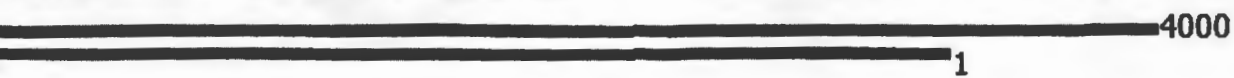




Google Earth

feet
km





Google Earth

feet
meters





St. Johns River Water Management District
4049 Reid Street
Palatka, FL 32177
386-329-4500



AMBIENT MONITORING SITE INFORMATION
AND PERMISSION TO SAMPLE FORM

SITE NAME: 23-LL-11009

STATION ID NUMBER:

SITE COORDINATES- LATITUDE: _____ LONGITUDE: _____

LOCATION DESCRIPTION: LAKE HUGGINTON ON PUTNAM COUNTY
OFF OF COUNTY RD 21 S

COUNTY: PUTNAM

ACCESS PROPERTY OWNER NAME: Suzanne & Rob Crain

ACCESS PROPERTY ADDRESS: 606 Hugginton Lake Road
Howards, FL 32640

OWNER MAILING ADDRESS: _____
(IF DIFFERENT FROM
ACCESS PROPERTY ADDRESS)

OWNER TELEPHONE NUMBER(S): 352-258-5431

HOURS OWNER MAY BE CONTACTED: anytime, 24 Hr Notice Please

CHECK APPROPRIATE BELOW

ARE YOU PRESENTLY USING THE WATER BODY _____ FOR:

☐ DRINKING

☒ RECREATION

☐ OTHER Fishing

I HEREBY GIVE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT OR ITS AGENT
PERMISSION TO ACCESS THE ABOVE WATER BODY LOCATED ON OR ADJACENT
TO MY PROPERTY TO COLLECT A WATER QUALITY SAMPLE.

Suzanne Crain
PRINTED NAME OF LANDOWNER

I would like the results sent to the address above.

☒ YES

☐ NO

Suzanne Crain
SIGNATURE OF LANDOWNER

1-17-17
DATE

DEP TIER 1
STATUS NETWORK SITE CHARACTERIZATION

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

Site ID	Latitude	Longitude	Type of Recon	Date of Recon
Z3-LL-11009			Site Visit	1/17/2017

Return Recon #1 _____

Return Recon #2 _____

Return Recon #3 _____

Resource Type	Secondary Resource Type
Large Lake	No 2nd Type
Desk Recon: 10/19/2016 By: Nate Gargas	Letter Sent:
Recon Team: Nate Gargas	

Site Location Address & Contact Information	Property Owner's Address
	Suzanne and Bob Crain
	606 Higginbotham Lake Rd
	Hawthorne, FL 32640
	352-258-5431
Data Requested: YES	County: Putnam

Tidal Info: _____

Access and Permission
YES-VERBAL PERMISSION

Reason for Exclusion

Recon Result
For Site:

Z3-LL-11009

INCLUDE

ADDITIONAL NOTES

***24 hour notice** Suzanne Crain (352) 258-5431

Use 16 ft kicker boat. Ramp is concrete, but narrow.

DIRECTIONS:

From palatka, Take FL-20 W, Turn left on Co Rd 21 go ~3.8 miles, turn left onto Higginbotham Lake Rd go ~0.1 miles, House will be on your left, 606 Higginbotham Lake Rd, Tan house with bright red porch, first house without a fence. Go down right side of house launch boat. Ramp is narrow and concrete.

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

PHOTOS

GWIS Generalized Water Information System Database Utilities

Tracking

Existing Station

New SW Station

New GW Station

PK RANDOM SAMPLE LOCATION = Z3-LL-11009

County	PUTNAM	Quarter Quad	
WMD	ST. JOHNS RIVER WMD	HUC	OKLAWAHA RIVER
Random Latitude	29° 33m 38.88504s	Random Longitude	81° 58m 11.8614s

Is Z3-LL-11009 sampleable? ☐ Yes ☐ No ☒ N/A

Exclusion Category:

Exclusion Criteria:(definitions):

Was Z3-LL-11009 sampled? Yes Month 10 Day 19 Year 2016

Comments:

☒ Aerial Photo ☐ Quad Map ☐ No Image

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 #3 VST RQ- 2017- *NA* Project Status *100%*

- 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 *Lab*

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification *5/31/17*

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.	<i>JPm</i>	<i>7/10/17</i>	<i>728</i>	<i>23.0</i>	<i>8.58</i>	<i>8.56</i>	<i>100</i>	<i>52.3</i>	<i>-</i>	<i>P</i>	<i>L</i>
ICV	<i>J</i>	<i>J</i>	<i>729</i>	<i>23.2</i>	<i>8.55</i>	<i>8.56</i>	<i>100.3</i>	<i>52.3</i>	<i>-</i>	<i>P</i>	<i>L</i>
CCV	<i>B-V</i>	<i>7/10/17</i>	<i>1335</i>	<i>24.25</i>	<i>8.39</i>	<i>9.04</i>	<i>107.9</i>	<i>50.2</i>	<i>-</i>	<i>F</i>	<i>L</i>
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.	<i>JPm</i>	<i>7/10/17</i>	<i>733</i>	<i>170315B</i>	<i>3/18</i>	<i>1000</i>	<i>1000</i>	<i>P</i>	<i>L</i>
ICV	<i>J</i>	<i>J</i>	<i>735</i>	<i>170315A</i>	<i>3/18</i>	<i>100</i>	<i>100</i>	<i>P</i>	<i>L</i>
CCV	<i>B-V</i>	<i>7/10/17</i>	<i>1338</i>	<i>170315B</i>	<i>3/18</i>	<i>1000</i>	<i>1006</i>	<i>P</i>	<i>L</i>
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.	<i>JPm</i>	<i>7/10/17</i>	<i>737</i>	<i>1607A12</i>	<i>6/18</i>	<i>7.0</i>	<i>7.00</i>	<i>-21.4</i>	<i>P</i>	<i>L</i>
Calibr.	<i>J</i>	<i>J</i>	<i>739</i>	<i>2702743</i>	<i>1/19</i>	<i>4.0</i>	<i>4.00</i>	<i>140.3</i>	<i>P</i>	<i>L</i>
Calibr.	<i>J</i>	<i>J</i>	<i>740</i>	<i>6111998</i>	<i>5/18</i>	<i>10.0</i>	<i>50.00</i>	<i>177.8</i>	<i>P</i>	<i>L</i>
ICV	<i>J</i>	<i>J</i>	<i>741</i>	<i>1607A12</i>	<i>6/18</i>	<i>7.0</i>	<i>7.05</i>	<i>-21.9</i>	<i>P</i>	<i>L</i>
CCV	<i>B-V</i>	<i>7/10/17</i>	<i>1340</i>	<i>2611998</i>	<i>5/18</i>	<i>10.0</i>	<i>9.97</i>	<i>-177.8</i>	<i>P</i>	<i>L</i>
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 *5/31/17*

Depth Sensor (Daily)	Name	Date	Time CT-ET	Zero the Sensor	ICV Value	Pass / Fail	Lab / Field
Pressure mode in air	<i>JPm</i>	<i>7/10/17</i>	<i>743</i>	<i>0.000</i>	<i>0.00</i>	<i>P</i>	<i>L</i>

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



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

March 2017

PAGE 1 OF 1

Data Qualified?

Yes / No

Location/STORET Station Name: Lake Higginbotham 23-LL-11009 Date: 7/10/17

STORET # 50866 WBID: _____ Latitude: 29° 33' 41.9"

County: RQ - 2017 ORG ID: 21FLA Longitude: 81° 58' 2.0"

Receiving Body of Water: _____ Field ID: See Label

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
<u>B. Voss</u>		☒	☒	☒	☒	☒
<u>O. Penick</u>		☒	☒	☒	☒	☒

Sampling Equipment		
☐ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☐ Syringe	
☐ Dipper	☐ Other	
Equipment ID OrthoKit # _____		
Collection Method		
☐ Wading	☐ Vis Boat	
☐ From Shore	☐ Canoe/Kayak	
☐ Other (note below)	☐ Electric Motor	
	☐ Gasoline Motor	

Water Level: Dry / Pooled / Low / Normal / High / Flooded Matrix: Fresh / Marine / DI

Meter ID# YSI #3 Photos: Yes / No Tide Falling: Yes / No / NA

Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Secchi Disk (m)	Sp COND (µmhos/cm)	Temp. (C°)
<u>EST</u>	<u>1115</u>	<u>0.3</u>	<u>5.1</u>	<u>7.6</u>	<u>104</u>	<u>7.07</u>	<u>0.03</u>	<u>1.6</u>	<u>77.0</u>	<u>31.8</u>
<u>CEN</u>	<u>1117</u>	<u>2.5</u> <u>3.0</u>		<u>7.75</u>	<u>104.5</u>	<u>7.00</u>	<u>0.03</u>		<u>77.0</u>	<u>31.4</u>

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	☐ CHL-SUITE-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-PW-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 ☐ W-PCL-SQ-R ☐ W-UHERB-AA ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Ice ☐ Other			

Notes: Status Lake

Place Label Here (If Available)

Signature: B. Voss Date: 7/10/17

Field Parameters Entered into LIMS: _____ (Initials/Date) Field Parameters QC in LIMS: _____ (Initials/Date)

Date Migrated to STORET: _____ (Initials/Date) Field Sheets Scanned/Saved: _____ (Initials/Date)



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

March 2017

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Data Qualified?
Yes / No

Location/STORET Station Name: _____ Date: ____/____/____
(mm/dd/yyyy)

STORET # _____ WBID: _____ Latitude: _____
(Decimal Degrees)

County: _____ RQ - 2017 _____ ORG ID: 21FLA _____ Longitude: _____
(Decimal Degrees)

Receiving Body of Water: _____ Field ID: See Label

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment		
						☐ Sample Container	☐ Van Dorn	☐ Pole
						☐ Carboy	☐ Syringe	
						☐ Dipper	☐ Other	
Equipment ID OrthoKit # _____								
Collection Method								
☐ Wading ☐ Via Boat								
☐ From Shore ☐ Canoe/Kayak								
☐ Other (note below) ☐ Electric Motor								
☐ Gasoline Motor								

Water Level: Dry / Pooled / Low / Normal / High / Flooded Matrix: Fresh / Marine / DI

Meter ID# _____ Photos: Yes / No Tide Falling: Yes / No / NA

Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Secchi Disk (m)	Sp COND (µmhos/cm)	Temp. (C°)
EST										
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-JCP	☐ 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 ☐ W-PCL-SQ-R ☐ W-UHERB-AA ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Ice ☐ Other			

Notes:	Place Label Here (If Available)
Signature: _____	Date: _____

Field Parameters Entered into LIMS: _____ Field Parameters QC in LIMS: _____
(Initials/Date) (Initials/Date)

Date Migrated to STORET: _____ Field Sheets Scanned/Saved: _____
(Initials/Date) (Initials/Date)

6596 265
20056

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

STORET STATION NUMBER:	DATE (MM/DD/YY)	LAKE NAME		FIELD ID / NAME:
ECO-REGION:	COUNTY	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 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	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	COMMENTS:			

ANALYSIS DATE:	ANALYST:	SIGNATURE:
7/10/17	Ham	gran

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 77912 MACROPHYTE ID: _____ LATITUDE: _____
 COUNTY: Putnam Co. STORET #: _____ LONGITUDE: _____
 DATE: 7/10/17 TIME: 1115 SAMPLING AGENCY: _____
 SITE NAME: Higganbottom Lake WBID: _____
 FIELD ID/NAME: _____ LAKE SIZE: _____ RQ: _____

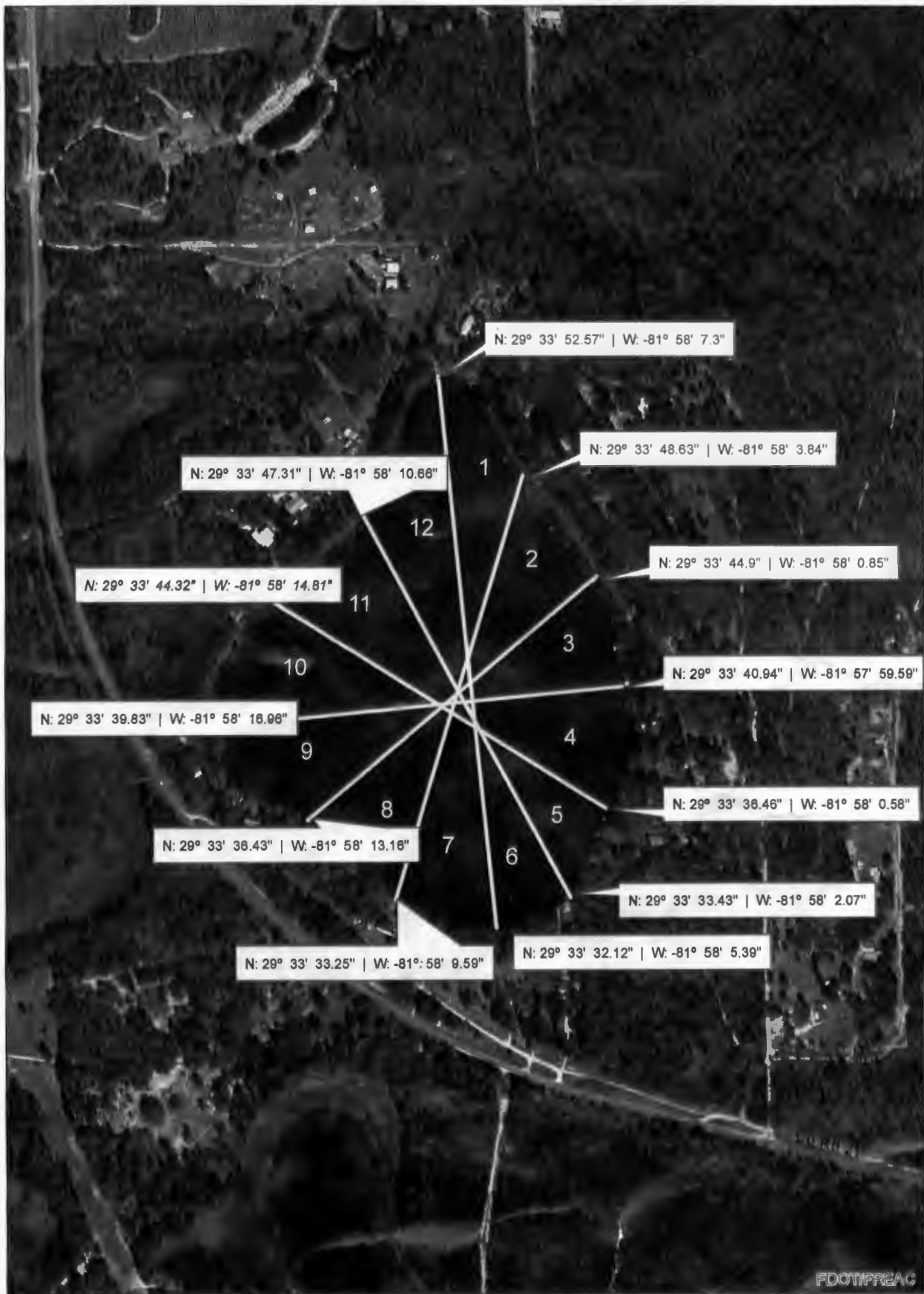
WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) : Forest/Natural ☐ Silviculture ☐ Field/Pasture ☐ Agricultural ☐ Residential ☒ Commercial ☐ Industrial ☐ Other (Specify) ☐						LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI:			
Local Watershed Erosion (select one) : ☐ None ☒ Slight ☐ Moderate ☐ Heavy						Artificially Impounded ☐ Yes ☐ No			
Local Watershed NPS Pollution : ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy						Land Use Source & Year:			
STORMWATER INPUTS <u>16</u>		Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation 20 19 18 17 <u>16</u>		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>16</u>		Very few man-made structures, roads, or other disturbance adjacent to lake (<10% lakeside affected) 20 19 18 17 <u>16</u>		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 <u>16</u>		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 ☐ 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>31.8</u> <u>7.07</u> <u>7.6</u> <u>104</u> <u>77</u> <u>0.03</u> Mid-Depth: _____ Bottom: <u>5.1</u>						Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____					
Meter ID: _____						Clarity: ☐ Clear ☒ 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: <u>N/A</u> 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:											
Weather Conditions :											
SAMPLING TEAM: <u>Jeremy Lam B Davis</u>						SIGNATURE: <u>Jeremy Lam</u>			DATE: <u>7/10/17</u>		

Higginbotham lake Z3-11009 29 33 38.8; 81 58 11.9



FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site:					Date:				
SPECIES	2	5	8	11	Collected? (✓)	SPECIES			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 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)									
Proserpinaca pectinata									
*Rhexia									
*Rhynchospora corniculata									
*Rhynchospora inundata									
Rhynchospora tracyi									
Ricciocarpus natans									
Sabal palmetto	✓	✓	✓	✓					
Sacciolepis striata	✓	✓	✓	✓					
*Sagittaria filiformis									
*Sagittaria graminea									
*Sagittaria isoetiformis									
Sagittaria lancifolia									
Sagittaria latifolia									

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DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

(R) Shio 77912

Waterbody: <u>Higginbotham Lake</u>				County: <u>Putnam</u>				Date: <u>7/10/17</u>			
Analyst: <u>JP</u>				Signature: <u>JP</u>				STORET: <u>50866</u>			
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 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.											
SPECIES	2	5	8	11	Collected? (✓)	SPECIES	2	5	8	11	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						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	✓	✓	✓	✓	
Cyrtilla racemiflora						*Ludwigia <u>virgata</u>	✓	✓			
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											
Eleocharis equisetoides											
Eleocharis interstincta				✓		Ludwigia ^F succutosa	✓				
*Eriocaulon compressum						Ludwigia "Rusty"					
*Eriocaulon decangulare											
Eupatorium capillifolium	✓	✓		✓							
*Fuirena											
Fuirena scirpoidea	✓	✓	✓	✓							
Gordonia lasianthus	✓	✓	✓	✓							