

Site Name Z1-SL-11038. Spring Lake No. 2

Date 10/04/2017

Field ID 215411038

Storet 52009

Visit ID 78222

RQ: N/A 2017-10-04

VPDB ID 1481010813

R2: 2017-09-04-10

HA ID 15019

- ☒ Sample Site Created in SBIO FB 02/16/2018
- ☒ Phys/Chem entered in SBIO FB 02/16/2018
- ☒ HA entered in SBIO Initial FB 2/16/18 ☒ Date and Initial QA: 2/19/18 SS
- ☒ LVI entered in SBIO Initial FB 2/16/18 ☒ Date and Initial QA: 2/20/18 MK

☐ < 2 m² vegetation

☒ Plants getting verified

Date submitted: In NW Lab

☒ Plants verified

Date returned: In NW Lab

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 78222 MACROPHYTE ID: _____ LATITUDE: N 30.76645
 COUNTY: Walton STORET #: 52009 LONGITUDE: W 86.05560969
 DATE: 10/04/17 TIME: 14:30 SAMPLING AGENCY: FL DEP - NWROC
 SITE NAME: Spring Lake No. 2 WBID: 293
 FIELD ID/NAME: Z1-SL-11038 LAKE SIZE: 14 RQ: 2017-09-04-10

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:				
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>19</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 <u>19</u> 18 17 16		15 14 13 12 11		10 9 8 7 6		5 4 3 2 1	
LAKESIDE ALTERATIONS <u>19</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 <u>19</u> 18 17 16		15 14 13 12 11		10 9 8 7 6		5 4 3 2 1	
BUFFER ZONE <u>20</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: <u>10</u> 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 <u>*Water Sample by NWFLMD</u>						Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other _____ Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____					
Meter Readings: Top: <u>0.3</u> <u>20.5</u> <u>4.6</u> <u>8.1</u> <u>101</u> <u>13</u> <u>0</u> Mid-Depth: _____ Bottom: <u>1.0</u> <u>263</u> <u>4.4</u> <u>8.0</u> <u>99</u> <u>13</u> <u>0</u> Meter ID: <u>NWFLMD</u>						Clarity: ☐ Clear ☒ Turbid ☐ Slightly Turbid Color: ☐ Clear ☐ Tannic ☒ Green SECCHI (M) <u>2.0</u> Total Station Depth (M) <u>2.4</u> VOB ☐					
Sediment Type: (may check more than one) ☐ Sandy ☒ Organic fibrous (peaty, CPOM) ☐ Vegetated ☐ Sand/Silt ☒ Organic smooth (muck) ☐ 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 :

SAMPLING TEAM: Frank Butera, Mike King

SIGNATURE: [Signature]

DATE: 10/04/17

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

STORET STATION NUMBER:	DATE (M/D/Y) 10/4/17	LAKE NAME: Spring Lake No. 2 (Z1-SL-11038)		FIELD ID / NAME: Z1-SL-11038	
WBID: 293	COUNTY: Walton	SAMPLING LOCATION/DESCRIPTION: Defuniak Springs		LAKE SIZE: 14 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 ☐	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 12	Secchi >3 m Or VOB 20 19 18 17 16	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 17	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 14	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 18	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 19	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 20	Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer 20 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 14	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 119	COMMENTS:				

ANALYSIS DATE:

10/4/2017

ANALYST: Frank Butera, Mike King

SIGNATURE:

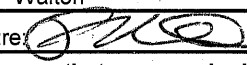
HA ID 15019**SBD0 VISIT ID 78222**

Site: Spring Lake No.2. (Z1-SL-11038). Storet. Date: 10/04/2017 SBIO ID 78222 Macro ID 10813

SBIO ID 78222 Macro ID 10813

Revision Date: March 1, 2014

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Spring Lake No. 2. (Z1-SL-11038)		County: Walton		Date: 10/4/2017	
Analyst: F. Butera		Signature: 		STORET: 52009	
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 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.					
SBIO ID <u>52009 78222</u>	1	4	7	10	Collected? (v)
SPECIES					
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 equisetifolia					
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					
Cyrtilla 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					
Macro ID <u>14813</u>	1	4	7	10	Collected? (v)
SPECIES					
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 <u>pulycerhe</u>					
Juncus repens					
*Juncus scirpoides					
Lachnanthes caroliniana					
Leersia hexandra					
Landoltia punctata (Spiro. punctata)					
Lemna sp.					
Leucothoe racemosa (Eubotrys racemosa)					
Limnium spongia					
Limnophila sessiliflora					
Liquidambar 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					
<u>Dichanthel. scab</u>					
<u>Ludwigia suffructosa</u>					
<u>Lycopus</u>					
<u>Tulip ppter</u>					

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

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

Date: 10/1/17		Name of Lake: Spring Lake 2. Z1-SL-11038		Gear used: <u>PONAR</u> 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	2.2	sand, silt/clay, <u>CPOM</u> , muck, SAV
2	2.4	sand, silt/clay, <u>CPOM</u> , muck, SAV	8		sand, silt/clay, CPOM, muck, SAV
3		sand, silt/clay, CPOM, muck, SAV	9		sand, silt/clay, CPOM, muck, SAV
4	1.9	sand, silt/clay, <u>CPOM</u> , muck, SAV	10	2.4	sand, silt/clay, <u>CPOM</u> , muck, SAV
5		sand, silt/clay, CPOM, muck, SAV	11		sand, silt/clay, CPOM, muck, SAV
6		sand, silt/clay, CPOM, muck, SAV	12		sand, silt/clay, CPOM, muck, SAV

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

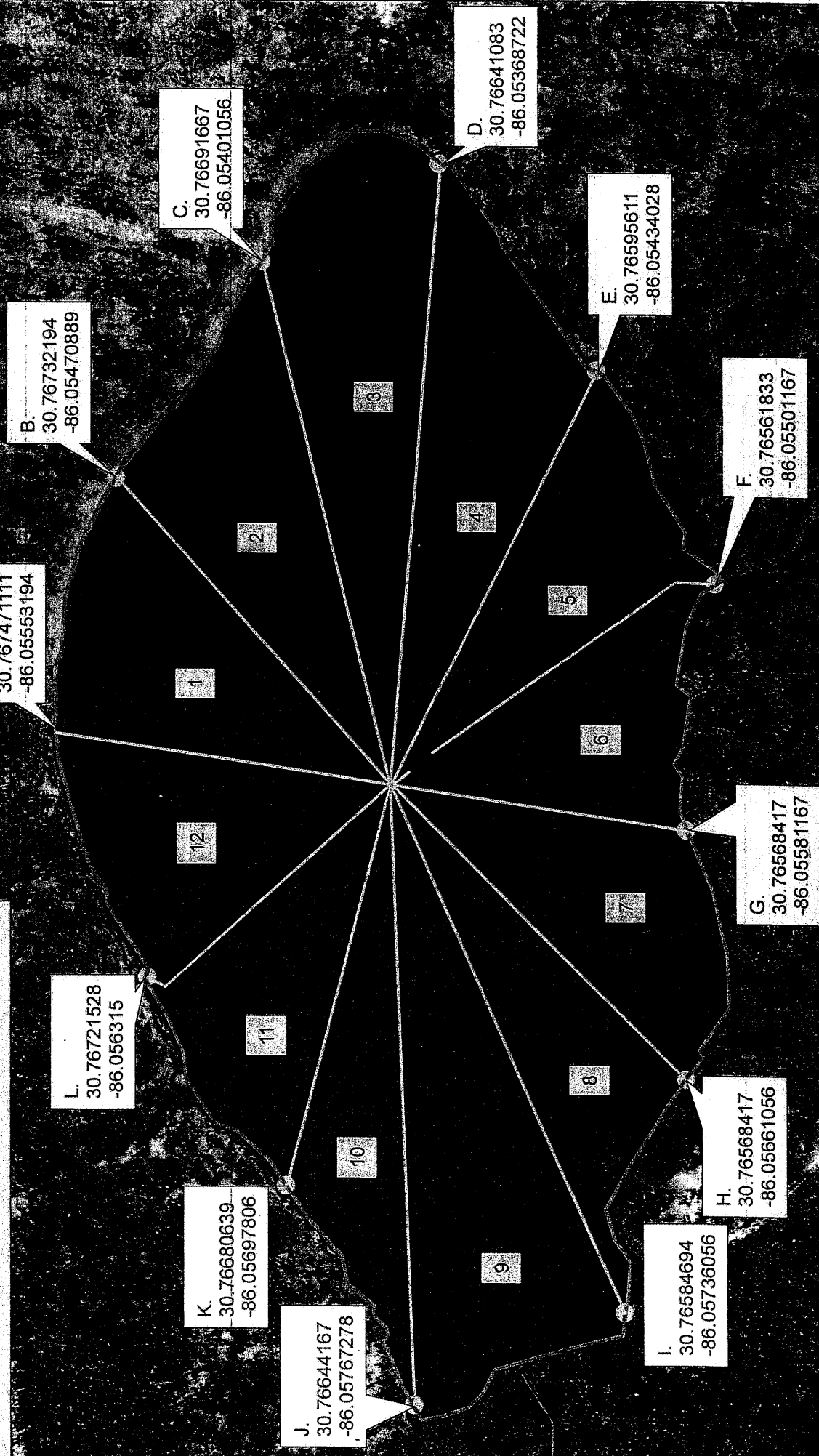
Storet 52449 Field ID Z1SL11038 Project: Status Small 2017
WBID 293

SBIO ID: 78222

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

Revision Date: February 1, 2004

Z1-SL-11038 Spring Lake # 2
30.76645 x -86.05560969
Status Small Lakes 2017



Z1-SL-11038 (Spring Lake # 2)

Status Storet TBD
Receiving Water Poley Br
Basin/ WBID Choctawhatchee R./ 293
City, County Defuniak Springs
Lake Acreage 14
Circumference (M) 986.1
Seg. Length (M) 82.175

Location	Decimal Latt	Decimal Long
Storet	30.76645	-86.05560969
A	30.76747111	-86.05553194
B	30.76732194	-86.05470889
C	30.76691667	-86.05401056
D	30.76641083	-86.05368722
E	30.76595611	-86.05434028
F	30.76561833	-86.05501167
G	30.76568417	-86.05581167
H	30.76568417	-86.05661056
I	30.76584694	-86.05736056
J	30.76644167	-86.05767278
K	30.76680639	-86.05697806
L	30.76721528	-86.056315

Ambient Status Monitoring Program - Small Lakes
Physical Chemistry, Habitat Summary, and Lab. Chemistry Summary

Z1-SL-11038 (Spring Lake No. 2) Sampled 10/04/2017
Walton, (Defuniak Springs), FL Sample ID: 78222
GPS: N30°45' 59.220" X W86°03' 20.1949" Macro ID: 10813
GPS: 30.76645 x -86.05560969 Sample Agency FL DEP NWROC

WIN-ID: 52009
Meter: NWFWMC
HA ID: 15019

Code	Parameter	Value	Quals	Units
	Sample Depth	0.3		meters
	Water Temperature	26.5		° C
	pH	4.6		S.U.
	Diss. Oxygen (Probe)	8.1		mg/L
	Diss. Oxygen Sat.	1.01		%
	Sp. Conductivity	13		u mho/cm
	Salinity	0		PPT
	Secchi Depth	2.00		meters
	Water Depth Max	2.4		meters

Field Parameters YSI meter 113529

Depth (m)	Temp @	pH (S.U.)	D.O. (mg/L)	DO%	Sp. Cond	Salinity	Secchi (m)
0.3	26.5	4.6	8.1	101	13	0.00	2.0
1.9	26.3	4.4	8.0	99	13	0.00	

Lake Sampling Sediment Characterization		
Drop #	Sediment Type	depth drop
1	Silt, CPOM , Muck	1.9
3*	Silt, CPOM , Muck	2.6
7	Silt, CPOM	3.2
10	Silt, CPOM, Muck	1.5

* Storet

Comments: Water level normal.
Wshed eros. Slight, NPS poll. Moderate, Least Buffer > 18M. Art. Impd. Yes.
Sed.Odor Normal, Sed. Oil None, Sand Smother None, Silt smother None, Water Odr. Normal,
Surf.Oil None, Clarity: Turbid, Color: Green, Periphy Common, Aqua. Veg. Abndt.,
Nuisance Plants: Rare Submersd Plants: Abndt. Apple Snails. Not Obsvd. Iron/Sulfur None.
YSI NWFWMMD meter. Survey Ambient Status Monitor (RQ-2017-09-04-10)

Z1-LL-11002 (Spring Lake No. 1)
 Sampled 05/12/2017
 Sample Agency FL DEP NWROC

WIN-ID: 52009
 Sample ID: 78222
 HA ID: 15019
 Macro ID: 10813

Size: 14 acres

Habitat Assessment Scores		
Hydrology	Impounded, Hydrology Art. Controlled	
Color	Dark, discolored 20 PCU	
Secchi	12	20
Veg. Quality	17	20
Stormwater Inputs	19	
		20
Bottom Substrate Quality	18	
		20
Lakeside Adverse Human Alterations	19	20
Upland Buffer Zone	20	20
Adverse Watershed Land Use	14	20
Total	119	140
Percentage	85%	

P-Chem. And Habitat parameters measured by F. Butera, M. King
 Lab. Chemistry parameters measured by FL DEP Central Lab.

Value codes

A = mean of 2+ values

T = value below detection limit

B = Counts unacceptable

U = not detected

I = value between the laboratory method detection limit and the laboratory practical quantitation limit.

J = estimate

O or 0 = data lost

S = Secchi is Visible on Bottom

K is < than value reported

P too numerous to count

L is > value reported

Q = out of holding time

Y = laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.

Station: Z1-SL-11038 Spring Lake No. 2
 GPS Dec. 30.7664 x -86.05561
 Storet: 52009 WBID 293
 Sample ID : 78222
 Macro ID: 10813

Sampled : 10/11/2017
 Sampled By. F.Butera, Mike King
 Location. Defuniak Springs, Walton Co. FL
 Receiving Waters:

	Taxa	1	4	7	10	C of C	Coll.	Verified
1	<i>Acer rubrum</i>	1	1	1	1	4.65		
2	<i>Bidens mitis</i>	1	1	1	1	6.31		
3	<i>Blechnum serrulatum</i>		1			7.15		
4	<i>Cliftonia monophylla</i>	1			1	5.63		
5	<i>Cyrilla racemiflora</i>	1	1	1	1	5.20		
6	<i>Dichanthelium scabriusculum</i>	1	1	1	1	7.15		
7	<i>Eleocharis baldwinii</i>	1	1	1		1.00		
8	<i>Juncus polycephalus</i>		1			4.96		
9	<i>Liriodendron tulipifera</i>		1					
10	<i>Ludwigia suffruticosa</i>	1	1	1			✓	FB Lab
11	<i>Lycopus</i> sp.		1	1				
12	<i>Magnolia virginiana</i>	1	1			9.44		
13	<i>Mayaca fluviatilis</i>	1	D	D	D	8.45		
14	<i>Myrica cerifera</i>		1	1	1	3.82		
15	<i>Nymphaea odorata</i>				1	6.99		
16	<i>Nymphoides aquatica</i>		1			6.09		
17	<i>Nyssa sylvatica</i> var. <i>biflora</i>	1				9.04		
18	<i>Panicum hemitomon</i>		1	1	1	5.82		
19	<i>Phragmites australis</i>		1			4.39		
20	<i>Triadenum virginicum</i>		1	1	1	8.16		
21	<i>Xyris</i> sp.	1	1	1	1			