2009

Report to the Governor and Legislature on the Implementation of the Sustainable Forest Resources Act

Minnesota Forest Resources Council

Minnesota
Forest
Resources
Council

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Minnesota Forest Resources Council 2009 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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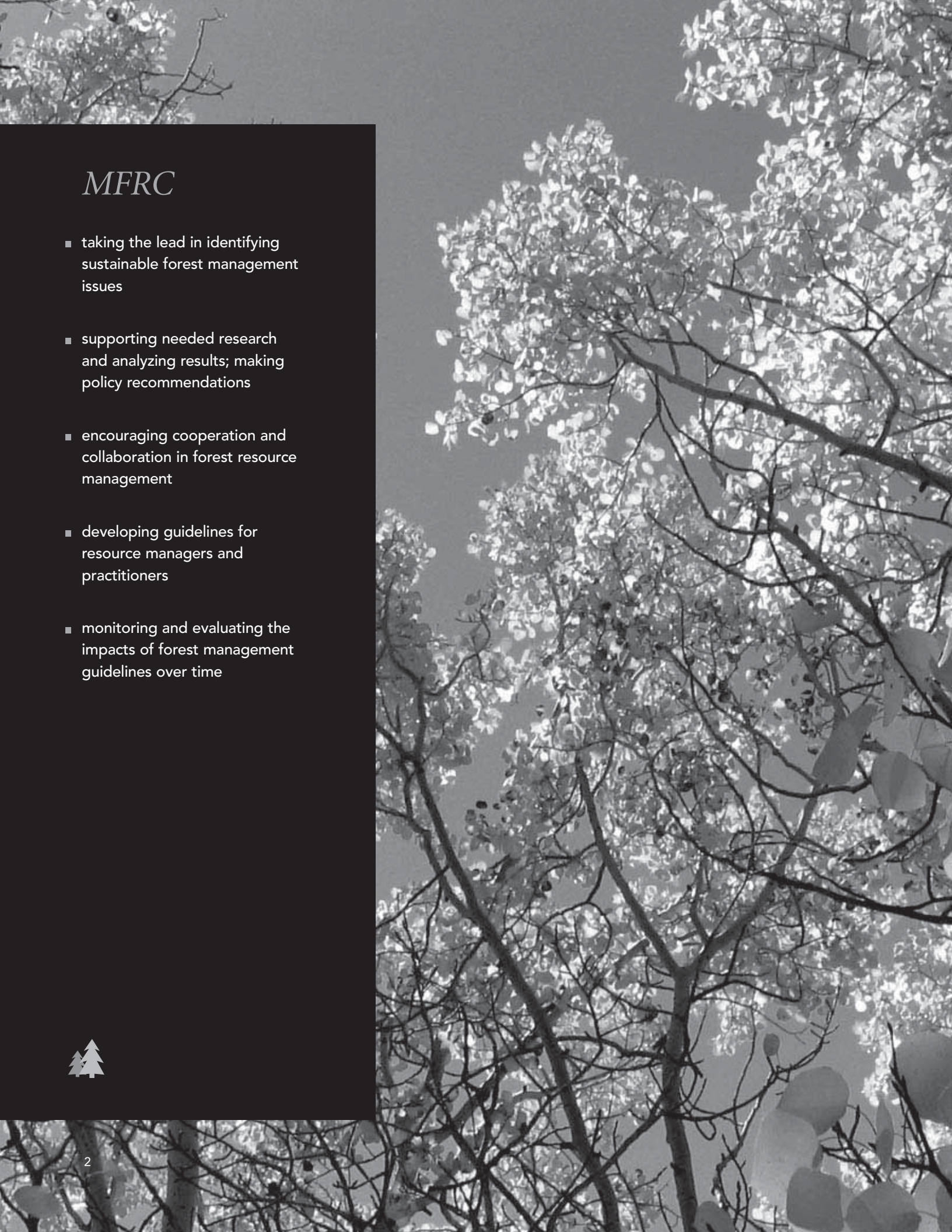

MFRC

- taking the lead in identifying sustainable forest management issues
- supporting needed research and analyzing results; making policy recommendations
- encouraging cooperation and collaboration in forest resource management
- developing guidelines for resource managers and practitioners
- monitoring and evaluating the impacts of forest management guidelines over time

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An Overview of MFRC Accomplishments in 2009

Accomplishments of the Minnesota Forest Resources Council (MFRC) in 2009 reflect the MFRC's ongoing commitment to identifying sustainable forest management issues; funding needed research and learning from the results; improving forest policy; encouraging cooperation in forest resource management; developing guidelines for resource managers; and monitoring and evaluating the impacts of forest management guidelines over time.

HIGHLIGHTS

- **The MFRC continued work on a study of the magnitude, causes, and impacts of forestland parcelization,** as well as analyzing a broad and integrated set of policy tools to mitigate the adverse effects of parcelization and subsequent development. A report that includes policy recommendations will be delivered to the Legislature in early 2010.

- **The Minnesota Department of Natural Resources (DNR), in conjunction with the MFRC, has developed a statewide forest bioeconomy strategy at the request of the Governor's Forestry Sub-Cabinet.** The DNR and the MFRC will present this statewide strategy for the use of woody biomass to the Sub-Cabinet in early 2010 for consideration by other state agencies and the Governor.

- **As directed by the 2009 Legislature, the MFRC evaluated the ecological and economic feasibility of increasing carbon sequestration in forests by planting 1,000,000 acres of trees,** a recommendation of the Minnesota Climate Change Advisory Group. A report that includes implementation recommendations will be delivered to the Legislature in January 2010.

- **The MFRC advised the Minnesota Department of Agriculture during discussions about Emerald Ash Borer management** in relation to Minnesota's ash forests, which make up seven percent of the state's total forest land. Ash trees are also a large component of urban and community forests statewide.

- **MFRC regional landscape committees initiated efforts to pool and leverage limited resources, including non-state resources,** to implement more MFRC landscape plans through new funding opportunities, such as those provided by the Outdoor Amendment to the Minnesota Constitution.

- **The MFRC provided oversight and assistance to the DNR in assessing timber harvesting and forest management guideline implementation,** which was last assessed in 2006. Implementation monitoring measures the statewide rate at which guidelines are implemented during forest harvesting operations. The DNR will present a report documenting the 2009 monitoring results to the MFRC by February 2010.

- **The MFRC Forest Resources Research Advisory Committee (RAC) continued to support two major research projects** addressing 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 organized a multi-disciplinary panel of senior researchers to develop a comprehensive vision and strategy for forest-related research in Minnesota.

- **The Forest Resources Interagency Information Cooperative (IIC), led by the University of Minnesota CFANS Department of Forest Resources and overseen by the MFRC, initiated and conducted several projects,** including creation of a forest planning cooperative to help counties increase timber revenue, development of a forest wildlife habitat model format for use with forest planning models, and a silvicultural practices survey. The IIC also initiated work on a common forest inventory format for public landowners, forest growth models to better assess woody biomass supply, and a database on Minnesota's family-owned forests.

Alfred D. Sullivan,
Chair
Photo by Patrick O'Leary, University of Minnesota

The Minnesota Forest Resources Council

The Role of the MFRC

The Minnesota Forest Resources Council's 17 members promote long-term sustainable management of Minnesota's forests in two ways:

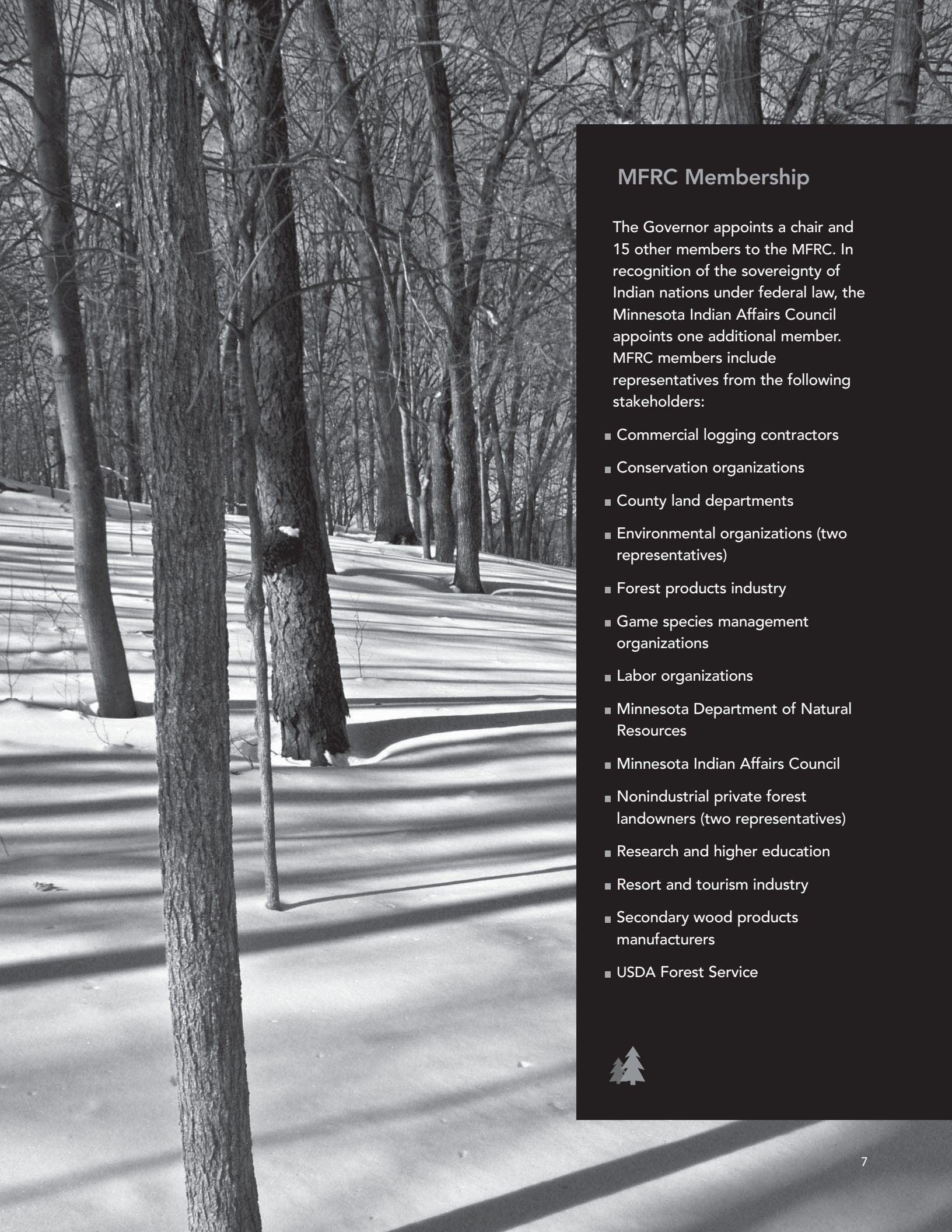
- By coordinating implementation of the Sustainable Forest Resources Act (SFRA), established under Minnesota Statute §89A.
- By advising the Governor and federal, state, county, and local governments on sustainable forest resource policies and practices.

Purpose of the SFRA

In 1995, the SFRA created a policy framework for sustainable forestry 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 managing 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; establish processes and mechanisms that seek these perspectives; and incorporate them into planning and management.

Promoting collaboration across disciplines for a common goal: sustainable management of Minnesota's forests.



MFRC Membership

The Governor appoints a chair and 15 other members to the MFRC. In recognition of the sovereignty of Indian nations under federal law, the Minnesota Indian Affairs Council appoints one additional member. MFRC members include representatives from the following stakeholders:

- 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

Improving Forest Policy

The MFRC is charged by statute with developing forest policy recommendations to the Governor and local, state, and federal governments. To approach this charge strategically, the MFRC has identified and developed four priority forest policy issues to focus on through the coming year:

Forest Land Base – Forest Parcelization and Development

Using a pilot study conducted in Itasca County and completed in 2007 by University of Minnesota and USDA Forest Service researchers, the MFRC was able to translate what had been only anecdotes into actual evidence that large blocks of forestland are being divided into smaller pieces (a process called "parcelization") and undergoing subsequent development.

The MFRC obtained funds from the Blandin Foundation, Iron Range Resources, and the Minnesota Legislature to extend the pilot study and to examine the effectiveness of various policy tools in mitigating the adverse effects of parcelization. As a result, the MFRC will be able to understand the extent, drivers, and impacts of continuing forestland parcelization. The MFRC developed recommendations to aid policy-makers and administrators in making decisions regarding appropriate policy tools for maintaining the forest land base.

▲ New markets and policies have led to an increase in biomass utilization during forest harvest operations. Wood biomass is generally chipped on site and then loaded into trucks for transport as shown here. *Photo: MFRC Staff.*

Forest Biomass and Biofuels Harvest

In light of the burgeoning interest in renewable energy sources, prospective policy mandates, and the potential economic and environmental benefits of increased use of woody material, the MFRC supports opportunities for the use of woody biomass. At the same time, the MFRC maintains a strong concern for the sustainability of the resource.

The MFRC, in conjunction with the DNR, developed a statewide forest bioeconomy strategy at the request of the Governor's Forestry Sub-Cabinet. Staff worked closely with numerous stakeholders and decision-makers to help define a statewide strategy for using woody biomass. The MFRC has also collaborated with the University of Minnesota CFANS, the IIC, the University of Minnesota Natural Resources Research Institute, the Biobusiness Alliance, and other groups in trying to further understand implications of the use of woody biomass for energy, including supply constraints, possible impacts on the wood fiber economy, and potential ecological impacts.

Forest Carbon Sequestration

The MFRC understands the importance of Minnesota's forests in removing and storing carbon from the atmosphere. The MFRC is active in climate-change policy discussions and encourages investigations into the role of Minnesota's forests in mitigating climate change, as well as the effects of climate change on Minnesota's forests.

Million-acre assessment

The 2009 Legislature directed the MFRC to review the Minnesota Climate Change Advisory Group's recommendation to increase carbon sequestration in forests by planting 1,000,000 acres of trees. It requested recommendations on implementing such an effort and an analysis of the number and ownership of acres available for tree planting, the types of native species best suited for planting, the availability of planting stock, and potential costs. A final report is due on January 15, 2010.

Forest Policy Priorities

Forest land base

The MFRC is concerned about the ecological, economic, and social impacts of forestland ownership changes, parcelization, fragmentation, and development.

Forest biomass and biofuels harvest

The MFRC is interested in the economic and ecological benefits of harvesting biomass and wants to sustain this valuable resource.

Forest carbon sequestration

The MFRC understands the important role that Minnesota's forests play in sequestering carbon and is working to better understand both the natural dynamics and associated policy responses.

Threats to forest health

Invasive insects, diseases, and plants are growing threats to Minnesota's forests; the MFRC wants to minimize their impacts to our forests, our communities, and our economy.

The MFRC used a two-stage analysis to review the availability of land for forestation. In the first stage, the MFRC used information on climate, soils, and presettlement vegetation to identify areas in the state that are not currently forested but where it is ecologically feasible to grow trees. In addition, the MFRC identified general ownership and current land uses. The second stage, conducted in cooperation with forestry and agricultural experts at the University of Minnesota and the IIC, assessed the economic feasibility of planting trees on the areas identified in the first stage. Here the MFRC compared the estimated economic returns associated with current land uses to those following conversion to growing trees. These comparisons included information on crop and timber prices, potential subsidies to land owners, and conversion costs.

Forest carbon offset project protocol development

MFRC staff served on a Forest Carbon Standards Committee (FCSC) sponsored by the American Forest and Paper Association. The FCSC is a diverse group of U.S. and Canadian forest stakeholders dedicated to developing and maintaining consensus standards for measuring and reporting forest carbon offsets under national greenhouse gas emission reduction programs in the United States and Canada. The forest carbon offset project standards will provide an affordable and science-based means for Minnesota public and private forestland owners to participate in developing cap-and-trade programs designed to reduce greenhouse gas emissions. Standards probably will be finalized in 2010.

Departmental and interagency climate change mitigation and adaptation teams

MFRC staff participated in DNR and interagency climate change mitigation and adaptation teams. These teams track issues, legislation, and the scientific literature as a basis for developing recommendations and coordinating activities for mitigating and/or adapting to the effects of climate change on natural resources.

Threats to Forest Health

With the recent arrival of emerald ash borer (EAB) and continued challenges associated with gypsy moths, earthworms, and buckthorn, among other invasive species, concern about forest health has been heightened. Building on the statewide forest protection plan developed collaboratively with other agencies and groups in 2007-2008, the MFRC has been an advisor to the Minnesota Department of Agriculture and has been actively engaged in discussions about EAB management in relation to Minnesota's extensive ash forests, a sizeable component (seven percent) of the state's total forestland. Ash trees are also a common species in urban and community forests statewide.

Additional Forest Policy Issues

The MFRC recognizes that wildfire suppression is consuming an increasing share of the USDA Forest Service budget. In response to the reduction in funding available for the two national forests in Minnesota, for University of Minnesota research, and for state and private forest owners for managing their lands sustainably, the MFRC sent a letter to the Governor, Minnesota's congressional delegation, and the chief of the USDA Forest Service, among others, supporting the use of a separate funding process for large-scale fire suppression. This part of the Forest Service budget would be separate from the regular operating budget. The MFRC communicated its support for the Forest Service to reinvest in those programmatic areas that have been curtailed because of increased fire suppression and encourage the promotion of those activities that decrease the occurrence, severity, and cost of large-scale fires. Congress passed a program similar to the MFRC recommendation and signed it into law within the 2010 appropriations bill.

▲ Emerald ash borer, photo by David Cappaert, Michigan State University, Bugwood.org

The emerald ash borer was detected in St. Paul, Minnesota in 2009. This invasive species threatens rural and urban forests throughout the state. The Minnesota Forest Resources Council is working with the Minnesota Department of Agriculture, DNR, and other partners to implement a statewide response and mitigate impacts from this infestation.

Coordinating Landscape-Level Forest Resource Management

The Sustainable Forest Resources Act laid the foundation for large-scale forest management by establishing the Landscape Program. The MFRC oversees this program to support a broad perspective and approach to sustainable forest management. The program is a voluntary, grass-roots effort that builds relationships, strengthens partnerships, and identifies collaborative forest management projects that address local and regional needs. Collectively, actions taken through landscape-level management represent concrete steps in determining and reaching citizen-identified short-term and long-term goals for broad landscape regions.

The Landscape-Level Management Process

Society is increasingly aware of the impacts of human activity on forest ecosystems and the growing expectations for forest products and services. As a result, people are thinking more comprehensively about human impacts on forest resources. Their perspective extends beyond the site level to much larger landscape regions. Emerging issues such as climate change, biomass energy, wildfire fuel reduction, and forestland parcelization need to be addressed with landscape-level solutions.

The landscape-level forest resource management process involves four distinct but interrelated phases: planning, coordination, implementation, and monitoring and evaluation. Regional landscape committees in each of the six forested regions (see map on page 15) have prepared a regional forest resource plan or "landscape plan."

Since completion of the six plans from 2002-2005, the Landscape Program shifted emphasis to plan implementation. Regional committees meet regularly to guide coordination and implementation of the landscape plans.

Regional Landscape Committees and Partnerships: The Foundation of Landscape-Level Management

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 six committees are actively working to:

- Encourage all agencies, organizations, industry, and private landowners to consider and integrate the landscape-level context when they develop 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 is a landscape plan?

A landscape plan describes the forest of the future and suggests the means by which landowners, professional foresters, and agencies can make it come about.

West Central landscape committee members decide where to focus their efforts. *Photo: MFRC Staff.*

Highlights of Committee Accomplishments

Northeast Regional Landscape Committee:

- Facilitated and coordinated work on three opportunity area projects: the Manitou Collaborative, the Seven Bears/Sand Lake Project, and the Echo Trail/Vermilion River Project.
- Supported the development of a new initiative sponsored by the University of Minnesota Institute on the Environment to increase the resiliency of the boreal forest.

North Central Regional Landscape Committee:

- Continued facilitation and project coordination support for the Leech Lake Pines Collaborative and the Tri-County Water Plan project.
- Further developed a framework of principles to guide the selection and development of opportunity area projects as a part of the overall funding and project development process.

Northern Regional Landscape Committee:

- Organized and sponsored the second annual workshop on native plant classification systems for field foresters working in the region. The same training format was subsequently used in three other locations in Minnesota.
- Continued work on amending the landscape plan through development of new methods to integrate native plant communities and the Ecological Classification System into landscape goals and strategies specifically focused on ecological parameters.

East Central Regional Landscape Committee:

- Continued work in the Four Corners Pilot Forestry Project area. Supported efforts by project partners to coordinate the delivery of technical assistance to landowners. Organized a landowner education event and distributed information materials to landowners in the project area.

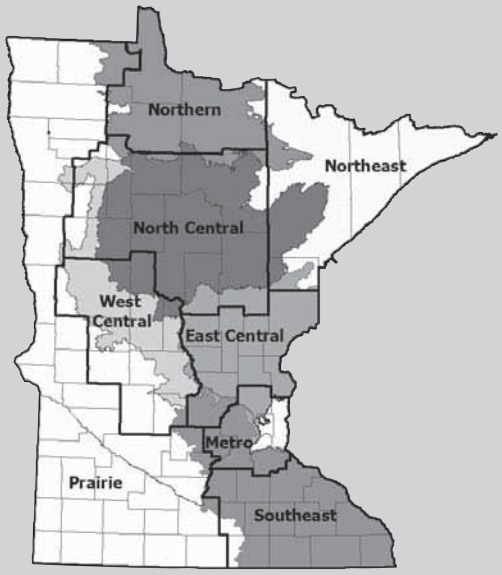
- Supported the formation of an informal coalition of 19 agencies and organizations into the Anoka Sand Plain Partnership. Convened numerous meetings to create and grow the partnership. Supported efforts by the partnership members to prepare grant applications for more than $1.5 million.

Southeast Regional Landscape Committee:

- Initiated the Forest Bank project to improve regional forest health and productivity by implementing a forest land bank program. The program will pool resources and ideas from professionals to educate landowners about sustainable forest management and provide annual payments to participating landowners. Through consultation with professional foresters and creation of forest stewardship plans, the forest bank will determine sustainable management and harvest practices on enrolled lands.
- Supported the purchase of easements through the Forest Legacy program in the Wabasha Blufflands Forest Legacy area.

West Central Regional Landscape Committee:

- Provided funding support for the multi-year Wadena County Pilot Forestry project, which offered increased technical services to private forestland owners through contracts with Soil and Water Conservation District (SWCD) staff. Initiated a buckthorn management project.
- Expanded and strengthened partnerships on the Otter Tail County Pilot Forestry project with the SWCDs, townships, DNR Wildlife, and the U.S. Fish and Wildlife Service.



MFRC 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.

Setting Priorities

New Funding Opportunities

The year 2009 brought major changes to the ways in which funding for forest management projects will occur in the near and distant future. While much of this change can be attributed to the passage of the Outdoor Amendment to the Minnesota Constitution, which is projected to provide $6 billion from increased sales taxes over 25 years for habitat, clean water, and recreation/cultural facilities and projects, other federal and non-profit funding resources also have become available recently.

2009 Initiative: 25-year Implementation Visions

Recognizing opportunities to greatly increase the successful implementation of the MFRC landscape plans through additional funding, regional committees have responded in two primary ways:

- initiation of a major implementation visioning process, and
- formation of informal coalitions, or work groups, to pool and leverage limited resources, including non-state resources.

Starting in 2009, each of the six regional committees began to develop a 25-year implementation vision based on directions set forth in the landscape plans and input from regional partners. Through this process, the committees are identifying "opportunity areas" where efforts should be concentrated in each multi-million acre landscape region. Subsequently, they are identifying specific projects within these areas to help support the development of specific proposals. As a result, new partnerships are being formed to guide comprehensive development of these projects.

The MFRC Landscape Program has played a convening and coordinating role to help foster the creation and growth of this overarching project development framework. The collaborative and coordination principles that form the foundation for landscape-level management will help promote more cost-effective forest management projects.

Increasing Local Capacity

Growing Partnerships Through Collaboration

In addition to on-the-ground coordination and implementation activities, the MFRC regional landscape committees collectively supported the preparation of funding proposals for projects that would:

- **focus on forest stewardship planning and implementation** through applied forested watershed land cover analyses in Carlton County;
- **increase riparian forest stewardship and water quality protection,** combined with Forest Stewardship Council certification in Aitkin County;
- **protect public forest investments** through focused private forest management on private in-holdings in the Littlefork Headwaters Area;
- **promote increased private forestland management in rapid-growth areas** along Interstate 35 in the Four Corners Pilot Forestry Project Area;
- **enhance Southeast Minnesota's forest products economies** through increased private forestland management and the Forest Bank Program; and
- **create and sustain Buckthorn-Free Zones** in Otter Tail and Wadena counties, supported by collaborative private forest management.

If funded, these projects would leverage $315,000 of non-state funding for locally-driven, sustainable forest management activities.

Looking Ahead

Like all forest management, planning must keep pace with the times. In the near future, landscape committees and the MFRC will initiate second generation plans that acknowledge changes in our forests, our communities, and our economy and address new issues, such as wildfire fuel reduction, climate change, parcelization, and bioenergy use.

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.

Evaluating Voluntary Site-Level Guidelines

A core mandate of the Sustainable Forest Resources Act is to develop comprehensive guidelines for timber harvesting and forest management. Since 1995, the MFRC has worked to create voluntary site-level guidelines by focusing diverse interests on shared concerns and the science related to sustainable forest management.

First published in 1999, the guidelines are a set of integrated management practices 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.* These voluntary guidelines provide valuable decision-making tools for landowners, resource managers, and loggers, who all share a responsibility to make sustainable forest management decisions. The guidelines combine flexibility and choice with the best scientific information available to provide landowners and resource managers with options for managing their forestland sustainably. Free hard copies of the guidelines are available by request or can be downloaded from the MFRC website at www.frc.mn.gov

▲ Participants of the 2009 forest management guideline training listen to Brad Jones (Instructor, Itasca Community College) discuss guidelines related to soil productivity at a training site at the Cloquet Forestry Center. *Photo: MFRC Staff.*

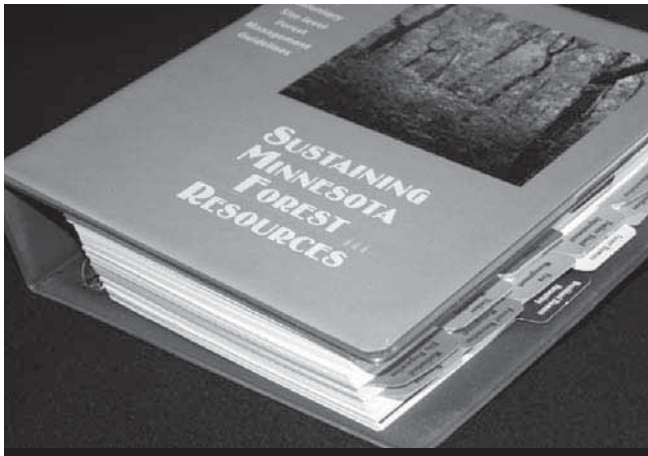
Guideline Revision

The guidelines are periodically revised and updated in response to new research, evolving social values, and emerging technologies. The guidelines were initially revised in 2005 and are scheduled to be evaluated for further revision beginning in 2010. This second revision will be focused mainly on the riparian guidelines. Revision of the riparian guidelines was deferred in 2005 until more scientific information became available about impacts of harvesting in riparian areas and the effectiveness of management practices in mitigating these impacts. In response to this information need, the MFRC convened the Riparian Science Technical Committee (RSTC) to review and evaluate scientific knowledge about riparian forest management.

In the committee's 2007 summary report, the RSTC made several recommendations regarding riparian management zone width, residual basal area, and seasonal pond buffers. As a precursor to guideline revision, the MFRC formed an *ad hoc* committee to evaluate the economic implications of the RSTC recommendations and completed an analysis in 2009. Results from this analysis, in conjunction with the RSTC summary report, will be used as the basis for consideration of riparian area guideline revisions.

Forest Management Guideline Training

Guideline training for loggers and natural resource managers is one of the most important factors influencing guideline adoption and implementation. Therefore, the work of the Sustainable Forests Education Cooperative (SFEC) and Minnesota Logger Education Program (MLEP) is a critical component influencing the success of the voluntary program. In 2009, SFEC and MLEP partnered to provide a two-day introductory course on the guidelines to more than 60 loggers and natural resource professionals. Participants and instructors alike gave the 2009 training high marks, mainly because of the new educational format that MLEP, SFEC, DNR, the University of Minnesota Extension, and the MFRC developed. MFRC-funded instructor training in the new format was conducted by MLEP and SFEC. For additional information on the MLEP and SFEC, visit page 30.



▲ Voluntary Site-Level Guidelines Binder "Sustaining Minnesota Forest Resources"

Tools we need

Voluntary Site-Level Guidelines help landowners, resource managers, and loggers sustain our forests and the benefits they provide. Copies of the guidelines are free on request or can be downloaded from www.frc.mn.gov

Monitoring Guideline Implementation and Effectiveness

As required under the SFRA, the MFRC provides oversight and program direction to several monitoring programs administered by the DNR, including implementation monitoring of the voluntary forest management guidelines and evaluation of the effectiveness of those guidelines in protecting water quality, wildlife habitat, and soil productivity. Monitoring results are used for guideline revision, targeted training and outreach, and fulfillment of certain certification requirements for public and private forestland.

▲ This site illustrates an example of properly installed log water bars. Water bars divert water from forest roads and skid trails to reduce erosion. Implementation monitoring measures the use of such practices and provides the MFRC with information to improve harvest practices. *Photo: MN DNR.*

Implementation Monitoring

Monitoring in 2009 was focused on measuring the implementation rate of timber harvesting and forest management guidelines, which was last assessed in 2006.

- New site selection protocols were used so that a sufficient number of nonindustrial private forest (NIPF) landowner sites were included in the statewide sample. In previous years NIPF sites were underrepresented.
- An MFRC-funded electronic data collection system was field-tested and evaluated. The system allows data to be spatially referenced, potentially enhancing utilization of information collected in the field and streamlining production of summary reports.

DNR and MFRC personnel are currently summarizing and analyzing data generated during the 2009 monitoring period. A report documenting the 2009 implementation monitoring results will be presented to the MFRC by February 15, 2010. MFRC will use the results to inform the next revision of the forest management guidelines in 2010.

The MFRC recommended to the Commissioner of the DNR a biennial schedule of implementation monitoring and reporting after the MFRC's comprehensive review of the monitoring program in 2008 identified several ways to improve the program. In 2009, the DNR formally adopted the biennial schedule. This schedule will allow for valid assessment of implementation trends over time, keep resources needed for monitoring to a reasonable level, and ensure that a timely and consistent report is delivered to the public.

Effectiveness Monitoring

The MFRC has historically funded a number of research projects designed to assess the effectiveness of various guidelines at protecting water resources, wildlife habitat, and soil productivity. Most of these efforts have assessed effectiveness at the local or site level under controlled conditions, limiting applicability of the results. In 2009, a research plan was developed to assess effectiveness of the guidelines at larger spatial scales and across the greater range of site variability occurring within the state (visit www.frc.mn.gov, and select the site-level program under the council initiatives for more information). An effort is underway to identify partnerships and funding opportunities to begin implementing this research plan in 2010.

Monitoring guideline use

In 2009, the DNR visited 87 sites to measure guideline use and will present the results to the MFRC in 2010.

Here a monitoring contractor records a sediment-filled intermittent stream. Data from monitoring sites are used to inform potential guideline revisions and future training sessions. *Photo: MN DNR.*

Supporting Research

In 2009, the MFRC Forest Resources Research Advisory Committee (RAC) continued to support two research projects addressing 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 organized a multi-disciplinary panel of senior researchers to develop a comprehensive vision and strategy for forest-related research in Minnesota.

Funded Research

Ecological impacts of woody biomass harvesting

Pre-harvest data for the study examining biomass harvesting impacts were collected this summer, including inventories of soil nutrient stores, ecosystem carbon, and wood decay fungi. Harvesting will occur at each site during the winter of 2009-2010, and post-harvest data will be collected in 2010. University of Minnesota Department of Forest Resources researchers leading the study were also able to use the initial funding from the MFRC as leverage to secure a national, competitive grant from the U.S. Department of Agriculture/Department of Energy Biomass Research and Development Initiative for $2.7 million. These funds will be used to continue long-term measurements at the already-established research sites, as well as to expand the study to include several research sites across the northern Lake States in partnership with the USDA Forest Service, the University of Wisconsin, and the University of Missouri. This project will provide a robust assessment of the environmental sustainability and capacity for expanded biomass harvesting across the northern Lake States.

▲ Josh Kragthorpe of the USDA Forest Service measures the diameter of a tree as part of the pre-harvest measurements conducted at one of the woody biomass research sites. Measurements such as this are used to estimate baseline biomass pools for comparison to future estimates after the treatments are applied. *Photo: USDA Forest Service.*

Factors influencing willingness to pay for public stumpage

Funded by the RAC and the Minnesota Department of Employment and Economic Development, researchers at the University of Minnesota CFANS, the DNR, and the USDA Forest Service investigated factors influencing Minnesota stumpage prices and reviewed state timber sale policies and procedures. This research addressed concerns identified by the Governor's 2006 Task Force on the Competitiveness of Minnesota's Primary Forest Products Industry. The project is nearly complete, with analysis of a survey of foresters and stumpage purchasers to be completed in 2009. The MFRC expects this work to culminate in a set of recommended improvements regarding timber sales.

Forest resources research assessment: Direction for research investment in Minnesota

The RAC is charged by statute with assessing the current forest resources research capacity in the state, as well as identifying priority research needs and topics to help guide the state in strategically approaching forest resources research. The RAC has appointed an advisory panel of senior researchers and administrators to guide the assessment.

In 2009, the panel designed and administered a survey of entities engaged in forest resources research in the state in order to assess both current research capacity and progress made on priorities identified in 1998. The panel is identifying current forest resource research priorities. Panel members will present these priorities to the RAC, which will request further input from businesses, organizations, agencies, individuals, and the public. These activities will result in an integrated set of priority research needs, helping decision-makers to make strategic funding and programmatic choices in the future.

Research Advisory Committee Members:

Allen Levine (Chair)
Dean, College of Food, Agricultural and Natural Resource Sciences, University of Minnesota

John Beebe
Senior Research Scientist, National Council for Air and Stream Improvement

Dave Epperly
Director, Division of Forestry, Minnesota Department of Natural Resources (as appointed by Mark Holsten, DNR Commissioner)

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, Northern Research Station, USDA Forest Service

Forest Research Advisory Panel Members:

John Beebe, *Senior Research Scientist, National Council for Air and Stream Improvement*

Bill Berguson, *Program Director, Natural Resources Research Institute, University of Minnesota Duluth*

Francesca Cuthbert, *Fisheries, Wildlife and Conservation Biology Department Head, University of Minnesota CFANS*

Alan Ek, *Forest Resources Department Head, University of Minnesota CFANS*

Dave Epperly, *Forestry Division Director, Minnesota Department of Natural Resources*

Steve Hirsch, *Ecological Resources Division Director, Minnesota Department of Natural Resources*

George Host, *Senior Research Associate, Natural Resources Research Institute, University of Minnesota Duluth*

Pam Jakes, *Research Social Scientist, USDA Forest Service Northern Research Station*

Jim Marshall, *Forest Resources Manager, UPM-Kymmene*

Brian Palik, *Team Leader/Research Ecologist, USDA Forest Service*

Michael Prouty, *Field Representative, Northeastern Area, State and Private Forestry, USDA Forest Service*

Shri Ramaswamy, *Bioproducts and Biosystems Engineering Department Head, University of Minnesota CFANS*

Peter Reich, *Regents Professor, Department of Forest Resources, University of Minnesota CFANS*

Jim Sanders, *Forest Supervisor, Superior National Forest, USDA Forest Service*

Dave Schad, *Fish and Wildlife Director, Minnesota Department of Natural Resources*

Research: providing direction for Minnesota

Research conducted and supported by the MFRC identifies opportunities to improve our forest management practices and policies. Priority research needs identified by the research assessment will inform future strategic funding and programmatic decisions.

Developing and Sharing Information

Information development and management are essential components of effective sustainable forest management. The Interagency Information Cooperative (IIC) was created as part of the SFRA of 1995 to coordinate the development and use of forest resources data in the state with oversight from the MFRC.

The IIC is housed within the University of Minnesota's Department of Forest Resources in the College of Food, Agricultural and Natural Resource Sciences. With support from the 2008 Legislature, the IIC developed the following initiatives:

A Common Forest Inventory Format

In collaboration with the Minnesota Forest Resources Partnership (MFRP) and the IIC, the MFRC surveyed forest managers to summarize forest inventory programs and their status in Minnesota. This initial assessment provided the basis for a focused inventory discussion coordinated by the MFRP. Results indicate counties are facing funding shortfalls and operational difficulty in maintaining up-to-date forest inventories. In response, the IIC is conducting a study of methodology for using frequently-measured USDA Forest Service Forest Inventory and Analysis (FIA) field plot data to simplify existing county inventory data collection. The approach under study would populate county forest inventory records with FIA plot data to simplify field data collection for counties, speed data acquisition at a much reduced cost, and facilitate use of contemporary forest planning models.

A Forest Planning Cooperative

A pilot cooperative has been formed with five counties to examine and employ contemporary forest planning models to assess alternative strategies for developing county forest management plans. Preliminary trials from one county indicate that traditional assumptions made in forest planning can potentially cost counties a great deal in terms of lost timber revenue.

Forest Growth Models for Managed Stands

Three efforts are underway to provide forest growth models for use in traditional and biomass harvest scheduling and forest management planning:

1. Development of preliminary statewide estimates of woody biomass availability,
2. Assessment of the reliability of FIA data and model forms for developing managed stand models, and
3. Development of spreadsheet-based growth models for rapid projections of fiber and biomass supply under existing and enhanced forest management.

These efforts have provided preliminary estimates of residual biomass available statewide under current harvesting infrastructure and show that FIA data can be pooled to create a large database to facilitate modeling managed forest conditions. The Forest Age Class Change Simulator was developed to project forest growth and harvest and yield scenarios for rapid short- to long-term projections/scenarios of fiber and biomass supply statewide and by region. The model has been used for several analyses already and is available by contacting the IIC at http://iic.gis.umn.edu

A Forest Wildlife Habitat Model Format

Habitat suitability matrices that describe the relationships among forest wildlife species and forest type and stand age have been assembled, updated, and improved. These matrices will be combined with Web-based lookup of wildlife-habitat relationships and specific site suitability for certain wildlife species for use with forest planning models.

Planning with wildlife in mind

Consideration of wildlife habitat is a component of forest planning. The IIC is developing a wildlife habitat model to provide information on habitat relationships and suitability for a variety of forest-dependent species.

Information on Minnesota's Family-Owned Forests

The IIC has been charged with developing a database on Minnesota's family-owned forests, with information on associated resource management, trends in land value and ownership, and parcelization and fragmentation. A comprehensive review and synthesis is underway, including: forest owners' attitudes, beliefs, values, and actions; forest land values, real estate transactions, forest inventory, and investment potential; national assessments of family forests and related policies and programs; studies evaluating public policy strategies to encourage continued investment in land management; and spatial aspects of family-forest lands and forest stewardship.

Statewide Silvicultural Practices

Results from a recent survey of statewide silvicultural practices indicate that the relative intensity of silvicultural systems used has decreased in the last decade, as the proportion of clear cutting (acres) diminished and the use of patch clear cutting, seed tree, shelterwood, and single-tree and group selection systems increased. However, clear cutting was still the predominant type of silvicultural system employed across all ownerships. The resulting report *Current status and long-term trends of silvicultural practices in Minnesota: A 2008 assessment* will soon be published as a Department of Forest Resources staff paper, available online: www.forestry.umn.edu/publications

▲ Harvesting methods are one important factor considered when developing a silvicultural prescription. Advances in technology have changed forest harvesting methods, such as the use of this stroke delimber to remove branches from harvested trees, a job which used to be conducted by loggers with chainsaws. *Photo: MFRC Staff.*

Collaboration and Information Sharing

The MFRC strives to provide current, science-based information to Minnesota's citizens and natural resource practitioners. Responding to requests by the Lessard-Sams Outdoor Heritage Council in 2009, the MFRC and Minnesota Forest Resources Partnership collaborated on development of a draft statewide vision for forest habitat investment priorities. The draft vision incorporates various regional and professional perspectives, ensuring consideration of ecological, social and economic concerns. The MFRC and Partnership chairs plan to jointly present the vision to the Lessard-Sams Outdoor Heritage Council in May 2010.

Participating in Sustainable Forestry

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" are represented and incorporated into forest resource planning and management.

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, as well as an opportunity to learn more about forest management.

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 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 register a concern, call 1-888-234-3702 or submit one online at www.frc.mn.gov

The Sustainable Forests Education Cooperative

The Sustainable Forests Education Cooperative (SFEC), located in the University of Minnesota's College of Food, Agricultural and Natural Resource Sciences and physically located at the Cloquet Forestry Center, 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 educational programs for natural resource professionals by offering training on current research findings, new technologies, and state-of-the-art practices. SFEC also tracks Stewardship Plan Writer Credits and identifies Certified Foresters in cooperation with the DNR.

The SFEC organized and helped to coordinate numerous workshops during 2009. As in previous years, educational programming for natural resource professionals addressed such varied topics as ecosystem silviculture, forest management and biomass harvesting guidelines, emerald ash borer identification and quarantine, forestry tax considerations for private forestland owners, and climate change. For more information including a calendar of events, visit http://sfec.cfans.umn.edu

The Minnesota Logger Education Program

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.

MLEP's Minnesota 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.

In 2009, MLEP provided training to 1,824 loggers, landowners, and professionals through more than 40 workshops on topics including: forest management and biomass harvesting guidelines; geospatial information and planning; global positioning systems; timber cruising and marking; silviculture; timber stand treatment; riparian forest management; logging and transportation safety; and equipment operation and servicing. For more information, visit www.mlep.org

Working together to sustain our forests

In 2009, sustainable forestry and the MFRC's initiatives benefited from more than 2,000 hours of volunteers' involvement. Interested individuals become involved with MFRC initiatives by:

- Attending MFRC meetings,
- Participating in regional landscape committees,
- Using the timber harvesting/forest management guidelines,
- Reporting concerns about specific timber harvesting or forest management activity through the Public Concerns Registration Program, and
- Participating in forest resources educational programs.

Thank you

Thank you to all the organizations and individuals who 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

Citizens of Minnesota who participate in SFRA and MFRC programs

Cloquet Forestry Center

Freshwater Society

Institute for Agriculture and Trade Policy – Community Forestry Resource Center

Interagency Information Cooperative

Minnesota Association of County Land Commissioners

Minnesota Board of Water and Soil Resources

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

National Council for Air and Stream Improvement

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 CFANS Department of Forest Resources

University of Minnesota CFANS Sustainable Forests Education Cooperative

University of Minnesota Duluth Natural Resources Research Institute

University of Minnesota Extension

Wood Fiber Employees Joint Legislative Council

MFRC Senior Forestry Consultant during 2009: Larry Hegstad

MFRC student workers during 2009: Erin Baumgart and Theodore LaFrance

Remembering Bob Oswold
MFRC Member, 1995 - 2009

Bob Oswold was the only person to have served on the Minnesota Forest Resources Council continuously since its inception in 1995. Bob was a leader in the labor movement for many years. He served as a vice president of the Minnesota American Federation of Labor and Congress of Industrial Organizations, as president of the Cloquet Central Labor Body, and in many other offices.

Bob was the leading labor voice on forestry issues in Minnesota. In addition to serving on the MFRC, he was a member of the Governor's Blue Ribbon Commission on Forestry and Forest Products, testified frequently at the Capitol, and was twice the labor co-chair of the Wood Fiber Employees Joint Legislative Council.

With a love of the woods, his family, public policy, and his fellow citizens, Bob unselfishly gave of his time and talents to improve our state's forests and the jobs that they provide. We are grateful for his contributions, which have made Minnesota a better place.

Minnesota Forest Resources Council 2009 Report to the Governor and Legislature on the Implementation of the Sustainable Forest Resources Act

This information is available in an alternate format upon request.

Equal opportunity to participate in and benefit from Minnesota Forest Resources Council programs is available to all individuals regardless of race, color, creed, religion, national origin, sex, and marital status, status with regard to public assistance, age, sexual orientation, or disability. Discrimination inquiries should be sent to the Minnesota Forest Resources Council, 2003 Upper Buford Circle, St. Paul, Minnesota 55108; or the Equal Opportunity Office, Department of the Interior, Washington, DC 20240.

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The Minnesota Forest Resources Council was established by the Sustainable Forest Resources Act (SFRA) of 1995 to promote long-term sustainable management of Minnesota's forests.

To find out more about the council, visit our web site:

www.frc.mn.gov

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