



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes No

WIN Station Name: Crystal lake Center

Date: 07/01/2019
(mm/dd/yyyy)

WIN/ Field ID: G3TLHR0012

WBID: 795A

Latitude: 30.4531

County: Washington

ORG ID: 21FTLHR

Longitude: 85.7027
(Decimal Degrees)

Receiving Body of Water: NA

RQ- 2019-06-24-34
(Decimal Degrees)

Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment			
J. Burtchett J. Woods				☒	☒	☒	☒	☒	☒ Sample Container	☐ Van Dorn	☐ Pole	
									☐ Carboy	☒ Syringe		
									☐ Dipper	☐ Other		
									Depth Measured with Sonar			
									Equipment ID #1			
									Collection Method			
									☐ Wading	☐ Canoe/Kayak		
									☐ From Shore	☐ Electric Motor		
									☐ Other	☒ Gasoline Motor		
Water Level: Dry/ Pooled/ Low / Normal <u>High</u> / Flooded				Meter ID# 15477				Matrix: <u>Fresh</u> / Marine / DI				
Photos: Yes / <u>No</u>				Flow: No Flow / Intertidal / Flowing / NA				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	1230	21.9	0.3	7.5	8.05	107.9	7.10	0.01	29.7	30.8		
CEN	1233		9.8		10.54	118.8	7.59	6.01	28.5	21.8		
Biological Samples Collected: <u>None</u> HA SCI RPS Algae ID LVS <u>LVI</u> Other:												
SBIO ID Numbers: SBIO-ID: <u>79902</u> HA-ID: <u>16125</u> RPS-ID: Macrophyte-ID: <u>11402</u> LIMS#: <u>2099705</u>												
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	7163030	10/30/19	☒ <2				
Metals	☐ W-ICPMS ☐ W-ICP				☐ Ice ☐ HNO3			☐ <2				
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um Filter				☒ Ice							
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				☐ Ice							
	☐ PCR-HF183 ☐ PCR-DG3 ☐ PCR-GFD											
Tracers	☐ W-E8321-DI ☐ W-E8321-MS				☐ Ice							
Pesticides	☐ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-E8321-DI				☐ Ice							
	☐ W-PCL-SQ-R ☐ W-E8321-MS ☐ W-CARB-AA											
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C				☐ Ice							

Notes:

Sonde cord unable to reach bottom depth.

Place Label Here

Signature: Gale

Date: 07/01/19

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

7-3-19

Migrate Data to WIN:

Verify Data In WIN:

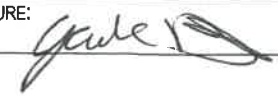
(Initials/Date)

(Initials/Date)

(Initials/Date)

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

STORET STATION NUMBER: G 35214R0012		DATE (M/D/Y) 07/01/2019		LAKE NAME Crystal Lake		FIELD ID / NAME:		
ECO-REGION:		COUNTY: Washington		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)		3 2.6 2.2 1.8 1.4		1.0 0.9 0.8 0.7 0.6	
20	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 16		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	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 3		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	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 19		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	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%) 2		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	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 3		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	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 7							
20	20 19 18 17 16		15 14 13 12 11		10 9 8 7 6		5 4 3 2 1	
TOTAL SCORE	70		COMMENTS:					

ANALYSIS DATE: 07/01/19	ANALYST: J. Burtchett	SIGNATURE: 
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DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: _____
 COUNTY: _____ STORET #: G3TLH20012 LONGITUDE: _____
 DATE: _____ TIME: 1230 SAMPLING AGENCY: _____
 SITE NAME: Crystal Lake Center WBID: 795A
 FIELD ID/NAME: G3TLH20012 LAKE SIZE: _____ RQ: 2019-06-24-34

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) ☐ <u>100</u>				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>4</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>1</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>1</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 # <u>7163030</u> Exp. Date: <u>10/30/19</u> 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: 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>7.10</u> <u>4.05</u> <u>67.9</u> <u>29.7</u> <u>0.01</u> Mid-Depth: _____ Bottom: <u>9.80</u> <u>21.8</u> <u>7.59</u> <u>10.54</u> <u>118.8</u> <u>28.5</u> <u>0.01</u>						Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid Color: ☒ Clear ☐ Tannic ☐ Green SECCHI (M) <u>7.5</u> Total Station Depth (M) <u>21.9</u> VOB ☐											
Sediment Type: (may check more than one) ☒ Sandy ☐ Organic fibrous (peaty, CPOM) ☐ Vegetated ☐ Sand/Silt ☐ Organic smooth (muck) ☐ Other (Specify): _____						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: <u>unable to collect bottom depth readings</u> <u>sonde cord too short.</u>					
Weather Conditions: <u>Clear</u>																	
SAMPLING TEAM: <u>Burtchett Woods</u>						SIGNATURE: <u>[Signature]</u>			DATE: <u>07/01/19</u>								

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Crystal Lake</u>		County: <u>Washington</u>		Date: <u>07/01/19</u>									
Analyst: <u>J. Burtch</u>		Signature: <u>[Signature]</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): 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		7	10	1	4	Collected? (✓)	SPECIES		7	10	1	4	Collected? (✓)
		8	11	2	5				8	11	2	5	
Acer rubrum							Habenaria repens						
Alternanthera philoxeroides							Hydrilla verticillata						
Andropogon sp.							Hydrocotyle sp.						
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							Itea virginica						
Brasenia schreberi							Juncus effusus						
Cabomba caroliniana							*Juncus marginatus						
Casuarina equisetifolia							*Juncus megacephalus						
Centella asiatica							Juncus repens						
Cephalanthus occidentalis							*Juncus scirpoides						
Ceratophyllum demersum							Lachnanthes caroliniana						
Chara sp.							Leersia hexandra						
Cladium jamaicense							Landoltia punctata (Spirodela punctata)						
Cliftonia monophylla							Lemna sp.						
Colocasia esculenta							Leucothoe racemosa (Eubotrys racemosa)						
Commelina							Limnium spongia						
Cyperus americanus							Limnophila sessiliflora						
*Cyperus alternifolius (C. involucratus)							Liquidambar styraciflua						
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						
*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						
Eleocharis cellulosa													
Eleocharis equisetoides													
Eleocharis interstincta													
*Eriocaulon compressum													
*Eriocaulon decangulare													
Eupatorium capillifolium													
*Fuirena													
Fuirena scirpoidea													
Juncus lasianthus													

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site:						Date:					
SPECIES	7	10	1	4	Collected? (✓)	SPECIES	7	10	1	4	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											