



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: ROSS LAKE CENTER

Date: 7/17/19
(mm/dd/yyyy)

WIN/ Field ID: 20030454

WBID: 2543F

Latitude: 29.7010

(Decimal Degrees)

County: Putnam

ORG ID: 21FLA

Longitude: 81.9963

(Decimal Degrees)

Receiving Body of Water: Long Lake Drain

RQ-2019-07-15-08

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Brianna Davis					☒	☒	☒	☒	☒
J. Parrish					☒	☒	☒	☒	☒

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☐ Syringe	
☐ Dipper	☐ Other	
Depth Measured with <u>Desi</u>		
Equipment ID <u>0440#3</u>		

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

Water Level: Dry / Pooled / Low / Normal / High / Flooded
Photos: Yes / No
Flow: No Flow / Intestinal / Flowing / NA
Meter ID# Desi
Tide: Rising / Falling / Slack / NA
Matrix: Fresh / Marine / DI
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	11 15	2.7	0.3	0.5	4.78	65.7	4.57	0.03	62.9	32.3
CEN	11 18		1.6		0.14	18	4.56	0.03	66.9	27.8

Biological Samples Collected: None HA SCI RPS Algae ID LVS LVI 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	<u>NA8344050</u>	<u>12/10/19</u>	☒ <2
Filtered Nutrients	☐ W-PO4-F ☒ Field Filtered 0.45 um Filter	☐ Ice	<u>R7HA29007</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-CAR5-AA	☐ Ice			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C	☐ Ice			

Notes:

Signature: B. Davis

WIN ID/Field ID:



20030454

Ross Lake Center

Date: 7/17/19

LIMS EVENT ID: WIN Import ID:

Enter Field Parameters, Verify Station ID in LIMS DMT: QC Station ID, Field Parameters in LIMS DMT:

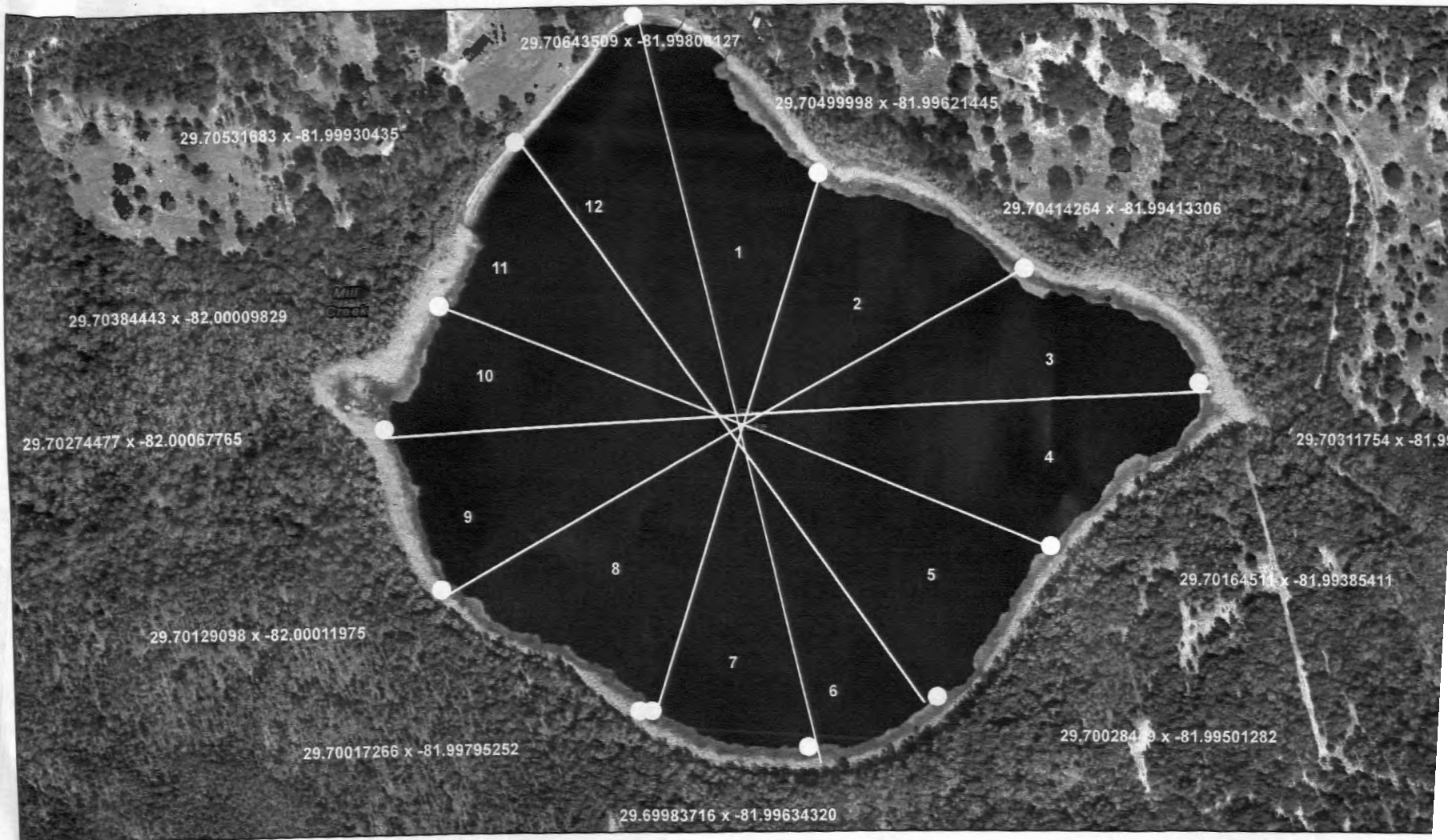
Scan/Save Field Sheets BD 7/18/19 Migrate Data to WIN: Verify Data in WIN:

(Initials/Date)

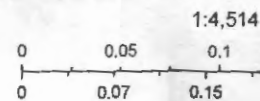
(Initials/Date)

(Initials/Date)

✓ Koss
Standard Map



July 15, 2019



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Geographics, CNES/Airbus DS, USDA, the GIS User Community

Map created by
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DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>ROSS Lake</u>	County: <u>Putnam</u>	Date: <u>2/12/19</u>									
Analyst:	Signature:	STORET: <u>20030454</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.		Lake units sampled (circle one group): 1, 4, 7, 10 2, 5, 8, 11 3, 6, 9, 12									
SPECIES	1	4	7	10	Collected? (v)	SPECIES	1	4	7	10	Collected? (v)
Acer rubrum	P	P	P	P		Habenaria repens					
Alternanthera philoxeroides						Hydrilla verticillata					
Andropogon sp.						Hydrocotyle sp.	P	P	P	P	
Azolla filiculoides (A. caroliniana)						Hygrophila polysperma					
Baccharis sp.						*Hypericum fasciculatum				P	
Bacopa caroliniana						*Hypericum hypericoides					
Bacopa monnieri						*Hypericum myrtifolium					
Bidens laevis						Ilex cassine	P		P	P	
Bidens mitis						Ipomoea aquatica					
Blechnum serrulatum						Ipomoea sagittata					
Boehmeria cylindrica						Itea virginica					
Brasenia schreberi						Juncus effusus					
Cabomba caroliniana						*Juncus marginatus					
Casuarina equisetifolia						*Juncus megacephalus					
Centella asiatica						Juncus repens					
Cephalanthus occidentalis	P	P	P	P		*Juncus scirpoides					
Ceratophyllum demersum						Lachnanthes caroliniana					
Chara sp.						Leersia hexandra	P	P	P	P	
Cladium jamaicense	P	P	P	P		Landoltia punctata (Spirodela punctata)					
Cliftonia monophylla						Lemna sp.	P	P	P	P	
Colocasia esculenta						Leucothoe racemosa (Eubotrys racemosa)					
*Commelina						Limnium spongia	P	P	P	P	
Crinum americanum						Limnophila sessiliflora					
*Cyperus alternifolius (C. involucratus)						Liquidambar styraciflua	P	P	P	P	
Cyperus articulatus						*Ludwigia arcuata					
Cyperus haspan						*Ludwigia leptocarpa					
*Cyperus lecontei						*Ludwigia linearis					
*Cyperus polystachyos						*Ludwigia octovalvis					
*Cyperus odoratus						*Ludwigia peruviana					
*Cyperus surinamensis						*Ludwigia repens					
Cyrilla racemiflora						*Ludwigia					
Decodon verticillatus						Luziola fluitans (Hydrochloa carolinensis)					
Diodia virginiana						Lyonia lucida					
*Echinochloa crus-galli						Magnolia virginiana			P		
*Echinochloa muricatum						Mayaca fluviatilis					
Echinochloa walteri						Melaleuca quinquenervia					
Eclipta prostrata (E. alba)						Micranthemum glomeratum					
Egeria densa						Micranthemum umbrosum					
Eichhornia crassipes						Mikania scandens					
*Eleocharis baldwinii	P					Mimosa pigra					
*Eleocharis						Myrica cerifera	P	P	P	P	
Eleocharis cellulosa											
Eleocharis equisetoides						<i>Succup Magnolia</i>			P	P	
Eleocharis interstincta											
*Eriocaulon compressum						<i>Cyperus spp</i>	P				
*Eriocaulon decangulare											
Eupatorium capillifolium											
*Fuirena											
Fuirena scirpoidea											
Gordonia lasianthus		P	P								

C

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: <u>Ross Lake</u>					Date:				
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				
Nelumbo lutea					*Schoenoplectus tabernaemontani (Scirpus validus)				
Nitella spp.					Scirpus cubensis (Oxycaryon cubense)				
Nuphar sp.					Scirpus cyperinus				
Nymphaea odorata		P			*Sesbania				
Nymphoides aquatica					Solidago sp.				
Nyssa sylvatica var. biflora		P	P	P	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			P		*Utricularia purpurea				
Pistia stratioides					*Utricularia cornuta				
Pluchea sp.					*Utricularia radiata				
*Polygonum glabrum (densiflorum)			P		Vallisneria americana				
*Polygonum hydropiperoides		P			*Websteria confervoides				
*Polygonum punctatum					Wedelia trilobata (Sphagneticola trilobata)				
*Polygonum					Wolffiella spp.				
Pontederia cordata		P			Woodwardia virginica			P	
*Potamogeton diversifolius					Xyris sp.				
*Potamogeton illinoensis					Zizania aquatica				
*Potamogeton pusillus					Zizaniopsis milacea				
*Potamogeton pectinatus (Stuckenia pectinatus)									
Proserpinaca pectinata					Chenx			P	
*Rhexia									
*Rhynchospora corniculata									
*Rhynchospora inundata									
Rhynchospora tracyi									
Ricciocarpus natans									
Sabal palmetto				P					
Sacciolepis striata									
*Sagittaria filiformis									
*Sagittaria graminea									
*Sagittaria isoetiformis									
Sagittaria lancifolia									
Sagittaria latifolia									
Sabal Minor		P	P						

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: 29.7010
 COUNTY: Putnam STORET #: 20030454 LONGITUDE: -81.9963
 DATE: 7/12/19 TIME: 1115 SAMPLING AGENCY: 25435 DEAR
 SITE NAME: Ross Lake Center WBID: _____
 FIELD ID/NAME: _____ LAKE SIZE: Large RQ: 2015-07-12-08

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		Land Use Source & Year:	
Local Watershed NPS Pollution : ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy									
STORMWATER INPUTS <u>20</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>16</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>18</u>		Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18m 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 # <u>5A8344070</u> Exp. Date: <u>12/10/19</u> 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>32.3</u> <u>4.57</u> <u>6.57</u> <u>65.7</u> <u>62.9</u> <u>0.03</u> Mid-Depth: <u>1.6</u> <u>27.8</u> <u>4.56</u> <u>0.14</u> <u>1.8</u> <u>66.9</u> <u>0.03</u> Bottom: _____ Meter ID: <u>Desi</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 SECCHI (M) <u>0.5</u> Total Station Depth (M) <u>2.7</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: Absent Rare Common Abundant Periphyton ☐ ☒ ☐ ☐ Nuisance Plants ☒ ☐ ☐ ☐ Submersed Plants ☒ ☐ ☐ ☐ Exotic Apple Snails ☒ ☐ ☐ ☐						Additional Notes:					
Weather Conditions: <u>Clear</u>											
SAMPLING TEAM:						SIGNATURE:			DATE:		

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

STORET STATION NUMBER: 20030454	DATE (M/D/Y) 7/17/19	LAKE NAME Ross Lake		FIELD ID / NAME:	
ECO-REGION:	COUNTY: Putnam	SAMPLING LOCATION/DESCRIPTION: Center		LAKE SIZE: Large	
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 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 ☐	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 ☐	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 ☐	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 ☐	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 ☐	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 ☐	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 19				
TOTAL SCORE 120		COMMENTS:			
ANALYSIS DATE:		ANALYST:		SIGNATURE:	