



St. Johns River Water Management District

Ann B. Shortelle, Ph.D., Executive Director

4049 Reid Street • P.O. Box 1429 • Palatka, FL 32178-1429 • 386-329-4500
On the internet at www.sjrwmd.com.

AMBIENT MONITORING SITE INFORMATION AND PERMISSION TO SAMPLE FORM

SITE NAME: LAKE SUSAN STATION ID NUMBER: 23-26-12015

SITE COORDINATES: LATITUDE: 29° 31' 53.499" LONGITUDE: 81° 51' 42.3469"

COUNTY: Putnam LOCATION DESCRIPTION: Lake just 100 yards west of road 21
5 North of Lake Susan Rd. in Putnam County.

ACCESS PROPERTY OWNER NAME: DANNY KOLLMEYER

ACCESS PROPERTY ADDRESS: 110th Lake Shore

HAWTHORNE FL 32640

OWNER MAILING ADDRESS: 916 RONCEDELEON DR
(IF DIFFERENT FROM ACCESS PROPERTY ADDRESS) TEJERA VERDE FL 33715

OWNER TELEPHONE NUMBER(S): 727-460-7448

HOURS OWNER MAY BE CONTACTED: 9-5

I HEREBY GIVE THE 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 AND PERFORM A HABITAT ASSESSMENT (sediment sample also if water body is Small Lake).

Danny Kollmeyer
PRINTED NAME OF LANDOWNER

I would like the results sent to the address above.

☒ YES

☐ NO

[Signature]
SIGNATURE OF LANDOWNER

3/23/18
DATE

GOVERNING BOARD

John A. Miklos, CHAIRMAN
ORLANDO

Fred N. Roberts Jr., VICE CHAIRMAN
OCALA

Chuck Draks, SECRETARY
ORLANDO

Ron Howes, TREASURER
OCOA

Douglas C. Bourmiquet
VERO BEACH

Douglas Burnett
ST. AUGUSTINE

Susan Dolan
SANFORD

Janet Price
FERNANDINA BEACH

STORET Stations

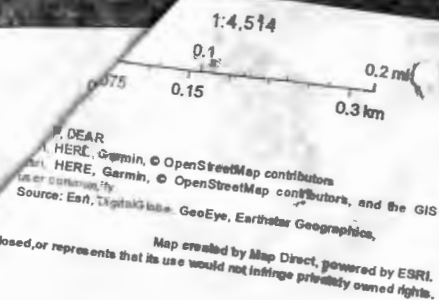


June 1, 2018

STORET Stations

- | | |
|--|--|
|  STORE Stations |  River/Stream |
|  Canal |  Spring |
|  Estuary |  Well |
|  Facility |  Wetland |
|  Lake |  Other |
|  Ocean | |

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

STORET STATION NUMBER:	DATE (M/D/Y): 6/4/18	LAKE NAME: Lake Susan		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	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	3 2.6 2.2 1.8 1.4	1.0 0.9 0.8 0.7 0.6	0.5 0.4 0.3 0.2 0.1
	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	88%-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	101			
COMMENTS:				

ANALYSIS DATE: 6/4/18	ANALYST: [Signature]	SIGNATURE: [Signature]
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79045

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: 29 31 53 49
 COUNTY: DUTAM STORET #: 52.616 LONGITUDE: 81 59 42.35
 DATE: 06-04-18 TIME: 1045 SAMPLING AGENCY: _____
 SITE NAME: 23-LL-12015 WBID: _____
 FIELD ID/NAME: Lake Susan LAKE SIZE: _____ RQ: _____

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)												
☐	☐	☐	☐	☐	☐	☐	☐												
Local Watershed Erosion (select one) : ☒ None ☐ Slight ☐ Moderate ☐ Heavy								Artificially Impounded			LDI: Land Use Source & Year:								
Local Watershed NPS Pollution : ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy								☐ Yes ☒ No											
STORMWATER INPUTS <u>15</u>		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
LAKESIDE ALTERATIONS <u>16</u>		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)								
		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
BUFFER ZONE <u>19</u>		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

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 _____																																			
Meter Readings: <table border="1" style="width: 100%; border-collapse: collapse;"> <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>0.3</td> <td>29.5</td> <td>5.5</td> <td>8.1</td> <td>107</td> <td>51</td> <td>0.02</td> </tr> <tr> <td>Mid-Depth:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Bottom:</td> <td>4.2</td> <td>21.6</td> <td>4.7</td> <td>0.6</td> <td>7.0</td> <td>55</td> <td>0.02</td> </tr> </tbody> </table>									Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat. (%)	Cond. (UMHO/CM)	Salinity (PPT)	Top:	0.3	29.5	5.5	8.1	107	51	0.02	Mid-Depth:								Bottom:	4.2	21.6	4.7	0.6	7.0	55	0.02	Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____			
	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat. (%)	Cond. (UMHO/CM)	Salinity (PPT)																																				
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Bottom:	4.2	21.6	4.7	0.6	7.0	55	0.02																																				
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" style="width: 100%; border-collapse: collapse;"> <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 : 								Additional Notes: <u>1.0 m Secchi</u>																																			
SAMPLING TEAM: <u>[Signature]</u>				SIGNATURE: <u>[Signature]</u>				DATE: <u>6/4/18</u>																																			

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: <u>LAKE SUSAN</u>					Date: <u>06-04-18</u>						
SPECIES	3	6	9	12	Collected? (✓)	SPECIES	3	6	9	12	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 <u>Hirsute</u>	✓	✓	✓	✓		Wolffiella spp.					
Pontederia cordata	✓	✓	✓	✓		Woodwardia virginica	✓	✓			
*Potamogeton diversifolius						Xyris sp.					✓
*Potamogeton illinoensis						Zizania aquatica					
*Potamogeton pusillus						Zizaniopsis milacea					
*Potamogeton pectinatus (Stuckenia pectinatus)						Polygonum Hirsute					
Proserpinaca pectinata						<u>Sabal palmetto</u>	✓	✓			
*Rhexia											
*Rhynchospora corniculata											
*Rhynchospora inundata											
Rhynchospora tracyi											
Ricciocarpus natans											
Sabal palmetto											
Sacciolepis striata	✓	✓	✓	✓							
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia											
Sagittaria latifolia											

23-11-12015

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

AK 79045

Waterbody: <u>Lake SUSAN</u>					County: <u>PUTNAM</u>					Date: <u>06-04-18</u>				
Analyst: <u>J. PARRISH, P. O'GORMAN</u>					Signature: _____					STORET: _____				
Except where noted as "sp." species level identification required. *Genera that may require lab verification*										Lake units sampled (circle one group):				
Plants in bold = FLEPPC invasive exotic.										1, 4, 7, 10 2, 5, 8, 11 3, 6, 9, 12				
It's 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	3	6	9	12	Collected? (✓)	SPECIES	3	6	9	12	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	✓	✓	✓	✓				
Cyrtilla racemiflora						*Ludwigia linearis								
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>VIVIPARIS</u>	✓	✓	✓	✓		Myrica cerifera		✓	✓	✓				
Eleocharis cellulosa						Najas tri lobata								
Eleocharis equisetoides						Habenaria								
Eleocharis interstincta														
*Eriocaulon compressum														
*Eriocaulon decangulare														
Eupatorium capillifolium														
*Fuirena														
Fuirena scirpoidea	✓	✓	✓	✓										
Gordonia lasianthus	✓		✓	✓										

Water levels High

GWIS Generalized Water Information System Database Utilities

Recon Tracking

Existing Station

New SW Station

New GW Station

PK RANDOM SAMPLE LOCATION = Z3-LL-12015

County	PUTNAM	Quarter Quad	
WMD	ST. JOHNS RIVER WMD	HUC	OKLAWAHA
Random Latitude	29° 31m 53.498691558838s	Random Longitude	81° 59m 42.346908569336s

Is Z3-LL-12015 sampleable? ☐ Yes ☐ No ☒ N/A**Exclusion Category:****Exclusion Criteria:(definitions):**

Was Z3-LL-12015 sampled?

Yes

Month Day Year **Comments:**☒ Aerial Photo ☐ Quad Map ☐ No Image

DEP TIER 1
STATUS NETWORK SITE CHARACTERIZATION

Stream/Water Body Name: **Lake Susan**

Site ID	Latitude	Longitude	Type of Recon	Date of Recon
Z3-LL-12015			Site Visit	3/23/2018

Return Recon #1 _____

Return Recon #2 _____

Return Recon #3 _____

Resource Type	Secondary Resource Type
Large Lake	No 2nd Type
Desk Recon: 11/16/2017 By: Nate Gargas	Letter Sent:
Recon Team: Nate Gargas	

Site Location Address & Contact Information	Property Owner's Address
	Denny Kollmeyer
	816 Ponce De Leon Dr
	Tierra Verde , FL 33715
Data Requested: YES	County: Putnam

Tidal Info: _____

Access and Permission
YES-PERMISSION LETTER

Reason for Exclusion

Recon Result
For Site:

Z3-LL-12015

INCLUDE

ADDITIONAL NOTES

CALL BEFORE SAMPLING 48 hour notice
Denny Kollmeyer 727-460-7448
GATE- NEED KEY OR COMBO. Gate Combo is 7000
Additional Items: Duracraft

DIRECTIONS:

From the Palatka take FL-19S go ~8.5 miles, Make a slight right onto Co Rd 310 go ~7.8 miles, turn left onto County Rd 315 S go ~5.1 miles, turn right onto State Hwy 21 go ~0.4 miles, continue onto Co Rd 21 go ~1.5 miles, turn left onto Lake Susan Rd go ~3.4 miles, turn right onto Susan Lake Shore Ln, there will be a chain link fenced area for trash. Immediately bear to left toward the security surveillance signs. Turn right at the end of the road, drive approximately 150 meters past Kiddon Korner's sign, then through one more set power lines, then turn left into slightly hidden drive way. See Photos/map

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

PHOTOS