



Continued Monitoring of Water Quality Benefits

Project progress and BMP benefits are being evaluated through water quality monitoring at three sites on the creek. Data collected at these sites include stream stage and discharge, and pollutant concentrations. The water quality variables being monitored are nutrients (nitrogen and phosphorus), total suspended solids, and fecal coliform bacteria. Baseline data collected from 1995 to 1998 and water quality monitoring have been used to define baseline conditions and reflect water quality conditions before project implementation. Water quality data collected after 1999 will be used to document the cumulative benefits of BMPs applied in the watershed because 1999 was the first year with a significant number of BMPs.

Although the project has realized quick progress toward its land management goals, the nature of the applied practices and size of the watershed make it very difficult to accurately measure the water quality benefits associated with the practices over the short term. However, a preliminary review of water quality data collected since 1997 does indicate that water quality conditions are beginning to improve at some sampling sites in the watershed.

The most notable water quality trend has been detected at the monitoring site for the headwaters watershed. Although fluctuations in the concentrations are still within the range of natural variability, it appears that the project is having a positive effect on total ammonia and nitrogen concentrations in the upper portion of the watershed. However, examination of other water quality variables, such as fecal coliform bacteria, shows mixed results. Consequently, an accurate evaluation of the Cottonwood Creek project after just 2 years of "targeted implementation" cannot be based on measured water quality trends.

A more accurate indicator during this early stage of the project is an evaluation of the number of BMPs applied in the watershed. Based on this information, the Cottonwood Creek project is achieving land management improvements in the watershed and can truly be recognized as a "success in the works." Over the long term, as BMPs mature and additional practices are installed, the water quality benefits of these land use changes will be tracked through ongoing monitoring efforts and the data will be used to confirm and quantify the anticipated success of the Cottonwood Creek project.