

RQ# 7691

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

SAMPLE ID 2016-08-29-39

ORG ID

LATITUDE 28.2713

COUNTY Osceola

STORET # G4CE0023

LONGITUDE -81.5904

DATE 8-29-16

TIME 1045

SAMPLING AGENCY 21 FCEN

SITE NAME Davenport Crk E of SR545

FIELD ID/NAME

RECEIVING BODY OF WATER

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural ☐ 50 ☐ Silviculture ☐ Field/Pasture ☐ Agricultural ☐ Residential ☐ 25 ☐ Commercial ☐ Industry ☐ Other (Specify) ☐ 25 Golf ☐								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 ☐ 0.21 m/s ☐ m/s
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: ☐ 718m ☐ Right Bank: ☐ 718m				Hydrologic Modification Score (per FT 3101) ☐				☐ m/s ☐ 0.21 m/s ☐ m/s
High Water Mark: ☐ 1 + ☐ 0.3 = ☐ 1.3 (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No				☐ m deep ☐ 0.3 m deep ☐ m deep
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 ☐
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SUBSTRATE TYPE

Assessment Tool: ☒ SCI ☒ RPS ☒ LVS ☐ LCI ☐ BioRecon	INVERT PERI % Coverage # Times Sampled # Times Sampled
Woody Debris (Snags)	☐ 7 ☐
Undercut Banks / Roots	☐ 7 ☐
Leaf Packs or Mat	☐ 23 ☐
Aquatic Vegetation	☐ ☐
Rock or Shell Rubble..	☐ 8 ☐
Sand.....	☐ 3 ☐
Mud / Muck / Silt	☐ ☐
Other	☐ ☐
Other	☐ ☐

WATER QUALITY

Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top: ☐ 0.3	☐ 26.0	☐ 7.2	☐ 6.3	☐ 78	☐ 212	☐ 0.1	☐ 0.5(5)
Mid:							☒ VOB
Bottom:							
Meter ID: ☐ 11C / AB							TOTAL DEPTH ☐ 0.3

Water Odors Normal ☒ Petroleum ☐
 Sewage ☐ Chemical ☐ Other ☐
Water Surface Oils Normal ☐ Sheen ☐
 Globbs ☐ Slick ☐ Other ☐
Water Sample Taken? ☒ Yes ☐ NoSample Preserved? ☒ Yes ☐ No

Lot Number: _____ Exp: _____

Color Tannic ☒ Green (Algae) ☐
 Clear ☐ Other (Specify) ☐
Algae Sample Taken? ☐ Yes ☒ NoSample Preserved? ☐ Yes ☐ No

Lot Number: _____ Exp: _____

Clarity Clear ☒ Slightly Turbid ☐
 Turbid ☐ Opaque ☐
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

Terry Riordan
Natalie Ayala Mike Drennan

SIGNATURE:

DATE:

8-29-16

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Pavenport Cvk</u>					County: <u>Osceola</u>		Date: <u>8-29-16</u>		Investigators: <u>T. Riordan</u> <u>N. Mulla</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	STORET Station Number: <u>G4CF0023</u>

Secchi depth	<u>0.56</u>
Estimated?	

6mm

# points ranked 4-6	
total points assessed	
% 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-2016-08	

20mm

10cm

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

0	1	N		60	1	N		92
	2				2			
	3				3			
	4				4			
	5				5			
	6				6			
	7				7			
	8				8			
	9				9			
10	1	N		70	1			71
	2				2			
	3				3			
	4				4			
	5				5			
	6				6			
	7				7			
	8				8			
	9				9			
20	1	N		80	1			96
	2				2			
	3				3			
	4				4			
	5				5			
	6				6			
	7				7			
	8				8			
	9				9			
30	1	N		90	1			90
	2				2			
	3				3			
	4				4			
	5				5			
	6				6			
	7				7			
	8				8			
	9				9			
40	1			100	1			89
	2				2			
	3				3			
	4				4			
	5				5			
	6				6			
	7				7			
	8				8			
	9				9			
50	1				1			
	2				2			
	3				3			
	4				4			
	5				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%.

Storet Number: G4CE0023

Signature: 2/2/2014

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.

$$\angle 2 \text{ m}^2$$

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

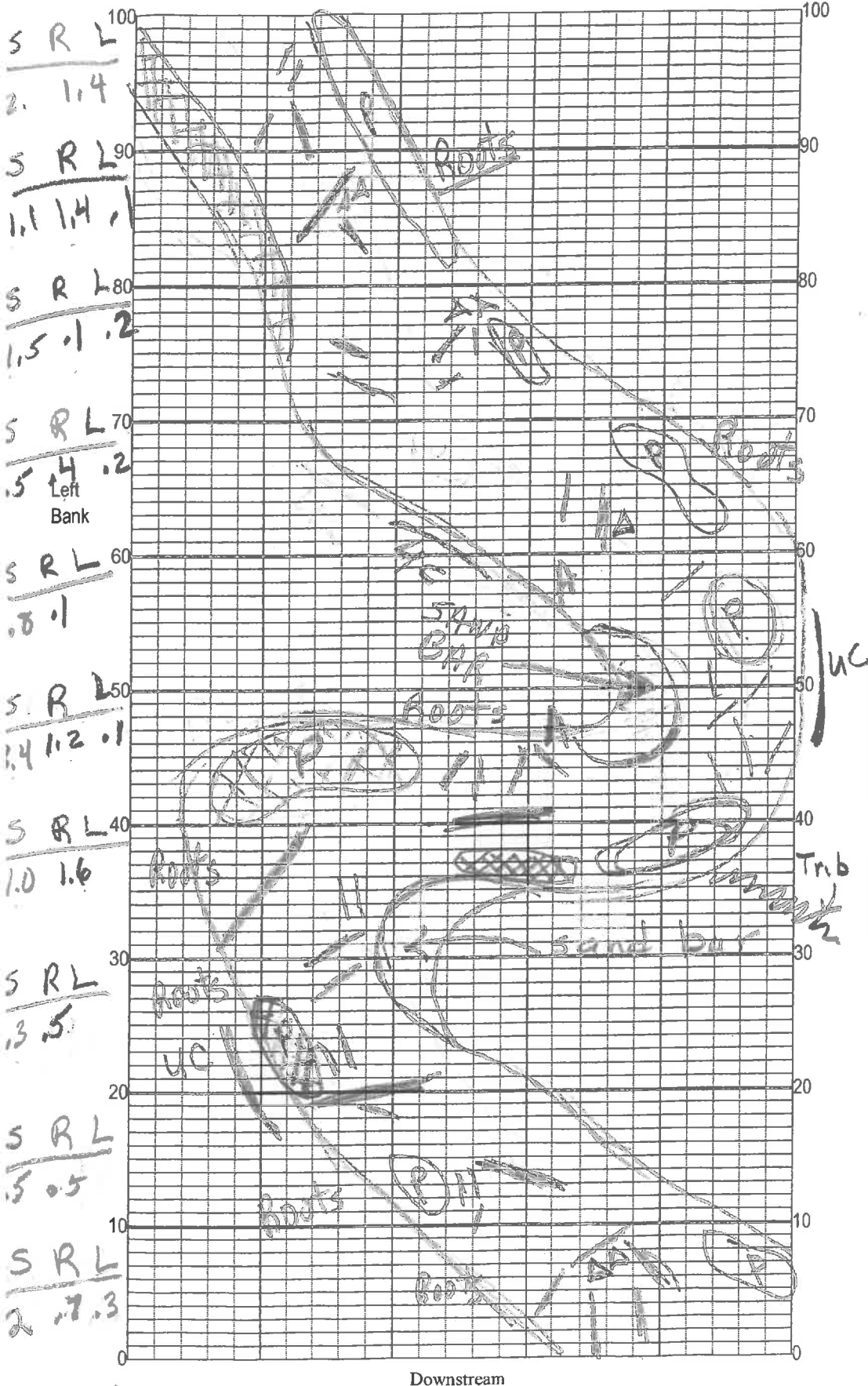
SAMPLING AGENCY: 21 FL CEN		STORET STATION NUMBER: G4CE 0023	DATE (MM/DD/YY): 8-29-16	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: Osceola	LOCATION: Davenport Crk	FIELD ID/NAME: G4CE 0023	

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 10	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability 6	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 14	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 13 ----- Primary Score 43	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 17	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 7 Left Bank 9	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 5 Left Bank 8	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 9 Left Bank 9 ----- Secondary Score 64	10 9	8 7 6	5 4	3 2 1

107 TOTAL SCORE

Date: 8-29-16	Analyst: Terry Riordan Natalie Ayala Mike Brennan	Signature: 
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: Davenport Creek
 Date: 8-29-16
 Sampler: Terry Rierdon

100 m: Latitude _____
 Longitude _____
 0 m: Latitude _____
 Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

- ☒ Snags _____
- ☒ Roots Roots/undercut banks _____
- ☒ A Leaf Packs (or mats) _____
- ☒ A Aquatic Macrophytes 0
- ☐ _____
- ☐ _____
- ☒ P Pools total # observed = 9
range expected = 2-4

Average width 4 m
 Average depth .5 m

Velocity measured at 60 meter mark.

WQ & chemistry taken at 100 meter mark.

Habitat Smothering: XXXX
 Note areas (on map) where sand or silt is smothering substrates, limiting habitability.

Bank Stability:
 Note areas (on map) with unstable, eroding banks.

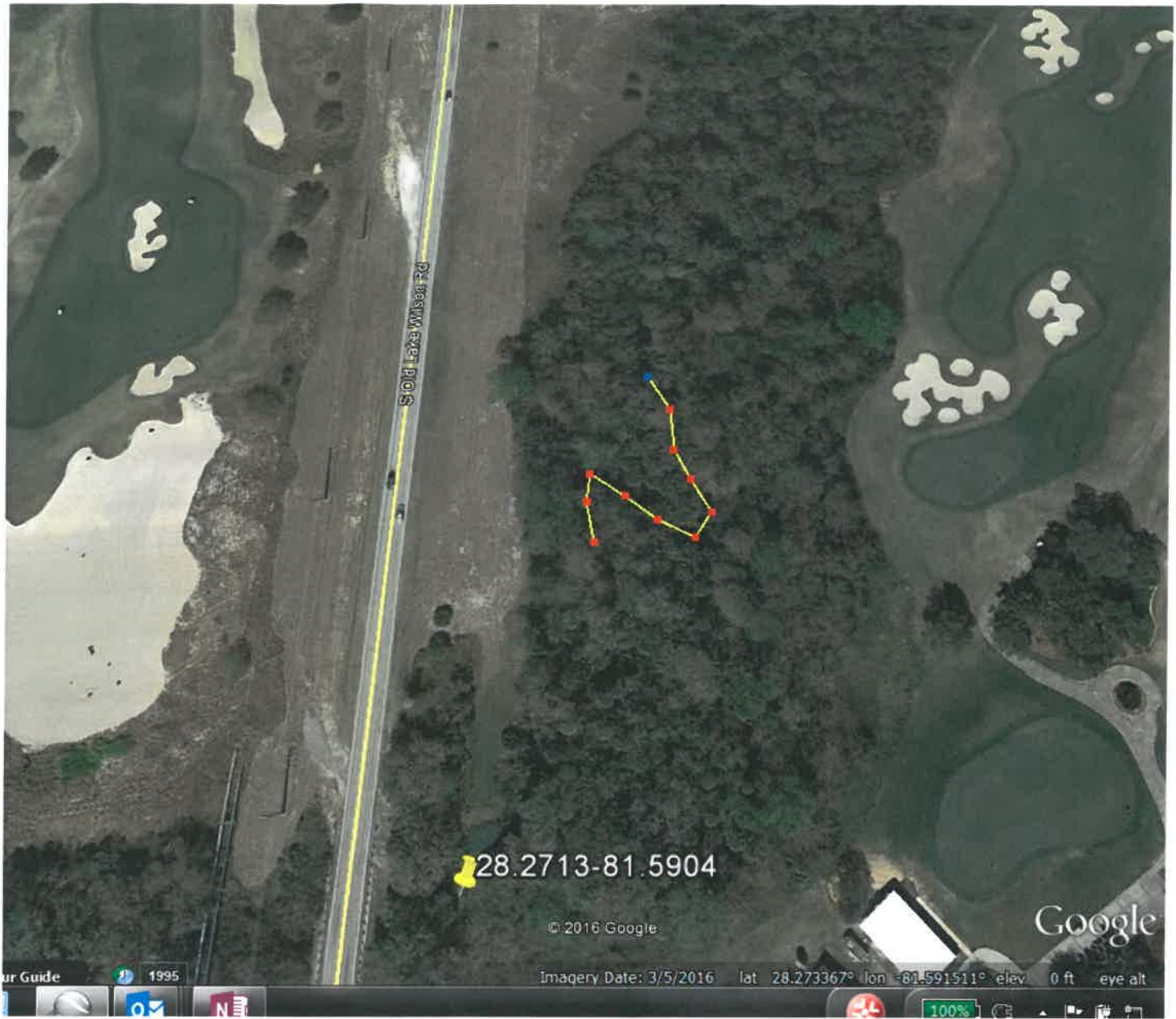
Riparian Buffer Width:
 Note areas (on map) where natural vegetation is altered or eliminated.

Plants observed / other notes:

UC = undercut
Centa masulata
Sambucus canadensis

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

S R L
15.6 7.4 .9
15.6 7.4 .9 = 23.9 ÷ 400 = 6%



28.2713-81.5904

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