



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV
Yes / No

WIN Station Name:		HOLDENS POND CENTER				Sample Date:		5/31/2023	
WIN / Field ID:	G3NE0003	ORG ID:	21FLA	ENR:		Latitude:	29.56503		
County:	ALACHUA	WBID:	2713C	LAKE	3F	Longitude:	-82.06161		
Receiving Body of Water:						-	RQ-	2023-05-29-15	

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Jeremy Parrish					
Katherine Halbert					

Sampling Equipment			
☒	Sample Container		Carboy
	Dipper		Van Dorn
	Syringe	☒	Pole
Syringe Lot#		Filter Lot#	
Secchi Equipment ID:		D#4	
Collection Method			
	Wading		Canoe/Kayak
	From Shore		Electric Motor
		☒	Gasoline Motor
Depth Measured With Meter			

Water Level:	Normal
Flow:	NA
Matrix:	Fresh
Tide Stage:	
High Tide:	
Low Tide:	
Photos:	Yes
Meter ID:	Bruce
Depth Gauge ID:	depth_gauge

Time Zone	Time	Total Depth (m)	Sample Depth (m)	DO (mg/L)	DO (%SAT)	Temp. (°C)	pH	Secchi Disk (m)	Sp COND (µmhos/cm)	Salinity (PPT)
EST	1035	2.86	0.3	10.46	130.6	26.7	6.84	0.6	53.4	0.02
	1039		2	3.28	39.3	24.4	5.55		55.1	0.02
	1036		2.36	0.28	3.3	24.1	5.36		55.4	0.02

Biological Samples Collected:

LVI

SBIO Visit ID:

HA ID:

RPS ID:

Macrophyte ID:

LIMS Sample ID Entered

Into The Macrophyte Module:

Parameter Suite	Parameter Methods (LIMS Test Codes)			Preservation			
				Type	Lot#	Expiration Date	pH Check
Microbiology							
Chlorophyll	CHLSUITE-W			ICE			
Physical/Aggregate	ALKALINITY, TURBIDITY, W-F, W-TSS			ICE			
Nutrients	W-CL-IC, W-COLOR, W-SO4-IC, W-TDS			ICE			
Filtered Nutrients	W-PO4-F	Field Filtered 0.45 µm Filter		ICE	Syringe Lot#; Filter Lot#:		
Acid Preserved Nutrients	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP			ICE	H2SO4*	SA2229010	08/30/23
Metals	W-ICPMS	W-ICP	W-HARD	ICE	HNO3**	NA2230040	09/01/23
Organics (LC)	W-E8321-DIW-E8321-DI	W-E8321-MSW-E8321-MS		Ice			
Macroinvertebrates							
Organics (GC)	W-PSNP-TQ	W-TR-SQ-R		Ice	*2.0 ml of H2SO4 Used Unless Noted Otherwise **2.0 ml of HNO3 Used Unless Noted Otherwise		
Molecular							
Periphyton							
Phytoplankton							
BOD							
DOC					SyringeLot#		FilterLot#
Other(s)							
Field Comments:							
Comments on COC:							
Relinquish Date:	05/31/2023	Signature:					

LIMS EVENT ID: WIN Import ID:

Enter Field Parameters, Verify Station ID In LIMS DMT: (Initials/Date)

QC Station ID, Field Parameters In LIMS DMT: (Initials/Date)

Save Field Sheets on Network: KH 05/31/2023 (Initials/Date)

Migrate Data to WIN: (Initials/Date)

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Holden Pond Center</u>		County: <u>Alachua</u>		Date: <u>05/31/23</u>							
Analyst: <u>Jeremy Parrish</u>		Signature: <u>Jeremy Parrish</u>		STORET: <u>63160003</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 2, 5, 8, 11 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	1	4	7	10	Collected? (✓)	SPECIES	1	4	7	10	Collected? (✓)
Acer rubrum						Habenaria repens					
✓ Alternanthera philoxeroides	P	P	P	P		Hydrilla verticillata					
Andropogon sp.	P	P	P	P		Hydrocotyle sp.	P	P	P		
Azolla filiculoides (A. caroliniana)						Hygrophila polysperma					
Baccharis sp.						*Hypericum fasciculatum					
Bacopa caroliniana						*Hypericum hypericoides					
Bacopa monnieri						*Hypericum myrtifolium					
Bidens laevis	P	P	P	P		Ilex cassine	P				
Bidens mitis						Ipomoea aquatica					
Blechnum serrulatum <u>U</u>						Ipomoea sagittata					
Boehmeria cylindrica						Itea virginica					
Brasenia schreberi						Juncus effusus					
Cabomba caroliniana						*Juncus marginatus				P	
Casuarina equisetifolia						*Juncus megacephalus					
Centella asiatica						Juncus repens					
Cephalanthus occidentalis	P	P	P	P		*Juncus scirpoides				P	
✓ Ceratophyllum demersum	P	P	P	P		Lachnanthes caroliniana					
Chara sp.						Leersia hexandra					
Cladium jamaicense	P	P	P	P		Landoltia punctata (Spirodela punctata)					
Cliftonia monophylla						Lemma sp.	P	P	P	P	
Colocasia esculenta	P	P	P	P		Leucothoe racemosa (Eubotrys racemosa)					
*Commelina						Limnium spongia					
Crinum americanum						Limnophila sessiliflora					
*Cyperus alternifolius (C. involucrat)						Liquidambar styraciflua					
Cyperus articulatus						*Ludwigia arcuata					
Cyperus haspan						✓ Ludwigia leptocarpa				P	P
*Cyperus lecontei						*Ludwigia linearis					
*Cyperus polystachyos						*Ludwigia octovalvis					
*Cyperus odoratus						*Ludwigia peruviana					
*Cyperus surinamensis						*Ludwigia repens					
Cyrtilla racemiflora						*Ludwigia <u>sp. (umbellata)</u>					
Decodon verticillatus	P		P	P		Luziola fluitans (Hydrochloa carolinensis)					
Diodia virginiana						Lyonia lucida					
*Echinochloa crus-galli						Magnolia virginiana					P
*Echinochloa muricatum						Mayaca fluviatilis					
Echinochloa walteri			P			Melaleuca quinquenervia					
Eclipta prostrata (E. alba)						Micranthemum glomeratum					
Egeria densa						Micranthemum umbrosum					
Eichhornia crassipes						Mikania scandens				P	
*Eleocharis baldwinii			P			Mimosa pigra					
*Eleocharis						Myrica cerifera					
Eleocharis cellulosa						<u>Aldelandia uniflora</u>				P	
Eleocharis equisetoides											
Eleocharis interstincta											
*Eriocaulon compressum											
*Eriocaulon decangulare											
Eupatorium capillifolium											
*Fuirena											
Fuirena scirpoidea											
Gordonia lasianthus											

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site:					Date:						
SPECIES	1	4	7	10	Collected? (✓)	SPECIES	1	4	7	10	Collected? (✓)
Myriophyllum aquaticum			P			Salix caroliniana	P	P	P		
*Myriophyllum heterophyllum						Salvinia minima	P	P	P	P	
*Myriophyllum laxum						Sambucus canadensis					
*Myriophyllum pinnatum						Sapum 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)	P	P	P	P	
Nuphar sp.		P		P		Scirpus cyperinus					
Nymphaea odorata						*Sesbania					
Nymphoides aquatica		P	P			Solidago sp.					
Nyssa sylvatica var. biflora					P	Sparganium americanum					
Orontium aquaticum						Spartina bakeri					
Osmunda cinnamomea						Spirodela polyrrhiza	P	P	P	P	
Osmunda regalis						Taxodium sp.					
Panicum hemitomon						Thalia geniculata					
Panicum repens						Thelypteris palustris					
Paspalidium geminatum						Triadenum virginicum					
*Paspalum repens						Typha sp.	P	P	P	P	
Paspalum urvillei						Urochloa mutica (Brachiaria mutica)					
Peltandra sp.						*Utricularia gibba (U. biflora)					
Persea sp.						*Utricularia floridana					
Pennisetum purpureum						*Utricularia foliosa					
Phragmites australis						*Utricularia inflata					
Pinus elliotii						*Utricularia purpurea					
Pistia stratioides		P			P	*Utricularia cornuta					
Pluchea sp.						*Utricularia radiata					
*Polygonum glabrum (densiflorum)		D	D	D	D	Vallisneria americana					
*Polygonum hydropiperoides						*Websteria confervoides					
*Polygonum punctatum						Wedelia trilobata (Sphagnetocola trilobata)					
*Polygonum						Wolffiella spp.	P	P	P	P	
Pontederia cordata		P	P	P	P	Woodwardia virginica					
*Potamogeton diversifolius						Xyris sp.				P	
*Potamogeton illinoensis						Zizania aquatica					
*Potamogeton pusillus						Zizaniopsis milacea					
*Potamogeton pectinatus (Stuckenia pectinatus)											
Proserpinaca pectinata											
*Rhexia											
*Rhynchospora corniculata											
*Rhynchospora inundata											
Rhynchospora tracyi											
Ricciocarpus natans											
Sabal palmetto											
Sacciolepis striata		P	P	P							
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia		P	P	P	P						
Sagittaria latifolia			P	P							

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: _____
COUNTY: Alachua STORET #: G3NE0003 LONGITUDE: _____
DATE: 5/31/2023 TIME: 1035 SAMPLING AGENCY: _____
SITE NAME: Holden Pond WBID: _____ RQ: _____
FIELD ID/NAME: _____ LAKE SIZE: _____

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: _____													
☐	☐	☐	☐	☐	☐	☐	☐	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		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>13</u>		20	19	18	17	16	15	14	<u>13</u>	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>15</u>		20	19	18	17	16	<u>15</u>	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>15</u>		20	19	18	17	16	<u>15</u>	14	13	12	11	10	9	8	7	6	5	4	3	2	1

WATER / SUBSTRATE / BIOLOGICAL: SAMPLES AND OBSERVATIONS

Water:										Water Odors:	
Nutrient Sample Taken? ☒ Yes ☐ No Preserved? ☒ Yes ☐ No pH < 2 ☐ No										☒ Normal	
Color Sample Taken? ☒ Yes ☐ No Lot # _____ Exp. Date: _____										☐ Sewage ☐ Petroleum ☐ Other _____	
Alkalinity Sample Taken? ☒ Yes ☐ No										Water Surface Oils: ☒ None	
Water Level ☐ Low ☒ Normal ☐ High										☐ Sheen/Slick ☐ Glob ☐ Other _____	
Meter	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat. (%)	Cond. (UMHO/CM)	Salinity (PPT)	Clarity:		Color:	
Readings:								☐ Clear		☐ Clear	
Top:	<u>0.3</u>	<u>26.8</u>	<u>6.84</u>	<u>10.46</u>	<u>130.6</u>	<u>53.4</u>	<u>0.02</u>	☐ Opaque ☒ Turbid		☐ Tannic ☒ Green	
Mid-Depth:	<u>2</u>	<u>24.4</u>	<u>5.55</u>	<u>3.28</u>	<u>39.3</u>	<u>55.1</u>	<u>0.02</u>	☐ Slightly Turbid			
Bottom:	<u>2.36</u>	<u>24.1</u>	<u>5.36</u>	<u>0.28</u>	<u>3.3</u>	<u>55.4</u>	<u>0.02</u>				
Meter ID: _____								SECCHI (M) <u>0.6</u>		Total Station Depth (M) <u>2.36</u>	
Sediment Type: (may check more than one)								Sediment Odors:			
☐ Sandy ☒ Organic fibrous (peaty, CPOM) ☐ Vegetated								☐ Normal ☐ Other (Specify): _____			
☐ Sand/Silt ☐ Organic smooth (muck) ☐ Other (Specify): _____								☒ Anaerobic			
Biological Communities:								Abundance:		Additional Notes:	
LVI Conducted? ☒ Yes ☐ No								Absent Rare Common Abundant		<u>Green Algae in water column</u>	
Phytoplankton Sample Taken? ☐ Yes ☒ No								Periphyton ☒ ☐ ☐ ☐			
Sample Preserved? ☐ Yes ☒ No								Nuisance Plants ☐ ☒ ☒ ☐			
Lot #: _____ Exp. Date: _____								Submersed Plants ☐ ☒ ☐ ☐			
Algal Bloom/Algal ID Sample Taken? Yes ☒ No ☐								Exotic Apple Snails ☒ ☐ ☐ ☐			
Active Vegetation Mgmt? ☒ Yes ☐ No ☐ Don't Know											
Weather Conditions:											

SAMPLING TEAM: Jeremy Pann

SIGNATURE: Jeremy Pann

DATE: 5/31/23

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

STORET STATION NUMBER: 03NE0003		DATE (M/D/Y) 5/31/23		LAKE NAME Holdens Pond Center		FIELD ID / NAME:	
ECO-REGION:		COUNTY: Alachua		SAMPLING LOCATION/DESCRIPTION:		LAKE SIZE:	
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	
		Poor					
Secchi		Secchi > 3 m Or VOB		Secchi (m)		Secchi (m)	
6		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6	
		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6	
Vegetation Quality		Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa 13		Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants 13		Large masses (21%-40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats 6	
		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6	
Stormwater Inputs		Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation 13		Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place 13		Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place 6	
		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6	
Bottom Substrate Quality		Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present 10		Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present 10		Moderate layer of CPOM/mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom 10	
		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6	
Lakeside Adverse Human Alterations		Very few man-made structures, roads, or other disturbance adjacent to lake (<10%) 15		Moderate disturbance visible (structures, roads or other), 10%-49% lakeside affected 15		Many structures, roads or other human disturbance visible (50%-70%) lakeside affected 6	
		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6	
Upland Buffer Zone		Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer 15		89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer 15		50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer 6	
		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6	
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 13					
		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6	
TOTAL SCORE		85		COMMENTS:			

ANALYSIS DATE: 05/31/2023	ANALYST: Jeremy Parnin	SIGNATURE: Jeremy Parnin
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