

Site Name Z1-LL-13005 Hammock Lake

Date: 07/02/2019

Field ID Z1LL13005 Storet

Project: Status Lakes

Visit ID 79810

RQ: 2019-04-29-13

VPDB ID

LIMS ID:

HA ID

WBID: 686A

☐ LVI

☐ Sample Site Created in SBIO

☐ Phys/Chem entered in SBIO

☐ HA entered in SBIO Initial

☐ Date and Initial QA:

☐ RPS entered in SBIO Initial

☐ Date and Initial QA:

☐ LVI entered in SBIO Initial

☐ Date and Initial QA:

☐ Plants getting verified

Date submitted:

☐ Plants verified

Date returned:

☐ VPDB authorized in SBIO

☐ Date and Initial:

☐ VPDB score:

☐ If SMP, scanned into database

Notes.

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: N 30.47428
COUNTY: Washington (Vernon) STORET #: _____ LONGITUDE: W -8558975
DATE: 07/02/2019 TIME: _____ SAMPLING AGENCY: FL DEP - NWROC
SITE NAME: Z1-LL-13005 (Hammock Lake) WBID: 686
FIELD ID/NAME: Z1-LL-13005 LAKE SIZE: 384 RQ: 2019-04-29-13

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) ☐						LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI: <u>1.25 (245)</u>			
Local Watershed Erosion (select one) : ☐ None ☐ Slight ☐ Moderate ☐ Heavy						Artificially Impounded ☐ Yes ☐ No			
Local Watershed NPS Pollution : ☐ No evidence ☐ Slight ☐ Moderate ☐ Heavy						Land Use Source & Year:			
STORMWATER INPUTS <u>20</u>		Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation ☒ 19 ☐ 18 ☐ 17 ☐ 16		Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place 15 ☐ 14 ☐ 13 ☐ 12 ☐ 11		Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place 10 ☐ 9 ☐ 8 ☐ 7 ☐ 6		Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1	
LAKESIDE ALTERATIONS <u>20</u>		Very few man-made structures, roads, or other disturbance adjacent to lake (<10% lakeside affected) ☒ 19 ☐ 18 ☐ 17 ☐ 16		Moderate disturbance visible - structures, roads or other (10%-49% lakeside affected) 15 ☐ 14 ☐ 13 ☐ 12 ☐ 11		Many structures, roads or other human disturbance visible (50%-70% lakeside affected) 10 ☐ 9 ☐ 8 ☐ 7 ☐ 6		Highly developed or disturbed (>70% of lakeside affected) 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1	
BUFFER ZONE <u>19</u>		Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer 20 ☒ 19 ☐ 18 ☐ 17 ☐ 16		89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer 15 ☐ 14 ☐ 13 ☐ 12 ☐ 11		50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer 10 ☐ 9 ☐ 8 ☐ 7 ☐ 6		< 29% of shoreline with >18m buffer 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1	

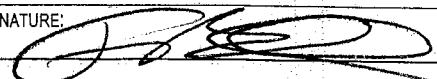
WATER / SUBSTRATE / BIOLOGICAL: SAMPLES AND OBSERVATIONS

Water: Nutrient Sample Taken? ☐ Yes ☒ No Preserved? ☐ Yes ☐ pH<2 ☐ No Color Sample Taken? ☐ Yes ☒ No Lot # _____ Exp. Date: _____ Alkalinity Sample Taken? ☐ Yes ☒ No Water Level ☐ Low ☐ Normal ☒ High						Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other _____					
Meter Readings: Top: <u>0.3</u> <u>32.5</u> <u>5.02</u> <u>98.9</u> <u>7.23</u> <u>15.1</u> <u>0.01</u> Mid-Depth: <u>2.4</u> <u>28.9</u> <u>4.84</u> <u>4.01</u> <u>51.7</u> <u>15.8</u> <u>0.01</u> Bottom: <u>4.3</u> <u>21.4</u> <u>21.3</u> <u>5.08</u> <u>0.24</u> <u>2.7</u> <u>19.0</u> <u>0.01</u> Meter ID: <u>159179</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 ☐ Opaque ☐ 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 ☒ ☐ ☐ ☐					
Sediment Odors: ☒ Normal ☐ Anaerobic ☐ Other (Specify): _____						Additional Notes: <u>Boat Ramp.</u> <u>30.4739</u> <u>85.58485</u>					
Weather Conditions: <u>HOT 100°F. Sunny.</u>											
SAMPLING TEAM: Frank Butera, Stopher Slade						SIGNATURE: <u>[Signature]</u> DATE: <u>07/02/2019</u>					

STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
Lake Habitat Assessment Field Sheet

STORET STATION NUMBER:	DATE (M/D/Y)	LAKE NAME Z1-LL-13005, Hammock Lake		FIELD ID / NAME: z11113005
ECO-REGION: WBID 686	COUNTY: Washington	SAMPLING LOCATION/DESCRIPTION: Hammock Lake, Vernon, FL		LAKE SIZE: 384
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 ☐	Impounded, hydrology of system artificially controlled ☐
HYDROLOGY				
Color	Very clear, uncolored water (benthic sampling appropriate) ☐	Water somewhat tannin stained (benthic sampling appropriate) ☒	Dark, discolored water (water color 20 PCU or higher) ☐	Visibility extremely reduced due to high color ☐
	Optimal	Suboptimal	Marginal	Poor
Secchi 13	Secchi > 3 m Or VOB 20 19 18 17 16	Secchi(m) 3 2.6 2.2 1.8 1.4 15 14 13 12 11	1.0 0.9 0.8 0.7 0.6 10 9 8 7 6	0.5 0.4 0.3 0.2 0.1 5 4 3 2 1
Vegetation Quality 28	Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa 20 19 18 17 16	Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants 15 14 13 12 11	Large masses (21%-40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats 10 9 8 7 6	Lake choked (>40%) with nuisance macrophytes (duckweed, hyacinth, etc.) or algal mats, or few plants present at all (e.g., plants removed) 5 4 3 2 1
Stormwater Inputs 20	Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation 20 19 18 17 16	Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place 15 14 13 12 11	Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place 10 9 8 7 6	Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place 5 4 3 2 1
Bottom Substrate Quality 19	Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present 20 19 18 17 16	Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present 15 14 13 12 11	Moderate layer of CPOM/mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom 10 9 8 7 6	Thick deposits of CPOM, or fine detritus and anaerobic muck/mud/silt, or algal growth or nuisance plants (Hydrilla) cover bottom 5 4 3 2 1
Lakeside Adverse Human Alterations 28	Very few man-made structures, roads, or other disturbance adjacent to lake (<10%) 20 19 18 17 16	Moderate disturbance visible (structures, roads or other), 10%-49% lakeside affected 15 14 13 12 11	Many structures, roads or other human disturbance visible (50%-70%) lakeside affected 10 9 8 7 6	Highly developed or disturbed (>70% of lakeside affected) 5 4 3 2 1
Upland Buffer Zone 19	Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer 20 19 18 17 16	89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer 15 14 13 12 11	50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer 10 9 8 7 6	< 29% of shoreline with >18m buffer 5 4 3 2 1
Adverse Watershed Land Use 18	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 20 19 18 17 16			

TOTAL SCORE: **129** COMMENTS: Section 2 clear-cut area Lake. Periphyton obscuring visibility

ANALYSIS DATE: 6/7/04 WAB ANALYST: F Butera SIGNATURE: 

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Z1-LL-13005 (Hammock Lake)					County: Washington (Vernon)					Date: 07/02/2019									
Analyst: F. Butera					Signature:					STORET:									
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				
SBIO ID _____ SPECIES	1	4	7	10	Collect ed? (✓)	Macro ID _____ SPECIES	1	4	7	10	Collect ed? (✓)								
Acer rubrum						Habenaria repens													
Alternanthera philoxeroides						Hydrilla verticillata													
Andropogon sp.						Hydrocotyle sp.													
Azolla filiculoides (A. caroliniana)						Hygrophila polysperma													
Baccharis sp.						*Hypericum fasciculatum													
Bacopa caroliniana						*Hypericum hypericoides													
Bacopa monnieri	1	1			✓	*Hypericum myrtifolium													
Bidens laevis						Ilex cassine													
Bidens mitis						Ipomoea aquatica													
Blechnum serrulatum						Ipomoea sagittata													
Boehmeria cylindrica						Itea virginica													
Brasenia schreberi	1	1	1	1		Juncus effusus													
Cabomba caroliniana						*Juncus marginatus													
Casuarina equisetifolia						*Juncus megacephalus													
Centella asiatica						Juncus repens													
Cephalanthus occidentalis	1	1	1	1		*Juncus scirpoides													
Ceratophyllum demersum						Lachnanthes caroliniana													
Chara sp.						Leersia hexandra	1	1	1	1									
Cladium jamaicense						Landoltia punctata (Spiro. punctata)													
Cliftonia monophylla						Lemna sp.													
Colocasia esculenta						Leucothoe racemosa (E. racemosa)													
*Commelina						Limnobia spongia													
Crinum americanum						Limnophila sessiliflora													
*Cyperus alternifolius (C. involucratus)						Liquidambar styraciflua													
Cyperus articulatus						*Ludwigia arcuata													
Cyperus haspan						*Ludwigia leptocarpa													
*Cyperus lecontei						*Ludwigia linearis													
*Cyperus polystachyos						*Ludwigia octovalvis													
*Cyperus odoratus						*Ludwigia peruviana													
*Cyperus surinamensis						*Ludwigia repens													
Cyrilla racemiflora	1	1	1	1		*Ludwigia													
Decodon verticillatus						Luziola fluitans (H. carolinensis)													
Diodia virginiana						Lyonia lucida													
*Echinochloa crus-galli						Magnolia virginiana													
*Echinochloa muricata						Mayaca fluviatilis													
Echinochloa walteri						Melaleuca quinquenervia													
Eclipta prostrata (E. alba)						Micranthemum glomeratum													
Egeria densa						Micranthemum umbrosum													
Eichhornia crassipes						Mikania scandens													
*Eleocharis baldwinii	1	1	1	1		Mimosa pigra													
*Eleocharis <i>elongata</i>	1	1	1	1		Myrica cerifera													
Eleocharis cellulosa						<i>Hypericum lissophyllum</i>	1	1	1	1									
Eleocharis equisetoides																			
Eleocharis interstincta																			
*Eriocaulon compressum						<i>Periphyton</i>	1	1	1	1									
*Eriocaulon decangulare																			
Eupatorium capillifolium						<i>Aspidosiphon / Lysichiton</i>	1	1			✓								
*Fuirena																			
Fuirena scirpoidea	1	1	1			<i>Amphicarpum - Dead</i>	1												
Gordonia lasianthus						<i>Dead</i>													

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Z1-SL-13001 (Andrew's Lake) Storet:						Date: 07/12/2019	SBIO ID		Macro ID		
SPECIES	1	4	7	10	Collect ed? (✓)	SPECIES	1	4	7	10	Collect ed? (✓)
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					
Nitella spp.						Scirpus cubensis (Oxycaryon cubense)					
Nuphar sp.						Scirpus cyperinus					
Nymphaea odorata	1	1	1	1		*Sesbania					
Nymphoides aquatica	1	1	1	1		Solidago sp.					
Nyssa sylvatica var. biflora			1			Sparganium americanum					
Orontium aquaticum						Spartina bakeri					
Osmunda cinnamomea						Spirodela polyrhiza					
Osmunda regalis						Taxodium sp.					
Panicum hemitomon	1	1	1	1		Thalia geniculata					
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 floridana	1	1	1	1	
Pennisetum purpureum						*Utricularia foliosa					
Phragmites australis						*Utricularia inflata					
Pinus elliotii <i>Slack</i>	1	1	1	1		*Utricularia purpurea					
Pistia stratioides						*Utricularia cornuta					
Pluchea sp.						*Utricularia radiata					
*Polygonum glabrum (densiflorum)						Vallisneria americana					
*Polygonum hydropiperoides						*Websteria confervoides					
*Polygonum punctatum						Wedelia trilobata (Sphag. trilobata)					
*Polygonum						Wolffiella spp.					
Pontederia cordata	1					Woodwardia virginica					
*Potamogeton diversifolius						Xyris sp.					
*Potamogeton illinoensis						Zizania aquatica					
*Potamogeton pusillus						Zizaniopsis milacea					
*Potamogeton pectinatus (Stuck. pectinatus)						Vaccinium ellipticum	1	1			
Proserpinaca pectinata											
*Rhexia											
*Rhynchospora corniculata											
*Rhynchospora inundata											
Rhynchospora tracyi											
Ricciocarpus natans											
Sabal palmetto											
Sacciolepis striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis		</									

DEP-SOP-001/01
FS 7000 General Biological Community Sampling

Form FD 9000-2: COMPOSITE LAKE SAMPLING SHEET (< 1000 ACRES)

Date:		Name of Lake: Z1-LL-13005 Hammock Lake		Gear used: PONAR EKMAN OTHER	
Comments:					
Drop #	Depth (m)	Sediment Type (circle all that apply)	Drop #	Depth (m)	Sediment Type (circle all that apply)
1		sand, silt/clay, CPOM, muck, SAV	7		sand, silt/clay, CPOM, muck, SAV
2		sand, silt/clay, CPOM, muck, SAV	8		sand, silt/clay, CPOM, muck, SAV
3		sand, silt/clay, CPOM, muck, SAV	9		sand, silt/clay, CPOM, muck, SAV
4		sand, silt/clay, CPOM, muck, SAV	10		sand, silt/clay, CPOM, muck, SAV
5		sand, silt/clay, CPOM, muck, SAV	11		sand, silt/clay, CPOM, muck, SAV
Point 6	4.8	sand, silt/clay, CPOM, muck, SAV	12		sand, silt/clay, CPOM, muck, SAV

CPOM = coarse particulate organic matter; SAV = submerged aquatic vegetation

Storet

Field ID Z1LL13005 Project. Status Lakes Large.

SBIO ID:

WBID 686

Pics

Sect. 7 - Shoreline - N.

Sect. 10 - North Shoreline

Sect. 10 - clearing

Sect. 10 - channel to Hammock Lake

Sect. 10 - Oak - in the water

10 - South

Sect 1 - South North

Sect 1 - North South

Sect. 2 - clear cut - N

Sect 4 - 8 ft deep - South

Sect. 4 - North.

Station
N
E
S
W

Paste map here and show location of each dredge drop and where water chemistry parameters were collected.

Revision Date: February 1, 2004