



RQ-2020- 2022-06-13-49
Customer: DEP-TLHR
Project ID: SMP

needs loaded WIN

Lab Page ____ of ____

Collected By: Woods/Blair
Field Report Prepared By: Woods
Sampling Agency: 21FTLHR

WIN ID / Field ID → KIT: LVI WBID: 1133A Location LAKE MARTIN							Comments:			
Matrix: <u>Fresh</u> / Marine							(Check one) ☒ GRAB ☐ COMPOSITE			
Date	Time	DO (mg/L)	DO (%SAT)	Temp. (C°)	pH	Sample Depth (m)	Secchi Disk (m)	Total Depth (m)	Sp COND (µmhos/cm)	Salinity (PPTH)
7/2/22	1105 <u>EST</u> / CST	7.89	106.6	32.2	7.39	0.3	2.0 ☐ VOB (S)	3.1	246.8	0.11
Cental Lab please use top row for login purposes										
	1108 <u>EST</u> / CST	30 4.60	61.8	30.7	7.13	2.6			260.9	0.12
Parameter Suite		Parameter Methods				Preservation	pH Check	# Bottles sent to Lab	Bottle Group	
Preserved Nutrients (P-500ML)		☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP				☒ Ice ☒ H2SO4*	☒ <2	1	A	
		Lot #	2145160		Exp:	6/2/23				
Metals (P-500ML)		☒ W-ICPMS ☒ W-ICP ☒ W-HARD				☒ Ice ☒ HNO3*	☒ <2	1	A	
		Lot #	1105100		Exp:	6/7/23				
Filtered Nutrients (P125ML)		☐ W-PO4-F ☐ Field Filtered 0.45 µm Filter				☐ Ice				
		Filter Lot #								
		Syringe Lot #								
Chlorophyll (BP-1L)		☒ CHLSUITE-W				☒ Ice		1	A	
Physical/Aggregate (Fresh) (P-1L)		☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS				☒ Ice		1	A	
Physical/Aggregate (Marine) (P-1L)		☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY				☐ Ice				
Macroinvertebrates (PJ-2L)		☐ MI-FW-QLDC				☐ Formalin				
Periphyton (PT-50ML)		☐ ALGAE-ID				☐ Ice				
Microbiology (Contract Lab Bottle)		☐ E Coli ☐ F Coli ☐ Enterococci				☐ Ice				
Molecular (QPCR-P-500ML)		☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-DG3 ☐ PCR-GULL2 ☐ PCR-GFD ☐ See Notes				☐ Ice				
Tracers (BG-500ML)		☐ W-E8321-DI ☐ W-E8321-MS				☐ Ice				
Pesticides (BG-500ML) (BG-1L)		☒ W-E8321-DI ☒ WE8321-MS ☒ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-PCL-SQ-R ☐ W-CARB-AA (5 ml of MCAA** Buffer Solution)				☒ Ice		5	A	
Name: <u>Jon Woods</u>					Signature: <u>[Signature]</u>			Date: <u>7/1/22</u>		

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

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

STORET STATION NUMBER: <i>03TLHR0033</i>	DATE (M/D/Y) <i>7/7/22</i>	LAKE NAME <i>Lake Martin</i>		FIELD ID / NAME:	
ECO-REGION:	COUNTY: <i>Bay</i>	SAMPLING LOCATION/DESCRIPTION: <i>center</i>		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	
Secchi ☐ <i>12</i>	Secchi >3 m Or VOB 20 19 18 17 16	3 2.6 2.2 1.8 1.4	1.0 0.9 0.8 0.7 0.6	0.5 0.4 0.3 0.2 0.1	
Vegetation Quality ☐ <i>12</i>	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 ☐ <i>6</i>	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 ☐ <i>14</i>	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 ☐ <i>4</i>	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 ☐ <i>3</i>	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 ☐ <i>5</i>	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 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1				
TOTAL SCORE <i>58</i> ☐ <i>576</i>		COMMENTS:			
ANALYSIS DATE: <i>7/7/22</i>		ANALYST: <i>Woods</i>		SIGNATURE: <i>[Signature]</i>	

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: C-314R-0053 MACROPHYTE ID: _____ LATITUDE: _____
 COUNTY: Bay STORET #: _____ LONGITUDE: _____
 DATE: 7/7/22 TIME: 1109 SAMPLING AGENCY: 21FCTHR
 SITE NAME: Lake martin WBID: _____
 FIELD ID/NAME: _____ LAKE SIZE: _____ RQ: 2022-06-13-49

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) : Forest/Natural ☐ Silviculture ☐ Field/Pasture ☐ Agricultural ☐ Residential <u>80</u> Commercial ☐ Industrial <u>20</u> Other (Specify) ☐					LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI:																
Local Watershed Erosion (select one) : ☐ None ☒ Slight ☐ Moderate ☐ Heavy					Artificially Impounded ☒ Yes ☐ No					Land Use Source & Year:											
Local Watershed NPS Pollution : ☐ No evidence ☐ Slight ☒ Moderate ☐ Heavy																					
STORMWATER INPUTS <u>8</u>		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				
LAKESIDE ALTERATIONS <u>4</u>		Very few man-made structures, roads, or other disturbance adjacent to lake (<10% lakeside affected) 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				
BUFFER ZONE <u>3</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 # <u>2145160</u> Exp. Date: <u>5/2/23</u> Alkalinity Sample Taken? ☒ Yes ☐ No Water Level ☐ Low ☒ Normal ☐ High										Water Odors: ☐ Normal ☐ Sewage ☐ Petroleum ☐ Other _____																			
Meter Readings: Top: <u>0.3</u> <u>32.2</u> <u>7.39</u> <u>7.89</u> <u>104.6</u> <u>246.8</u> <u>0.11</u> Mid-Depth: <u>2.0</u> <u>31.0</u> <u>7.44</u> <u>6.67</u> <u>89.9</u> <u>256.4</u> <u>0.12</u> Bottom: <u>2.6</u> <u>30.7</u> <u>7.13</u> <u>4.60</u> <u>61.8</u> <u>260.9</u> <u>0.12</u> Meter ID: <u>153484</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): _____										Sediment Odors: ☒ Normal ☐ Other (Specify): _____ ☐ Anaerobic																			
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>partly cloudy</u>																													
SAMPLING TEAM: <u>Woods/Blair</u>										SIGNATURE: <u>[Signature]</u>					DATE: <u>7/7/22</u>														

12394

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Lake Martin</u>					County: <u>Bay</u>					Date: <u>7/2/22</u>				
Analyst: <u>Woods/Blair</u>					Signature: <u>[Signature]</u>					STORET: <u>G3TLHR0053</u>				
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	1	4	7	10	Collected? (✓)	SPECIES	1	4	7	10	Collected? (✓)			
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						*Hypericum myrtifolium								
Bidens laevis						Ilex cassine								
Bidens mitis						Ipomoea aquatica								
Blechnum serrulatum						Ipomoea sagittata								
Boehmeria cylindrica		✓	✓	✓		Itea virginica								
Brasenia schreberi						Juncus effusus								
Cabomba caroliniana						*Juncus marginatus								
Casuarina equisetifolia						*Juncus megacephalus								
Centella asiatica						Juncus repens								
Cephalanthus occidentalis			✓	✓		*Juncus scirpoides								
Ceratophyllum demersum	✓					Lachnanthes caroliniana								
Chara sp.						Leersia hexandra								
Cladium jamaicense	✓	✓	✓	✓		Landoltia punctata (Spirodela punctata)								
Cliftonia monophylla						Lemna sp.								
Colocasia esculenta	✓	✓	✓	✓		Leucothoe racemosa (Eubotrys racemosa)								
Commelina						Limnium 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								
Cyrtilla racemiflora			✓			*Ludwigia								
Decodon verticillatus						Luziola fluitans (Hydrochloa carolinensis)								
Diodia virginiana						Lyonia lucida								
*Echinochloa crus-galli						Magnolia virginiana	✓	✓	✓	✓				
*Echinochloa muricatum						Mayaca fluviatilis								
Echinochloa walteri						Melaleuca quinquenervia								
Eclipta prostrata (E. alba)						Micranthemum glomeratum								
Egeria densa						Micranthemum umbrosum								
Eichhornia crassipes	✓					Mikania scandens								
*Eleocharis baldwinii	✓					Mimosa pigra			✓					
*Eleocharis						Myrica cerifera	✓	✓	✓	✓				
Eleocharis cellulosa														
Eleocharis equisetoides														
Eleocharis interstincta						<u>Carex Cambosa</u>		✓	✓					
*Eriocaulon compressum														
*Eriocaulon decangulare														
Eupatorium capillifolium			✓											
*Fuirena														
Fuirena scirpoidea														
Gordonia lasianthus														

WIN ID / Field ID →

KIT: LVI

WBID: 1133A

Location



G3TLHR0053



LAKE MARTIN