

## **Beyond Vital Signs: Parameters of Significance**

**Factors other than the basic five vital signs can also have a significant role to aquatic systems. These parameters maybe part of the natural hydrologic system but harm can be seen when normal conditions are exceeded.**

**The following is a brief list of some parameters citizen monitors are collecting data on.**

**Nitrogen** is a nutrient that occurs naturally in streams and is essential for plants and animals in an aquatic ecosystem. Problems occur when large amounts nitrogen are introduced into the stream ecosystem. As a result, there can be excessive algal growth depleting the available oxygen in the stream that fish and other aquatic organisms depend upon.

**Phosphate** is required macro-nutrient for green plants. It is often a limited resource, especially in fresh water systems. When naturally occurring levels become elevated, algal blooms can occur which may lead to oxygen depletion and to fish kills.

**Indicator bacteria** such as coliform bacteria, fecal coliform bacteria, *E. coli* and *enterococcus* are all considered indicators of water contaminated with fecal matter. Contaminated water may contain other pathogens (micro-organisms that cause illness) that are more difficult to test for. Therefore these indicator bacteria are useful in giving us a measure of contamination levels.

**Debris/Trash** impacts human health and safety, poses an entanglement or ingestion threat to wildlife and degrades critical habitats.

**Sediment** starved streams begin to gouge their beds and erode heir banks. Too much sediment can smother habitat and cause adverse effects to aquatic organisms.