

Site Name Spring Lake Center

Date 08/21/2018

Field ID G3NW0164

Storet G3NW0164

Project: SMP / TMDL Studies

Visit ID 78773

RQ: 2018-08-13-34

RPS ID N/A

LIMS ID: 2018995

VPDB ID 11246

HA ID 15352

☒ LVI

☐ RPS/LVS Only

☒ Sample Site Created in SBIO

☒ Phys/Chem entered in SBIO

☒ HA entered in SBIO

Initial FB 08/23/2018

☐ Date and Initial QA: 8/27/18 JS

☐ RPS entered in SBIO

Initial _____

☐ Date and Initial QA: _____

☒ LVI entered in SBIO

Initial FB 3/27/2019

☒ Date and Initial QA: 3/28/2019 JS

☐ < 2 m² vegetation

☒ Plants getting verified

Date submitted: 8/28/2018

☒ Plants verified

Date returned: 3/26/2019

☒ LVI authorized in SBIO

FB 3/28/2019

☒ LVI score: 65

C of C: 11.00

FLEPPC (%): 5.75



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2018

Data Qualified?

Yes / No

WIN Station Name: Spring Lake Center

Date: 08/21/2018
(mm/dd/yyyy)

WIN/ Field ID: G3NW0164

WBID: 302

Latitude: 30.75261

County: Walton

ORG ID: 21FLPNS

Longitude: 86.060708

(Decimal Degrees)

(Decimal Degrees)

Receiving Body of Water:

RQ-2018- 08-13-34

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Frank Butera		X	X			
Stopher Slade			X	X	X	

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☒ Syringe	
☐ Dipper	☐ Other	
Depth Measured with Secchi #2		
Equipment ID		

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

Water Level: Dry/ Pooled/ Low / Normal High / Flooded

Meter ID# 118163

Matrix: fresh / Marine / DI

Photos: Yes / No

Flow: No Flow / Intestinal / Flowing / NA

Tide: Rising/ Falling/ Slack/ NA

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 (µmhos/cm)	Temp. (C°)
EST	13:00	2.8	0.3	2.2	8.03	106.1	6.75	0.01	17	29.94
CEN			2.3	2.1	0.44	5.1	5.88	0.01	24	29.94

Biological Samples Collected: None HA SCI RPS Algae ID LVS LVI Other:

SBIO ID Numbers: SBIO-ID: 78773 HA-ID: 15352 RPS-ID: N/A Macrophyte-ID: 11246 LIMS#: 2018995

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	SA7341020	12/07/2018	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice	16570048		
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CHC / 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-SUC-AA-R ☒ W-UHERB-AA ☒ W-AHERB-AA	☒ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-UHERB-AA ☐ W-AHERB-AA ☐ W-CARB-AA ☐ W-PCL-SQ-R ☐ W-PYR-AA-R ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Ice ☐ Other			

Place Preservative Sticker(s) Here
(If Available)

Notes:

Field/WIN ID



G3NW0164

Location:



SPRING LAKE CENTER

Signature: Frank Butera

Date: 08/21/2018

Enter Field Parameters, Verify Station ID in LIMS DMT:

QC Station ID, Field Parameters in LIMS DMT:

Scan/Save Field Sheets

08/23/2018
(Initials/Date)

Migrate Data to WIN:

(Initials/Date)

Verify Data in WIN:

(Initials/Date)

(Initials/Date)

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 78773 MACROPHYTE ID: 11246 LATITUDE: N 30.75261
 COUNTY: Walton STORET #: G3NW0164 LONGITUDE: W -86.060708
 DATE: 8/21/2018 TIME: 13:00 CTZ SAMPLING AGENCY: FL DEP - NWROC
 SITE NAME: Spring Lake (Center) WBID: 302
 FIELD ID/NAME: G3NW0164 LAKE SIZE: 152 RQ: 2018-08-13-34

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>15</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>16</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>11</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 ☐ No pH<2 ☐ No Color Sample Taken? ☒ Yes ☐ No Lot # <u>54734626</u> Exp. Date: <u>12/7/18</u> Alkalinity Sample Taken? ☒ Yes ☐ No 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>29.94</u> <u>6.75</u> <u>8.03</u> <u>106.1</u> <u>17</u> <u>0.01</u> Mid-Depth: Bottom: <u>2.3</u> <u>29.90</u> <u>5.88</u> <u>0.4</u> <u>5.1</u> <u>20</u> <u>0.01</u>								Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other							
Meter ID: <u>118163</u>								Clarity: ☐ Clear ☐ Opaque ☐ Turbid ☒ Slightly Turbid Color: ☐ Clear ☐ Tannic ☒ Green							
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 ☒ ☐ ☐ ☐							
Weather Conditions: <u>RAIN!!</u>								Additional Notes: <u>LWS ID 2018995</u>							

SAMPLING TEAM: Frank Butera,

Stefan Slade

SIGNATURE:

[Signature]

DATE:

8/21/2018

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

Store/ WIN ID NUMBER: G3NW0164	DATE (M/D/Y) (F5) 8/21/2018	LAKE NAME: Spring Lake Center		FIELD ID / NAME: G3NW0164
ECO-REGION: 302	COUNTY: Walton	SAMPLING LOCATION/DESCRIPTION: Defuniak Springs, FL		LAKE SIZE: 152 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 (F5) 13	Secchi > 3 m Secchi(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 (14)	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 (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 (15)	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 (16)	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 (11)	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 (17)	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 104	COMMENTS:			
ANALYSIS DATE: 8/21/2018	ANALYST: Frank Butera, Stoph Slade		SIGNATURE: 	

SBIO ID: 78773

HA ID: 15352

RQ:2018-08-13-34

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Spring Lake Center				County: Walton (Defuniak Spring)				Date: 8/21/2018			
Analyst: F. Butera				Signature: <i>[Signature]</i>				STORET: G3NW0164			
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>78773</u>		1 4 7 10		Collect ed? (✓)	Macro ID <u>11246</u>		1 4 7 10		Collect ed? (✓)		
SPECIES		5 6 9 12			SPECIES		5 6 9 12				
Acer rubrum		1 1 1 1			Habenaria repens		1 1 1 1				
Alternanthera philoxeroides		1 1 1 1			Hydrilla verticillata		1 1 1 1				
Andropogon sp.		1 1			Hydrocotyle sp.		1 1 1 1				
Azolla filiculoides (A. caroliniana)					Hygrophila polysperma						
Baccharis sp.					*Hypericum fasciculatum		1 1 1 1				
Bacopa caroliniana		1			*Hypericum hypericoides						
Bacopa monnieri					*Hypericum myrtifolium						
Bidens laevis					Ilex cassine						
Bidens mitis		1 1			Ipomoea aquatica						
Blechnum serrulatum					Ipomoea sagittata						
Boehmeria cylindrica		1 1 1 1			Itea virginica						
Brasenia schreberi		1 1 1 1			Juncus effusus		1 1 1 1				
Cabomba caroliniana					*Juncus marginatus						
Casuarina equisetifolia		1			*Juncus megacephalus						
Centella asiatica		1			Juncus repens						
Cephalanthus occidentalis					*Juncus scirpoides						
Ceratophyllum demersum					Lachnanthes caroliniana						
Chara sp.					Leersia hexandra		1 1 1 1				
Cladium jamaicense					Landoltia punctata (Spiro. punctata)						
Cliftonia monophylla		1 1			Lemna sp.						
Colocasia esculenta		1 1			Leucothoe racemosa (E. racemosa)						
*Commelina					Limnobia spongia						
Crinum americanum					Limnophila sessiliflora						
*Cyperus alternifolius (C. involucreatus)					Liquidambar styraciflua						
Cyperus articulatus					*Ludwigia arcuata						
Cyperus haspan		1			*Ludwigia leptocarpa		1				
*Cyperus lecontei					*Ludwigia linearis						
*Cyperus polystachyos					*Ludwigia octovalvis						
*Cyperus odoratus					*Ludwigia peruviana						
*Cyperus surinamensis					*Ludwigia repens						
Cyrilla racemiflora		1 1 1 1			*Ludwigia octovalvis		1		✓ (FB)		
Decodon verticillatus					Luziola fluitans (H. carolinensis)						
Diodia virginiana					Lyonia lucida						
*Echinochloa crus-galli					Magnolia virginiana		1 1 1 1				
*Echinochloa muricata					Mayaca fluviatilis		1 1 1 1				
Echinochloa walteri					Melaleuca quinquenervia						
Eclipta prostrata (E. alba)					Micranthemum glomeratum						
Egeria densa					Micranthemum umbrosum						
Eichhornia crassipes					Mikania scandens						
*Eleocharis baldwinii <i>virginiana</i>		1 1 1 1			Mimosa pigra						
*Eleocharis					Myrica cerifera		1 1 1 1				
Eleocharis cellulosa					<i>Ilex umbellata</i>		1 1 1 1				
Eleocharis equisetoides					<i>Ludwigia arcuata</i>		1		✓ (FB)		
Eleocharis interstincta					Joc-Fye Weed		1 1 1 1		✓ (FB)		
*Eriocaulon compressum					<i>Cyperus</i>		1 1 1 1				
*Eriocaulon <i>decandense</i>		1 1		✓ (FB)	<i>Free Fite</i>		1 1 1 1				
Eupatorium capillifolium		1			<i>Bacopa</i>		1 1 1 1				
*Fuirena					<i>Ludwigia linearis</i>		1 1 1 1		✓ (FB)		
Fuirena scirpoidea		1 1			<i>True Ludwigia</i>		1 1 1 1				
Gordonia lasianthus											

RQ:2018-08-13-34

LIMS ID 208995

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Spring Lake Storet: G3NW0164					Date: 8/28/2018	SBIO ID: 18723	Macro ID				
SPECIES	1	4	7	10	Collect ed? (✓)	SPECIES	1	4	7	10	Collect ed? (✓)
	3	6	9	12			3	6	9	12	
Myriophyllum aquaticum						Salix caroliniana					
*Myriophyllum heterophyllum						Salvinia minima					
*Myriophyllum laxum						Sambucus canadensis					
*Myriophyllum pinnatum						Sapium sebiferum	1	1	1	1	
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			1	1	
Nymphaea odorata						*Sesbania					
Nymphaeoides aquatica	1	1	1	1		Solidago sp.					
Nyssa sylvatica var. biflora	1	1	1	1		Sparganium americanum					
Orontium aquaticum						Spartina bakeri					
Osmunda cinnamomea			1			Spirodela polyrhiza					
Osmunda regalis						Taxodium sp.	1			1	
Panicum hemitomon			1	1		Thalia geniculata					
Panicum repens	1	1	1	1		Thelypteris palustris					
Paspalidium geminatum						Triadenum virginicum	1	1	1	1	
*Paspalum repens						Typha sp.					
Paspalum urvillei	1	1	1	1		Urochloa mutica (Brachiaria mutica)					
Peltandra sp.						*Utricularia gibba (U. biflora)					
Persea sp.						*Utricularia floridana	DCDI	DCDI	DCDI	DCDI	
Pennisetum purpureum						*Utricularia foliosa					
Phragmites australis						*Utricularia inflata					
Pinus elliotii						*Utricularia purpurea					
Pistia stratioides						*Utricularia cornuta	1			1	
Pluchea sp.						*Utricularia radiata					
*Polygonum glabrum (densiflorum)						Vallisneria americana					
*Polygonum hydropiperoides						*Websteria confervoides				1	
*Polygonum punctatum						Wedelia trilobata (Sphag. trilobata)					
*Polygonum						Wolffiella spp.					
Pontederia cordata	1		1	1		Woodwardia virginica - crochete		1	1	1	
*Potamogeton diversifolius						Xyris sp.	1	1	1	1	
*Potamogeton illinoensis						Zizania aquatica					
*Potamogeton pusillus						Zizaniopsis milacea					
*Potamogeton pectinatus (Stuck. pectinatus)						Toxicoderma radicans		1	1		
Proserpinaca pectinata						Vaccinium		1	1		
*Rhexia						Crystal lake plant					
*Rhynchospora corniculata						Cyperus difformis		1	1	1	
*Rhynchospora inundata						Cyperus croceus		1	1	1	
Rhynchospora tracyi						Cyperus japonica		1	1	1	
Ricciocarpus natans						Dirban hella scab	1	1	1	1	
Sabal palmetto						Phlox					
Sacciolepis striata		1	1	1		Rhexia mariana	1	1	1	1	
*Sagittaria filiformis						Pinus (sa d) clausa	1	1	1	1	
*Sagittaria graminea						Vitis	1	1	1	1	
*Sagittaria isoetiformis											
Sagittaria lancifolia	1	1	1	1							
Sagittaria latifolia											
Phyllanthus			1								
Carex glaucescens	1	1	1	1							

RQ:2018-08-13-34

*Schoenoplectus tabernaemontani = Scirpus validus

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Spring Lake Center		County: Walton (Defuniak Spring)		Date: 8/21/2018	
Analyst: F. Butera		Signature: <i>[Signature]</i>		STORET: G3NW0164	
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 78773	1 4 7 10	Collecte	Macro ID	1 4 7 10	Collecte
SPECIES	3 6 9 12	d? (✓)	SPECIES	3 6 9 12	ed? (✓)
<i>Juncus polycephalus</i>	1		Camphor Tree		
<i>Juncus triglochin</i>			Ginger		
<i>Polygonum punctatum</i>			Liquidambar		
<i>Liriodendron</i>	1				
<i>Lycopus</i>	1				
<i>Magnolia grand</i>					
purple mist flower			Photo not collected		
<i>Conoclinium</i>					
Canna Lily					
Ginger					
<i>Prunella</i>					
Unid. Ericaceae					
<i>Albizia</i> EXOTIC					
Unid. Ericaceae					
*Field ID <i>Prunella</i>					
<i>Chrysopsis</i> sp. XX					
*Crystal Lk. Plant					
<i>Ludwigia virginica</i> XX	1				
Field ID <i>L. himantella</i>					
<i>Chrysopsis</i> sp.					
*Crystal Lk. plant					
<i>Lagerstronia</i> sp.					
(Crepe Myrtle)					
Unknown Ericaceae					
<i>Zizania</i> → <i>Eragrostis</i>					
<i>elliptica</i>					

RQ:2018-08-13-34

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

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

Date: 8/21/2018	Name of Lake: Spring Lake	Gear used: PONAR	EKMAN	OTHER	
Comments: Completed in 2017 Spring Lakes					
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
6		sand, silt/clay, CPOM, muck, SAV	12		sand, silt/clay, CPOM, muck, SAV

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

WIN ID: G3NW0164

Field ID G3NW0164 RQ-2018-08-13-34

SBIO ID:

78773

WBID 302

Project. TMDL Studies (SMP 2018)

Set 1

4

7 - no buffer curve section.

10

* ~~Is~~ Lots of rain.

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

Revision Date: February 1, 2004

Station: Spring Lake (Center)
GPS Dec. 30.75261 x 86.060708
Storet: G3NW0164 WBID 302
Sample ID : 78773
Macro ID: 11246

Sampled : 08/21/2018
Sampled By: F. Butera, S. Slade
Location: Defuniak Spring, Co. FL
Receiving Waters:
LIMS ID: 2018995

	Taxa	1	4	7	10	C of C	Coll.	Verified
1	<i>Andropogon</i> sp.			1	1			
2	<i>Arundinaria gigantea</i>				1	5.25		
3	<i>Canna</i> sp.	1				6.75		
4	<i>Carex glaucescens</i>	1	1	1	1	4.70		
5	<i>Colocasia esculenta</i>	1				0.00		
6	<i>Cyperus croceus</i> *			1			✓	A. O'Neal
7	<i>Cyperus haspan</i>			1		5.68	✓	Lab F Butera
8	<i>Dichanthelium scabriusculum</i>	1	1	1	1	7.15		
9	<i>Eleocharis submersa</i> (wispy-Vivipara)	1	1	1	1	3.81		
10	<i>Eragrostis elliotii</i> !			1	1		✓	Lab F Butera
11	<i>Eriocaulon lineare</i>	1	1			6.00	✓	Lab F Butera
12	<i>Fuirena scirpoidea</i>			1	1	6.50		
13	<i>Habenaria repens</i>	1	1	1		4.58		
14	<i>Juncus effusus</i>	1	1	1		3.25		
15	<i>Juncus polycephalus</i>	1	1	1		4.96		
16	<i>Juncus trigonocarpus</i>			1				
17	<i>Lachnanthes caroliniana</i>				1	3.76		
18	<i>Leersia hexandra</i>	1	1	1	1	5.61		
19	<i>Mayaca fluviatilis</i>	1	1	1		8.45		
20	<i>Panicum hemitomon</i>			1	1	5.82		
21	<i>Panicum repens</i>	1	C	1	1	0.00		
22	<i>Paspalum urvillei</i>	1	1	1	1	0.00		
23	<i>Pontederia cordata</i>	1		1	1	5.38		
24	<i>Sacciolepis striata</i>		1	1	1	5.35		
25	<i>Sagittaria lancifolia</i>	1	1	1	1	4.96		
26	<i>Scirpus cyperinus</i>			1	1	3.50		
27	<i>Websteria confervoides</i>				1	4.00		
28	<i>Xyris</i> sp.	1	1	1	1			
29	<i>Bacopa caroliniana</i>			1		5.31		
30	<i>Bidens mitis</i>	1		1		6.31		
31	<i>Boehmeria cylindrica</i>	1	1	1	1	5.91		
32	<i>Brasenia schreberi</i>	1	1	1	1	8.79		
33	<i>Centella asiatica</i>			1		1.92		
34	<i>Chrysopsis</i> sp. **			1			✓	A. O'Neal
35	<i>Conoclinium coelestinum</i>			1		4.37	✓	Lab F Butera
36	<i>Erechtites hieraciifolius</i>	1		1		1.37		
37	<i>Eupatorium capillifolium</i>			1		0.83		
38	<i>Eutrochium fistulosum</i>	1		1	1		✓	Lab F Butera
39	<i>Hydrocotyle</i> sp.	1	1	1	1	2.00		
40	<i>Hypericum fasciculatum</i>		1		1	7.27		
41	<i>Ludwigia leptocarpa</i>			1		5.85		
42	<i>Ludwigia octovalvis</i>			1		0.62	✓	Lab F Butera
43	<i>Ludwigia virgata</i> **	1	1	1	1		✓	A. O'Neal
44	<i>Lycopus</i> sp.	1	1	1	1			
45	<i>Nymphoides aquatica</i>	1	1	1	1	6.09		
46	<i>Phyllanthus urinaria</i>			1		0.22		
47	<i>Polygonum punctatum</i>			1		7.22	✓	Lab F Butera
48	<i>Rhexia mariana</i>	1		1		7.90		
49	<i>Toxicodendron radicans</i>			1				
50	<i>Triadenum virginicum</i>	1	1	1	1	8.16		

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	Taxa	1	4	7	10	C of C	Coll.	Verified
51	<i>Utricularia comuta</i>	1			1			
52	<i>Utricularia floridana</i>	D	C	D	1	6.34		
53	<i>Vitis</i> sp.	1	1	1	1			
54	<i>Acer rubrum</i>	1	1	1	1	4.65		
55	<i>Albizia julibrissin</i>		1			0.00		
56	<i>Cliftonia monophylla</i>	1	1			5.63		
57	<i>Cyrtilla racemiflora</i>	1	1	1	1	5.20		
58	<i>Ilex vomitoria</i>			1		3.00		
59	<i>Liriodendron tulipifera</i>	1		1	1			
60	<i>Magnolia grandiflora</i>			1		4.36		
61	<i>Magnolia virginiana</i>	1		1	1	9.44		
62	<i>Myrica cerifera</i>	1		1	1	3.82		
63	<i>Nyssa sylvatica</i> var. <i>biflora</i>	1	1		1	9.04		
64	<i>Pinus clausa</i> (Sand Pine)	1		1	1			
65	<i>Sapium sebiferum</i>	1	1	1	1	0.00		
66	<i>Taxodium</i> sp.	1			1	7.20		
67	<i>Vaccinium</i> sp.		1	1				
68	<i>Lycopodium</i> sp.			1	1			
69	<i>Osmunda cinnamomoea</i>			1		6.44	✓	Lab F Butera
70	<i>Woodwardia areolata</i>		1	1	1	7.68		
	Taxa per section	40	32	58	41	Herb. Taxa		53
	Exotic Present	5	4	4	3	Woody Taxa		14
	Avg. taxa per section	43				Ferns		3
	sections with exotics	4				Macro Algae		0
	Exotic Taxa	7	Exotics per Section: 4.0			Total Taxa		70

40 31 58 43

Seen but not counted (Not approp. For LVI or Not in surveyed segment)

<i>Lagerstromia</i> sp. (Crepe Myrtle)	1	-	-	-
Camphor Tree	-	-	-	-
<i>Liquidambar styraciflua</i>	-	-	-	-

Metric	Rep. 1	Rep. 2	Rep. 3	Rep. 4	LVI Average
LVI 2012	68	60	66	67	65
LVI 2012 Category	-	-	-	-	
Native Percentage	89.74	90.32	90.91	89.74	90.18
FLEPPC Pct (Exotic)	7.69	6.45	3.64	5.13	5.73
Total Taxa	39	31	55	39	41.00
C of C over 7.0	12.82	12.9	5.45	12.82	11.00
Dominant Taxa	<i>U. floridana</i>	<i>U. floridana</i> , <i>P. repens</i>	<i>U. floridana</i>	N/A	<i>U. floridana</i> , <i>P. repens</i>
C of C Dominant	6.34	3.17	6.34		5.28

* *Cyperus croceus* orig. ID *C. difformis*.

** *Ludwigia virgata* ID F. Butera, Verify A. O'Neal. Field ID *L. hiratella*.

** *Chrysopsis* sp. ID F. Butera, Verify A. O'Neal

! *Eragrostis elliottii* field ID *Zizania aquatica*