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

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

Meter ID: YSI Bruce RQ- 7/9 Project: Sabal LVI 23-SL-15005

Notes: (1) Always wait for meter to stabilize before recording any readings.
(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400 Date of Last Temperature Verification 8/16/21

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	JParrish	9/23/21	816	21.0	759	8.9	8.9	99.9	—	1.039	(P) / F	(L) / F
ICV	"	9/23/21	817	21.0	759	8.9	8.9	99.9	—	1.03	(P) / F	(L) / F
CCV	Kim Appleby	9/23/21	1552	22.3	758.4	8.7	8.68	99.7	—	1.0319	(P) / F	(L) / F
CCV											P / F	L / F

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 (Pro DSS 0.75 to 1.50); 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 µmhos/cm	Meter Reading µmhos/cm	Pass / Fail	Lab / Field
Calibr.	JParrish	9/23/21	818	210426B	5/22	1000	1000	(P) / F	(L) / F
ICV	"	9/23/21	819	210426A	5/22	100	103	(P) / F	(L) / F
CCV	Kim Appleby	9/23/21	1559	210426L	5/22	1413	1410	(P) / F	(L) / F
CCV								P / F	L / F

Conductivity Acceptance criteria ± 5%

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	JParrish	9/23/21	826	2104E81	4/23	7.	21.2	7.00	-42.3	(P) / F	(L) / F
Calibr.	"	"	829	2107640	7/23	4.	21.5	4.00	134.4	(P) / F	(L) / F
Calibr.	"	"	830	2107A04	12/22	10.	21.3	10.00	-206.2	(P) / F	(L) / F
ICV	"	"	832	2107640	7/23	4.	21.5	3.93	136	(P) / F	(L) / F
CCV	Kim Appleby	9/23/21	1600	2104E81	4/23	~~7.00~~ NA	22.0	6.98	-35.4	(P) / F	(L) / F
CCV						7.01				P / F	L / F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50; mV pH 4 Range +180 ± 50; mV pH 10 Range -180 ± 50;
If mV are recorded: slope from 7 to 10 163.9, slope from 4 to 7 176.7 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)
If **YES**, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 8/18/21
If **NO**, what will be used? (circle one) **Secchi Disk Line / Sonar** Unique ID: 8/18/21 DI ; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	JParrish	9/23/21	834	0.00	0.00	(P) / F	(L) / F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria ± 5 % or ± 0.05m, whichever is greater.

COMMENTS:

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: 29 28 10.43

COUNTY: Putnam STORET #: _____ LONGITUDE: 81 34 14.87

DATE: 9/23/21 TIME: 1215 SAMPLING AGENCY: _____

SITE NAME: SL-23-15005 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	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industrial	Other (Specify)

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 10	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
LAKESIDE ALTERATIONS 16	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	2	1
BUFFER ZONE 10	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

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:	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat. (%)	Cond. (UMHO/CM)	Salinity (PPT)
Top:	0.3	29.5	4.71	6.07	79.7	40.4	0.02
Mid-Depth:	2.0	29.2	4.73	5.92	77.1	41.4	0.02
Bottom :	2.6	29.1	4.70	5.93	77.1	41.5	0.02

Meter ID: YSI Pro

Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid

Color: ☒ Clear ☐ Tannic ☐ Green

SECCHI (M) 2.6

VOB ☒

Total Station Depth (M) 2.6

Sediment Type: (may check more than one)

☒ Sandy ☐ Organic fibrous (peaty, CPOM) ☐ Vegetated

☐ Sand/Silt ☐ Organic smooth (muck) ☐ Other (Specify): _____

Sample Taken? ☐ Yes ☒ No

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	☒	☐	☐	☐

Additional Notes:

Ivek saulsegmail.com

Dnellflaleave bellsouth.net

want data

Weather Conditions :

SAMPLING TEAM: Jerry Paul / Kim Appleby SIGNATURE: Jerry Paul DATE: 9/23/21

62-160.800, F.A.C.

Revision Date: January 2017

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

STORET STATION NUMBER:	DATE (M/D/Y): 9/23/21	LAKE NAME: Status 23-SL-15005	FIELD ID / NAME:
ECO-REGION:	COUNTY: Putnam	SAMPLING LOCATION/DESCRIPTION:	LAKE SIZE:

PARAMETER				
HYDROLOGY	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 ☐
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 20	Secchi >3 m or VOB | 20 | 19 | 18 | 17 | 16	Secchi(m) 3 | 2.6 | 2.2 | 1.8 | 1.4 | 15 | 14 | 13 | 12 | 11	1.0 | 0.9 | 0.8 | 0.7 | 0.6 | 10 | 9 | 8 | 7 | 6	0.5 | 0.4 | 0.3 | 0.2 | 0.1 | 5 | 4 | 3 | 2 | 1
Vegetation Quality 16	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 10	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 20	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 Alternations 16	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 10	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
71 32 3	20 | 19 | 18 | 17 | 16	15 | 14 | 13 | 12 | 11	**10** | 9 | 8 | 7 | 6	5 | 4 | 3 | 2 | 1
Adverse Watershed Land Use 11	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	103	COMMENTS:

ANALYSIS DATE:	ANALYST:	SIGNATURE:
9/23/21	Jerry Parrish	

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: 23-SL-15005	County: Putnam	Date: 9/23/2(
Analyst: JP/KA	Signature:	STORET:

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	2	5	8	11	Collected? (√)
Acer rubrum		P		P	
Alternanthera philoxeroides					
Andropogon sp.	P	P	P	P	
Azolla filiculoides (A. caroliniana)					
Baccharis sp.					
Bacopa caroliniana					
Bacopa monnieri					
Bidens laevis					
Bidens mitis					
Blechnum serrulatum					
Boehmeria cylindrica					
Brasenia schreberi	P	P	P	P	
Cabomba caroliniana					
Casuarina equisitifolia					
Centella asiatica				P	
Cephalanthus occidentalis		P	P	P	
Ceratophyllum demersum					
Chara sp.					
Cladium jamaicense					
Cliftonia monophylla					
Colocasia esculenta					
*Commelina					
Crinum americanum					
***Cyperus alternifolius** (C. involucratus)					
Cyperus articulatus					
Cyperus haspan					
*Cyperus lecontei					
*Cyperus polystachyos					
*Cyperus odoratus					
*Cyperus surinamensis					
Cyrilla racemiflora					
Decodon verticillatus					
Diodia virginiana					
*Echinochloa crus-galli					
*Echinochloa muricatum					
Echinochloa walteri					
Eclipta prostrata (E. alba)					
Egeria densa					
Eichhornia crassipes					
*Eleocharis baldwinii				P	
*Eleocharis					
Eleocharis cellulosa					
Eleocharis equisetoides					
Eleocharis interstincta					
*Eriocaulon compressum					
*Eriocaulon decangulare					
Eupatorium capillifolium		P	P	P	
*Fuirena					
Fuirena scirpoidea	P	P	P	P	
Gordonia lasianthus					

SPECIES	2	5	8	11	Collected? (√)
Habenaria repens					
Hydrilla verticillata					
Hydrocotyle sp.		P	P	P	
Hygrophila polysperma					
*Hypericum fasciculatum	P	P	P	P	
*Hypericum hypericoides					
*Hypericum myrtifolium	P	P	P	P	✓
Ilex cassine		P	P	P	
Ipomoea aquatica					
Ipomoea sagittata					
Itea virginica					
Juncus effusus					
*Juncus marginatus					
*Juncus megacephalus					
Juncus repens					
*Juncus scirpoides					
Lachnanthes caroliniana					
Leersia hexandra	P	P		P	
Landoltia punctata (Spirodela punctata)					
Lemna sp.					
Leucothoe racemosa (Eubotrys racemosa)					
Limnobium spongia					
Limnophila sessiliflora					
Liquidamber styraciflua					
*Ludwigia arcuata					
*Ludwigia leptocarpa					
*Ludwigia linearis					
*Ludwigia octovalvis					
***Ludwigia peruviana**					
*Ludwigia repens					
*Ludwigia suffruticosa	P	P		P	
Luziola fluitans (Hydrochloa carolinensis)					
Lyonia lucida					
Magnolia virginiana		P		P	
Mayaca fluviatilis	P				
Melaleuca quinquenervia					
Micranthemum glomeratum					
Micranthemum umbrosum					
Mikania scandens					
Mimosa pigra					
Myrica cerifera		P	P		
~~Hypis alata~~				P	

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site:

Date:

SPECIES	2	5	8	11	Collected? (√)
Myriophyllum aquaticum					
*Myriophyllum heterophyllum					
*Myriophyllum laxum					
*Myriophyllum pinnatum					
Myriophyllum spicatum					
*Najas filifolia					
*Najas guadalupensis					
*Najas minor					
Nelumbo lutea					
Nitella spp.					
Nuphar sp.	P	P	P	P	
Nymphaea odorata	P	P	P	P	
Nymphoides aquatica	P			P	
Nyssa sylvatica var. biflora					
Orontium aquaticum					
Osmunda cinnamomea					
Osmunda regalis					
Panicum hemitomon	P	P	P	P	
Panicum repens					
Paspalidium geminatum					
*Paspalum repens					
Paspalum urvillei					
Peltandra sp.					
Persea sp.					
Pennisetum purpureum					
Phragmites australis					
Pinus elliottii	P	P			
Pistia stratioides					
Pluchea sp.					
*Polygonum glabrum (densiflorum)					
*Polygonum hydropiperoides					
*Polygonum punctatum					
*Polygonum _____					
Pontederia cordata					
*Potamogeton diversifolius					
*Potamogeton illinoensis					
*Potamogeton pusillus					
*Potamogeton pectinatus (Stuckenia pectinatus)					
Proserpinaca pectinata					
*Rhexia virginica		P		P	
*Rhynchospora corniculata					
*Rhynchospora inundata					
Rhynochospora tracyi					
Ricciocarpus natans	P				
Sabal palmetto					
Sacciolepis striata					
*Sagittaria filiformis					
*Sagittaria graminea					
*Sagittaria isoetiformis				P	
Sagittaria lancifolia					
Sagittaria latifolia					
Rhynchospora microcephala	P			P	

SPECIES	2	5	8	11	Collected? (√)
Salix caroliniana					
Salvinia minima					
Sambucus canadensis					
Sapium sebiferum					
Saururus cernuus					
Schinus terebinthifolius					
*Schoenoplectus californicus					
*Schoenoplectus pungens					
*Schoenoplectus tabernaemontani (Scirpus validus)					
Scirpus cubensis (Oxycaryon cubense)					
Scirpus cyperinus					
*Sesbania _____					
Solidago sp.					
Sparganium americanum					
Spartina bakeri					
Spirodela polyrhiza					
Taxodium sp.					
Thalia geniculata					
Thelypteris palustris					
Triadenum virginicum					
Typha sp.			P		
Urochloa mutica (Brachiaria mutica)					
*Utricularia ~~gibba (U. biflora)~~ olivacea	P	P	P	P	✓
*Utricularia floridana	P	P	P	P	
*Utricularia foliosa					
*Utricularia inflata					
*Utricularia purpurea	P	P	P	P	✓
*Utricularia cornuta					
*Utricularia radiata					
Vallisneria americana					
*Websteria confervoides	P	P	P	P	✓
Wedelia trilobata (Sphagneticola trilobata)					
Wolffiella spp.					
Woodwardia virginica					
Xyris sp.	P		P	P	~~✓~~
Zizania aquatica					
Zizaniopsis milacea					
~~Bahia grass~~	P				
~~Rhexia Virg.~~				P	
Tripsacum dactyloides	P				
~~Saccharum giganteum~~ ~~Erianthus giganteus~~ Phragmites australis			P		

62-160.800, F.A.C

Revision Date:January 2017

DEP TIER 1
STATUS NETWORK SITE CHARACTERIZATION

Stream/Water Body Name:

Site ID	Latitude	Longitude	Type of Recon	Date of Recon
Z3-SL-15005			**Site Visit**	**7/7/2021**

Return Recon #1 _____

Return Recon #2 _____

Return Recon #3 _____

Resource Type	Secondary Resource Type
Small Lake	**No 2nd Type**
Desk Recon: 12/15/2021 By: Nate Gargasz	Letter Sent:
Recon Team: Nate Gargasz	

Site Location Address & Contact Information	Property Owner's Address
	Iveson & Paticia Sauls
	PO Box 27
	Lake Como, FL 32157
	832-621-6955
Data Requested:	*County:* Putnam

Tidal Info:

Access and Permission
YES-PERMISSION LETTER

Reason for Exclusion

Recon Result For Site:
Z3-SL-15005
INCLUDE

ADDITIONAL NOTES

CALL BEFORE SAMPLING 24 hrs.
832-621-6955 or 386-559-0071
Access property address 118 Cessna Street Lake Como FL
Additional Items: Jon Boat w/Trolling Motor

DIRECTIONS:

From Palatka turn right on FL-100 E go ~2.3 miles, Merge onto US-17 S/Reid St go ~18.9 miles, turn right onto C.R Hwy 17 S go ~0.9 miles, Turn right onto Highlands Ave go ~0.2 miles, turn left onto Yardley Ave go ~187 Ft, turn right onto Huntington Shortcut Rd go ~0.8 miles, turn left onto Cessna St go ~0.2 miles, first house on your left, let them know your there and drive back to lake on left side of house see pictures.

Ivy Sauls – email – Iveesauls@gmail.com
Report – Dnelflateau@bellsouth.net

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

GWIS Generalized Water Information System
Database Utilities

Recon Tracking | Existing Station | New SW Station | New GW Station

PK RANDOM SAMPLE LOCATION = Z3-SL-15005

County	PUTNAM	**Quarter Quad**	
WMD	ST. JOHNS RIVER WMD	**HUC**	UPPER ST. JOHNS
Random Latitude	29° 28m 10.4326s	**Random Longitude**	81° 34m 14.8768s

Is Z3-SL-15005 sampleable? ○ Yes ○ No ◉ N/A

Exclusion Category:

Exclusion Criteria:(definitions):

Was Z3-SL-15005 sampled? Yes *Month* 5 *Day* 24 *Year* 2021

Comments:

Save Reset

◉ Aerial Photo ○ Quad Map ○ No Image

Show Map