

Site Name Allen Lake (Middle)

Date: 09/03/2019

Field ID G3NW0085 Storet G3NW0085

Project: SMP / TMDL Studies

Visit ID 80193

RQ: 2019-07-29-70

Macro ID 11484

LIMS ID: 2116423

HA ID 16214

WBID: 959H

☒ LVI

☒ Sample Site Created in SBIO

☐ Phys/Chem entered in SBIO

☒ HA entered in SBIO Initial FB

☐ Date and Initial QA: _____

☒ LVI entered in SBIO Initial FB

☒ Date and Initial QA: _____

☐ < 2 m² vegetation

☒ Plants getting verified

Date submitted: _____

☐ Plants verified

Date returned: _____

☐ Macro authorized in SBIO

☐ Date and Initial: MK, 01/14/2020

☐ LVI Score: 68

☒ If SMP, scanned into database



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name:

Allen Lake (Middle)

Date:

9/3/19

(mm/dd/yyyy)

WIN/Field ID:

G3NW0085

WBID:

959H

Latitude:

30.35419498

(Decimal Degrees)

County:

Walton

ORG ID:

21FLPNS

Longitude:

-86.25178176

(Decimal Degrees)

Receiving Body of Water:

Gulf of Mexico

RQ-2019-07-08-18

07-29-70

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Frank Butera						X	X	X	X
Matt Bearden Myranda Clark						X	X		

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☒ Syringe	
☐ Dipper	☐ Other	
Depth Measured with <u>PDPSS</u>		
Equipment ID		

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

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

Meter ID#

154179

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 (PPTH)	Sp COND (umhos/cm)	Temp. (C°)
EST	13:05	1.6	0.3	1.0	6.73	89.9	5.37	0.04	83.6	30.8
CEN	13:10		1.1		5.59	72.4	5.18	0.04	83.7	29.0

Biological Samples Collected:

None HA SCI RPS Algae ID LVS LVI Other:

SBIO ID Numbers:

SBIO-ID: 80193

HA-ID: 16214

RPS-ID: N/A

Macrophyte-ID: 10484

LIMS#: 2116423

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	SA8344070	12/10/19	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3	NA9099030	04/09/2020	☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um Filter	☒ Ice	16570048		
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / ☒ W-F / ☒ W-TSS / ☒ TURBIDITY / ☒ W-CI-IC / ☒ W-COLOR / ☒ W-SO4-IC / ☒ W-TDS	☒ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / ☐ W-BR-IC / ☐ 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-BacR ☐ PCR-GULL2 ☐ PCR-HF183 ☐ PCR-DG3 ☐ 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-CAR8-AA	☐ Ice			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C				

Place Preservative Sticker(s) Here
(If Available)

Notes:

Ref:

Date: 29Jul19

SHIPPING:

0.00

Dep:

Wgt: 10.00 LBS

SPECIAL:

0.00

HANDLING:

0.00

TOTAL:

0.00

DV: 0.00

Sves: PRIORITY OVERNIGHT
TRCK: 4751 8782 3165

Signature:

Field/WIN ID →



G3NW0085

Location:

Allen Lake (Middle)

Date:

9/3/19

LIMS EVENT ID:

WIN Import ID:

Enter Field Parameters, Verify Station ID In LIMS DMT:

QC Station ID, Field Parameters In LIMS DMT:

Scan/Save Field Sheets

Migrate Data to WIN:

Verify Data In WIN:

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 80193 MACROPHYTE ID: 11484 LATITUDE: 30.35419498
COUNTY: Walton (Santa Rosa Beach) STORET #: G3NW0085 LONGITUDE: -86.25178176
DATE: 09/03/2019 TIME: 13:05 CTZ SAMPLING AGENCY: FL DEP - NWROC
SITE NAME: Allen Lake (Middle) WBID: 959H
FIELD ID/NAME: ZG3NW0085 LAKE SIZE: 15 RQ: 2019-07-08-46

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>N/A</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>7</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
LAKESIDE ALTERATIONS <u>3</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
BUFFER ZONE <u>8</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
					Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place 5 4 3 2 1
					Highly developed or disturbed (>70% of lakeside affected) 5 4 3 2 1
					< 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 # _____ 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>30.8</u> <u>5.37</u> <u>6.73</u> <u>89.9</u> <u>83.6</u> <u>3.8</u> Mid-Depth: _____ Bottom: <u>1.1</u> <u>29.0</u> <u>5.18</u> <u>5.59</u> <u>72.4</u> <u>63.7</u> <u>29.0</u> Meter ID: <u>154179</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): <u>algae</u>				Clarity: ☐ Clear ☒ Turbid ☐ Opaque ☐ 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 ☐ Other (Specify): _____ ☐ Anaerobic				Additional Notes: <u>Lake checked w/ submersed vegetation</u>			
Weather Conditions: <u>Sunny, Hot</u>							
SAMPLING TEAM: Frank Butera, Matt Beardon <u>M. Clarke</u>				SIGNATURE: <u>[Signature]</u>		DATE: <u>09/03/19</u>	

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

Store/ WIN ID NUMBER: G3NW0085	DATE (M/D/Y) 09/03/19	LAKE NAME: Allen Lake (<i>middle</i>)		FIELD ID / NAME: G3NW0085
ECO-REGION: 959H	COUNTY: Walton	SAMPLING LOCATION/DESCRIPTION: Santa Rosa Beach, FL		LAKE SIZE: 15.3 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 10	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 <i>Butera</i> 11 9	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 7	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 14	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 3	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 8	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 9	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 6062	COMMENTS:			

ANALYSIS DATE: 09/03/19	ANALYST: Frank Butera, Mike King	SIGNATURE: <i>Frank Butera</i>
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SBIO ID: **80193**HA ID: **16214**

RQ:2018-07-08-46

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Allen Lake (Middle)				County: Walton (Santa Rosa Beach)				Date: 09/03/2019			
Analyst: F. Butera				Signature: <i>[Signature]</i>				STORET: G3NW0085			
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			
SBI ID 80193	3	6	9	12	Collect ed? (✓)	Macro ID 11484	3	6	9	12	Collect ed? (✓)
SPECIES						SPECIES					
Acer rubrum						Habenaria repens					
Alternanthera philoxeroides						Hydrilla verticillata					
Andropogon sp.		1				Hydrocotyle sp.					
Azolla filiculoides (A. caroliniana)						Hygrophila polysperma		1			
Baccharis sp.						*Hypericum fasciculatum					
Bacopa caroliniana						*Hypericum hypericoides			1		
Bacopa monnieri						*Hypericum myrtifolium					
Bidens laevis						Ilex cassine					
Bidens mitis						Ipomoea aquatica					
Blechnum serrulatum						Ipomoea sagittata					
Boehmeria cylindrica						Itea virginica					
Brasenia schreberi		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	1	1			
Chara sp.						Leersia hexandra					
Cladium jamaicense	1			1		Landoltia punctata (Spiro. punctata)					
Cliftonia monophylla						Lemna sp.					
Colocasia esculenta						Leucothoe racemosa (E. racemosa)					
*Commelina						Limnobia spongia					
Crinum americanum						Limnophila sessiliflora					
*Cyperus alternifolius (C. involucreatus)						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	1		1	1		*Ludwigia					
Decodon verticillatus						Luziola fluitans (H. carolinensis)	1	1	1	1	
Diodia virginiana						Lyonia lucida					
*Echinochloa crus-galli						Magnolia virginiana		1			
*Echinochloa muricatum						Mayaca fluviatilis					
Echinochloa walteri						Melaleuca quinquenervia					
Eclipta prostrata (E. alba)						Micranthemum glomeratum					
Egeria densa						Micranthemum umbrosum					
Eichhornia crassipes						Mikania scandens		1	1		
*Eleocharis baldwinii						Mimosa pigra					
*Eleocharis W.S.P.	1		1	1		Myrica cerifera	1	1	1	1	
Eleocharis cellulosa						P. glauca					
Eleocharis equisetoides						Juncus sp.					
Eleocharis interstincta						Hygrophila sp.					
*Eriocaulon compressum						Hypericum brachy	1	1	1	1	
*Eriocaulon decangulare											
Eupatorium capillifolium	1		1	1							
*Fuirena						Juncus → R. tracyi W.S.P.					
Fuirena scirpoidea	1		1	1							
Gordonia lasianthus											

RQ:2019-07-08-46

29-70

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

~~RQ:2019-07-08-46~~

**Schoenoplectus tabernaemontani* = *Scirpus validus*

Station: Allen Lake (Middle)
 GPS Dec. 30.35419 x -86.25178
 Storet: G3NW0085 WBID 959H
 Sample ID : 80193 Macro ID: 11484
 RQ-2019-07-29-70

Sampled : 09/03/2019
 Sampled By. F.Butera, M. Clark
 Location. Santa Rosa Beach, Walton Co. FL
 Receiving Waters: Gulf of Mexico.
 LIMS ID: 2116423

	Taxa	3	6	9	12	Coll.	Verified
1	<i>Andropogon</i> sp.		1				
2	<i>Brasenia schreberi</i>		1	1			
3	<i>Cephalanthus occidentalis</i>	1	1	1	1		
4	<i>Cladium jamaicense</i>	1			1		
5	<i>Cyrilla racemiflora</i>	1		1	1		
6	<i>Eleocharis vivipara</i> (submersed)	1		1	1		
7	<i>Eupatorium capillifolium</i>	1		1	1		
8	<i>Fuirena scirpoidea</i>		1	1	1		
9	<i>Hypericum brachyphyllum</i>	1	1	1	1		
10	<i>Hypericum fasciculatum</i>		1				
11	<i>Hypericum hypercoides</i>			1			
12	<i>Juncus</i> sp.				1	Y	FB
13	<i>Lachnanthes caroliana</i>	1	1				
14	<i>Luziola fluitans</i> (Michx.)	1	1	1	1		
15	<i>Magnolia virginiana</i>		1				
16	<i>Mikania scandens</i>		1	1			
17	<i>Myrica cerifera</i>	1	1	1	1		
18	<i>Myriophyllum heterophyllum</i>	D	C	C	C		
19	<i>Nuphar</i> sp.	1	C	C	1		
20	<i>Nymphaea odorata</i>	1	1	1	C		
21	<i>Nymphoides aquatica</i>	1	1	1	1		
22	<i>Panicum hemitomon</i>				1		
23	<i>Panicum repens</i>	1	1	1	1		
24	<i>Pinus clausa</i> (Sand Pine)			1	1		
25	<i>Rhynchospora inundata</i>	1	1	1	1	Y	FB
26	<i>Rhynchospora tracyi</i>			1	1	Y	FB
27	<i>Sabal palmetto</i>				1		
28	<i>Sacciolepis striata</i>	1		1	1		
29	<i>Sapium sebiferum</i>			1			
30	<i>Triadenum virginicum</i>		1	1			
31	<i>Utricularia floridana</i>	1	1	1	1		
32	<i>Vitis</i> sp.		1	1	1		
33	<i>Xyris</i> sp.	1			1		
	Taxa per section	18	19	24	24	Herb. Taxa	25
	Exotic Present	1	1	2	1	Woody Taxa	7
	Avg. taxa per section	21	Exotics per Section: 1.25			Ferns	0
	sections with exotics	4				Macro Algae	0
	Exotic Taxa	2				Total Taxa	32

Photo Log

Storet

Station Name: Allen Lake (Middle)

Date:

Samplers. F. Butera, ~~M. Bearden~~

- 1 Section 12 - North
- 2 Section 12 - Surface
- 3 North - Shore
- 4 East - Shore
- 5 South - shore
- 6 West - shore
- 7 _____
- 8 _____
- 9 _____
- 10 _____
- 11 _____
- 12 _____
- 13 _____
- 14 _____
- 15 _____
- 16 _____
- 17 _____

Notes.

**Allan Lake Storet G3NW0085
WBID 959H. SMP Lakes 2018
30.35419 x -86.25178**

