

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

STRATEGIC MONITORING PLAN FIELD SHEET

January 2022

Meter Passed End

of Day CCV

☒ Yes / ☐ No

WIN Station Name: Lake Harney, Center of Lake

Date: 6/14/2022

WIN/Field ID: G2CE0254

WBID: 2964A

ENR: -

Latitude: 28.75833

County: VOLUSIA

Org ID: 21FLCEN

Longitude: -81.05997

Receiving Body of Water: -

RQ: 2022-06-13-22

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Elizabeth Bates	x		x		
☒	Terry Riordan		x		x	x
☐						
☐						

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

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# SHRIMP TRAP					
Photos: YES		Flow:		Tide:		Tide Times: High: Low:					
Biological Samples Collected: ☐ None ☐ HA ☐ SCI ☐ RPS ☐ Algae ID ☐ LVS ☒ LVI Other:											
SBIO ID Numbers: SBIO:84489 Macro ID: 12185						LIMS: 2334833					
Notes: SUNNY											

Duplicate Sample

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

Blank

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

LIMS EVENT ID: CEN-DIST-2022-06-15-02

WIN Import ID: 35053

Enter Field Parameters, Verify Station ID In LIMS DMT: EB 6/29/22

QC Station ID, Field Parameters In LIMS DMT: KWM 7/8/22

(Initials/Date)

(Initials/Date)

Scan/Save Field Sheets KWM 8/29/22

Migrate Data to WIN: KWM 8/29/22

Verify Data In WIN:

(Initials/Date)

(Initials/Date)

(Initials/Date)



RQ-2022-06-13-22

Customer: CEN-DIST

Project ID: STRATEGIC MONITORING PLAN

Collected By: Elizabeth Bates, Terry Riordan

Field Report Prepared By: Elizabeth Bates

Sampling Agency: FDEP

Place Label Here						Comments:					
WIN ID/Field ID:  G2CE0254											
Location: Lake Harney, Center of Lake											
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)	
6/14/2022	1353 EST	7.49	103.4	32.2	7.87	0.3	1.5 ☐ VOB (S)	2.4	1167	0.57	
	1356 EST	6.95	91.6	29.6	7.69	1.9	Central Lab please use top row for login purposes		1193	0.59	
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 #	130873		Exp:	11/17/22					
Metals (P-500ML)		☒ W-ICPMS ☒ W-ICP ☒ W-HARD				☒ Ice ☐ HNO3*		☒ <2	1	A	
		Lot #	NA1286110		Exp:	11/16/22					
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☐ Ice			1	A	
		Filter Lot #				Syringe Lot #	1335260				
BOD (BP-1L)		☐ OV-BODUNIN				☐ Ice					
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-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					
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		MCAA Exp.			
Pesticides (BG-500ML) (BG-1L)		☒ W-E8321-DI		☒ WE8321-MS		☒ W-PSNP-TQ		☒ W-CT-CL-R		5	A
		☐ W-PCL-TQ-R		☐ W-CARB-AA (5 ml of MCAA** Buffer Solution)		☐ W-TR-SQ-R					
		☐ W-PCB-TQ-R									
Phytoplankton/Periphyton				DTY-QN-C		PKD-QN-C		☐ Ice			
Name: Elizabeth Bates Terry Riordan					Signature: 					Date: 06/14/2022	

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Lake Harney</u>	County: <u>Volusia/Seminole</u>	Date: <u>6/14/22</u>	
Analyst: <u>W. Bates, Terry Jordan</u>	Signature: <u>W. Bates</u>	STORET:	
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): <u>1, 4, 7, 10</u> 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.			
SPECIES	Collected? (✓)	SPECIES	Collected? (✓)
Acer rubrum		Fuirena scirpoides	
Alternanthera philoxeroides		Gordonia lasianthus	
Amaranthus australis		Habenaria repens	
Andropogon sp.		Hibiscus coccineus	
Azolla filiculoides (A. caroliniana)		Hibiscus grandiflora <u>vs</u>	
Baccharis sp.		Hydrilla verticillata	
Bacopa caroliniana		Hydrocotyle sp.	
Bacopa monnieri		Hygrophila polysperma	
Bidens alba		Hymenocallis sp.	
Bidens laevis		*Hypericum fasciculatum	
Bidens mitis		*Hypericum hypericoides	
Blechnum serrulatum		*Hypericum myrtifolium	
Boehmeria cylindrica		Ilex cassine	
Brasenia schreberi		Ipomoea aquatica	
Cabomba caroliniana		Ipomoea sagittata	
Canna		Itea virginica	
Centella asiatica		Juncus effusus	
Cephalanthus occidentalis		*Juncus marginatus	
Ceratophyllum demersum		*Juncus megacephalus	
Chara sp.		Juncus repens	
Cladium jamaicense		*Juncus scirpoides	
Colocasia esculenta		Lachnanthes caroliniana	
*Commelina		Leersia hexandra	
Crinum americanum		Landoltia punctata (Spirodela punctata)	
*Cyperus alternifolius (C. involucratus)		Lemna sp.	
Cyperus articulatus		Leucothoe racemosa (Eubotrys racemosa)	
Cyperus haspan		Limnium spongia	
*Cyperus lecontei		Limnophila sessiliflora	
*Cyperus polystachyos		Liquidambar styraciflua	
*Cyperus odoratus		*Ludwigia arcuata	
*Cyperus surinamensis		*Ludwigia grandiflora	
Cyrilla racemiflora		*Ludwigia hexapetala	
Decodon verticillatus		*Ludwigia leptocarpa	
Diodia virginiana		Ludwigia (native)	
*Echinochloa crus-galli		*Ludwigia octovalvis	
*Echinochloa muricatum		*Ludwigia peruviana	
Echinochloa walteri		*Ludwigia repens	
Eclipta prostrata (E. alba)		Ludwigia suffruticosa	
Eichhornia crassipes		Luziola fluitans (Hydrochloa carolinensis)	
*Eleocharis <u>balduinii</u>		Magnolia virginiana	
Eleocharis cellulosa		Mayaca fluviatilis	
*Eleocharis elongata		Melaleuca quinquenervia	
Eleocharis equisetoides		Micranthemum glomeratum	
Eleocharis interstincta		Micranthemum umbrosum	
Eleocharis submersed viviparous		Mikania scandens	
*Eriocaulon compressum		Mimosa pigra	
*Eriocaulon decangulare		Myrica cerifera	
Eupatorium capillifolium		<u>Mimosa strigillosa</u>	
Fraxinus			

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: <u>Lake Harney</u>		Date: <u>6/14/22</u>	
SPECIES	Collected? (✓)	SPECIES	Collected? (✓)
Myriophyllum aquaticum		Salix caroliniana	
*Myriophyllum heterophyllum		Salvinia minima	
*Myriophyllum laxum		Sambucus canadensis	
*Myriophyllum pinnatum		Sapium sebiferum	
Myriophyllum spicatum		Saururus cernuus	
*Najas filifolia		Schinus terebinthifolius	
*Najas guadalupensis		*Schoenoplectus californicus	
*Najas minor		*Schoenoplectus pungens	X
Nelumbo lutea		*Schoenoplectus tabernaemontani (Scirpus validus)	
Nitella spp.		Scirpus cubensis (Oxycaryon cubense)	
Nuphar sp.		Scirpus cyperinus	
Nymphaea mexicana		*Sesbania <u>sp</u>	
Nymphaea odorata		Solidago sp.	
Nymphoides aquatica		Sparganium americanum	
Nyssa sylvatica var. biflora		Spartina bakeri	
Orontium aquaticum		Spirodela polyrhiza	
Osmunda cinnamomea		Taxodium sp.	
Osmunda regalis		Thalia geniculata	
Panicum hemitomon		Thelypteris interrupta	
Panicum repens		Thelypteris palustris	
Paspalidium geminatum		Triadenum virginicum	
*Paspalum repens		Typha sp.	
Paspalum urvillei <u>egline</u>	X	Urochloa mutica (Brachiaria mutica)	
Peltandra sp.		*Utricularia foliosa	
Persea sp.		*Utricularia gibba (U. biflora)	
Pennisetum purpureum		*Utricularia inflata	
Phragmites australis		*Utricularia purpurea	
Pinus elliotii		*Utricularia radiata	
Pistia stratioides		*Utricularia resupinata	
Pluchea sp.		Vallisneria americana	
*Polygonum glabrum (densiflorum)		Vigna luteola	
Polygonum hirsutum		Vitis sp.	
*Polygonum hydropiperoides		*Websteria confervoides	
*Polygonum punctatum		Wedelia trilobata (Sphagneticola trilobata)	
*Polygonum		Wolffiella spp.	
Pontederia cordata		Woodwardia virginica	
*Potamogeton diversifolius		Xyris sp.	
*Potamogeton illinoensis		Zizania aquatica	
*Potamogeton pusillus		Zizaniopsis milacea	
*Potamogeton pectinatus (Stuckenia pectinatus)		<u>Erechtites hieracifolia</u>	
Proserpinaca pectinata		<u>Ambrosia artemisiifolia</u>	
*Rhexia		<u>Sabazia grandiflora</u>	
*Rhynchospora corniculata		<u>Coreopsis sp</u>	
*Rhynchospora inundata		<u>Phyla nodiflora</u>	
Rhynchospora nitens		<u>Setaria parviflora</u>	
Ricciocarpus natans		<u>Coelestis pentacarpus</u>	
Sabal palmetto		<u>Spartina patens</u>	X
Sacciolepis striata			
*Sagittaria filiformis			
*Sagittaria graminea			
*Sagittaria isoetiformis			
Sagittaria lancifolia			
Sagittaria latifolia			

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: Seneca/Volusia MACROPHYTE ID: _____ LATITUDE: 28.75833
COUNTY: Seneca/Volusia STORET #: _____ LONGITUDE: -81.05997
DATE: 6/14/22 TIME: _____ SAMPLING AGENCY: 21FLCEN
SITE NAME: Lake Hartney Center of Lake WBID: 2964A
FIELD ID/NAME: GRICE0054 LAKE SIZE: 6202 acre RQ: 2022-06-13-22

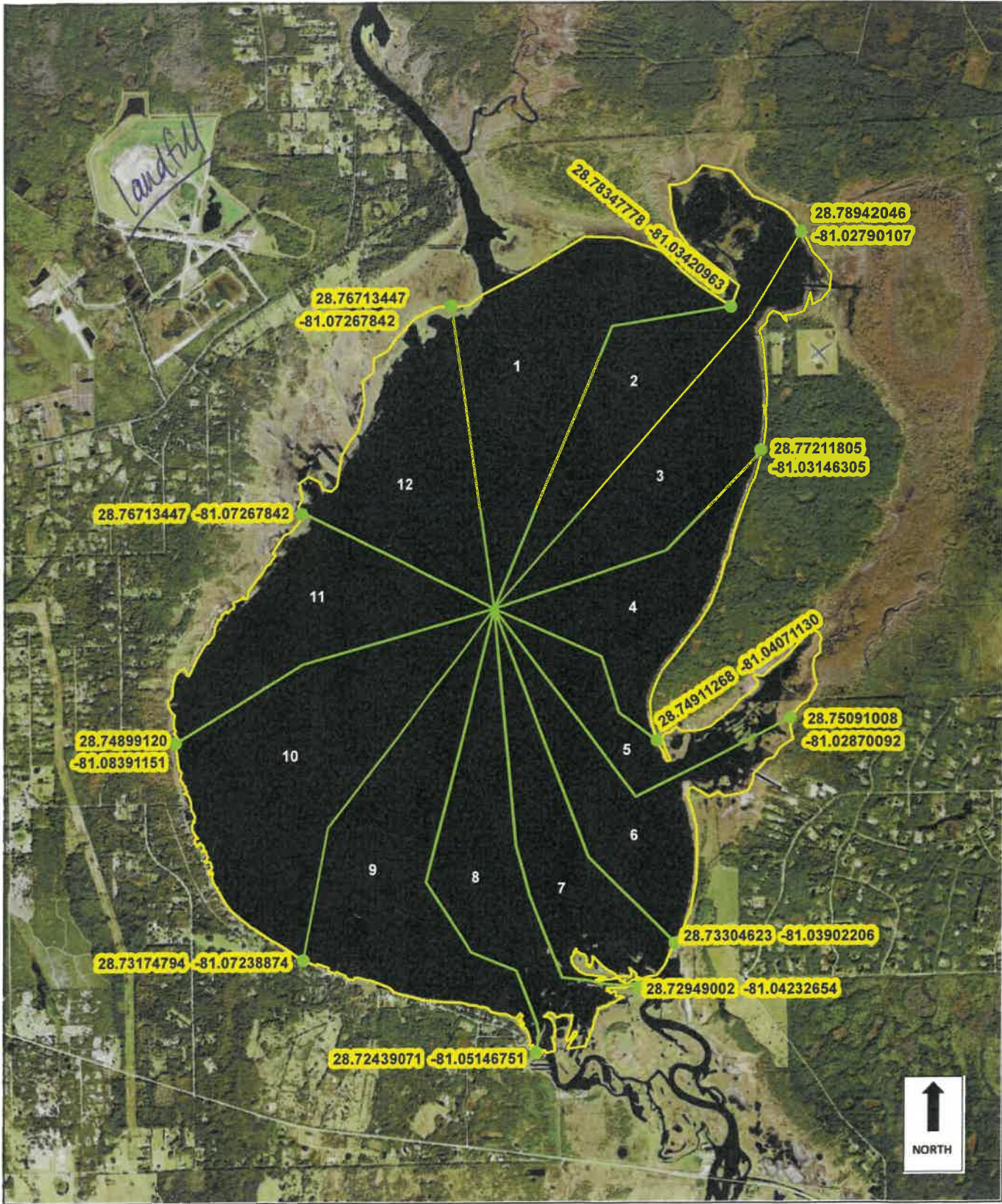
WATERSHED / LAKESIDE FEATURES

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>15</u>		<u>45</u>		<u>35</u>			<u>LAND RT</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		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>14</u>		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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>15</u>		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	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>14</u>		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

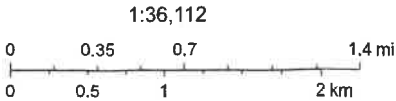
WATER / SUBSTRATE / BIOLOGICAL: SAMPLES AND OBSERVATIONS

Water: 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>32.2</u> <u>7.87</u> <u>7.49</u> <u>103.4</u> <u>1167</u> <u>0.57</u> Mid-Depth: _____ Bottom: <u>1.9</u> <u>29.6</u> <u>7.69</u> <u>6.95</u> <u>91.6</u> <u>1193</u> <u>0.59</u>								Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____							
Meter ID: <u>Swamp Trap</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): _____								SECCHI (M) <u>1.5</u> Total Station Depth (M) <u>2.9</u> VOB ☐							
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								Sediment Odors: ☒ Normal ☐ Anaerobic ☐ Other (Specify): _____							
Abundance: Periphyton ☐ Absent ☐ Rare ☒ Common ☐ Abundant Nuisance Plants ☐ ☒ ☐ ☐ Submersed Plants ☐ ☒ ☐ ☐ Exotic Apple Snails ☒ ☐ ☐ ☐								Additional Notes: <u>Section 4 algae globs,</u>							
Weather Conditions: <u>Sunny upper 90's</u>															
SAMPLING TEAM: <u>Libby Terry Proban</u>								SIGNATURE: <u>9/6</u>				DATE: <u>6/14/22</u>			

LVI MAP FOR WBID 2964A LAKE HARNEY

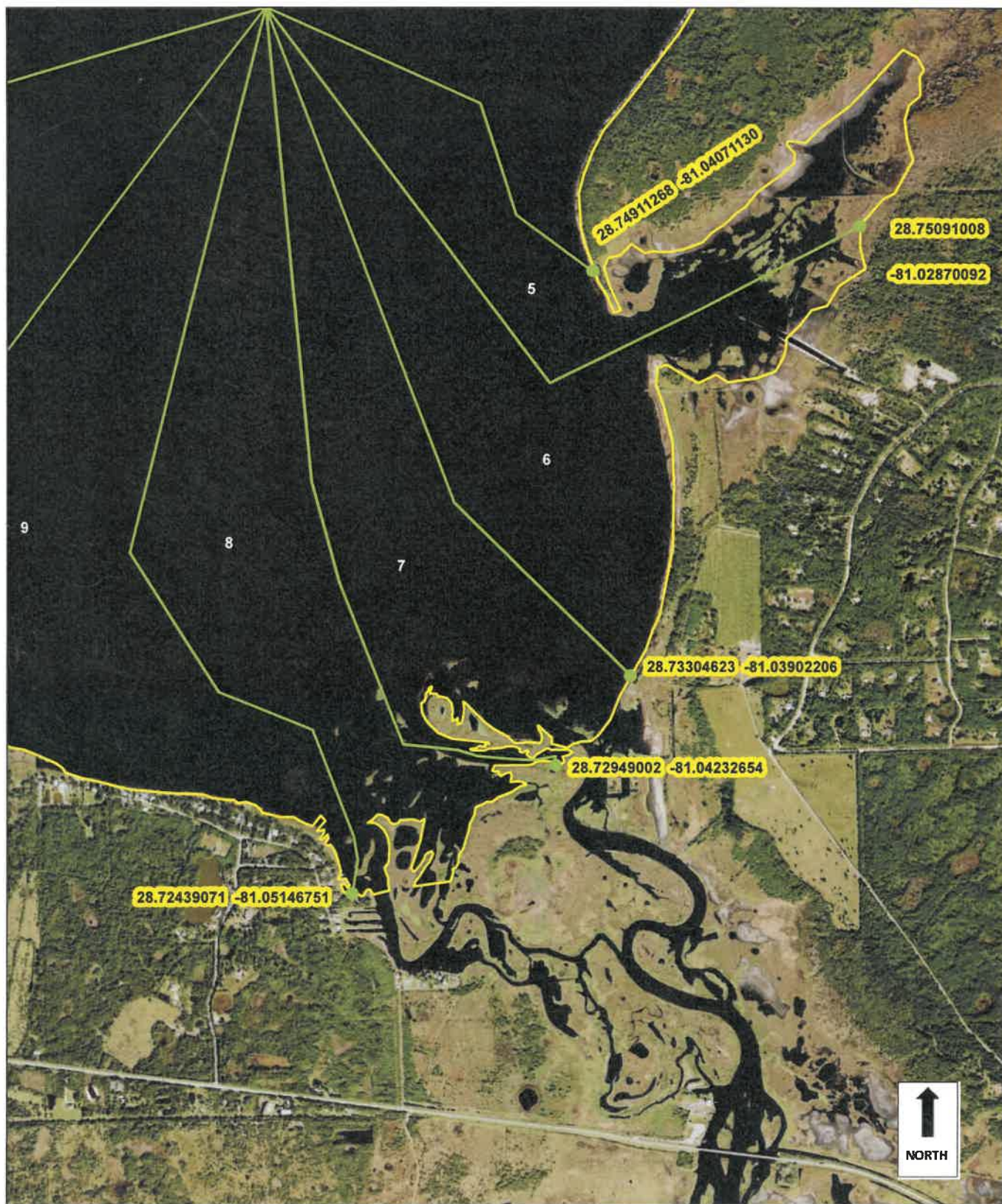


1,4,7,10



SEE REVERSE FOR SE DETAIL

WBID_2964A_LAKE_HARNEY_LVI_MAP_SE_DETAIL



1:18,056

0 0.17 0.35 0.7 mi
0 0.28 0.55 1.1 km