FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End of Day CCV: Yes / No

WIN Station Name: Marshall Lake @ Center **Date:** 5/18/2021

WIN/Field ID: G1CE0110 **WBID:** 2854A **ENR:** - **Latitude:** 28.6779

County: ORANGE **Org ID:** 21FLCEN **Longitude:** -81.53

Receiving Body of Water: Ocklawaha **RQ-** 2021-05-10-46

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
[x] Leif Boman		x		x	x
[x] Victoria Schwartz	x		x		
[ ]					
[ ]					

Sampling Equipment

- [x] Sample Container
- [ ] Dipper
- [x] Syringe
- [ ] Carboy
- [ ] Van Dorn
- [ ] Pole

Depth measured with: Secchi

Secchi Equipment ID: Light

Collection Method

- [ ] Wading
- [ ] From Shore
- [ ] Other _____
- [x] Canoe/Kayak
- [ ] Electric Motor
- [ ] Gasoline Motor

Water Level: [x] Normal [ ] Low [ ] High [ ] Dry [ ] Pooled [ ] Flooded

Meter ID# SHRIMP TRAP

Photos: YES **Flow:** NA **Tide:** **Tide Times:** High: Low:

Biological Samples Collected: [ ] None [ ] HA [ ] SCI [ ] RPS [ ] Algae ID [ ] LVS [x] LVI Other:

SBIO ID Numbers: SBIO 82452 MACROPHYTE 11816 LIMS 2248301

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-2021-05-19-02 **WIN Import ID:** 27961

Enter Field Parameters, Verify Station ID In LIMS DMT: KWM 5/21/21 (Initials/Date) **QC Station ID, Field Parameters In LIMS DMT:** EB 7/13/21 (Initials/Date)

Scan/Save Field Sheets KWM 8/6/21 (Initials/Date) **Migrate Data to WIN:** KWM 8/6/21 (Initials/Date) **Verify Data In WIN:** _____ (Initials/Date)

RQ-2021-05-10-46
Customer: WQAP
Project ID: SMP

Collected By: Leif Boman, Victoria Schwartz
Field Report Prepared By: Leif Boman
Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID: G1CE0110

Location: Marshall Lake @ 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 (PPTh)
5/18/2021	1140 EST	8.02	98.4	25.7	7.53	0.3	1.2 ☐ VOB (S)	4.2	182.2	0.09
	1150	8.06	98.9	25.7	7.47	2.0	Central Lab please use top row for login purposes		182.2	0.09
	1153 EST	7.95	97.4	25.6	7.4	3.7			182	0.09

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 ☒ $H2SO_4$*	☒ <2	1	A
	Lot # SA0293040 **Exp:**	10/19/21			
Metals (P-500ML)	☐ W-ICPMS ☐ W-ICP ☐ W-HARD	☐ Ice ☐ HNO_3*	☐ <2		
	Lot # **Exp:**				
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice		1	A
	Filter Lot # 17135566				
	Syringe Lot # 1091364				
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-BR-IC / 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			
Pesticides (BG-500ML) (BG-1L)	☐ W-E8321-DI ☐ WE8321-MS ☐ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-PCL-SQ-R ☐ W-CARB-AA (5 ml of MCAA** Buffer Solution) ☐ W-DIELDRIN	☐ Ice			
Phytoplankton/Periphyton	☐ DTM-QL-C ☐ PEN-QL-C ☐ DTY-QN-C ☐ PKD-QN-C ☐ DTM-QN-C ☐ PRN-QN-C ☐ PKD-QN-BV	☐ Ice			

Name:
Leif Boman
Victoria Schwartz

Signature: Victoria Schwartz

Date: 5/18/21

*2.0 ml of Preservative used unless noted otherwise.
**MCAA: Monochloroacetic acid buffer solution

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: 28.677856

COUNTY: Orange STORET #: GICE0110 LONGITUDE: -81.532667

DATE: 5/18/21 TIME: 11:40 SAMPLING AGENCY: 21FLCEN

SITE NAME: Marshall Lake @ Center WBID: 2854A

FIELD ID/NAME: GICE0110 LAKE SIZE: 0.09464 sq. miles RQ: 2021-05-10-46

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)
30				70			

LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer)

LDI: _____

Land Use Source & Year:

Local Watershed Erosion (select one) : ☐ None ☐ Slight ☒ Moderate ☐ Heavy

Local Watershed NPS Pollution : ☐ No evidence ☐ Slight ☒ Moderate ☐ Heavy

Artificially Impounded ☐ Yes ☒ No

STORMWATER INPUTS 15	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 8	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 8	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 ☒ pH<2 ☐ No

Color Sample Taken? ☒ Yes ☐ No Lot # SA0293040 Exp. Date: 10/19/21

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:	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat. (%)	Cond. (UMHO/CM)	Salinity (PPT)
Top:	0.3	25.7	7.53	8.02	98.4	182.2	0.09
Mid-Depth:	2.0	25.7	7.47	8.06	98.9	182.2	0.09
Bottom :	3.7	25.6	7.40	7.95	97.4	182.0	0.09

Meter ID: Shrimp Trap

Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid

Color: ☐ Clear ☒ Tannic ☐ Green

SECCHI (M) 1.2 VOB ☐

Total Station Depth (M) 4.2

Sediment Type: (may check more than one) Sample Taken? ☐ Yes ☒ No

☐ Sandy ☐ Organic fibrous (peaty, CPOM) ☐ Vegetated

☐ Sand/Silt ☐ Organic smooth (muck) ☐ Other (Specify):_____

Sediment Odors: N/A ☐ Normal ☐ Other (Specify): _____ ☐ Anaerobic

Biological Communities:

LVI Conducted? ☒ Yes ☐ No

Phytoplankton Sample Taken? ☐ Yes ☒ No

Sample Preserved? N/A ☐ 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	☒	☐	☐	☐

Additional Notes:

New/current construction along ~~Eastern~~ Southern Shore

Weather Conditions : Sunny

SAMPLING TEAM: Leif Boman + Victoria Schwark **SIGNATURE:** _____ **DATE:** 5/18/21

WBID: 2854A

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Marshall Lake	County: Orange	Date: 05/18/2021
Analyst: Leif Boman, Victoria Schwartz	Signature:	STORET: 611E0110

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	3	6	9	12	Collected? (√)
Acer rubrum	/	/			
Alternanthera philoxeroides					
Amaranthus australis					
Andropogon sp.					
Azolla filiculoides (A. caroliniana)			/	/	
Baccharis sp.					
Bacopa caroliniana					
Bacopa monnieri					
Bidens alba					
Bidens laevis					
Bidens mitis					
Blechnum serrulatum					
Boehmeria cylindrica					
Brasenia schreberi					
Cabomba caroliniana					
Canna					
Centella asiatica					
Cephalanthus occidentalis	/				
Ceratophyllum demersum					
Chara sp.					
Cinnamomum camphora					
Cladium jamaicense					
Colocasia esculenta					
*Commelina _____					
Crinum americanum					
***Cyperus alternifolius (C. involucratus)**					
Cyperus articulatus					
Cyperus haspan					
*Cyperus lecontei					
*Cyperus polystachyos					
*Cyperus odoratus					
*Cyperus surinamensis					
Cyrilla racemiflora					
Decodon verticillatus					
Diodia virginiana					
*Echinochloa crus-galli					
*Echinochloa muricatum					
Echinochloa walteri					
Eclipta prostrata (E. alba)					
Eichhornia crassipes					
*Eleocharis _____					
Eleocharis cellulosa					
*Eleocharis elongata					
Eleocharis equisetoides					
Eleocharis interstincta					
Eleocharis submersed viviparous	/	/		/	
*Eriocaulon compressum					
*Eriocaulon decangulare					
Eupatorium capillifolium		/			
Fraxinus					

SPECIES	3	6	9	12	Collected? (√)
Fuirena scirpoides					
Gordonia lasianthus					
Habenaria repens					
Hibiscus coccineus					
Hibiscus grandiflora					
Hydrilla verticillata			/	/	
Hydrocotyle sp.			/	/	
Hygrophila polysperma					
Hymenocallis sp.					
*Hypericum fasciculatum					
*Hypericum hypericoides					
*Hypericum myrtifolium					
Ilex cassine					
Ipomoea aquatica					
Ipomoea sagittata					
Itea virginica					
Juncus effusus					
*Juncus marginatus					
*Juncus megacephalus					
Juncus repens					
*Juncus scirpoides					
Lachnanthes caroliniana					
Leersia hexandra					
Landoltia punctata (Spirodela punctata)					
Lemna sp.					
Leucothoe racemosa (Eubotrys racemosa)					
Limnobium spongia					
Limnophila sessiliflora					
Liquidamber styraciflua					
*Ludwigia arcuata					
*Ludwigia grandiflora					
*Ludwigia hexapetala					
*Ludwigia leptocarpa					
Ludwigia (native)					
*Ludwigia octovalvis			/	/	
***Ludwigia peruviana**		/		/	
*Ludwigia repens					
Ludwigia suffruticosa					
Luziola fluitans (Hydrochloa carolinensis)					
Magnolia virginiana					
Mayaca fluviatilis					
Melaleuca quinquenervia					
Micranthemum glomeratum					
Micranthemum umbrosum					
Mikania scandens			/		
Mimosa pigra					
Myrica cerifera					

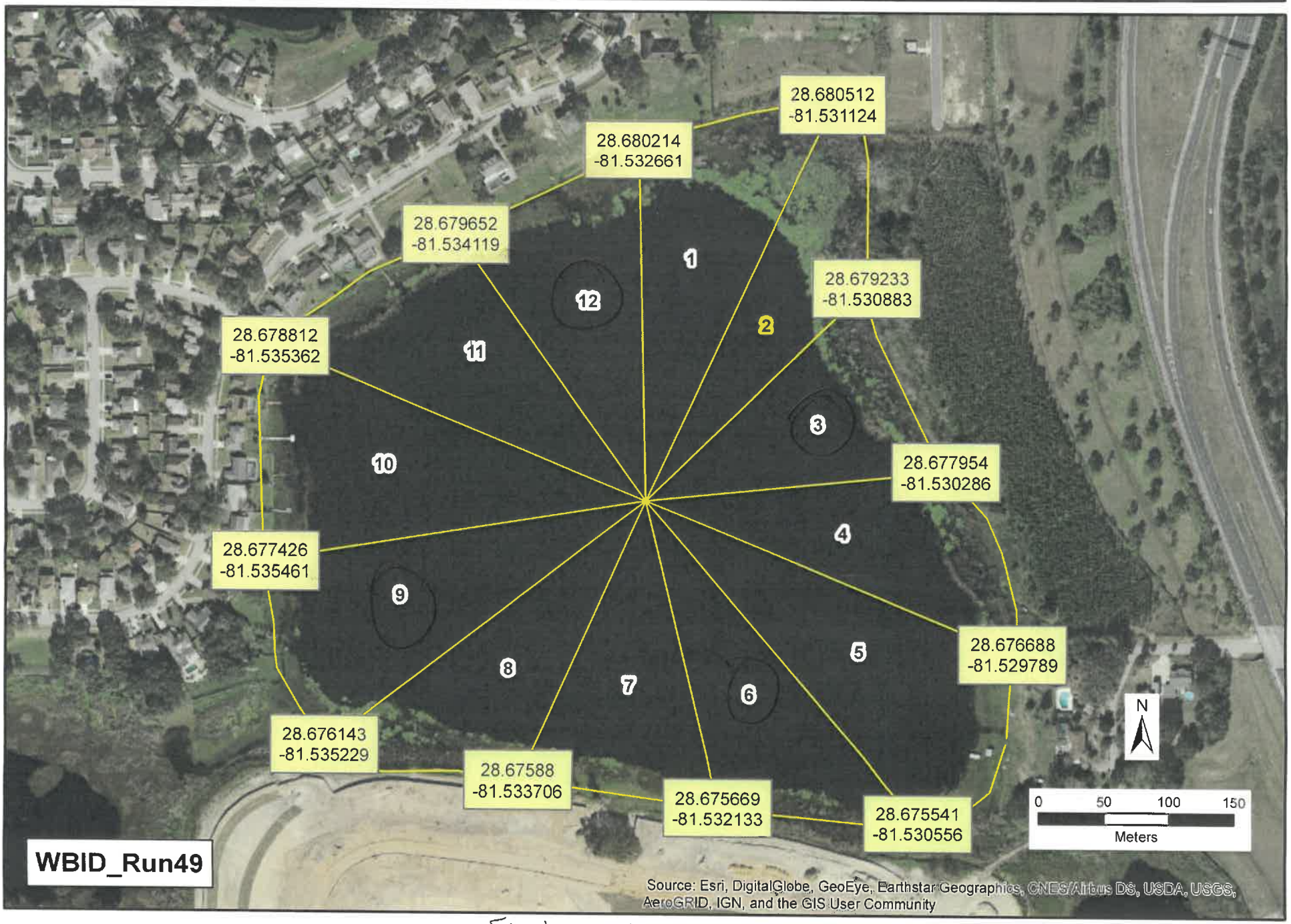
FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: Marshall Lake | Date: 05/18/21

SPECIES	3	6	9	12	Collected? (√)
Myriophyllum aquaticum					
*Myriophyllum heterophyllum					
*Myriophyllum laxum					
*Myriophyllum pinnatum					
Myriophyllum spicatum					
*Najas filifolia					
*Najas guadalupensis				/	
*Najas minor					
Nelumbo lutea					
Nitella spp.					
Nuphar sp.	/	/	/	/	
Nymphaea mexicana					
Nymphaea odorata	C	/	/	/	
Nymphoides aquatica					
Nyssa sylvatica var. biflora					
Orontium aquaticum					
Osmunda cinnamomea					
Osmunda regalis					
Panicum hemitomon	/	/		/	
Panicum repens	/	/	/	/	
Paspalidium geminatum			/	/	
*Paspalum repens					
Paspalum urvillei					
Peltandra sp.					
Persea sp.					
Pennisetum purpureum					
Phragmites australis					
Pinus elliottii					
Pistia stratioides					
Pluchea sp.					
*Polygonum glabrum (densiflorum)					
Polygonum hirsutum					
*Polygonum hydropiperoides					
*Polygonum punctatum					
*Polygonum _____					
Pontederia cordata	/	/	/	/	
*Potamogeton diversifolius					
*Potamogeton illinoensis					
*Potamogeton pusillus					
*Potamogeton pectinatus (Stuckenia pectinatus)					
Proserpinaca pectinata					
*Rhexia _____					
*Rhynchospora corniculata					
*Rhynchospora inundata					
Rhynochospora nitens					
Ricciocarpus natans					
Sabal palmetto					
Sacciolepis striata					
*Sagittaria filiformis					
*Sagittaria graminea					
*Sagittaria isoetiformis					
Sagittaria lancifolia	/	/	/	/	
Sagittaria latifolia					

SPECIES	3	6	9	12	Collected? (√)
Salix caroliniana	/	/	/	/	
Salvinia minima			/	/	
Sambucus canadensis		/		/	
Sapium sebiferum (NONE - VS)		VS		A	VS
Saururus cernuus					
Schinus terebinthifolius					
*Schoenoplectus californicus					
*Schoenoplectus pungens					
*Schoenoplectus tabernaemontani (Scirpus validus)					
Scirpus cubensis (Oxycaryon cubense)		/	/	/	VS
Scirpus cyperinus					
*Sesbania _____					
Solidago sp.					
Sparganium americanum					
Spartina bakeri					
Spirodela polyrhiza					
Taxodium sp.					
Thalia geniculata					
Thelypteris interrupta					
Thelypteris palustris					
Triadenum virginicum					
Typha sp.	C	/	/	/	
Urochloa mutica (Brachiaria mutica)					
*Utricularia foliosa					
*Utricularia gibba (U. biflora)					
*Utricularia inflata		D	D	D	
*Utricularia purpurea					
*Utricularia radiata					
*Utricularia resupinata					
Vallisneria americana					
Vigna luteola					
Vitis sp.					
*Websteria confervoides					
Wedelia trilobata (Sphagneticola trilobata)					
Wolffiella spp.					
Woodwardia virginica					
Xyris sp.					
Zizania aquatica					
Zizaniopsis milacea					

LVI Map for Marshall Lake, WBID 2854A



[Construction]

Current Date: 4/27/2021

Date Saved: 4/27/2021