



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION RING PROGRAM FIELD SHEET

WIN / Field ID:



G2NE1134

January 2018

Data Qualified?

Yes / No

Clear lake Center

Date: 8/2/2018
(mm/dd/yyyy)

WBID: 2896

Latitude: 25.42221
(Decimal Degrees)

County: Putnam

ORG ID: 21FLA

Longitude: 81.55589
(Decimal Degrees)

Receiving Body of Water: Clear lake outlet

RQ-2018-07-30-21

Sampling Team Members						WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
B = D = J Perish										

Sampling Equipment									
☒ Sample Container	☐ Van Dorn	☐ Pole							
☐ Carboy	☐ Syringe								
☐ Dipper	☐ Other								
Depth Measured with YSI D									
Equipment ID 04644									

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

Water Level: Dry / Pooled / Low / Normal / (High) / Flooded						Meter ID# YSI D	Matrix: (Fresh) / Marine / DI				
Photos: Yes / (No)						Flow: No Flow / Interstitial / Flowing (NA)					
Tide: Rising / Falling / Slack (NA)						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 (µmhos/cm)	Temp. (C°)
EST	1325	1.7	0.3	VOB	7.03	94.8	4.09	0.06	125	31.09
CEN	1330		1.0		7.03	94.8	4.07	0.06	124	31.08

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	8085170	3/26/19	☐ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice	R7KA12572		
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-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-HF183 ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-GFD	☐ Ice			
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA ☐ W-AHERB-AA	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-UHERB-AA ☐ W-AHERB-AA ☐ W-CARB-AA	☐ Ice			
	☐ W-PCL-SQ-R ☐ W-PYR-AA-R ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Other			

Notes:

Place Label Here

Signature: B = D =

Date: 8/2/18

Enter Field Parameters, Verify Station ID in LIMS DMT:

QC Station ID, Field Parameters in LIMS DMT: 8/2/18

(Initials/Date)

(Initials/Date)

Scan/Save Field Sheets 8/2/18

Migrate Data to WIN:

Verify Data in WIN:

(Initials/Date)

(Initials/Date)

(Initials/Date)

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

78685 (R)

Waterbody: <u>Clear Lake</u>		County: <u>Putnam</u>		Date: <u>8/2/18</u>							
Analyst: <u>gpm</u>		Signature: <u>gpm</u>		STORET: <u>G2Nell3</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): <u>1, 4, 7, 10</u> 2, 5, 8, 11 3, 6, 9, 12							
SPECIES	1	4	7	10	Collected? (✓)	SPECIES	1	4	7	10	Collected? (✓)
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						Limnobia spongia					
Crinum americanum						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 <u>viviparous</u>	✓	✓	✓	✓		Myrica cerifera	✓	✓	✓	✓	
Eleocharis cellulosa						Ludwigia Sufantross	✓	✓	✓		
Eleocharis equisetoides						Eriocaulon Spp.	✓	✓	✓		
Eleocharis interstincta											
*Eriocaulon compressum											
*Eriocaulon decangulare											
Eupatorium capillifolium											
*Fuirena						Plastich petroplicanus	✓				
Fuirena scirpoidea						"plastic plant"					
Gordonia lasianthus	✓	✓	✓	✓							

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site:					Date:				
SPECIES	1	4	7	10	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		✓	✓			*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	0	0	✓
Pistia stratioides						*Utricularia cornuta			
Pluchea sp.						*Utricularia radiata			
*Polygonum glabrum (densiflorum)						Vallisneria americana			
*Polygonum hydropiperoides						*Websteria confervoides			
*Polygonum punctatum						Wedelia trilobata (Sphagnetica trilobata)			
*Polygonum						Wolffiella spp.			
Pontederia cordata	✓					Woodwardia virginica	✓	✓	✓
*Potamogeton diversifolius						Xyris sp.			
*Potamogeton illinoensis						Zizania aquatica			
*Potamogeton pusillus						Zizaniopsis milacea			
*Potamogeton pectinatus (Stuckenia pectinatus)						Vitis sp.	✓		
Proserpinaca pectinata						Scirpus paludum			✓
*Rhexia			✓						
*Rhynchospora corniculata									
*Rhynchospora inundata									
Rhynchospora tracyi									
Ricciocarpus natans									
Sabal palmetto									
Sacciolepis striata	✓								
*Sagittaria filiformis									
*Sagittaria graminea									
*Sagittaria isoetiformis									
Sagittaria lancifolia									
Sagittaria latifolia									

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: _____
 COUNTY: _____ STORET #: 62NE1134 LONGITUDE: _____
 DATE: 8/2/18 TIME: 1325 SAMPLING AGENCY: _____
 SITE NAME: Clear Lake WBID: _____
 FIELD ID/NAME: _____ LAKE SIZE: _____ RQ: 2018-07-30-21

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) : Forest/Natural <u>50</u> Silviculture _____ Field/Pasture _____ Agricultural _____ Residential <u>50</u> 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>15</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	
LAKESIDE ALTERATIONS <u>14</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	
BUFFER ZONE <u>13</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	
				Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place 10 9 8 7 6	
				Many structures, roads or other human disturbance visible (50%-70% lakeside affected) 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	
				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>31.1</u> <u>4.1</u> <u>7.0</u> <u>94.8</u> <u>123</u> <u>0.06</u> Mid-Depth: _____ Bottom: <u>3</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			
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				Color: ☒ Clear ☐ Tannic ☐ Green			
Abundance: Absent Rare Common Abundant Periphyton ☐ ☐ ☐ ☒ Nuisance Plants ☐ ☒ ☐ ☐ Submersed Plants ☐ ☐ ☐ ☒ Exotic Apple Snails ☒ ☐ ☐ ☐				SECCHI (M) <u>3</u> Total Station Depth (M) <u>3</u> VOB ☐			
Sediment Odors: ☒ Normal ☐ Other (Specify): _____ ☐ Anaerobic				Additional Notes:			
Weather Conditions :							
SAMPLING TEAM: <u>Jeremy Parnell / B. Davis</u>				SIGNATURE: <u>Jeremy Parnell</u>		DATE: <u>8/2/18</u>	

79685

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

STORET STATION NUMBER: 62NE1134	DATE (M/D/Y) 8/2/18	LAKE NAME Clear Lake	FIELD ID / NAME:
ECO-REGION:	COUNTY Putnam	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
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) ☐
	Impounded, hydrology of system artificially controlled ☐		
	Optimal	Suboptimal	Marginal
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
20	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6
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
17	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6
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
15	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6
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
18	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6
Lakeside Adverse Human Alternations	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
14	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6
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
13	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6
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		
15	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6

TOTAL SCORE	102	COMMENTS:
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ANALYSIS DATE: 8/2/18	ANALYST: Jeremy Parrish	SIGNATURE:
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Distribution: White - Return to Originator; Yellow - Retained by Client

LSJR Lake

last revised Jan 25, 2018

Central Laboratory Submittal Form

Customer: NE-DIST

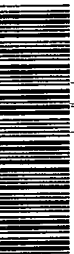
Requester: Jeremy M. Parrish

Field Report Prepared By: Jeremy Parrish

Project ID: SMP

Collected By: Jeremy Parrish

Sampling Agency: FDEP NG

Loc	WIN / Field ID:		☐ dd ☐ dms	Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)	0.06	Comments	Temp (C)	31.1	pH	4.1	Sample Depth	0.3	ft	☒ m	Sp. Conductance (umho/cm)	123	Bottle Group(s)	A
File	Matrix (type, e.g., Salt, Fresh, etc)	Fresh	Diss. Oxygen	7.0	% sat	(mg/L)	Total Res. Chlorine															
WI	Clear lake Center																					
Loc	WIN / Field ID:		☐ dd ☐ dms	Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)	0.07	Comments	Temp (C)	29.9	pH	7.0	Sample Depth	0.3	ft	☒ m	Sp. Conductance (umho/cm)	162	Bottle Group(s)	A
File	Matrix (type, e.g., Salt, Fresh, etc)	Fresh	Diss. Oxygen	7.74	% sat	(mg/L)	Total Res. Chlorine															
WI	Lake Lillie Center																					
Loc	WIN / Field ID:		☐ dd ☐ dms	Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)	0.04	Comments	Temp (C)	29.9	pH	5.90	Sample Depth	0.3	ft	☒ m	Sp. Conductance (umho/cm)	99	Bottle Group(s)	A
File	Matrix (type, e.g., Salt, Fresh, etc)	Fresh	Diss. Oxygen	6.97	% sat	(mg/L)	Total Res. Chlorine															
WI	Lake Como Center																					
Loc	WIN / Field ID:		☐ dd ☐ dms	Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)	0.05	Comments	Temp (C)	29.6	pH	5.36	Sample Depth	0.3	ft	☒ m	Sp. Conductance (umho/cm)	104	Bottle Group(s)	A
File	Matrix (type, e.g., Salt, Fresh, etc)	Fresh	Diss. Oxygen	5.0	% sat	(mg/L)	Total Res. Chlorine															
WI	Silver Lake Center																					

Relinquished By: <i>Jeremy Parrish</i>	Date/Time: <i>8/2/18 1600</i>	Shipping Method: <i>FedEx</i>	Number of Coolers Shipped: <i>2</i>	Received By:	Date/Time:
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Group: A	Bottle Type: ALKALINITY TURBIDITY W-CL-IC W-COLOR W-F W-SO4-IC W-TDS W-TSS	P-1L	# of Bottles: 4	Preservative:	ICE	Enter Number of Bottles Sent to Lab	4
Group: A	Bottle Type: CHLSUITE-W	BP-1L	# of Bottles: 4	Preservative:	ICE	Enter Number of Bottles Sent to Lab	4
Group: A	Bottle Type: W-NH3 W-NO2NO3 W-S-A-TP W-TKN W-TOC	P-500ML	# of Bottles: 4	Preservative: ICE And H2SO4		Enter Number of Bottles Sent to Lab	4
Group: A	Bottle Type: W-PO4-F	P-125ML	# of Bottles: 4	Preservative: FILTER-ICE		Enter Number of Bottles Sent to Lab	4

Group A

Bottle type

NE-ALS ACQ

P-250ml

bottles

Preservative

ICE

Enter number of bottles sent to lab

4 to ALS