



## **USDA-CSREES 2006 National Water Quality Conference**

### [Using Biological and Physiochemical Monitoring to Measure BMP Effectiveness](#)

Forestry Best Management Practices (BMPs) have been developed and implemented for over 20 years in some regions of the United States to reduce the water quality impacts of silvicultural activities. State forestry agencies promote these practices and routinely monitor BMP implementation. Published reports have shown that the forestry community has adopted these guidelines, noting high BMP implementation ratings across the country. However, this approach only addresses the presence and functionality of BMPs, not their actual effectiveness in protecting water quality.

A BMP effectiveness study is being conducted to evaluate Texas' BMPs for protecting water quality during intensive, operational forestry activities. This project follows the BACI study design (before – after / control – impact) and focuses on monitoring biological communities (benthic macroinvertebrates and fish) found in East Texas streams. Physiochemical monitoring (grab and stormwater) is also being conducted to calculate sediment and nutrient loading occurring from these operations. This monitoring is being conducted at points along the stream, above and below the treatment area, to establish reference and test conditions. Baseline data, collected one year before the treatment, will be compared to data collected for two years after the treatment. Preliminary results from this project support that BMPs, when applied properly, are effective in protecting water quality.

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