



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

March 2017

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Date Qualified?

Yes / No

Location/STORET Station Name: Fishbone Creek @ 212th

Date: 11-29-2017

STORET # G1TLHR0015

WBID: 3686

Latitude: 29.8077252

County: Dixie RQ: 2017-10-30-54

ORG ID: 21FLTLHR

Longitude: 83.301748

Receiving Body of Water: California Lake

Field ID: G1TLHR0015-2017-06

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Chris Green									
Mike Eckles									
Blake Spencer									

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 / Pooled / Low / Normal / High / Flooded										Matrix: Fresh / Marine / DI	
Meter ID# 12451600XLM				Photos: Yes / No				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 (umhos/cm)	Temp. (C°)	
EST	11:30	0.3	1.4	6.07	63.6	7.40	0.19	1.4	393	17.55	
CEN								1.4			

Biological Samples Collected: None HA SCI RPS Algae ID LVS LVI Other									
SBIO ID Numbers: SBIO-ID: 78135 RPS-ID: 8654 Macrophyte-ID: LIMS#:									

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	SA-7163030	6-12-18	☒ <2
Metals	☒ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☐ Field Filtered 0.45 um 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 ☐ qPCR	☐ Ice			
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA ☐ W-AHERB-AA	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R	☐ Ice			
	☐ W-PCL-SQ-R ☐ W-UHERB-AA ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Other			

Notes:

G1TLHR0015-2017-06

WBID 3686 Field ID ↑ STORET ↓

Fishbone Creek @ 212th

G1TLHR0015

Signature:	Date:
AK-3	11-29-2017
Field Parameters Entered into LIMS: 12/22/17	Field Parameters QC in LIMS: 12/25/17
Date Migrated to STORET: 12-19-18	Field Sheets Scanned/Saved: 12/25/17

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

California Lake

SAMPLING AGENCY: 8034 (ZIFLTLHR)		STORET STATION NUMBER: G1TLHR0015	DATE (MM/DD/YY): 11-29-2017	RECEIVING BODY OF WATER: Lake George
REMARKS:	COUNTY: Dixie	LOCATION: Fishbone Creek # 212 th	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>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>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>11</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>16</u> Primary Score <u>30-40</u> <u>40</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>20</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>5</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>9</u> Left Bank <u>10</u> Secondary Score <u>74</u>	10 9	8 7 6	5 4	3 2 1

114

TOTAL SCORE

Date: 11-29-2017	Analyst: Chris Green	Signature: Chris Green
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DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID G1TLHR0015 ORG ID 21FLTLHR LATITUDE 29.8077252
 COUNTY Dixie STORET # G1TLHR0015 LONGITUDE 83.301748
 DATE 11-29-2017 TIME 11:45 SAMPLING AGENCY 8034 (DEP)
 SITE NAME Fishbone Creek @ 212th
 FIELD ID/NAME _____ RECEIVING BODY OF WATER Lake George

RIPARIAN ZONE / STREAM FEATURES

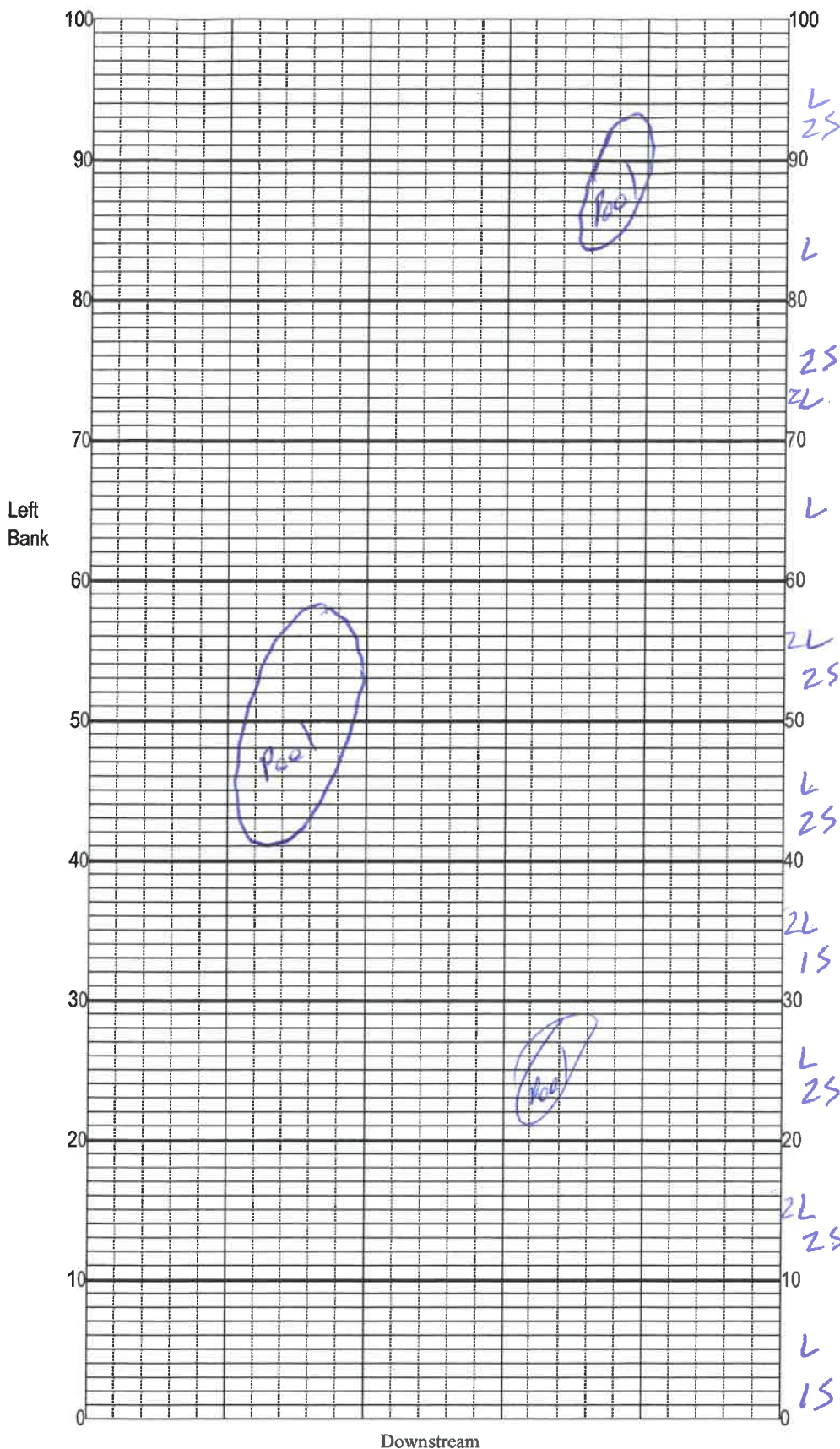
PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>10</u> Silviculture <u>90</u> Field/Pasture _____ Agricultural _____ Residential _____ Commercial _____ Industry _____ Other (Specify) _____							Landscape Development Intensity Index (LDI) _____
Local Watershed 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 _____ m wide _____ m/s <u>0.125</u> m/s _____ m/s			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>718m</u> Right Bank: <u>10m</u>		Hydrologic Modification Score (per FT 3101) _____		_____ m/s _____ m/s _____ m/s			
High Water Mark: <u>0.4</u> + <u>1.4</u> = <u>1.8</u> (m) (above present water level) (present depth) (above bed)		Artificially Impounded ☐ Yes ☒ No		_____ m deep <u>0.4</u> m deep <u>1.4</u> m deep <u>0.3</u> 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	
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>17.55</u> <u>7.40</u> <u>6.07</u> <u>63.6</u> <u>393</u> <u>0.19</u> <u>1.4</u> Mid: _____ _____ _____ _____ _____ _____ _____ Bottom: _____ _____ _____ _____ _____ _____ _____ Meter ID: <u>12 YSI 600 XLM</u>		
Woody Debris (Snags) <u>1.5</u> <u>7</u> _____ Undercut Banks / Roots <u>0</u> _____ _____ Leaf Packs or Mat <u>1.4</u> <u>7</u> _____ Aquatic Vegetation <u>0</u> _____ _____ Rock or Shell Rubble.. <u>0</u> _____ _____ Sand..... <u>48.5</u> <u>3</u> _____ Mud / Muck / Silt <u>48.5</u> <u>3</u> _____ 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: _____		
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 ☐		
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 <u>Chris Green / Blake Spencer</u>			SIGNATURE: <u>ChS</u>		DATE: <u>11-29-2017</u>

DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet

Fishbone Creek @ 212th



Location: GITLHRO015

Date: 11-29-2017

Sampler: Chris Green

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☒ S	Snags	<u>1.5</u>
☒ R	Roots/undercut banks	<u>0</u>
☒ L	Leaf Packs (or mats)	<u>1.4</u>
☒ A	Aquatic Macrophytes	<u>0</u>
☐		
☐		
☒	Pools	total # observed = <u>3</u> # range expected = <u>1-2</u>

Average width 10 m
Average depth 1.4 m

Velocity measured at 100 meter mark. 8 sec.

WQ & chemistry taken at 50 meter mark.

Habitat Smothering: slight
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 / 10
Note areas (on map) where natural vegetation is altered or eliminated.

Plants observed / other notes:

S - 15
R -
L - 14
A -

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

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET

Waterbody: Fishbone Creek # 212 th	Date: 11-29-17	County: Dixie	Storet Number: 617LHROO15
Analyst: Chris Green	Signature: CK3-		
Comments: less than 2m ² of Veg.			

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.

[illegible]

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: *Fishbone Creek @ 212th*
GITLHRO015

County: *Nixie*

Date: *11-29-2017*

Investigators: *Chris Green*

STORET Station Number:
GITLHRO015

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	<i>~</i>			60	1	<i>~</i>			
	2					2				
	3					3				
	4					4				
	5			<i>93</i>		5			<i>89</i>	
	6					6				
	7					7				
	8					8				
	9					9				
10	1				70	1				
	2					2				
	3					3				
	4			<i>89</i>		4			<i>92</i>	
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
20	1				80	1				
	2					2				
	3					3				
	4					4				
	5			<i>90</i>		5			<i>91</i>	
	6					6				
	7					7				
	8					8				
	9					9				
30	1				90	1				
	2					2				
	3					3				
	4					4				
	5			<i>89</i>		5			<i>90</i>	
	6					6				
	7					7				
	8					8				
	9					9				
40	1				100	1				
	2					2				
	3					3				
	4					4				
	5			<i>93</i>		5			<i>95</i>	
	6					6				
	7					7				
	8					8				
	9					9				
50	1				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%.					
	2									
	3									
	4									
	5			<i>94</i>						
	6									
	7									
	8									
	9									

Secchi depth *1.9*
Estimated? *no*

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	<i>✓</i>
Habitat Assessment	<i>✓</i>
SCI/Biorecon	<i>✓</i>
Water sample	<i>✓</i>

RQ- *2017-10-30-54*

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