



# Benthic Macroinvertebrate Indexing

Date: \_\_\_\_\_ Time: \_\_\_\_\_

UTM or GPS Location: \_\_\_\_\_

Other Volunteers Involved: \_\_\_\_\_

Was the stream dry when it was monitored?  Yes  No

Stream Habitat Type (check all types sampled in stream reach)

Riffle  Run  Pool  No

Stream Microhabitats Sampled (check all sampled)

Algae Mats  Sand  Weed Beds  
 Logjams  Junk (tires, garbage, etc.)  Undercut Banks  
 Root Wads  Leaf Packs  Rip Rap  
 Fallen Trees  Rocks  Overhanging Vegetation  
 Silt/Muck  Other (describe) \_\_\_\_\_

Dissolved Oxygen (mg/l)

Expiration date on back of color comparator \_\_\_\_\_

check one  1  2  3  4  5  6  8  10  12

Water Temperature \_\_\_\_\_ °Fahrenheit

Transparency (record whole numbers only – no tenths) \_\_\_\_\_ centimeters

Stream Flow (along your transect)

high  normal  low  not sure

Count	Tolerance Value (TV)	MBI value (count x TV)	Count	Tolerance Value (TV)	MBI value (count x TV)
<b>Ephemeroptera (mayflies)</b>			<b>Odonata (dragon/damselflies)</b>		
_____	Baetidae (6)	_____	_____	Aeshnidae (3)	_____
_____	Baetiscidae (4)	_____	_____	Calopterygidae (6)	_____
_____	Caenidae (7)	_____	_____	Coenagrionidae (8)	_____
_____	Ephemerellidae (2)	_____	_____	Corduliidae/Libellulidae (7)	_____
_____	Ephemeridae (6)	_____	_____	Gomphidae (5)	_____
_____	Heptageniidae (4)	_____	<b>Plecoptera (stoneflies)</b>		
_____	Isonychiidae (4)	_____	_____	Capniidae (3)	_____
_____	Leptohyphidae (4)	_____	_____	Nemouridae (3)	_____
_____	Leptophlebiidae (4)	_____	_____	Perlidae (3)	_____
_____	Metretopodidae (2)	_____	_____	Perlodidae (2)	_____
_____	Oligoneuriidae (2)	_____	_____	Pteronarcyidae (0)	_____
_____	Polymitarcyidae (2)	_____	_____	Taeniopterygidae (2)	_____
_____	Potamanthidae (4)	_____			

Count	Tolerance Value (TV)	MBI value (count x TV)	Count	Tolerance Value (TV)	MBI value (count x TV)
<b>Megaloptera (alderflies, dobsonflies)</b>			<b>Diptera (true flies)</b>		
	Corydalidae (6)			Athericidae (2)	
	Sialidae (4)			Chironomidae (6)	
<b>Trichoptera (caddisflies)</b>				Empididae (6)	
	Brachycentridae (1)			Simuliidae (6)	
	Glossosomatidae (0)			Syrphidae (10)	
	Helicopsychidae (3)			Tabanidae (6)	
	Hydropsychidae (5)			Tipulidae (4)	
	Hydroptilidae (6)		<b>Gastropod (snail)</b>		
	Leptoceridae (4)			Left Spiral (8)	
	Limnephilidae (4)			Limpet (6)	
	Philopotamidae (4)			Orbsnail (6)	
	Polycentropodidae (6)		<b>Right Spiral (6)</b>		
<b>Coleoptera (beetles)</b>			<b>Pelecypoda (bivalves)</b>		
	Curculionidae (no value)	N/A		Clam/Mussel (7)	
	Dryopidae (5)		<b>Other</b>		
	Dytiscidae (5)			Amphipoda (scud) (6)	
	Elmidae (5)			Decapoda (crayfish) (6)	
	Gyrinidae (4)			Hirudinea (leech) (8)	
	Haliplidae (5)			Hydrocarina (water mite) (6)	
	Hydrophilidae (8)			Isopoda (sowbug) (8)	
	Psephenidae (5)			Oligochaeta (segmented worm) (8)	
	Scirtidae (5)			Turbellaria (flatworm) (6)	
<b>Hemiptera (true bugs)</b>				Unidentified (no value)	N/A
	Belostomatidae (9)		<b>Total Number of Identified Organisms</b>		
	Corixidae (5)		Tolerance values:		
	Gerridae/Veliidae (6)		0 = very low tolerance to pollution (high quality organisms);		
	Nepidae (6)		10 = very high tolerance to pollution (low quality organisms).		
	Notonectidae (6)				

**Metrics**

1. Taxa Richness (Number of different families or taxa identified overall)
2. EPT Taxa Richness (Number of families identified in Ephemeroptera, Plecoptera, Trichoptera orders – EPT)
3. % EPT (total number of organisms in EPT orders/total number of organisms identified)
4. MBI – Macroinvertebrate Biotic Index [(Sum of count x tolerance value of all organisms = sum of MBI values column) / (total number of identified organisms)]
5. % 3 Most Dominant Taxa (sum of organisms in the three most abundant taxa/total number of identified organisms)

**Other Assessment Observations and Notes**

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