

LVI

Site Name Triplet Lake @ Center of Middle Lobe Sample Date 7/10/19
WBID 2994B1 WIN ID 62CE0213 RQ 2019-07-08-69

	Initial/Date	QC Initial/Date
Water chemistry data to LIMS	08/4/19 LMD	8/23/2019
Create SBIO station visit 60047	8/4/19 LMD	n/a
Vascular Entry (add LIMS ID)	8/4/19 LMD	8/19/19 NA
Lake Observation Sheet Entry	8/4/19 LMD	8/19/19 NA
Authorize SBIO data	8/23/2019	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: Triplet Lake @ Center of Middle Lobe

Date: 07/10/2019

WIN/ Field ID: G2CE0213

WBID: 30040

Latitude: 28.669722

County: Seminole

ORG ID: 21FLCEN

Longitude: -81.326944

Receiving Body of Water:

RQ-2019- 07-08-69

Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment			
Natalie Ayala									☒ Sample Container	☐ Van Dorn	☐ Pole	
Mike Drennan									☐ Carboy	☒ Syringe		
									☐ Dipper	☐ Other		
									Depth Measured with Secchi Disk Line / Meter			
									Equipment ID (Leadfoot/Knothead, Crusty/ Bucket, Mucky/Trap)			
									Collection Method			
									☐ Wading	☒ Canoe/Kayak		
									☐ From Shore	☒ Electric Motor		
									☐ Other	☒ Gasoline Motor		
Water Level: Dry/ Pooled/ Low / Normal / High / Flooded				Meter ID# Shrimp / Trap				Matrix: Fresh / Marine / DI				
Photos: Yes / No		Flow: No Flow / Intestinal / Flowing		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 (PPT)	Sp COND (umhos/cm)	Temp. (C°)		
EST	1222	1.8	0.3	0.8	6.09	80.8	7.02	0.07	142.4	30.1		
CEN			1.3		5.49	72.1	6.90	0.07	142.1	29.7		
Biological Samples Collected: None				HA	SCI	RPS	Algae ID	LVS	LVI	Other:		
SBIO ID Numbers: SBIO-ID: 80047				HA-ID: 16156	RPS-ID:	Macrophyte-ID: 11433	LIMS#: 2101959					
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		See below	"	☒ <2		
Metals		☒ W-ICPMS ☒ W-JCP				☒ Ice ☒ HNO3		See below	"	☒ <2		
Filtered Nutrients		☒ W-PO4 F ☒ Field Filtered 0.45 um 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-BacR ☐ PCR-GULL2 ☐ 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 ☐ W-PCL-SQ-R ☐ WE8321-MS ☐ W-CARB-AA				☐ Ice ☐ Other						
Phytoplankton		☐ DTY-QN-C ☐ PKD QN-C				☐ Ice						

Notes:

Launch @ 28.67319, -81.32596

WIN ID / Field ID →

Triplet Lake @ Center of
Middle Lobe



G2CE0213

Signature: [Signature]

Date: 7/10/19

LIMS EVENT ID: CENT-DIST-2019- 07-11-01

Enter Field Parameters, Verify Station ID In LIMS DMT: [Signature] 8/4/19

QC Station ID, Field Parameters In LIMS DMT: NA 8/23/19

Scan/Save Field Sheets

(Initials/Date)

Migrate Data to WIN:

(Initials/Date)

Verify Data In WIN:

(Initials/Date)

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

STORET STATION NUMBER: 62C60213	DATE (M/D/Y) 7/10/19	LAKE NAME Triplet Lake		FIELD ID / NAME: 62C60213	
ECO-REGION:	COUNTY: Seminole	SAMPLING LOCATION/DESCRIPTION: Triplet Lake @ center of Middle Lobe		LAKE SIZE: 80 acres	
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 (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)	
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 ☐	
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 ☐	
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 ☐	
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 ☐	
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 ☐	
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 ☐				
TOTAL SCORE	81				
COMMENTS:					
ANALYSIS DATE:	ANALYST:		SIGNATURE:		
7/10/19	Natalie Ayala, Melce Drennon				

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 80047 **MACROPHYTE ID:** 11433 **LATITUDE:** 28.669722
COUNTY: Seminole **STORET #:** 62CE0213 **LONGITUDE:** -81.326944
DATE: 7/10/19 **TIME:** 1222 **SAMPLING AGENCY:** FDEP - CEPOL
SITE NAME: Triple Lake @ Center of Middle Lake **WBID:** 2994B1
FIELD ID/NAME: 62CE0213 **LAKE SIZE:** 80 Acres **RQ:** 2019-0708-69

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:													
40				50			Parks 10														
Local Watershed Erosion (select one): ☒ None ☐ Slight ☐ Moderate ☐ Heavy						Artificially Impounded		Land Use Source & Year:													
Local Watershed NPS Pollution : ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy						☐ Yes ☒ No															
STORMWATER INPUTS 14		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	2	1
LAKESIDE ALTERATIONS 13		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	4	3	2	1
BUFFER ZONE 12		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	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 # SA7163030 Exp. Date: 10/30/19 Alkalinity Sample Taken? ☒ Yes ☐ No NA8197080 7/16/19 Water Level ☐ Low ☒ Normal ☐ High						Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other					
Meter Readings:						Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other					
Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat. (%) Cond. (UMHO/CM) Salinity (PPT)						Clarity: ☐ Clear ☐ Turbid ☒ Slightly Turbid					
Top: 0.3 30.1 7.02 6.09 80.8 142.4 0.07						Color: ☐ Clear ☒ Tannic ☐ Green					
Mid-Depth:						SECCHI (M) 0.8 Total Station Depth (M)					
Bottom: 1.3 29.7 6.90 5.49 72.1 142.1 0.07						VOB					
Sediment Type: (may check more than one) ☒ Sandy ☒ Organic fibrous (peaty, CPOM) ☒ Vegetated ☐ Sand/Silt ☐ Organic smooth (muck) ☐ Other (Specify):						Sediment Odors: ☒ Normal ☐ Anaerobic ☐ Other (Specify):					
Biological Communities:						Abundance:					
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						Absent Rare Common Abundant Periphyton ☐ ☐ ☒ ☐ Nuisance Plants ☐ ☐ ☐ ☒ Submersed Plants ☐ ☐ ☐ ☒ Exotic Apple Snails ☐ ☒ ☐ ☐					
Weather Conditions: 90's clear						Additional Notes:					
SAMPLING TEAM: Natalie Ayala, Mike Drennon						SIGNATURE:					
DATE: 7/10/19						DATE: 7/10/19					

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

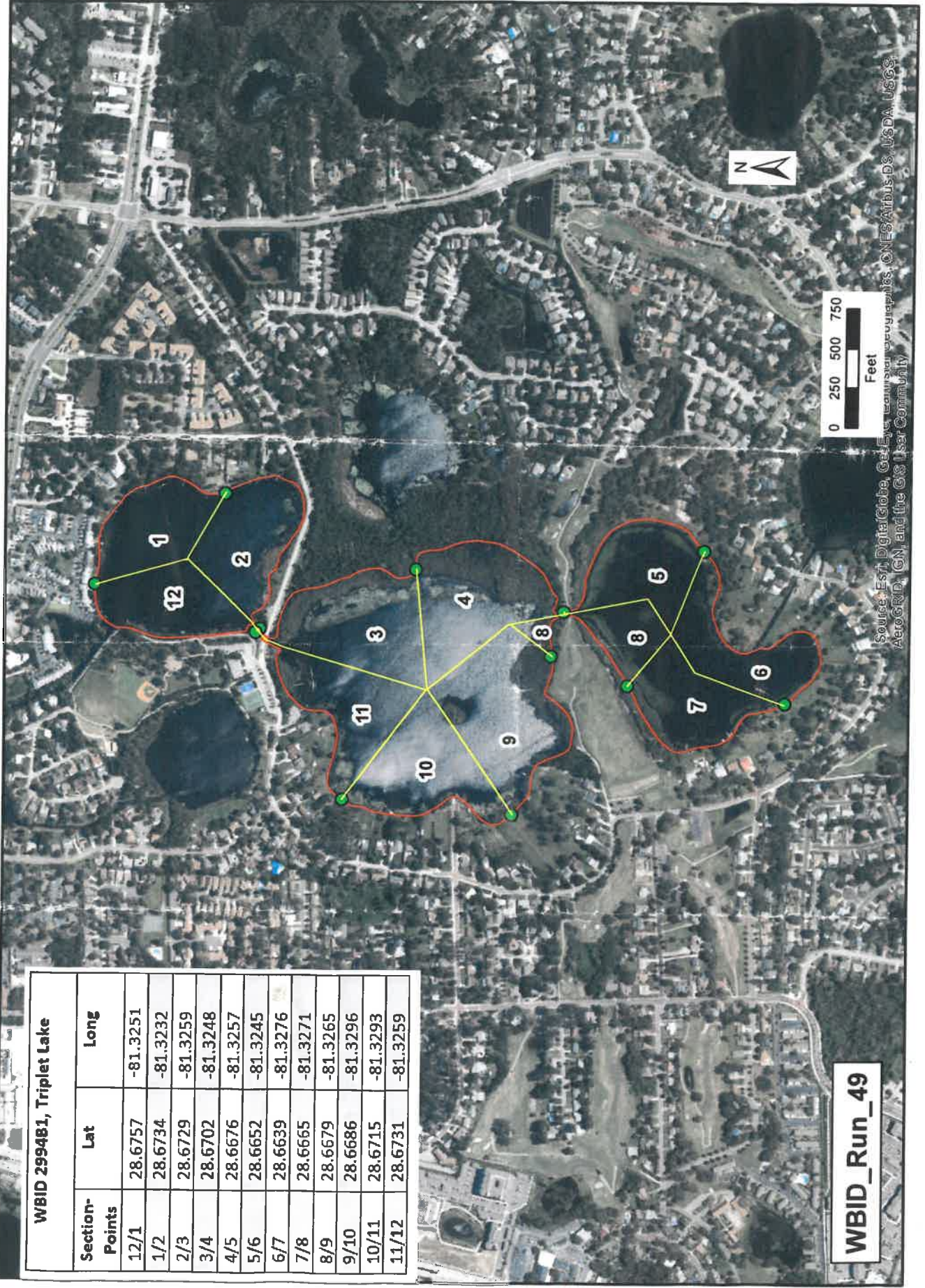
Waterbody: <u>Triplet Lake</u>	County: <u>Seminole</u>	Date: <u>7/10/19</u>	
Analyst: <u>Ayala, Drennon</u>	Signature: <u>[Signature]</u>	STORET: <u>2266213</u>	
Except where noted as "sp." species level identification required. *Genera that may require lab verification			
Plants in bold = FLEPPC Invasive 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? (v)	SPECIES	2 5 8 11 Collected? (v)
<i>Acer rubrum</i>		<i>Fraxinus</i>	
<i>Alternanthera philoxeroides</i>		<i>Fuirena scirpoides</i>	
<i>Amaranthus australis</i>		<i>Gordonia lasianthus</i>	
<i>Andropogon</i> sp.		<i>Habenaria repens</i>	
<i>Azolla filiculoides</i> (A. caroliniana)		<i>Hibiscus coccineus</i>	
<i>Baccharis</i> sp.		<i>Hibiscus grandiflora</i>	
<i>Bacopa caroliniana</i>		<i>Hydrilla verticillata</i>	
<i>Bacopa monnieri</i>		<i>Hydrocotyle</i> sp.	
<i>Bidens alba</i>		<i>Hygrophila polysperma</i>	
<i>Bidens laevis</i>		<i>Hymenocallis</i> sp.	
<i>Bidens misit</i>		<i>*Hypericum fasciculatum</i>	
<i>Blechnum serrulatum</i>		<i>*Hypericum hypericoides</i>	
<i>Boehmeria cylindrica</i>		<i>*Hypericum myrtifolium</i>	
<i>Brasenia schreberi</i>		<i>Ilex cassine</i>	
<i>Cabomba caroliniana</i>		<i>Ipomoea aquatica</i>	
<i>Canna</i>		<i>Ipomoea sagittata</i>	
<i>Centella asiatica</i>		<i>Itea virginica</i>	
<i>Cephalanthus occidentalis</i>		<i>Juncus effusus</i>	
<i>Ceratophyllum demersum</i>		<i>*Juncus marginatus</i>	
<i>Chara</i> sp.		<i>*Juncus megacephalus</i>	
<i>Cicuta maculata</i>		<i>Juncus repens</i>	
<i>Cinnamomum camphora</i>		<i>*Juncus scirpoides</i>	
<i>Cladium jamaicense</i>		<i>Lachnanthes caroliniana</i>	
<i>Colocasia esculenta</i>		<i>Loeria hoxandra</i>	
<i>*Commelina</i>		<i>Landoltia punctata</i> (<i>Spirodela punctata</i>)	
<i>Cornus americanum</i>		<i>Lemna</i> sp.	
<i>*Cyperus alternifolius</i> (C. involucreatus)		<i>Leucothoe racemosa</i> (<i>Eubotrys racemosa</i>)	
<i>Cyperus articulatus</i>		<i>Limnolobium spongia</i>	
<i>Cyperus haspan</i>		<i>Limnophila sessiliflora</i>	
<i>*Cyperus lecontei</i>		<i>Liquidambar styraciflua</i>	
<i>*Cyperus polystachyos</i>		<i>*Ludwigia arcuata</i>	
<i>*Cyperus odoratus</i>		<i>*Ludwigia grandiflora</i>	
<i>*Cyperus surinamensis</i>		<i>*Ludwigia hexapetala</i>	
<i>Cyrtilla racemiflora</i>		<i>*Ludwigia leptocarpa</i>	
<i>Decodon verticillatus</i>		<i>Ludwigia (native)</i>	
<i>Diodia virginiana</i>		<i>*Ludwigia octovalvis</i>	
<i>*Echinochloa crus-galli</i>		<i>*Ludwigia peruviana</i>	
<i>*Echinochloa muricatum</i>		<i>*Ludwigia repens</i>	
<i>Echinochloa walteri</i>		<i>Ludwigia suffruticosa</i>	
<i>Eclipta prostrata</i> (E. alba)		<i>Luziola fluitans</i> (<i>Hydrochloa carolinensis</i>)	
<i>Eleocharis crassipes</i>		<i>Magnolia virginiana</i>	
<i>*Eleocharis baldwinii</i>		<i>Mayaca fluviatilis</i>	
<i>Eleocharis cellulosa</i>		<i>Metaleuca quinqueveneria</i>	
<i>*Eleocharis elongata</i>		<i>Micranthemum glomeratum</i>	
<i>Eleocharis equisetoides</i>		<i>Micranthemum umbrosum</i>	
<i>Eleocharis interstincta</i>		<i>Mikania scandens</i>	
<i>Eleocharis submersed viviparus</i>		<i>Mimosa pigra</i>	
<i>*Eriocaulon compressum</i>		<i>Myrica cerifera</i>	
<i>*Eriocaulon decangulare</i>			
<i>Eupatorium capillifolium</i>			

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site:	Date:
SPECIES	2 5 8 11 Collected? (v)
<i>Myriophyllum aquaticum</i>	
<i>*Myriophyllum heterophyllum</i>	
<i>*Myriophyllum laxum</i>	
<i>*Myriophyllum pinnatum</i>	
<i>Myriophyllum spicatum</i>	
<i>*Najas filifolia</i>	
<i>*Najas guadalupensis</i>	
<i>*Najas minor</i>	
<i>Nelumbo lutea</i>	
<i>Nitella</i> spp.	
<i>Nuphar</i> sp.	
<i>Nymphaea mexicana</i>	
<i>Nymphaea odorata</i>	
<i>Nymphaeoides aquatica</i>	
<i>Nyssa sylvatica</i> var. <i>biflora</i>	
<i>Orontium aquaticum</i>	
<i>Osmunda cinnamomea</i>	
<i>Osmunda regalis</i>	
<i>Panicum hemitomon</i>	
<i>Panicum repens</i>	
<i>Paspalum geminatum</i>	
<i>*Paspalum repens</i>	
<i>Paspalum urvillei</i>	
<i>Peltandra</i> sp.	
<i>Persea</i> sp.	
<i>Pennisetum purpureum</i>	
<i>Phragmites australis</i>	
<i>Pinus eliottii</i>	
<i>Pistia stratioides</i>	
<i>Pluchea</i> sp.	
<i>*Polygonum glabrum</i> (<i>densiflorum</i>)	
<i>Polygonum hirsutum</i>	
<i>*Polygonum hydropiperoides</i>	
<i>*Polygonum punctatum</i>	
<i>*Polygonum</i>	
<i>Pontederia cordata</i>	
<i>*Potamogeton diversifolius</i>	
<i>*Potamogeton illinoensis</i>	
<i>*Potamogeton pusillus</i>	
<i>*Potamogeton pectinatus</i> (<i>Stuckenia pectinatus</i>)	
<i>Proserpinaca pectinata</i>	
<i>*Rhexia cuneata</i>	
<i>*Rhynchospora corymbulata</i>	
<i>*Rhynchospora inundata</i>	
<i>Rhynchospora nitens</i>	
<i>Rhizocarpus natans</i>	
<i>Sabal palmetto</i>	
<i>Sagittaria striata</i>	
<i>*Sagittaria filiformis</i>	
<i>*Sagittaria graminea</i>	
<i>*Sagittaria isoeifomis</i>	
<i>Sagittaria latifolia</i>	
<i>Sagittaria latifolia</i>	

→ *Juncus acuminatus* ✓

LVI Map for Triplet Lake, WBID 2994B1



WBID 2994B1, Triplet Lake		
Section-Points	Lat	Long
12/1	28.6757	-81.3251
1/2	28.6734	-81.3232
2/3	28.6729	-81.3259
3/4	28.6702	-81.3248
4/5	28.6676	-81.3257
5/6	28.6652	-81.3245
6/7	28.6639	-81.3276
7/8	28.6665	-81.3271
8/9	28.6679	-81.3265
9/10	28.6686	-81.3296
10/11	28.6715	-81.3293
11/12	28.6731	-81.3259

WBID_Run_49