



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2016

PAGE ____ OF ____

Check box if data qualified

STORET Station Name: Lake Marion Creek S of Poinciana Pkwy Date: 1/19/16
(mm/dd/yyyy)

STORET Station ID: G4CE0071 Latitude: 28.0691
(Decimal Degrees)

WBID: 1472A RQ-2016-01-18-27 ORG ID: 21FCEN Longitude: -81.4811
(Decimal Degrees)

Receiving Body of Water: Lake Hatchewah Field ID: G4CE0071 County: Polk

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Duplicate Collection	Blank Collection
Mike Brennan								
Katie Williams								

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# Betty Boop Photos: Yes / No Tide Falling: Yes / No / NA

Time Zone	Time	Total Depth (m)	Sample Depth	Temp (°C)	DO (mg/L)	DO (%SAT)	COND (µmhos/cm)	Salinity (ppt)	pH	Secchi Disk (m)
<u>EST</u>	<u>1245</u>	<u>1</u>	<u>0.3</u>	<u>12.5</u>	<u>7.3</u>	<u>69</u>	<u>131</u>	<u>0.06</u>	<u>7.1</u>	<u>VOB</u>
CEN										

Biological Samples Collected: None HA SCI LVS RPS LVI Other _____

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☒ TKN / TP / NOx / NH3 / TOC / TN ☐ Other _____	☒ Ice ☐ H ₂ SO ₄			☒ < 2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO ₃			☐ < 2
Filtered Nutrients	☒ OP ☒ Field Filtered 0.45 µm Filter	☒ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Microbiology	☐ E Coli ☐ F Coli ☐ Entero ☐ QPCR	☐ Ice			
Periphyton	☐ ALGAE-ID	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PSCL-TQA ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other _____			

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

Notes: Water level appears to be higher than normal, but not too high to sample. Velocity is fast.

Date: 01/19/16 G4CE0071 01192016
Time: _____
Field ID G4CE0071
STORET G4CE0071
RQ-2015-01-18-27

Signature: KWilliams Date: 1/19/16

Field Parameters Entered into LIMS: MLK 1/26/16 Field Parameters QC in LIMS: JK 2/1/16
(Initials/Date) (Initials/Date)
Date Migrated to STORET: KMW 2/26/16 Field Sheets Scanned/Saved: NA 2/29/16
(Initials/Date) (Initials/Date)

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

SAMPLE ID <u>75441</u>	ORG ID _____	LATITUDE _____
COUNTY <u>Polk</u>	STORET # <u>G4CE0071</u>	LONGITUDE _____
DATE <u>1/19/16</u>	TIME _____	SAMPLING AGENCY _____
SITE NAME <u>Lake Maion Creek S of Poinciana Parkway</u>		
FIELD ID/NAME <u>G4CE0071 - 01192016</u>	RECEIVING BODY OF WATER <u>Lk. Haskins</u>	

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>100</u> Silviculture _____ Field/Pasture _____ 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 <u>12</u> m wide <u>0.3</u> m/s <u>0.25</u> m/s <u>0.25</u> m/s
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>718</u> Right Bank: <u>718</u>		Hydrologic Modification Score (per FT 3101) <u>1</u> Artificially Impounded ☐ Yes ☒ No
High Water Mark: <u>-2</u> + <u>1.0</u> = <u>1.2</u> (m) (above present water level) (present depth) (above bed)		
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) Top: <u>0.3</u> <u>12.5</u> <u>7.1</u> <u>7.3</u> <u>69</u> <u>131</u> <u>0.06</u> _____ Mid: _____ _____ _____ _____ _____ _____ _____ ☒ VOB Bottom: _____ _____ _____ _____ _____ _____ _____ TOTAL DEPTH <u>1.0</u> Meter ID: <u>Betty Boop</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 Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: _____ Exp: _____ Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot Number: _____ Exp: _____		Water Surface Oils Normal ☐ Sheen ☐ Globbs ☐ Slick ☐ Other ☐ 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>High water, many plants in water that may not otherwise be. But not flooded.</u> ☐ The antecedent hydrologic conditions have been met to my best knowledge.		
SAMPLING TEAM <u>Mike Brennan, Kate Will</u>			SIGNATURE <u>KW</u>		DATE: <u>1/19/16</u>

Storet Number: 641ED07

Signature:

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.

HERBACEOUS SPECIES	Meter Mark										Specimen collected (check)	HERBACEOUS SPECIES	Meter Mark										Specimen 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>	/	/		/	/	/	/	/	/	/		<i>Micranthemum glomeratum</i>											
<i>Bacopa caroliniana</i>												<i>Micranthemum umbrosum</i>											
<i>Bacopa monnieri</i>												<i>Myriophyllum aquaticum</i>											
<i>Bidens mitis</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>	/	/	/	/	/	/	/	/	/	/		<i>Potamogeton illinoensis</i>											
<i>Eleocharis (wispy viviparous)</i>	/	/	/	/	/	/	/	/	/	/		<i>Ruellia simplex</i>											
<i>Hydrilla verticillata</i>												<i>Sacciolepis striata</i>											
<i>Hydrocotyle</i>	/		/	/	/	/	/	/	/	/		<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>	/	/	/	/	/	/	/	/	/		
<i>Landoltia punctata</i>												<i>Samolus parviflora</i>											
<i>Lemna</i>												<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>																							
<i>Ludwigia repens</i>												<i>Thelyperis</i>	/	/	/	/	/	/	/	/	/		
<i>Luziola fluitans</i>												<i>Rhynchospora</i>	/	/	/	/	/						

FDEP FORM 9000-25: RAPID PERIPHYTON SURVEY FIELD SHEET

Site: Lake Marion Creek

County: Polk

Date: 1/19/16

Investigators: Katie Williams, Mike Pinner

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

points ranked 4-6: 0
total points assessed: 0
% points ranked 4-6: 0

Secchi depth: 1.0

Check accompanying data collected at same site/date.

Algal mat sample ✓
Habitat Assessment ✓
Linear Veg. Survey ✓
SCI/Biorecon (circle 1) ✓
Water sample ✓
RO: 2016-01-18-27

Algal Thickness Rank

N	rough, no algae; slimy; algae to 1 mm
3	>1mm - 6 mm
4	>6 - 20 mm
5	>20 mm - 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 an 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

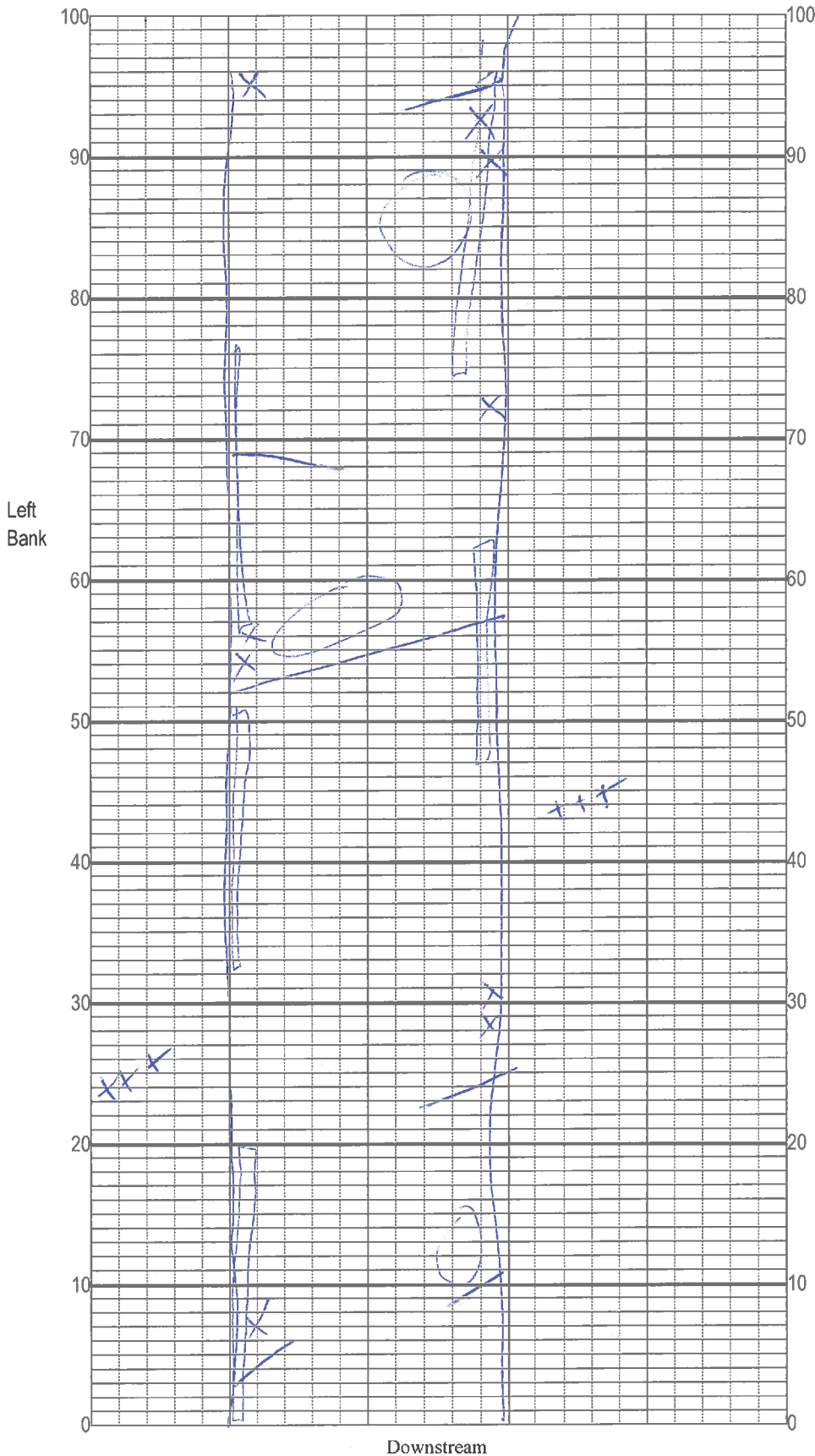
SAMPLING AGENCY:		STORET STATION NUMBER: <u>64CE0071</u>	DATE (MM/DD/YY):	RECEIVING BODY OF WATER: <u>Lk. Hatlineha</u>
REMARKS:	COUNTY: <u>Polk</u>	LOCATION: <u>Lake Marion Creek</u>	FIELD ID/NAME:	

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	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered
Substrate Diversity <u>15 11</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>3</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>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>18 14</u> ----- Primary Score <u>43</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>19</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>8</u> Left Bank <u>8</u> ----- Secondary Score <u>75</u>	10 9	8 7 6	5 4	3 2 1

118 TOTAL SCORE

Date: <u>1/19/16</u>	Analyst: <u>William</u>	Signature: <u>Kate Williams</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: Lake Marion Creek.
Date: 1/19/16
Sampler: K. Williams

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>12</u> 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:

thelypteris interrupta, *acer*,
saururus, *taxodium*, *eichornia*,
salvinia, *nitaria*, *menis*,
lobata, *sagittaria lancifolia*,
potamogeton, *rhydospora*,
peltandra,