

Instructions: Bold fields must be completed.

Station Summary						
Waterbody Name CAVES CREEK			Waterbody ID Code 166100		Sample ID (YYYYMMDD-CY-FD) 20191008-39-02	
Sampling Location @ 5th Ave					Database Key 208654177	
SWIMS Station ID 10017030		SWIMS Station Name CAVES CREEK AT 5TH AVE (DS OF CULVERT)				
Latitude Same as	Longitude Station		Lat/Long Determination Method (circle) SWIMS SWDV GPS			Datum Used if using GPS WGS84 or NAD83
Basin (WMU) UPPER FOX			Watershed Name MONTELLO RIVER		County MARQUETTE	
Sample and Site Descriptors						
Sample Collector (Last Name, First) DAVID BOLHA				Project Name NER LONG-TERM TREND WADEABLE REFERENCE STREAM		
Sampling Device						
<input checked="" type="checkbox"/> D-Frame Kick Net <input type="checkbox"/> Surber Sampler <input type="checkbox"/> Eckman <input type="checkbox"/> Ponar <input type="checkbox"/> Artificial Substrate <input type="checkbox"/> Hess Sampler <input type="checkbox"/> Other: _____						
Habitat Sampled						
<input checked="" type="checkbox"/> Riffle <input type="checkbox"/> Run <input type="checkbox"/> Pool <input type="checkbox"/> Other <input type="checkbox"/> Shoreline Composite <input type="checkbox"/> Proportionally-Sampled Habitat <input type="checkbox"/> Littoral Zone <input type="checkbox"/> Profundal Zone <input type="checkbox"/> Wetland						
Total Sampling Time (min) 2	Estimated Area Sampled (m <sup>2</sup> ) 1.0		Number of Samples in Composite 1		Replicate No. _____ of _____	
Reason For Sampling						
<input type="checkbox"/> Least Impacted Reference <input type="checkbox"/> Baseline <input type="checkbox"/> Impact / Treatment Site <input type="checkbox"/> Control Site <input checked="" type="checkbox"/> Trend <input type="checkbox"/> Other: _____						
Water Temp. (C) 11.5	D.O. (mg/l) 9.4	D.O. (% sat.) 87.6	pH (su) 7.8	Conductivity (umhos/cm) 285.9	Transparency (cm) 120	
Water Color <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Stained			Estimated Stream Velocity (m/s) <input type="checkbox"/> Slow (< 0.15 m/s) <input checked="" type="checkbox"/> Moderate (0.15 m/s - 0.5 m/s) <input type="checkbox"/> Fast (> 0.5 m/s)			
Measured Velocity circle units m/s or f/s		Average Stream Depth of reach (m) 0.2		Average Stream Width of reach (m) 1.8		
Composition of Substrate Sampled (Percent):						
Bedrock: _____		Boulders (basketball or larger): _____		Rubble (tennisball to basketball): 40		Gravel (ladybug to tennisball): 50
Sand: 10		Clay: _____		Silt/Muck: _____		Overhanging Vegetation: _____
Aquatic Macrophytes: _____		Leaf Snags: _____		Coarse Woody Debris: _____		Other (____): _____
Embeddedness of Substrate at Sample Site (%) 40			Canopy Cover at Sample Site (%) 100			

**Stream and Watershed Descriptors**

N = Not a problem      PL = Present, Low Impact  
 U = Uncertain          PH = Present, High Impact

Factors that may be influencing Water Resource Integrity	Local	Water-shed	Factors that may be influencing Water Resource Integrity	Local	Water-shed
<b>Biological</b>			<b>Chemical</b>		
Algae: - Diatoms / Periphyton	N	N	Chlorine	N	N
- Filamentous Algae	N	N	Dissolved Oxygen	N	N
- Planktonic Algae	N	N	Nutrients (P, N...)	N	N
Iron Bacteria	N	N	Toxics: - Inorganic (Metals)	N	N
Macrophytes	N	N	- Organic (PCBs, pesticides...)	N	N
Slimes	N	N	Other - Specify:		
Other - Specify:			<b>Sources of Stream Impacts</b>		
			Bank Erosion	N	N
			Point Source - Specify:	N	N
<b>Physical</b>			Pasturing of Livestock	N	N
Bank Erosion	N	N	Runoff: - Barnyard	N	N
Channelization: - Upstream	N	N	- Construction	N	N
- Downstream	N	N	- Cropland	N	N
Hydraulic Scour / Channel Incision	N	N	- Urban	N	N
Impoundment: - Upstream	N	N	Septic Systems	N	N
- Downstream	N	N	Tile Drainage - Organic Soils	N	N
Low Flow	N	N	- Mineral Soils	N	N
Sedimentation	PL	PL	Springs	PL	PL
Sludge	N	N	Tributary(s)	N	N
Thermal	N	N	Wetland	N	N
Turbidity	N	N	Other - Specify:		
Other - Specify:					

Comments

Special Instructions for Laboratory

For Lab Use Only		
Sample Sorter Cough, Natalie	Taxonomist Drumick, Jeffrey	Estimated Percent of Sample Sorted 13 to 12.5%
Date Processed 12/15/2020	Specimens Saved Subsample archived in ABL until Dec 2023	

E3 - 96

A3 - 93

189

Taxa	Life Stage	Bench Tally	Count	Taxonomic Reference	Condition	Unique Taxon
<i>Baetis brunneicolor</i>	L	x-	15	Klub 2016		
<i>B. flavistriga</i> species complex	L	"	2	"		
<i>Brachycentrus americanus</i>	L	-III	8	Hils 1985		
<i>B. occidentalis</i>	L	I	1	Hils 1985	imm	
<i>Glossosoma</i>	L	III	8	Merrill & B 2019	imm	N
<i>Protophila</i>	L	-	5	"		
<i>Glossosoma intermedium</i>	L	III	3	Wym Mar 2000		
<i>Helicopsyche borealis</i>	L	-III	9	Hils 1985		
<i>Helicopsyche</i>	P	I	1	Merrill & B 2019		N
Hydropsychidae	L	I	1	"	imm	N
<i>Ceratopsyche glossinae</i>	L	-II	7	Schm Hils 1986		
<i>Cheumatopsyche</i>	L	xI	11	Merrill & B 2019		
<i>Hydropsyche</i>	L	-	5	Hils 1985	imm	N
<i>Wheeleri</i>	L	xII	12	Schm Hils 1986		
<i>Lepidostoma</i>	L	-	5	Merrill & B 2019		
Philoptamidae	L	I	1	"	imm	
<i>Neophylax</i>	L	xIII	13	"	imm	
<i>Optioservus</i>	L	aIII	28	"	imm	N
<i>O. fastidius</i>	L, A	xIII	13	Hils Sch 1972		
<i>Stenelmis</i>	L	I	1	Merrill & B 2019		
<i>Atherix variegata</i>	L	I	1	Hils 1985		
<i>Tvetenia</i>	P	I	1	Merrill & B 2019		N
<i>Simulium vittatum</i> species complex OS110218	L	III	4	Atle et al 2004		
<i>Antocha</i>	L	III	3	Merrill & B 2019		
<i>Dicranota</i>	L	I	1	"		
<i>Gammarus pseudolimnoides</i>	A	x-III	19	Hils 1972		
<i>Caecidotea racovitzae</i>	A	III	4	Will 1972		
<i>Comptosia</i>	L	I	1	And et al 2013		
<i>Eukretella claripennis</i> group	L	"	2	"		
<i>Tvetenia bavarica</i> group	L	I	1	Bode 1983		
<i>Rheotanytarsus</i>	L	I	1	And et al 2013		

>3 taxa, TVAL < 2.0  
31 < (0.1 x 174)