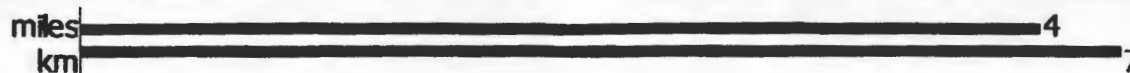




Google Earth

miles
km



**DEP TIER 1
STATUS NETWORK SITE CHARACTERIZATION**

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

Site ID	Latitude	Longitude	Type of Recon	Date of Recon
Z3-LL-12004			Site Visit	3/15/2018

Return Recon #1 _____

Return Recon #2 _____

Return Recon #3 _____

Resource Type	Secondary Resource Type
Large Lake	No 2nd Type
Desk Recon: 11/15/2017 By: Nate Gargas	Letter Sent:
Recon Team: Meghan Mason	

Site Location Address & Contact Information	Property Owner's Address
Data Requested:	County: Alachua

Tidal Info: _____

Access and Permission
PUBLIC ACCESS

Reason for Exclusion

Recon Result
For Site:
Z3-LL-12004

INCLUDE

ADDITIONAL NOTES

Additional Items: Duracraft

DIRECTIONS:

Launch boat at Marjorie Kinnan Rawlings Historic State Park, 18815 Co Rd 325, Hawthorne, FL 32640. The ramp is on the south end of park. The most reliable way to lake is to navigate to end of canal at ramp turn north at benches navigate to Cross Creek and head WSW out to Orange Lake. See Maps in recon Report

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-LL-12004

County	ALACHUA	Quarter Quad	
WMD	ST. JOHNS RIVER WMD	HUC	OKLAWAHA
Random Latitude	29° 27m 51.721088409424s	Random Longitude	82° 10m 05.820330142975s

Is Z3-LL-12004 sampleable? ☐ Yes ☐ No ☒ N/A**Exclusion Category:****Exclusion Criteria:(definitions):**

Was Z3-LL-12004 sampled?

Yes

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

DEP-SOP-001/01: Form FD 9000-3
PHYSICAL/CHEMICAL CHARACTERIZATION ELECTRONIC FIELD SHEET

ELCS

SAMPLE ID : _____ ORG ID : _____ Latitude : _____ Longitude : _____
 COUNTY : _____ STORET # : _____ (degrees) (minutes) (seconds) (degrees) (minutes) (seconds)
 DATE : 08-29-18 TIME : _____
 SITE NAME : ORANGE LAKE SAMPLE COMPLETE ? _____
 FIELD ID/NAME : _____ RECEIVING BODY OF WATER : _____

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category) :

Forest/Natural	silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)

Local Watershed Erosion (select one) : ☐ None ☐ Slight ☐ Moderate ☐ Heavy
 Local Watershed NPS Pollution : ☐ No evidence ☐ Slight ☐ Moderate ☐ Heavy

Width of Riparian Vegetation (m) on Each Buffer Side
 Left Bank : Right Bank :

High Water Mark: + =
 (m) (above present water level) (present depth) (above bed)

Artificially Impounded ☐ Yes ☐ No

Artificially ☐ No ☐ Mostly recovered, more sinuous
 Channelized : ☐ Some recovery ☐ Recent, severe

Canopy Cover % : ☐ Open ☐ Lightly Shaded (11-45%)
☐ Heavily Shaded ☐ Moderate Shaded (46-80%)

Typical Width (m) Depth (m)/Velocity (m/sec) Transect
 m wide
 m/s m/s m/s
 m deep m deep m deep

SEDIMENT / SUBSTRATE

Sediment Oils
☐ Absent ☐ Slight
☐ Moderate ☐ Profuse

Sediment Odors
☐ Normal ☐ Sewage ☐ Petroleum
☐ Chemical ☐ Anaerobic
☐ Other (Specify) :

Sediment Deposition
☐ Sludge Sand Smothering : None Slight Moderate Severe
 Silt Smothering : None Slight Moderate Severe
☐ Other (Specify) :

SUBSTRATE TYPE
 Assessment Tool: ☐ SCI ☐ BioRecon
☐ LCI ☐ LVI ☐ INVERT ☐ PERI
 % Coverage # Times Sampled # Times Sampled

Woody Debris (Snags)			
Undercut Banks / Roots			
Leaf Packs or Mat			
Aquatic Vegetation			
Rock or Shell Rubble..			
Sand.....			
Mud / Muck / Silt			
Other			
Other			

WATER QUALITY
 Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M)
 Top :
 Mid-Depth :
 Bottom :

Water Surface Oils : ☐ None ☐ Sheen ☐ Globbs ☐ Slick
Water Odors : ☐ Normal ☐ Sewage ☐ Petroleum ☐ Chemical
☐ Other (Specify) :

Water Sample Taken ? ☐ Yes ☐ No **SYSTEM TYPE** ☐ Stream ☐ Lake
☐ Wetland ☐ Estuary
☐ Other (Specify) :

Clarity ☐ Clear ☐ Slightly Turbid
☐ Turbid ☐ Opaque **Color** ☐ Tannic ☐ Green (Algae)
☐ Clear ☐ Other (Specify) :

WEATHER CONDITIONS / NOTES :

☐ The antecedent hydrologic conditions have been met to my best knowledge.
 Water samples preserved ? ☐ Yes ☐ pH<2 ☐ No Algae samples preserved ? ☐ Yes ☐ No

ABUNDANCE

	Absent	Rare	Common	Abundant
Periphyton :	☐	☐	☐	☐
Fish :	☐	☐	☐	☐
Aquatic Macrophytes :	☐	☐	☐	☐
Iron/Sulfur Bacteria :	☐	☐	☐	☐

SAMPLING TEAM : _____ **SIGNATURE :** _____ **DATE :** _____

STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
Lake Habitat Assessment Field Sheet

STORET STATION NUMBER:	DATE (M/D/Y) 08-29-18	LAKE NAME ORANGE LAKE		FIELD ID / NAME:												
ECO-REGION:	COUNTY: Alachua	SAMPLING LOCATION/DESCRIPTION: LVI		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 13	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 15	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 6	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	Very few man-made structures, roads, or other disturbance adjacent to lake (<10%) 18	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 20	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 16															
	20 19 18 17 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
TOTAL SCORE	94															
COMMENTS:																
ANALYSIS DATE: 08-29-18	ANALYST: P O'Connor										SIGNATURE:					

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 79044 **MACROPHYTE ID:** _____ **LATITUDE:** 29.28 505
COUNTY: _____ **STORET #:** 53600 **LONGITUDE:** 082 10.097
DATE: 08-29-18 **TIME:** 100 **SAMPLING AGENCY:** DEAR NEA ROK
SITE NAME: ORANGE LAKE **WBID:** _____
FIELD ID/NAME: _____ **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)														
<u>68</u>		<u>20</u>	<u>10</u>	<u>2</u>																	
Local Watershed Erosion (select one): ☐ None ☒ Slight ☐ Moderate ☐ Heavy								Artificially Impounded ☐ Yes ☐ No													
Local Watershed NPS Pollution: ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy																					
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										
<u>15</u>		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
LAKESIDE ALTERATIONS		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)										
<u>18</u>		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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										
<u>19</u>		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: Top: _____ Mid-Depth: <u>0.3</u> <u>28.7</u> <u>6.3</u> <u>4.23</u> <u>54.6</u> <u>71.3</u> <u>0.03</u> Bottom: <u>1.6</u> <u>27.8</u> <u>6.16</u> <u>2.17</u> <u>27.7</u> <u>71.9</u> <u>0.03</u>								Clarity: ☐ Clear ☐ Opaque ☐ Turbid ☒ Slightly Turbid Color: ☐ Clear ☒ Tannic ☐ Green SECCHI (M) <u>0.6</u> Total Station Depth (M) <u>1.9</u> VOB ☐							
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 ☐ ☐ ☒ ☐							
Additional Notes: <u>23-LL-12004</u> <u>Total Depth 1.9</u>															
Weather Conditions: _____															
SAMPLING TEAM: _____								SIGNATURE: _____				DATE: _____			

7/6/18

7/6/18

SPECIES		1	2	3	4	Collected? (✓)	SPECIES		1	2	3	4	Collected? (✓)
		3	6	9	12				3	6	9	12	
Myriophyllum aquaticum	Parrot feather	✓					Salix caroliniana	Willow	✓	✓	✓	✓	
*Myriophyllum heterophyllum	Twoleaf Water Milfoil						Salvinia minima	Water spangles	✓	✓	✓	✓	
*Myriophyllum laxum	Loose Water Milfoil						Sambucus canadensis	Elderberry		✓	✓	✓	
*Myriophyllum pinnatum	Cutleaf Water Milfoil						Sapium sebiferum	Chinese tallow					
Myriophyllum spicatum	Eurasian Water Milfoil						Saururus cernuus	Lizard's tail					
*Najas filifolia	Needleleaf waternymph						Schinus terebinthifolius	Brazilian Pepper		✓		✓	
*Najas quadalupensis	Southern Naiad						*Schoenoplectus californicus	Giant Bulrush	✓			✓	
*Najas minor	Brittle Waternymph	✓			✓		*Schoenoplectus pungens	3-square Bulrush					
Nelumbo lutea	American lotus	✓	✓		✓		*Schoenoplectus tabernaemontani (Scirpus validus)		✓				
Nitella spp.	Brittlewort	✓	✓	✓	✓		Scirpus cubensis (Oxycaryon cubense)		✓			✓	
Nuphar sp.	Spatterdock	✓	✓	✓	✓		Scirpus cyperinus	Woolgrass				✓	
Nymphaea odorata	Fragrant Waterlily						*Sesbania	Rattlebush				✓	
Nymphoides aquatica	Floating heart						Solidago sp.	Goldenrod					
Nymphoides cristata	Crested Floating heart						Sparganium americanum	American Burreed					
Nyssa sylvatica var. biflora	Swamp Tupelo		✓	✓			Spartina bakeri	Sand Cordgrass		✓	✓	✓	
Orontium aquaticum	Goldenclub		✓				Spirodela polyrhiza	Duckweed	✓	✓	✓	✓	
Osmunda cinnamomea	Cinnamon Fern		✓				Taxodium sp.	Cypress	✓	✓	✓	✓	
Osmunda regalis	Royal fern		✓				Thalia geniculata	Alligator Flag					
Panicum hemitomon	Maidencane	✓			CD		Thelypteris palustris	Marshfern					
Panicum repens	Torpedograss	✓	✓	✓			Triadenum virginicum	Virginia Marsh St.	✓	✓		✓	
Paspalidium geminatum	Egyptian Paspalidium	✓	✓	✓			Typha sp.	Cattail	✓	✓		✓	
*Paspalum repens	Water paspalum				✓		Urochloa mutica (Brachiaria m.)	Paragrass					
Paspalum urvillei	Vaseygrass			✓			*Utricularia gibba (U. biflora)	Cone-spur b.w.					
Peltandra sp.	Arrow arum						*Utricularia floridana	Florida Yellow Bladderwort					
Persea sp.	Bay tree						*Utricularia foliosa	Horned Bladderwort					
Pennisetum purpureum	Elephantgrass						*Utricularia inflata	Floating Bladderwort					
Phragmites australis	Common reed						*Utricularia purpurea	Purple Bladderwort					
Pinus elliotii	Slash pine	✓	✓	✓	✓		*Utricularia cornuta	Horned Bladderwort					
Pistia stratioides	Water lettuce	✓	✓	✓	✓		*Utricularia radiata	Little Floating Bladderwort					
Pluchea sp.	Camphorweed	✓	✓	✓	✓		Vallisneria americana	Tapegrass					
*Polygonum glabrum (densiflorum)	Knotweed	✓	✓	✓	✓		*Websteria confervoides	Algal Bulrush					
*Polygonum hydropiperoides	Smartweed				✓		Wedelia trilobata (Sphagneticola t.)	Cr. Oxeye					
*Polygonum punctatum	Dotted Smartweed				✓		Wolffiella spp.	Mudmidget				✓	
*Polygonum	Knotweed/Smartweed	✓	✓	✓	✓		Woodwardia virginica	VA Chainfern				✓	
Pontederia cordata	Pickerselweed	✓	✓	✓	✓		Xyris sp.	Yellow-eyed grass					
*Potamogeton diversifolius	Waterthread Pondweed						Zizania aquatica	Wildrice					
*Potamogeton illinoensis	Illinois Pondweed						Zizaniopsis milacea	Southern Wildrice				✓	
*Potamogeton pusillus	Small Pondweed												
*Potamogeton pectinatus (Stuckenia)	Sago Pondweed												
Proserpinaca pectinata	Combleaf Mermaidweed						Nymphaea mexicana			✓	✓	✓	
*Rhexia	Meadowbeauty						Setaria magna		✓	✓	✓	✓	
*Rhynchospora corniculata	Short bristle Beaksedge						Thelypteris sp.		✓	✓	✓	✓	
*Rhynchospora inundata	Horned Beaksedge						Luzula fluitans					✓	
Rhynchospora tracyi	Tracy's Beaksedge												
Ricciocarpus natans	Liverwort												
Sabal palmetto	Cabbage Palm	✓	✓										
Sacciolepis striata	American Cupscale Grass	✓	✓										
*Sagittaria filiformis	Variable leaf Arrowhead												
*Sagittaria graminea	Grassy Arrowhead												
*Sagittaria isoetiformis	Quillwort Arrowhead												
Sagittaria lancifolia	Bulltongue Arrowhead	✓	✓	✓	✓								
Sagittaria latifolia	Duck Potato	✓	✓	✓	✓								

Waterbody: Crane Lake

County: Alachua Co.

Date: 8-29-2015

Analyst: P. O'Connor / J. Parrish

Signature: _____

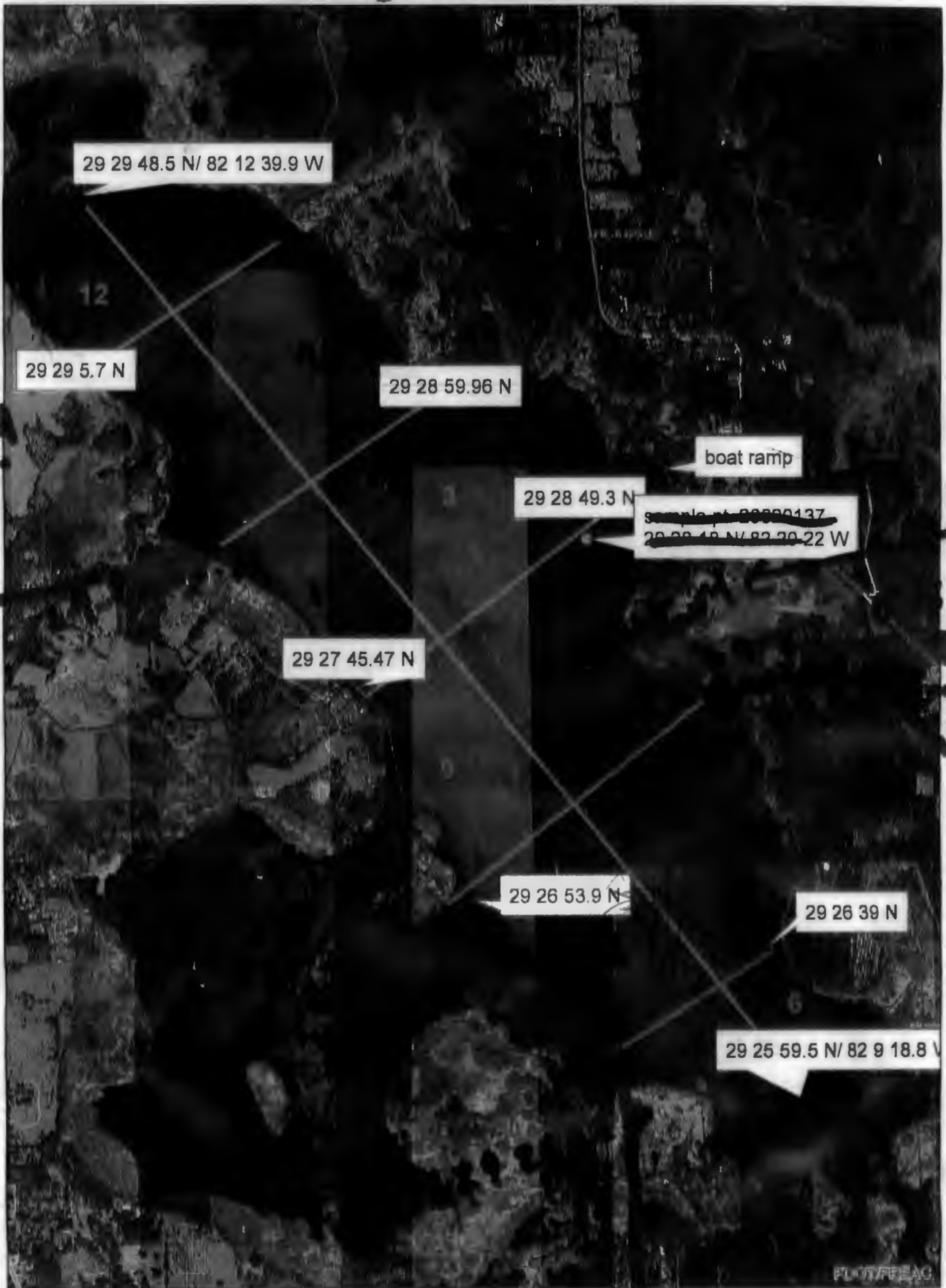
STORET:

Except where noted as "sp." species level identification required. *Genera that may require lab verification* Plants in bold= FLEPPC

Lake units sampled

SPECIES		1	2	3	4	Collec ted?	SPECIES		1	2	3	4	Collec ted?
		3	6	9	12				3	6	9	12	
Acer rubrum	Red Maple	✓	✓	✓	✓		Habenaria repens	Waterspider bog	✓	✓	✓	✓	
Alternanthera philoxeroides	Alligator Weed	✓			✓		Hydrilla verticillata	Waterhyme	✓	✓	✓	✓	
Andropogon sp.	Broom grass						Hydrocotyle sp.	Water pennywort	✓	6	✓	✓	
Azolla filiculoides (A. caroliniana)	Mosquito fern						Hygrophila polysperma	Indian swampweed					
Baccharis sp.	Saltbush						*Hypericum fasciculatum	Peelbark St. Johnswort					
Bacopa caroliniana	Lemon bacopa						*Hypericum hypericoides	St. Andrew's Cross					
Bacopa monnieri	Waterhyssop						*Hypericum myrtifolium	Myrtleleaf St. Johnswort			✓		
Bidens laevis	Smooth Beggartick				✓		Ilex cassine	Dahoon holly			✓		
Bidens mitis	Smallfruit Beggartick				✓		Ipomoea aquatica	Swamp Morning Glory					
Blechnum serrulatum	Swamp fern				✓		Ipomoea sagittata	Saltmarsh Morning Glory					
Boehmeria cylindrica	Smallspike false nettle				✓		Itea virginica	Virginia Sweetpire	✓			✓	
Brasenia schreberi	Water sheild						Juncus effusus	Soft Rush	✓			✓	
Cabomba caroliniana	Carolina fanwort						*Juncus marginatus	Grassleaf Rush					
Casuarina equisetifolia	Australian pine						*Juncus megacephalus	Bighead Rush					
Centella asiatica	Spadeleaf		✓	✓	✓		Juncus repens	Lesser Creeping Rush					
Cephalanthus occidentalis	Buttonbush	✓	✓	✓	✓		*Juncus scirpoides	Needlepod Rush					
Ceratophyllum demersum	Coontail	✓	✓		✓		Lachnanthes caroliniana	Redroot	✓				
Chara sp.	Muskgrass						Leersia hexandra	Southern Cutgrass	✓				
Cladium jamaicense	Swamp sawgrass	✓	✓	✓	✓		Landoltia punctata (Spirodela punctata)	Dotted	✓	✓		✓	
Cliftonia monophylla	Buckwheat tree				✓		Lemna sp.	Duckweed	✓	✓		✓	
Colocasia esculenta	Wild taro	✓	✓	✓	✓		Leucothoe racemosa (Eubotrys r.)	Doghobble	✓		✓	✓	
*Commelina	Dayflower						Limnobia spongia	American spongeplant	✓		✓	✓	
Crinum americanum	Swampily						Limnophila sessiliflora	Asian Marshweed			✓		
*Cyperus alternifolius (C. involucratus)							Liquidamber styraciflua	Sweetgum	✓	✓	✓		
Cyperus articulatus	Jointed flatsedge						*Ludwigia arcuata	Piedmont Primrosewillow	✓	✓	✓	✓	
Cyperus haspan	Haspan flatsedge						*Ludwigia leptocarpa	Anglestem Primrosewillow	✓	✓	✓	✓	
*Cyperus lecontei	LeConte's Flatsedge						*Ludwigia linearis	Narrowleaf P. willow					
*Cyperus polystachyos	Manyspike flatsedge				✓		*Ludwigia octovalvis	Mexican P. willow			✓	✓	
*Cyperus odoratus	Fragrant flatsedge				✓		*Ludwigia peruviana	Peruvian P. willow			✓	✓	✓
*Cyperus surinamensis	Tropical flatsedge						*Ludwigia repens	Creeping Primrosewillow					
Cyrtia racemiflora	Swamp titi	✓					*Ludwigia	Primrosewillow					
Decodon verticillatus	Swamp loosestrife	✓					Luziola fluitans (Hydrochloa carolinensis)					✓	
Diodia virginiana	Virginia buttonweed						Lyonia lucida	Fetterbush					
*Echinochloa crus-galli	Barnyardgrass						Magnolia virginiana	Sweetbay					
*Echinochloa muricatum	Rough Barnyardgrass	✓					Mayaca fluviatilis	Bogmoss					
Echinochloa walteri	Cockspur grass						Melaleuca quinquenervia	Punktree					
Eclipta prostrata (E. alba)	False daisy						Micranthemum glomeratum	Manatee mudflower					
Egeria densa	Brazilian waterweed				✓		Micranthemum umbrosum	Shade mudflower	✓	✓	✓	✓	
Eichhornia crassipes	Water hyacinth	✓			✓		Mikania scandens	Climbing hempvine	✓	✓	✓	✓	
*Eleocharis baldwinii	Baldwin's spikerush	✓					Mimosa pigra	Giant sensitive tree	✓	✓		✓	
*Eleocharis	Spikerush						Myrica cerifera	Wax myrtle	✓	✓		✓	
Eleocharis cellulosa	Gulf Coast spikerush								✓	✓	✓	✓	
Eleocharis equisetoides	Jointed spikerush						Amaranthus australis		✓	✓	✓	✓	
Eleocharis interstincta	Knotted spikerush						Doker vine			✓	✓	✓	
*Eriocaulon compressum	Flattened pipewort						Licita maculata		✓	✓	✓	✓	
*Eriocaulon decanquulare	Tenangle pipewort	✓	✓		✓		Kosteletzkya		✓	✓	✓	✓	
Eupatorium capillifolium	Dog fennel	✓	✓		✓		Isopalmum?			✓	✓	✓	
*Fuirena	Umbrella grass						Zehneria gracilifolia		✓	✓	✓	✓	
Fuirena scirpoidea	Rush fuirena						Eupatorium serotinum		✓	✓	✓	✓	
Gordonia lasianthus	Loblolly Bay												

Orange Lake-LVI



TAK WAC Dot
PO 6, 9, 12

29 26 12.0

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: DEP#154181

RQ: NA

Project: ORANGE LAKE LUT

- 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 07-11-18

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.	PO'Connor	08-29-18	0710	23.9	8.43	8.43	8.43	100.0	-	-	(P/F) (L/F)	F
ICV	✓	✓	0715	23.9	760	8.43	8.43	100.0	-	-	(P/F) (L/F)	F
CCV	PO'Connor	08-29-18	1645	25.6	760	8.17	8.29	101.2	-	-	(P/F) (L/F)	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.	PO'Connor	08-29-18	0720	180711A	07-2019	1000	1000	(P/F) (L/F)	F
ICV	✓	✓	0725	180321A	04-2019	100	102.0	(P/F) (L/F)	F
CCV	PO'Connor	08-29-18	1650	180321A	04-2019	100	103.6	(P/F) (L/F)	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.	PO'Connor	08-29-18	0730	2803E45	03-2020	7.00	24.3	7.09	-20.3	(P/F) (L/F)	F
Calibr.	✓	✓	0737	2803D38	03-2020	4.00	24.5	4.0	161.7	(P/F) (L/F)	F
Calibr.	✓	✓	0740	274527	04-2019	10.00	24.5	9.96	-189.8	(P/F) (L/F)	F
ICV	✓	✓	0750	2803E45	03-2020	7.0	24.5	7.04	-18.8	(P/F) (L/F)	F
CCV	PO'Connor	08-29-18	1655	2803D38	03-2020	4.0	24.5	4.05	155.5	(P/F) (L/F)	F
CCV							24.5			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 _____, slope from 4 to 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: 07-11-18

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						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: Initial calibration for DO%, mmHg was 760.0 pmo 08-29-18 0710