

HA/RPS/LVS or SCI

Site Name Bug Spring Run

Sample Date 3/19/18

WBID 1362

STORET GICE0037

RQ 2018-03-19-63

	Initial/Date	QC Initial/Date
Water chemistry data to LIMS	Kmw 3/27/18	JA 6/21/18
Create SBIO station visit	Tallahassee ✓	n/a
Phys/Chem entry	Kmw 4/10/18	LG 6/7/18
Habitat Assessment entry	Kmw 4/10/18	LG 6/7/18
Vascular entry (add LIMS ID to entry)	Kmw 4/10/18	LG 6/7/18
RPS entry	Kmw 4/10/18	LG 6/7/18
Authorize SBIO data	LG 6/7/18	n/a
Scan all sheets to 21FLCEN folder		n/a
LIMS/STORET migration		n/a
File in cabinet		n/a

Comments/notes:



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2018

Data Qualified?

Yes / No

WIN Station Name: Bugg Spring Run @ 475m US of Helena Run Date: 3/19/19
(mm/dd/yyyy)

WIN ID/ Field ID 61CE0037 WBID: 1362 Latitude: 28.760959
(Decimal Degrees)

County: Lake ORG ID: 21FLCEN Longitude: -81.897361
(Decimal Degrees)

Receiving Body of Water: Helena Run RQ - 2018-03-19-63

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Duplicate Collection	Blank Collection
Lip Boman Katie Williams			/	/	/	/		

Sampling Equipment	
☒ Sample Container	☐ Van Dorn ☐ Pole
☐ Carboy	☒ Syringe
☐ Dipper	☐ Other
Depth Measured with: <u>SECCHI DISK LINE</u>	
Equipment ID	

Collection Method	
☐ Wading	☐ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other	☒ Gasoline Motor

Water Level: Dry/ Pooled/ Low/ <u>(Normal)</u> / High/ Flooded	Meter ID# <u>Betty 67</u>	Matrix: <u>Fresh</u> / Marine / DI
Photos: <u>Yes</u> / No	Flow: No Flow / Intertidal / <u>(Flowing)</u> / NA	Tide: Rising/ Falling/ Slack/ <u>NA</u>
Tide Times: High		Low

Field Sample

(Bracket Sample Time)

Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Sp COND (µmhos/cm)	Temp. (C°)
<u>EST</u>	<u>1100</u>	<u>1.2</u>	<u>0.3</u>	<u>1.20</u>	<u>262</u>	<u>299</u>	<u>7.21</u>	<u>0.16</u>	<u>343</u>	<u>21.82</u>
CEN										

Biological Samples Collected: None HA SCI RPS Algae ID LVS LVI Other: RPS: 8956

SBIO ID Numbers: SBIO-ID: 78297 HA-ID: 15088 RPS-ID: 8956 Macrophyte-ID: 10876 LIMS#: 1975942

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	<u>SA7341020</u>	<u>12/7/18</u>	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice	<u>13615055</u>		
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity W-F / W-TSS / TURBIDITY / W-CH-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-AHERB-AA ☐ W-PYR-AA-R ☐ W-CARB-AA ☐ W-PCL-SQ-R ☐ W-UHERB-AA ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Ice ☐ Other			

Contains: 1:1 H2SO4
Lot No.: SA7341020
Expires: 12/07/18
See Safety Data Sheet (SDS)

SULFURIC ACID <61%
Contains: 1:1 H2SO4
Lot No.: SA7341020
Expires: 12/07/18
See Safety Data Sheet (SDS)

QA/QC Sample Information Duplicate

Time Zone: EST CEN Time: 1102 Field ID: G1CE0037DUP
(WIN ID + DUP)

Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Chec
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H ₂ SO ₄	SA7341020	12/7/18	☒ < 2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO ₃			☐ < 2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☐ Ice	13615055		
Chlorophyll	☐ CHLSUITE-W	☐ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CI-IC / W-COLOR / W-SO4-IC / W-TDS	☐ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / W-F / W-TSS / TURBIDITY	☐ Ice			
Microbiology	☒ E Coli ☐ F Coli ☐ Enterococci	☒ Ice			
Molecular	☐ PCR-FILTER ☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-G				
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA ☐ W-AHERB-AA				
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-CARB-AV ☐ W-PCL-SQ-R ☐ W-UHERB-AA ☐ W-GLYPH ☐ W-SUC-AA				

WIN ID / Field ID →

Bugg Spring Run @
475m Upstream of
Helena Run (1362)

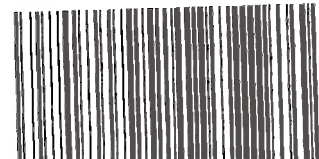
G1CE0037DUP

**SULFURIC
ACID <61%
DANGER**
T094-09-4
7733-18-6

Contains: 1:1 H2SO4
Lot No.: SA7341020
Expires: 12/07/18
See Safety Data Sheet (SDS)

Contains: 1:1 H2SO4
Lot No.: SA7341020
Expires: 12/07/18
See Safety Data Sheet (SDS)

May be corrosive to metals. Causes severe skin burns and eye damage. Do not breathe fumes/vapors. When breathing fumes/vapors, wear respirator. Use only outdoors or in a well-ventilated area. Wear protective gloves. Wash contaminated clothing before reuse. IF SWALLOWED, rinse mouth. DO NOT induce vomiting. IF ON SKIN, flush with water. Take off immediately all contaminated clothing. Rinse skin with soap and water. IF INHALED, remove victim to fresh air and watch for respiratory distress. IF IN EYES, flush cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Store locked up. Store in corrosive resistant container with a resistant seal liner.



G1CE0037DUP

Blank

Time Zone: EST CEN Time: 1150 Field ID: BLANK 2018
(BLANK_DDMMYYYY)

DI Source: WASH ROOM Location: _____

☒ Field Blank ☐ Equipment Blank ☐ Field Cleaned Equipment Blank Equipment ID: Carboy #3

Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Chec
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H ₂ SO ₄	SA7341020	12/7/18	☒ < 2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO ₃			☐ < 2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice	13615055		
Chlorophyll	☐ CHLSUITE-W	☐ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CI-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / W-F / W-TSS / TURBIDITY	☐ Ice			
Microbiology	☐ E Coli ☐ F Coli ☐ Enterococci	☐ Ice			
Molecular	☐ PCR-FILTER ☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-GF				
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA ☐ W-AHERB-AA				
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-CARB-AV ☐ W-PCL-SQ-R ☐ W-UHERB-AA ☐ W-GLYPH ☐ W-SUC-AA				

Field ID →

Field Blank

Place Preservative Sticker(s) Here
(If Available)

Field ID →

Bugg Spring Run
@ 475 m Upstream of
Helena Run (1362)

BLANK_03192018



BLANK_03192018

Notes:

Signature: KWilliams

Date: 3/19/18

Enter Field Parameters, Verify Station ID In LIMS DMT: Kmw 3/27/18

(Initials/Date)

QC Station ID, Field Parameters In LIMS DMT: 2A 6/21/18

(Initials/Date)

Scan/Save Field Sheets

Migrate Data to WIN:

Verify Data In WIN:

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

SAMPLE ID _____ ORG ID 21FUEEN LATITUDE 28.760959
 COUNTY Lake STORET # G1CED037 LONGITUDE -81.897361
 DATE 3/19/18 TIME _____ SAMPLING AGENCY _____
 SITE NAME Bug Spring Run
 FIELD ID/NAME _____ RECEIVING BODY OF WATER Helena Run

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category) : Forest/Natural <u>60</u> Silviculture _____ Field/Pasture <u>15</u> Agricultural _____ Residential <u>25</u> 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 <u>10</u> m wide			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank : <u>710</u> Right Bank : <u>718</u>				Hydrologic Modification Score (per FT 3101) _____		<u>0.01</u> m/s <u>0.01</u> m/s <u>0.01</u> m/s			
High Water Mark: <u>0.2</u> + <u>1.2</u> = <u>1.4</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No		<u>1.1</u> m deep <u>1.2</u> m deep <u>1.1</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	
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SUBSTRATE TYPE

Assessment Tool: ☐ SCI ☒ RPS ☒ LVS
☐ LCI ☐ BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
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>21.82</u>	<u>7.21</u>	<u>2.62</u>	<u>29.9</u>	<u>343</u>	<u>0.16</u>	_____
Mid:	_____	_____	_____	_____	_____	_____	_____	☒ VOB
Bottom	_____	_____	_____	_____	_____	_____	_____	TOTAL DEPTH
Meter ID:	<u>Betty 67</u>							<u>1.2</u>

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>7341020</u> Exp: <u>12/7/18</u>	Color Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify) ☐
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Algae Sample Taken? ☒ Yes ☐ No Sample Preserved? ☐ Yes ☒ No Lot Number: _____ Exp: _____	Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐
--	--

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

AMBIENT FIELD CONDITIONS / NOTES:

Bright green algae noted 11/2017 not seen today. More hyphilla than previously.
☒ 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

LCB, KMW

SIGNATURE:

K Williams

DATE:

3/19/18

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

Waterbody: <u>Bragg Spring Run</u>	Date: <u>3/19/18</u>	County: <u>Lake</u>	Storet Number: <u>G14ED03</u>
Analyst: <u>Kate Williams</u>	Signature: <u>Williams</u>		
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.

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	
<i>Alternanthera philoxeroides</i>												<i>Micranthemum glomeratum</i>											
<i>Bacopa caroliniana</i>												<i>Micranthemum umbrosum</i>											
<i>Bacopa monnieri</i>												<i>Myriophyllum aquaticum</i>	/	/	/	/	/	/	/	/	/		
<i>Bidens</i> <i>laevis</i>												<i>Najas guadelupensis</i>											
<i>Boehmeria cylindrica</i>												<i>Nuphar luteum</i>	/	/							/		
<i>Centella asiatica</i>												<i>Orontium aquaticum</i>											
<i>Ceratophyllum demersum</i>	/	/	/	/	/	/	/	/	/	/		<i>Panicum hemitomon</i>											
<i>Chara</i>												<i>Panicum repens</i>											
<i>Cicuta maculata</i>	/	/	/	/	/	/	/	/	/	/		<i>Panicum rigidulum</i>											
<i>Cladium jamaicense</i>												<i>Pistia stratioides</i>	/	/	/	/	/	/	/	/	/		
<i>Colocasia esculenta</i>												<i>Polygonum glabra</i>											
<i>Commelina diffusa</i>												<i>Polygonum hydropiperoides</i>											
<i>Commelina virginica</i>												<i>Polygonum punctatum</i>											
<i>Crinum americanum</i>												<i>Pontederia cordata</i>	/	/	/	/	/	/	/	/	/		
<i>Diodia virginiana</i>												<i>Potamogeton illinoensis</i>											
<i>Eichhornia crassipes</i>												<i>Ruellia simplex</i>											
<i>Eleocharis (wispy viviparous)</i>												<i>Sagittaria striata</i>											
<i>Hydrilla verticillata</i>	/	/	/	/	/	/	/	/	/	/		<i>Sagittaria kurziana</i>											
<i>Hydrocotyle</i>	/	/	/	/	/	/	/	/	/	/		<i>Sagittaria lancifolia</i>	/	/	/	/	/	/	/	/	/		
<i>Hygrophila polysperma</i>												<i>Sagittaria latifolia</i>											
<i>Hymenocallis</i>												<i>Salvinia minima</i>	/	/	/	/	/	/	/	/	/		
<i>Lachnanthes caroliniana</i>												<i>Samolus parviflora</i>											
<i>Landoltia punctata</i>												<i>Saururus cernuus</i>											
<i>Lemna</i>	/	/	/	/	/	/	/	/	/	/		<i>Sparganium americanum</i>											
<i>Limnophila sessiflora</i>												<i>Typha</i>	/	/	/	/	/	/	/	/	/		
<i>Ludwigia leptocarpa</i>												<i>Vallisneria spiralis</i>											
<i>Ludwigia palustris</i>												<i>Zizania aquatica</i>											
<i>Ludwigia peruviana</i>												<i>Peltandra</i>	/	/	/	/	/	/	/	/	/		
<i>Ludwigia repens</i>												<i>Azolla</i>	/	/	/	/	/	/	/	/	/		

* Much more coverage of hydulla than last visit

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

SAMPLING AGENCY:		STORET STATION NUMBER: <u>G1CED037</u>	DATE (MM/DD/YY): <u>3/19/18</u>	RECEIVING BODY OF WATER: <u>Helena Run</u>
REMARKS:	COUNTY: <u>Lake</u>	LOCATION: <u>Buggy Spring Run</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>4</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>10/12</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>2</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> ----- Primary Score <u>21</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>10</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>9</u> ----- Secondary Score <u>78</u>	10 9	8 7 6	5 4	3 2 1

99

TOTAL SCORE

Date: <u>3/19/18</u>	Analyst: <u>LCB, kmw</u>	Signature: <u>Kullmanis</u>
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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: _____

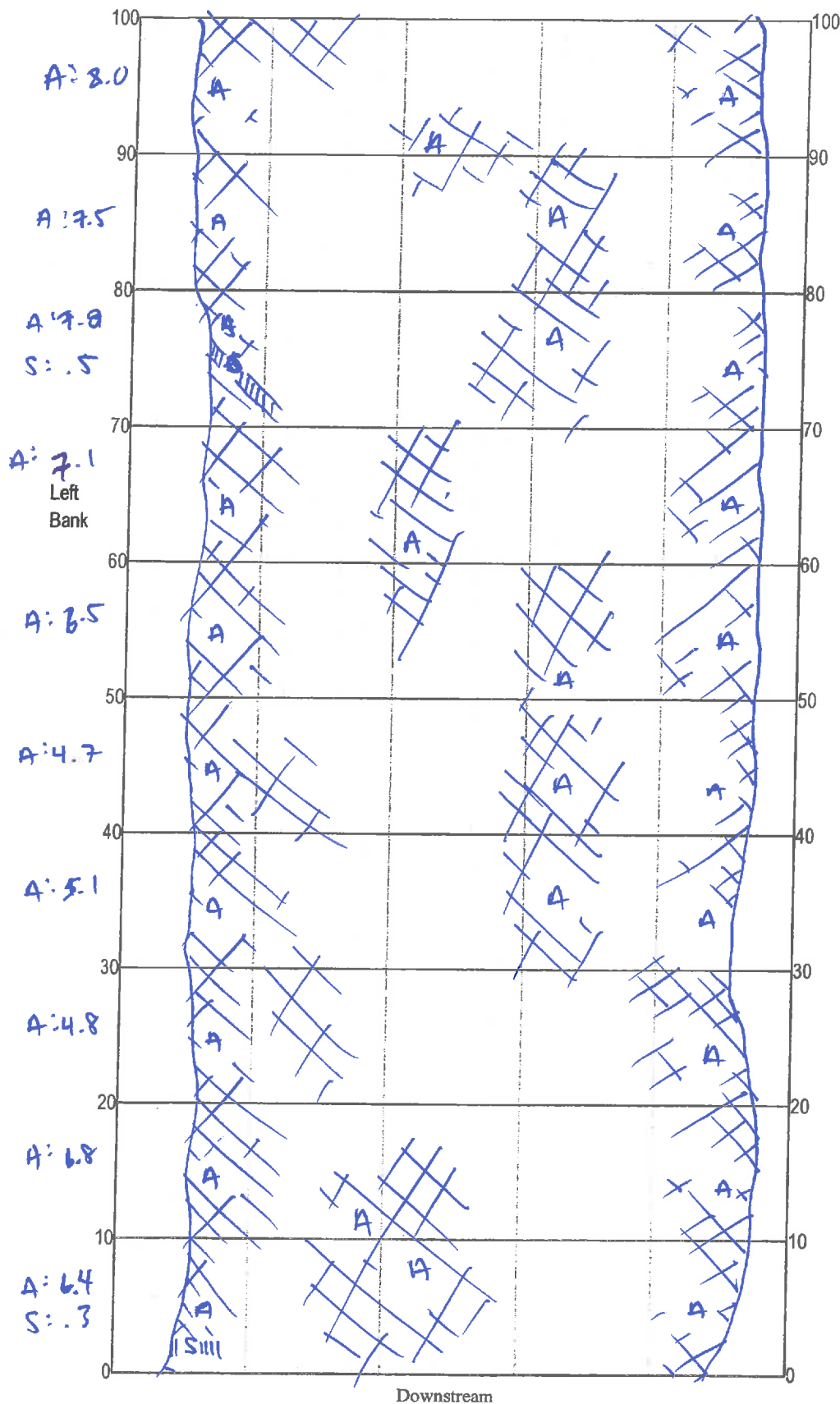
Date: _____

Sampler: _____

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 _____
☐	_____
☐	_____
☐	Pools
total # observed = _____	
# range expected = _____	
Average width _____ m	
Average depth _____ m	
Velocity measured at _____ meter mark.	
WQ & chemistry taken at _____ 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:

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: Bugg Spring Run

Date: 3/19/18

Sampler: Leif Bonner, Katie Willis

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☒ S Snags .8 0.08

☐ Roots/undercut banks _____

☐ Leaf Packs (or mats) _____

☒ A Aquatic Macrophytes 6.47 LB 1.75 LB 4.7

☐ _____ 1.80 / total

☐ Pools total # observed = _____
range expected = _____

Average width 10 m

Average depth 1.2 m

Velocity measured at 50 meter mark.

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:

A: ~~4.7~~ 6.47 LB

S: .8

Significantly more
Hyacinth than last
time. Slightly
less algae smother.

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Bugg Spring Run County: Lake Date: 3/19/10 Investigators: KMW, LGB

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		4		
	2		4		
	3		3	✓	
	4		2		
	5		2		0
	6		2		
	7		2		
	8		2		
	9		2		
10	1		2		
	2		2		
	3		2	✓	
	4		2		
	5		2		0
	6		2		
	7		2		
	8		2		
	9		2		
20	1		2		
	2		2		
	3		2	✓	
	4		2		
	5		2		0
	6		2		
	7		2		
	8		2		
	9		2		
30	1		2		
	2		2		
	3		2	✓	
	4		2		
	5		2		0
	6		2		
	7		2		
	8		2		
	9		2		
40	1		2		
	2		2		
	3		2	✓	
	4		2		
	5		2		0
	6		2		
	7		2		
	8		2		
	9		2		
50	1		2		
	2		2		
	3		2	✓	
	4		2		
	5		2		0
	6		2		
	7		2		
	8		2		
	9		2		

STORET Station Number: 61020037

Secchi depth 1.2 (s)
Estimated? N

points ranked 4-6 29
total points assessed 99
% points ranked 4-6 29

Check accompanying data collected at same site/date.
Algal mat sample ☒
Linear Veg Survey ☒
Habitat Assessment ☒
SCI/Biorecon ☒
Water sample ☒
RQ- 2018-03-19-63

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%.