FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter Passed End of Day CCV: (Yes) / No

WIN Station Name:	Lake Rachard @ Center					**Sample Date:**	8/8/2022
WIN / Field ID:	G4SD0164	**ORG ID:**	21FLFTM	**ENR:**		**Latitude:**	27.30414
County:	Highlands	**WBID:**	1938I	LAKE	3F	**Longitude:**	-81.36891
Receiving Body of Water:	Lake Istokpoga					**RQ-**	2022-08-08-67

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Nicole Reistad		x		x	x
Thomas Baker	x		x		

Sampling Equipment					
x	Sample Container			Carboy	
	Dipper			Van Dorn	
	Syringe			Pole	
Syringe Lot#	*1363442*		**Filter Lot#**	*17441866*	
Secchi Equipment ID:	*3312A*				

Collection Method			
	Wading	x	**Canoe/Kayak**
	From Shore		**Electric Motor**
			Gasoline Motor
Depth Measured With	*Sonar*		

Water Level:	*Normal*
Flow:	*NA*
Matrix:	*Fresh*
Tide Stage:	
High Tide:	
Low Tide:	
Photos:	*Yes*
Meter ID:	*President Camacho*

Time Zone	Time	Total Depth (m)	Sample Depth (m)	DO (mg/L)	DO (%SAT)	Temp. (ºC)	pH	Secchi Disk (m)	Sp COND (µmhos/cm)	Salinity (PPTh)
EST	950	14.4	0.3	8.34	111.9	30.8	8.55	2.5	154.3	0.07
	952		2	8.34	111.7	30.8	8.58		154.2	0.07
	954		10	0.31	3.4	19.4	6.82		177.7	0.08

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 Nutrients	**ALKALINITY, TURBIDITY, W-F, W-TSS**			**ICE**				
	W-CL-IC, W-COLOR, W-SO4-IC, W-TDS			**ICE**				
Filtered Nutrients	**W-PO4-F**	**Field Filtered 0.45 µm Filter**		**ICE**				
Acid Preserved Nutrients	**W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP**			**ICE**	**H2SO4***	*132683*	*12/18/22*	*H2SO4 pH<2*
Metals	**W-ICPMS**	**W-ICP**	**W-HARD**	**ICE**	**HNO3****	NA1286110	11/16/22	HNO3 pH<2
Organics (LC)	**W-E8321-DI**	**W-E8321-MS**		**Ice**				
Macroinvertebrates								
Organics (GC)				**Ice**				
	W-PSNP-TQ	**W-TR-SQ-R**						
Molecular								
Periphyton								
Phytoplankton								
BOD								
Other(s)								

*2.0 ml of H2SO4 Used Unless Noted Otherwise
**2.0 ml of HNO3 Used Unless Noted Otherwise

Field Comments:			
Comments on COC:			
Relinquish Date:	08/08/2022	**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: _____ (Initials/Date)

Migrate Data to WIN: _____ (Initials/Date)

Visit ID: 85126 LimsID: 2347434 Macro ID: 12237

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: 27.3044

COUNTY: Highlands STORET #: NA LONGITUDE: -81.36891

DATE: 08/08/22 TIME: 0950 SAMPLING AGENCY: FDEP-SROC

SITE NAME: GASD016A WBID: 1938I

FIELD ID/NAME: Lake Lachard @ Center LAKE SIZE: Small RQ: 2022-08-08-67

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)
25%		60%		15%			

LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI: _____

Local Watershed Erosion (select one) : [X] None [ ] Slight [ ] Moderate [ ] Heavy

Local Watershed NPS Pollution : [X] No evidence [ ] Slight [ ] Moderate [ ] Heavy

Artificially Impounded [ ] Yes [X] No

Land Use Source & Year:

STORMWATER INPUTS 20	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 15	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) 15%					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 14	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 85%					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? [X] Yes [ ] No Preserved? [X] Yes [X] pH<2 [ ] No

Color Sample Taken? [X] Yes [ ] No Lot # 132683 Exp. Date: 12/18/22

Alkalinity Sample Taken? [X] Yes [ ] No

Water Level [ ] Low [X] Normal [ ] High

Water Odors: [X] Normal [ ] Sewage [ ] Petroleum [ ] Other _____

Water Surface Oils: [X] 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	30.8	8.55	8.34	111.9	154.3	0.07
Mid-Depth:	2	30.8	8.56	8.34	111.7	154.2	0.07
Bottom :	10	14.4	6.82	0.31	3.4	177.7	0.08

Meter ID: PRESIDENT CAMACHO

Clarity: [X] Clear [ ] Opaque [ ] Turbid [ ] Slightly Turbid

Color: [ ] Clear [ ] Tannic [X] Green

SECCHI (M) 2.5 VOB [ ]

Total Station Depth (M) 14.4

Sediment Type: (may check more than one) Sample Taken? [ ] Yes [X] No

[ ] Sandy [ ] Organic fibrous (peaty, CPOM) [ ] Vegetated

[X] Sand/Silt [ ] Organic smooth (muck) [ ] Other (Specify): _____

Sediment Odors: [X] Normal [ ] Other (Specify): [ ] Anaerobic _____

Biological Communities:

LVI Conducted? [X] Yes [ ] No

Phytoplankton Sample Taken? [ ] Yes [X] No

Sample Preserved? [ ] Yes [X] No

Lot #: _____ Exp Date: _____

Algal Bloom/Algal ID Sample Taken? Yes (No)

Active Vegetation Mgmt? [ ] Yes [ ] No [X] Don't Know

Abundance:

	Absent	Rare	Common	Abundant
Periphyton	[ ]	[ ]	[ ]	[✓]
Nuisance Plants	[ ]	[ ]	[✓]	[ ]
Submersed Plants	[X]	[ ]	[ ]	[ ]
Exotic Apple Snails	[ ]	[✓]	[✓]	[ ]

Additional Notes:

Weather Conditions :

Sunny

SAMPLING TEAM: NICOLE REISTAD, THOMAS BAKER SIGNATURE: _____ DATE: 08/08/22

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Lake Lachard/Rachard | County: Highlands | Date: 08/08/22

Analyst: NICOLE REISTAD, THOMAS BAKER | Signature: | STORET: GASDOL04

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					
Andropogon sp.					
Azolla filiculoides (A. caroliniana)					
Baccharis sp.					
Bacopa caroliniana					
Bacopa monnieri					
Bidens laevis					
Bidens mitis					
Blechnum serrulatum					
Boehmeria cylindrica					
Brasenia schreberi					
Cabomba caroliniana					
Casuarina equisitifolia					
Centella asiatica					
Cephalanthus occidentalis			✓	✓	
Ceratophyllum demersum					
Chara sp.					
Cladium jamaicense					
Cliftonia monophylla					
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)					
Egeria densa					
Eichhornia crassipes					
*Eleocharis baldwinii					
*Eleocharis					
Eleocharis cellulosa					
Eleocharis equisetoides					
Eleocharis interstincta					
*Eriocaulon compressum					
*Eriocaulon decangulare					
Eupatorium capillifolium		✓		✓	
*Fuirena					
Fuirena scirpoidea					
Gordonia lasianthus					

SPECIES	3	6	9	12	Collected? (√)
Habenaria repens					
Hydrilla verticillata		✓			
Hydrocotyle sp.					
Hygrophila polysperma					
*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 leptocarpa					
*Ludwigia linearis					
*Ludwigia octovalvis		✓			
***Ludwigia peruviana**			✓		
*Ludwigia repens					
*Ludwigia					
Luziola fluitans (Hydrochloa carolinensis)					
Lyonia lucida					
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: Lake Lachard / Bachard

Date: 08/08/22

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 odorata					
Nymphoides aquatica					
Nyssa sylvatica var. biflora					
Orontium aquaticum					
Osmunda cinnamomea					
Osmunda regalis					
Panicum hemitomon		D			
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 hydropiperoides					
*Polygonum punctatum					
*Polygonum _____					
Pontederia cordata					
*Potamogeton diversifolius					
*Potamogeton illinoensis					
*Potamogeton pusillus					
*Potamogeton pectinatus (Stuckenia pectinatus)					
Proserpinaca pectinata					
*Rhexia _____					
*Rhynchospora corniculata					
*Rhynchospora inundata					
Rhynochospora tracyi					
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					
Saururus cernuus					
Schinus terebinthifolius	✓	✓		✓	
*Schoenoplectus californicus					
*Schoenoplectus pungens					
*Schoenoplectus tabernaemontani (Scirpus validus)					
Scirpus cubensis (Oxycaryon cubense)					
Scirpus cyperinus					
*Sesbania _____					
Solidago sp.					
Sparganium americanum					
Spartina bakeri					
Spirodela polyrhiza					
Taxodium sp.					
Thalia geniculata					
Thelypteris palustris					
Triadenum virginicum					
Typha sp.	E	✓	C	D	
Urochloa mutica (Brachiaria mutica)					
*Utricularia gibba (U. biflora)					
*Utricularia floridana					
*Utricularia foliosa					
*Utricularia inflata					
*Utricularia purpurea					
*Utricularia cornuta					
*Utricularia radiata					
Vallisneria americana					
*Websteria confervoides					
Wedelia trilobata (Sphagneticola trilobata)					
Wolffiella spp.					
Woodwardia virginica					
Xyris sp.					
Zizania aquatica					
Zizaniopsis milacea					
Urena lobata		✓			
Anona glabra		✓			
Blechnum serrulatum (Telmatoblechnum)			✓	✓	
Quercus virginiana				✓	
wild coffee				✓	