

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: EXO

RQ-2019-05-20-41

Project: LAKESREF

(Palestine Lake)

- 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

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.	C. Ruben	5.22.19	0728	23.9	761	8.5	8.45	95.8	—	—	(P) F	(L) F
ICV	↓	↓	0730	23.9	761	8.5	8.45	100	—	—	(P) F	(L) F
CCV	C. Ruben	5.22.19	1350	24.3	762	8.9	8.2	97.0	—	—	(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 mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	C. Ruben	5.22.19	0735	190430A	5/2020	1000	1001	(P) F	(L) F
ICV	↓	↓	0737	190319A	3/2020	100	103	(P) F	(L) F
CCV		5.22.19	1354	190430A	5/2020	1000	985	(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.	C. Ruben	5.22.19	0740	2811E61	11/2020	7.	24.3	7.17	-384	(P) F	(L) F
Calibr.			0742	2901A40	1/2021	4.	24.2	4.04	143.2	(P) F	(L) F
Calibr.			0744	2901B51	6/2020	10.	24.4	9.96	-206.6	(P) F	(L) F
ICV	↓	↓	0747	2811E61	11/2020	7.0	24.2	7.04	-30.1	(P) F	(L) F
CCV		5.22.19	1359	2901A40	1/2020	4.0	24.7	4.12	134.6	(P) F	(L) F
CCV				OK ce						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	C. Ruben	5.22.19	0749	0.00	0.00	(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

January 2019

Data Qualified?

Yes / No

WIN Station N

WIN ID/Field ID:



19010044

Reference lake

Date: 5/22/19
(mm/dd/yyyy)

WIN ID/ Field I

Palestine Lake Center

Latitude: 30.44969
(Decimal Degrees)

County:

Union Co

CRS ID: 21FLA

Longitude: -82.4672
(Decimal Degrees)

Receiving Body of Water:

N/A

RQ-2019-05-20-41

Sampling Team Members							WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Duplicate Collection	Blank Collection	Sampling Equipment			
C. Ruben J. Parrish								X							☒ Sample Container	☐ Van Dorn	☐ Pole
															☐ Carboy	☐ Syringe	
															☐ Dipper	☐ Other	
Depth Measured with:							Equipment ID:							Collection Method			
														☐ Wading	☐ Canoe/Kayak		
														☐ From Shore	☐ Electric Motor		
														☐ Other	☒ Gasoline Motor		
Water Level: Dry/ Pooled/ Low/ <u>Normal</u> / High/ Flooded							Meter ID# EXO							Matrix: <u>Fresh</u> / Marine / DI			
Photos: Yes / <u>No</u>		Flow: No Flow / Intertidal / Flowing/ <u>NA</u>					Tide: Rising/ Falling/ Slack/ <u>NA</u>					Tide Times: High Low					

Field Sample

(Bracket Sample Time)

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	1155	2.7	0.3	0.6	6.9	88	7.30	0.02	46	27.6
CEN			2.1		4.1	46	7.46	0.02	46	25.7

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	SA8344070	12/19	☒ <2	
Metals	☒ W-ICPMS ☒ W-ICP				☒ Ice ☒ HNO3	NA9099030	4/2020	☒ <2	
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice	K8KA1278			
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-E3821-MS ☐ W-E3821-DI				☐ Ice				
Pesticides	☐ W-PSNP-TQ ☐ W-E3821-MS ☐ W-CT-CL-R ☐ W-PCL-SQ-R ☐ W-E3821-DI ☐ W-CARB-AA				☐ Ice				
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C				☐ Ice				

Contains: 1:1 H2SO4
Lot No.: SA8344070
Expires: 12/10/19
See Safety Data Sheet (SDS)

Contains: 1:1 HNO3
Lot No.: NA9099030
Expires: 04/09/20
See Safety Data Sheet (SDS)

Contains: 1:1 H2SO4
Lot No.: SA8344070
Expires: 12/10/19
See Safety Data Sheet (SDS)

Contains: 1:1 HNO3
Lot No.: NA9099030
Expires: 04/09/20
See Safety Data Sheet (SDS)

Florida Department of Environmental Protection

Central Laboratory Submittal Form

Customer: WQAP

Project ID: LAKESREF

Requester: Jeremy M. Parrish

Collected By: C. Ruben / J. Parrish

Field Report Prepared By: C. Ruben

Sampling Agency: FDEP DEAR NE ROC

Location	☐ Comp ☒ Grab	Collection (comp begin or grab) Date 5/22/19 Time 1155	☒ Eastern ☐ Central	Composite end Date _____ Time _____	Bottle Group(s) (See pg 2)
Field ID	Matrix (type, e.g., Salt, Fresh, etc) Fresh		Diss. Oxygen 6.9	☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L)
WIN/S	Temp (C) 27.6		pH 7.30	Sample Depth 0.3	Sp. Conductance (umho/cm) 46
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt) 0.02	
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	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	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	Sp. Conductance (umho/cm)
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)	
Comments					

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
Chase R	5/22/19 1400	Fedex	1		

* Sending more samples tomorrow same RQ

Group: A	Bottle Type:	P-1L	# of Bottles: 4	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: 4	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	CHLSUITE-W						
Group: A	Bottle Type:	BP-1L	# of Bottles: 4	Preservative:	Lugols	Enter Number of Bottles Sent to Lab	1
	DTY-QN-C						
	PKD-QN-C						
Group: A	Bottle Type:	P-500ML	# of Bottles: 4	Preservative:	HNO3	Enter Number of Bottles Sent to Lab	1
	W-ICP						
	W-ICPMS						
Group: A	Bottle Type:	P-500ML	# of Bottles: 4	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: 4	Preservative:	FILTER-ICE	Enter Number of Bottles Sent to Lab	1
	W-PO4-F						

Reference lake

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Paleshale lake center</u>	County: <u>Union</u>	Date: <u>8/22/19</u>									
Analyst: <u>JRansh / C Riker</u>	Signature: <u>Jerry Ransh</u>	STORET: <u>19010044</u>									
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.											
SPECIES	1	4	7	10	Collected? (✓)	SPECIES	1	4	7	10	Collected? (✓)
<i>Acer rubrum</i>	P	P	P	P		<i>Habenaria repens</i>					
<i>Alternanthera philoxeroides</i>						<i>Hydrilla verticillata</i>					
<i>Andropogon</i> sp.	P	P				<i>Hydrocotyle</i> sp.					
<i>Azolla filiculoides</i> (A. caroliniana)						<i>Hygrophila polysperma</i>					
<i>Baccharis</i> sp.						* <i>Hypericum fasciculatum</i>					
<i>Bacopa caroliniana</i>						* <i>Hypericum hypericoides</i>					
<i>Bacopa monnieri</i>						* <i>Hypericum myrtifolium</i>					
<i>Bidens laevis</i>						<i>Ilex cassine</i>					
<i>Bidens mitis</i>	P	P	P	P	✓	<i>Ipomoea aquatica</i>					
<i>Blechnum serrulatum</i>						<i>Ipomoea sagittata</i>					
<i>Boehmeria cylindrica</i>						<i>Itea virginica</i>					
<i>Brasenia schreberi</i>						<i>Juncus effusus</i>					
<i>Cabomba caroliniana</i>						* <i>Juncus marginatus</i>					
<i>Casuarina equisetifolia</i>						* <i>Juncus megacephalus</i>					
<i>Centella asiatica</i>						<i>Juncus repens</i>					
<i>Cephalanthus occidentalis</i>	P	P	P	P		* <i>Juncus scirpoides</i>					
<i>Ceratophyllum demersum</i>						<i>Lachnanthes caroliniana</i>					
<i>Chara</i> sp.						<i>Leersia hexandra</i>					
<i>Cladium jamaicense</i>						<i>Landoltia punctata</i> (<i>Spirodela punctata</i>)					
<i>Cliftonia monophylla</i>						<i>Lemna</i> sp.					
<i>Colocasia esculenta</i>						<i>Leucothoe racemosa</i> (<i>Eubotrys racemosa</i>)					
* <i>Commelina</i>						<i>Limnium spongia</i>					
<i>Crinum americanum</i>						<i>Limnophila sessiliflora</i>					
* <i>Cyperus alternifolius</i> (C. involucratus)						<i>Liquidambar styraciflua</i>					
<i>Cyperus articulatus</i>						* <i>Ludwigia arcuata</i>					
<i>Cyperus haspan</i>						* <i>Ludwigia leptocarpa</i>					
* <i>Cyperus lecontei</i>						* <i>Ludwigia linearis</i>					
* <i>Cyperus polystachyos</i>						* <i>Ludwigia octovalvis</i>					
* <i>Cyperus odoratus</i>						* <i>Ludwigia peruviana</i>					
* <i>Cyperus surinamensis</i>						* <i>Ludwigia repens</i>					
<i>Cyrtilla racemiflora</i>						* <i>Ludwigia altern... or Salicaria</i>	P	P	P	P	✓
<i>Decodon verticillatus</i>	P	P	P	P		<i>Luziola fluitans</i> (<i>Hydrochloa carolinensis</i>)	P	P	P	P	
<i>Diodia virginiana</i>						<i>Lyonia lucida</i>					
* <i>Echinochloa crus-galli</i>						<i>Magnolia virginiana</i>	P	P	P	P	
* <i>Echinochloa muricatum</i>						<i>Mayaca fluviatilis</i>					
<i>Echinochloa walteri</i>						<i>Melaleuca quinquenervia</i>					
<i>Eclipta prostrata</i> (E. alba)						<i>Micranthemum glomeratum</i>					
<i>Egeria densa</i>						<i>Micranthemum umbrosum</i>					
<i>Eichhornia crassipes</i>						<i>Mikania scandens</i>					
* <i>Eleocharis baldwinii</i>						<i>Mimosa pigra</i>					
* <i>Eleocharis</i>						<i>Myrica cerifera</i>	P	P	P	P	
<i>Eleocharis cellulosa</i>						<i>Lyrcopus</i> sp.	P	P	P	P	✓
<i>Eleocharis equisetoides</i>											
<i>Eleocharis interstincta</i>											
* <i>Eriocaulon compressum</i>											
* <i>Eriocaulon decangulare</i>											
<i>Eupatorium capillifolium</i>											
* <i>Fuirena</i>											
<i>Fuirena scirpoidea</i>											
<i>Gordonia lasianthus</i>	P	P	P	P							

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

[illegible]

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: 30.11496
 COUNTY: Dillon STORET #: 19010044 LONGITUDE: 82.4079
 DATE: 5/22/19 TIME: 1155 SAMPLING AGENCY: FCP NREC
 SITE NAME: Paleshore lake center WBID: _____
 FIELD ID/NAME: _____ LAKE SIZE: _____ RQ: 2019-0520-41

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>19</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>20</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>20</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 # _____ Exp. Date: _____ 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>22.6</u> <u>7.30</u> <u>6.9</u> <u>88</u> <u>46</u> <u>6.02</u> Mid-Depth: _____ Bottom: <u>2.7</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): _____						Clarity: ☐ Clear ☐ Opaque ☐ Turbid ☒ 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 ☐ Anaerobic ☐ Other (Specify): _____						SECCHI (M) <u>0.6</u> Total Station Depth (M) <u>2.7</u> VOB ☐					
Weather Conditions: <u>Overcast lake</u>											
SAMPLING TEAM: <u>John / C. Rubin</u>						SIGNATURE: <u>[Signature]</u>			DATE: <u>5/22/19</u>		

DEP Form FD 9000-6: Lake Habitat Assessment Field Sheet

STORET STATION NUMBER:	DATE (M/D/Y) 5/22/19	LAKE NAME Palosine Lake Center		FIELD ID / NAME:
ECO-REGION:	COUNTY: Union	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 6	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 19	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 19	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 20	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 20	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 20	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			

TOTAL SCORE 120

COMMENTS:

ANALYSIS DATE: 5/22/19

ANALYST: Jeremy Purnish

SIGNATURE: Jeremy Purnish