



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

PAGE 1 OF 1

Data Qualified?

Yes / No

October 2017

Location/STORET Station Name: Holiday Springs above Pump House Date: 12/11/17

STORET # G1CE0029 WBID: 2838D Latitude: 28.74062267 (mm/dd/yyyy)

County: Lake RQ - 2017-11-13-55 ORG ID: 2IFUEN Longitude: -81.8174127 (Decimal Degrees)

Receiving Body of Water: Lk. Harris Field ID: G1CE0029 (Decimal Degrees)

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment				Collection Method			
<u>Leif Boman</u> <u>Kate Williams</u>		☒	☒	☒	☒	☒	☒ Sample Container	☐ Van Dorn	☐ Pole	☒ Wading	☐ Canoe/Kayak	☐ From Shore	☐ Electric Motor	
							☐ Carboy	☒ Syringe	☐ Other	☐ Gasoline Motor				
							Equipment ID							
Water Level: Dry / Low / <u>Normal</u> / Above Normal / Flooded							Meter ID# <u>600-Nan</u>		Matrix: <u>Fresh</u> / Marine / DI					
Photos: Yes / No							Flow: No Flow / Intestinal / <u>Flowing</u> / NA		Tide: Rising / Falling / Slack / <u>NA</u>		Tide Times: High / Low			
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°)				
<u>EST</u>	<u>1120</u>	<u>0.2</u>	<u>0.4</u>	<u>3.1</u>	<u>37</u>	<u>7.7</u>	<u>0.14</u>	<u>0.4(s)</u>	<u>301</u>	<u>23.7</u>				
<u>CEN</u>														

Biological Samples Collected:		None	<u>HA</u>	SCI	<u>RPS</u>	Algae ID	<u>LVS</u>	LVI	Other	
SBIO ID Numbers:		SBIO-ID: <u>78171</u>	HA-ID:	RPS-ID: <u>8882</u>	Macrophyte-ID: <u>0792</u>	LIMS#: <u>1952942</u>				
Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Check	Place Preservative Stickers Here (If Available)				
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-SATP	☒ Ice ☒ H2SO4	<u>SA7275010</u>	<u>10/18</u>	☒ <2					
Metals	☒ W-ICPMS ☒ W-ICP	☒ Ice ☒ HNO3	<u>NA7261120</u>	<u>9/18</u>	☒ <2					
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um 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	☐ Ice								
Molecular	☐ PCR FILTER ☐ PCR HF183 ☐ PCR BacR ☐ PCR GULL2 ☐ PCR GFD	☐ Ice								
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA ☐ W-AHERB-AA	☐ Ice								
Pesticides	☐ W-PSNP-TQ ☐ W-UHERB-AA ☐ W-AHERB-AA ☐ W-PCL-SQ-R ☐ W-PYR-AA-R ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Ice ☐ Other								

Notes:

Holiday Springs above
Pump House

G1CE0029

Field ID ↑

STORET ↓

RQ-2017-11-13-55

Date: 12/11/2017

G1CE0029

Signature:

KWilliams

Date:

12/11/17

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)

DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID _____ ORG ID 21FLEN LATITUDE _____
 COUNTY Lake STORET # 61CED029 LONGITUDE _____
 DATE 12/11/17 TIME _____ SAMPLING AGENCY _____
 SITE NAME Holiday Springs above pump house
 FIELD ID/NAME 61CED029 RECEIVING BODY OF WATER Lk. Harrie

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>30</u> Silviculture _____ Field/Pasture <u>30</u> Agricultural _____ Residential <u>40</u> Commercial _____ Industry _____ Other (Specify) _____								Landscape Development Intensity Index (LDI) _____
Local Watershed Erosion (select one): ☐ None ☒ Slight ☐ Moderate ☐ Heavy				Typical Width (m) Depth (m)/Velocity (m/sec) Transect _____ m wide <u>2.5</u> m wide				
Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☒ Moderate ☐ Heavy								
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>1</u> Right Bank: <u>1</u>				Hydrologic Modification Score (per FT 3101) _____				
High Water Mark: <u>0.3</u> + <u>0.4</u> = <u>0.7</u> (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%)				

SEDIMENT / SUBSTRATE

Sediment Oils ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse			Sediment Odors ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ Other (Specify): _____			Smothering of Substrates Sand Smothering: None ☐ Slight ☒ Moderate ☐ Severe ☐ Silt Smothering: None ☐ Slight ☒ Moderate ☐ Severe ☐ Algae Smothering: None ☐ Slight ☒ Moderate ☐ Severe ☐				
SUBSTRATE TYPE Assessment Tool: ☐ SCI ☐ RPS ☐ LVS ☐ LCI ☐ BioRecon			WATER QUALITY							
			Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Woody Debris (Snags)			Top:							
Undercut Banks / Roots			Mid:							☐ VOB
Leaf Packs or Mat			Bottom:							TOTAL DEPTH
Aquatic Vegetation			Meter ID: _____							
Rock or Shell Rubble..			Water Odors Normal ☐ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐			Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐				
Sand.....			Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: _____ Exp: _____			Color Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify) ☐				
Mud / Muck / Silt			Algae Sample Taken? ☒ Yes ☐ No Sample Preserved? ☐ Yes ☒ No Lot Number: _____ Exp: _____			Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐				
Other			System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☒ <u>spring run</u>							
Other			AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.							

SAMPLING TEAM

SIGNATURE:

DATE:

KMW, LGB

K. Williams

12/11/17

Waterbody: <u>Holman Springs</u>	Date: <u>12/1</u>	County: <u>Lake</u>	Storet Number: <u>6160029</u>
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Analyst: Kate Williams Signature: Williams

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.

Revision Date: March 1, 2014

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Holiday Springs</u>					County: <u>Lake</u>		Date: <u>12/11/17</u>		Investigators: <u>KMW, LGB</u>	
									STORET Station Number: <u>GICED029</u>	

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	3	↓	80	60	1	2	↓	82
	2	2				2	2		
	3	2				3	2		
	4	2				4	2		
	5	2				5	2		
	6	2				6	2		
	7	2				7	3		
	8	2				8	2		
	9	2				9	2		
10	1	3	↓	74	70	1	5	↓	94
	2	2				2	3		
	3	2				3	2		
	4	2				4	2		
	5	2				5	2		
	6	2				6	2		
	7	2				7	3		
	8	2				8	2		
	9	2				9	2		
20	1	2	↓	90	80	1	2	↓	48
	2	2				2	2		
	3	2				3	2		
	4	2				4	2		
	5	2				5	2		
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		
30	1	2	↓	82	90	1	2	↓	80
	2	2				2	2		
	3	2				3	2		
	4	2				4	2		
	5	2				5	2		
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		
40	1	2	↓	84	100	1	2	↓	90
	2	2				2	2		
	3	2				3	2		
	4	2				4	2		
	5	2				5	2		
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		
50	1	2	↓	80		1	2	↓	
	2	2				2	2		
	3	2				3	2		
	4	2				4	2		
	5	2				5	2		
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		

Secchi depth	0.4(s)
Estimated?	

# points ranked 4-6	
total points assessed	
% points ranked 4-6	

Check accompanying data collected at same site/date.	
Algal mat sample	✓
Linear Veg Survey	✓
Habitat Assessment	✓
SCI/Biorecon	
Water sample	✓
RQ- 2017-11-13-55	

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%.

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

SAMPLING AGENCY:		STORET STATION NUMBER:	DATE (MM/DD/YYYY):	RECEIVING BODY OF WATER:
		G1CE0029	12/11/17	LK. Harris
REMARKS:	COUNTY:	LOCATION:		FIELD ID/NAME:
	Lake	Holiday Springs		

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>4</u>	20 19 18 17 16	15 14 13 12 11	10 <u>9</u> 8 7 6	5 <u>4</u> 3 2 1
Substrate Availability <u>4</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 <u>3</u> 2 1
Water Velocity <u>15</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 8 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>15</u> Primary Score <u>39</u> <u>40</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 <u>13</u> 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. 5 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>14</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability Right Bank <u>7</u> Left Bank <u>4</u>	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. 3 2 1
Riparian Buffer Zone Width Right Bank <u>3</u> Left Bank <u>3</u>	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 Right Bank <u>3</u> Left Bank <u>3</u> Secondary Score <u>39</u>	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

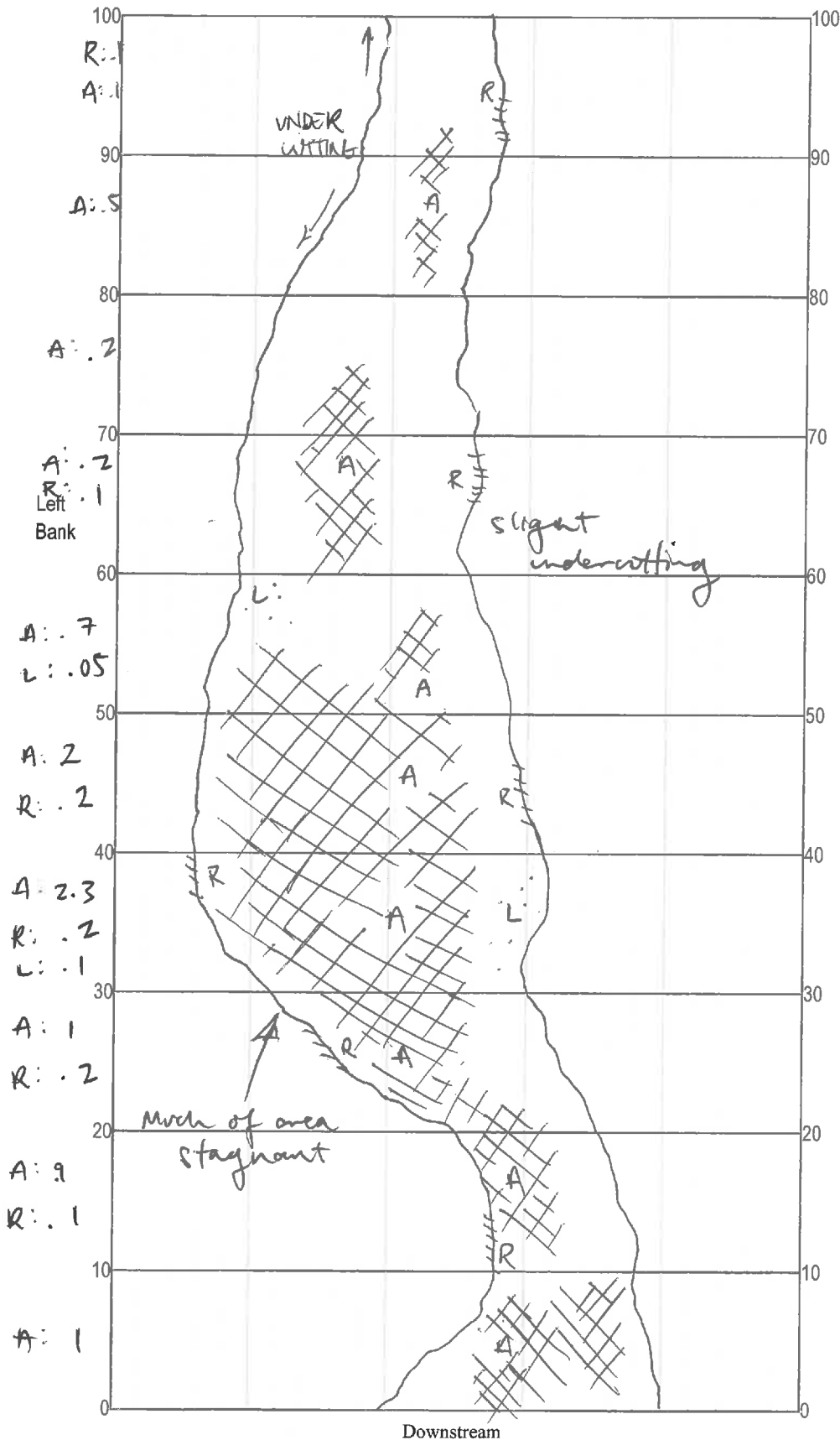
76 79

TOTAL SCORE

Date: 12/11/17	Analyst: Katie Williams	Signature: Katie Williams
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Lots of *Najas guadalupensis* in run not noted before, bumps up availability score.

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: Holiday Spring
Date: 12/11/17
Sampler: Leif Boman

100 m: Latitude	_____
Longitude	_____
0 m: Latitude	_____
Longitude	_____
Substrates: Code key, draw proportionate habitat abundance. %	
☐ Snags	_____
☒ R Roots/undercut banks	<u>0.09</u> (LB)
☒ L Leaf Packs (or mats)	<u>0.06</u>
☒ A Aquatic Macrophytes	<u>3.56</u>
☐ _____	_____
☐ _____	_____
☒ Pools	total # observed = <u>0</u> # range expected = _____
Average width	<u>2.5</u> m
Average depth	<u>.3</u> m
Velocity measured at <u>50</u> 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:

A: 8.9

R: 0.9

L: .15

250² ft

Much of previous root habitat is now above water line. Much more vegetation than previous visits.