



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End
of Day CCV
☒ Yes / ☐ No

WIN Station Name: Lake Gentry Outlet @ 350m N Of Lake Gentry

Date: 9/24/2020

WIN/Field ID: G4CE0182

WBID: 3177B

ENR:

Latitude: 28.1562

County: OSCEOLA

Org ID: 21FLCEN

Longitude: -81.2415

Receiving Body of Water: Kissimmee River

RQ- 2020-09-14-37

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Elizabeth Bates	x		x		
☒	Leif Boman		x		x	x
☐						
☐						

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☒ Syringe	☐ Pole
Depth measured with: Secchi	
Secchi Equipment ID: Knothead	
Collection Method	
☐ Wading	☐ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other	☒ Gasoline Motor

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# CRAW DADDY					
Photos: YES		Flow: FLOW		Tide:		Tide Times: High: Low:					
Biological Samples Collected: ☐ None ☒ HA ☐ SCI ☒ RPS ☐ Algae ID ☒ LVS ☐ LVI Other:											
SBIO ID Numbers: SBIO 81500 MACROPHYTE 11719 RPS 9596						LIMS 2198294					
Notes:											

Duplicate Sample

Time Zone: EST	Time: N/A	Field ID: N/A	(WIN ID_DUP)
WIN DMT Activity ID:			

Blank

Time Zone:	Time: N/A	Field ID: N/A	(Blank Type_DDMMYYYY)
DI Source: N/A	Location: N/A		
DI Type: N/A	Equipment ID: N/A		

LIMS EVENT ID: CEN-DIST-2020-09-25-02

WIN Import ID: 22627

Enter Field Parameters, Verify Station ID In LIMS DMT: KWM 10/5/20

QC Station ID, Field Parameters In LIMS DMT: TR 10/5/2020

(Initials/Date)

(Initials/Date)

Scan/Save Field Sheets kwm 10/30/20

(Initials/Date)

Migrate Data to WIN: KWM 10/30/20

(Initials/Date)

Verify Data In WIN:

(Initials/Date)



RQ-2020-09-14-37

Customer: WQAP

Project ID: SMP

Collected By: Elizabeth Bates, Leif Boman

Field Report Prepared By: Elizabeth Bates

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G4CE0182

Location: Lake Gentry Outlet @ 350m N Of Lake Gentry

Comments:

Matrix: Fresh

(Check one)

☒ GRAB☐ COMPOSITE

Date	Time	DO (mg/L)	DO (%SAT)	Temp. (C°)	pH	Sample Depth (m)	Secchi Disk (m)	Total Depth (m)	Sp COND (µmhos/cm)	Salinity (PPTH)
9/24/2020	11:01 EST	7.53	93.7	26.6	5.77	0.315	1.2 ☐ VOB (S)	3	159	0.07

Central Lab please use top row for login purposes

	11:05 EST	7.51	93.4	26.5	5.84	2.54			159	0.07
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Parameter Suite	Parameter Methods	Preservation	pH Check	# Bottles sent to Lab	Bottle Group
Preserved Nutrients (P-500ML)	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP Lot # SA9354050 Exp: 12/20/2020	☒ Ice ☐ H2SO4*	☒ <2	1	A
Metals (P-500ML)	☐ W-ICPMS ☐ W-ICP ☐ W-HARD Lot # Exp:	☐ Ice ☐ HNO3*	☐ <2		
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter Filter Lot # 16930280 Syringe Lot # 9149785	☒ Ice		1	A
Chlorophyll (BP-1L)	☒ CHLSUITE-W	☒ Ice		1	A
Physical/Aggregate (Fresh) (P-1L)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice		1	A
Physical/Aggregate (Marine) (P-1L)	☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates (PJ-2L)	☐ MI-FW-QLDC	☐ Formalin			
Periphyton (PT-50ML)	☐ ALGAE-ID	☐ Ice			
Microbiology (Contract Lab Bottle)	☒ E Coli ☐ F Coli ☐ Enterococci ☐ Contract Lab	☒ Ice		1	A
Molecular (QPCR-P-500ML)	☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-DG3 ☐ PCR-GULL2 ☐ PCR-GFD	☐ Ice			
Tracers (BG-500ML)	☐ W-E8321-DI ☐ W-E8321-MS	☐ Ice			
Pesticides (BG-500ML) (BG-1L)	☐ W-E8321-DI ☐ WE8321-MS ☐ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-PCL-SQ-R ☐ W-CARB-AA (5 ml of MCAA** Buffer Solution)	☐ Ice			
		☐ Ice			

Name:
Elizabeth Bates
Leif Boman

Signature:

Date:

09/24/2020

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET																									
Waterbody: Lake Gruening Outlet										Date: 9/24/20 County: Osceola					Storet Number:										
Analyst: Keif Bowman										Signature: [Handwritten Signature]															
Comments:																									
Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1m ² 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	
Alternanthera philoxeroides							/						Micranthemum glomeratum												
Bacopa caroliniana													Micranthemum umbrosum												
Bacopa monnieri													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												

Percent Cover Categories for macrophytes in a 10 m segment of a stream 5 m wide

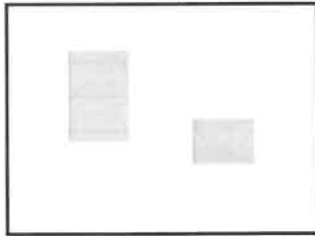
5% Macrophyte Coverage



5% Macrophyte Coverage



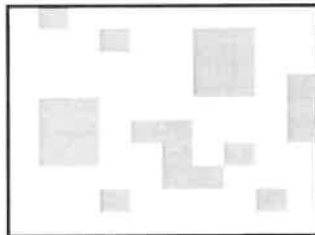
10% Macrophyte Coverage



10% Macrophyte Coverage



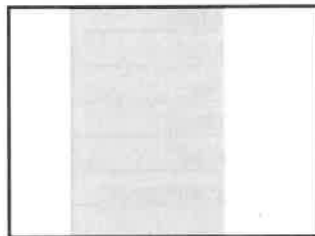
25% Macrophyte Coverage



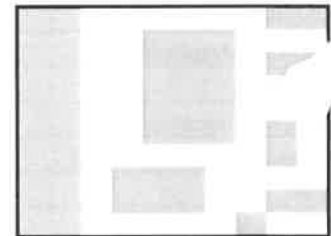
25% Macrophyte Coverage



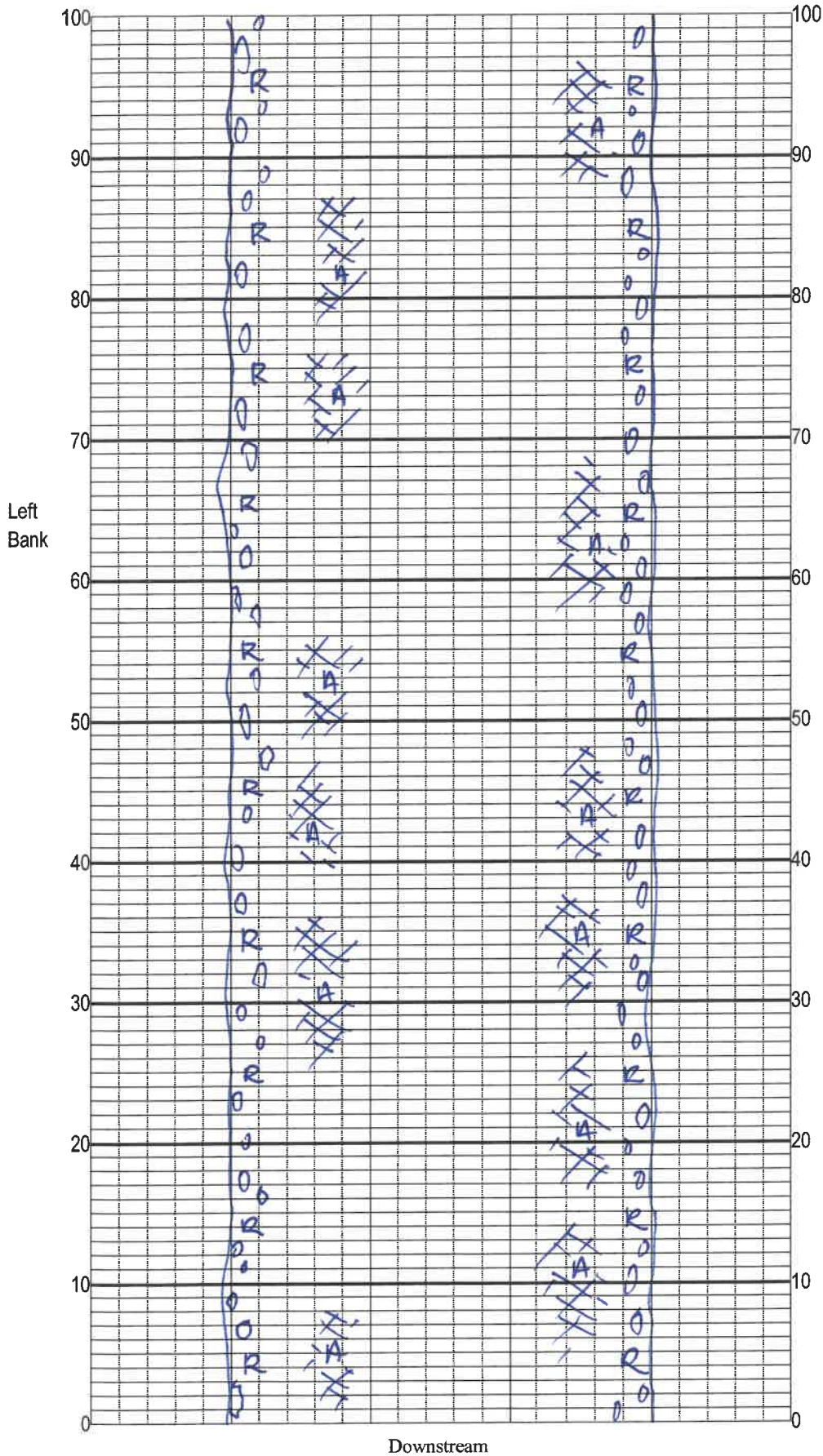
50% Macrophyte Coverage



50% Macrophyte Coverage



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: GENTRY OUTLET

Date: 09/24/2020

Sampler: Leif Boman
Elizabeth Bates

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	<u>2.6</u>
☒	<u>Rocks</u>	<u>5</u>
☐	_____	_____
☐	Pools	total # observed = _____ # range expected = _____

Average width 20 m
Average depth 3 m

Velocity measured at 50 meter mark. 50%

WQ & chemistry taken at 0 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:

LVS completed.

Majority of surfaces had light silt/algal smothering.

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Gentry Outlet County: Osceola Date: 9/24/20 Investigators: Leif Roman, Elizabeth Bates

STORET Station Number:

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

3m deep

Secchi depth 1.2
Estimated? 55

points ranked 4-6 5
total points assessed 5
% points ranked 4-6 100

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
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%.

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

SAMPLING AGENCY: <u>FDOP-CEROC</u>		STORET STATION NUMBER:	DATE (MM/DD/YY): <u>09/24/2020</u>	RECEIVING BODY OF WATER:
REMARKS:	COUNTY:	LOCATION: <u>Lake George Outlet</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>8</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>6</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>14</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>3</u> -----	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae.	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae.	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth).	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation.
Primary Score <u>31</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	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 or straightening 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>1</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 woody 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 woody 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>2</u> Left Bank <u>2</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>1</u> Left Bank <u>1</u> -----	10 9	8 7 6	5 4	3 2 1
Secondary Score <u>27</u>				

58

TOTAL SCORE

Date: <u>09/24/2020</u>	Analyst: <u>[Signature]</u>	Signature: <u>[Signature]</u>
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DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID _____ ORG ID 2IFLCEN LATITUDE 28.1562
 COUNTY Osceola STORET # _____ LONGITUDE -81.2415
 DATE 09/24/2020 TIME 11:00 SAMPLING AGENCY FDEP-CEROC
 SITE NAME Lake Gentry outlet
 FIELD ID/NAME G4CE0182 RECEIVING BODY OF WATER Kissimmee River

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) ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐								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 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: ☐ Right Bank: ☐				Hydrologic Modification Score (per FT 3101) ☐				.21 m/s .21 m/s .21 m/s 2.5 m deep 3 m deep 2.5 m deep	
High Water Mark: ☐ + ☐ = ☐ (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No				Canopy Cover % ☒ Open ☐ Lightly Shaded (11-45%) ☐ Heavily Shaded ☐ Moderate Shaded (46-80%)	
Artificially ☐ No ☐ Mostly recovered, more sinuous Channelized: ☐ Some recovery ☒ Recent, severe				0%					

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: 0.35 26.6 5.77 7.53 93.7 159.0 0.07 1.2 Mid: _____ Bottom: 2.54 26.5 5.84 7.51 93.4 159.0 0.07 Meter ID: <u>Crawdaddy</u>					
Woody Debris (Snags) _____ Undercut Banks / Roots _____ Leaf Packs or Mat _____ Aquatic Vegetation <u>2.6</u> Rock or Shell Rubble <u>5.0</u> 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>SA9354050</u> Exp: <u>12/20/2020</u>			Color Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify) ☐		
			Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☒ No Lot Number: _____ Exp: _____			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) ☒ <u>canal</u>					
AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.								
SAMPLING TEAM <u>Leif Boman, Elizabeth Bates</u>				SIGNATURE: <u>/ aibu</u>		DATE: <u>09/24/2020</u>		

RQ-2020-09-14-37.