

field ID



G1NE0198 06272017

storet ID



G3NE0002

Hammock Lake

ENVIRONMENTAL PROTECTION PROGRAM FIELD SHEET

March 2017

PAGE 1 OF 1

Data Qualified?

Yes / No

Date: 06/27/17
(mm/dd/yyyy)

NBID: 2700

Latitude: 29.7066

County: Alachua RQ - 2017-06-19-15

ORG ID: 21FLA

Longitude: 82.4433

Receiving Body of Water: UN-NAMED Dr. 2694 Field ID: See Label

Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment			
B. DAVIS				X	X				☒ Sample Container	☐ Van Dorn	☐ Pole	
P. O'Connor					X	X	X		☐ Carboy	☐ Syringe		
									☐ Dipper	☐ Other		
									Equipment ID OrthoKit # 43			
Collection Method												
☐ Wading									☐ Via Boat			
☐ From Shore									☒ Canoe/Kayak			
☐ Other (note below)									☐ Electric Motor			
									☐ Gasoline Motor			
Water Level: Dry / Pooled / Low / <u>Normal</u> / High / Flooded									Matrix: <u>Fresh</u> / Marine / DI			
Meter ID# QUANTA #1				Photos: Yes / <u>No</u>				Tide Falling: Yes / No / <u>NA</u>				
Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Secchi Disk (m)	Sp COND (umhos/cm)	Temp. (C°)		
EST	1045	0.1	0.1	5.55	74.0	8.37	0.13	>0.1	261	30.38		
CEN												

Biological Samples Collected: None HA SCI RPS Algae ID LVS LVI Other

SBIO ID Numbers: SBIO-ID: RPS-ID: Macrophyte-ID: LIMS#:

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4			☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice			
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Periphyton	☐ ALGAE-ID	☐ Ice			
Microbiology	☐ E Coli ☐ F Coli ☐ Enterococci ☐ qPCR	☐ Ice			
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA ☐ W-AHERB-AA	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R	☐ Ice			
	☐ W-PCL-SQ-R ☐ W-UHERB-AA ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Other			

Notes:

Place Label Here (If Available)

Signature: *Patricia A. Davis* Date: 06-27-17

Field Parameters Entered into LIMS: *06/27/17* (Initials/Date)

Date Migrated to STORET: (Initials/Date)

Field Parameters QC in LIMS: (Initials/Date)

Field Sheets Scanned/Saved: *NF 7/10/17* (Initials/Date)

Contains
1:1
Sulfuric Acid
SA-7093010
EXP: 04/03/18
Warning!
See SDS

AK

Form FD9000-27 Lake Vegetation Index Data Sheet (04-21-11)														
Waterbody: <u>Hammock Lake</u>					County: <u>Alachua</u>					Date: <u>06-27-17</u>				
Analyst: <u>P. O'Connor</u>					Signature: <u>P. O'Connor</u>					STORET: <u>G3NE0002</u>				
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	Collected?	SPECIES		1	2	3	4	Collected?	
<i>Acer rubrum</i>	Red Maple	✓	✓				<i>Habenaria repens</i>	Waterspider bog						
<i>Alternanthera philoxeroides</i>	Alligator Weed	✓	✓	✓	✓		<i>Hydrilla verticillata</i>	Waterthyme				✓		
<i>Andropogon</i> sp.	Broom grass						<i>Hydrocotyle</i> sp.	Water pennywort	✓	✓	✓			
<i>Azolla filiculoides</i> (A. caroliniana)	Mosquito fern						<i>Hygrophila polysperma</i>	Indian swampweed						
<i>Baccharis</i> sp.	Saltbush	✓	✓				* <i>Hypericum fasciculatum</i>	Peelbark St. Johnswort						
<i>Bacopa caroliniana</i>	Lemon bacopa						* <i>Hypericum hypericoides</i>	St. Andrew's Cross						
<i>Bacopa monnieri</i>	Waterhyssop			✓			* <i>Hypericum myrtifolium</i>	Myrtleleaf St. Johnswort						
<i>Bidens laevis</i>	Smooth Beggartick		✓				<i>Ilex cassine</i>	Dahoon holly						
<i>Bidens mitis</i>	Smallfruit Beggartick						<i>Ipomoea aquatica</i>	Swamp Morning Glory						
<i>Blechnum serrulatum</i>	Swamp fern						<i>Ipomoea sagittata</i>	Saltmarsh Morning Glory						
<i>Boehmeria cylindrica</i>	Smallspike false nettle	✓	✓	✓	✓		<i>Itea virginica</i>	Virginia Sweetspire						
<i>Brasenia schreberi</i>	Water shield						<i>Juncus effusus</i>	Soft Rush				✓		
<i>Cabomba caroliniana</i>	Carolina fanwort						* <i>Juncus marginatus</i>	Grassleaf Rush						
<i>Casuarina equisetifolia</i>	Australian pine						* <i>Juncus megacephalus</i>	Bighead Rush						
<i>Centella asiatica</i>	Spadeleaf		✓				<i>Juncus repens</i>	Lesser Creeping Rush						
<i>Cephalanthus occidentalis</i>	Buttonbush	✓	✓				* <i>Juncus scirpoides</i>	Needlepod Rush						
<i>Ceratophyllum demersum</i>	Coontail						<i>Lachnanthes caroliniana</i>	Redroot						
<i>Chara</i> sp.	Muskgrass						<i>Leersia hexandra</i>	Southern Cutgrass						
<i>Cladium jamaicense</i>	Swamp sawgrass						<i>Landoltia punctata</i> (<i>Spirodela punctata</i>)	Dotted						
<i>Cliftonia monophylla</i>	Buckwheat tree						<i>Lemna</i> sp.	Duckweed						
<i>Colocasia esculenta</i>	Wild taro	✓	✓	✓	✓		<i>Leucothoe racemosa</i> (Eubotrys r.)	Doghobble						
* <i>Commelina</i>	Dayflower						<i>Limnobia spongia</i>	American spongeplant						
<i>Crinum americanum</i>	Swamp lily						<i>Limnophila sessiliflora</i>	Asian Marshweed						
*<i>Cyperus alternifolius</i> (C. involucratus)							<i>Liquidambar styraciflua</i>	Sweetgum	✓	✓				
<i>Cyperus articulatus</i>	Jointed flatsedge						* <i>Ludwigia arcuata</i>	Piedmont Primrosewillow						
<i>Cyperus haspan</i>	Haspan flatsedge						* <i>Ludwigia leptocarpa</i>	Anglestem Primrosewillow						
* <i>Cyperus lecontei</i>	LeConte's Flatsedge						* <i>Ludwigia linearis</i>	Narrowleaf P. willow						
* <i>Cyperus polystachyos</i>	Manyspike flatsedge						* <i>Ludwigia octovalvis</i>	Mexican Primrosewillow						
* <i>Cyperus odoratus</i>	Fragrant flatsedge	✓	✓	✓	✓		*<i>Ludwigia peruviana</i>	Peruvian P. willow	✓					
* <i>Cyperus surinamensis</i>	Tropical flatsedge		✓		✓		* <i>Ludwigia repens</i>	Creeping Primrosewillow						
<i>Cyrtilla racemiflora</i>	Swamp titi						* <i>Ludwigia</i>	Primrosewillow						
<i>Decodon verticillatus</i>	Swamp loosestrife	✓	✓	✓	✓		<i>Luziola fluitans</i> (<i>Hydrochloa carolinensis</i>)		✓					
<i>Diodia virginiana</i>	Virginia buttonweed						<i>Lyonia lucida</i>	Fetterbush						

SPECIES		1	2	3	4	Collected? (✓)	SPECIES		1	2	3	4	Collected? (✓)
		9	12	6	3				9	12	6	3	
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 guadalupensis	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	Goldencub						Spirodela polyrhiza	Duckweed					
Osmunda cinnamomea	Cinnamon Fern						Taxodium sp.	Cypress		✓	✓		
Osmunda regalis	Royal fern						Thalia geniculata	Alligator Flag					
Panicum hemitomon	Maidencane						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	Pickereelweed						Xyris sp.	Yellow-eyed grass					
*Potamogeton diversifolius	Waterthread Pondweed						Zizania aquatica	Wildrice					
*Potamogeton illinoensis	Illinois Pondweed						Zizaniopsis milacea	Southern Wildrice					
*Potamogeton pusillus	Small Pondweed						Ruellia		✓				
*Potamogeton pectinatus (Stuckenia)	Sago Pondweed						Vitis						

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

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STORET STATION NUMBER: G3NE0002	DATE (M/D/Y) 06-27-17	LAKE NAME HAMMOCK		FIELD ID / NAME: G3NE0002
ECO-REGION:	COUNTY: ALACHUA	SAMPLING LOCATION/DESCRIPTION: HAMMOCK LAKE		LAKE SIZE: 4 acres
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 3	Secchi >3 m Or VOB 20 19 18 17 16	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 12	Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa 20 19 18 17 16	Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants 15 14 13 12 11	Large masses (21%-40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats 10 9 8 7 6	Lake choked (>40%) with nuisance macrophytes (duckweed, hyacinth, etc.) or algal mats, or few plants present at all (e.g., plants removed) 5 4 3 2 1
Stormwater Inputs 9	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
Bottom Substrate Quality 8	Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present 20 19 18 17 16	Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present 15 14 13 12 11	Moderate layer of CPOM/ mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom 10 9 8 7 6	Thick deposits of CPOM, or fine detritus and anaerobic muck/mud/silt, or algal growth or nuisance plants (Hydrilla) cover bottom 5 4 3 2 1
Lakeside Adverse Human Alterations 8	Very few man-made structures, roads, or other disturbance adjacent to lake (<10%) 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
Upland Buffer Zone 8	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
Adverse Watershed Land Use 10	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, <u>Low Density Residential</u> , Row Crops, Commercial Urban, Industrial 20 19 18 17 16			
TOTAL SCORE 60/88		COMMENTS: Ongoing Algae (blue green) Bloom		
ANALYSIS DATE: 06-27-17		ANALYST: P O'Connor		SIGNATURE: P O'Connor

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 QUANTA #1 RQ- 2017-06-19-15 Project Quiver Lakes

- 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 L-6

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.	<u>POBma</u>	<u>06-21-17</u>	<u>0720</u>	<u>23.8</u>	<u>8.44</u>	<u>8.44</u>	<u>100.0</u>	<u>—</u>	<u>—</u>	<u>Pass</u>	<u>LAB</u>
ICV	<u>V</u>	<u>06-19-15</u>	<u>0725</u>	<u>23.8</u>	<u>8.44</u>	<u>8.42</u>	<u>100.0</u>	<u>—</u>	<u>—</u>	<u>Pass</u>	<u>LAB</u>
CCV	<u>B Davis</u>	<u>6-27-17</u>	<u>1650</u>	<u>23.9</u>	<u>8.43</u>	<u>8.42</u>	<u>99.8</u>	<u>—</u>	<u>—</u>	<u>P</u>	<u>L</u>
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.	<u>PO con</u>	<u>06-21-17</u>	<u>0127</u>	<u>170315B</u>	<u>03-2018</u>	<u>1000</u>	<u>1000</u>	<u>Pass</u>	<u>LAB</u>
ICV	<u>V</u>	<u>V</u>	<u>0129</u>	<u>170315A</u>	<u>03-2018</u>	<u>100</u>	<u>99</u>	<u>Pass</u>	<u>LAB</u>
CCV	<u>B Davis</u>	<u>6-27-17</u>	<u>1652</u>	<u>170315B</u>	<u>03-18</u>	<u>1000</u>	<u>989</u>	<u>P</u>	<u>L</u>
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.	<u>PO am</u>	<u>06-21-17</u>	<u>0730</u>	<u>1607A12</u>	<u>06-2018</u>	<u>7.0</u>	<u>7.00</u>	<u>—</u>	<u>Pass</u>	<u>LAB</u>
Calibr.	<u>V</u>	<u>V</u>	<u>0745</u>	<u>2610F42</u>	<u>10-2018</u>	<u>4.0</u>	<u>4.00</u>	<u>—</u>	<u>Pass</u>	<u>LAB</u>
Calibr.	<u>V</u>	<u>V</u>	<u>0750</u>	<u>2611998</u>	<u>05-2018</u>	<u>10.0</u>	<u>9.91</u>	<u>—</u>	<u>Pass</u>	<u>LAB</u>
ICV	<u>B Davis</u>	<u>6/27/17</u>	<u>1654</u>	<u>1607A12</u>	<u>6/18</u>	<u>7.0</u>	<u>7.12</u>	<u>—</u>	<u>P</u>	<u>L</u>
CCV										
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 N/A

Depth Sensor (Daily)	Name	Date	Time CT-ET	Zero the Sensor	ICV Value	Pass / Fail	Lab / Field
Pressure mode in air				0.000			

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

NF 7/10/17