

### Timber Harvesting and Forest Management Guidelines on Public and Private Forest Land in Minnesota

#### Monitoring for Implementation

2004, 2005, 2006 Results Compared to Baseline  
Monitoring Report

#### Overview

- 2004-2006 results were similar to those for 2000-2002
- Landowners, managers, loggers generally followed the guidelines well
- Higher implementation rates are attainable through additional training, better planning, and improved communications between landowners and loggers
- There is room to improve the monitoring protocols

#### Implementation rates were VERY GOOD for

- Visual quality
- Cultural resources
- Endangered, threatened, and special concern species
- Filter strips
- Snags

#### Filter strips

- Disturbance guidelines met 96% of the time (compared to 73% in 2000-2002)
- Erosion in filters strips was very rare (only 2% showed any erosion and sediment reached a waterbody on only 1%)
- Roads, skid trails, and landings avoided filter strips 85% of the time

#### Snags

- 73% of sites retained at least 1 snag per acre (the same as in 2000-2002)
- 54% of sites retained more than 2 snags per acre (up from 37%)

#### Implementation rates were FAIR to GOOD for

- Landings
- Rutting (except on crossings)
- Coarse woody debris
- Roads and skid trails (except for the use of water diversion and erosion control practices)

**Landings**

- In good condition and away from filter strips, RMZs and wetlands 75% of the time (up from 61% in 2000-2002)
- Few were rutted (about 10%)
- Fewer than 2% released sediment to a waterbody

**Rutting**

- About 45% of sites had no rutting
- Rutting generally affected less than 5% of a site and was usually confined to roads, skid trails, and landings

**Coarse Woody Debris**

- 75% of the sites met the guidelines (about the same as in 2000-2002)

**Roads and Skid Trails**

- The use of access controls on forest roads improved
- Skidding was concentrated on skid trails on 39% of the sites and randomly distributed lightly on 61%

**Improvements are needed for**

**Amount of infrastructure**

- 52% of sites met guidelines limiting amount of infrastructure
- Average amount of infrastructure increased since 2000-2002 (from 3.0% to 3.8%)

**RMZs along streams and lakes**

- Fewer sites met RMZ width and BA guidelines than in 2000-2002 (46%, down from 52%)

**Improvements are needed for**

**Water diversion and erosion control practices**

- Only 30% of approaches that needed erosion control had them
- Of the approaches that needed erosion control 34% showed signs of erosion and 20% eroded into a waterbody

**Wetland crossings**

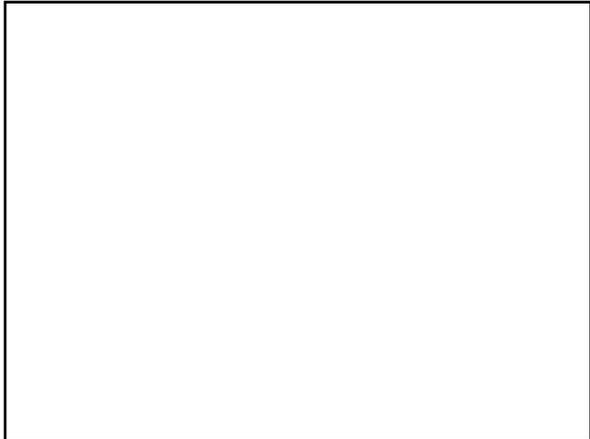
- 33% of crossing were rutted

**Improvements are needed for**

**Leave tree retention**

- Meeting leave tree guidelines declined to 47% of sites from 61% in 2000-2002
- Sites with both scattered leave trees and trees in clumps likely meet the guideline intent

VERY GOOD	FAIR to GOOD	NEEDS IMPROVEMENT
<ul style="list-style-type: none"> <li>• Visual quality</li> <li>• Cultural resources</li> <li>• Endangered, threatened, and special concern species</li> <li>• Filter strips</li> <li>• Snags</li> </ul>	<ul style="list-style-type: none"> <li>• Landings</li> <li>• Rutting</li> <li>• Coarse woody debris</li> <li>• Roads and skid trails</li> </ul>	<ul style="list-style-type: none"> <li>• Infrastructure</li> <li>• RMZs</li> <li>• Erosion control practices</li> <li>• Wetland crossings</li> <li>• Leave tree retention</li> </ul>



**Recommendations**

These recommendations are based on two related assumptions.

- It is in everyone's best interest to maintain and enhance the integrity of the system of voluntary guidelines.
- Producing regularly scheduled, unbiased reports on current rates of guideline implementation is essential to maintaining the integrity of the voluntary guideline system.

The recommendations focus on what needs to be accomplished rather than the mechanisms for bringing the necessary changes about

**Recommendations regarding the strategic direction of the program**

Articulate goals for the program

- Articulate the purpose(s) of implementation monitoring and the intended use(s) of the information it generates. Review these decisions periodically to determine whether they are still relevant.
- Establish and maintain a regular schedule for reporting that balances stakeholder information needs with available staff and financial resources.

**Recommendations regarding the strategic direction of the program**

Use implementation monitoring results more effectively.

- Focus communication efforts (i.e., reports, presentations, news releases) on specific audiences and specific practices.
- Set challenging implementation goals, by geographic area or ownership categories if appropriate, and closely track performance.
- Collect information on the reasons for non-implementation and use this information appropriately (e.g., to increase awareness, improve education efforts, modify the guidelines).

**Recommendations regarding the strategic direction of the program**

Place full responsibility for monitoring with the Council, along with appropriate staffing and funding.

**Recommendations for improving methods**

Improve data collection and handling

- Eliminate the need to transcribe field data by using smart data loggers. Smart (programmable) data loggers will also improve the quality of the data collected and reduce the workload associated with correcting errors.
- Create a database that reflects the logical relationships between harvest site features, harvest practices, and guidelines. A relational database will facilitate data summaries and report writing.

**Recommendations for improving methods**

Improve data collection and handling

- Eliminate data with little value. If it has not been summarized in previous reports, it likely can be eliminated.
- Use a Geographic Information System to record and process data where practical.

**Recommendations for improving methods**

Improve data collection and handling

- Revise the methods used to measure guideline application in the field so that they more accurately reflect the intent of the guideline.

Leave tree recommendations

RMZ width and basal area recommendations

Skid trail intensity and distribution

- Increase participation in monitoring by NIPF landowners via a combination of incentives for participating and disincentives for refusing to participate.

**Alternative scenarios for consideration**

- Let DNR, other public agency, and forest industry contribute data to the site-level monitoring program. Encourage these forestland managers to use the site-level monitoring protocols during their inspections. Store these data in the same database that houses the data from randomly selected sites. Summarize the results.
- Allow forest industry, public agencies, and other forest stakeholder groups to employ contractors trained by the Site-Level Monitoring Program. Maintain a pool of consultants qualified to conduct site visits using site-level monitoring protocols.

**Alternative scenarios for consideration**

- Monitor a subset of guidelines each year, monitoring all guidelines over 3-4 years.
- Monitor in one geographic area each year, monitoring all areas over 3-4 years.

