

**BioSurvey**

**Macro Tally Sheet**

Stream Name: \_\_\_\_\_ Date \_\_\_\_\_ Weather  
Yesterday \_\_\_\_\_

Monitor ID #s \_\_\_\_\_ Time: \_\_\_\_\_ Today \_\_\_\_\_  
Please record all \_\_\_\_\_

Group I-Sensitive	
_____ Water penny larvae	_____ Riffle beetle adults
_____ Hellgrammites	_____ Stonefly nymphs
_____ Mayfly nymphs	_____ Non net-spinning caddisfly larvae (case builders)
_____ Gilled snails	

  

Group II-Somewhat Sensitive	
_____ Beetle larvae	_____ Scuds
_____ Clams	_____ Sowbugs
_____ Cranefly larvae	_____ Fishfly larvae
_____ Crayfish	_____ Alderfly larvae
_____ Damselfly nymphs	_____ Net-spinning caddisfly larvae (non case builders)
_____ Dragonfly nymphs	

  

Group III-Tolerant	
_____ Aquatic worms	_____ Midge larvae
_____ Blackfly larvae	_____ Snails
_____ Leaches	

## Biosurvey: Field Data Sheets

### Macroinvertebrate Survey

#### Type of Stream

\_\_\_\_\_ Rocky-bottom                      \_\_\_\_\_ Muddy-bottom

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

\_\_\_\_\_ Vegetated Bank Margin                      \_\_\_\_\_ Aquatic Vegetation Beds  
\_\_\_\_\_ Snags and Logs                      \_\_\_\_\_ Silt/sand/gravel Substrate

#### Macroinvertebrate Count

Identify the macroinvertebrates (to order) in your sample using the identification sheets. We are only concerned with organisms that appear on the identification sheets. Record the number of organisms below and then assign them letter codes based on their abundance:

**R** (rare) = 1-9 organisms; **C** (common) = 10-99 organisms; **D** (dominant) = 100 plus organisms.

example: 20 (C) Water Penny larvae

(Enter a whole number for each, 0-999)

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#### Group I - Sensitive

\_\_\_\_\_ ( ) Water Penny larvae                      \_\_\_\_\_ ( ) Riffle beetle adults  
\_\_\_\_\_ ( ) Hellgrammites                      \_\_\_\_\_ ( ) Stonefly nymphs  
\_\_\_\_\_ ( ) Mayfly nymphs                      \_\_\_\_\_ ( ) Non-net spinning  
\_\_\_\_\_ ( ) Gilled snails                      caddisfly larvae

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#### Group II - Somewhat Sensitive

\_\_\_\_\_ ( ) Beetle larvae                      \_\_\_\_\_ ( ) Scuds  
\_\_\_\_\_ ( ) Clams                      \_\_\_\_\_ ( ) Sowbugs  
\_\_\_\_\_ ( ) Crane fly larvae                      \_\_\_\_\_ ( ) Fishfly larvae  
\_\_\_\_\_ ( ) Crayfish                      \_\_\_\_\_ ( ) Alderfly larvae  
\_\_\_\_\_ ( ) Damselfly nymphs                      \_\_\_\_\_ ( ) Net-spinning  
\_\_\_\_\_ ( ) Dragonfly nymphs                      caddisfly larvae

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#### Group III - Tolerant

\_\_\_\_\_ ( ) Aquatic worms                      \_\_\_\_\_ ( ) Midge larvae  
\_\_\_\_\_ ( ) Blackfly larvae                      \_\_\_\_\_ ( ) Snails  
\_\_\_\_\_ ( ) Leeches

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# Water Quality Rating

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

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## Group I – Sensitive

(# of R's) x 5.0 = \_\_\_\_\_

(# of C's) x 5.6 = \_\_\_\_\_

(# of D's) x 5.3 = \_\_\_\_\_

**Sum of the Index Value for Group I =** \_\_\_\_\_

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## Group II – Somewhat Sensitive

(# of R's) x 3.2 = \_\_\_\_\_

(# of C's) x 3.4 = \_\_\_\_\_

(# of D's) x 3.0 = \_\_\_\_\_

**Sum of the Index Value for Group II =** \_\_\_\_\_

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## Group III – Tolerant

(# of R's) x 1.2 = \_\_\_\_\_

(# of C's) x 1.1 = \_\_\_\_\_

(# of D's) x 1.0 = \_\_\_\_\_

**Sum of the Index Value for Group III =** \_\_\_\_\_

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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

Good > 40

Fair 20-40

Poor < 20

Note: The tolerance groupings (Group I, II, III) and the water quality rating categories were developed for streams in the Mid-Atlantic states.