal ☐ Other (Specify): _____ ☐ Anaerobic									
Weather Conditions : <u>80's clear</u>																			
SAMPLING TEAM: <u>Mike Linger / Leif Boman</u>										SIGNATURE: <u>Mike Linger</u>					DATE: <u>10/31/19</u>				

DEP Form FD 9000-6: Lake Habitat Assessment Field Sheet

STORET STATION NUMBER: G2CE0225		DATE (M/D/Y) 10/31/2019		LAKE NAME Lake Jane		FIELD ID / NAME:	
ECO-REGION:		COUNTY Seminole		SAMPLING LOCATION/DESCRIPTION: @ 20m West of fountain		LAKE SIZE: Small	
PARAMETER		No surface inflow or outflow present, very long water residence time, groundwater seepage dominates ☐		Surface water inflow present, but flow is rare, moderate to long water residence time ☒		Surface water inflow and outflow present (or outflow only), sometimes with visible flow, short water residence time ☐	
HYDROLOGY						Impounded, hydrology of system artificially controlled ☐	
Color		Very clear, uncolored water st (benthic sampling appropriate) ☐		Water somewhat tannin stained (benthic sampling appropriate) ☐		Dark, discolored water (water color 20 PCU or higher) ☒	
		Optimal		Suboptimal		Marginal	
Secchi		Secchi >3 m Or VOB		Secchi(m)		Secchi(m)	
☐		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6	
Vegetation Quality		Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa ☐		Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants ☐		Large masses (21%- 40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats ☐	
☐		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6	
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 ☐	
☐		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6	
Bottom Substrate Quality		Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present ☐		Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present ☐		Moderate layer of CPOM/ mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom ☐	
☐		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6	
Lakeside Adverse Human Alterations		Very few man-made structures, roads, or other disturbance adjacent to lake (<10%) ☐		Moderate disturbance visible (structures, roads or other), 10%-49% lakeside affected ☐		Many structures, roads or other human disturbance visible (50%-70%) lakeside affected ☐	
☐		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6	
Upland 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 ☐	
☐		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6	
Adverse Watershed Land Use		Score the potential effects from adverse human land uses, based on a continuum of amount and type, with least to most adverse as follows: Native vegetation, Silviculture, Pasture or Citrus, Low Density Residential, Row Crops, Commercial, High Density Residential, Urban, Industrial ☐					
☐		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6	
TOTAL SCORE		☐		COMMENTS:			
☐		35					

ANALYSIS DATE: 10/31/19	ANALYST: Mike Linger	SIGNATURE:
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LVI Map for Lake Jane, WBID 2994L



DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Lake Jane County: Seminole Date: 10/31/2019
 Analyst: Mike Linger / Leif Borman Signature: [Signature] STORET: G2CE0225
 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	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					
Cyrilla 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 submersed viviparous	/	/	/	/		Mimosa pigra					
*Eriocaulon compressum						Myrica cerifera					
*Eriocaulon decangulare											
Eupatorium capillifolium											

Site: <u>Lk Jane</u>					Date: <u>10/21/19</u>						
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.					
<i>Osmunda regalis</i>						<i>Thalia geniculata</i>					
<i>Panicum hemitomon</i>						<i>Thelypteris interrupta</i>					
Panicum repens						<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 gibba</i> (<i>U. biflora</i>)					
<i>Persea</i> sp.						* <i>Utricularia foliosa</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>Vitis</i> sp.					
<i>Polygonum hirsutum</i>						* <i>Websteria confervoides</i>					
* <i>Polygonum hydropiperoides</i>						Wedelia trilobata (<i>Sphagneticola trilobata</i>)					
* <i>Polygonum punctatum</i>						<i>Wolffiella</i> spp.					
* <i>Polygonum</i>						<i>Woodwardia virginica</i>					
<i>Pontederia cordata</i>						<i>Xyris</i> sp.					
* <i>Potamogeton diversifolius</i>						<i>Zizania aquatica</i>					
* <i>Potamogeton illinoensis</i>						<i>Zizaniopsis milacea</i>					
* <i>Potamogeton pusillus</i>											
* <i>Potamogeton pectinatus</i> (<i>Stuckenia pectinatus</i>)											
<i>Proserpinaca pectinata</i>											
* <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>											
* <i>Sagittaria filiformis</i>											
* <i>Sagittaria graminea</i>											
* <i>Sagittaria isoetiformis</i>											
<i>Sagittaria lancifolia</i>											
<i>Sagittaria latifolia</i>											