



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

PAGE ____ OF ____

February 2016

Data Qualified?
Yes / No

STORET Station Name: Alligator Creek @ 86

Date: 4/26/16
(mm/dd/yyyy)

STORET Station ID: GITLHR0017

Latitude: 30.56798
(Decimal Degrees)

WBID: 3325 RQ: 2016-03-14-S6

ORG ID: ZIFLHR

Longitude: -93.01602
(Decimal Degrees)

Receiving Body of Water: Alapaha River

Field ID: GITLHR0017

County: Hamilton

Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Colby Marshall				X	X			
Chris Green					X		X	X
Jeff Nye				X				

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

Meter ID# 600 XLM #12 Photos: Yes / No

Matrix: Fresh / Marine / DI

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	1220	0.3	0.6	7.9	86.6	4.2	0.04	0.4	81	19.8
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	<u>SA-S25900</u>	<u>9/16</u>	☐ <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			
BOD	☒ BOD-UNIN	☒ 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			
Microbiology	☐ E Coli ☐ F Coli ☐ Enteroc ☐ 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			

Place Preservative Sticker(s) Here
(If Available)

Notes:

SCI@ 1245

Place Label Here
(If Available)

Signature: Chris Green

Date: 4-26-2016

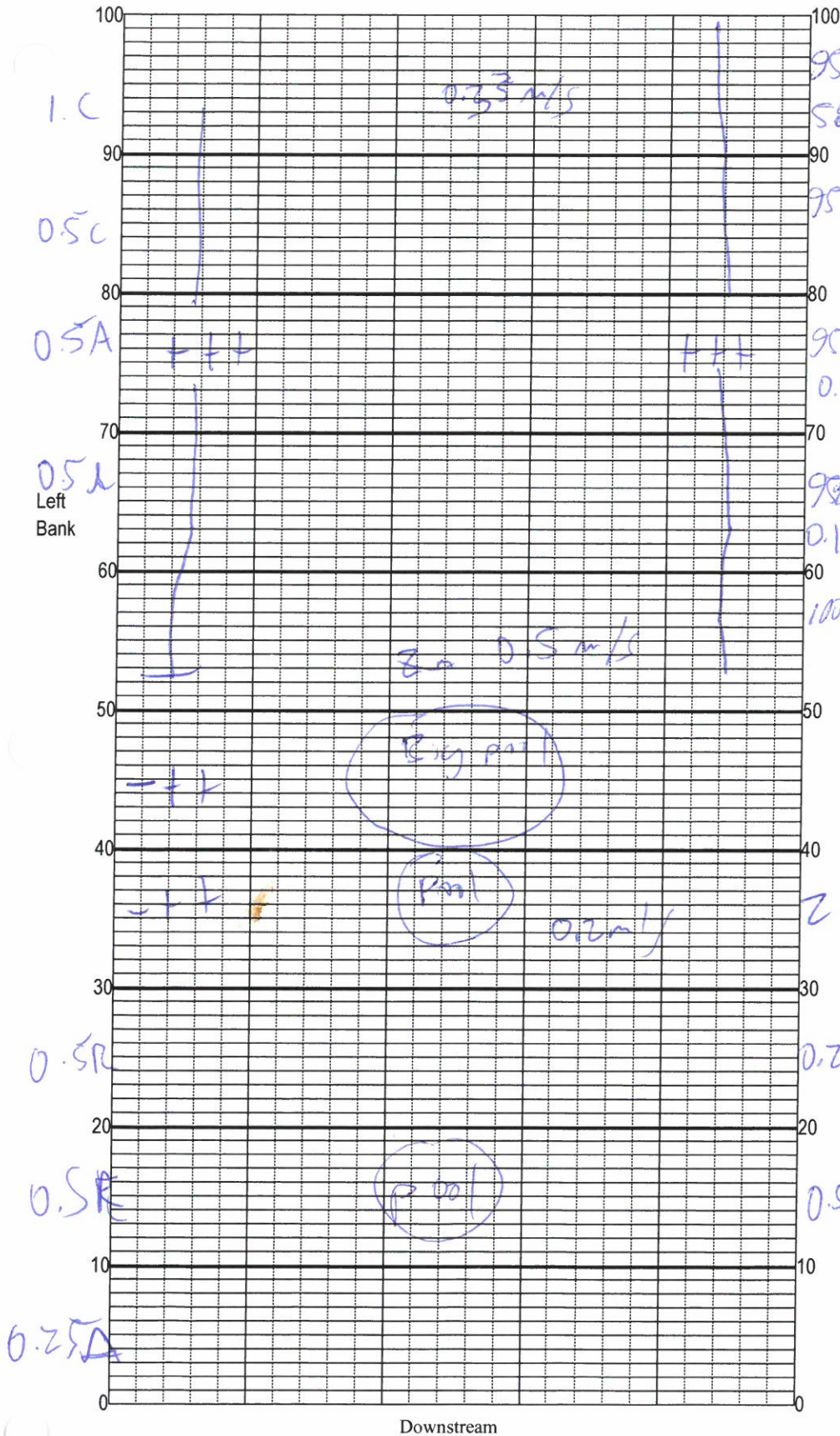
Field Parameters Entered into LIMS: _____
(Initials/Date)

Field Parameters QC in LIMS: _____
(Initials/Date)

Date Migrated to STORET: _____
(Initials/Date)

Field Sheets Scanned/Saved: CV 5-4-2016
(Initials/Date)

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: Alligator Creek
Date: 4/24/16
Sampler: Colby Marshall / Chris Green

100 m: Latitude 30.56798
Longitude 83.01602

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☒ A	Snags	<u>0.8</u>
☒ B	Roots/undercut banks	_____
☒ C	Leaf Packs (or mats)	<u>0.4</u>
☒ D	Aquatic Macrophytes	_____
☒ R	Rock	<u>50</u>
☐	_____	_____
☒ O	Pools	total # observed = <u>3</u> # range expected = <u>2-4</u>

Average width 5 m

Average depth 0.6 m

Velocity measured at 100 meter mark.

WQ & chemistry taken at 100 meter mark.

Habitat Smothering: Slight sand
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 + 10m
Note areas (on map) where natural vegetation is altered or eliminated.

Plants observed / other notes:

0.5A Hydrocotyl < 1m²
fontinalis very common
from 50m-100m
swept w/ rocks and snags

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Alligator Creek</u>					County: <u>Hamilton</u>		Date: <u>4/26/16</u>		Investigators: <u>Green / Marshall</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	N			60	1	N			
	2					2				
	3					3				
	4					4				
	5			88		5			43	
	6					6				
	7					7				
	8					8				
	9					9				
10	1				70	1				
	2					2				
	3					3				
	4					4				
	5			91		5			92	
	6					6				
	7					7				
	8					8				
	9					9				
20	1				80	1				
	2					2				
	3					3				
	4					4				
	5			91		5			95	
	6					6				
	7					7				
	8					8				
	9					9				
30	1				90	1				
	2					2				
	3					3				
	4					4				
	5			92		5			93	
	6					6				
	7					7				
	8					8				
	9					9				
40	1				100	1				
	2					2				
	3					3				
	4					4				
	5			87		5			88	
	6					6				
	7					7				
	8					8				
	9					9				
50	1					1				
	2					2				
	3					3				
	4					4				
	5			91		5				
	6					6				
	7					7				
	8					8				
	9					9				

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%.

Secchi depth 0.4
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-2014-0344-56

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

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET			
Waterbody: Alligator Creek	Date: 4/26/16	County: Hamilton	Storet Number: GIL4R001
Analyst: Colby Marshall		Signature: Colby Marshall	

Comments: $LUS < 2m^2$

	Meter Mark									Specimen collected (check)		Meter Mark									Specimen collected (check)	
HERBACEOUS SPECIES	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90		90-100	HERBACEOUS SPECIES	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80		80-90
Alternanthera philoxeroides											Micranthemum glomeratum											
Bacopa caroliniana											Micranthemum umbrosum											
Bacopa monneri											Myriophyllum aquaticum											
Bidens mitis											Najas guadelupensis											
Boehmeria cylindrica											Nuphar luteum											
Centella asiatica											Orontium aquaticum											
Ceratophyllum demersum											Panicum hemitomon											
Chara											Panicum repens											
Cicuta maculata											Panicum rigidulum											
Cladium jamaicense											Pistia stratioides											
Colocasia esculenta											Polygonum glabra											
Commelina diffusa											Polygonum hydropiperoides											
Commelina virginica											Polygonum punctatum											
Crinum americanum											Pontedaria cordata											
Diodia virginiana											Potamogeton illinoensis											
Eichhornia crassipes											Ruellia simplex											
Eleocharis (wispy viviparous)											Sacciolepis striata											
Hydrilla verticillata											Sagittaria kurziana											
Hydrocotyle											Sagittaria lancifolia											
Hygrophila polysperma											Sagittaria latifolia											
Hymenocallis											Salvinia minima											
Lachnanthes caroliniana											Samolus parviflora											
Landoltia punctata											Saururus cernuus											
Lemna											Sparganium americanum											
Limnophila sessiflora											Typha											
Ludwigia leptocarpa											Vallisneria americana											
Ludwigia palustris											Zizania aquatica											
Ludwigia peruviana																						
Ludwigia repens																						
Luziola fluitans																						
If no Dominant or Co-Dominant were selected, indicate with "X"																						
Indicate % cover macrophytes per section																						

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

SAMPLE ID G1T4R0017 ORG ID FLTC412 LATITUDE 30.56798
 COUNTY Hamilton STORET # G1T4R0017 LONGITUDE -83.01602
 DATE 4/26/16 TIME 1245 SAMPLING AGENCY 8034
 SITE NAME Alligator Creek @ 86
 FIELD ID/NAME G1T4R0017 RECEIVING BODY OF WATER Alapaha River

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>10</u> Silviculture <u>50</u> Field/Pasture <u>10</u> Agricultural <u>30</u> Residential <u> </u> Commercial <u> </u> Industry <u> </u> Other (Specify) <u> </u>								Landscape Development Intensity Index (LDI) <u> </u>	
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>5</u> m wide 0.4 m/s 0 m/s 0.3 m/s 0.3 m/s 0.33 m/s 0.4 m deep 0.6 m deep 0.6 m deep			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>10m</u> Right Bank: <u>18</u>				Hydrologic Modification Score (per FT 3101) <u> </u>				Artificially Impounded ☐ Yes ☒ No	
High Water Mark: <u>1.5</u> + <u>0.6</u> = <u>2.1</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): <u> </u>	Smothering of Substrates Sand Smothering: None ☒ Slight ☐ Moderate ☐ Severe ☐ Silt Smothering: None ☒ Slight ☐ Moderate ☐ Severe ☐ Algae Smothering: None ☒ Slight ☐ Moderate ☐ Severe ☐
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SUBSTRATE TYPE

Assessment Tool: ☒ SCI ☒ RPS ☒ LVS

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	<u>0.8</u>	<u>7</u>	<u> </u>
Undercut Banks / Roots	<u> </u>	<u> </u>	<u> </u>
Leaf Packs or Mat	<u>0.4</u>	<u>0</u>	<u> </u>
Aquatic Vegetation	<u> </u>	<u> </u>	<u> </u>
Rock or Shell Rubble..	<u>50</u>	<u>7</u>	<u> </u>
Sand.....	<u>48.8</u>	<u>6</u>	<u> </u>
Mud / Muck / Silt	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MGL)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top:	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>0.4</u>
Mid:	<u>0.3</u>	<u>19.8</u>	<u>4.2</u>	<u>7.7</u>	<u>87</u>	<u>81</u>	<u>0.04</u>	☐ VOB
Bottom	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Meter ID:	<u>600x6m 4 12</u>							

Water Odors Normal ☒ Petroleum ☐
 Sewage ☐ Chemical ☐ Other ☐

Water Sample Taken? ☒ Yes ☐ No
 Sample Preserved? ☐ Yes ☐ No
 Lot Number: SA-859020 Exp: 9/16

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 ☐

System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐

AMBIENT FIELD CONDITIONS / NOTES:

Fortinella is very common from 50m - 100m of stretch - swept as rocks & snags.
☒ The antecedent hydrologic conditions have been met to my best knowledge.

ABUNDANCE

	Not Obs.	Rare	Common	Abundant
Periphyton:	☒	☐	☐	☐
Fish:	☐	☐	☒	☐
Aquatic Plants:	☐	☒	☐	☐
Iron/Sulfur Bacteria:	☒	☐	☐	☐

SAMPLING TEAM

Chris Green / Colby Marshall

SIGNATURE:

Ch3-

DATE:

4-26-2016

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

SAMPLING AGENCY: <u>8034</u>		STORET STATION NUMBER: <u>GTL4R2017</u>	DATE (MM/DD/YY): <u>07/26/16</u>	RECEIVING BODY OF WATER: <u>Alapaha River</u>
REMARKS:	COUNTY: <u>Hamilton</u>	LOCATION: <u>Alligator Creek @ 86</u>	FIELD ID/NAME: <u>GTL4R2017</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>10</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>20</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>20</u>	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 <u>20</u> 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>19</u> ----- Primary Score <u>62</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>18</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>89</u> Left Bank <u>cm 89</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>5</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>7</u> Left Bank <u>10</u> ----- Secondary Score <u>67</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

136 **TOTAL SCORE**

Date: <u>4-26-2016</u>	Analyst: <u>Chris Green</u>	Signature: <u>Ch. Green</u>
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