

STREAMSIDE BIOSURVEY: MACROINVERTEBRATES

Stream Name: _____

County: _____ State: _____

Investigators: _____

Site (description): _____

Latitude: _____ Longitude: _____

Site or Map Number: _____

Date: _____ Time: _____

Weather in past 24 hours:

- Storm (heavy rain)
- Rain (steady rain)
- Showers (intermittent rain)
- Overcast
- Clear/Sunny

Weather now:

- Storm (heavy rain)
- Rain (steady rain)
- Showers (intermittent rain)
- Overcast
- Clear/Sunny

MACROINVERTEBRATE SURVEY

Type of Sampling (check one)

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Rocky bottom _____ Muddy bottom _____

Muddy Bottom Sampling Only: Record the number of jabs taken in each habitat type.

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Vegetated bank margin _____

Snags and logs _____

Aquatic vegetation beds _____

Silt/sand/gravel substrate _____

MACROINVERTEBRATE COUNT

1. Identify the macroinvertebrates in your sample and assign them letter codes based on their abundance: R (rare) = 1-9 organisms; C (common) = 10-99 organisms; and D (dominant) = 100 plus organisms.

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Group I Sensitive	Group II Somewhat-Sensitive	Group III Tolerant
_____ Water penny larvae	_____ Beetle larvae	_____ Aquatic worms
_____ Hellgrammites	_____ Clams	_____ Blackfly larvae
_____ Mayfly nymphs	_____ Crane fly larvae	_____ Leeches
_____ Gilled snails	_____ Crayfish	_____ Midge larvae
_____ Riffle beetle adult	_____ Damselfly nymphs	_____ Snails
_____ Stonefly nymphs	_____ Scuds	
_____ Non net-spinning caddisfly larvae	_____ Sowbugs	
	_____ Fishfly larvae	
	_____ Alderfly larvae	
	_____ Net-spinning caddisfly larvae	

WATER QUALITY RATING

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2. To calculate the index value, add the number of letters found in the three Groups above and multiply by the indicated weighting factor.

Group I	Group II	Group III
_____ (# of R's) x 5.0	_____ (# of R's) x 3.2	_____ (# of R's) x 1.2
= _____	= _____	= _____
_____ (# of C's) x 5.6	_____ (# of C's) x 3.4	_____ (# of C's) x 1.1
= _____	= _____	= _____
_____ (# of D's) x 5.3	_____ (# of D's) x 3.0	_____ (# of D's) x 1.0
= _____	= _____	= _____
Sum of the Index value for Group I = _____	Sum of the Index value for Group II = _____	Sum of the Index value for Group III = _____

To calculate the water quality score for the stream site, add together the index values for each group. The sum of these values equals the water quality score.

Water quality score = _____

Compare this score to the following number ranges to determine the quality of your stream site.

0	Good	>40
0	Fair	20 - 40
0	Poor	<20

NOTE: The tolerance groupings (Group I, II, and III) and the water quality rating categories were developed for streams in the Mid-Atlantic states. A trained biologist familiar with local stream fauna should help determine if these tolerance and water quality rating categories should be modified for your geographic region and program.