



What's in the Water?

Often, we try to assess the water quality of a stream by looking at and smelling the water. Sometimes, however, a polluted stream may look crystal clear and smell clean. Another way to tell if a stream is healthy is to look at what lives in the stream.

Macroinvertebrates are organisms that lack an internal skeleton and are large enough to be seen without a microscope. They are a very important part of wetland and stream ecosystems, and spend all or part of their lives in the water.

Macroinvertebrate populations can be impacted by a variety of stressors, including:

- ◆ Agricultural runoff
- ◆ Sewage and fertilizers
- ◆ Changes in land use from natural vegetation
- ◆ Sedimentation
- ◆ Introduction of alien species
- ◆ Contamination from metals and other pollutants



What is an indicator species?

An indicator species is one whose presence or absence or state of well-being is an overall indicator of the health of an environment.

For example, a mayfly is a macroinvertebrate whose presence indicates healthy waters. The absence of mayflies in an area where they existed previously could indicate that the water quality has deteriorated.

A species that can survive and even thrive in polluted environments is called a tolerant organism.

How Healthy is My Stream?

Lots can be learned about your local stream without sampling macroinvertebrates. Next time you are observing a stream in your area, ask yourself:

- ◆ What environmental stressors exist here?
- ◆ How may they affect the health of the stream?
- ◆ How may they affect the health of the organisms living in the stream?
- ◆ Are all organisms impacted in the same way?

