

GWIS Generalized Water Information System
Database Utilities

Recon Tracking

Existing Station

New SW Station

New GW Station

PK RANDOM SAMPLE LOCATION = Z3-SL-13025

County	CLAY	Quarter Quad	
WMD	ST. JOHNS RIVER WMD	HUC	LOWER ST. JOHNS
Random Latitude	29° 44m 33.5343s	Random Longitude	82° 01m 45.8885s

Is Z3-SL-13025 sampleable?☐ Yes ☐ No ☒ N/A**Exclusion Category:****Exclusion Criteria:(definitions):****Was Z3-SL-13025 sampled?**☐ YesMonth Day Year **Comments:**☒ Aerial Photo ☐ Quad Map ☐ No Image

Near Keystone Hg⁴ H⁵
East of sulfate

**DEP TIER 1
STATUS NETWORK SITE CHARACTERIZATION**

Stream/Water Body Name: **lake Opal**

Site ID	Latitude	Longitude	Type of Recon	Date of Recon
Z3-SL-13025			Site Visit	7/15/2019

Return Recon #1 _____

Return Recon #2 _____

Return Recon #3 _____

Resource Type	Secondary Resource Type
Small Lake	No 2nd Type
Desk Recon: 12/17/2019 By: Nate Gargas	Letter Sent:
Recon Team: Nate Gargas	

Site Location Address & Contact Information	Property Owner's Address
	Larry Bullock
	25416 Pine St
	Melrose , FL 32666
	303-817-0649
Data Requested: YES	County: Clay

Tidal Info: _____

Access and Permission
YES-VERBAL PERMISSION

Reason for Exclusion

Recon Result
For Site:

Z3-SL-13025

INCLUDE

ADDITIONAL NOTES

CALL BEFORE SAMPLING 48 hrs. notice Larry Bullock 303-817-0649

Additional Items: Jon Boat w/Trolling Motor

DIRECTIONS:

From the District go west on FL-100 go ~20.8 miles, turn left onto Co Rd 214 go ~2.6 miles, turn left onto Melrose Rd go ~0.7 miles, turn left onto Lilly Lake Rd go ~0.5 miles, access is on your left. it is kind of hidden turn down drive near red building (see pics) If drive down to lake carry boat down incline and launch. if you drive down to black mailbox 8409 you've gone too far.

Site address is 8399 Lilly Lake Rd Melrose FL 32666.

FILES GENERATED:
(i.e. digital photos, GPS, etc.)

PHOTOS



St. Johns River Water Management District
4049 Reid Street
Palatka, FL 32177
386-329-4500



AMBIENT MONITORING SITE INFORMATION
AND PERMISSION TO SAMPLE FORM

SITE NAME: 23-50-13025

STATION ID NUMBER:

SITE COORDINATES- LATITUDE: _____ LONGITUDE: _____

LOCATION DESCRIPTION: _____

_____ COUNTY: _____

ACCESS PROPERTY OWNER NAME: _____

ACCESS PROPERTY ADDRESS: _____

OWNER MAILING ADDRESS: LARRY B54690 AOL.COM
(IF DIFFERENT FROM
ACCESS PROPERTY ADDRESS) Melrose 22666

OWNER TELEPHONE NUMBER(S): 203-817-0649

HOURS OWNER MAY BE CONTACTED: _____

CHECK APPROPRIATE BELOW
ARE YOU PRESENTLY USING THE WATER BODY _____ FOR:

☐ DRINKING

☒ RECREATION

☐ OTHER _____

I HEREBY GIVE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT OR ITS AGENT
PERMISSION TO ACCESS THE ABOVE WATER BODY LOCATED ON OR ADJACENT
TO MY PROPERTY TO COLLECT A WATER QUALITY SAMPLE.

LARRY BULLOCK

PRINTED NAME OF LANDOWNER

I would like the results sent to the address above.

☒ YES

☐ NO

[Signature]
SIGNATURE OF LANDOWNER

6/16/19
DATE

Untitled Map

Write a description for your map.

Legend



Google Earth

N

1000 ft

Untitled Map

Write a description for your map.

Legend



Google Earth

23-5L-13025
 DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Opal Lake</u>		County: <u>Purman</u>		Date: <u>9/12/19</u>	
Analyst: <u>Blanch / C Ruben</u>		Signature: _____		STORET: <u>56307</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? (✓)
Acer rubrum		P	P		
Alternanthera philoxeroides					
Andropogon sp.					
Azolla filiculoides (A. caroliniana)					
Baccharis sp.					
Bacopa caroliniana					
Bacopa monnieri					
Bidens laevis					
Bidens mitis					
Blechnum serrulatum					
Boehmeria cylindrica					
Brasenia schreberi					
Cabomba caroliniana					
Casuarina equisetifolia					
Centella asiatica					
Cephalanthus occidentalis					
Ceratophyllum demersum					
Chara sp.					
Cladium jamaicense					
Cliftonia monophylla					
Colocasia esculenta					
*Commelina					
Crinum americanum					
*Cyperus alternifolius (C. involucratus)					
Cyperus articulatus					
Cyperus haspan					
*Cyperus lecontei				P	
*Cyperus polystachyos					
*Cyperus odoratus					
*Cyperus surinamensis					
Cyrtilla racemiflora					
Decodon verticillatus					
Diodia virginiana					
*Echinochloa crus-galli					
*Echinochloa muricatum					
Echinochloa walteri					
Eclipta prostrata (E. alba)					
Egeria densa					
Eichhornia crassipes					
*Eleocharis baldwinii					
*Eleocharis <u>viva porcus</u>		P	P	P	
Eleocharis cellulosa					
Eleocharis equisetoides					
Eleocharis interstincta					
*Eriocaulon compressum		P		P	
*Eriocaulon decangulare		P	P	P	
Eupatorium capillifolium					
*Fuirena					
Fuirena scirpoidea		D	D	E	C
Gordonia lasianthus					

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: <u>Opa Lake</u>					Date:						
SPECIES	1	4	7	10	Collected? (✓)	SPECIES	1	4	7	10	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						*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											

561080721

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: _____
 COUNTY: _____ STORET #: 56307 LONGITUDE: _____
 DATE: 9.12.19 TIME: 1040 1030 SAMPLING AGENCY: _____
 SITE NAME: Opal Lake 23-SL-13025 WBID: _____
 FIELD ID/NAME: _____ LAKE SIZE: _____ RQ: 2019-

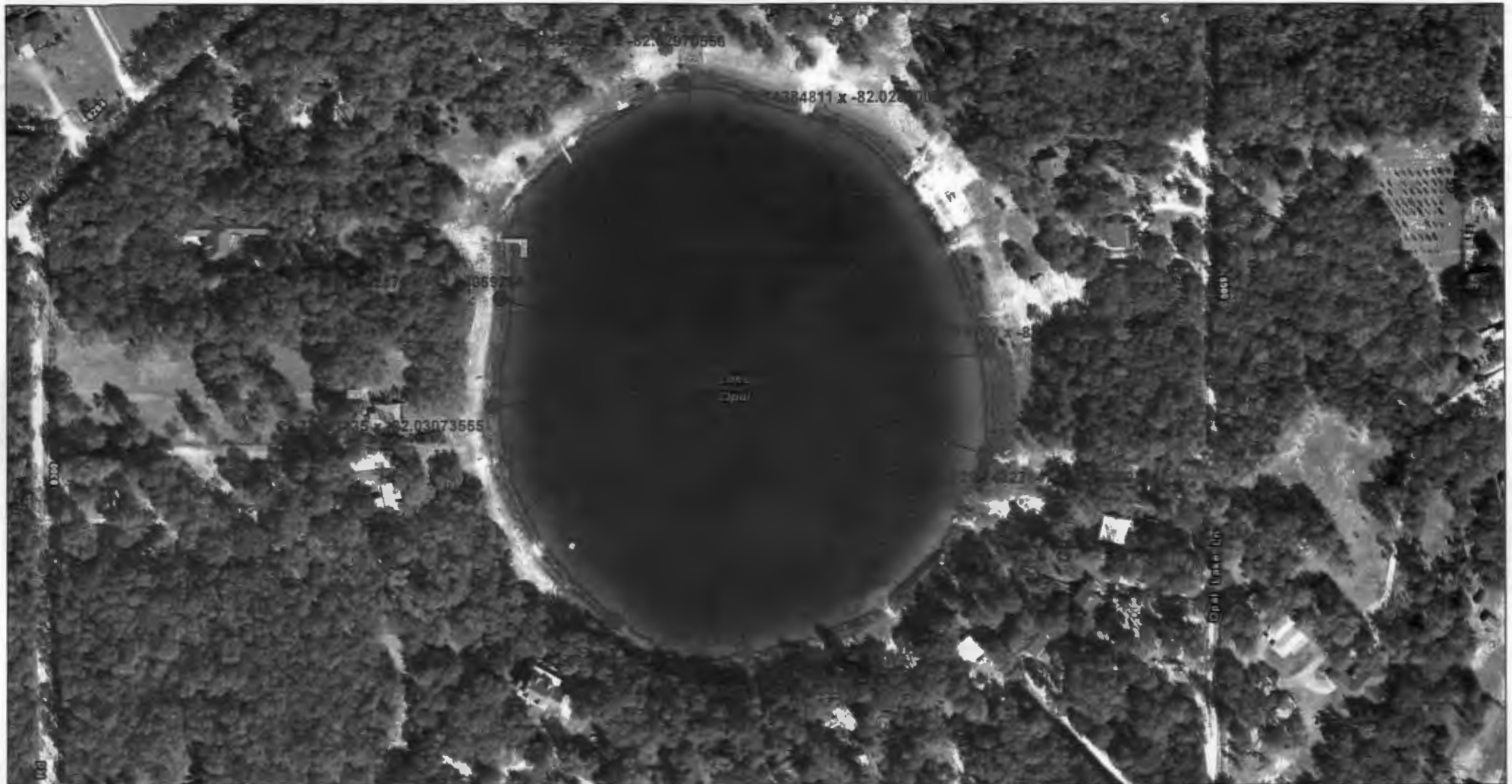
WATERSHED / LAKESIDE FEATURES

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: Land Use Source & Year: _____													
Local Watershed Erosion (select one) : ☒ None ☐ Slight ☐ Moderate ☐ Heavy Local Watershed NPS Pollution : ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy ☐ Yes ☒ No																					
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>12</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>12</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>10</u>		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

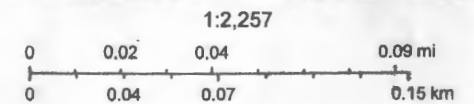
WATER / SUBSTRATE / BIOLOGICAL: SAMPLES AND OBSERVATIONS

Water: Nutrient Sample Taken? ☐ Yes ☒ No Preserved? ☐ Yes ☐ 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: <table border="1"> <thead> <tr> <th></th> <th>Depth (M)</th> <th>Temp. (°C)</th> <th>pH (SU)</th> <th>D.O. (MG/L)</th> <th>D.O. Sat. (%)</th> <th>Cond. (UMHO/CM)</th> <th>Salinity (PPT)</th> </tr> </thead> <tbody> <tr> <td>Top:</td> <td><u>0.3</u></td> <td><u>30.8</u></td> <td><u>6.27</u></td> <td><u>7.06</u></td> <td><u>94.7%</u></td> <td><u>55</u></td> <td><u>0.02</u></td> </tr> <tr> <td>Mid-Depth:</td> <td><u>2.6</u></td> <td><u>30.7</u></td> <td><u>6.23</u></td> <td><u>7.0</u></td> <td><u>94%</u></td> <td><u>55</u></td> <td><u>0.02</u></td> </tr> <tr> <td>Bottom:</td> <td><u>6.7</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>									Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat. (%)	Cond. (UMHO/CM)	Salinity (PPT)	Top:	<u>0.3</u>	<u>30.8</u>	<u>6.27</u>	<u>7.06</u>	<u>94.7%</u>	<u>55</u>	<u>0.02</u>	Mid-Depth:	<u>2.6</u>	<u>30.7</u>	<u>6.23</u>	<u>7.0</u>	<u>94%</u>	<u>55</u>	<u>0.02</u>	Bottom:	<u>6.7</u>							Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid Color: ☒ Clear ☐ Tannic ☐ Green SECCHI (M) <u>4.9</u> Total Station Depth (M) _____ VOB ☐							
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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: <table border="1"> <thead> <tr> <th></th> <th>Absent</th> <th>Rare</th> <th>Common</th> <th>Abundant</th> </tr> </thead> <tbody> <tr> <td>Periphyton</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Nuisance Plants</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Submersed Plants</td> <td>☐</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Exotic Apple Snails</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> </tbody> </table>									Absent	Rare	Common	Abundant	Periphyton	☐	☒	☐	☐	Nuisance Plants	☐	☒	☐	☐	Submersed Plants	☐	☐	☒	☐	Exotic Apple Snails	☒	☐	☐	☐							
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Exotic Apple Snails	☒	☐	☐	☐																																											
Weather Conditions: <u>Partly cloudy, breeze</u>																																															
SAMPLING TEAM: <u>C Ruben J Parrish</u>								SIGNATURE: _____				DATE: <u>9.12.19</u>																																			

Standard Map *Opal*



September 11, 2019



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Map created by Map Direct, powered by ESRI.
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DEP Form FD 9000-6: Lake Habitat Assessment Field Sheet

8072d

STORET STATION NUMBER:	DATE (M/D/Y): 9/12/19	LAKE NAME: opal lake		FIELD ID / NAME:
ECO-REGION:	COUNTY:	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	Secchi(m)		
	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 Alterations	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			
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
TOTAL SCORE	98			
COMMENTS:				

ANALYSIS DATE: 9/12/19	ANALYST: J. H. M.	SIGNATURE:
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