

Instructions: Bold fields must be completed.

Station Summary

Waterbody Name UNNAMED	Waterbody ID Code 2941500	Sample ID (YYYYMMDD-CY-FD) 20191008-26-04
Sampling Location Upstream ATV bridge $\approx$ 40 m		Database Key 209649660

SWIMS Station ID 10044096	SWIMS Station Name UNNAMED TRIB TO BOOMER CREEK UPSTREAM OF ATV BRIDGE
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Latitude 46.48660	Longitude -90.34990	Lat/Long Determination Method (circle) SWIMS SWDV GPS	Datum Used if using GPS WGS84 or NAD83
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Basin (WMU) LAKE SUPERIOR	Watershed Name MONTREAL RIVER	County IRON
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Sample and Site Descriptors

Sample Collector (Last Name, First) JOSEPH CUNNINGHAM	Project Name MONTREAL RIVER TWA 2017-2018-2019
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Sampling Device

☒ D-Frame Kick Net	☐ Surber Sampler	☐ Eckman
☐ Ponar	☐ Artificial Substrate	☐ Hess Sampler ☐ Other: _____

Habitat Sampled

☒ Riffle	☐ Run	☐ Pool
☐ Other	☐ Shoreline Composite	☐ Proportionally-Sampled Habitat
☐ Littoral Zone	☐ Profundal Zone	☐ Wetland

Total Sampling Time (min) 1 min	Estimated Area Sampled (m ²) 1 m ²	Number of Samples in Composite 3-20 record kicks	Replicate No. _____ of _____
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Reason For Sampling

☐ Least Impacted Reference	☐ Baseline	☐ Impact / Treatment Site
☐ Control Site	☐ Trend	☐ Other: TWA

Water Temp. (C) 11.2	D.O. (mg/l) 9.9	D.O. (% sat.) 90.6	pH (su) 7.5	Conductivity (umhos/cm) 98	Transparency (cm) 2/20
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Water Color ☐ Clear ☐ Turbid ☒ Stained	Estimated Stream Velocity (m/s) ☐ Slow (< 0.15 m/s) ☒ Moderate (0.15 m/s - 0.5 m/s) ☐ Fast (> 0.5 m/s)
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Measured Velocity circle units m/s or f/s	Average Stream Depth of reach (m) 0.2 m	Average Stream Width of reach (m) 2.5 m
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Composition of Substrate Sampled (Percent):

Bedrock: _____	Boulders (basketball or larger): _____	Rubble (tennisball to basketball): 40	Gravel (ladybug to tennisball): 50
Sand: _____	Clay: _____	Silt/Muck: _____	Overhanging Vegetation: _____
Aquatic Macrophytes: _____	Leaf Snags: 10	Coarse Woody Debris: _____	Other (): _____

Embeddedness of Substrate at Sample Site (%) 10%	Canopy Cover at Sample Site (%) 60%
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Stream and Watershed Descriptors

N = Not a problem
U = Uncertain

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

Comments

Special Instructions for Laboratory

For Lab Use Only

Sample Sorter Sam Lamarche	Taxonomist Dimick Jeffrey	Estimated Percent of Sample Sorted 13%
Date Processed 2/24/2020	Specimens Saved 234	Subsample archived in ABL into / Jul 2023

C1 E3
90 144 234 total

Taxa	Life Stage	Bench Tally	Count	Taxonomic Reference	Condition	Unique Taxon
<i>Acerpenna</i>	L	II	2	Klub 2016	dam	N
<i>A. macdunnoughi</i>	L	III	3	"		
<i>Ephemerella</i>	L	-I	6	"	dam/imm	n=3, Y
<i>E. subvaria</i>	L	8-II	37	"		
<i>Heptageniidae</i>	L	II	2	"	dam	N
<i>Epeorus vitreus</i>	L	XI	11	"		
<i>Leucophaea</i>	L	X	10	"		
<i>Maccaffertium</i>	L	III	3	"	imm	Y
<i>M. vicarium</i>	L	III	21	"		
<i>Leptophlebiidae</i>	L	III	3	"	dam	N
<i>Leptophlebia</i>	L	II	2	"	imm	
<i>Paraleptophlebia</i>	L	XIII	14	"	imm	N
<i>P. mollis</i>	L	SD	1	"		
<i>Calopterygidae</i>	L	I	1	West May 2006	dam	
<i>Cardiogaster</i>	L	II	2	Tennissen 2019	imm	
<i>Paracappa angulata</i>	L	XIII	19	Hitch 1974	imm	
<i>Leuctra</i>	L	I	1	Hils 1995	dam	
<i>Acmaeura</i>	L	X	10	"	dam	
<i>Isoneta transmarina</i>	L	I	1	Hils 1982		
<i>Taeniopteryx</i>	L	-II	7	Hils 1995	imm	
<i>Microsema gelidum</i>	L	III	4	Hils 1985		
<i>M. rusticum</i>	L	III	3	"		
<i>Glossosoma</i>	L	III	3	Hils 1995	imm	
<i>Ceratopsyche glossosoma</i>	L	-III	8	Schm Hils 1986		
<i>C. sparna</i>	L	II	3	"		
<i>Hydropsyche betteni</i>	L	I	1	"		
<i>Lepidostoma</i>	L	III	4	Hils 1995		
<i>Limnephilidae</i>	L	-I	6	"	imm	
<i>Neophylax</i>	L	III	3	"	imm	
<i>Gorydaliidae</i>	L	I	1	"	dam	N
<i>Myranda semicornis</i>	L	-III	8	Neunzig 1966		
<i>Ophiocentrus</i>	L	-II	7	Hils Schm 1992	imm	N
<i>O. fastiditus</i>	L, A	-I	6	"		
<i>Atherix variegata</i>	L	I	1	Hils 1995		
<i>Bezzia/Palpomys</i>	L	II	2	"		
<i>Antocha</i>	L	II	2	"		
<i>Dicranopta</i>	L	III	3	"		
<i>Pseudolimnophila</i>	L	I	1	"		

[illegible]