

**The Timber Harvest and Forest Management Guideline
Implementation Goals for 2000: A Progress Report
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INTRODUCTION

In 1995 the Minnesota Legislature enacted the Sustainable Forest Resources Act. As a result, the Minnesota Forest Resources Council (MFRC) was created and charged with the responsibility to coordinate the implementation of the Act. Among the many charges of the MFRC was the creation and publication of site-level timber harvesting and forest management guidelines that limit unwanted impacts to forest functions and protect a variety of forest values. Published in 1999, the guidebook entitled, *Sustaining Minnesota's Forest Resources: Voluntary Site-Level Forest Management Guidelines*, contain recommendations for addressing site-level water quality, wetland, wildlife habitat, riparian management, soil productivity, historic and cultural resources, and visual quality issues associated with conducting timber harvesting and forest management activities. In addition to the publication of the guidelines, the MFRC supported development of guideline introductory field and classroom training sessions for loggers and natural resource professionals. Moreover, the MFRC established a series of guideline implementation goals to encourage and evaluate full implementation of the guidelines around the state.

CRITERIA FOR ESTABLISHING IMPLEMENTATION GOALS

In December 1998, the MFRC established guideline implementation goals for each of the state's major forest landowner categories. These goals were established prior to implementation of the guidelines and reflect societal aspirations for acceptable rates of guideline use. Some of the criteria considered when selecting guideline application goals are listed below.

The implementation goals should

- be easy to identify and capable of being measured.
- be attained with existing or soon-to-be available technologies.
- be achieved within economically acceptable parameters.
- help to further forest resource protection goals.
- reflect the voluntary nature and complexity of the guidelines.
- respect forest landowner rights, responsibilities, and objectives.
- be consistent with applicable state, federal, and tribal environmental quality laws.
- allow for forest health emergencies or other natural catastrophes.
- recognize the variety of public and private interests that manage forest land in Minnesota.

The guideline implementation goals are organized to address four major aspects, organizational support, awareness and understanding, commitment to and application of the guidelines. The following describes each of the goals targeted to be reached in 2000.

ORGANIZATIONAL SUPPORT OF THE GUIDELINES

Background

Guideline implementation success relies heavily upon the support of major public and private organizations that have an interest in the sustainability of Minnesota's forests. Many organizations have had direct involvement in developing the MFRC's timber harvesting and forest management guidelines. An even greater number of organizations have an interest in

assuring site-based forest management practices are sustainable. The public support of these organizations will play a major role in determining the degree to which the guidelines are widely implemented. A total of 29 public and private organizations with an interest in the management, use, and protection of Minnesota's forest resources were solicited to offer a statement of support for the guidelines.

Goal: Statement of support for the guidelines by a variety of public and private organizations with an interest in the management, use, and protection of Minnesota's forest resources.

Results

The following 18 organizations have offered their support for the guidelines in 2000.

Table 1. Organizational support for the MFRC guidelines		
Organizations that have stated support for the guidelines	Organizations that currently do not support the guidelines	Organizations that did not respond to the MFRC request
<ul style="list-style-type: none"> • Chippewa National Forest • Superior National Forest • Minnesota Association of County Land Commissioners • The Wildlife Society/Minnesota Chapter • Minnesota Forest Industries • Minnesota Timber Producers Association • Associated Contract Loggers • Wood Fiber Employees Joint Legislative Council • Minnesota Environmental Initiative • Blandin Paper Company • Minnesota Forest Resources Partnership • Minnesota AFL-CIO • St. Louis County Land Department • Minnesota Department of Natural Resources • Minnesota Loggers Education Program • Minnesota Forestry Association • Society of American Foresters Minnesota Chapter • Minnesota Ruffed Grouse Society • The Nature Conservancy of Minnesota • Minnesota Deer Hunters Association 	<ul style="list-style-type: none"> • Trout Unlimited/Minnesota Chapter 	<ul style="list-style-type: none"> • Izaak Walton League, Minnesota Division • Minnesota Indian Affairs Council • Minnesota Resort Association • Minnesota Association of Consulting Foresters • Minnesota Center for Environmental Advocacy • Minnesota Audubon • Sierra Club North Star Chapter Office • Minnesota Lakes Association

AWARENESS AND UNDERSTANDING OF GUIDELINES

Background

In order that the guidelines are applied correctly potential users such as loggers, forest landowners, and resource managers must be aware of their existence and subsequently understand the reasoning behind the need for the guidelines. The MFRC knew it would be important to not only work with partners to heighten awareness about the guidelines, but also to measure the awareness of the guidelines with these groups.

As a result, two continuing education programs were established. Loggers created the Minnesota Logger Education Program (MLEP) to promote high operation standards and enhance professionalism for loggers. The Institute for Sustainable Natural Resources (ISNR—now the Center for Continuing Education, CCE) was established by the University of Minnesota College of Natural Resources to provide innovative education programs for natural resources professionals.

MLEP and CCE provide training opportunities that facilitate understanding of on-the-ground application of sustainable harvesting and management practices. During 1999 and 2000, two training programs were delivered to resource managers and logging professionals throughout Minnesota. The first was a full-day classroom training opportunity to introduce the forest management guidelines.

The second was a full-day field training session to allow practitioners to practice skills gained from the introductory session. In the past two years, 38 day-long sessions have been attended by more than 1,500 practitioners.

Goals and Results

Table 2. Guideline Awareness Goals Versus Actual Awareness Achieved in 2000.	
Awareness goals set for 2000	Awareness Achieved for 2000
75 percent of all wood harvested in Minnesota is done by timber harvesters who have attended both introductory guideline training and field demonstrations.	74.1 percent of all wood harvested in Minnesota was done by timber harvesters who have attended both training sessions. 2.9 percent of the wood harvested in Minnesota was done by timber harvesters who have completed only one training session.
75 percent of the state's natural resource professionals who are involved in administering timber sales or silvicultural operations have attended both introductory guideline training and field demonstrations.	63 percent of the state's natural resource professionals who are involved in administering timber sales or silvicultural operations have attended both guideline training sessions. In addition, 23 percent attended at least one training session while 14 percent have attended neither training session.
75 percent of the state's non-industrial private forest landowners <u>that own greater than 20 acres of forest land</u> are provided written information about the guidelines.	47,571 private forest landowners owning <u>greater than 20 contiguous acres</u> were sent written information about the guidelines.

Wood Harvested in Minnesota

One of the benchmark measures the Minnesota Forest Resources Council set for the end of the year 2000 was that at least 75 percent of the wood harvested in Minnesota would be harvested by loggers that have received the introductory training for the timber harvesting and forest management guidelines. This training involves two full day sessions, one classroom and one field session. Based on the training records of the Minnesota Logger Education Program (MLEP), 393 logging company owners have completed the introductory forest management guideline training. An additional 36 have taken part of the training and will be required to complete the training by the end of 2001 to maintain their MLEP membership.

MLEP member companies harvested 77 percent of the timber harvested in Minnesota in 1999 (74.1 percent by full members and 2.9 percent by provisional members). The volume of timber harvested by MLEP member companies is based on a 1998 unpublished University of Minnesota study titled *MLEP Assessment of 1997 Member Production* (Charles Blinn, Professor, College of Natural Resources). The study was a mail survey of MLEP members. A total of 287 members out of 341 responded. The estimate of production was 2,665,721 cords (an average of 7,872 cords per year per member company), which was 70 percent of the total harvest in 1997.

Since 1998 MLEP membership has increased to 429, including 393 full members and 36 provisional members. It was assumed that the production of the first 341 members remained the same as in 1997. It was also assumed that the 88 new members were smaller producers. Therefore, the average production of the lower two thirds of the 1997 respondents (3,100 cords per year) was used to calculate the total harvest volume of the 88 newest members (111,600 cords in total). The resulting total estimated volume harvested by MLEP member companies in 1999 was 2,938,521 cords. The total estimated harvest statewide for 1999 was 3,816,200 cords.

Natural Resource Professionals

The Minnesota Forest Resources Council set a goal to have 75 percent of natural resource professionals directly involved in setting up and administering timber sales to have completed the introductory forest management guideline training by the end of 2000. A total of 707 natural resource professionals completed at least one of the guideline training sessions.

A survey sent to employers identified that of the 707 participants 386 were field foresters, 167 were supervisory or program staff foresters, and 154 were non-forestry professionals. This same survey also identified 61 field foresters that have not yet attended either guideline training session.

The survey revealed that there are a total of 447 field foresters directly involved with setting up and administering timber sales. The proportion of field foresters that took guideline training varied greatly by organization. The breakdown is shown in the table below.

Table 3. Training session attendance of field foresters.				
	Completed Training	Only One Session	No Training Taken	Total
DNR Forestry	180 (81%)	41 (19%)	0	221
Forest Industry	34 (79%)	9 (21%)	0	43
County	52 (63%)	17 (21%)	13 (16%)	82
US Forest Service	8 (20%)	10 (25%)	22 (55%)	40
Consultants	5 (11%)	16 (34%)	26 (55%)	47
American Indian	3 (21%)	11 (79%)	?	14
Total	282 (63%)	104 (23%)	61 (14%)	447

As stated above, 167 of the natural resource professional that attended guideline training were considered supervisors and program staff. As a percentage of the total number of participants (707) 24% fit into this category. Sixty of the 167 supervisors and program staff (35%) participated in both days of training.

Table 4. Training session attendance of foresters that are supervisory or program staff.			
	Completed Training	Only One Session	Total
DNR Forestry	23	28	51
Forest Industry	21	37	58
County	9	11	20
US Forest Service	1	31	38
Consultants	0	0	0
American Indian	0	0	0
Total	60	107	167

The non-forestry professionals were from a broad spectrum of organizations and individuals and represented 22% of the 707 individuals that participated in at least one training session. Fifty-one of the 154 non-forestry professionals (33%) participated in both days of training.

- There were 106 non-forestry professionals from the Minnesota Department of Natural Resources that attended training sessions. The following divisions were represented Wildlife (44), Fisheries (20), Parks (16), Trails and Waterways (10), Ecological Services (9), Minerals (3), Enforcement (2), Waters (1), and Planning (1)
- Non-forestry professionals from 48 other organizations also attended. These organizations include the MFRC, Soil and Water Conservation Districts, Camp Ripley, University of Minnesota, Vermilion Community College, Water Planning Boards, US Fish and Wildlife Service, LTV Steel and USX Corporation, County Woodland Committees, Three Rivers Resource Conservation and Development Council, Minnesota Land Trust, Nature Conservancy, Minnesota Conservation Corps, Environmental Learning Centers, Community Forestry Resource Center, Natural Resource Conservation Service, and Minnesota Board of Water and Soil Resources.

Non-Industrial Private Forest Landowners

The MFRC also established an awareness goal for the state's nonindustrial private forest landowners (NIPF). There are approximately 77,100¹ NIPF's who own greater than 20 acres of forest land. The MFRC wanted to reach 75 percent of the state's NIPF's who own greater than 20 acres of forest land with written information about the guidelines. Toward that end the MFRC

¹ Birch, Thomas W. 2000. Private Forest-land Owners of the Northern United States, 1994. Resour. Bull. NE-136. Radnor, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 293 p.

produced a brochure entitled *Guidelines for Forest Management: "How-To's" for Private Forest Landowners*. Between 1999 and 2000, the MFRC sent this brochure to NIPF landowners who owned parcels of 20 or more contiguous acres in Aitkin, Becker, Carlton, Cass, Clearwater, Cook, Crow Wing, Hubbard, Itasca, Kanabec, Koochiching, Lake, Lake of the Woods, Mille Lacs, Morrison, Pine, and St. Louis counties. Forest landowners with more than 20 acres, but whose land is divided into several smaller parcels did not receive a copy of the brochure. The MFRC distributed a total of 47,571 brochures to NIPF's across the state, reaching about 53 percent of the total number of forest landowners.

Other Natural Resources Educational Offerings

The Center for Continuing Education (CCE) coordinated or co-sponsored 29 workshops in FY 00 and 23 workshops in FY 01. A total of 280 participants attend workshops in FY 00 and an estimated 635 will attend in FY 01. (These numbers do not include participation in the guideline training introductory and field sessions co-sponsored by MLEP and CCE.) In addition to the guideline training courses, the CCE offers workshops that relate to a specific guideline component, landscape-level workshops that promote the MFRC sustainable forest mission and technical courses that are critical to overall performance.

Workshops that contain direct components of the guidelines as part of the course structure are listed below.

- White Spruce Management
- Identifying Plants to Classify Forest Habitats
- Managing for Reptiles and Amphibians
- Managing Northern Hardwoods
- Practical Silviculture in an Ecological World

Workshops that focused on landscape-level planning and forest dynamics are listed below. While these courses did not directly address the MFRC guidelines there were aspects of the MFRC guidelines that were part of the discussions.

- Windstorm Ecology
- Managing Forests for Wildlife with Views on a Changing Climate
- Forest Certification for the Small Private Landowner
- Third North American Forest Ecology Workshop
- Native Plant Society: Nontimber Forest Products Symposium
- Close Encounters of a Human Kind: Environment, Evolution and Experience Symposium
- Disturbance Ecology
- Landscapes: Modeling Forested Landscapes and Wildlife
- Increasing Forest Productivity while Decreasing Forest Fragmentation
- Collaborative Learning Approach to Landscape-Level Planning

Technical courses offer important information to understand forest dynamics and technologies. Although these courses are not directly related to the guidelines they are critical to overall performance.

- Tree Breeding Principles and Strategies: An Overview
- Forestry Field Skills and Techniques
- Beneficial Use of Byproducts a Soil Amendments: Current Research and Applications

- History of Timber Use and Tribal Land Development in Northern Minnesota.
- Air Photo Interpretation
- GMO Workshop
- Timber Appraisal Workshop
- Handheld Computers in Field Forestry
- GPS Systems in Forestry
- Safety First: GMO Forum
- Quicker Cheaper Stand Assessment
- Land Line Relocation
- Obtaining Air Photo Coverage

COMMITMENT TO APPLY GUIDELINES

Background

Awareness and understanding of the guidelines must be accompanied by a willingness to actually apply the guidelines. Evaluating how often and the extent to which a discussion of guideline application takes place during the pre-harvest planning between the forest landowner, the resource manager, and the logger can measure evidence of a commitment to apply the guidelines. During the pre-harvest planning the parties involved can explicitly acknowledge the existence of the guidelines and subsequently discuss their application prior to commencing harvest operations. The discussion of guideline considerations should be done in conjunction with conducting a pre-harvest review.

Goals for Guideline Commitment

The established goals listed below were not part of the baseline study *Monitoring the Implementation of the Timber Harvesting and Forest Management Guidelines on Public and Private Forest Land in Minnesota: Report 2000* (MFRC report #MP-0201), because these sites were harvested prior to the publication of the timber harvesting and forest management guidelines. Future monitoring reports will give us the desired information and measure how close we are to our goals.

75 percent of all public (federal, state, county) forest resource agency's timber sales are conducted with a pre-harvest review of new sales (sales after guidelines were made available) during which guideline application is discussed jointly by the timber harvester and resource manager.

75 percent of all timber sales on private, industrial forests are conducted with a pre-harvest review of new sales (sales after guidelines were made available) during which guideline application is discussed jointly by the timber harvester and resource manager.

75 percent of all timber sales on private, non-industrial (NIPF) and tribal forests where professional forestry assistance is provided are done so with a pre-harvest review of new sales (sales after guidelines were made available) during which guideline application is discussed jointly by the timber harvester and forest landowner or its representative (e.g., resource manager).

50 percent of all timber sales on private, non-industrial (NIPF) and tribal forests where professional forestry assistance is not provided are done so with a pre-harvest review of new sales (sales after guidelines were made available) during which guideline application is discussed jointly by the timber harvester and forest landowner or its representative (e.g., resource manager).

Results

The baseline monitoring information could not measure whether or not there was a discussion of guideline application during the pre-harvest planning between the forest landowner, the resources manager, and the logger because the guidelines were not yet available. The first round of implementation monitoring did find that during onsite meetings between the landowner, the resources manger, and the logger road issues and timber harvesting specifications were discussed on 71% of the 94% of sites, respectively.

APPLICATION OF THE GUIDELINES

Background

Actual application of the guidelines is the most direct measure of guideline use. Because Minnesota's forest practice guidelines are voluntary, their application is not compelling, especially on private forest land. Additionally, the application of specific recommended practices are dependent on the forest landowner's management objectives, the condition of the forest at time of harvest, and major physical attributes of the forested property. Despite these conditions, goals can be established for aggregate levels of guideline implementation (not individual harvest sites) and for acceptable rates of improvement in guideline application. These goals must be linked to appropriate physical attributes of the forest. For example, guideline application goals for defined riparian management zones versus application goals for certain guidelines to be applied on all sites harvested (e.g., disposal of limbs and tops). Goals for guideline application and for rates of improvement could be different for major forest landowner categories, landscape regions, and/or types of practices.

Measures of Guideline Application

Goals

The identification of specific goals for the application of the guidelines is considered premature without an understanding of the extent to which the recommended practices are currently applied. In order to develop such goals for guideline application by forest landowner category, landscape region, and groups of practices, the MFRC affirmed that the following two-step process was necessary.

Step 1

Field monitoring will be used to develop a comprehensive baseline assessment of how Minnesota's current forest management and timber harvesting practices (i.e., pre-guideline conditions) compare to the recommended practices suggested in the forest practice guidebooks. An interdisciplinary management team will develop a field monitoring baseline assessment with input from scientists and practitioners.

The first step, establishing a field monitoring baseline assessment, has been completed and the results can be found in the MFRC report entitled *Monitoring the Implementation of the Timber Harvesting and Forest Management Guidelines on Public and Private Forest Land in Minnesota: Report 2000* (MFRC report #MP-0201). This report discusses the findings from the first year of conducting field monitoring of timber harvesting and forest management practices on public and private forest lands in Minnesota.

Step 2

Using goal selection criteria and results from the baseline assessment (pre-guideline conditions), the MFRC will specify goals for the application of the guidelines by forest landowner category, landscape region, and/or groups of practices.

The MFRC has begun to contemplate this question and will work to consider goal selection and criteria based on the results from the baseline monitoring assessment.

Continuous Improvement

Lastly, the MFRC stated that continuous improvement in the application of the guidelines was a long-term goal. In order to measure the improvements both steps one and two must first be in place.

The MFRC believes that continuous improvement (toward application goals) in the rate at which guidelines are being used is a long-term goal. Over time, successive field monitoring should indicate continuous improvement in the use of the practices recommended in the guidelines compared to pre-guideline application rates, and progress toward the application goals specified above.