

# Benthic Macroinvertebrates

## Why do we measure this?

Benthic macroinvertebrates are small animals that live on the bottom of the stream. They are relatively immobile compared to other stream animals therefore they cannot escape either long or short term pollution. Benthic macroinvertebrates also have varying tolerances to pollution. Separating the macroinvertebrates sampled from a stream into groups that range from sensitive to tolerant to pollution can provide a way to calculate a biotic index. The biotic index calculated from the macroinvertebrate survey can give a longer term measurement of the health of a stream. This biotic index, along with dissolved oxygen, temperature, and other parameters can provide insight about the overall health of a stream.

### Equipment Needed:

- Kicknet and Chest Waders
- Bucket(s) and subsampler (ex. Cool Whip container)
- Plastic eyedroppers(6-7) and forceps
- White trays and ice cube trays
- Tally counter and magnifying glass
- 70% alcohol and glass vials

## Definition of Terms

**Citizen Monitoring Biotic Index:** A water quality index using the pollution tolerances of macroinvertebrates.

**Riffle:** Shallow area in a stream where water flows swiftly over rocks.

**Substrate:** The stream bottom surface on which plants and animals attach or live.

**Taxonomic group:** Macroinvertebrates grouped according to shared

that are characteristics.

