
Unit IV. Field Investigation

This unit guides you through a water quality monitoring investigation of your local stream. You may choose to investigate one or all of the parameters in the following sections.

The sections for each parameter contain background information to help you understand and interpret your results. Specific field directions and data sheets are printed on separate pages to let you copy these easily to take with you when you sample.

Sections

1. General Stream Survey

The general stream survey helps you identify basic information about the site location, the sampling date and conditions, and any insights into activities in the area that might affect water quality.

2. Physical Properties

Physical measurements help you understand the movement of water through the stream and how the stream's watershed influences the flow and general functioning of the stream. These physical properties are especially important in evaluating the quality of fish habitat.

- a. Stream Flow
- b. Stream Shape
- c. Physical Data Collection Sheet

3. Chemical Properties

Chemical measurements help us understand whether or not a stream's water is polluted. The sections also explain how the different pollutants affect our uses of the streams.

- a. pH
- b. Dissolved Oxygen
- c. Nutrients
 - Nitrogen (Nitrate and Ammonia)
 - Phosphorus
- d. Turbidity
- e. Temperature

4. Biological Properties

The plants and animals found near and in a stream help us understand whether or not the stream is polluted, how changes in the watershed may be influencing the stream, and how the stream and its community is changing over time.

- a. Macroinvertebrates
- b. Riparian Vegetation

Each monitoring section contains the following information:

- Background information, including definitions, why we care about that measurement, and what might make it change over time.
- A simple overview of the monitoring method
- Masters for overheads
- Information to help you interpret your results
- Resources for further investigation
- Directions for sampling in the field
- Data collection sheets