

CALIBRATION AND VERIFICATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)

Boldly "X" this box if there are qualified data on this page.

Meter ID: 56126

RQ: 2019-07-22-09

Project: LVS Asbury

- Notes: (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 6/2019

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	J Pansh	7/24/19	718	23.3	755	8.5	8.5	100	—	—	P/F	L/F
ICV		L	719	23.4	755	8.8	8.46	99.2	—	—	P/F	L/F
CCV	J Pansh	7/24/19	1155	26	755	8.1	8.09	100.0	—	—	P/F	L/F
CCV											P/F	L/F

DO Acceptance criteria from Table ± 0.3 mg/L. Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.
 Optical: DO gain range 0.85 to 1.15 (Pro DSS 0.75 to 1.50); DO charge N/A. Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

Spec. Cond. FT 1200	Name	Date	Time CT-ET	Lot #	Expir. Date	Standard μ hos/cm	Meter Reading μ hos/cm	Pass / Fail	Lab / Field
Calibr.	J Pansh	7/24/19	720	190430A	5/20	1000	1000	P/F	L/F
ICV		L	722	147430	12/19	147	155.5	P/F	L/F
CCV	J Pansh	7/24/19	1156	190319B	3/20	100	103.5	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	J Pansh	7/24/19	727	290405	3/21	7.	24.7	7.01	63	P/F	L/F
Calibr.			728	290400	3/21	4.	24.6	4.01	115	P/F	L/F
Calibr.			729	2901851	7/20	10.	24.7	10.07	237	P/F	L/F
ICV			731	290400	3/21	4.	24.3	4.12	108	P/F	L/F
CCV	J Pansh	7/24/19	1158	2901851	7/20	10.0	24.6	10.05	240	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ; mV pH 4 Range $+180 \pm 50$; mV pH 10 Range -180 ± 50 ;
 If mV are recorded: slope from 7 to 10 _____, slope from 4 to 7 _____ (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: _____

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	J Pansh	7/24/19	737	0.00	0.0	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

Data Qualified?

Yes / No

January 2019

WIN Station Name: North Lake Asbury CenterDate: 7/24/19WIN/ Field ID: G2NE1199WBID: 2438Latitude: 30.057049County: ClayORG ID: 21FLALongitude: -81.819213Receiving Body of Water: Black CreekRQ-2018- 07-22-09

Sampling Team Members						WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Spanish						X	X	X		
Bravys							X	X		

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☐ Syringe	
☐ Dipper	☐ Other	
Depth Measured with <u>5' stick</u>		
Equipment ID <u>0140 #44</u>		

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

Water Level: Dry/ Pooled/ Low / <u>Normal</u> / High / Flooded						Meter ID# <u>57156</u>		Matrix: <u>Fresh</u> / Marine / DI		
Photos: <u>Yes</u> / No		Flow: No Flow / Intertidal / Flowing / <u>NA</u>		Tide: Rising/ Falling/ Slack/ <u>NA</u>		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 (umhos/cm)	Temp. (C°)
EST	1015	4.6	0.3	1.3	7.7	103.8	7.58	0.06	132	30.9
CEN			3.8		4.6	61.8	6.85	0.06	129	30.4

Biological Samples Collected: None HA SCI RPS Algae ID LVS <u>LVI</u> Other:										
SBIO ID Numbers:		SBIO-ID:		HA-ID:		RPS-ID:		Macrophyte-ID:		LIMS#:

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	<u>SA8344070</u>	<u>12/10/19</u>	☒ <2
Metals	☒ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☐ Field Filtered 0.45 um Filter	☒ Ice	<u>R9BA86875</u>		
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-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-CARB-AA	☐ Ice			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C				

Notes:

WIN ID/Field ID:



G2NE1199

North Lake Asbury Center

Signature: B. T.Date: 7/24/19

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: _____	

Lake LVI Stella, Asbury, Estella

Central Laboratory Submittal Form

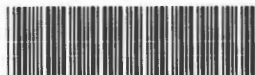
last revised Jan 25, 2018

Customer: NE-DIST

Requester: Jeremy M. ParrishField Report Prepared By: B-D

Project ID: SMP

Collected By: B. Davis, J. ParrishSampling Agency: DEARNER

Location	WIN ID/Field ID:  G2NE1199		☐ Comp ☒ Grab		Collection (comp begin or grab) Date <u>7/24/19</u> Time <u>1015</u>	☒ Eastern ☐ Central	Composite end Date _____ Time _____	Bottle Group(s) (See pg 2)	
Field ID	North Lake Asbury Center		Matrix (type, e.g., Salt, Fresh, etc) <u>Fresh</u>		Diss. Oxygen <u>7.7</u>	☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	A	
WIN/ST			Temp (C) <u>30.9</u>	pH <u>7.58</u>	Sample Depth <u>0.3</u>	☐ ft ☒ m	Sp. Conductance (umho/cm) <u>132</u>		
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt) <u>0.06</u>	Comments				
Location			☐ Comp ☐ Grab		Collection (comp begin or grab) Date _____ Time _____	☐ Eastern ☐ Central	Composite end Date _____ Time _____	Bottle Group(s)	
Field ID			Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		
WIN/STORET #			Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)		
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)	Comments				
Location			☐ Comp ☐ Grab		Collection (comp begin or grab) Date _____ Time _____	☐ Eastern ☐ Central	Composite end Date _____ Time _____	Bottle Group(s)	
Field ID			Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		
WIN/STORET #			Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)		
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)	Comments				
Location			☐ Comp ☐ Grab		Collection (comp begin or grab) Date _____ Time _____	☐ Eastern ☐ Central	Composite end Date _____ Time _____	Bottle Group(s)	
Field ID			Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		
WIN/STORET #			Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)		
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)	Comments				

Relinquished By: <u>B-D</u>	Date/Time <u>7/24/19 1600</u>	Shipping Method <u>Fed Ex</u>	Number of Coolers Shipped: <u>1</u>	Received By:	Date/Time
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Group: A	Bottle Type:	P-1L	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	ALKALINITY						
	TURBIDITY						
	W-CL-IC						
	W-COLOR						
	W-F						
	W-SO4-IC						
	W-TDS						
	W-TSS						

Group: A	Bottle Type:	BP-1L	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	CHLSUITE-W						

Group: A	Bottle Type:	P-500ML	# of Bottles: 2	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab	1
	W-NH3						
	W-NO2NO3						
	W-S-A-TP						
	W-TKN						
	W-TOC						

Group: A	Bottle Type:	P-125ML	# of Bottles: 2	Preservative:	FILTER-ICE	Enter Number of Bottles Sent to Lab	1
	W-PO4-F						

Waterbody: <u>Lake Ashby North</u>		County: <u>Clay Co.</u>		Date: <u>7/24/19</u>									
Analyst: <u>Jeremy Penn</u>		Signature: <u>Jeremy Penn</u>		STORET: <u>62NE119</u>									
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.													
SPECIES		1	4	7	10	Collected? (Y)	SPECIES		1	4	7	10	Collected? (Y)
Acer rubrum		P	P	P	P		Habenaria repens						
Alternanthera philoxeroides		P	P	P	P		Hydrilla verticillata						
Andropogon sp.							Hydrocotyle sp.		P				
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		P			P		Itea virginica						
Brasenia schreberi							Juncus effusus			P			
Cabomba caroliniana							*Juncus marginatus						
Casuarina equisetifolia							*Juncus megacephalus						
Centella asiatica							Juncus repens						
Cephalanthus occidentalis		P	P	P	P		*Juncus scirpoides						
Ceratophyllum demersum		P	P	P	P		Lachnanthes caroliniana						
Chara sp.							Leersia hexandra						
Cladium jamaicense							Landoltia punctata (Spirodela punctata)						
Cliftonia monophylla							Lemna sp.						
Colocasia esculenta		P	P	P			Leucothoe racemosa (Eubotrys racemosa)						
*Commelina							Limnobia spongia						
Crinum americanum							Limnophila sessiliflora						
*Cyperus alternifolius (C. involucratus)							Liquidambar styraciflua		P	P	P	P	
Cyperus articulatus							*Ludwigia arcuata						
Cyperus haspan							*Ludwigia leptocarpa				P	P	
*Cyperus lecontei							*Ludwigia linearis						
*Cyperus polystachyos							*Ludwigia octovalvis						
*Cyperus odoratus							*Ludwigia peruviana		P	P	P	P	
*Cyperus surinamensis							*Ludwigia repens						
Cyrilla racemiflora							*Ludwigia						
Decodon verticillatus							Luziola fluitans (Hydrochloa carolinensis)						
Diodia virginiana							Lyonia lucida						
*Echinochloa crus-galli sp.					P		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		P		P	P	
Eleocharis cellulosa													

Apple snails

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: Lake Ashbury						Date: 7/24/19					
SPECIES	1	4	7	10	Collected? (Y)	SPECIES	1	4	7	10	Collected? (Y)
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					
Nelumbo lutea						*Schoenoplectus tabernaemontani (Scirpus validus)					
Nitella spp.						Scirpus cubensis (Oxycaryon cubense)					
Nuphar sp.						Scirpus cyperinus					
Nymphaea odorata						*Sesbania					
Nymphoides aquatica						Solidago sp.					
Nyssa sylvatica var. biflora						Sparganium americanum					
Orontium aquaticum						Spartina bakeri					
Osmunda cinnamomea						Spirodela polyrhiza					
Osmunda regalis						Taxodium sp.					
Panicum hemitomon						Thalia geniculata					
Panicum repens						Thelypteris palustris					
Paspalidium geminatum						Triadenum virginicum					
*Paspalum repens						Typha sp.					
Paspalum urvillei						Urochloa mutica (Brachiaria mutica)					
Peltandra sp.						*Utricularia gibba (U. biflora)					
Persea sp.						*Utricularia floridana					
Pennisetum purpureum						*Utricularia foliosa					
Phragmites australis						*Utricularia inflata					
Pinus elliotii						*Utricularia purpurea					
Pistia stratioides						*Utricularia cornuta					
Pluchea sp.						*Utricularia radiata					
*Polygonum glabrum (densiflorum)						Vallisneria americana					
*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)											
Proserpinaca pectinata											
*Rhexia											
*Rhynchospora corniculata											
*Rhynchospora inundata											
Rhynchospora tracyi											
Ricciocarpus natans											
Sabal palmetto											
Sacciolepis striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia											
Sagittaria latifolia											

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ **MACROPHYTE ID:** _____ **LATITUDE:** 30.05705
COUNTY: Clay **STORET #:** 7062NE1199 **LONGITUDE:** -81.8192
DATE: 7/24/19 **TIME:** 1015 **SAMPLING AGENCY:** _____
SITE NAME: North Lake Ashby Center **WBID:** 2438
FIELD ID/NAME: _____ **LAKE SIZE:** _____ **RQ:** 2019-07-22-09

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>5</u>				<u>95</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>5</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>5</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>3</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>30.9</u> <u>7.58</u> <u>7.7</u> <u>103.8</u> <u>132</u> <u>0.06</u> Mid-Depth: _____ Bottom: <u>4.6</u> <u>30.4</u> <u>6.85</u> <u>4.6</u> <u>61.8</u> <u>129</u> <u>0.06</u>								Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____			
Meter ID: _____								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>1.3</u> Total Station Depth (M) <u>4.6</u> VOB ☐			
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: 			
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Weather Conditions: 				SAMPLING TEAM: <u>Jeremy Parnish / Brian Davis</u>				SIGNATURE: <u>Jeremy Parnish</u>				DATE: <u>7/24/19</u>			
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DEP Form FD 9000-6: Lake Habitat Assessment Field Sheet

STORET STATION NUMBER:	DATE (M/D/Y) 7/24/19	LAKE NAME North Lake Ashbury Center		FIELD ID / NAME:
ECO-REGION:	COUNTY: Clay	SAMPLING LOCATION/DESCRIPTION:		LAKE SIZE:
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	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 13	Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants 13	Large masses (21%-40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats 8	Lake choked (>40%) with nuisance macrophytes (duckweed, hyacinth, etc.) or algal mats, or few plants present at all (e.g., plants removed) 5
Stormwater Inputs	Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation 8	Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place 13	Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place 8	Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place 5
Bottom Substrate Quality	Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present 16	Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present 16	Moderate layer of CPOM/mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom 8	Thick deposits of CPOM, or fine detritus and anaerobic muck/mud/silt, or algal growth or nuisance plants (Hydrilla) cover bottom 5
Lakeside Adverse Human Alterations	Very few man-made structures, roads, or other disturbance adjacent to lake (<10%) 5	Moderate disturbance visible (structures, roads or other), 10%-49% lakeside affected 11	Many structures, roads or other human disturbance visible (50%-70%) lakeside affected 8	Highly developed or disturbed (>70% of lakeside affected) 5
Upland Buffer Zone	Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer 5	89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer 11	50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer 8	<29% of shoreline with >18m buffer 5
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 11			
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
TOTAL SCORE	69	COMMENTS: Bulkhead 80% lake		
ANALYSIS DATE:	7/24/19	ANALYST:	JERRY BARNES	
		SIGNATURE:	JERRY BARNES	

- Tom Latusky -
 708-8125

