

DEIS Appendix K

Executive Summary of MFRC Reports

**Baseline Monitoring for Implementation
of the Timber Harvesting and Forest Management Guidelines
on Public and Private Forest Land in Minnesota:
Combined Report for 2000, 2001, and 2002**



A report by the Minnesota Department of Natural Resources

Richard Dahlman and Michael J. Phillips
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Executive Summary

Minnesota forest practices have been guided by Best Management Practices (BMPs) for water quality since 1990. Additional BMPs to protect wetlands and visual quality were added in 1995. The Sustainable Forest Resources Act (SFRA) of 1995 mandated that the BMPs be expanded to provide protection for a broad range of functions and values on all forest lands in Minnesota. To address this mandate, the Minnesota Forest Resources Council (Council) utilized a multi-stakeholder process to develop guidelines to protect soil productivity, wildlife habitat, riparian management zones, and cultural and historic resources. These guidelines were integrated with the existing BMPs and, in 1999, Minnesota's comprehensive timber harvest and forest management (TH/FM) guidelines were published in a guidebook titled *Sustaining Minnesota Forest Resources: Voluntary Site-Level Forest Management Guidelines*.

This report discusses the findings of the first three years of monitoring. It establishes a baseline of harvesting practices prior to publication of the TH/FM guidelines.

The SFRA also required that a process be developed to monitor forest management practices on all forest lands in Minnesota to ensure that the guidelines are properly implemented. A monitoring program was implemented, beginning in 2000. The program objective is to evaluate the implementation of the guidelines through field visits to randomly selected recent timber harvest sites on state, county, national forest, tribal, other public agency, forest industry, other corporate, and non-industrial private forest (NIPF) lands. This report discusses the findings of the first three years of monitoring. It establishes a baseline of harvesting practices prior to publication of the TH/FM guidelines.

A total of 334 harvesting sites have been monitored for implementation of the TH/FM guidelines: 108 in 2000, 118 in 2001, and 108 in 2002. Monitoring sites were randomly selected on all ownerships, with the

selection process significantly revised each year as procedures were refined. Initially, sites were identified using a sampling procedure that randomly selected blocks of land 1/2 township in size throughout the forested area of the state. In 2001 this procedure was modified to compare the use of satellite imagery with aerial photography of randomly selected 1/6 township blocks for initial site identification.

Satellite imagery proved to be the most efficient and effective, and satellite imagery was used exclusively in 2002. Satellite imagery is also being used to identify a pool of sites for monitoring in 2004.

Landowners of all potential sample sites were subsequently contacted to secure permission to visit their sites and gather site background information prior to conducting the field reviews. The focus of the field review was to evaluate the application of measurable timber harvest and forest management guidelines.

This report summarizes the results for all monitored sites that were harvested and/or under contract prior to publication of the Council's TH/FM guidebook. This includes all sites monitored in 2000 and 2001, along with 89 of the 108 sites monitored in 2002, for a total of 315 sites. The remaining 19 sites monitored in 2002 were sold and contracted for after the publication of the TH/FM guidelines, or the harvest agreement was modified to incorporate the TH/FM guidelines. The results for these 19 sites will be analyzed along with the sites monitored in 2004.

Some of the important findings from the three baseline years of monitoring are given below:

- 53% of the monitored sites were harvested exclusively in the winter.
- 92% of the sites were managed as even-age. 93% of these were clearcut, and 2/3 of the clearcuts retained some reserve trees.
- 25% of the monitored sites were visually sensitive.

- Filter strip compliance with the guideline recommendation (< 5% mineral soil exposure, dispersed over the filter strip) was 73%.
- Riparian management zone (RMZ) guideline recommendations for width and residual basal area were met 52% of the time.
- Appropriate water diversion and erosion control practices were installed on 7.4% (three-year data) of skid trail and road approaches to wetlands and streams. However, more detailed information gathered in 2002 found that erosion was evident on only 5.8% of the approaches, and sediment was reaching a water body on 59% of those with erosion evident.
- 37% of the skid trail and road segments with a grade of 2% or more had the appropriate water diversion and erosion control practices installed. Detailed information gathered in 2002 found that erosion was visually evident on 22% of the segments, and sediment was reaching a water body on 20% of the segments where erosion was observed.
- Only 6% of more than 2,000 locations on the 89 sites monitored in 2002 had rutting 6 inches deep or deeper. Most rutted locations (78%) had less than 5% of their surface area in ruts, and 47% of the rutting was confined to roads, skid trails, and landings.
- The guidelines recommend that site infrastructure (i.e., roads, landings) occupy no more than 3% of the harvest area. The statewide average was 3% for all three years.
- Landings were located outside of filter strips and RMZs 77% and 98% of the time, respectively, and outside of wetlands 79% of the time.
- Coarse woody debris guidelines were met in 79% of the general harvest areas and in 69% of the RMZs.
- Slash was retained at the stump or redistributed back on the site for 75% of the sites monitored.
- 53% of the clearcut sites met the leave tree guideline recommendations.