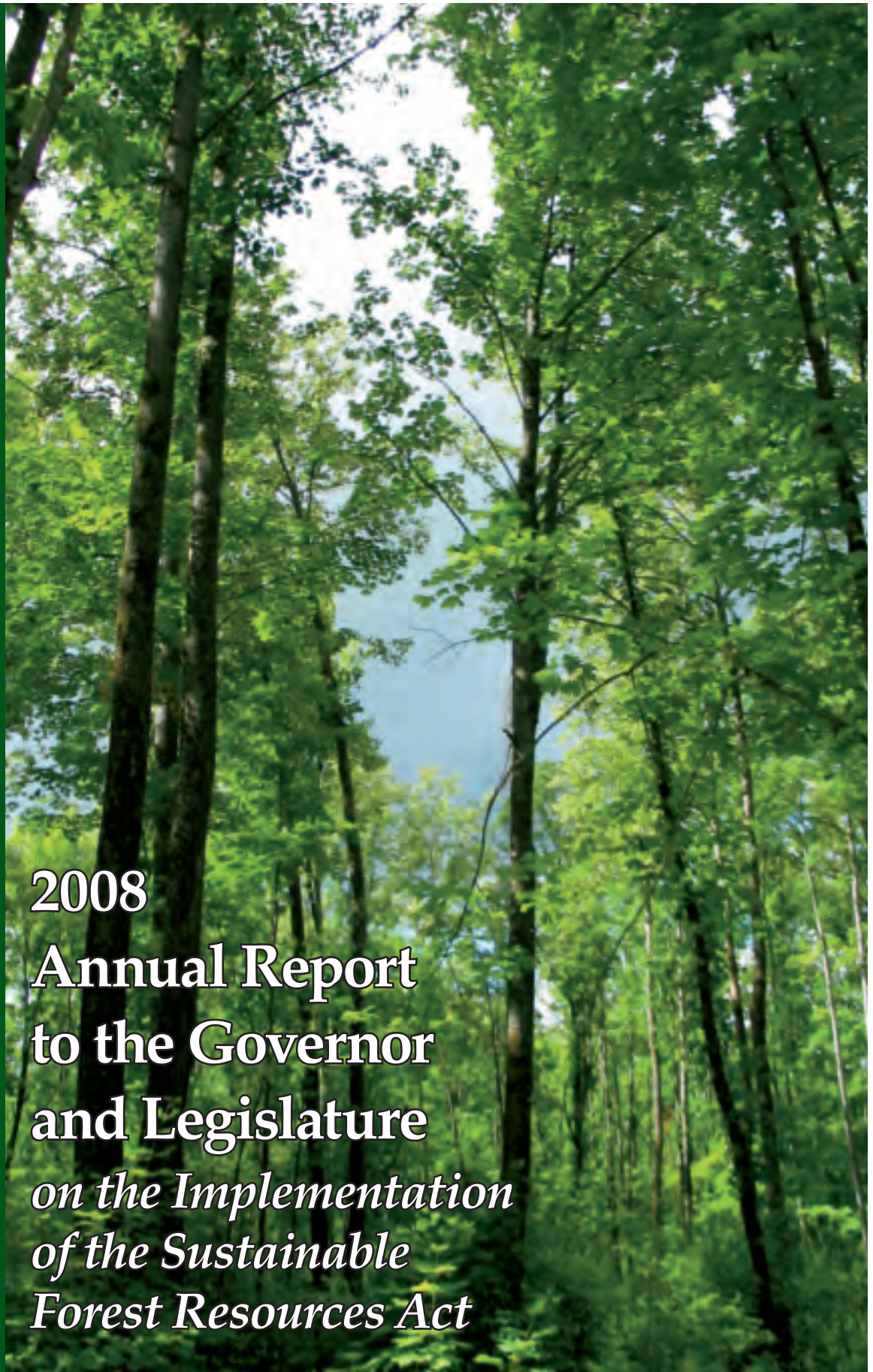


Minnesota Forest Resources Council

2008

Annual Report
to the Governor
and Legislature

*on the Implementation
of the Sustainable
Forest Resources Act*



Thank You

Thank you to all the organizations that continue to help, support, and participate in the programs of the Sustainable Forest Resources Act (SFRA) and the Minnesota Forest Resources Council (MFRC):

Associated Contract Loggers
Audubon Minnesota
Blandin Foundation
Cloquet Forestry Center
Institute for Agriculture and Trade Policy–
Community Forestry Resource Center
Minnesota Association of County Land Commissioners
Minnesota Center for Environmental Advocacy
Minnesota Deer Hunters Association
Minnesota Department of Natural Resources
Minnesota Forest Industries
Minnesota Forest Resources Partnership
Minnesota Forestry Association
Minnesota Indian Affairs Council
Minnesota Logger Education Program
Minnesota Resort and Campground Association
Minnesota Ruffed Grouse Society
Minnesota Timber Producers Association
Sustainable Forests Education Cooperative
The Nature Conservancy
The Trust for Public Land
USDA Forest Service
Chippewa National Forest
Superior National Forest
Northern Research Station
State and Private Forestry
USDI Fish and Wildlife Service
University of Minnesota
College of Food, Agricultural, and Natural
Resource Sciences
University of Minnesota-Duluth
Natural Resources Research Institute
University of Minnesota Extension
Wood Fiber Joint Legislative Council

Citizens of Minnesota who participate in SFRA
and MFRC programs
MFRC senior forestry consultant during 2008:
Larry Hegstad
MFRC student workers and interns during 2008:
Erin Baumgart, Tom Kirzeder, and Theodore LaFrance



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Minnesota Forest Resources Council

2008 Annual Report to the Governor and Legislature

on the Implementation of the Sustainable Forest Resources Act

*Respectfully submitted
by the Minnesota Forest Resources Council*

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Photo by Erin Baumgart

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The Minnesota Forest Resources Council

The MFRC is a 17-member organization working to promote long-term sustainable management of Minnesota's forests in two ways:

- By coordinating implementation of the Sustainable Forest Resources Act (SFRA), established under Minnesota Statutes 89A.
- By advising the Governor and federal, state, county, and local governments on sustainable forest resource policies and practices.

Created in 1995, the MFRC operates within the policy framework for sustainable forestry set forth in the SFRA, which is to:

- **Pursue the sustainable management, use, and protection** of the state's forest resources to achieve the state's economic, environmental, and social goals.
- **Encourage cooperation and collaboration** between public and private sectors in the management of the state's forest resources.
- **Recognize and consider forest resource issues, concerns, and impacts** at the site and landscape levels.
- **Recognize the broad array of perspectives** regarding the management, use, and protection of the state's forest resources, and establish processes and mechanisms that seek these perspectives and incorporate them into planning and management.



From the Chair An Overview of MFRC Accomplishments in 2008

Accomplishments of the Minnesota Forest Resources Council (MFRC) in 2008 reflect the MFRC's ongoing commitment to taking the lead in identifying sustainable forest management issues; funding needed research and analyzing results; making policy recommendations; encouraging cooperation and collaboration in forest resource management; developing guidelines for resource managers and practitioners; and monitoring and evaluating the impacts of forest management guidelines over time.

- **The MFRC developed a strategic policy focus for the next two years, comprised of four priority issues:** 1) impacts of forestland ownership changes, parcelization, and development on private and public forestland; 2) economic and ecological impacts of forest biomass and biofuels harvesting; 3) forest carbon sequestration and the role of Minnesota forests in mitigating the effects of climate change; and 4) threats to forest health.
- **The MFRC obtained \$203,000 in funding** from the Blandin Foundation, Iron Range Resources, and the Minnesota Legislature to study the magnitude, causes, and impacts of forestland parcelization in the state, as well as to analyze a broad and integrated set of policy tools to mitigate the adverse effects of parcelization. The MFRC will continue to carry out this study over the next year, culminating in recommendations to the Legislature.
- **The MFRC supported the development of 18 "opportunity area projects"** that involve multiple partners, including landowners, foresters, township and county officials, and resource managers from soil and water conservation districts (SWCDs), resource conservation and development districts (RC&Ds), and state and federal agencies. Developed for both public and private lands, these projects address a range of topics in such areas as forestry and watershed education, wildlife habitat, joint timber sale planning, technical assistance for private landowners, and open lands management.

- **The MFRC's woody biomass harvesting guidelines are the first state-level guidelines in the United States** for the sustainable removal of woody biomass for energy from forests, brushlands, and open lands. This year, more than 1400 copies of the biomass harvesting guidelines have been distributed to resource managers and practitioners. The MFRC helped sponsor training on these guidelines, which was provided by the Minnesota Logger Education Program and the Sustainable Forests Education Cooperative.

- **The MFRC received the Minnesota Department of Natural Resources (DNR) report on three years of implementation monitoring data.** The report, titled *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*, analyzed three years of implementation monitoring data (2004-2006) to assess forest harvest practices **after** the adoption and publication of the MFRC timber harvesting/forest management guidelines. Those results were then compared to baseline monitoring data (2000-2002) collected on sites either harvested or contracted for harvest **prior to** publication of the MFRC guidelines in 1999. The report identified 1) successes and deficiencies in the application of specific forest management guidelines among landowners; 2) opportunities to improve education efforts; and 3) potential research topics regarding forest management practices.

- **The MFRC approved a number of recommendations, based on a comprehensive review of the site-level monitoring program,** and took steps to 1) better articulate the purposes of implementation monitoring and the intended uses of the information it generates; 2) establish and maintain a regular schedule for monitoring and reporting; and 3) more effectively use the information generated.

- **The MFRC funded two major research projects** through its Forest Resources Research Advisory Committee (RAC), thanks to \$500,000 in funding provided by the 2008 Minnesota Legislature. These two studies will address issues identified by the Governor's Task Force on the Competitiveness of Minnesota's Primary Forest Products Industry and by the MFRC Biomass Guideline Committee. The RAC also initiated a Forest Resources Research Assessment to develop a comprehensive vision and strategy for forest-related research in Minnesota.



Photo by Patrick O'Leary/
University of Minnesota

Alfred D. Sullivan

Alfred D. Sullivan
Chair

MFRC membership

The Governor appoints a chair and 15 other members to the MFRC. Recognizing the sovereignty of Indian nations under federal law, the Minnesota Indian Affairs Council appoints one additional member.

MFRC membership includes a chair plus individuals representing the following categories:

- Commercial logging contractors
- Conservation organizations
- County land departments
- Environmental organizations (*two representatives*)
- Forest products industry
- Game species management organizations
- Labor organizations
- Minnesota Department of Natural Resources
- Minnesota Indian Affairs Council
- Nonindustrial private forest landowners (*two representatives*)
- Research and higher education
- Resort and tourism industry
- Secondary wood products manufacturers
- USDA Forest Service

Forest Policy Initiatives

Over the past several years, the role of the Minnesota Forest Resources Council has evolved from a primary focus on core program development to an expanded focus on identifying and addressing policy issues and initiatives related to sustainable forest management. This expanded focus includes providing ongoing policy advice to the Governor, the Minnesota Legislature, and state, county, and federal government officials.

What are the MFRC's four priority issues for 2008-10?

One of the primary roles of the MFRC is to identify and address key policy issues related to the sustainable management of Minnesota's forests. We spent considerable time in 2008 updating and defining our focus in the policy arena. Reviewing MFRC accomplishments regarding priority policy issues and utilizing input from around the state, we developed a strategic policy focus for the next two years, which identified the following four priority issues:

- **Forest land base:** Economic, ecological, and social impacts of forestland ownership changes, parcelization, and development on private and public lands that may result in fragmentation or loss of forested land.
- **Forest biomass and biofuels harvest:** Economic and ecological impacts and benefits of forest biomass harvesting.
- **Forest carbon sequestration:** The role of forests and forest products in carbon sequestration.
- **Threats to forest health:** Economic, ecological, and social impacts of declining forest health, especially related to invasive terrestrial plants, insects, and diseases across the landscape.

We will continue to identify and track other important forest policy issues, with special emphasis on: water quality and its relationship to forest cover; professional recruitment, education, and training; public education and information; and issues surrounding wildfire.

What were the highlights of the MFRC's policy work in 2008?

Policy initiatives for 2008 focused primarily on the first three of the MFRC's four priority issues for 2008-10. MFRC action related to the fourth priority issue—threats to forest health—involved organizing a task force to develop the 2008 Forest Protection Plan, a strategy to address invasive forest pests (see "Policy Research," page 29).



New housing built in a forested setting contributes to forest fragmentation. The MFRC is evaluating policy tools to maintain healthy, contiguous forests and vibrant communities. Photo by Larry Korlmak, University of Florida, www.interfacesouth.usda.gov (2002)

Forest land base: Forestland parcelization and development

Background: Forestland parcelization is the division of large forested blocks of land into smaller parcels, often transferring ownership from a single owner to multiple owners. Parcelization has been closely linked to forest fragmentation and development, which have demonstrated negative impacts on timber availability, wildlife habitat, biodiversity levels, recreational opportunities, and other forest-related benefits. Recognizing that large blocks of forestland support a host of economic, environmental, and social benefits, ensuring continuation of these benefits is a significant concern as parcels get smaller and, in time, become developed.

MFRC action: The MFRC has obtained \$203,000 in funding from the Blandin Foundation, Iron Range Resources, and the Minnesota Legislature to:

- **Increase our understanding** of the magnitude, causes, and impacts of forestland parcelization in the state.
- **Analyze a broad and integrated set of policy tools** to mitigate the adverse effects of parcelization.

Building on research previously funded by the MFRC, we have begun to address the various parts of the study by means of a thorough review of existing documents and programs, extensive consultation with stakeholders, and the engagement of experts from around the country regarding forestland parcelization.

We will continue to carry out this study over the next year. The study will result in a series of recommendations to the Minnesota Legislature. These recommendations will provide decision-makers with a better understanding of:

- The problems we face related to parcelization
- The range of available policy tools and the cost-effectiveness of each approach
- Integrated solutions that reflect the complexity of the problem
- Potential roles and responsibilities of various levels of government and private organizations

Parcelization has been closely linked to forest fragmentation and development, which have demonstrated negative impacts on timber availability, wildlife habitat, biodiversity levels, recreational opportunities, and other forest-related benefits.

This wood has been chipped for use at a woody biomass energy facility in Virginia, Minnesota.



What is woody biomass harvesting?

On forested sites, biomass harvesting removes different or additional woody material from a site than would be removed under typical roundwood harvest. In addition to the use of tops and limbs from trees harvested in a roundwood operation, biomass harvesting may include the use of small-diameter trees or stems (which have historically been “non-merchantable”), dead trees (snags), down logs (coarse woody debris), brush, and stumps.¹

Often biomass harvesting is conducted in conjunction with roundwood harvest. Biomass harvesting may also be used as a tool to rejuvenate sites or to reduce fuel loads. This practice may be conducted on sites where a roundwood harvest is not occurring.

¹The guidelines generally recommend retaining snags, coarse woody debris, and stumps, as well as some tops and limbs.

Forest biomass and biofuels harvest

Background: With the advent of changing markets and federal and state policies (e.g., Minnesota’s 1994 Biomass Mandate, 2007 Renewable Energy Objective, and 2007 Renewable Energy Standard), the number of potential users of woody biomass for energy production has increased. These increased demands present both significant opportunities for economic development and ecological restoration, as well as substantial challenges in our use of woody biomass for energy (such as maintaining ecological functions of the site and minimizing impacts to water quality).

To address some of these opportunities and concerns, the MFRC developed guidelines for the sustainable harvest of woody biomass and, in 2008, funded research to investigate the ecological impacts of woody biomass harvesting.

MFRC action: We took a lead role in clarifying the status of woody biomass use for energy in the forested portions of the state by compiling information from state agencies, nonprofits, private industry, research institutes, and others. This information included definitions of woody biomass, current and potential users, other guideline development efforts, completed and current research efforts, and various availability assessments.

Using this information, we recommended a statewide assessment of woody biomass availability that will include consideration of technical, economic, and ecological constraints. Subsequently, a University of Minnesota study of these constraints on total availability was funded by the Next Generation Energy Board (established by the Minnesota Legislature to develop biofuels policies and recommendations for legislative consideration), in conjunction with the University of Minnesota’s Initiative for Renewable Energy and the Environment.

We also worked with the Blandin Foundation and numerous stakeholders to further address availability and feasibility of harvesting woody biomass. We continue to closely track developments regarding the use of woody biomass.



Forests sequester and release carbon. The MFRC is identifying land use policies and forest management strategies that may maintain and enhance the carbon storage capacity of forests. *Photo by Eli Sagor, University of Minnesota Extension*

Forest carbon sequestration

Background: As concerns about climate change grow, and as both states and regional consortia develop policies to reduce greenhouse gas emissions, the potential of forests and the forest products industry to contribute to those reductions has attracted increased attention. Forests sequester and release vast amounts of carbon through both natural processes and human activities. Land use policies, forest management strategies, wildfire control, and the use of wood in long-lived forest products (such as houses and furniture) can preserve and enhance the carbon storage capacity of forests while also strengthening the role of the forest products industry in mitigating the effects of climate change.

In a 2008 report, the Governor's Minnesota Climate Change Advisory Group (MCCAG) recognized the importance of forests in greenhouse gas reduction by suggesting that nearly 30% of the state's 2025 greenhouse gas emission reduction goals could be achieved through forest management initiatives.

MFRC action: The MFRC contributed significantly to two efforts to enhance the role of forest carbon sequestration and the forest products industry in mitigating climate change:

- MFRC staff participated in the MCCAG, providing data and analyses of carbon storage in forests and wood products. MFRC staff also identified forest management improvements that would increase the capacity of forests and the forest products industry to reduce greenhouse gas emissions.
- MFRC staff participated in the Minnesota Terrestrial Carbon Sequestration Initiative, an effort funded by the Legislature to identify those Minnesota land uses with the greatest potential to reduce greenhouse gas emissions while also providing additional water quality, wildlife habitat, and recreational benefits. The MFRC's Information Management Committee will spend a large portion of 2009 gathering and synthesizing information related to forest carbon sequestration and climate change.

What is forest carbon sequestration?

Atmospheric carbon is absorbed during the process of photosynthesis. It can potentially be stored in trees and wood products for long periods of time. Long-term carbon storage—"carbon sequestration"—can help reduce inputs of greenhouse gas (CO₂) to the atmosphere and mitigate the effects of CO₂ associated with climate change.

Landscape-Level Forest Resource Management

The MFRC Landscape Program fulfills the MFRC's charge to "encourage cooperation and collaboration between public and private sectors in the management of the state's forest resources." This grass-roots effort builds relationships, strengthens partnerships, and identifies collaborative forest management projects that address local needs and represent concrete steps in determining and reaching citizen-identified short-term and long-term goals for broad landscape regions.



A landscape is a large geographic area or region defined by common natural, political, and social features. A landscape may encompass millions of acres.

How does the Landscape Program support sustainable forest resource management?

As we become increasingly aware of the impacts of human activity on forest ecosystems, and as expectations for forest products and services diversify and grow, people are thinking more comprehensively about human impacts on forest resources on larger and larger geographic scales. Emerging issues, like climate change, biomass energy, wildfire fuel reduction, and forestland parcelization, need to be addressed with landscape-level solutions.

The Sustainable Forest Resources Act (SFRA) laid the foundation for large-scale forest management by establishing the Landscape Program. The MFRC oversees the Landscape Program to support a broad perspective and a collaborative approach to sustainable forest management.

How does the landscape-level management process work?

The MFRC divided the state into six major forested regions plus two other (metro and prairie) regions (see Figure 1). A regional forest resource plan or “landscape plan” has been prepared for each of the six forested regions. Each plan begins with statements that describe desired future conditions for the region’s forests over a long-term horizon (up to 100 years).

The plans also include shorter-term goals and strategies to guide efforts by landowners; forestry professionals; and industry, tribal, and agency officials in pursuing the sustainable management of the region’s forest resources. The landscape-level forest resource management process involves four phases: planning, coordination, implementation, and monitoring and evaluation.

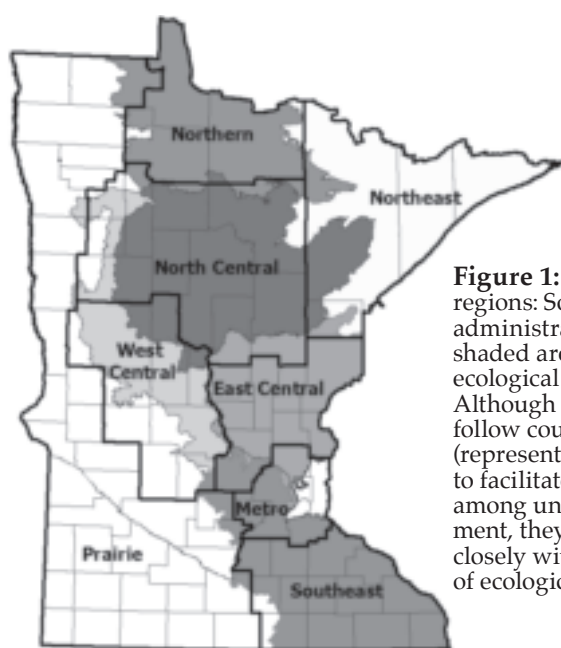


Figure 1: Landscape regions: Solid lines represent administrative boundaries; shaded areas represent ecological boundaries. Although regional borders follow county boundaries (represented by fine lines) to facilitate coordination among units of government, they also correspond closely with the borders of ecological regions.

What is the role of regional landscape committees?

Volunteer, citizen-based regional landscape committees are central to carrying out these landscape management processes. Regional landscape committees provide an open public forum for diverse interests to cooperatively promote forest sustainability. The MFRC Landscape Program fulfills the SFRA’s charge to “encourage cooperation and collaboration between public and private sectors in the management of the state’s forest resources.”

The Landscape Program is a voluntary grass-roots effort that builds relationships and strengthens partnerships to address both regional and local needs. By bringing together representative interests from landscape regions, the committees serve as springboards for effective forest management activities that address specific needs and challenges in each landscape region.

How do the regional landscape committees go about implementing their landscape plans?

How is the Landscape Program perceived beyond Minnesota?

The MFRC Landscape Program is a unique initiative—unmatched anywhere else in the country—resulting from state legislation to establish and fund a framework for landowners, resource managers, interested groups, and public officials to work together to address forest sustainability on a landscape level.

The Landscape Program is prominently featured in a 2008 report titled *Stewardship and Landscape Coordination for Sustainable Forests*, by John Fedkiw and Gerald A. Rose. Published by the Pinchot Institute for Conservation, whose purpose is to provide leadership in forest conservation thought, policy, and action, the report commits two of its six chapters to a detailed description and analysis of the MFRC and its Landscape Program. (For more information about this publication, see page 29.)

Established committees provide local expertise and information to the MFRC. In this photo, as part of the MFRC annual tour, Council members hear directly from members of the Southeast Regional Landscape Committee about forest management challenges and opportunities in the Blufflands near Wabasha.

With the planning process in all six of the major forested landscapes completed, the Landscape Program is now focused on plan implementation. Regional committees meet on a regular basis to guide implementation and coordination of the landscape plans. The six committees are actively working to:

- **Encourage consideration of the landscape-level context** by all agencies, organizations, industry, and private landowners when developing their resource management plans and implementation projects.
- **Coordinate and support projects by partnering organizations** that promote sustainable forest management practices in the landscape region.
- **Develop and implement committee projects** that proactively address the goals and strategies outlined in the regional forest resource plans.
- **Monitor activities and outcomes** of projects implemented by the committees, as well as those by partnering organizations and landowners across the landscape region.



What kinds of committee initiatives took place in 2008?

During 2008, the six regional landscape committees undertook initiatives in a wide range of areas, including the following:

- **Supported the development of “opportunity area” projects** that involve multiple partners, including landowners, foresters, township and county officials, and resource managers from soil and water conservation districts (SWCDs), resource conservation and development districts (RC&Ds), and state and federal agencies. Developed for both public and private lands, these projects address a range of topics in such areas as forestry and watershed education, wildlife habitat, joint timber sale planning, technical assistance for private landowners, and open lands management.
- **Collaborated with townships, counties, and SWCDs** to integrate goals and strategies from regional landscape plans into local forestry projects, as well as local land use and resource planning processes.
- **Convened resource manager workshops** tailored to address forest management issues or concerns of particular interest to residents of various landscape regions.
- **Coordinated funding development** for regional landscape committee projects. Grants have been submitted for a wide range of project types, including:
 - Harvesting biofuels for wildlife, forest health, and fuel load reduction.
 - Improving water quality through sustainable forestry.
 - Promoting forest industry diversification.
 - Strategic land asset management planning.
 - Private forestland management.
 - Biomass education for landowners.
 - Developing strategies for long-term approaches to supporting locally based sustainable forest industries in the Blufflands of southeast Minnesota.
- **Coordinated statewide collaboration on landowner education** by convening natural resource managers to guide the development of statewide training programs for landowners.
- **Collected information regarding both attitudes and technical/financial capacities** of landowners, forest products industry representatives, economic development professionals, and others with respect to regional forest management and industry opportunities.
- **Sponsored outreach opportunities**, including appearances at area events, presentations, display booths, and dissemination of fact sheets and brochures related to the work of the Landscape Program.
- **Increased dialogue among the MFRC and the committees**, as directed by the SFRA.

How will future committee planning adapt to changes in conditions over time?

As with other forest resource management processes, good planning is dynamic, reflecting appropriate change over time. Over the next several years, regional landscape committees and the MFRC will begin the process of preparing the second generation of landscape plans.

Work on the original plans began as early as 1998, and future updates will reflect changes in regional economic, ecological, and social conditions, such as wildfire fuel reduction, climate change, bioenergy, and parcelization.

For more information about the Landscape Program, or to learn more about forest management initiatives in your region, contact Lindberg Ekola, MFRC landscape program manager, at 320-256-8300 or ekola.mfrc@charter.net

What are specific examples of 2008 landscape committee accomplishments in northern Minnesota?



Northern Regional Landscape Committee

- Organized and sponsored a two-day workshop in Littlefork on native plant classification systems for field foresters working in the region. DNR Forestry and Ecological Resources staff provided the lead on training.
- Provided a venue for presentations on fire ecology, the Firewise program, woody biomass markets and trends, and the Minnesota DNR Agassiz Lowlands subsection forest resource management planning process.
- Supported the development of landowner education wildlife workshops in conjunction with the Giziibii RC&D and SWCDs in 10 northwestern counties.

“Bringing the trainers to the students” worked well for us. Instructors... did an excellent job and should be commended for their efforts.

*Tom Castonguay, forester,
Red Lake Bureau of Indian Affairs,
and Dennis Hummitzsch,
Koochiching County Land Commissioner*

North Central Regional Landscape Committee

- Developed a framework of principles to guide the selection and development of opportunity area projects.
- Initiated three opportunity area projects: the Leech Lake Pines Collaborative, the Crow Wing County Township Forestry Project, and Land Asset Management Planning for Lands in the Leech Lake Basin.
- Monitored landscape plan use and implementation.
- Provided a venue for presentations on the Minnesota DNR Chippewa Plains Pine Moraines/Outwash Plains subsection forest resource management planning process and the Itasca County Wildfire Protection Plan.
- Continued committee member presentations to help clarify how partners are applying landscape plan goals and strategies within their respective planning and forest management operations.

Northeast Regional Landscape Committee

- Facilitated and coordinated work with Lake County, The Nature Conservancy, Minnesota DNR, USDA Forest Service, and other organizations on three opportunity area projects, including the Manitou Collaborative, the Sand Lake/Seven Beavers Project, and the Echo Trail/Vermilion River Project.
- Discussed projects and opportunities for coordination with the Northeast Sustainable Development Partnership of the University of Minnesota.
- Explored coordination opportunities with the North Shore Management Board.
- Provided a venue for presentations on land trades and exchange processes, forest inventory systems, and the Minnesota DNR’s subsection forest resource management planning process.

What are specific examples of 2008 landscape committee accomplishments in southern Minnesota?



West Central Regional Landscape Committee

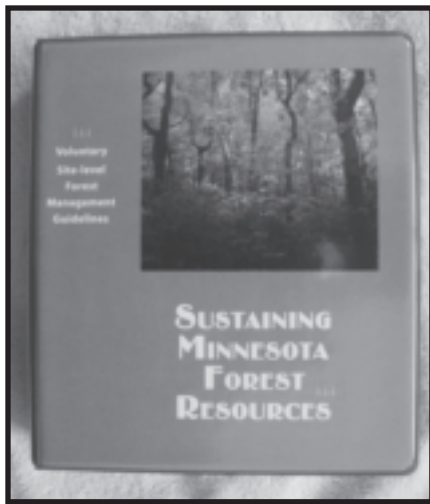
- Provided funding support for a multi-year Wadena County Pilot Forestry Project:
 - Leveraged \$115,000 in state funding from the Clean Water Legacy Program.
 - Contracted with the Wadena SWCD to provide overall staff coordination.
 - Developed and distributed a landowner information packet to forest stewardship plan holders, local officials, and realtors.
 - Prepared a forestry newsletter in conjunction with the SWCD newsletter that was sent out to more than 3,500 landowners in Wadena County.
 - Prepared forest stewardship plans in four townships covering 615 acres.
- Continued work on the Otter Tail County Pilot Forestry Project and the Open Lands Management Project.
- Met with DNR Wildlife and USDI Fish and Wildlife Service staff to gather data and strengthen working relationships.
- Managed a display booth and distributed information at the Conservation and Wildlife Expo in August 2008, attended by more than 800 people.

East Central Regional Landscape Committee

- Continued work on the Four Corners Pilot Forestry Project, a private forestland demonstration project covering approximately 100,000 acres in four adjacent townships in four counties.
 - Worked with partnering agencies and organizations to convene five landowner education events, attracting more than 200 landowners.
 - Partnered with SWCDs to hire a project coordinator/forester to help oversee the coordination of technical services to interested landowners.
 - Sought additional federal and state funding to match funds contributed by the East Central Woodland Owners Council and a private landowner.
 - Initiated the Anoka Sand Plain Forest and Savanna Conservation Project with seven partnering organizations. The project is designed to improve oak savanna habitat. The initial focus is on public lands, with future efforts to focus on private lands. The committee's work group on this project is pursuing a major grant from the National Fish and Wildlife Foundation.

Southeast Regional Landscape Committee

- Sponsored and organized the committee's second major education event. The one-day workshop, titled "Forest Management in Our Region," was held at St. Mary's University in Winona in March.
- Hosted and coordinated the 2008 MFRC annual meeting and tour in July. Provided a presentation to Council members on major forest policy issues facing the region and provided recommendations on program staffing and project funding needs.
- Is currently pursuing funding through the USDA Forest Service for development of a study to address locally based sustainable forest industry in the Blufflands.



Voluntary Site-Level Guidelines

The development of comprehensive timber harvesting/forest management guidelines is a core mandate of the Sustainable Forest Resources Act. The process of successfully focusing diverse interests on shared concerns and the science related to sustainable forest management to create voluntary site-level guidelines represents the foundation of the work of the MFRC since its inception in 1995.

Forestland certification

- In Minnesota, forestland certification programs seek to promote sustainable forest management. The MFRC timber harvesting/forest management guidelines are critical to successful compliance with the two principal forestland certification programs adopted in Minnesota: the Sustainable Forestry Initiative (SFI) and the Forest Stewardship Council (FSC). In addition, the MFRC actively supports the Master Logger Certification Program, which was developed by the Minnesota Logger Education Program (MLEP).
- The amount of Minnesota forestland under forest certification is significant. More than 4.8 million acres of DNR-administered forestland have earned dual certification under SFI and FSC; more than 1.8 million acres of county forestland are certified under one or both of these programs; and nearly 830,000 acres of private forestland are certified under one or both of these programs.

How do the guidelines serve landowners and managers?

- Recognizing the challenges that sustainable forest management represents, the MFRC produced *Sustaining Minnesota Forest Resources: Voluntary Site-Level Forest Management Guidelines* in 1999, as well as a revised version of the guidebook in 2005. These collaborative statewide efforts involved a broad spectrum of people who value forested lands in Minnesota.
- The guidebook provides a set of integrated guidelines that address projected impacts on forest resources as identified in the 1994 *Generic Environmental Impact Statement Study on Timber Harvesting and Forest Management in Minnesota (GEIS)*. These voluntary guidelines provide valuable decision-making tools for landowners, resource managers, and loggers throughout Minnesota, all of whom share an ongoing responsibility to make balanced, informed decisions about forest use, management, and sustainability.
- The guidelines are intended to provide diverse options for landowners, resource managers, and loggers seeking to maintain forest sustainability. Request a hard copy of the 2005 *Guidelines* from the Minnesota Forest Resources Council (651-603-6761), or download a copy from the MFRC website at www.frc.state.mn.us



Woody biomass harvesting guidelines were developed to address concerns about the impact of increased removal of biomass from the state's forests, brushlands, and open lands on long-term site productivity, biodiversity, and wildlife populations. *Photo by Erin Baumgart*

How has the MFRC supported information and training on woody biomass harvesting guidelines?

About five years ago, prospective expansion of the use of woody biomass for energy raised concerns about how increased removal of biomass from the state's forests, brushlands, and open lands would impact long-term site productivity, biodiversity, and wildlife populations. In response to these concerns, the 2005 Minnesota Legislature directed the MFRC and the Minnesota DNR to develop guidelines or best management practices for **sustainably managed woody biomass** on forestland (MFRC responsibility) and brushland/open land (DNR responsibility), as per Minnesota Statutes Chapter 216B, Section 2424 (M.S. § 216B.2424). The DNR subsequently asked the MFRC to take the lead in developing brushland and open land guidelines, as well.

Between fall 2005 and winter 2007, a 12-member interdisciplinary technical committee appointed by the MFRC developed drafts of both forestland and brushland/open land biomass guidelines for use by equipment operators, contractors, biomass procurement agents, loggers, natural resource managers, and landowners. Following peer and public review, the MFRC formally approved the guidelines in May 2007.

The forest and brushland/open land woody biomass harvesting guidelines were developed as additional chapters in MFRC's 2005 *Sustaining Minnesota Forest Resources: Voluntary Site-Level Forest Management Guidelines*. More than 1400 copies of the biomass harvesting guidelines were distributed to resource managers and practitioners in 2008. In addition, we helped sponsor training on these guidelines provided by the Minnesota Logger Education Program and the Sustainable Forests Education Cooperative in spring and fall 2008 (see pages 24-25 for more details).

First state-level woody biomass harvesting guidelines in the United States

The MFRC's woody biomass harvesting guidelines, published in December 2007, represent the first state-level guidelines in the United States for the sustainable removal of woody biomass for energy from forests, brushlands, and open lands. In 2008, the program focused on distribution and training related to the new guidelines.

Monitoring: Forest Resources and Practices

Ongoing monitoring of site-level guidelines is an important aspect of the MFRC's sustainable forest management programs. Monitoring is critical to providing reliable data related to implementation of—as well as the effectiveness of—site-level guidelines for timber harvesting and forest management.

Why do we monitor?

Monitoring is an essential component of our efforts to ensure implementation of the SFRA (see Figure 2). The DNR, with oversight and direction from the MFRC, is responsible for three key monitoring programs identified in the SFRA:

- **Implementation monitoring** evaluates how well forest management practices on public and private forestland conform to recommendations described in the MFRC's site-level timber harvesting/forest management guidelines.
- **Forest resource monitoring** evaluates broad trends and conditions in the state's forest resources at statewide, landscape, and site levels.
- **Effectiveness monitoring** involves research on how the guidelines protect specific forest resources, ecological processes, and forest-related values.

In 2008, our monitoring efforts focused primarily on implementation and effectiveness monitoring.

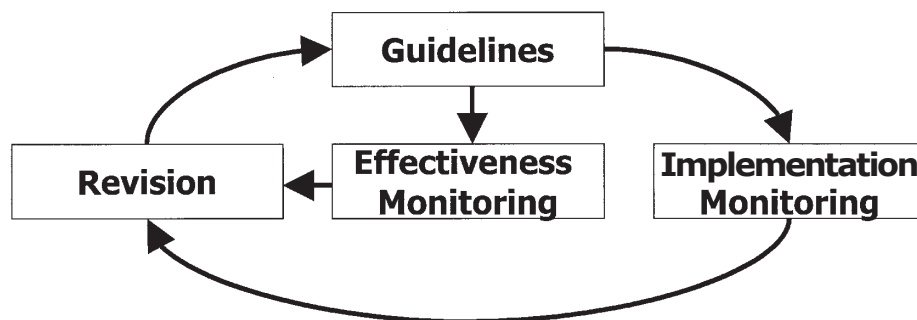


Figure 2: The 2005 revisions to the 1999 timber harvesting/forest management guidebook were based in part on the MFRC's ongoing process of monitoring voluntary guidelines, along with feedback obtained from training programs.

What did we learn this year about the effect of the guidelines on forest harvest practices?

In 2008, the MFRC received the *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*, submitted by the Minnesota DNR.

This report analyzed three years of implementation monitoring data (2004-2006) to assess forest harvest practices **after** the adoption and publication of the MFRC timber harvesting/forest management guidelines. Those results were then compared to baseline monitoring data (2000-2002) collected on sites either harvested or contracted for harvest **prior** to publication of the MFRC guidelines in 1999.

The report identified 1) successes and deficiencies in the application of specific forest management guidelines among landowners; 2) opportunities to improve education efforts; and 3) potential research topics regarding forest management practices.

Highlights of the report

- In 2001, we set a goal that guidelines be discussed and used to plan forest management activities a minimum of 75% of the time for all public agency, forest industry, and professionally assisted non-industrial private forest (NIPF) timber sales. The report indicates that public agency and forest industry landowners exceeded that goal in 2004-06, while NIPF landowners were well below the target.
- Analysis of the 2004-2006 data indicated that, in general, most landowners, managers, and loggers are implementing MFRC-recommended forest management practices. For example, disturbances to filter strips were limited to less than 5% of the area more than 95.9% of the time, an improvement over the 72.8% reported for sites harvested before adoption of the guidelines.
- Further improvement in implementation rates will result from additional training, better planning, and improved communications between landowners/resource managers and loggers.
- The report also suggested consideration of potential modifications to site-level monitoring procedures to better reflect the intent of specific guidelines and improve sampling intensity on NIPF land.

Analysis of the 2004-2006 data indicated that, in general, most landowners, managers, and loggers are implementing MFRC-recommended forest management practices.



Coarse woody debris (CWD) provides important habitat for forest animals and plants. The DNR's 2008 monitoring report found that harvested riparian management zones (RMZs) are not meeting current CWD guidelines; however, limited data from 2000 indicate that undisturbed RMZs may not meet guidelines any more often than harvested sites. Further research and reconsideration of the CWD guidelines were recommended.

- The DNR monitoring report included the following recommendations:
 - That future revisions to the *Forest Management Guidelines* include greater emphasis on private forest management education and assistance, improved visual sensitivity maps, and reconsideration of current skid trail and coarse woody debris guidelines.
 - That greater emphasis be placed on guideline training programs related to erosion control practices for wetland and water crossing approaches, the importance of limiting logging infrastructure, and checking records for cultural/historic and endangered, threatened, or sensitive (ETS) species.
 - That future research include an assessment of the effects of increased soil compaction and slash distribution on regeneration.

The full report is available on the MFRC website.

What have we learned from a review of the site-level monitoring program?

In consultation with the MFRC, the Minnesota DNR deferred routine data collection activities associated with guideline implementation monitoring for the 2007 and 2008 field seasons to permit a comprehensive review of the site-level monitoring program.

The review included:

- An examination of current data collection and reporting practices
- A survey of the program's stakeholders to assess their monitoring information needs
- Identification of strengths and weaknesses of the current program in satisfying stakeholder needs and fulfilling its statutory requirements

This fall, we approved a number of recommendations from the review and took steps to:

- Better articulate the purposes of implementation monitoring and the intended uses of the information it generates.
- Establish and maintain a regular schedule for monitoring and reporting.
- More effectively use information generated.

Approved changes to monitoring methods included improvement of data collection and handling, review of field measurement techniques to ensure agreement with guideline intent, and increased NIPF land-owner participation.

The full report is available on the MFRC website.



Scattered slash placed on skid trails reduces soil compaction, rutting, and erosion. Increased evidence of erosion on skid trails at sites monitored after timber harvesting/forest management guideline adoption is a concern that will be addressed in upcoming training programs.

What are we learning about costs and effectiveness of the riparian guidelines?

Two MFRC studies of riparian timber harvesting guidelines reflect the significant importance of analyzing guidelines in terms of both cost and effectiveness.

Economic analysis of riparian guidelines

In 2004, we convened a multi-disciplinary team to review the best available science relating to riparian forest functions and management. In 2007, the team presented its findings regarding hydrology, geochemistry, and wildlife components of riparian areas. Based on these findings, we are undertaking a study to address the economic impacts of riparian forest management alternatives.

Through a collaboration of the Minnesota DNR and the USDA Forest Service, we have gathered data regarding the character and extent of forested riparian areas. These data will be used by a panel of economists to advise us on the valuation of costs and benefits of riparian management, which will aid in the evaluation of potential revisions to the forest management guidelines.



Riparian management zones include forested areas along lakes, rivers, and streams.

LCCMR-funded research: Evaluating riparian timber harvesting guidelines

The University of Minnesota and USDA Forest Service Northern Research Station completed work on Phase II of the riparian research project titled Evaluating Riparian Timber Harvesting Guidelines. Funded by the Legislative-Citizen Commission on Minnesota Resources (LCCMR), the project is intended to 1) characterize lasting impacts from timber harvesting and 2) assess whether these changes affect forest productivity and future site conditions.

The researchers reported that, based on differing amounts of basal area retained within the riparian management zone (RMZ), partially harvested zones have substantial aspen suckering, although at or just below the low range of full stocking. Site-level stream effects on aquatic habitats (e.g., invertebrate biomass) were statistically significant but relatively small. These results suggest that application of the RMZ guidelines does minimize negative instream impacts. The research also documented dramatic community compositional change from domination by mature forest bird species to domination by early successional bird species.

Project work will continue on Phase III through June 30, 2009. Additional post-harvest data are being collected and analyzed. That data collection includes assessments at Pokegama Creek, near Grand Rapids, Minnesota, a site established using MFRC funding during the 1990s.

In addition, a meta-analysis is being conducted to combine the results of terrestrial, aquatic, and bird studies and to evaluate the effects of riparian management treatments on habitats and communities. A workshop, entitled "At the Water's Edge: Current State of Riparian Forest Management," was held this year in Grand Rapids to present the research findings to natural resource managers and loggers.

Research

In late 2007, the Forest Resources Research Advisory Committee (RAC) was reconvened, thanks to recent funding appropriations to the MFRC from the Minnesota Legislature. In 2008, the RAC recommended that the MFRC fund two research projects that will address issues identified by the Governor's Task Force on the Competitiveness of Minnesota's Primary Forest Products Industry and by the MFRC Biomass Guideline Committee. The RAC also initiated a Forest Resources Research Assessment to develop a comprehensive vision and strategy for forest-related research in Minnesota.

What were our 2008 research focuses?

Key knowledge gaps regarding impacts of biomass harvesting on ecosystem components

In 2008, the MFRC provided funding to a team of researchers from the University of Minnesota and the USDA Forest Service to address several key knowledge gaps regarding the impacts of biomass harvesting on critical ecosystem components, including deadwood-dependent (saproxylic) organisms, native plant communities, and nutrient availability.

With \$300,000 in funding from the 2008 Minnesota Legislature, the project will result in the establishment of four large-scale, silvicultural treatments designed to address the following two key research questions:

- Do different levels of woody biomass harvesting have long-term effects on saproxylic (deadwood-dependent) animal and fungal communities, forest regeneration and productivity, nutrient availability, and carbon storage?
- To what extent does retention of leave trees and harvesting residues ameliorate the impacts of biomass harvesting?

Study sites were selected in fall 2008 and are located on lands administered by the Minnesota DNR and the St. Louis County Land Department. Pre-harvest data will be collected in the summer of 2009; the sites will be harvested the following winter; and initial post-harvest data will be collected in 2010. While the MFRC is providing the initial funding, specific study sites were selected with the anticipation of long-term monitoring.

Research Advisory Committee membership

Members of the Research Advisory Committee include:

Allen Levine, Chair
Dean, College of Food, Agriculture,
and Natural Resource Sciences,
University of Minnesota

Mark Holsten
Commissioner, Minnesota
Department of Natural Resources

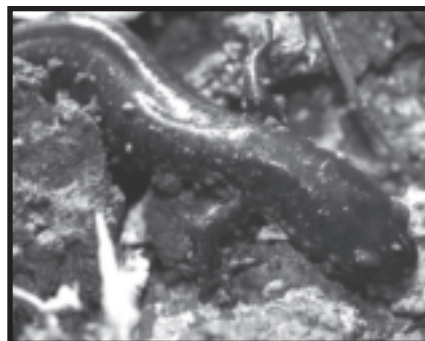
George Ice
Principal Scientist,
National Council for
Air and Stream Improvement

Michael Lalich
Director, Natural Resources
Research Institute

Tom Martinson
Land Commissioner,
Lake County

Peter Reich
Regents Professor,
University of Minnesota

Tom Schmidt (ex officio)
Assistant Director,
USDA Forest Service
Northern Research Station



Salamander species in northern Minnesota, such as this blue-spotted salamander, utilize fallen logs and other woody debris for habitat. The effect of woody biomass harvesting on salamander populations will be assessed by this research. Photo by Bekah Dalen, Lee and Rose Warner Nature Center

Wood availability and contract processes at public timber sales have challenged the competitiveness of Minnesota's forest products industry. Research supported by the RAC will seek to provide direction on best practices for setting up and administering timber sales on public lands.

Photo by Erin Baumgart



Factors influencing willingness to pay for public stumpage

Recent fluctuations in Minnesota's stumpage market have raised concern about the policies, procedures, and contract provisions associated with Minnesota's timber sale programs on public land. In 2006, the Governor's Task Force on the Competitiveness of Minnesota's Primary Forest Products Industry recommended that funds be appropriated to the RAC to provide direction on best practices for setting up and administering timber sales on public lands.

In 2008, the MFRC directed \$200,000 in funding from the Minnesota Legislature to a project designed by researchers at the University of Minnesota, the Minnesota DNR, and the USDA Forest Service Northern Research Station to identify factors that impact the price for stumpage in Minnesota.

The researchers worked with the DNR in late 2008 to conduct timber sales via auction of timber tracts through sealed bids. For each tract, the influence of contract length (short versus long) or base price (lower versus higher) will be assessed through a paired bidding approach. Results of this research will be available in June 2009.

Recent fluctuations in Minnesota's stumpage market have raised concern about policies, procedures, and contract provisions associated with Minnesota's timber sale programs on public land.

What are the goals of the new Forest Resources Research Assessment?

In 2008, the RAC initiated an assessment process to develop a 10-year vision and a five-year strategic plan for forest resources research in Minnesota. This process will include:

- An assessment of the status of current research
- Identification of important research needs and priority research activities
- An assessment of progress toward addressing identified needs

A multi-disciplinary panel of senior researchers from Minnesota will guide the research assessment and prioritization process. This vetting of research capacity, needs, and priorities will also be done in conjunction with a number of public meetings around the state.

An expert panel, including representatives from the University of Minnesota, Natural Resources Research Institute, UPM-Kymmene Blandin Paper Company, National Council for Air and Stream Improvement, Minnesota DNR, and USDA Forest Service held the first Research Assessment meeting in December 2008. Results from this assessment are anticipated within the year.



Photo by Lee Karney, U.S. Fish and Wildlife Service



Research needs related to forest resources will be considered within the context of sustainable communities, sustainable economics, and sustainable ecosystems.

Education

Educational programs, including workshops and training, are essential to supporting both understanding and adoption of site-level guidelines for sustainable forest resource management.



Participants in a timber marking workshop discuss tradeoffs and decisions that need to be considered when marking timber. Photo by Dave Chura, Minnesota Logger Education Program

How does MLEP training help support sustainable forest resource management?

The Minnesota Logger Education Program (MLEP) is a logger-initiated program established in 1995 to promote high operational standards, enhance logger professionalism, and respond to the SFRA. MLEP provides training for logging business owners, employees, and other resource managers in areas of sustainable forest resource management, workplace safety, business management, and transportation.

In 2008, MLEP offered training to landowners and professionals, including workshops on forest management and biomass harvesting guidelines; harvest implementation; geospatial information and planning; global positioning systems; timber cruising and marking; stewardship contracting; small-scale logging; silviculture; timber stand treatment; riparian forest management; logging and transportation safety; and equipment operation and servicing.

In addition, MLEP's Master Logger Certification Program provides added confidence to customers and the public that the person performing a harvest has the education and experience to do the job correctly. It is an independent, third-party audit of a logging business's harvest, safety, and business practices. Logger certification provides formal recognition of those logging businesses that have met the high standard required for certification. (For more information, visit www.mlep.org)

How does the SFEC support natural resource professionals?

The Sustainable Forests Education Cooperative (SFEC), located in the University of Minnesota's College of Food, Agricultural, and Natural Resource Sciences, was established in response to the SFRA in 1995. More than 40 organizations—including private, county, state, federal, and tribal institutions—represent the cooperative membership. Its purpose is to provide innovative education programs for natural resource professionals by offering training on current research findings, new technologies, and state-of-the-art practices. (For more information, visit <http://sfec.cfans.umn.edu>)

Since 1997, the SFEC has provided continuing education opportunities in a broad range of fields, including, among others, forest ecology and management, wildlife biology, forest hydrology, botany, best management practices, technology transfer, and human dimensions. Along with MLEP, the SFEC has been a leader in continuing education on planning and implementation of the MFRC forest management guidelines.

The SFEC coordinated numerous workshops during 2008. As in previous years, educational programming for natural resource professionals addressed a variety of topics, including ecosystem silviculture, forest management and biomass harvesting guidelines, plant identification skills, and scaling wood.

In January 2008, the SFEC held the sixth Forest and Wildlife Research Review Conference. This program included presentations on the emerging bioenergy industry and forest-derived biomass in Minnesota, along with presentations on timber management practices in riparian areas, family forests, forest wildlife, land parcelization, restoration forestry, and climate change. The MFRC continues to be a cosponsor of this conference.



A logger uses a basal area gauge to take measurements of available wood volume during a timber stand improvement exercise. *Photo by Dave Chura, Minnesota Logger Education Program*

Woody biomass harvesting guideline training in 2008

In 2008, MLEP and SFEC offered five workshops, focused on the new woody biomass harvesting guidelines, to more than 600 professionals and landowners. Training addressed specific biomass harvesting guidelines in the areas of wildlife habitat and biodiversity, water quality, riparian management zones, and soil productivity.

Training also focused on planning, design, and operational considerations. Grants from the MFRC and the USDA Forest Service helped support this training. Visit the MLEP and SFEC websites (www.mlep.org and <http://sfec.cfans.umn.edu>) for updates on training available in 2009.

Biomass harvesting guideline training now online

MLEP and the University of Minnesota Extension have developed an online version of the biomass harvesting guideline training. Loggers and foresters who successfully complete the online training will receive MLEP or SAF credit. Training is free for members of MLEP and the SFEC. More information is available online at www.mlep.org/onlinebiomassintro.htm

Information Development and Management

Information development and management are essential components of effective sustainable forest management. Funding of these initiatives supports ongoing needs related to efficient and effective information analysis, communication, and data management tools that provide the foundation for sustainable forest management.

How does the IMC manage information and identify information needs?

The Information Management Committee (IMC) assists the MFRC in meeting its statutory mandate to advise the Governor and federal, state, county, and local governments on sustainable forest resource policies and practices. The IMC assists the MFRC by:

- Advancing and focusing the discussion of forest policy issues selected by MFRC.
- Compiling and disseminating information and analyses to the MFRC that are relevant to those policy issues, ensuring that the Interagency Information Cooperative (IIC) fulfills its purpose.
- Bringing to the attention of the MFRC trends in ecological, economic, and social factors that may affect Minnesota forests.
- Developing tools (e.g., papers, publications, and audio-visual presentations) for communicating the results of MFRC policy work to the Minnesota Legislature and the Governor.

In 2008, the IMC initiated a strategic review of current MFRC policy initiatives. The review was designed to:

- Identify existing data and information voids.
- Determine criteria for prioritizing information needs and issues.

The IMC also conducted an assessment of forest inventory information and methodology in Minnesota to:

- Provide a summary of current inventory methods and information.
- Promote understanding and communication among agencies.
- Identify potential inventory efficiencies.

The Information Management Committee assists the MFRC in meeting its statutory mandate to advise the Governor and federal, state, county, and local governments on sustainable forest resource policies and practices.

What new activities will recent IIC funding support?

The Interagency Information Cooperative (IIC) was created as part of the SFRA of 1995 (M.S. § 89A.09) to coordinate the development and use of forest resources data in the state. The IIC has been used as a forum for agencies to discuss data standards, as well as a place to store data and tools. It has also provided leadership in interagency data collection and analysis projects.

The IIC is currently housed within the College of Food, Agricultural, and Natural Resource Sciences within the University of Minnesota. Due to a lack of funding, however, the IIC has not been active in recent years.

In 2008, the Minnesota DNR, University of Minnesota, and the MFRC successfully pursued funding for the IIC as recommended by the 2006 Governor's Task Force on the Competitiveness of Minnesota's Primary Forest Products Industry. The 2008 Legislature reinvigorated the IIC with a grant for \$197,000 to the University of Minnesota. With this funding over the next year, the IIC anticipates pursuing the following initiatives:

- Development and public availability of a **common forest inventory format** that would describe key attributes of Minnesota's public forestlands and foster common formats for related resource data.
- Refinement of **rapid growth models for managed forest stands** for use in traditional and biomass harvest scheduling models and forest management planning.
- Establishment of a **forest planning cooperative** with University of Minnesota and county participants.
- Research and development focused on a **forest wildlife habitat model format** for use by forest managers.
- Development of an **information database on Minnesota's family-owned forests**, with information on associated resource management, land values, and ownership trends (such as forest land parcelization/fragmentation).
- Initiation of a **statewide silvicultural practices survey**.



Public Participation

What is the Public Concerns Registration Process?

The Public Concerns Registration Process (PCRP) provides an opportunity for citizens to inform landowners, foresters, and loggers of specific concerns regarding timber harvesting and forest management practices they see in Minnesota.

Although it is not a regulatory or punitive program to stop timber harvests or resolve disputes over contractual issues or forest management activities, the PCRP does encourage the sustainable management of Minnesota's forests by emphasizing education of those involved.

Through this program, landowners, loggers, and foresters benefit by becoming more aware of public concerns regarding forest management, and by learning more about guidelines for sustainable forest management. All aspects of the Public Concerns Registration Process are managed with confidentiality.

To learn more about activities of the PCRP, as well as a more detailed explanation of the PCRP process, visit the MFRC website at www.frc.state.mn.us

MFRC and SFRA programs all require participation of individuals interested in forest resources in Minnesota. This participation is essential to ensuring that a "broad array of perspectives regarding the management, use, and protection of the state's forest resources" is represented and incorporated into forest resource planning and management.

What opportunities exist for public participation in MFRC programs?

There are many ways for interested individuals to become involved:

- **Attend MFRC meetings.** Scheduled meetings are posted on the MFRC website at www.frc.state.mn.us/Info/calendar, or call 651-603-6761 for meeting dates.
- **Participate in regional landscape committees.** For more information, contact Lindberg Ekola at 320-256-8300 or ekola.mfrc@charter.net
- **Use the timber harvesting/forest management guidelines.** They are available on the MFRC website at www.frc.state.mn.us/FMgdline/Guidebook, or contact the MFRC at 651-603-6761 for a copy.
- **Notify the MFRC of specific timber harvesting or forest management activities that concern you.** Call toll-free 1-888-234-3702.
- **Attend forest resources educational programs.** For additional information, contact:
 - Sustainable Forests Education Cooperative: Call 218-726-6404 or visit <http://sfec.cfans.umn.edu>
 - Minnesota Logger Education Program: Call 218-722-5442 or visit www.mlep.org
- **Access information regarding Minnesota's forest resources.** Visit the Interagency Information Cooperative at <http://iic.gis.umn.edu>

MFRC Publications

Sharing information with the public is an important component of the work of the MFRC. For that reason, the MFRC makes its publications available online to all interested individuals.

In addition, written documentation of the MFRC's substantial accomplishments in the areas of policy research, landscape planning, guideline development and monitoring, and public involvement represents a significant contribution to the growing body of knowledge related to the field of sustainable forest resource management.

Documents Produced in 2008

All MFRC documents are available on the MFRC's website:
www.frc.state.mn.us/Info/MFRCdocs.html

MFRC Annual Report

2007 Annual Report to the Governor and Legislature on the Implementation of the Sustainable Forest Resources Act (*January 2008*)

Policy Research

Forest Protection Plan Task Force: Forest Protection Plan. Charlie Peterson, Minnesota Department of Administration (*January 2008*)

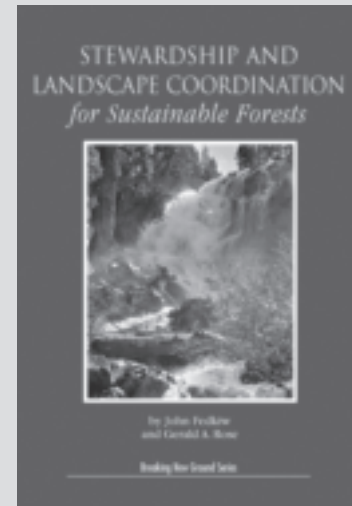
Monitoring Program

Timber Harvesting and Forest Management Guidelines on Public and Private Forest Land in Minnesota: A report submitted to the Minnesota Forest Resources Council. Rick Dahlman, Minnesota DNR (*April 2008*)

Review of the Department of Natural Resources/Minnesota Forest Resources Council Site-Level Monitoring Program. Clarence Turner, MFRC and Minnesota DNR. (*August 2008*)

Minnesota Forest Resources Council – Public Concerns Registration Process 2008 Annual Report (*August 2008*)

MFRC and Landscape Program featured in new national report



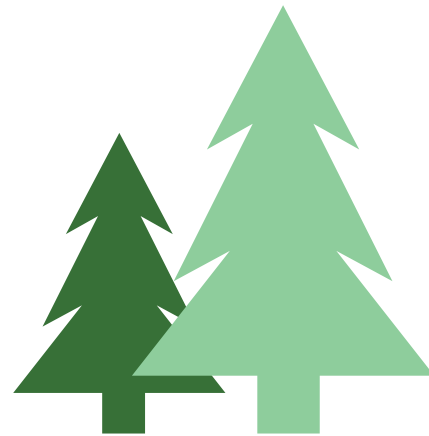
The MFRC and the MFRC Landscape Program are prominently featured in a 2008 report titled *Stewardship and Landscape Coordination for Sustainable Forests*, by John Fedkiw and Gerald A. Rose.

Published by the Pinchot Institute for Conservation, whose purpose is to provide leadership in forest conservation thought, policy, and action, the book commits two of its six chapters to a detailed description and analysis of the MFRC and its Landscape Program.

Copies of the report are available at www.pinchot.org under *Publications*.

Acronyms

| | |
|-------|---|
| CWD | Coarse woody debris |
| DNR | Department of Natural Resources |
| ETS | Endangered, threatened, or sensitive species |
| FSC | Forest Stewardship Council |
| IIC | Interagency Information Cooperative |
| IMC | Information Management Committee |
| LCCMR | Legislative-Citizen Commission on Minnesota Resources |
| MCCAG | Minnesota Climate Change Advisory Group |
| MFRC | Minnesota Forest Resources Council |
| MLEP | Minnesota Logger Education Program |
| NIPF | Non-industrial private forest |
| PCR | Public Concerns Registration Process |
| RAC | Research Advisory Committee |
| RC&D | Resource Conservation and Development |
| RMZ | Riparian management zone |
| SFEC | Sustainable Forests Education Cooperative |
| SFI | Sustainable Forestry Initiative |
| SFRA | Sustainable Forest Resources Act |
| SWCD | Soil and Water Conservation District |
| USDA | U. S. Department of Agriculture |
| USDI | U. S. Department of the Interior |



Minnesota Forest Resources Council 2008 Annual Report to the Governor and Legislature on the Implementation of the Sustainable Forest Resources Act

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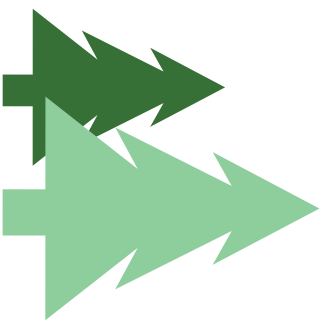
This information is available in an alternate format upon request.

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