



Missouri Streams Fact Sheet



INTRODUCTION TO STREAM MONITORING



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Streams and rivers are invaluable. They provide vital habitat and a source of fresh water for fish and wildlife. Streams also provide humans with water for drinking, irrigation, industrial supplies, power production, transportation, fishing, boating, swimming and aesthetic enjoyment. Collectively, we humans are the primary cause of degradation to stream systems, but we can also create the solutions to these problems. We can be instrumental in protecting and restoring habitat and water quality, ensuring for future generations the beauty and recreational opportunities our watersheds have to offer. One great way to protect our streams is by monitoring stream health.

There are many reasons for monitoring streams. Anyone can conduct a baseline study to characterize the overall health of the stream. This enables the monitor to document existing conditions and establish a data base for future comparisons. If the adopted stream is in good shape but is threatened by a proposed land use change, the monitor could then use their baseline data to compare the changes that might occur when the land use changes. This is called *trend analysis*. Your watershed mapping and inventory may reveal a problem. In this case you might conduct an impact analysis of that problem and determine how serious a problem it is. You may be involved with a watershed project and landowners have implemented best management practices to reduce impacts to a stream. In this case you could design a monitoring project to assess whether the best management practices have been effective at reducing impacts to the stream.

Measuring the quality of a river over long periods of time is important to detect changes in the river and look for trends. This includes changes in the watershed as well as the water. The quality of a stream is a reflection of its watershed, so the monitor should look at the entire watershed. The best way to assess stream quality is to take an all-encompassing approach and look at as many components of the stream as possible: the living organisms, the water chemistry and the physical environment.

