

LVI

Site Name Lake Gleason Sample Date 5/1/19

WBID 2093 G WIN ID G2CE0114 RQ 2019-04-29-44

	Initial/Date	QC Initial/Date
Water chemistry data to LIMS	KWM MAY 07 2019	NA 5/24/2019
Create SBIO station visit	KWM MAY 07 2019	n/a
Vascular Entry (add LIMS ID)	KWM MAY 07 2019	NA 5/24/2019
Lake Observation Sheet Entry	KWM MAY 07 2019	NA 5/24/2019
Authorize SBIO data	Natalie Ayala 5/24/19	n/a
Scan all sheets to 21FLCEN folder	NA 5/24/19	n/a
LIMS/WIN migration	LMD 7/26/19	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 Gleason @ Center

Date: 5/1/19

(mm/dd/yyyy)

WIN/ Field ID: G2CE0114

WBID: 2893G

Latitude: 28.89192

(Decimal Degrees)

County: Volusia

ORG ID: 21FLCEN

Longitude: -81.26495

(Decimal Degrees)

Receiving Body of Water: _____

RQ-2019- 04-29-44

Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Natalie Ayala					✓		✓	✓
Katie March				✓		✓		

Sampling Equipment			
☒ Sample Container	☐ Van Dorn	☐ Pole	
☐ Carboy	☒ Syringe		
☐ Dipper	☐ Other		
Depth Measured with Secchi Disk Line / Meter _____			
Equipment ID Leadfoot, Knothead, Crusty/Bucket, /Trap _____			

Collection Method			
☐ Wading	☒ Canoe/Kayak		
☐ From Shore	☒ Electric Motor		
☐ Other	☐ Gasoline Motor		

Water Level: Dry/ Pooled/ Low <u>Normal</u> / High / Flooded				Meter ID# <u>821167</u>				Matrix: <u>Fresh</u> / Marine / DI			
Photos: Yes/ No <u>No</u>				Flow: No Flow / Intestinal / Flowing <u>NA</u>				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	1215	2.0	0.3	1.2	5.53	69.1	7.18	0.08	179	26.72	
CEN			1.5		5.45	67.8	7.15	0.08	179	26.52	

Biological Samples Collected: None HA SCI RPS Algae ID LVS <u>LVI</u> Other:			
SBIO ID Numbers: SBIO-ID: <u>79436</u> HA-ID: _____ RPS-ID: _____ Macrophyte ID: <u>11270</u> LIMS#: <u>2082650</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>SA8344070</u>	<u>12/19</u>	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um Filter	☒ Ice	<u>13615055</u>		
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CH-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: Park/Launch: <u>28.89126, -81.26719</u>		WIN ID / Field ID → <u>Lake Gleason @ Center</u>
Signature: <u>K March</u>	Date: <u>5/1/19</u>	 G2CE0114

LIMS EVENT ID: CENT-DIST-2019-05-02-01

Enter Field Parameters, Verify Station ID In LIMS DMT: KWM MAY 07 2019

QC Station ID, Field Parameters In LIMS DMT: NA 5/24/2019

Scan/Save Field Sheets NA 5/24/19
(Initials/Date)

Migrate Data to WIN: LMD 7/26/19
(Initials/Date)

Verify Data In WIN: _____
(Initials/Date)

LVI Map for Gleason Lake, WBID 2893G



DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Lake Gleason</u>	County: <u>Volusia</u>	Date: <u>5/1/19</u>
Analyst: <u>Angela March</u>	Signature: <u>K March</u>	STORET: <u>G2C0014</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	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						Limnium sp.					
Cyperus haspan				✓		Limnophila sessiliflora					
*Cyperus lecontei				✓		Liquidambar styraciflua					
*Cyperus polystachyos				✓		*Ludwigia arcuata					
*Cyperus odoratus	✓			✓		*Ludwigia grandiflora					
*Cyperus surinamensis	✓					*Ludwigia hexapetala					
Cyrtilla 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 submersa viviparous						Mimosa pigra					
*Eriocaulon compressum						Myrica cerifera					
*Eriocaulon decangulare	✓			✓							
Eupatorium capillifolium	✓			✓							

★ NO DOMINANT SELECTED SECTION 7

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: Lake Gleason					Date: 5/1/2019						
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.	✓		✓	✓		Scirpus cyperinus					
Nymphaea mexicana	✓	✓	✓	✓		*Sesbania					
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 gibba (U. biflora)	✓	✓	✓	✓	
Persea sp.						*Utricularia foliosa	✓	✓	✓	✓	
Pennisetum purpureum						*Utricularia inflata			✓	✓	
Phragmites australis			✓			*Utricularia purpurea			✓	✓	
Pinus elliotii			✓			*Utricularia radiata					
Pistia stratioides	✓	✓				*Utricularia resupinata					
Pluchea sp.	✓	✓				Vallisneria americana			✓	✓	
*Polygonum glabrum (densiflorum)	✓	✓				Vitis sp.					
Polygonum hirsutum		✓				*Websteria confervoides					
*Polygonum hydropiperoides						Wedelia trilobata (Sphagneticola trilobata)					
*Polygonum punctatum						Wolffiella spp.					
*Polygonum	✓	✓	✓	✓		Woodwardia virginica					
Pontederia cordata	✓	✓	✓	✓		Xyris sp.					
*Potamogeton diversifolius						Zizania aquatica					
*Potamogeton illinoensis						Zizaniopsis milacea					
*Potamogeton pusillus						<i>bottlebrush</i>			✓	✓	
*Potamogeton pectinatus (Stuckenia pectinatus)						<i>vigna</i>					
Proserpinaca pectinata						<i>melaleuca virginica</i>					
*Rhexia											
*Rhynchospora corniculata											
*Rhynchospora inundata											
Rhynchospora nitens											
Ricciocarpus natans		✓									
Sabal palmetto		✓									
Sacciolepis striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis	✓	✓	✓	✓							
Sagittaria lancifolia	✓	✓	✓	✓							
Sagittaria latifolia											

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 79436 MACROPHYTE ID: 11270 LATITUDE: _____
 COUNTY: Nova Scotia STORET #: 62100114 LONGITUDE: _____
 DATE: 5/1/19 TIME: _____ SAMPLING AGENCY: _____
 SITE NAME: Lake Gleason WBID: 29936
 FIELD ID/NAME: _____ LAKE SIZE: _____ RQ: 2019-04-29-44

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) : Forest/Natural <u>5</u> Silviculture _____ Field/Pasture _____ Agricultural <u>95</u> Residential _____ Commercial _____ Industrial _____ Other (Specify) _____				LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI: _____ Land Use Source & Year: _____	
Local Watershed Erosion (select one) : ☐ None ☒ Slight ☐ Moderate ☐ Heavy				Artificially Impounded ☐ Yes ☒ No	
Local Watershed NPS Pollution : ☐ No evidence ☐ Slight ☒ Moderate ☐ Heavy					
STORMWATER INPUTS <u>4</u>	Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation 20 19 18 17 16	Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place 15 14 13 12 11	Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place 10 9 8 7 6	Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place 5 4 3 2 1	
LAKESIDE ALTERATIONS <u>3</u>	Very few man-made structures, roads, or other disturbance adjacent to lake (<10% lakeside affected) 20 19 18 17 16	Moderate disturbance visible - structures, roads or other (10%-49% lakeside affected) 15 14 13 12 11	Many structures, roads or other human disturbance visible (50%-70% lakeside affected) 10 9 8 7 6	Highly developed or disturbed (>70% of lakeside affected) 5 4 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 20 19 18 17 16	89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer 15 14 13 12 11	50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer 10 9 8 7 6	< 29% of shoreline with >18m buffer 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: Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat. (%) Cond. (UMHO/CM) Salinity (PPT) Top: <u>0.3</u> <u>26.72</u> <u>7.18</u> <u>5.53</u> <u>69.1</u> <u>179</u> <u>0.08</u> Mid-Depth: _____ Bottom: <u>1.5</u> <u>26.52</u> <u>7.15</u> <u>5.45</u> <u>67.8</u> <u>179</u> <u>0.08</u> Meter ID: <u>Betty 67</u>				Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____ Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid Color: ☒ Tannic ☐ Clear ☐ Green SECCHI (M) <u>1.2</u> Total Station Depth (M) <u>2.0</u> VOB ☐			
Sediment Type: (may check more than one) ☒ Sandy ☐ Organic fibrous (peaty, CPOM) ☒ Vegetated ☐ Sand/Silt ☐ Organic smooth (muck) ☐ Other (Specify): _____				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: Absent Rare Common Abundant Periphyton ☐ ☐ ☒ ☐ Nuisance Plants ☐ ☐ ☒ ☐ Submersed Plants ☐ ☐ ☒ ☐ Exotic Apple Snails ☐ ☐ ☒ ☐			
Weather Conditions :				Additional Notes: less submersed veg. noted compared to previous LVIs.			
SAMPLING TEAM: <u>Angela, March</u>				SIGNATURE: <u>March</u>		DATE: <u>5/1/19</u>	