

LVI

Site Name Secret Lake

Sample Date 7/2/19

WBID 2994I

WIN ID G2CE0211

RQ 2019-06-03-46

	Initial/Date	QC Initial/Date
Water chemistry data to LIMS	LMD 7/5/19	MKL 7/15/19
Create SBIO station visit 79911	LMD 7/5/19	n/a
Vascular Entry (add LIMS ID)	LMD 7/5/19	MKL 7/15/19
Lake Observation Sheet Entry	LMD 7/5/19	MKL 7/15/19
Authorize SBIO data	MKL 7/15/19	n/a
Scan all sheets to 21FLCEN folder	LMD 8/19/19	n/a
LIMS/WIN migration		n/a
File in cabinet		n/a

Comments/notes:

* This packet also contains F.S.^{is} (WR) for
G2CE0009 + G2CE0204



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: Secret Lake @ Center

Date: 07/02/2019

WIN/ Field ID: G2CE0211

WBID: 2994I

Latitude: 28.673932

(mm/dd/yyyy)

County: Seminole

ORG ID: 21FLCEN

Longitude: -81.328406

(Decimal Degrees)

Receiving Body of Water: _____

RQ-2019- 06-03-46

(Decimal Degrees)

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Mike Linger					☒	☒	☒	☒	☒
Mike Drennan					☒	☒	☒	☒	☒

Sampling Equipment									
☒ Sample Container	☐ Van Dorn	☐ Pole							
☐ Carboy	☒ Syringe								
☐ Dipper	☐ Other								
Depth Measured with <u>Secchi Disk Line / Meter</u>									
Equipment ID <u>Leadfoot, Knochhead, Crusty/Bucket, Mucky/Trap</u>									

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

Water Level: <u>Dry</u> / Pooled / Low / <u>Normal</u> / High / Flooded		Meter ID# <u>Shrimp Trap</u>	Matrix: <u>Fresh</u> / Marine / DI
Photos: <u>Yes</u> / No	Flow: No Flow / Intestinal / Flowing / <u>NA</u>	Tide: Rising / Falling / Slack / <u>NA</u>	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	1048	4.2	0.3	1.0	9.90	135.5	8.70	0.09	192.2	31.9
GEN			3.7		0.25	3.3	7.08	0.09	195.3	28.9

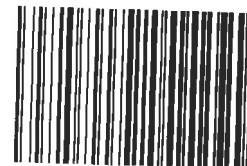
Biological Samples Collected: None <u>HA</u> SCI RPS Algae ID LVS <u>EVI</u> Other:									
SBIO ID Numbers: SBIO-ID: <u>79911</u> HA-ID: <u>16124</u> RPS-ID: _____ Macrophyte-ID: <u>11406</u> LIMS#: <u>2100372</u>									

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>SA7163030</u>	<u>10/30/19</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	H2SO4 LOT# SA7163030 EXP: 10/30/2019 Place Preservative Sticker(s) Here (If Available)		
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-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:

WIN ID / Field ID →

Secret Lake @ Center



G2CE0211

Signature: [Signature]

Date: 7/2/19

LIMS EVENT ID: CENT-DIST-2019-07-03-01

Enter Field Parameters, Verify Station ID in LIMS DMT: MD 7/5/19

QC Station ID, Field Parameters in LIMS DMT: MKL 7/5/19

Scan/Save Field Sheets MD 8/19/19

Migrate Data to WIN: _____

Verify Data in WIN: _____

(Initials/Date)

(Initials/Date)

(Initials/Date)

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

STORET STATION NUMBER: 02CE0211	DATE (M/D/Y) 7/2/19	LAKE NAME Secret Lake	FIELD ID / NAME: 02CE0211
ECO-REGION:	COUNTY: Seminole	SAMPLING LOCATION/DESCRIPTION: @ Center	LAKE SIZE: 7.4 Acres
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
Secchi	Secchi >3 m Or VOB	3 2.6 2.2 1.8 1.4	1.0 0.9 0.8 0.7 0.6
Vegetation Quality	Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa ☒	Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants	Large masses (21%-40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats
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
Bottom Substrate Quality	Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present ☒	Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present	Moderate layer of CPOM/mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom
Lakeside Adverse Human Alternations	Very few man-made structures, roads, or other disturbance adjacent to lake (<10%) ☒	Moderate disturbance visible (structures, roads or other), 10%-49% lakeside affected	Many structures, roads or other human disturbance visible (50%-70%) lakeside affected
Upland 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
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 ☒		

TOTAL SCORE 56	COMMENTS:
ANALYSIS DATE: 7/2/19	ANALYST: Mike Linger / Mike Drannen
SIGNATURE: 	

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 79911 MACROPHYTE ID: 11406 LATITUDE: 28.673932
 COUNTY: Seminole STORET #: 62CE0211 LONGITUDE: -81.328406
 DATE: 07/02/2019 TIME: 1048 SAMPLING AGENCY: FDEP-CEPAC
 SITE NAME: Secret Lake @ Center WBID: 29941
 FIELD ID/NAME: 62CE0211 LAKE SIZE: 7.4 Acres RQ: 2019-06-03-46

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS):					Recreational Park Other (Specify)		LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer)	
Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industrial	Other (Specify)	LDI: <u> </u>
<u>5</u>				<u>60</u>			<u>35</u>	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>11</u>		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 <u>4</u>		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)
		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6		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		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
		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 ☐ No pH<2 ☐ No Color Sample Taken? ☒ Yes ☐ No Lot # <u>SA7163030</u> Exp. Date: <u>10/30/19</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: Top: <u>0.3</u> <u>31.9</u> <u>8.70</u> <u>9.90</u> <u>135.5</u> <u>192.2</u> <u>0.09</u> Mid-Depth: <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> Bottom: <u>3.7</u> <u>28.9</u> <u>7.08</u> <u>0.25</u> <u>3.3</u> <u>195.3</u> <u>0.09</u>		Clarity: ☐ Clear ☐ Opaque ☐ Turbid ☒ Slightly Turbid		Color: ☐ Clear ☐ Tannic ☒ Green							
Meter ID: <u>Shrimp Trap</u>		SECCHI (M) <u>1.0</u>		Total Station Depth (M) <u>4.2</u>							
Sediment Type: (may check more than one) ☒ Sandy ☒ Organic fibrous (peaty, CPOM) ☐ Sand/Silt ☐ Organic smooth (muck)		Sample Taken? ☐ Yes ☒ No ☐ Vegetated ☐ Other (Specify): _____		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: Absent Rare Common Abundant Periphyton ☐ ☐ ☒ ☐ Nuisance Plants ☐ ☐ ☒ ☐ Submersed Plants ☐ ☐ ☒ ☐ Exotic Apple Snails ☐ ☒ ☐ ☐		Additional Notes:							
Weather Conditions: <u>upper 90's clear</u>											
SAMPLING TEAM: <u>Mike Linger / Mike Drannen</u>			SIGNATURE: <u>[Signature]</u>		DATE: <u>7/2/19</u>						

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Secret lake</u>		County: <u>Seminole</u>		Date: <u>7/2/19</u>							
Analyst: <u>Linger/Drennan</u>		Signature: <u>[Signature]</u>		STORET: <u>GZCE0211</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): <u>1, 4, 7, 10</u> 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	/	/	/	/		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 <u>diffusa</u>	/	/	/	/		Landoltia punctata (Spirodela punctata)					
Crinum americanum						Lemna sp.					
*Cyperus alternifolius (C. involucratus)						Leucothoe racemosa (Eubotrys racemosa)					
Cyperus articulatus						Limnium spongia					
Cyperus haspan						Limnophila sessiliflora					
*Cyperus lecontei						Liquidambar styraciflua					
*Cyperus polystachyos						*Ludwigia arcuata					
*Cyperus odoratus						*Ludwigia grandiflora					
*Cyperus surinamensis						*Ludwigia hexapetala					
Cyrilla 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 submersed viviparous						Mimosa pigra	/	/	/	/	
*Eriocaulon compressum						Myrica cerifera					
*Eriocaulon decangulare											
Eupatorium capillifolium											

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: *Secret Lake*Date: *7/2/19*

SPECIES	1	4	7	10	Collected? (✓)	SPECIES	1	4	7	10	Collected? (✓)
Myriophyllum aquaticum						<i>Salix caroliniana</i>					
* <i>Myriophyllum heterophyllum</i>						<i>Salvinia minima</i>					
* <i>Myriophyllum laxum</i>						<i>Sambucus canadensis</i>					
* <i>Myriophyllum pinnatum</i>						<i>Sapium sebiferum</i>					
<i>Myriophyllum spicatum</i>						<i>Saururus cernuus</i>					
* <i>Najas filifolia</i>						<i>Schinus terebinthifolius</i>					
* <i>Najas guadalupensis</i>						* <i>Schoenoplectus californicus</i>					
* <i>Najas minor</i>						* <i>Schoenoplectus pungens</i>					
<i>Nelumbo lutea</i>						* <i>Schoenoplectus tabernaemontani</i> (<i>Scirpus validus</i>)					
<i>Nitella</i> spp.						<i>Scirpus cubensis</i> (<i>Oxycaryon cubense</i>)					
<i>Nuphar</i> sp.						<i>Scirpus cyperinus</i>					
<i>Nymphaea mexicana</i>						* <i>Sesbania</i>					
<i>Nymphaea odorata</i>						<i>Solidago</i> sp.					
<i>Nymphoides aquatica</i>						<i>Sparganium americanum</i>					
<i>Nyssa sylvatica</i> var. <i>biflora</i>						<i>Spartina bakeri</i>					
<i>Orontium aquaticum</i>						<i>Spirodela polyrhiza</i>					
<i>Osmunda cinnamomea</i>						<i>Taxodium</i> sp.					
<i>Osmunda regalis</i>						<i>Thalia geniculata</i>					
<i>Panicum hemitomon</i>						<i>Thelypteris interrupta</i>					
<i>Panicum repens</i>						<i>Thelypteris palustris</i>					
<i>Paspalidium geminatum</i>						<i>Triadenum virginicum</i>					
* <i>Paspalum repens</i>						<i>Typha</i> sp.					
<i>Paspalum urvillei</i>						<i>Urochloa mutica</i> (<i>Brachiaria mutica</i>)					
<i>Peltandra</i> sp. <i>virginica</i>						* <i>Utricularia gibba</i> (<i>U. biflora</i>)					
<i>Persea</i> sp.						* <i>Utricularia foliosa</i>					
<i>Pennisetum purpureum</i>						* <i>Utricularia inflata</i>					
<i>Phragmites australis</i>						* <i>Utricularia purpurea</i>					
<i>Pinus elliotii</i>						* <i>Utricularia radiata</i>					
<i>Pistia stratioides</i>						* <i>Utricularia resupinata</i>					
<i>Pluchea</i> sp.						<i>Vallisneria americana</i>					
* <i>Polygonum glabrum</i> (<i>densiflorum</i>)						<i>Vitis</i> sp.					
<i>Polygonum hirsutum</i>						* <i>Websteria confervoides</i>					
* <i>Polygonum hydropiperoides</i>						<i>Wedelia trilobata</i> (<i>Sphagneticola trilobata</i>)					
* <i>Polygonum punctatum</i>						<i>Wolffiella</i> spp.					
* <i>Polygonum</i>						<i>Woodwardia virginica</i>					
<i>Pontederia cordata</i>						<i>Xyris</i> sp.					
* <i>Potamogeton diversifolius</i>						<i>Zizania aquatica</i>					
* <i>Potamogeton illinoensis</i>						<i>Zizaniopsis milacea</i>					
* <i>Potamogeton pusillus</i>						<i>Saururus</i>					
* <i>Potamogeton pectinatus</i> (<i>Stuckenia pectinatus</i>)						<i>Phyla nodiflora</i>					
<i>Proserpinaca pectinata</i>						<i>Nephrrolepis exaltata</i>					
* <i>Rhexia</i>						Grass → <i>E. crus-galli</i>					
* <i>Rhynchospora corniculata</i>											
* <i>Rhynchospora inundata</i>											
<i>Rhynchospora nitens</i>											
<i>Ricciocarpus natans</i>											
<i>Sabal palmetto</i>											
<i>Sacciolepis striata</i>											
* <i>Sagittaria filiformis</i>											
* <i>Sagittaria graminea</i>											
* <i>Sagittaria isoetiformis</i>											
<i>Sagittaria lancifolia</i>											
<i>Sagittaria latifolia</i>											

Secret Lake 2994 I

