

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 5100

RQ:

2021-10-11-60

Project:

Stanslake
Angelsblow

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.	J Parish	10/12/21	824	20.4	762	9.1	9.1	100.2	-	1.031	(P) F	(L) F
ICV	J	2	825	20.5	762	9.1	9.04	100.2	-	1.031	(P) F	(L) F
CCV	J Parish	10/12/21	1400	21.9	761.4	8.8	8.80	100.4	-	-	(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 μ mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	J Parish	10/12/21	826	210426A	5/22	1000	1000	(P) F	(L) F
ICV	J	2	827	210426A	5/22	100	99.7	(P) F	(L) F
CCV	J Parish	10/12/21	1402	210426C	5/22	1413	1400	(P) F	(L) F
CCV								P / F	L / F

Conductivity Acceptance criteria $\pm 5\%$

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.	J Parish	10/12/21	831	210758	7/23	7.	21.7	7.00	36.7	(P) F	(L) F
Calibr.			833	2107640	7/23	4.	21.8	4.00	141	(P) F	(L) F
Calibr.			835	2107A04	12/22	10.	20.9	10.00	208.8	(P) F	(L) F
ICV			837	2107640	7/23	4.	21.7	3.98	141.9	(P) F	(L) F
CCV	J Parish	10/12/21	1403	2107A04	12/22	10.	20.9	10.00	208.9	(P) F	(L) F
CCV										P / F	L / F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

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

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 171.3, slope from 4 to 7 177.7 (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: ; 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	J Parish	10/12/21	840	0.00	0.00	(P) F	(L) F

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

COMMENTS:

23 SL-15022

DEP FORM FD.9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>104y oaks Lake</u>		County: <u>Purcell</u>		Date: <u>10/12/21</u>							
Analyst:		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. 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	10	Collected? (✓)	SPECIES	2	5	8	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 <u>diffusa</u>		✓				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					
Cyrtia 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						<u>Low pea vine</u>				✓	✓
Eleocharis equisetoides						<u>Aster</u>					
Eleocharis interstincta						<u>Cyperus coccineus</u>		✓		✓	
*Eriocaulon compressum											
*Eriocaulon decangulare											
Eupatorium capillifolium											
*Fuirena											
Fuirena scirpoidea											
Gordonia lasianthus											

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site:					Date:						
SPECIES	2	5	8	10	Collected? (✓)	SPECIES	2	5	8	10	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)						Sabal m.					
Proserpinaca pectinata						Sau. palmetto					
*Rhexia						Tris. virginica					
*Rhynchospora corniculata						Woodwardia arcolata					
*Rhynchospora inundata						Symphe. caroliniana					
Rhynchospora tracyi						Stuckenia pectinatus					
Ricciocarpus natans						Rivula simplex					
Sabal palmetto		✓									
Sacciolepis striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia											
Sagittaria latifolia											

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

STORET STATION NUMBER:	DATE (M/D/Y) 10/12/21	LAKE NAME Holy Oaks Lake		FIELD ID / NAME:
ECO-REGION:	COUNTY: Pinal	SAMPLING LOCATION/DESCRIPTION: 23-SL-15022		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	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 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	42			
COMMENTS:				

ANALYSIS DATE:	ANALYST:	SIGNATURE:
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DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: _____
 COUNTY: Duval STORET #: _____ LONGITUDE: _____
 DATE: 10/12/21 TIME: 1055 SAMPLING AGENCY: _____
 SITE NAME: Holly Oaks 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>5</u> Silviculture _____ Field/Pasture _____ Agricultural _____ Residential <u>95</u> Commercial _____ Industrial _____ Other (Specify) _____										LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI: _____ Land Use Source & Year: _____											
Local Watershed Erosion (select one) : ☐ None ☒ Slight ☐ Moderate ☐ Heavy										Artificially Impounded ☒ Yes ☐ No											
Local Watershed NPS Pollution : ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy																					
STORMWATER INPUTS <u>5</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 <u>5</u> 4 3 2 1				
LAKESIDE ALTERATIONS <u>5</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) <u>5</u> 4 3 2 1				
BUFFER ZONE <u>5</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 <u>5</u> 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 _____									
Meter Readings: Top: <u>0.3</u> <u>25.6</u> <u>7.63</u> <u>103.7</u> <u>8.44</u> <u>290</u> <u>0.14</u> Mid-Depth: _____ Bottom: _____										Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____									
Meter ID: _____										Clarity: ☐ Clear ☐ Opaque ☐ Turbid ☒ Slightly Turbid Color: ☐ Clear ☒ Tannic ☐ Green									
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 ☒ ☐ ☐ ☐									
Weather Conditions: _____										Additional Notes: <u>email Jim 1940 Betty @ earth.net</u>									
SAMPLING TEAM: <u>Jan Par</u>										SIGNATURE: <u>Jan Par</u>									
DATE: <u>10/12/21</u>																			

Recon Tracking

Existing Station

New SW Station

New GW Station

PK RANDOM SAMPLE LOCATION = Z3-SL-15022

County	DUVAL	Quarter Quad	
WMD	ST. JOHNS RIVER WMD	HUC	LOWER ST. JOHNS
Random Latitude	30° 20m 58.4446s	Random Longitude	81° 31m 53.3044s

30.349567

81.53147

Is Z3-SL-15022 sampleable?☐ Yes ☐ No ☒ N/A**Exclusion Category:****Exclusion Criteria:(definitions):****Was Z3-SL-15022 sampled?**☐ Yes

Month 5 ▾ Day 24 ▾ Year 2021 ▾

Comments:

Save

Reset

☒ Aerial Photo ☐ Quad Map ☐ No Image

Show Map

STATUS NETWORK SITE CHARACTERIZATION

Stream/Water Body Name: **Holly Oaks Lake**

Site ID	Latitude	Longitude	Type of Recon	Date of Recon
Z3-SL-15022			Site Visit	6/24/2021

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 Gargas	Letter Sent:
Recon Team: Nate Gargas	

Site Location Address & Contact Information	Property Owner's Address
	Jim Green
	1617 Holly Oaks Lake Rd. West
	Jacksonville, FL 32225
	904-228-5544
Data Requested: YES	County: Duval

Tidal Info: _____

Access and Permission
YES-VERBAL PERMISSION

Reason for Exclusion

Recon Result
For Site:
Z3-SL-15022

INCLUDE

ADDITIONAL NOTES	
PLEASE GIVE 24-HOUR NOTICE Jim Green phone # 904-228-5544 or 904-641-9505 Use Jon boat, trolling motor	
DIRECTIONS:	
From Palatka, take SR 100 east to East Palatka and turn left on CR 207. Follow CR 207 to I-95 north toward Jacksonville. Take I-95 north to the I-295 East Beltway and follow the I-295 East Beltway to the Monument Rd. exit. Turn right on Monument Rd. and go approx.0.5 mile and turn left on Classic Oak Rd. East. Follow this road for approx. 0.1 mile and turn right on Holly Oaks Lake Rd. West. Go approx. 0.1 and turn right into the dirt driveway that is just before the yellow bricked entrance with the number 1617 on it. Go most of the way down the driveway and turn left between the bushes into Mr. Green's backyard. Drive near the shore of the small pond and between the water sprinkler and the tree down to the shoreline. SEE PHOTOS	
FILES GENERATED: (i.e. digital photos, GPS, etc.)	PHOTOS