



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

PAGE ____ OF ____

February 2016

Data Qualified?
Yes / No

STORET Station Name: London Creek/Hatchineha Drain

Date: 6/1/16
(mm/dd/yyyy)

STORET Station ID: 26010985

Latitude: 28.06028
(Decimal Degrees)

WBID: 1472 RQ: 2016-05-09-58 ORG ID: 21FLCEN

Longitude: -81.44944
(Decimal Degrees)

Receiving Body of Water: LK. Hatchineha Field ID: G4CE0120

County: Polk

Sampling Team Members

Leif Boman
Katie Williams

WQ Measurements
Sample Collection
Documentation
Preservation
Preservation Check

Sampling Equipment

☒ Sample Container ☐ Van Dorn ☐ Pole
☐ Carboy ☒ Syringe
☐ Dipper ☐ Other _____

Equipment ID _____

Collection Method

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

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

Matrix: Fresh / Marine / DI

Meter ID# 11C/AB 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>1110</u>	<u>0.3</u>	<u>1.3</u>	<u>4.9</u>	<u>58</u>	<u>6.6</u>	<u>0.05</u>	<u>0.5</u>	<u>104</u>	<u>24.3</u>
CEN										

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 ☐ HNO2			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice			
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Kit A/C)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CI-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice			
Physical/Aggregate (Kit B/D)	☐ 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 _____			

Contains
1:1
Sulfuric Acid
SA-5259020
EXP: 09/16/16
Warning!
See MSDS

Place Preservative S
(if available)

Notes:

RQ-2016-05-09-58

Date: 6/1/16

Time: 6/1/16

G4CE0120

Field ID ↑
STORET ↓

26010985

Signature: KWilliams

Date: 6/1/16

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)

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

SAMPLE ID _____ ORG ID 21FLCEN LATITUDE _____
 COUNTY Polk STORET # 26010985 LONGITUDE _____
 DATE 6/1/14 TIME _____ SAMPLING AGENCY FDEP
 SITE NAME Hatchineha Drain/ London Creek
 FIELD ID/NAME _____ RECEIVING BODY OF WATER LE Hatchineha

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>85</u> Silviculture _____ Field/Pasture <u>15</u> Agricultural _____ Residential _____ Commercial _____ Industry _____ Other (Specify) _____								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 _____ m wide _____ m/s _____ m/s _____ m/s				
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) <u>_____</u>				
High Water Mark: <u>0.5</u> + <u>1.4</u> = <u>1.9</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																																										
<table border="1"> <thead> <tr> <th></th> <th>Depth (M)</th> <th>Temp. (°C)</th> <th>pH (SU)</th> <th>D.O. (MG/L)</th> <th>D.O. Sat (%)</th> <th>Cond. (UMHO/CM)</th> <th>Salinity (PPT)</th> <th>SECCHI (M)</th> </tr> </thead> <tbody> <tr> <td>Top:</td> <td><u>0.3</u></td> <td><u>24.3</u></td> <td><u>6.6</u></td> <td><u>4.9</u></td> <td><u>58</u></td> <td><u>104</u></td> <td><u>0.05</u></td> <td><u>0.5</u></td> </tr> <tr> <td>Mid:</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Bottom:</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>				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>24.3</u>	<u>6.6</u>	<u>4.9</u>	<u>58</u>	<u>104</u>	<u>0.05</u>	<u>0.5</u>	Mid:	_____	_____	_____	_____	_____	_____	_____	_____	Bottom:	_____	_____	_____	_____	_____	_____	_____	_____	TOTAL DEPTH: <u>1.3</u>						
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ABUNDANCE			Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐ Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐																																										
Not Obs. Rare Common Abundant Periphyton: ☐ ☒ ☐ ☐ Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☐ ☒ ☐ ☐ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐			System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) _____ AMBIENT FIELD CONDITIONS / NOTES: ☐ The antecedent hydrologic conditions have been met to my best knowledge.																																										

SAMPLING TEAM

LOB, KMW

SIGNATURE:

Williamis

DATE:

6/1/14

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>London Creek/Hatch. Drain</u>					County: <u>Polk</u>		Date: <u>6/1/14</u>		Investigators: <u>LGB, kmw</u>		
Transect (m)					Transect (m)					STORET Station Number: <u>26010985</u>	
Point 1=right 9=left					Point 1=right 9=left						
Algal Thickness Rank (N-6, X)					Algal Thickness Rank (N-6, X)						
Estimated					Estimated						
Canopy Cover					Canopy Cover						

0	1	N		64	60	1	N		88
	2	N	✓						
	3	N	✓						
	4	N	✓						
	5	N	✓						
	6	N	✓						
	7	N	✓						
	8	N							
	9	N							
10	1	N		72	70	1	N		84
	2	N	✓						
	3	N	✓						
	4	N	✓						
	5	N	✓						
	6	N	✓						
	7	N	✓						
	8	N							
	9	N							
20	1	N		88	80	1	N		76
	2	N	✓						
	3	N	✓						
	4	N	✓						
	5	N	✓						
	6	N	✓						
	7	N	✓						
	8	N	✓						
	9	N							
30	1	N		76	90	1	N		72
	2	N	✓						
	3	N	✓						
	4	N	✓						
	5	N	✓						
	6	N	✓						
	7	N	✓						
	8	N	✓						
	9	N							
40	1	N		48	100	1	N		54
	2	N	✓						
	3	N	✓						
	4	N	✓						
	5	N	✓						
	6	N	✓						
	7	N	✓						
	8	N							
	9	N							
50	1	N		80		1	N		
	2	N	✓						
	3	N	✓						
	4	N	✓						
	5	N	✓						
	6	N	✓						
	7	N	✓						
	8	N							
	9	N							

Secchi depth	<u>0.5</u>
Estimated?	

# points ranked 4-6	<u>0</u>
total points assessed	<u>7</u>
% points ranked 4-6	<u>0</u>

Check accompanying data collected at same site/date.	
Algal mat sample	
Linear Veg Survey	✓
Habitat Assessment	✓
SCI/Biorecon	
Water sample	✓
RQ- <u>2016-05-09-58</u>	

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%.

Store Number: 26010985

Signature: K. W. F. G. M. S.

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

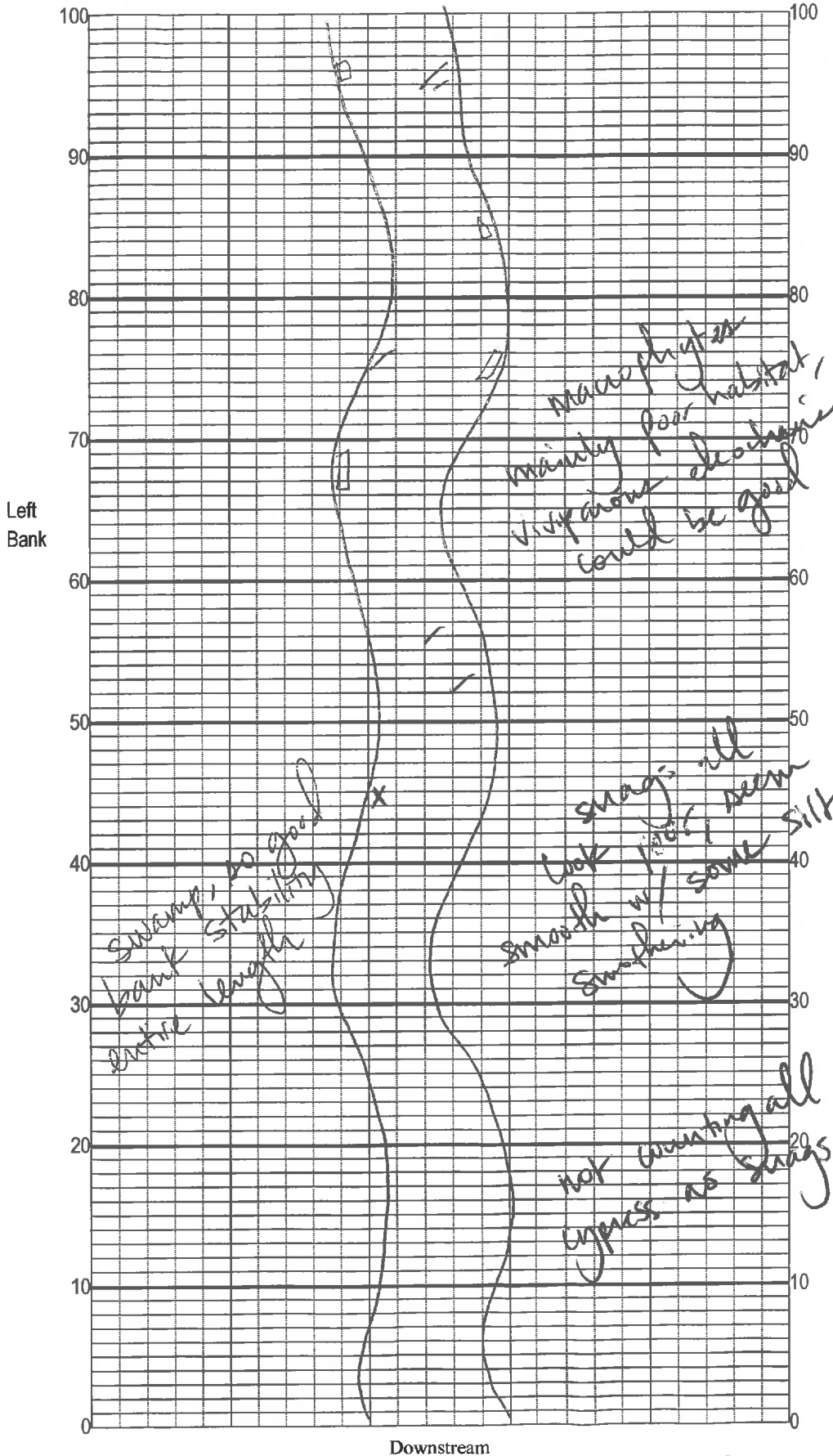
SAMPLING AGENCY:		STORET STATION NUMBER: <u>26010995</u>	DATE (MM/DD/YY): <u>6/1/14</u>	RECEIVING BODY OF WATER: <u>4. Hatchineha</u>
REMARKS:	COUNTY: <u>Polk</u>	LOCATION: <u>Hatchineha</u>	FIELD ID/NAME:	

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 <u>2 but very poor</u>	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered
Substrate Diversity <u>6</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 <u>6</u>	5 4 3 2 1
Substrate Availability <u>2</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 1
Water Velocity <u>5</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>10 8</u> ----- Primary Score <u>35 21</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 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>20</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
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.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank <u>10</u> Left Bank <u>10</u>	10 9	8 7 6	5 4	3 2 1
Riparian Buffer Zone Width	Width of vegetation greater than 18 m	Width of vegetation >12 to 18m	Width of vegetation 6 to 12 m. human activities close to system	Less than 6 m of buffer zone due to intensive human activities
Right Bank <u>10</u> Left Bank <u>10</u>	10 9	8 7 6	5 4	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.	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed.	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious.	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).
Right Bank <u>9</u> Left Bank <u>9</u> ----- Secondary Score <u>76 76</u>	10 9	8 7 6	5 4	3 2 1

109 99 TOTAL SCORE

Date: <u>6/1/14</u>	Analyst: <u>Kate Williams</u>	Signature: <u>KWilliams</u>
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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: London Creek
Hatchincha Drain
Date: 6/1/14
Sampler: KMW

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 <u>10</u> m	
Average depth <u>1</u> 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:

poor habitat, not ideal.
Also smothered w/ silt
and thin layer of
algae from low flow.

Dominant plant in Swamp is
unknown scleria. Typical cypress
swamp habitat.

Revision Date: March, 2014