



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

February 2016

A-KIT

PAGE 1 OF 1

Data Qualified?
Yes / No

STORET Station Name: LAKE THOMAS OUTLET

Date: 10/26/2016
(mm/dd/yyyy)

STORET Station ID: 21FLHILL509

Latitude: 28° 9' 25.44" N
(Decimal Degrees)

WBID: 14635 RQ-2016-10-24-68

ORG ID: 21FLTPA

Longitude: -82° 30' 23.39" W
(Decimal Degrees)

Receiving Body of Water: GOM

Field ID: G1SW0050

County: HILLSBOROUGH

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Stephen Clingeman									
Judy Ashton									

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☒ Syringe	
☐ Dipper	☐ Other	
Equipment ID		

Collection Method	
☐ Wading	☐ Via Boat
☒ From Shore	☐ Canoe/Kayak
☐ Other (note below)	☐ Electric Motor
	☐ Gasoline Motor

Water Level: Dry / Low / Normal / High / Flooded

Matrix: Fresh / Marine / DI

Meter ID#

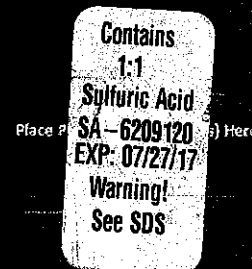
Photos: Yes / No

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	11:45	0.3	0.5	7.9	87	6.0	0.08	0.5	175	20.3
CEN								"5"		

Biological Samples Collected: None HA SCI LVS RPS LVI Other

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			
BOD	☐ BOD-UNIN	☐ Ice			
Physical/Aggregate (Kit A)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CH-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice			
Physical/Aggregate (Kit B)	☐ Alkalinity / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Microbiology	☐ E Coli ☐ F Coli ☐ Enterococcus ☐ QPCR	☐ Ice			
Periphyton	☐ ALGAE-ID	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other			



Flow m/s: 0.07 m/s "J" Quality Flow

Notes:

STAGNANT IN SOME SECTIONS
LOW W/L

LIMS 1845023

Visit 77283

RQ-2016-10-24-68

Date: 10/26/2016 Field ID: G1SW0050

Time:

STORET: 21FLHILL509

Signature:

Date: 10/26/2016

Field Parameters Entered into LIMS: SC 11/18/16

(Initials/Date)

Field Parameters QC in LIMS: SC 01-04-68 17 52 11/17

(Initials/Date)

Date Migrated to STORET: (Initials/Date)

Field Sheets Scanned/Saved: (Initials/Date)

DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY: <u>FDLP</u>		STORET STATION NUMBER: <u>615W0050</u>	DATE (MM/DD/YY): <u>10-26-16</u>	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: <u>HILLS.</u>	LOCATION: <u>LK. THOMAS OUTLET</u>	FIELD ID/NAME: <u>21ALHILLSD9</u>	

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present (snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock)	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags)	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered
Substrate Diversity <u>2</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 <u>2</u> 1
Substrate Availability <u>1</u>	Greater than 30% major productive habitat present at site 20 19 18 17 16	16% to 30% major productive habitat, by aerial extent 15 14 13 12 11	6% to 15% major productive habitat 10 9 8 7 6	Less than 5% major productive habitat 5 4 3 2 <u>1</u>
Water Velocity <u>8</u>	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 20 19 18 17 16	Max. observed at typical transect: >0.1 to 0.25 m/sec 0.25 0.21 0.17 0.13 >0.1 15 14 13 12 11	Max. observed at typical transect: 0.05 to 0.1 m/sec 0.1 0.09 0.07 0.06 0.05 10 9 <u>8</u> 7 6	Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec <0.05 0.04 0.03 0.01 <0.01 5 4 3 2 1
Habitat Smothering <u>5</u> Primary Score <u>16</u>	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 18 17 16	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae. 15 14 13 12 11	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). 10 9 8 7 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. <u>5</u> 4 3 2 1
Secondary Habitat Components	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.	Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered.	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks.
Artificial Channelization <u>1</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 <u>1</u>
Bank Stability	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas. <u>3</u> 2 1
Riparian Buffer Zone Width	Width of vegetation greater than 18 m 10 9	Width of vegetation >12 to 18m 8 7 6	Width of vegetation 6 to 12 m. human activities close to system 5 4	Less than 6 m of buffer zone due to intensive human activities 3 2 1
Riparian Zone Vegetation Quality	Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance. 10 9	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed. 8 7 6	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious. 5 4	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). 3 2 1

45

TOTAL SCORE

Date: <u>10-26-16</u>	Analyst: <u>S. Ashman, S. Clingerman</u>	Signature: <u>[Signature]</u>
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$3 \times 100 = 300 m^2$

DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet

Length of grid represents 100 m of stream (not linear meters).
(Horizontal scale is double vertical scale, draw proportionately).

Location: _____

Date: _____

Sampler: _____

100 m: Latitude _____	
Longitude _____	
0 m: Latitude _____	
Longitude _____	
Substrates: Code key, draw proportionate habitat abundance. %	
☐	Snags _____
☐	Roots/undercut banks _____
☐	Leaf Packs (or mats) _____
☐	Aquatic Macrophytes _____
☐	_____
☐	_____
☐	Pools total # observed = _____ # range expected = _____
Average width _____ m	
Average depth _____ m	
Velocity measured at _____ meter mark.	
WQ & chemistry taken at _____ meter mark.	
Habitat Smothering: Note areas (on map) where sand or silt is smothering substrates, limiting habitability.	
Bank Stability: Note areas (on map) with unstable, eroding banks.	
Riparian Buffer Width: Note areas (on map) where natural vegetation is altered or eliminated.	

Plants observed / other notes:

Waterbody: LAKE THOMAS OUPG

Date: 10.26.16 County: HILLS

County: Itals

Store Number: 61500050

Analyst: J. Ashton, S. C. W. G. M. A. N.

Signature: July C

Comments:

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m² of taxa present). Note in the boxes below if no dominant are selected, and note total macrophyte abundance rank for each section. Only the most common taxa are listed, so use blank spaces for additional taxa names.

spaces for additional taxa names.

HERBACEOUS SPECIES	Meter Mark										Specime n collected (check)	HERBACEOUS SPECIES	Meter Mark										Specime n collected (check)
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100			0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	
<i>Alternanthera philoxeroides</i>	X	X	X		X			X				<i>Micranthemum glomeratum</i>	X	X	X		X	X	X				
<i>Bacopa caroliniana</i>												<i>Micranthemum umbrosum</i>											
<i>Bacopa monnieri</i>												<i>Myriophyllum aquaticum</i>											
<i>Bidens bitis</i>												<i>Najas guadelupensis</i>											
<i>Boehmeria cylindrica</i>												<i>Nuphar luteum</i>											
<i>Centella asiatica</i>												<i>Orontium aquaticum</i>											
<i>Cephalanthus occidentalis</i>												<i>Panicum hemitomon</i>											
<i>Ceratophyllum demersum</i>												<i>Panicum repens</i>											
<i>Chara</i>												<i>Panicum rigidulum</i>											
<i>Cicuta maculata</i>												<i>Pistia stratioides</i>											
<i>Cladium jamaicense</i>												<i>Polygonum glabra</i>											
<i>Colocasia esculenta</i>												<i>Polygonum hydropiperoides</i>											
<i>Crinum americanum</i>												<i>Polygonum punctatum</i>											
<i>Diodia virginiana</i>												<i>Pontedaria cordata</i>											
<i>Eichhornia crassipes</i>	X	X	D	X	X	X						<i>Potamogeton illinoensis</i>											
<i>Eleocharis (wispy viviparous)</i>												<i>Ruellia simplex</i>											
<i>Hydrilla verticillata</i>												<i>Sacciolepis striata</i>											
<i>Hydrocotyle</i>	X			X								<i>Sagittaria kurziana</i>											
<i>Hygrophila polysperma</i>												<i>Sagittaria lancifolia</i>											
<i>Hymenocallis</i>												<i>Sagittaria latifolia</i>											
<i>Itea virginica</i>												<i>Salix caroliniana</i>											
<i>Lachnanthes caroliniana</i>												<i>Salvinia minima</i>	X	X	Y	X	X	X	X	X	X	X	
<i>Landoltia punctata</i>												<i>Samolus parviflora</i>											
<i>Lemna</i>	X	X	X	X	X	X	X	X	X	X		<i>Saururus cernuus</i>											
<i>Limnophila sessiflora</i>												<i>Typha</i>											
<i>Ludwigia leptocarpa</i>												<i>Vallisneria americana</i>											
<i>Ludwigia palustris</i>												<i>Zizania aquatica</i>											
<i>Ludwigia peruviana</i>												POTAMOGETON	D	D									
<i>Ludwigia repens</i>	X	X				X						SELENIA REPENS			X	X							
<i>Luziola fluitans</i>												LUZIOILA						X					

If no Dominant or Co-Dominant were selected, indicate with an "X"

Indicate % cover macrophytes per section

0-5% Macrophyte Coverage

>5 and ≤10% Macrophyte Coverage

>10 and ≤25% Macrophyte Coverage

>25 and ≤50% Macrophyte Coverage

> 50% Macrophyte Coverage

RPS 8563

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: LAKE THOMAS OUTLET	County: HILLS	Date: 10-26-16	Investigators: J. ASHON, S. DUNHAM
STORET Station Number: G15W0050			

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	
0	1	N			60	1	N			
	2					2				
	3					3				
	4					4				
	5			88		5				90
	6					6				
	7					7				
	8					8				
	9					9				
10	1	N			70	1	N			
	2					2				
	3					3				
	4					4				
	5			43		5				94
	6					6				
	7					7				
	8					8				
	9					9				
20	1	N			80	1	N			
	2					2				
	3					3				
	4					4				
	5			90		5				90
	6					6				
	7					7				
	8					8				
	9					9				
30	1	N			90	1	N			
	2					2				
	3					3				
	4					4				
	5			92		5				90
	6					6				
	7					7				
	8					8				
	9					9				
40	1				100	1	N			
	2					2				
	3					3				
	4					4				
	5			90		5				90
	6					6				
	7					7				
	8					8				
	9					9				
50	1					1				
	2					2				
	3					3				
	4					4				
	5			90		5				90
	6					6				
	7					7				
	8					8				
	9					9				

Secchi depth	0.5
Estimated?	N
# points ranked 4-6	0
total points assessed	99
% points ranked 4-6	0

Check accompanying data collected at same site/date.	
Algal mat sample	
Linear Veg Survey	✓
Habitat Assessment	✓
SCI/Biorecon	
Water sample	
RQ-2016-10-24-6B	

Algal Thickness Rank	
N	rough, no algae, slimy, algae up to 1mm
3	>1mm - 6mm
4	>6mm - 20mm
5	>20mm - 10 cm
6	>10 cm

Record "N" and check "Estimated" for points deeper than the Secchi depth; algae are presumed absent. Check "Estimated" if thickness estimated for deep points which can be seen but not reached.

Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.

Record canopy cover as the number of small densiometer quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6.

Collect algal mat sample following DEP SOP FS 7240 if the percentage of total sampled points with a thickness rank of 4, 5, or 6 is >20%.

Request Number: 2016-10-24-68

Florida Department of Environmental Protection
Central Laboratory Submittal FormPage 1 of 2
last revised Nov 10, 2015

Customer: SW-DIST

Requester: Judy Ashton

Field Report Prepared By: S. Ungermaier/J. Ashton

Project ID: SMP

Collected By: S. Ungermaier/J. Ashton

Sampling Agency: 21 FLTPA

Location	BELLOWS LAKE/EAST LAKE		☐ Comp ☒ Grab	Collection (comp begin or grab) Date 10/26/2016 Time 9:25	Eastern Central	Composite end Date	Time	Bottle Group(s) (See pg 2)
Field ID	RQ-2016-10-24-68		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen 10.3	☒ mg/L	Total Res. Chlorine	A
Date: 10/26/2016	Field ID: G1SW0044				120	☒ % sat	(mg/L)	
Time:			Temp (C) 22.7	pH 8.4	Sample Depth 0.3	☐ ft ☒ m	Sp. Conductance (umho/cm) 122	
STORET:	24030127		☐ dd ☐ dms	Salinity (ppt) 0.04	Comments			

Location	LAKE MEADOWS OUTLET		☐ Comp ☒ Grab	Collection (comp begin or grab) Date 10/26/2016 Time 1:45	Eastern Central	Composite end Date	Time	Bottle Group(s)
Field ID	RQ-2016-10-24-68		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen 7.9	☐ mg/L	Total Res. Chlorine	
Date: 10/26/2016	Field ID: G1SW0050				8.7	☐ % sat	(mg/L)	
Time:			Temp (C) 20.3	pH 6.0	Sample Depth	☐ ft ☒ m	Sp. Conductance (umho/cm) 175	
STORET:	21FLHILL509		☐ dd ☐ dms	Salinity (ppt) 0.08	Comments			

Location			☐ Comp ☐ Grab	Collection (comp begin or grab) Date	Eastern Central	Composite end Date	Time	Bottle Group(s)
Field ID			Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L	Total Res. Chlorine	
ORET #						☐ % sat	(mg/L)	
Time			Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)	
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)	Comments			

Location			☐ Comp ☐ Grab	Collection (comp begin or grab) Date	Eastern Central	Composite end Date	Time	Bottle Group(s)
Field ID			Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L	Total Res. Chlorine	
ORET #						☐ % sat	(mg/L)	
Time			Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)	
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)	Comments			

Relinquished By:	Date/Time	Shipping Method	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
	10/26/2016 1800	FEDEX						

Group: A	Bottle Type:	P-1L	# of Bottles: 6	Preservative:	ICE	Enter Number of Bottles Sent to Lab	2
	ALKALINITY						
	TURBIDITY						
	W-CL-IC						
	W-COLOR						
	W-F						
	W-SO4-IC						
	W-TDS						
	W-TSS						
Group: A	Bottle Type:	P-1L	# of Bottles: 6	Preservative:	ICE	Enter Number of Bottles Sent to Lab	
	BOD-UNIN						
Group: A	Bottle Type:	BP-1L	# of Bottles: 6	Preservative:	ICE	Enter Number of Bottles Sent to Lab	2
	CHLSUITE-W						
Group: A	Bottle Type:	P-500ML	# of Bottles: 6	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab	2
	W-NH3						
	W-NO2NO3						
	W-S-A-TP						
	W-TKN						
	W-TOC						
Group: A	Bottle Type:	P-125ML	# of Bottles: 6	Preservative:	ICE-FLTR	Enter Number of Bottles Sent to Lab	2
	W-PO4-F						



Package
US Airbill

FedEx
Tracking
Number

8104 1261 4824

From Please print and press hard.

Date 10-26-16

Sender's FedEx
Account Number

Sender's
Name

Phone (813) 470-5700

Company

FDEP

Address

13051 N. Telecom Pkwy

Dept./Floor/Suite/Room

City

Temple Terrace

State

FL

ZIP

33617

Your Internal Billing Reference

First 24 characters will appear on invoice.

To

Recipient's

Name SAMPLE RECEIVING

Phone (850) 245-8085

Company FLORIDA DEP/CHEMISTRY SECTION

Address 2600 BLAIRSTONE RD

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Dept./Floor/Suite/Room

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City TALLAHASSEE

State

FL

ZIP

32309-6542

0124452242



Leave the packing to the pros at FedEx Office.
Visit fedex.com/office

MUR 4

Form
ID No.

0215

4 Express Package Service

* To most locations.

Packages up to 150 lbs.
For packages over 150 lbs., use the
FedEx Express Freight US Airbill.

Next Business Day

☐ FedEx First Overnight
Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless Saturday Delivery is selected.

☒ FedEx Priority Overnight
Next business morning.* Friday shipments will be delivered on Monday unless Saturday Delivery is selected.

☐ FedEx Standard Overnight
Next business afternoon.*
Saturday Delivery NOT available.

2nd Business Day

☐ FedEx 2Day A.M.
Second business morning.*
Saturday Delivery NOT available.

☐ FedEx 2Day
Second business afternoon.* Thursday shipments will be delivered on Monday unless Saturday Delivery is selected.

☐ FedEx Express Saver
Third business day.*
Saturday Delivery NOT available.

5 Packaging

* Declared value limit \$500.

☐ FedEx Envelope*

☐ FedEx Pak*

☐ FedEx Box

☐ FedEx Tube

☒ Other

6 Special Handling and Delivery Signature Options

Fees may apply. See the FedEx Service Guide.

☐ Saturday Delivery

NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ No Signature Required

Package may be left without obtaining a signature for delivery.

☐ Direct Signature

Someone at recipient's address may sign for delivery.

☐ Indirect Signature

If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only.

Does this shipment contain dangerous goods?

One box must be checked.

☒ No

☐ Yes

As per attached Shipper's Declaration.

☐ Shipper's Declaration not required.

☐ Dry Ice

Dry Ice, 9, UN 1845

x kg

☐ Cargo Aircraft Only

Restrictions apply for dangerous goods—see the current FedEx Service Guide.

7 Payment Bill to:

Enter FedEx Acct. No. or Credit Card No. below.

☐ Sender
Acct. No. in Section 1 will be billed.

☒ Recipient

☐ Third Party

☐ Credit Card

☐ Cash/Check

FedEx Acct. No. 4470-2262-7

Credit Card No.

Exp. Date

Total Packages

Total Weight

Total Declared Value*

1

56

lbs.

\$

00

*Your liability is limited to US\$100 unless you declare a higher value. See back for details. By using this airbill you agree to the service conditions on the back of this airbill and in the current FedEx Service Guide, including terms that limit our liability.

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