



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

October 2017

Qualified Data

Location/STORET Station Name: Dead River @ Power Lines

Date: 12/07/2017
(mm/dd/yyyy)

STORET # G1CE0056

WBID: 2817C

Latitude: 28.81299739

(Decimal Degrees)

County: Lake RQ - 2017-10-16-34

ORG ID: 21' FL CEN

Longitude: -81.76627258

(Decimal Degrees)

Receiving Body of Water: LAKE EUSTIS

Field ID: G1CE0056

Sampling Team Members						WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment				
TERRY RIORDAN							✓		✓	✓	☒ Sample Container	☐ Van Dorn	☐ Pole		
KATIE WILLIAMS						✓		✓			☐ Carboy	☒ Syringe			
											☐ Dipper	☐ Other			
											Equipment ID _____				
											Collection Method				
											☐ Wading	☐ Canoe/Kayak			
											☐ From Shore	☐ Electric Motor			
											☐ Other	☒ Gasoline Motor			
Water Level: Dry / Low / <u>Normal</u> / Above Normal / Flooded						Meter ID# <u>BETTY / 67</u>				Matrix: <u>Fresh</u> / Marine / DI					
Photos: <u>Yes</u> / No		Flow: No Flow / Intestinal / <u>Flowing</u> / NA		Tide: Rising / Falling / Slack / <u>NA</u>		Tide Times: High		Low							
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>1140</u>	<u>0.3</u>	<u>2.8</u>	<u>7.2</u>	<u>80</u>	<u>7.4</u>	<u>0.15</u>	<u>0.7</u>	<u>304</u>	<u>20.8</u>					
<u>CEN</u>		<u>2.3</u>		<u>7.1</u>	<u>80</u>	<u>7.4</u>	<u>0.15</u>		<u>304</u>	<u>20.7</u>					
Biological Samples Collected: None <u>HA</u> <u>SCI</u> <u>RPS</u> Algae ID <u>LVS</u> LVI Other _____															
SBIO ID Numbers: SBIO-ID: <u>78144</u> HA-ID: <u>14951</u> RPS-ID: <u>8868</u> Macrophyte-ID: <u>10785</u> LIMS#: <u>1952174</u>															
Parameter Suite	Parameter Methods					Preservation	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 ☐ HNO3			☐ <2						
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter					☒ Ice									
Chlorophyll	☒ CHLSUITE-W					☒ 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									
Periphyton	☐ ALGAE-ID					☐ Ice									
Microbiology	☐ E Coli ☐ F Coli ☐ Enterococci					☐ Ice									
Molecular	☐ PCR-FILTER ☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-GFD					☐ Ice									
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA ☐ W-AHERB-AA					☐ Ice									
Pesticides	☐ W-PSNP-TQ ☐ W-UHERB-AA ☐ W-AHERB-AA					☐ Ice									
	☐ W-PCL-SQ-R ☐ W-PYR-AA-R ☐ W-GLYPH ☐ W-SUC-AA-R					☐ Other									

Notes:

RQ-2017-10-16-34
Dead River @ Power Lines
Date: 12/07/2017
Time:

G1CE0056

Field ID ↑
STORET ↓

G1CE0056

Signature: Kell Williams

Date: 12/7/17

Field Parameters Entered into LIMS: Kmw 12/15/17

(Initials/Date)

Field Parameters QC in LIMS: 7/2 1/3/18

(Initials/Date)

Date Migrated to STORET: _____

Field Sheets Scanned/Saved: _____

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Dead River @ Powerline County: LAKE Date: 12/7/17 Investigators: Terry Riordan
Katie Williams

STORET Station Number: GICE 0056

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

Secchi depth 0.7
 Estimated? N

points ranked 4-6 0
 total points assessed 99
 % points ranked 4-6 0

Check accompanying data collected at same site/date.

Algal mat sample ☐

Linear Veg Survey ☒

Habitat Assessment ☒

SCI/Biorecon ☐

Water sample ☒

RQ- 2017-10-16-34

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 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID _____ ORG ID 21FLCEN LATITUDE 28.81299739
COUNTY _____ STORET # GICE0056 LONGITUDE -81.76427258
DATE 12/7/17 TIME _____ SAMPLING AGENCY _____
SITE NAME Lead River (at Power Lines)
FIELD ID/NAME GICE0056 RECEIVING BODY OF WATER Lk. Eustis

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category):								Landscape Development Intensity Index (LDI) _____
Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)	
<u>50</u>				<u>50</u>				
Local Watershed Erosion (select one): ☒ None ☐ Slight ☐ Moderate ☐ Heavy						Typical Width (m) Depth (m)/Velocity (m/sec) Transect		
Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☒ Moderate ☐ Heavy						<u>125</u> m wide		
Width of Riparian Vegetation (m) on Each Buffer Side				Hydrologic Modification Score (per FT 3101)				
Left Bank: <u>718</u>		Right Bank: <u>718</u>						
High Water Mark: <u>0.3</u> + <u>2.8</u> = <u>3.1</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No				
Artificially ☒ No ☐ Mostly recovered, more sinuous				Canopy Cover % ☒ Open ☐ Lightly Shaded (11-45%)				
Channelized: ☐ Some recovery ☐ Recent, severe				☐ 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 % Coverage Woody Debris (Snags) _____ Undercut Banks / Roots _____ Leaf Packs or Mat _____ Aquatic Vegetation _____ Rock or Shell Rubble _____ Sand _____ 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: <u>0.3</u> <u>20.8</u> <u>7.4</u> <u>7.2</u> <u>80</u> <u>304</u> <u>0.15</u> <u>0.7</u> Mid: _____ Bottom: <u>2.3</u> <u>20.7</u> <u>7.4</u> <u>7.1</u> <u>80</u> <u>304</u> <u>0.15</u> <u>2.8</u> Meter ID: <u>Betty 67</u> 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: _____ System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) _____		
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☒ ☐ ☐ ☐ Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☐ ☐ ☐ ☒ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐			Water Surface Oils Normal ☒ Sheen ☐ Globs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐ Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐		
			AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.		

SAMPLING TEAM

Terry R. Jordan, Katie Williams

SIGNATURE

Katie Williams

DATE

12/7/17

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

SAMPLING AGENCY:		STORET STATION NUMBER: <u>G1CE0066</u>	DATE (MM/DD/YY): <u>12/7/17</u>	RECEIVING BODY OF WATER: <u>LK. Eustis</u>
REMARKS:	COUNTY: <u>Lake</u>	LOCATION: <u>Dead River</u>	FIELD ID/NAME: <u>G1CE0066</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>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>8</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>3</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>6</u> ----- Primary Score <u>25</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	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>9</u> Left Bank <u>9</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>74</u>	10 9	8 7 6	5 4	3 2 1

99 TOTAL SCORE

Date: <u>12/7/17</u>	Analyst: <u>KMW</u>	Signature: <u>KWilliams</u>
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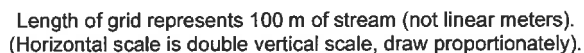
Waterbody: <u>Dead River</u>	Date: <u>12/7/17</u>	County: <u>Lake</u>	Storet Number: <u>616E006</u>
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Analyst: _____ Signature: *K. Harris*

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.

Revision Date: March 1, 2014

Left
Bank

Location: Dead River
Date: 12/7/17
Sampler: Kate Williams

Plants observed / other notes:

No defined banks, just
floods into wetlands.
Like last sample, wind
precluded us from
obtaining accurate velocity
sample, but presumed low
due to nature of system.

Revision Date: March 1, 2014