



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

STRATEGIC MONITORING PLAN FIELD SHEET

January 2022

Meter Passed End

of Day CCV

☒ Yes / ☐ No

WIN Station Name: LAKE AURORA AT CENTER

Date: 5/23/2023

WIN/Field ID: G4CE0234

WBID: 1573F

ENR: -

Latitude: 27.878901

County: POLK

Org ID: 21FLCEN

Longitude: -81.467266

Receiving Body of Water: -

RQ: 2023-05-22-10

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Leif Boman		☒		☒	☒
☒	Jessie Atchison	☒		☒		
☐						
☐						

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

Water Level: ☒ 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 ☐ LVI Other:
SBIO ID Numbers:		SBIO ID: 87384		MACROPHYTE ID: 12499			2412322
Notes: 85 AND CLOUDY							

Duplicate Sample

Time Zone: EST	Time:	Field ID: N/A	(WIN ID_DUP)
WIN DMT Activity ID:			

Blank

Time Zone: EST	Time: 1240	Field ID: FB_05232023	(Blank Type_DDMYYYY)
DI Source: Lab sink		Location: Boat Ramp	
DI Type: Field Blank		Equipment ID:	
DI Container (Name/ID):		DI Container Type: Butter Baby	

LIMS EVENT ID: CEN-DIST-2023-05-24-02

WIN Import ID: 41772

Enter Field Parameters, Verify Station ID In LIMS DMT: KWM 7/25/23

QC Station ID, Field Parameters In LIMS DMT: VLS 7/25/23

(Initials/Date)

(Initials/Date)

Scan/Save Field Sheets KWM 8/3/23

(Initials/Date)

Migrate Data to WIN: KWM 7/26/23

(Initials/Date)

Verify Data In WIN:

(Initials/Date)



RQ-2023-05-22-10
Customer: CEN-DIST
Project ID: STRATEGIC MONITORING PLAN

Collected By: Leif Boman, Jessie Atchison
Field Report Prepared By: Leif Boman
Sampling Agency: FDEP

Place Label Here WIN ID/Field ID: G4CE0234 Location: LAKE AURORA AT 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)
	1210 EST	8.4	109.9	29.4	7.94	0.3	3.9 ☐ VOB (S)	9.9	201.2	0.09
5/23/2023	1215	8.52	110.5	28.9	8.26	2	Central Lab please use top row for login purposes		201.2	0.09
	1217 EST	0.71	7.8	23.1	7.43	9.4			200.9	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 ☒ H2SO4*		☒ <2	1	A
		Lot #	SA3013020		Exp:	1/25/24				
Metals (P-500ML)		☒ W-ICPMS ☒ W-ICP ☒ W-HARD				☒ Ice ☒ HNO3*		☒ <2	1	A
		Lot #	NA2230040		Exp:	09/01/23				
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice			1	A
		Filter Lot #	17769663		Syringe Lot#	2298556				
Biochemical Oxygen Demand (BP-1L)		BODTEST OV-BODUNIN				☐ ICE				
Chlorophyll (BP-1L)		☒ CHLSUITE-W				☒ Ice			1	A
Physical/Aggregate (Fresh) (P-1L)		☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CI-IC / W-COLOR / W-SO4-IC / W-TDS				☒ Ice			1	A
Physical/Aggregate (Marine) (P-1L)		☐ Alkalinity / W-F / W-TSS / TURBIDITY				☐ Ice				
Macroinvertebrates (PJ-2L)		☐ MI-FW-QLDC		Formalin Lot #		☐ 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. Date		
Pesticides (BG-500ML) (BG-1L)		☒ W-E8321-DI ☒ WE8321-MS		☒ W-PSNP-TQ		☐ W-CT-CI-R		MCAA Lot#	5	A
		☐ W-PCB-TQ-R		☐ W-CARB-AA (5 ml of MCAA** Buffer Solution)		☒ W-TR-SQ-R				
Phytoplankton/Periphyton		☐ W-PCB-TQ-R		☐ PKD-QN-BV		☐ Ice				
Name: Leif Boman Jessie Atchison				Signature:				Date: 05/23/2023		

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution



RQ- 2023-05-22-10

Collected By: Leif Boman, Jessie Atchison

Customer: WQAP

Field Report Prepared By: Leif Boman, Jessie Atchison

Project ID: SMP

Sampling Agency: FDEP

BLANK



Field ID: FB 05232023

Comments:

Matrix: Field Blank

(Check one) ☐ COMPOSITE ☒ GRAB

Date

Time

DI Source: Lab sink

5/23/2023

1240

EST

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		
	Lot # _____ Exp: _____				
Metals (P-500ML)	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3	☐ <2		
	Lot # _____ Exp: _____				
Filtered Nutrients (P125ML)	☐ W-PO4-F Filter ☐ Field Filtered 0.45 µm	☐ Ice			
	Filter Lot # _____				
	Syringe Lot # _____				
Physical/Aggregate (Fresh) (P-1L)	☐ Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-IC / TDS	☐ Ice			
Physical/Aggregate (Marine) (P-1L)	☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY	☐ Ice			
Tracers (BG-500ML)	☐ W-E8321-DI ☐ W-E8321-MS	☐ Ice	MCAA Exp. Date _____		
Pesticides (BG-500ML) (BG-1L)	☐ W-E8321-DI ☐ WE8321-MS ☐ W-PSNP-TQ ☐ W-CT-CI-R	☐ Ice	MCAA Lot# _____		
	☐ W-PCL-TQ-R ☐ W-CARB-AA ☐ W-TR-SQ-R				
	☐ W-PCB-TQ-R (5 ml of MCAA** Buffer Solution)				
Name: Leif Boman Jessie Atchison		Signature:		Date: 05/23/2023	

*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: 27.878901
 COUNTY: Polk STORET #: G4CE0234 LONGITUDE: -81.467266
 DATE: 5/23/23 TIME: 1210 SAMPLING AGENCY: DEP
 SITE NAME: Lake Aurora @ Center WBID: 1573F
 FIELD ID/NAME: Lake Aurora LAKE SIZE: Small RQ: 2023-05-22-12

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>25</u>	<u>25</u>	<u>50</u>																	
Local Watershed Erosion (select one) : ☒ None ☐ Slight ☐ Moderate ☐ Heavy										Artificially Impounded											
Local Watershed NPS Pollution : ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy										☐ Yes ☒ No											
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>15</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>8</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>5</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 ☒ pH<2 ☐ No Color Sample Taken? ☒ Yes ☐ No Lot # <u>SA3013020</u> Exp. Date: <u>1/25/24</u> 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: <table border="1"> <thead> <tr> <th></th> <th>Depth (M)</th> <th>Temp. (°C)</th> <th>pH (SU)</th> <th>D.O. (MG/L)</th> <th>D.O. Sat. (%)</th> <th>Cond. (UMHO/CM)</th> <th>Salinity (PPT)</th> </tr> </thead> <tbody> <tr> <td>Top:</td> <td><u>0.3</u></td> <td><u>29.4</u></td> <td><u>7.94</u></td> <td><u>8.4</u></td> <td><u>109.9</u></td> <td><u>201.2</u></td> <td><u>0.09</u></td> </tr> <tr> <td>Mid-Depth:</td> <td><u>2.0</u></td> <td><u>28.9</u></td> <td><u>8.26</u></td> <td><u>8.52</u></td> <td><u>110.5</u></td> <td><u>201.2</u></td> <td><u>0.09</u></td> </tr> <tr> <td>Bottom:</td> <td><u>9.4</u></td> <td><u>23.1</u></td> <td><u>7.43</u></td> <td><u>0.71</u></td> <td><u>7.8</u></td> <td><u>200.9</u></td> <td><u>0.09</u></td> </tr> </tbody> </table>											Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat. (%)	Cond. (UMHO/CM)	Salinity (PPT)	Top:	<u>0.3</u>	<u>29.4</u>	<u>7.94</u>	<u>8.4</u>	<u>109.9</u>	<u>201.2</u>	<u>0.09</u>	Mid-Depth:	<u>2.0</u>	<u>28.9</u>	<u>8.26</u>	<u>8.52</u>	<u>110.5</u>	<u>201.2</u>	<u>0.09</u>	Bottom:	<u>9.4</u>	<u>23.1</u>	<u>7.43</u>	<u>0.71</u>	<u>7.8</u>	<u>200.9</u>	<u>0.09</u>	Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid Color: ☒ Clear ☐ Tannic ☐ Green SECCHI (M) <u>3.9</u> Total Station Depth (M) <u>9.9</u> VOB ☐									
	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat. (%)	Cond. (UMHO/CM)	Salinity (PPT)																																												
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Sediment Type: (may check more than one) ☒ Sandy ☐ Organic fibrous (peaty, CPOM) ☐ Vegetated ☐ Sand/Silt ☐ Organic smooth (muck) ☐ Other (Specify): _____ Sample Taken? ☐ Yes ☒ No										Sediment Odors: ☒ Normal ☐ Anaerobic ☐ Other (Specify): _____																																									
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: <table border="1"> <thead> <tr> <th></th> <th>Absent</th> <th>Rare</th> <th>Common</th> <th>Abundant</th> </tr> </thead> <tbody> <tr> <td>Periphyton</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Nuisance Plants</td> <td>☐</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Submersed Plants</td> <td>☐</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Exotic Apple Snails</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> </tbody> </table>											Absent	Rare	Common	Abundant	Periphyton	☐	☒	☐	☐	Nuisance Plants	☐	☐	☒	☐	Submersed Plants	☐	☐	☒	☐	Exotic Apple Snails	☒	☐	☐	☐							
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Submersed Plants	☐	☐	☒	☐																																															
Exotic Apple Snails	☒	☐	☐	☐																																															
Weather Conditions: <u>85 & cloudy</u>										Additional Notes: <u>Native apple snails observed.</u>																																									
SAMPLING TEAM: <u>Jessie Atchison & Leif Boman</u>										SIGNATURE: _____ DATE: <u>5/23/23</u>																																									

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Lake Aurora</u>		County: <u>Polk</u>		Date: <u>5/23/23</u>							
Analyst: <u>Jessie Atchison & Leif Boman</u>		Signature: <u>Jessie Atchison</u>		STORET: <u>04CE0234</u>							
Except where noted as "sp." species level identification required. *Genera that may require lab verification* Plants in bold = FLEPPC invasive exotic.				Lake units sampled (circle one group): 1, 4, 7, 10 <u>2, 5, 8, 11</u> 3, 6, 9, 12							
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.											
SPECIES	2	5	8	11	Collected? (✓)	SPECIES	2	5	8	11	Collected? (✓)
Acer rubrum						Fuirena scirpoides	<u>C</u>	<u>C</u>	<u>C</u>	<u>D</u>	<u>(11)</u>
Alternanthera philoxeroides						Gordonia lasianthus					
Amaranthus australis						Habenaria repens					
Andropogon sp.						Hibiscus coccineus					
Azolla filiculoides (A. caroliniana)						Hibiscus grandiflora					
Baccharis sp.						Hydrilla verticillata					
Bacopa caroliniana						Hydrocotyle sp.	<u>/</u>	<u>/</u>			
Bacopa monnieri						Hygrophila polysperma					
Bidens alba						Hymenocallis sp.					
Bidens laevis						*Hypericum fasciculatum					
Bidens mitis						*Hypericum hypericoides					
Blechnum serrulatum						*Hypericum myrtifolium					
Boehmeria cylindrica						Ilex cassine					
Brasenia schreberi						Ipomoea aquatica					
Cabomba caroliniana						Ipomoea sagittata					
Canna						Itea virginica					
Centella asiatica						Juncus effusus					
Cephalanthus occidentalis						*Juncus marginatus					
Ceratophyllum demersum						*Juncus megacephalus					
Chara sp.	<u>/</u>					Juncus repens					
Cladium jamaicense						*Juncus scirpoides					
Colocasia esculenta						Lachnanthes caroliniana					
*Commelina						Leersia hexandra					
Crinum americanum						Landoltia punctata (Spirodela punctata)					
*Cyperus alternifolius (C. involucratus)						Lemna sp.					
Cyperus articulatus						Leucothoe racemosa (Eubotrys racemosa)					
Cyperus haspan						Limnium spongia					
*Cyperus lecontei						Limnophila sessiliflora					
*Cyperus polystachyos						Liquidambar styraciflua					
*Cyperus odoratus						*Ludwigia arcuata					
*Cyperus surinamensis						*Ludwigia grandiflora					
Cyrilla racemiflora						*Ludwigia hexapetala					
Decodon verticillatus						*Ludwigia leptocarpa	<u>/</u>			<u>/</u>	
Diodia virginiana						Ludwigia (native)					
*Echinochloa crus-galli						*Ludwigia octovalvis	<u>/</u>	<u>/</u>	<u>/</u>	<u>/</u>	
*Echinochloa muricatum						*Ludwigia peruviana	<u>/</u>			<u>/</u>	
Echinochloa walteri						*Ludwigia repens					
Eclipta prostrata (E. alba)						Ludwigia suffruticosa					
Eichhornia crassipes						Luziola fluitans (Hydrochloa carolinensis)					
*Eleocharis						Magnolia virginiana					
Eleocharis cellulosa						Mayaca fluviatilis	<u>/</u>				
*Eleocharis elongata						Melaleuca quinquenervia	<u>/</u>	<u>/</u>	<u>/</u>		
Eleocharis equisetoides						Micranthemum glomeratum					
Eleocharis interstincta						Micranthemum umbrosum					
Eleocharis submersed viviparous						Mikania scandens					
*Eriocaulon compressum						Mimosa pigra					
*Eriocaulon decanulare						Myrica cerifera	<u>/</u>			<u>/</u>	
Eupatorium capillifolium	<u>/</u>										
Fraxinus											

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: <u>Lake Aurora</u>					Date: <u>5/23/23</u>				
SPECIES	2	5	8	Collected? (✓)	SPECIES	2	5	8	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				(1)
*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 polyrrhiza				
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 foliosa				
Persea sp.					*Utricularia gibba (U. biflora)				
Pennisetum purpureum					*Utricularia inflata				
Phragmites australis					*Utricularia purpurea	/			
Pinus elliotii					*Utricularia radiata				
Pistia stratioides					*Utricularia resupinata	/	/		(5)
Pluchea sp.					Vallisneria americana				
*Polygonum glabrum (densiflorum)					Vigna luteola				
Polygonum hirsutum					Vitis sp.				
*Polygonum hydropiperoides					*Websteria confervoides				
*Polygonum punctatum					Wedelia trilobata (Sphagneticola trilobata)		/	/	
*Polygonum					Wolffiella spp.				
Pontederia cordata					Woodwardia virginica				
*Potamogeton diversifolius					Xyris sp.				
*Potamogeton illinoensis					Zizania aquatica				
*Potamogeton pusillus					Zizaniopsis milacea				
*Potamogeton pectinatus (Stuckenia pectinatus)					<u>Casuarina equisetifolia</u>		/		
Proserpinaca pectinata									
*Rhexia									
*Rhynchospora comiculata									
*Rhynchospora inundata									
Rhynchospora nitens									
Ricciocarpus natans									
Sabal palmetto									
Sacciolepis striata									
*Sagittaria filiformis									
*Sagittaria graminea									
*Sagittaria isoetiformis									
Sagittaria lancifolia	/	/	/	/					
Sagittaria latifolia									

LVI Map for WBID 1573F, Lake Aurora

