

Wisconsin's 2013 BMP Monitoring for Water Quality Executive Summary for County Forests

Background and Timber Sale Information

In the fall of 2013, county forests were monitored for the application and effectiveness of Wisconsin's Forestry Best Management Practices (BMPs) for Water Quality. A total of 33 timber sales were chosen to be monitored in order to ensure statistically valid results. These sites were selected because of the water resources in or adjacent to the sale. Information on how the BMPs were applied and how effective they were, was recorded along with site information such as: sale size, season of harvest, water resources, forest road use, and tree species of the harvest area. The average size for the sale area was 97.8 acres with a grand total of 3227 acres monitored. Most of the sites (11 sites each) were harvested either during the summer season or were cut during 'more than one' season. The most common water resource was wetlands (28 sites), followed closely by the presence of streams (23 sites). Every site that had a water resource, for which the BMP manual recommended a Riparian Management Zone (RMZ), had used an RMZ. The most commonly used RMZ was one which met the recommended distance specified in the manual. The most abundant dominant tree species on the harvest sites was aspen (20 sites). Lastly, there were 30 sites that included forest roads – and 21 of those contained active roads. Eight of those sites that contained forest roads had roads which included the presence of drainage structures, like water bars.

BMP Application

The 33 sites were each evaluated for BMP application, which consisted of 119 BMPs on the monitoring worksheet. Each BMP was rated as either:

- Not applicable to the site
- Insufficient information to rate
- Applied correctly where needed
- Applied incorrectly where needed
- Not applied where needed

The overall BMP application on county lands was good at 95%, and the amount of 'correctly applied' BMPs was slightly less at 93%. BMPs were found to be 'not applied', in situations where they were warranted, 5% of the time. When breaking down the application rate into monitoring categories, 'fuels, waste, lubricants, and spills' were rated the highest (98.4%) and 'forest roads' were the lowest (84.4%). Compared to past years, the 'correct application' rate was the same overall as in 2003 (93%), but varied widely when breaking down into the individual monitoring categories where some saw improvement, others decreased, and one remained the same (Figure 1). The 2013 results show an improvement from the baseline results measured in 1995-1997.

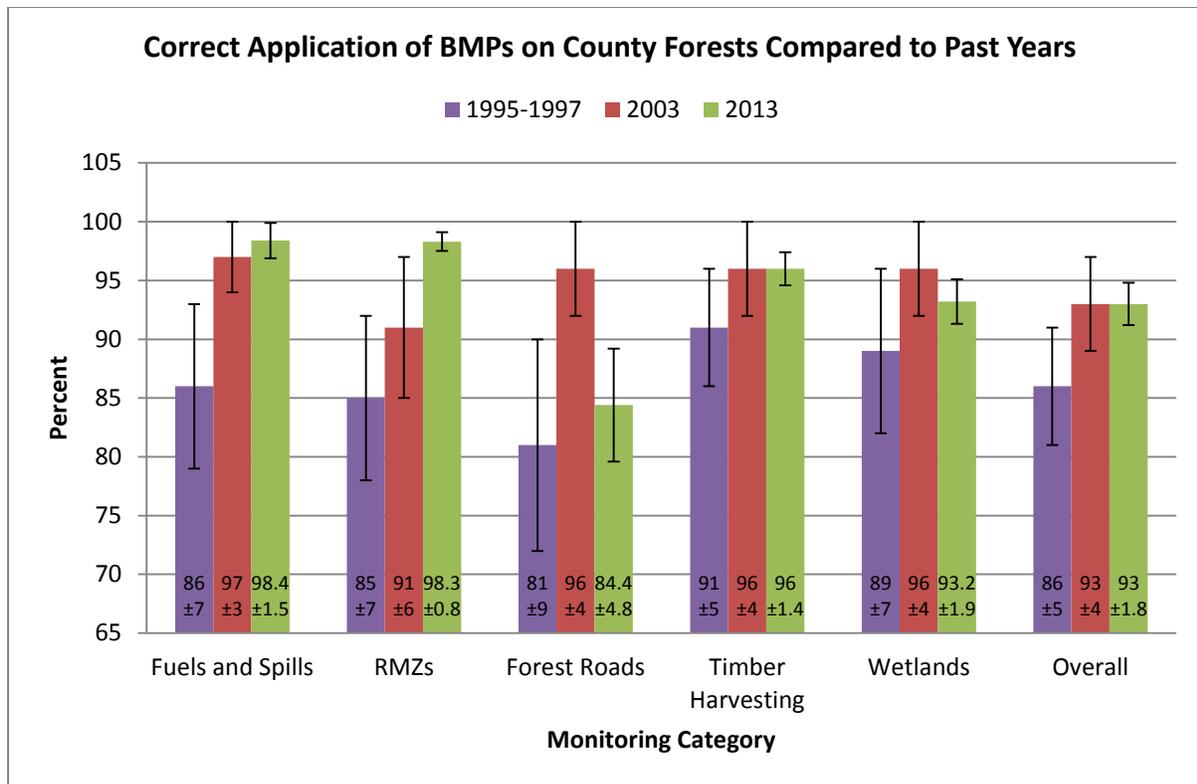


Figure 1. The correct application rates of BMPs on County lands in 2013 compared to the two different monitoring cycles - 1995/1997 and 2003.

BMP Effectiveness

For every BMP that was found to be applicable to the site, one of five effectiveness ratings was given:

- No adverse impact to water quality
- Minor short-term impact to water quality
- Minor long-term impact to water quality
- Major short-term impact to water quality
- Major long-term impact to water quality

The effectiveness of BMPs was very high, when their subsequent application rating was 'applied correctly'. The county effectively protected water quality 99.6% of the time, (saw no negative impact to water quality) when they applied the BMPs correctly. However, when BMPs were 'not applied' where they were needed, water quality was only protected 36.1% of the time. This shows the importance of using and correctly applying the BMPs in order to protect water quality.