



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

PAGE ____ OF ____

Data Qualified?

Yes / No

June 2016

STORET Station Name: Helena Run 0.45 mi. upstream of Hwy 27 Date: 08/15/2016
(GICE0035) (mm/dd/yyyy)

STORET Station ID: 20020444 WBID: 2832 Latitude: 28.7628028

County: Lake RQ - 2016-08-15-68 ORG ID: 21FLCEN Longitude: -81.8876167
(Decimal Degrees)

Receiving Body of Water: Lk Harris Field ID: GICE0035
(Decimal Degrees)

Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment			
<u>Mike Linger</u> <u>Natalie Ayala</u> <u>Terry Riordan</u>									☒ 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 / <u>Normal</u> / High / Flooded									Matrix: <u>Fresh</u> / Marine / DI			
Meter ID# <u>IC/AB</u>				Photos: <u>Yes</u> / No <u>NESW</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°)		
<u>EST</u>	<u>12:28</u>	<u>0.3</u>	<u>0.9</u>	<u>4.9</u>	<u>65</u>	<u>7.1</u>	<u>0.2</u>	<u>0.9 (s)</u>	<u>320</u>	<u>30.1</u>		
CEN												
Biological Samples Collected: None <u>HA</u> <u>SCI</u> <u>LVS</u> <u>RPS</u> 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	<u>6209120</u>	<u>7/27/17</u>	☒ <2		
Metals	☐ W-ICPMS ☐ W-ICP						☐ Ice ☐ HNO3			☐ <2		
Filtered Nutrients	☒ W-P04-F ☒ Field Filtered 0.45 µm Filter						☒ Ice					
Chlorophyll	☒ CHLSUITE-W						☒ Ice					
BOD	☐ BOD-UNIN						☐ Ice					
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CI-IC / W-COLOR / W-SO4-IC / W-TDS						☒ Ice					
Physical/Aggregate (Marine)	☐ Alkalinity / W-F / W-TSS / TURBIDITY						☐ Ice					
Macroinvertebrates	☐ MI-FW-QLDC						☐ Formalin					
Microbiology	☐ E Coli ☐ F Coli ☐ Enteroc ☐ QPCR						☐ Ice					
Periphyton	☐ ALGAE-ID						☐ Ice					
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R						☐ Ice					
	☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH						☐ Other					

Contains 1:1 Sulfuric Acid
SA-6209120
EXP: 07/27/17
Warning! See SDS

Notes: Flow for rivers/streams: 0.03 m/s Helena Run 0.45 mi. upstream of Hwy 27

Date: 08/15/2016
RQ-2016-08-15-68

Signature: [Signature] Date: 8/15/16

GICE0035
Field ID
STORET
20020444

Field Parameters Entered into LIMS: LMD 8/23/16 T.Sheet Updated: ☐ Field Parameters QC in LIMS: ☐ T.Sheet Updated: ☐
(Initials/Date) (Initials/Date)

Date Migrated to STORET: 8/23/16 T.Sheet Updated: ☐ Field Sheets Scanned/Saved: ☐ T.Sheet Updated: ☐
(Initials/Date) (Initials/Date)

FDEP FORM FD 9000-3: PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

SAMPLE ID 76748 ORG ID 21FLCEN LATITUDE 28.7628028
 COUNTY Lake STORET # 20020444 LONGITUDE -81.8876167
 DATE 8/15/16 TIME 12:00 SAMPLING AGENCY FDEP CE-ROC
 SITE NAME Helena Run 0.45 mi upstream of Hwy 27
 FIELD ID/NAME G2 CE0035 RECEIVING BODY OF WATER Lake Harris

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) ☐ <u>100</u> ☐ ☐ ☐ ☐ ☐ ☐ ☐								Landscape Development Intensity Index (LDI) ☐
Local Watershed Erosion (select one): ☐ None ☒ Slight ☐ Moderate ☐ Heavy Local Watershed NPS Pollution: ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy				Typical Width (m) Depth (m) Velocity (m/sec) Transect <u>20</u> m wide <u>0</u> m/s <u>0.03</u> m/s <u>0</u> m/s <u>0.5</u> m deep <u>0.9</u> m deep <u>0.5</u> m deep				
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>>18</u> Right Bank: <u>>18</u>				Hydrologic Modification Score (per FT 3101) ☐				
High Water Mark: <u>0.2</u> + <u>0.9</u> = <u>1.1</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 <u>Detritus / arch</u> ☒ 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 % Coverage ☐ INVERT ☐ PERI ☐ # Times Sampled ☐ # Times Sampled ☐		WATER QUALITY <u>12:28</u> Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: <u>0.3</u> <u>30.1</u> <u>7.1</u> <u>4.9</u> <u>65</u> <u>320</u> <u>0.2</u> <u>0.9</u> Mid: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☒ VOB Bottom: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Meter ID: <u>11C / AB</u> TOTAL DEPTH <u>0.9</u>			
Woody Debris (Snags) ☐ ☐ ☐ Undercut Banks / Roots ☐ ☐ ☐ Leaf Packs or Mat ☐ ☐ ☐ Aquatic Vegetation ☐ ☐ ☐ Rock or Shell Rubble ☐ ☐ ☐ Sand ☐ ☐ ☐ Mud / Muck / Silt ☐ ☐ ☐ Other ☐ ☐ ☐ Other ☐ ☐ ☐		Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐		Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐	
Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: <u>6209120</u> Exp: <u>7/27/17</u>		Color Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify) ☐		Clarity Clear ☐ Slightly Turbid ☐ Turbid ☒ Opaque ☐	
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☐ ☐ ☒ ☐ Fish: ☐ ☐ ☐ ☒ Aquatic Plants: ☐ ☐ ☐ ☒ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐		System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐		AMBIENT FIELD CONDITIONS / NOTES: <u>pics NESW 90's humid</u> ☒ The antecedent hydrologic conditions have been met to my best knowledge.	

SAMPLING TEAM

Mike Linger, Terry Riordan, Natalie Ayala

SIGNATURE:

[Signature]

DATE:

8/15/16

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Helena Run 0.45 mi. upstream of Hwy 27 County: Lake Date: 8/15/16 Investigators: Mike Linder

STORET Station Number: 20020444

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	N	16	60	1	N	N	0
	2		X			2	N	N	
	3		X			3	N	N	
	4		X			4	N	N	
	5		Y			5	N	N	
	6		Y			6	N	N	
	7		Y			7	N	N	
	8		N			8	N	N	
	9		N			9	N	N	
10	1	N	N	0	70	1	N	N	0
	2	N	N			2	N	N	
	3	N	N			3	N	N	
	4	N	N			4	N	N	
	5	N	N			5	N	N	
	6	N	N			6	N	N	
	7	N	N			7	N	N	
	8	N	N			8	N	N	
	9	N	N			9	N	N	
20	1	N	N	0	80	1	N	N	0
	2	N	N			2	N	N	
	3	N	N			3	N	N	
	4	N	N			4	N	N	
	5	N	N			5	N	N	
	6	N	N			6	N	N	
	7	N	N			7	N	N	
	8	N	N			8	N	N	
	9	N	N			9	N	N	
30	1	N	N	0	90	1	N	N	0
	2	N	N			2	N	N	
	3	N	N			3	N	N	
	4	N	N			4	N	N	
	5	N	N			5	N	N	
	6	N	N			6	N	N	
	7	N	N			7	N	N	
	8	N	N			8	N	N	
	9	N	N			9	N	N	
40	1	N	N	0	100	1	N	N	0
	2	N	N			2	N	N	
	3	N	N			3	N	N	
	4	N	N			4	N	N	
	5	N	N			5	N	N	
	6	N	N			6	N	N	
	7	N	N			7	N	N	
	8	N	N			8	N	N	
	9	N	N			9	N	N	
50	1	N	N	0		1	N	N	
	2	N	N			2	N	N	
	3	N	N			3	N	N	
	4	N	N			4	N	N	
	5	N	N			5	N	N	
	6	N	N			6	N	N	
	7	N	N			7	N	N	
	8	N	N			8	N	N	
	9	N	N			9	N	N	

Secchi depth
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-	☐

Algal Thickness Rank

N	rough, no algae, slimy, algae up to 1mm
3	>1mm - 6mm $\leftarrow 6 \rightarrow$
4	>6mm - 20mm $\leftarrow 20 \rightarrow$
5	>20mm - 10 cm
6	>10 cm

station @ 50m
20020444

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%.

Synonymium

	1	2	3	4	5	6	7	8	9	10	Σ
Salvinia	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Temna	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
nuphar	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Hydrocot	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Saw grass	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Salix	✓	✓	✓	✓	✓	✓	✓	✓		✓	
Scirpus cub	✓	✓	✓		✓	✓		✓			
Sp. cel oce oce	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Ceratophyllum	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Sag	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
wax myrtle		✓				✓	✓	✓		✓	✓
Acer			✓			✓		✓		✓	
water lily					✓						
pen cor					✓						
Bidens leavis						✓					
Crinum								✓			
peltandra						✓					

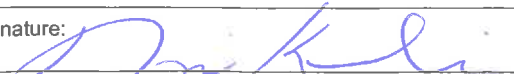
DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY: <u>FDEP</u>		STORET STATION NUMBER: <u>20020444</u>	DATE (MM/DD/YY): <u>8/15/16</u>	RECEIVING BODY OF WATER: <u>Lk Harris</u>
REMARKS:	COUNTY: <u>Lake</u>	LOCATION: <u>Helena Run 0.45 mi. upstream of Hwy 27</u>	FIELD ID/NAME: <u>G1CE0035</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>4</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 <u>4</u> 3 2 1
Substrate Availability <u>15</u>	Greater than 30% major productive habitat present at site 20 19 18 17 16	16% to 30% major productive habitat, by aerial extent <u>15</u> 14 13 12 11 <u>16</u>	6% to 15% major productive habitat 10 9 8 7 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>3</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 <u>3</u> 2 1
Habitat Smothering <u>2</u> Primary Score <u>24</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. 5 4 <u>3</u> <u>2</u> 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>17</u>	20 19 18 17 16	<u>15</u> 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability Right Bank <u>10</u> Left Bank <u>10</u> <u>20</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>10</u> Left Bank <u>10</u> <u>20</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>9</u> Left Bank <u>9</u> <u>18</u> Secondary Score <u>99</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

99

TOTAL SCORE

Date: <u>8/15/16</u>	Analyst: <u>Mike Linger</u> <u>Natalie Ayala</u> <u>Terry Riordan</u>	Signature: 
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S R L A

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

Location Helena RiverDate: 8-15-16Sampler: TR/NA/MKL100 m: Latitude 28.7628028
Longitude -81.88761670 m: Latitude 28.762661
Longitude -81.886710

Substrates: Code key, draw proportionate habitat abundance.



Snags



Roots/undercut banks



Leaf Packs (or mats)



Aquatic Macrophytes

32.5

Pools total # observed =

range expected = 1-2Average width 20 mAverage depth 0.9 mVelocity measured at 0 meter mark.WQ & chemistry taken at 100 meter mark.Habitat Smothering: Throughout heavy silt mark entire area

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: > 18

Note areas (on map) where natural vegetation is altered or eliminated.

oxycaryum cubensis

Plants observed / other notes:

Acer hydrocotylae

Lemna

Salvinia ceratophyllum

Cladium Si. lance

Fraxinus sambucus

Salix mikania

Revision Date: March 1, 2014

cephalanthus myrica

Thypha nuphar

Pontederica

Left Bank

Downstream

4 km

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

62-160 800, F.A.C.

 $\frac{650}{2000} = .325$

Coral

Salix
cephalanthus
ceratophyllum