



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End
of Day CCV
☒ Yes / ☐ No

WIN Station Name: Twin Lake **Date:** 6/21/2021
WIN/Field ID: G3NW0215 **WBID:** 906A **ENR:** **Latitude:** 30.39516199
County: OKALOOSA **Org ID:** 21FLPNS **Longitude:** -86.47528
Receiving Body of Water: Choctawhatchee - St. Andrew **RQ:** 2021-06-21-27

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Christopher Stopher Slade	x		x		
☒	Frank Butera		x		x	x
☐						
☐						

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☒ Syringe	☐ Pole
Depth measured with: Meter	
Secchi Equipment ID:	
Collection Method	
☐ Wading	☒ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other	☐ Gasoline Motor

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# 155077 (PRODSS)					
Photos: No		Flow: NA		Tide:		Tide Times: High: Low:					
Biological Samples Collected: ☐ None ☒ HA ☐ SCI ☐ RPS ☐ Algae ID ☐ LVS ☒ LVI Other:											
SBIO ID Numbers: SBIO82541. HA ID 16876. Macro ID 11859											
Notes: "O" QUALIFIER TOO MUCH SURFACE VEGETATION TO READ SECCHI. "R" QUALIFIER Water quality were not delivered for analysis.											

Duplicate Sample

Time Zone: CEN	Time:	Field ID: N/A	(WIN ID_DUP)
WIN DMT Activity ID:			

Blank

Time Zone:	Time:	Field ID:	(Blank Type_DDDMMYY)
DI Source:		Location:	
DI Type:		Equipment ID:	
DI Container (Name/ID):		DI Container Type:	

LIMS EVENT ID: 2257081 WIN Import ID:
Enter Field Parameters, Verify Station ID In LIMS DMT: QC Station ID, Field Parameters In LIMS DMT:
(Initials/Date) (Initials/Date)
Scan/Save Field Sheets FB Migrate Data to WIN: Verify Data In WIN:
(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2021-06-21-27

Customer: WQAP

Project ID: SMP

Collected By: Christopher Stopher Slade, Frank Butera

Field Report Prepared By: Christopher Stopher Slade

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G3NW0215

Location: Twin Lake

Comments: Microbiology sample(s) submitted to (2) contract laboratories

Matrix: Fresh

(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 (PPT _h)
6/21/2021	950 CEN	0.1	1.3	26.9	6.66	0.3	0 ☐ VOB (S)	0.7	457.1	0.22
							Central Lab please use top row for login purposes			
	CEN									

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 # 0293040 Exp: 10/19/21				
Metals (P-500ML)	☐ W-ICPMS ☐ W-ICP ☐ W-HARD	☐ Ice ☐ HNO3*	☐ <2		
	Lot # Exp:				
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice		1	A
	Filter Lot # 17097890				
	Syringe Lot # 0079929				
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 ☒ Contract Lab	☒ Ice		2	A
Molecular (QPCR-P-500ML)	☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-DG3 ☐ PCR-GULL2 ☐ PCR-GFD	☐ 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	☐ Ice			
	☐ W-PCL-TQ-R ☐ W-CARB-AA (5 ml of MCAA** Buffer Solution) ☐ W-DIELDRIN				
Phytoplankton/Periphyton	☐ DTM-QL-C ☐ PEN-QL-C ☐ DTY-QN-C ☐ PKD-QN-C	☐ Ice			
	☐ DTM-QN-C ☐ PRN-QN-C ☐ PKD-QN-BV				

Name:
Christopher Stopher Slade
Frank Butera

Signature:

Christopher Slade

Date:

6/21/2021

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

Site Name Twin Lake

Date: 06/21/2021

Field ID G3NW0215 Storet G3NW0215

Project: SMP / TMDL Studies

Visit ID 82541

RQ: 2021-06-21-27

Macro ID 11859

LIMS ID: 2257081

HA ID 16876

WBID: 906A

☒ LVI

☐ Sample Site Created in SBIO

☒ Phys/Chem entered in SBIO

☒ HA entered in SBIO Initial FB 7/15/2021

☒ Date and Initial QA: 7/19/2021 SS HA Score 28

☒ LVI entered in SBIO Initial FB, 7/15/2021

☐ Date and Initial QA: 01/24/2022 SS

☒ Plants getting verified

☐ Date submitted: _____

☐ Plants verified

☐ Date returned: _____

☒ Macro ID authorized in SBIO

☒ Date and Initial: 01/26/2022 FB

☒ Macro ID score: 35

☒ If SMP, scanned into database

Notes: Water quality has multiple qualifiers. "R" qualified for high rain fall preceding sampling event. Samples were delivered to central laboratory after hold time expired, water quality samples run so they could be associated with Lake Vegetation Index sampling (LVI). Bacteria samples are good (E. coli, Enterococci, and Fecal Coliform samples) were run by contract lab and were processed within holding times.

Plants to be verified 07/15/2021.

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 82544 82541 MACROPHYTE ID: 11859 LATITUDE: N 30.39516
 COUNTY: Okaloosa STORET #: G3NW0215 LONGITUDE: W -86.47528
 DATE: 6/21/2021 TIME: 9:50 CTZ SAMPLING AGENCY: FL DEP - NWROC
 SITE NAME: Twin Lake WBID: 906A
 FIELD ID/NAME: G3NW0215 LAKE SIZE: 2.88 5.64 acres RQ: 2021-06-21-27
 WATERSHED / LAKESIDE FEATURES LIMS ID: 2257081

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category - from GIS):					LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer)				
Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industrial	Other (Specify)	LDI: <u>N/A</u>	
☐	☐	☐	☐	☒	☒	☐	<u>2.88</u> <u>5.64 acres</u>	Land Use Source & Year:	
Local Watershed Erosion (select one): ☐ None ☐ Slight ☐ Moderate ☒ Heavy					Artificially Impounded ☒ Yes ☐ No				
Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☐ Moderate ☒ Heavy									
STORMWATER INPUTS		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	
<u>1</u>		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6		5 4 3 2 <u>1</u>	
LAKESIDE ALTERATIONS		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)	
<u>5</u>		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6		<u>5</u> 4 3 2 1	
BUFFER ZONE		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	
<u>10</u>		20 19 18 17 16		15 14 13 12 11		<u>10</u> 9 8 7 6		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 _____ Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____							
Meter Readings: Top: <u>0.3</u> <u>26.9</u> <u>6.66</u> <u>0.1</u> <u>1.3</u> <u>45.7</u> <u>0.22</u> Mid-Depth: _____ Bottom: _____								Clarity: ☐ Clear ☒ Turbid ☐ Opaque ☐ Slightly Turbid Color: ☐ Clear ☐ Tannic ☒ Green SECCHI (M) <u>0.4</u> Total Station Depth (M) <u>1.0</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 ☐ 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: Lake surface completely covered w/ Lemna Had difficulty sampling for diatoms Red Ox.															
Weather Conditions: <u>Tropical storm channeled overcast, 70's "R" Quickened later.</u> <u>Newly rain immediately after sample</u> <u>Water Quality samples arrived out of Hold Time, say for Bio Samples.</u>															
SAMPLING TEAM: Frank Butera, Stopher Slade								SIGNATURE: <u>[Signature]</u>				DATE: <u>06/21/2021</u>			

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

Store/ WIN ID NUMBER: G3NW0215	DATE (M/D/Y) 06/21/2004	LAKE NAME: Twin Lake		FIELD ID / NAME: G3NW0215												
ECO-REGION: 906A	COUNTY: Okaloosa	SAMPLING LOCATION/DESCRIPTION: Destin, Okaloosa Co., FL		LAKE SIZE: 2.8 5.6												
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		Poor												
Secchi	Secchi >3 m Or VOB	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
	20 19 18 17 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Vegetation Quality	Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa	Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants	Large masses (21%-40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats	Lake choked (>40%) with nuisance macrophytes (duckweed, hyacinth, etc.) or algal mats, or few plants present at all (e.g., plants removed)												
	20 19 18 17 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Stormwater Inputs	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 19 18 17 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Bottom Substrate Quality	Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present	Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present	Moderate layer of CPOM/ mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom	Thick deposits of CPOM, or fine detritus and anaerobic muck/mud/silt, or algal growth or nuisance plants (Hydrilla) cover bottom												
	20 19 18 17 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Lakeside Adverse Human Alternations	Very few man-made structures, roads, or other disturbance adjacent to lake (<10%)	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 19 18 17 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Upland Buffer Zone	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
Adverse Watershed Land Use	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, Airport, WWT															
	20 19 18 17 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

TOTAL
SCORE

28

COMMENTS:

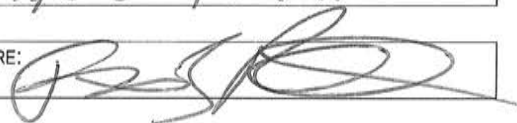
Overcast. Adjacent to WWTP. Lynsbye everywhere.

ANALYSIS DATE:

06/21/2004

ANALYST: Frank Butera, Stopher Slade

SIGNATURE:



SBIO ID:

82541
82544

HA ID:

16876

RQ:2021-06-21-27

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Twin Lake					County: Okaloosa (Destin)					Date: 06/21/2021				
Analyst: F. Butera, Stopher Slade					Signature: [Signature]					STORET: G4NW0215				
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	3	6	9	12	Collect ed? (✓)	Macro ID	3	6	9	12	Collect ed? (✓)			
SPECIES						SPECIES								
Acer rubrum						Habenaria repens								
Alternanthera philoxeroides	1	1	1	1		Hydrilla verticillata	1	1	1	1				
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	1					Itea virginica								
Brasenia schreberi						Juncus effusus								
Cabomba caroliniana						*Juncus marginatus								
Casuarina equisetifolia						*Juncus megacephalus								
Centella asiatica						Juncus repens								
Cephalanthus occidentalis				1		*Juncus scirpoides								
Ceratophyllum demersum						Lachnanthes caroliniana								
Chara sp.						Leersia hexandra								
Cladium jamaicense						Landoltia punctata (Spiro. punctata)					✓			
Cliftonia monophylla						Lemna sp.					✓			
Colocasia esculenta	1					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	1	1			✓	*Ludwigia peruviana								
*Cyperus surinamensis						*Ludwigia repens								
Cyrtilla racemiflora						*Ludwigia								
Decodon verticillatus						Luziola fluitans (H. 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														
*Eriocaulon compressum														
*Eriocaulon decangulare														
Eupatorium capillifolium														
*Fuirena														
Fuirena scirpoidea														
Gordonia lasianthus														

RQ:2021-06-21-27

American B. Hern

82541

Date: 6/24/2024 SBIO ID 82590 Macro ID 11859

RQ:2021-06-21-27

**Schoenoplectus tabernaemontani* = *Scirpus validus*

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

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

Date:		Name of Lake: Twin Lake		Gear Used ☒ POM ☐ 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
6		sand, silt/clay, CPOM, muck, SAV	12	1.0	sand, silt/clay, CPOM, muck, SAV

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

WIN ID:G4NW0215
WBID 906A

Field ID G4NW0215 Project. TMDL Studies
RQ-2021-06-21-37

SBIO ID:

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

Station: Twin Lake
 GPS Dec. 30.39516 x -86.47528
 Storet: G3NW0215 WBID 906A
 Sample ID : 82541 Macro ID: 11859
 RQ-2021-06-21-27 LIMS ID: 22527081

Sampled : 06/02/2021
 Sampled By: F. Butera, S. Slade
 Location: Vernon, Washington County
 Receiving Waters: Kell-Aire Lake
 Basin: Joe's Bayou

	Taxa	3	6	9	12	Coll.	Verified
1	<i>Acer rubrum</i>		1				
2	<i>Alternanthera philoxeroides</i>	1	1	1	1		
3	<i>Boehmeria cylindrica</i>	1					
4	<i>Cephalanthus occidentalis</i>				1		
5	<i>Chasmanthium nitidum</i>		1			Y Pressed	FB
6	<i>Colocasia esculenta</i>	1					
7	<i>Cyperus odoratus</i>	1	1			Y	FB
8	<i>Hydrocotyle</i> sp.	1	C	1	1		
9	<i>Landoltia punctata</i>	D	C	D	D		
10	<i>Lemna</i> spp.	1	1	1	1	Y	FB
11	<i>Lilaeopsis carolinensis</i>	1	1				
12	<i>Magnolia virginiana</i>				1		
13	<i>Myrica cerifera</i>	1	1	1	1		
14	<i>Myriophyllum aquaticum</i>	1	1	1	1		
15	<i>Panicum repens</i>			1	1	Y	FB
16	<i>Paspalum urvillei</i>	1	1			Y	FB
17	<i>Pinus elliotii</i> (Slash)	1		1			
18	<i>Polygonum hydropiperoides</i>	1	1	1	1		
19	<i>Pontederia cordata</i>	1					
20	<i>Sagittaria lancifolia</i>		1	1	1		
21	<i>Salix carolinana</i>			1			
22	<i>Sapium sebiferum</i>	1	1	1	1		
23	<i>Spartina bakeri</i> Merr.		1	1		Y (Pic only)	T McHale
24	<i>Taxodium</i> sp.		1	1	1		
25	<i>Typha</i> sp.		1	1	1		
26	<i>Vitis</i> sp.			1	1		
27	<i>Woodwardia areolata</i>	1					
	Taxa per section	16	16	16	15	Herb. Taxa	17
	Exotic Present	5	4	4	4	Woody Taxa	8
	Avg. taxa per section	16				Ferns	1
	Sections with exotics	4				Macro Algae	0
	Exotic Taxa	6				Total Taxa	26
			Exotics per Section: 4.3				

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

Taxon	3	6	9	12
Filamentous green algae	1	1	1	1
Blue-Green Algae (Lyngbya)	1	1	1	1

Metric	Rep. 1	Rep. 2	Rep. 3	Rep. 4	LVI Average
LVI 2012	22	40	36	43	35
Native Percentage	66.67	75	73.33	71.43	71.61
FLEPPC Pct (Exotic)	13.33	6.25	13.33	14.29	11.80
Total Taxa	15	16	15	14	15
C of C over 7.0	0	6.25	6.67	14.29	6.80
Dominant Taxa	Landoltia punctata	Hydrocotyle / L. punctata	Landoltia punctata	Landoltia punctata	Landoltia punctata
C of C Dominant	-	2	-	-	2.00

Plants for verification not returned.

Twin Lake

Storet G3NW0215
 Receiving Water Joe's Bayou
 Basin, WBID Choctawhatchee Bay, 906
 City, County Destin, Okaloosa
 Lake Acreage 5.59 acres / 2.262 Hectares
 Circumference (M) 1273.54
 Seg. Length (M) 106.1283333

Section	Location	Dec. Latt.	Dec. Long.
12	Storet	30.39516	-86.47528
	A	30.39549	86.47551
	B	30.39487	86.47485
3	C	30.39394	86.47491
	D	30.39355	86.47542
	E	30.39301	86.47599
6	F	30.39261	86.47545
	G	30.39192	86.47493
	H	30.39224	86.47595
9	I	30.39265	86.47662
	J	30.39321	86.47613
	K	30.39402	86.47570
12	L	30.39467	86.47514
	A	30.39549	86.47551

Segments selected 3,6,9,12

G3NW0218. Twin Lakes
WBID 906.
2.6 Hectares/ 5.6 Acres
Destin, Okaloosa
N 30.395162 x W 86.47528

