



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

STRATEGIC MONITORING PLAN FIELD SHEET

January 2022

Meter Passed End

of Day CCV

☒ Yes / No

WIN Station Name: Lake Beulah SW

Date: 5/18/2022

WIN/Field ID: G2SW0053

WBID: 1543B

ENR: -

Latitude: 28.03973

County: POLK

Org ID: 21FLTPA

Longitude: -81.96935

Receiving Body of Water: -

RQ: 2022-05-16-27

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Ben Paswater	x	x	x	x	
☒	Kevin Grace		x		x	x
☐						
☐						

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☐ Syringe	☐ Pole
Depth measured with: Secchi	
Secchi Equipment ID: Secchi #3	
Collection Method	
☒ Wading	☐ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other	☐ Gasoline Motor

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded		Meter ID# SWD	
Photos: YES	Flow: NA	Tide:	Tide Times: High: Low:
Biological Samples Collected: ☐ None ☐ HA ☐ SCI ☐ RPS ☐ Algae ID ☐ LVS ☒ LVI Other:			
SBIO ID Numbers: Visit ID: 84226 LVI: 12149			
Notes: WARM, PARTLY CLOUDY			

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: 2022-05-19-01

WIN Import ID: 34598

Enter Field Parameters, Verify Station ID In LIMS DMT: MM 5/31/2022

QC Station ID, Field Parameters In LIMS DMT: KG 06/21/2022

(Initials/Date)

(Initials/Date)

Scan/Save Field Sheets NA 08/30/2022

(Initials/Date)

Migrate Data to WIN: NA 08/24/2022

(Initials/Date)

Verify Data In WIN: NA 08/24/2022

(Initials/Date)



RQ-2022-05-16-27
Customer: SW-DIST
Project ID: STRATEGIC MONITORING PLAN

Collected By: Ben Paswater, Kevin Grace
Field Report Prepared By: Ben Paswater
Sampling Agency: FDEP

Place Label Here WIN ID/Field ID: G2SW0053 Location: Lake Beulah SW						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)
5/18/2022	1250 EST	10.56	139.7	30.3	8.58	0.3	1 ☒ VOB (S)	1	106.4	0.05
	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 #	SA1308030		Exp:	12/01/2022				
Metals (P-500ML)		☒ W-ICPMS ☒ W-ICP ☒ W-HARD				☒ Ice ☐ HNO3*		☒ <2	1	A
		Lot #	NA1105100		Exp:	06/07/2022				
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☐ Ice			1	A
		Filter Lot #	17232873			Syringe Lot #	1145497			
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-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		MCAA Exp. 2/4/2023		
Pesticides (BG-500ML) (BG-1L)		☒ W-E8321-DI	☒ WE8321-MS	☒ W-PSNP-TQ	☒ W-CT-CL-R	☒ Ice		MCAA Lot#	10	A
		☒ W-PCL-TQ-R	☒ W-CARB-AA (5 ml of MCAA** Buffer Solution)		128343					
		☒ W-PCB-TQ-R								
Phytoplankton/Periphyton				DTY-QN-C	PKD-QN-C	☐ Ice				
Name: Ben Paswater Kevin Grace				Signature:					Date: 05/18/2022	

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution



Site Name: Lake Beulah SW

COUNTY: POLKLAKE SIZE: SmallWBID: 1543 B

MACROPHYTE ID: _____

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)														
☐	☐	☒	☐	☒	☐	☒	☐														
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>2</u>		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	<u>2</u>	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>2</u>		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	<u>2</u>	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	<u>2</u>	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: Depth (M) <u>0.3</u> Temp. (°C) <u>30.3</u> pH (SU) <u>8.58</u> D.O. (MG/L) <u>10.56</u> D.O. Sat. (%) <u>139.7</u> Cond. (UMHO/CM) <u>106</u> Salinity (PPT) <u>.05</u> Mid-Depth: _____ Bottom: _____ Meter ID: <u>5W1</u>										Water Surface Oils: ☐ None ☐ Sheen/Slick ☐ Glob ☐ Other _____									
Sediment Type: (may check more than one) ☒ Sandy ☐ Organic fibrous (peaty, CPOM) ☒ Vegetated ☐ Sand/Silt ☐ Organic smooth (muck) ☐ Other (Specify): _____										Water Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid Color: ☒ Clear ☐ Tannic ☐ Green SECCHI (M) <u>1.0</u> Total Station Depth (M) <u>1.0</u> VOB ☒									
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										Sediment Odors: ☒ Normal ☐ Anaerobic ☐ Other (Specify): _____ Abundance: Periphyton ☐ Absent ☐ Rare ☐ Common ☒ Abundant Nuisance Plants ☐ ☐ ☐ ☒ Submersed Plants ☐ ☐ ☐ ☒ Exotic Apple Snails ☐ ☐ ☐ ☒									
Weather Conditions: <u>Sunny ~ 90°</u>																			
SAMPLING TEAM: <u>Ben Pagwater, Kevin Grace</u>										SIGNATURE: <u>Ben Pagwater</u>					DATE: <u>5/18/2022</u>				



Site Name: Lake Beulah SW

Waterbody: *Beulah*County: *Polk*Signature: *Beulah*Date: *5/18/2022*

Except where noted as sp. species level determination 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 (A-F)	3	6	9	12	Collected? (✓)	SPECIES (G-L)				Collected? (✓)
Acer rubrum		X		X		Gordonia lasianthus				
Alternanthera philoxeroides	X		X			Habenaria repens				
Andropogon sp.						Hymenachne amplexicaulis				
Azolla filiculoides (A. caroliniana)						Hydrilla verticillata		E	D	C
Baccharis sp.						Hydrocotyle sp.	X	X		
Bacopa caroliniana						Hygrophila polysperma				
Bacopa monnieri	X					*Hypericum fasciculatum				
Bidens laevis						*Hypericum hypericoides				
Bidens mitis						*Hypericum myrtifolium				
Blechnum serrulatum						Ilex cassine				
Boehmeria cylindrica						Ipomoea aquatica				
Brasenia schreberi						Ipomoea sagittata				
Cabomba caroliniana						Itea virginica				
Casuarina equisetifolia						Juncus effusus				
Centella asiatica						*Juncus marginatus				
Cephalanthus occidentalis						*Juncus megacephalus				
Ceratophyllum demersum						Juncus repens				
Chara sp.						*Juncus scirpoides				
Cladium jamaicense						Lachnanthes caroliniana				
Cliftonia monophylla						Leersia hexandra				
Colocasia esculenta						Landoltia punctata (Spirodela punctata)				
*Commelina						Lemna sp.				
Crinum americanum						Leucothoe racemosa (Eubotrys racemosa)				
*Cyperus alternifolius (C. involucratus)						Limnium spongia				
Cyperus articulatus						Limnophila sessiliflora				
Cyperus haspan	X		X			Liquidambar styraciflua	X			X
*Cyperus lecontei						*Ludwigia arcuata				
*Cyperus polystachyos						*Ludwigia leptocarpa				
*Cyperus odoratus	X			X		*Ludwigia linearis				
*Cyperus surinamensis						*Ludwigia octovalvis				
Cyrtilla racemiflora						*Ludwigia peruviana				
Decodon verticillatus						*Ludwigia repens				
Diodia virginiana						*Ludwigia				
*Echinochloa crus-galli						Luziola fluitans (Hydrochloa carolinensis)				
*Echinochloa muricatum						Lyonia lucida				
Echinochloa walteri										
Eclipta prostrata (E. alba)										
Egeria densa										
Eichhornia crassipes										
*Eleocharis baldwinii										
*Eleocharis										
Eleocharis cellulosa		X								
Eleocharis equisetoides										
Eleocharis interstincta										
*Eriocaulon compressum										
*Eriocaulon decangulare										
Eupatorium capillifolium	X		X							
*Fuirena										
Fuirena scirpoidea										

③ Hydrilla + Nuphar

⑥ Hydrilla + Eleocharis Cellulosa



Site Name: Lake Beulah SW

Date: 5/18/22

Name: Lake Beulah SW		Collected? (✓)	Collected? (✓)
SPECIES (M-P)			SPECIES (R-Z)
Magnolia virginiana			*Rhaxia
Mayaca fluviatilis			*Rhynchospora corniculata
Melaleuca quinquenervia			*Rhynchospora inundata
Micranthemum glomeratum			Rhynchospora tracyi
Micranthemum umbrosum			Ricciocarpus natans
Mikania scandens			Sabal palmetto
Mimosa pigra			Sacciolepis striata
Myrica cerifera			*Sagittaria filiformis
Myriophyllum aquaticum			*Sagittaria graminea
*Myriophyllum heterophyllum			*Sagittaria isoetiformis
*Myriophyllum laxum			Sagittaria lancifolia
*Myriophyllum pinnatum			Sagittaria latifolia
Myriophyllum spicatum			Salix caroliniana
*Najas filifolia			Salvinia minima
*Najas guadalupensis			Sambucus canadensis
*Najas minor			Sapium sebiferum
Nelumbo lutea	X		Saururus cernuus
Nitella spp.			Schinus terebinthifolius
Nuphar sp.	C		*Schoenoplectus californicus (Cali bulrush)
Nymphaea odorata			*Schoenoplectus pungens (three square)
Nymphoides aquatica			*Schoenoplectus tabernaemontani (softstem)
Nyssa sylvatica var. biflora		X	Scirpus cubensis (Oxycaryon cubense)
Orontium aquaticum			Scirpus cyperinus
Osmunda cinnamomea			*Sesbania
Osmunda regalis			Solidago sp.
Panicum hemitomon			Sparganium americanum
Panicum repens			Spartina bakeri
Paspalidium geminatum			Sphagneticola trilobata (Wedelia)
*Paspalum repens			Spirodela polyrhiza
Paspalum urvillei			Taxodium sp.
Peltandra sp.			Thalia geniculata
Persea sp.			Thelypteris palustris
Pennisetum purpureum			Triadenum virginicum
Phragmites australis			Typha sp.
Pinus elliotii			Urochloa mutica (Brachiaria mutica)
Pistia stratioides			*Utricularia gibba (U. biflora)
Pluchea sp.			*Utricularia floridana
*Polygonum glabrum (densiflorum)	X		*Utricularia foliosa
*Polygonum hydropiperoides			*Utricularia inflata
*Polygonum punctatum			*Utricularia purpurea
*Polygonum sp.			*Utricularia cornuta
Pontederia cordata	X		*Utricularia radiata
*Potamogeton diversifolius			Vallisneria americana
*Potamogeton illinoensis			*Websteria confervoides
*Potamogeton pusillus			Wolffiella spp.
*Potamogeton pectinatus			Woodwardia virginica
Proserpinaca pectinata			Xyris sp.
			Zizania aquatica
			Zizaniopsis milacea

C 9 Hydrilla D

f2 (12)^c Hydrilla and Cali Bulrush

Lake Beulah, WBID 1543B

