

Let
LVI

Site Name Holly Lake at Center of Lake Sample Date 9/24/18
WBID 28034 WIN ID 20026553 RQ 2018-09-24-46

	Initial/Date	QC Initial/Date
Water chemistry data to LIMS	LMD 10/1/18	7R 10/3/18
Create SBIO station visit 78907	LMD 10/1/18	n/a
Vascular Entry (add LIMS ID)	LMD 10/1/18	7R 10/3/18
Lake Observation Sheet Entry	LMD 10/1/18	7R 10/3/18
Authorize SBIO data	7R 10/3/18	n/a
Scan all sheets to 21FLCEN folder		n/a
LIMS/WIN migration		n/a
File in cabinet		n/a

Comments/notes:

LIMS ID 2027917

Ref.
LVI



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

April 2018

Data Qualified?

Yes ☒ No ☐

WIN Station Name: Holly Lake at Center of Lake

Date: 9/24/18
(mm/dd/yyyy)

WIN/ Field ID: 20020553

WBID: 2803A

Latitude: 28.94106
(Decimal Degrees)

County: LAKE

ORG ID: 21 FL CEN

Longitude: -81.71703
(Decimal Degrees)

Receiving Body of Water: _____

RQ-2018- 09-24-46

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment				
Terry Eriordan					☒	☒	☒	☒	☒	☒ Sample Container	☐ Van Dorn	☐ Pole		
Liz Bates					☒	☒	☒	☒	☒	☐ Carboy	☒ Syringe			
Mike Drennon					☒	☒	☒	☒	☒	☐ Dipper	☐ Other			
Water Level: Dry / Pooled / Low / <u>Normal</u> / High / Flooded					Meter ID# <u>800P/110N</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°)				
<u>EST</u>	<u>1133</u>	<u>4.6</u>	<u>0.3</u>	<u>0.4</u>	<u>7.17</u>	<u>95.3</u>	<u>7.59</u>	<u>0.14</u>	<u>302</u>	<u>30.40</u>				
<u>CEN</u>			<u>4.1</u>		<u>0.42</u>	<u>8.4</u>	<u>6.78</u>	<u>0.16</u>	<u>336</u>	<u>27.91</u>				
Biological Samples Collected: None HA SCI RPS Algae ID LVS <u>LVI</u> Other:														
SBIO ID Numbers: SBIO-ID: <u>78907</u> HA-ID: RPS-ID: Macrophyte-ID: <u>1080</u> LIMS#: <u>2027917</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>SA8101020</u>	<u>4/11/19</u>	☒ 2					
Metals	☒ W-ICPMS ☒ W-ICP					☒ Ice ☐ RNO3	<u>AA8080070</u>	<u>3/21/19</u>	☒ 2					
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um Filter					☒ Ice	<u>13615055</u>	Place Preservative Sticker(s) Here (If Available)						
Chlorophyll	☒ CHLSUITE-W					☒ Ice								
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CH-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-HF183 ☐ PCR-BacR ☐ PCR-GULL2 ☐ 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								
<u>DTY-QN-C PKD-QN-C *</u>						<u>ICE</u>								
Notes: <u>* Not preserved @ ROC w/ lugols</u>						WIN ID / Field ID → Holly Lake at Center of Lake (2803A)								
Signature: <u>[Signature]</u>						Date: <u>9/24/18</u>								



20020553

Enter Field Parameters, Verify Station ID in LIMS DMT: _____

QC Station ID, Field Parameters in LIMS DMT: _____

(Initials/Date)

(Initials/Date)

Scan/Save Field Sheets _____

Migrate Data to WIN: _____

Verify Data in WIN: _____

(Initials/Date)

(Initials/Date)

(Initials/Date)

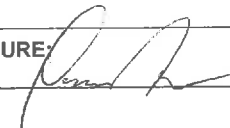
DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 78907 MACROPHYTE ID: _____ LATITUDE: 28.94106
 COUNTY: LAKE STORET #: 20020553 LONGITUDE: -81.71703
 DATE: 9/24/18 TIME: _____ SAMPLING AGENCY: FDEP-CEROL
 SITE NAME: Holly Lake WBID: 2803A
 FIELD ID/NAME: 20020553 LAKE SIZE: 99 acres RQ: 2018-09-24-46

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>40</u>		<u>10</u>	<u>30</u>	<u>20</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>13</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>11</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>11</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 ☐ No pH < 2 ☐ No Color Sample Taken? ☒ Yes ☐ No Lot # <u>SA8101020</u> Exp. Date: <u>4/11/19</u> Alkalinity Sample Taken? ☒ Yes ☐ No <u>NA8080070</u> <u>3/21/19</u> Water Level ☐ Low ☒ Normal ☐ High										Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other _____									
Meter Readings: Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat. (%) Cond. (UMHO/CM) Salinity (PPT) Top: <u>0.3</u> <u>30.40</u> <u>7.59</u> <u>7.17</u> <u>95.3</u> <u>362</u> <u>0.14</u> Mid-Depth: _____ Bottom: <u>4.1</u> <u>27.91</u> <u>6.78</u> <u>0.42</u> <u>5.4</u> <u>336</u> <u>0.16</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): _____										Clarity: ☐ Clear ☒ Turbid ☐ Slightly Turbid Color: ☐ Clear ☐ Tannic ☒ Green									
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 ☐ ☒ ☐ ☐									
Weather Conditions: <u>Low 90's</u>										Sediment Odors: ☒ Normal ☐ Anaerobic ☐ Other (Specify): _____									
SAMPLING TEAM: <u>Terry Riordan, Liz Bates, Mike Drannen</u>										SIGNATURE: 									
										DATE: <u>9/24/18</u>									

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: Holly Lake					Date: 9/24/18						
SPECIES	2	5	8	11	Collected? (✓)	SPECIES	2	5	8	11	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					
*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 polyrhiza					
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 gibba (U. biflora)	/				
Persea sp.						*Utricularia foliosa					
Pennisetum purpureum						*Utricularia inflata					
Phragmites australis						*Utricularia purpurea					
Pinus elliotii		/				*Utricularia radiata					
Pistia stratioides						*Utricularia resupinata					
Pluchea sp.		/	/			Vallisneria americana					
*Polygonum glabrum (densiflorum)						Vitis sp.		/		/	
Polygonum hirsutum						*Websteria confervoides					
*Polygonum hydropiperoides						Wedelia trilobata (Sphagneticola trilobata)					
*Polygonum punctatum						Wolffiella spp.					
*Polygonum						Woodwardia virginica			/	/	
Pontederia cordata	/	/	/	/		Xyris sp.		/			
*Potamogeton diversifolius						Zizania aquatica					
*Potamogeton illinoensis						Zizaniopsis milacea					
*Potamogeton pusillus											
*Potamogeton pectinatus (Stuckenia pectinatus)											
Proserpinaca pectinata						<i>Arundo donax</i> ^{arborea}	/	/	/	/	
*Rhexia						Ricobrya NEA?	/	/	/	/	
*Rhynchospora corniculata						Meghalopha ^{R. microcephala}	/	/	/	/	
*Rhynchospora inundata						Rubus ^{R. microcephala}	/	/	/	/	
Rhynchospora nitens						Rubus ^{R. microcephala}	/	/	/	/	
Ricciocarpus natans						Rubus ^{R. microcephala}	/	/	/	/	
Sabal palmetto						Rubus ^{R. microcephala}	/	/	/	/	
Sacciolepis striata						Rubus ^{R. microcephala}	/	/	/	/	
*Sagittaria filiformis						Rubus ^{R. microcephala}	/	/	/	/	
*Sagittaria graminea						Rubus ^{R. microcephala}	/	/	/	/	
*Sagittaria isoetiformis						Rubus ^{R. microcephala}	/	/	/	/	
Sagittaria lancifolia	/	/	/	/		Rubus ^{R. microcephala}	/	/	/	/	
Sagittaria latifolia						Rubus ^{R. microcephala}	/	/	/	/	

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Lake Holly</u>		County: <u>Lake</u>		Date: <u>9/24/18</u>							
Analyst: <u>Terry Riordan, Mike Danner</u>		Signature: <u>[Signature]</u>		STORET: <u>200553</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	/	/	/	/		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						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	/										

Holly Lake (Lake County)

