

Hunhngton Rd at 308

Verhous

6 miles

Gem pond

US Hwy 17



74066
DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: W+M MACROPHYTE ID: _____ LATITUDE: _____
 COUNTY: W+M STORET #: 51919 LONGITUDE: _____
 DATE: 09-14-17 TIME: 1355 SAMPLING AGENCY: _____
 SITE NAME: Green Lake WBID: _____
 FIELD ID/NAME: _____ LAKE SIZE: _____ RQ: _____

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) : Forest/Natural <u>45</u> Silviculture <u>45</u> Field/Pasture _____ Agricultural _____ Residential <u>5</u> Commercial _____ Industrial _____ Other (Specify) <u>LAND 91</u>							LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI: _____ Land Use Source & Year: _____				
Local Watershed Erosion (select one) : ☐ None ☒ Slight ☐ Moderate ☐ Heavy Local Watershed NPS Pollution : ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy Artificially Impounded ☐ Yes ☒ No											
STORMWATER INPUTS <u>14</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>12</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>16</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 # _____ Exp. Date: _____ Alkalinity Sample Taken? ☐ Yes ☒ No Water Level ☐ Low ☐ Normal ☒ High							Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other _____				
Meter Readings: Top: <u>0.3</u> <u>28.4</u> <u>6.1</u> <u>9.74</u> <u>120</u> <u>63</u> <u>0.03</u> Mid-Depth: _____ Bottom: <u>1.5</u> <u>27.2</u> <u>5.8</u> <u>8.6</u> <u>108</u> <u>62</u> <u>0.03</u> Meter ID: _____							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): _____							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: Absent Rare Common Abundant Periphyton ☐ ☐ ☒ ☐ Nuisance Plants ☒ ☐ ☐ ☐ Submersed Plants ☐ ☐ ☒ ☐ Exotic Apple Snails ☒ ☐ ☐ ☐				
Weather Conditions: <u>Post Hurricane Irma</u>							Additional Notes: <u>1.7m total depth</u> <u>1.0 Secchi</u>				
SAMPLING TEAM: _____							SIGNATURE: _____				
DATE: _____							DATE: _____				

78186

(K)

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

STORET STATION NUMBER: 51919	DATE (M/D/Y): 09-14-17	LAKE NAME: CIEM 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 ☐	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 VCB	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

101

COMMENTS:

Old Landfill w/ gradient from LAKE

ANALYSIS DATE:

09-14-17

ANALYST:

P. Kanner, J. Parrish

SIGNATURE:

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site:						Date: 09-14-17					
SPECIES	1	2	3	4	Collected? (Y)	SPECIES	1	2	3	4	Collected? (Y)
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 elliottii						*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)						makuvu3					
Proserpinaca pectinata						Paektahatchee					
*Rhexia marginata						Scheuchzeria Baldwini					
*Rhynchospora corniculata						Websteria					
*Rhynchospora inundata						Rhynchospora microcephala					
Rhynchospora tracyi						OLD CANIA uniflora					
Ricciocarpus natans						Erichthia					
Sabal palmetto											
Sacciolepis striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia											
Sagittaria latifolia											

AK

Waterbody: Green Pond County: Pitman Date: 9/14/15
 Analyst: gman Signature: gman STORET: 51919

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'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	1	2	3	6	9	Collected? (✓)	SPECIES	1	2	3	6	9	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							Limnium 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						
*Decodon verticillatus							Luziola fluitans (Hydrochloa carolinensis)						
*Diodia virginiana							Lyonia lucida						
*Echinochloa crus-galli							Magnolia virginiana						
*Echinochloa muricatum							Mayaca fluviatilis			✓			
Echinochloa walteri							Melaleuca quinquenervia						
Eriolipta prostrata (E. alba)							Micranthemum glomeratum						
Egeria densa							Micranthemum umbrosum						
Eichhornia crassipes							Mikania scandens						
*Eleocharis baldwinii							Mimosa pigra						
*Eleocharis							Myrica cerifera		✓	✓	✓		
Eleocharis cellulosa						✓	<u>LSD 20 flowers</u>			✓			
Eleocharis equisetoides													
Eleocharis interstincta													
*Eriocaulon compressum													
*Eriocaulon decangulare													
Eupatorium capillifolium		✓	✓	✓	✓								
*Fuirena													
Fuirena scirpoidea			✓	✓	✓								
Gordonia lasianthus		✓		✓									

CALIBRATION AND VERIFICATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)

Boldly "X" this box if there is qualified data on this page.

Meter YSI#4 RQ- N-A Project LAKE JEM LVI

- Notes: (1) Numbers ≤ 4 , are rounded down; numbers ≥ 5 are rounded up (e.g., 5.15 becomes 5.2).
 (2) Always wait for meter to stabilize before recording any readings.
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Circle/Fill In: Lab Calibration or Calibration/Verification on Site _____

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 06-2017

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	PO'Connor	09-14-17	0715	23.6	8.48	8.49	100.1	51.2	0.86794	P	L
ICV	↓	↓	0717	23.6	8.48	8.49	100.1	51.2	0.86794	P	L
CCV	PO'Connor	09-14-17	1525	25.2	8.28	8.34	101.3	52.3	0.86794	P	L
CCV											

Report DO mg/L with one decimal figure and DO % saturation as a whole number with no decimals.

DO Acceptance criteria from Table ± 0.3 mg/L.

Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.

Optical: DO gain range 0.85 to 1.15; DO charge N/A.

Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

Spec. Cond. FT 1200	Name	Date	Time CT-ET	Lot #	Expir. Date	Standard μ mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	PO'Connor	09-14-17	0720	170720A	08-2018	1000	1000	P	CAD
ICV	↓	↓	0722	170720B	08-2018	100	104	P	CAD
CCV	PO'Connor	09-14-17	1530	170720B	08-2018	100	104	P	CAD
CCV									

Report specific conductance as a whole number with no decimal figure.

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	PO'Connor	09-14-17	0725	1607A12	06-2018	7.0	7.00	-22.8	P	L
Calibr.	↓	↓	0727	270722	06-2019	4.0	4.00	155.6	P	L
Calibr.	↓	↓	0729	2611998	05-2018	10.0	9.97	-195.2	P	L
ICV	↓	↓	0732	1607A12	06-2018	7.0	7.01	-22.8	P	L
CCV	PO'Connor	09-14-17	1532	270722	06-2019	4.0	4.02	153.6	P	L
CCV										

Report pH with one decimal place; pH Acceptance criteria ± 0.2 SU; mV pH7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ; Slope from 7 to 10 and 4 to 7 must be between 165 and 180 mV

Depth (Quarterly)

Date of Last Depth Verification 06-2017

Depth Sensor (Daily)	Name	Date	Time CT-ET	Zero the Sensor	ICV Value	Pass/ Fail	Lab / Field
Pressure mode in air	PO'Connor	09-14-17	0712	0.000	0.026	P	L

ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater



Google Earth

feet
meters

2000

800



DEP TIER 1
STATUS NETWORK SITE CHARACTERIZATION

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

Site ID	Latitude	Longitude	Type of Recon	Date of Recon
Z3-SL-11032			Site Visit	3/8/2017

Return Recon #1 _____

Return Recon #2 _____

Return Recon #3 _____

Resource Type	Secondary Resource Type
Small Lake	No 2nd Type
Desk Recon: 2/14/2017 By: Nate Gargas	Letter Sent:
Recon Team: Nate Gargas	

Site Location Address & Contact Information	Property Owner's Address
	John Mammino
	6672 Asburn road
	Lake Worth, FL 33467
	561-231-4180
Data Requested: YES	County: Putnam

Tidal Info: _____

Access and Permission
YES-VERBAL PERMISSION

Reason for Exclusion

Recon Result
For Site:
Z3-SL-11032

INCLUDE

ADDITIONAL NOTES

CALL BEFORE SAMPLING ****48Hrs notice****

John Mammino phone #561-231-4180

Additional Items: Jon Boat w/Trolling Motor

Lake access will depend on what is happening on the site, avoid running over anything important, if necessary carry boat in from cul-de-sac

DIRECTIONS:

From Palatka district office, turn right on FL-100E, continue onto Peters St, merge onto US-17 S/Reid St go ~18.9 miles, turn right onto Old US Hwy 17 S go ~0.9 miles, Turn right onto Highlands Ave go ~0.2 miles, turn left onto Yardley Ave go ~187 feet, turn right onto Huntington Shortcut Rd go ~0.8 miles, turn left to stay on Huntington Shortcut Rd go ~2.2 miles, turn right onto huntington Rd go ~0.7 miles, turn left onto Brown Hammock Rd go ~0.5 miles, turn left on Gem Lake Rd go ~0.1 miles, Address of Sample access lot is 110 Gem Lake Rd Crescent City FL 32112. if you prefer to use a navigation app. When site was reconned owners had a couple of small mobile homes on property (see photos) but informed me construction may be starting on a house on the property. .

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

GWIS Generalized Water Information System
Database Utilities

Reach Tracking

Existing Station

New SW Station

New GW Station

PK RANDOM SAMPLE LOCATION = Z3-SL-11032

County	PUTNAM	Quarter Quad	
WMD	ST. JOHNS RIVER WMD	HUC	UPPER ST. JOHNS
Random Latitude	29° 25m 55.3044s	Random Longitude	81° 34m 15.1767s

Is Z3-SL-11032 sampleable?☐ Yes ☐ No ☒ N/A**Exclusion Category:****Exclusion Criteria:(definitions):**

Was Z3-SL-11032 sampled?

Yes

Month 2 Day 14 Year 2017

Comments:

Save

Reset

☒ Aerial Photo ☐ Quad Map ☐ No Image

Show Map