

# Freshwater Macroinvertebrate Sub-sampling

## Field Guide

### **Task**

To collect 20% of original sample for each taxon

### **What You Need**

- Sub-sampling grid with level
- Hat or bag
- Pieces of paper with grid labels
- 500-ml beaker

### **In the Field**

1. Record grid volume on *Data Sheet*.
2. Record total number of squares on grid on *Data Sheet*.
3. Multiply total number of squares by 0.2 to calculate the number of grids you need to sample.
4. Write grid numbers on pieces of paper and put in bag or hat. Pick enough for the 20%. Macroinvertebrates will be taken from those squares on the grid.
5. Place all the organisms from the taxon to sub-sample in beaker. The volume of water plus the organisms must equal the grid.
6. Adjust the sub-sampling grid so that it is perfectly leveled.
7. Mix the contents of the jar and pour onto the grid, spreading the sample evenly over the grid. If the grid is leveled and the volume is right, the organisms will be contained in their own 'pools' made from the raised lines on the grid.
8. If the grid is very stable and the number of organisms per square is small, the organisms in the randomly selected squares can be counted on the grid. Otherwise, use a basting syringe to remove the organisms from the randomly selected squares and transfer them to a jar and then count them.
9. Calculate the total number of individuals for this taxon. If you counted 20% of your squares, multiply the number of organisms you counted by 5 to estimate the total number of individuals for this taxon.
10. Report the percent of squares sub-sampled and the estimated total number of individuals that you sampled for this taxon on the [Macroinvertebrate Identification Data Sheet](#).