Taking Care of Family Forests: Lessons for Minnesota

Prepared by E.G. Nadeau, Elisabeth Howard and Kevin Edberg,
Cooperative Development Services

For the Vital Forests/Vital Communities Initiative of the Blandin Foundation

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Executive Summary

Taking Care of Family Forests was prepared for the Vital Forests/Vital Communities Initiative of the Blandin Foundation. The report reviews 24 private forest management programs in order to identify ways to increase the number of acres of sustainably managed family forests in Minnesota and elsewhere in the United States.

The **Methodology** used in preparing the report consisted of documentary and internet research and telephone interviews with participants in, and knowledgeable observers of, forest management programs. Selection of the 24 case studies was based primarily on six criteria provided by the Blandin Foundation that focused on: the ability to solve real problems on the ground; the relevance of programs to Minnesota; the potential to have a significant impact on forest management in a short time; peer-to-peer collaboration among family forest owners; cost-effectiveness; and the ability to measure plan implementation over time.

The 24 **forest management case studies** analyzed in the report are grouped into five categories: forest owner non-profit associations; forest owner cooperatives; public forest management incentive programs; logger certification programs; and other forest management programs. Five case studies are from Minnesota, seven from Michigan and Wisconsin, seven from elsewhere in the United States, three from Canada; one from Finland; and one from Sweden.

We divided the programs into three groups – most applicable, somewhat applicable, and least applicable -- based on their relevance to family forestry in Minnesota as measured by the Blandin Foundation criteria.

The six programs most applicable to Minnesota are presented below in alphabetical order.

- **Alabama's Treasure Forest Association** has a statewide network of chapters and an effective peer-to-peer educational approach at the local level.

- **Finland's Forest Management Associations** play a lead role in forest management and forest product marketing in Finland with over 50 years of strong public financial support.

- **Forestry Services by Farm Supply Cooperatives** are well-positioned to expand into fee-for-service forestry activities, because they are community-based, member-owned businesses located throughout rural Minnesota.

- **Quebec's Forest Management Associations** are the primary source of family forestry services in the province, supporting themselves by a combination of fees-for-service and cost-share funds from several provincial tax programs.

- **Trust to Conserve Northeast Forestland** has the potential to serve as an effective partnership among landowners, loggers, foresters, researchers, government agencies and other to promote and assist sustainable forestry on public and private land.

- **Wisconsin's Managed Forest Law (MFL)** provides a significant financial incentive for forest management plans; has a high percentage of private forestland under management; has clear; enforced accountability standards; is certified by Tree Farm; is developing a system for multi-property, forest management plans; and is exploring ways to contract with family forest organizations to provide local forestry services.

A review of all of the case studies was used to generate **Lessons Learned** for Minnesota and other states interested in expanding family forest management. These lessons are summarized in the following 10 ingredients for a successful program.

1. Adequate financial incentives for woodland owners
2. Appropriate sources of financial incentives
3. A simple application process
4. Minimum acreage requirements
5. Adequate time commitment
6. Recognition of multiple forest management goals
7. Accountability
8. Incentives for multi-property plans and plan implementation
9. Third party-certified management plans
10. Financing for family forest management associations and cooperatives

The **Conclusion** of the report reiterates that the family forests of Minnesota are already a resource of enormous economic and ecological value. It recommends setting a goal of doubling the number of acres of family forestland under sustainable management in Minnesota by 2015 – an increase from about 1 million to 2 million acres. The report also recommends a few key changes to facilitate the achievement of this goal:

- Revisions to the Sustainable Forest Incentive Act;
- An increase in public and private funds devoted to forest management planning and education;
- A greater involvement by family forest organizations in the provision of forestry education and services; and
- The development of a public-private financing and implementation strategy for a Minnesota Family Forest Initiative.

With these changes, Minnesota would become a national model for sustainable family forest management.

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I. Introduction

Purpose

The primary purpose of this report is to identify approaches to private forest management that have the potential to significantly increase the number of acres of sustainably managed family forests in Minnesota and elsewhere in the United States. As a measure of "significant increase," we recommend doubling the number of family forest acres under management in Minnesota by 2015. This would be an increase from about one million family forest acres with management plans in 2005 (Anderson, 2005) to two million acres in 2015.

The report is intended to be a resource for the **Vital Forests/Vital Communities Initiative** of the Blandin Foundation as it seeks to improve private forest management and to maintain a competitive forest industry in Minnesota. The report is also intended to be of use to others interested in improving private forest management in the United States.

Organization of the Report

The report is divided into five main sections:

- This **Introduction**;
- A description of the **methodology** used to identify, gather information on, and analyze family forest management programs;
- A **summary** of the major findings from the 24 case studies of family forest management models as they apply to Minnesota;
- Identification of **lessons learned** from the case studies that appear to have the best potential for application in Minnesota; and
- **Recommendations** for a Minnesota Family Forest Management Initiative.

The **24 case studies** are presented and described in detail in **Appendix A** of the report.

A Profile of Family Forests

Over 40% of the forestland in the United States is owned by individuals and families (estimate derived from National Research Council, 1996, p. 170). These properties are referred to as **family forests** in this report. (Note that, in keeping with the USDA Forest Service's definition of family owned forests, family forest data presented in this report do not include forestland owned by non-family corporations). In Minnesota, family forests comprise about 32% of forestland in the state (Miles et al., 1995, pp. 33-35). About 5.3 million acres of forestland in the state are owned by about 195,000 families and individuals (estimated from Miles et al., 1995, p. 33; Anderson, 2005).

Family forests play an important role in Minnesota's forest industry. About 35% of the wood harvested and marketed in Minnesota comes from these family forests (Miles et al., 1995). There is potential for a substantial increase in commercial harvests on family forestland, because growing stock far exceeds the rate of harvest. For example, every board foot of sawtimber removed from family forests each year is replaced by over 2 1/2 board feet of new growth (Miles et al., 1995).

It is important to recognize that almost 60% of family forest owners in the United States (estimated from National Research Council, 1996, p. 180) and about half of family forest owners in Minnesota (estimated from Anderson, 2005) own fewer than 10 forested acres. In Minnesota, this translates into 96,000 landowners who own between 1 and 9 forested acres with a combined total of 390,000 forested acres (Anderson, 2005). This represents about 7% of the family forestland in the state.

The other side of the coin is that about 100,000 family forest owners with 10 or more acres own a little less than 5 million acres or about 93% of the family forestland in Minnesota (Anderson, 2005). Because of this concentration of land in parcels of 10 acres or more, we focus on these larger properties in the research, analysis and recommendations presented in this report. We take this approach because it would not be cost-effective to feature very small forest owners (i.e., those with fewer than 10 acres) in a statewide forest management initiative that has the goal of “significantly increasing the amount of sustainably managed family forests in Minnesota.”

This approach should **not** be construed to mean that we are opposed to forest management on smaller parcels. We believe that family forest owners with small as well as large parcels should be encouraged to implement management plans. However, in order to get the “biggest bang for the buck,” very small parcels should be a secondary target for a statewide initiative.

Family Forest Management

As used in this report, **forest management** refers to the implementation of forestry practices based on a formal forest management plan. The priority goals of a management plan may vary (e.g., recreation, timber management, wildlife habitat, etc.) as long as the plan is designed to protect the long-term health of the forest.)

Only about 5% of family forest owners in the United States have forest management plans (National Research Council, 1996). In Minnesota, only about 10% of family forest owners with 10 or more acres – about 10,000 landowners -- have management plans. The total family forest acreage covered by these plans is about one million acres or 19% of all family forest acreage in the state. (These management plan data are estimates derived from Butler and Leatherberry, 2005; and Anderson, 2005). This figure compares to about 22% for non-industrial private landowners nationally (National Research Council, 1996). Washington and Wisconsin have among the highest percentages of NIPF land under management at about 30% for each state (Interview with Kirk Hanson, Small Forest Landowner Office, State of Washington; Wisconsin Forestry Plan Acres, prepared by Paul Pingrey, WI DNR).

This low level of forest management on family forestland persists despite the efforts of the USDA Forest Service, state forestry programs, the forest industry, consulting foresters and loggers, private initiatives such as Tree Farm, and woodland owner organizations.

Numerous studies indicate that the lack of forest management has negative economic and environmental consequences for landowners, for their communities, and for state, regional and national economies. (See for example, "Governor's Advisory Task Force on the Competitiveness of Minnesota's Primary Forest Products Industry," State of Minnesota, July 2003.)

Why has forest management on family forestland proven to be such a difficult issue to address despite the clear benefits of good management?

The simple answer is that most woodland owners either don't know what a forest management plan is or aren't convinced that the benefits of forest management outweigh the costs. (See, for example, John C. Roberts and Wayne Tlusty, 1986)

One promising approach to address both the lack of knowledge about, and the negative assessment of, forest management by family forest owners is to combine:

- More effective incentives for landowners to develop and implement forest management plans;
- Increased woodland owner education and technical assistance;
- Peer-to-peer involvement of landowners at the local community level;
- Better coordination among those with an interest in forestland sustainability (landowners, foresters, loggers, forest product buyers, general public, etc.) and
- A clearer demonstration of the long-term ecological and financial gains possible through improved woodland stewardship.

In addition to state, federal and industry programs, there are a variety of community-based approaches for providing education and services to family forest owners, for example, through:

- Local groups of Tree Farm members
- Chapters of state woodland owner associations
- Initiatives of Resource Conservation and Development Councils
- County private woodland councils
- Local woodland owner associations
- Forestry cooperatives
- Farm supply co-ops involved in forestry education and services
- Collaborative efforts by loggers, foresters and landowners
- Local woodland owner events such as group harvests, group timberstand improvement projects, and workshops.

There are numerous examples of these approaches to promoting forest sustainability in Minnesota and elsewhere in the United States. There are also forest management programs with long histories in Quebec, Nova Scotia, Sweden, Finland, and other countries that can be drawn on as well.

This report gathers information on a wide variety of family forest management programs in order to identify promising approaches to increase private forest acreage under sustainable management in Minnesota. It is intended to provide useful information to landowners, forestry professionals, non-profit organizations, the forest industry and government agencies interested in improving family forest management in Minnesota, in other states and at the national level.

II. Methodology

In its Family Forest Land Management Project, the Blandin Foundation describes six criteria for identifying models to improve family forest management in Minnesota:

1. Ability to solve real problems on the ground;
2. Ability to increase the number of management plans significantly over a short period of time;
3. Ability to foster and support peer-to-peer collaboration among family forest owners;
4. Effectiveness in tracking the status of management plan implementation over time;
5. Cost effectiveness; and
6. Ability to be implemented on a large scale in Minnesota.

We used these six criteria as the primary basis for selecting case studies for this report. We began with a broad list of about 50 family forest management programs in the United States, Canada, Europe and Asia. The list included a range of family forest management programs, including those carried out by non-profit associations, cooperatives, forestry professionals, the forest industry and various levels of government. We included programs only from developed countries because of the greater similarity in political and economic conditions in these countries and in Minnesota. The list was derived from a combination of interviews, documentary research, and programs known to the researchers.

We conducted a preliminary screening of these programs using the six criteria presented above. We also reduced the number of programs that were too similar to one another. For example, several woodland owner co-ops and associations and several state incentive programs were taken off of the priority list for this reason. We reduced the number of international examples because of different political, economic and forestry contexts. For example, programs in Japan, France, Germany and Italy were deleted from the sample for these reasons.

This paring down resulted in a list of 24 programs on which we carried out more detailed case study research. Using the same set of questions, we conducted semi-structured interviews with one or more representatives from, or knowledgeable observers of, each program. We supplemented the interview data with documentary and web-based information. We prepared a two-to-four page review of each case study using the same general format:

- Summary
- Origin and history
- Mission, goals and objectives
- Organizational structure
- Services
- Lessons
- Sources

These case studies are presented in **Appendix A**.

The lessons identified in each case study focus primarily on the six criteria identified by the Blandin Foundation. We reviewed the lessons from all 24 case studies and selected the six programs that appeared to have the most relevance to improving family forest management in Minnesota. We also used the case studies to compile the section of the report entitled **Lessons Learned.**

III. Family Forest Management Programs

Program summary

The table on the following three pages lists the 24 forest management case studies analyzed for this report. The programs are grouped into five categories: forest owner non-profit associations; forest owner cooperatives; public forest management incentive programs; logger certification programs; and other forest management programs. The table presents the name and location of each program, the year it began (and, if applicable, ended); the type of program, and a brief description.

Five case studies are from Minnesota, seven from Michigan and Wisconsin, seven from elsewhere in the United States, three from Canada; one from Finland; and one from Sweden. Case studies are presented in alphabetical order. **Appendix A** of the report presents the full case studies of these programs.

As stated in the methodology section, lessons can be derived from all of these case studies for family forest management in Minnesota and other states. However, some programs have greater applicability than others. We divided the programs into three groups based on their relevance to family forestry in Minnesota as measured by the Blandin Foundation criteria (see the list at the beginning of the methodology section).

We identified 6 of the 24 cases as having components that are “most applicable” to Minnesota. Each of the six programs is profiled below listing specific components that have good potential to be applied or adapted to family forest management in Minnesota.

Forest Management Programs Reviewed for "Taking Care of Family Forests"

Program	Start/End	Type	Summary Description
Member-controlled, non-profit associations			
Finland's Forest Management Associations	1950	Government-supported associations	Associations are locally-based and managed, providing forestry services with a focus on timber production for members (owners of forests over 7.5 hectares pay forest tax and are automatically members).
Quebec's Private Forest Management Associations	1971	Government-supported associations	The 44 associations provide forestry education and services to members, and help them access public funds to pay for these services.
Michigan's Western Upper Peninsula Forest Improvement District (WUPFID)	1985-2004	Government-supported association	Modeled after the Finnish land management associations, WUPFID had a peak membership of over 900. It's goals were to increase the productivity of forestland, better educate landowners, provide forest management plans, and coordinate timber sales.
Societe Sylvicole des Laurentides, Quebec	1987	Government-supported association	This forest management association helps landowners protect and add value to private forestland by coordinating financing, forest management services, and timber sales for members.
Carleton County Woodland Committee, Minnesota	1985	Local non-profit association	The Council is an unincorporated, volunteer group that provides learning opportunities for people to take care of their woods in economically and environmentally sustainable ways.
Alabama's TREASURE Forest Program	1991	State-level non-profit association	Preserve family forest owners' way of life by spreading responsible forest management through educational programs using direct involvement of landowners.
Minnesota Forestry Association	1876	State-level non-profit association	MFA's goal is to help meet timber demands now and in the future in an ecologically healthy way through education and advocacy, and through better coordination of local level efforts.

Wisconsin Family Forests	1999	State-level non-profit association	WFF forms local, township-based alliances to support sustainable forestry and community growth through education, facilitation of local harvests, and social networks. It is also developing group certification program.
Wisconsin Woodland Owners Association	1979	State-level non-profit association	WWOA addresses forest landowner interests and promotes responsible forest management through educational activities, sharing of information and advocacy.
Member-owned cooperatives			
Athol Forestry Cooperative, Nova Scotia	1977	Cooperative	The co-op secures financial assistance for its members' forest management efforts, and provides them technical assistance, timber marketing strategies and forestry education.
Doniphan Wood Cooperative. Missouri	not yet in operation	Cooperative	Scheduled to begin operation in 2005, this value-added co-op in southeastern Missouri, will process members' wood, primarily for use by area furniture and cabinet makers.
Farm supply cooperatives, United States	N/A	Cooperatives	These co-ops do not currently provide forestry services, but some have in the past. As established, community-based businesses, they could play a significant role in improving family forest management through the provision of fee-based services.
Headwater Forestry Cooperative, Minnesota	1999	Cooperative	The co-op organizes educational work days, provides forestry services to members, and coordinates sales of value-added wood -- particularly flooring, directly to the final customers or to flooring installers.
Kickapoo Woods Cooperative, Wisconsin	2000	Cooperative	Kickapoo provides education about sustainable forestry to its members and coordinates sustainable forest management, harvesting, processing and sales on a fee-for-service basis.
Massachusetts Woodland Cooperative/Institute	1999	Cooperative and non-profit	The co-op offers FSC certification to its members. It is developing a value-added products and services and is building a GIS-based database for landscape-level management and planning. The Institute is a 501(c)(3) sister organization providing educational services.
Northwoods Forestry Cooperative, Minnesota	2002	Cooperative	NFC provides networking and educational opportunities for it members and helps them create forest management plans, find markets for forest products, and carry out harvest, transport, milling and drying of timber.

Sustainable Woods Cooperative, Wisconsin	1998-2003	Cooperative	SWC attempted to promote sustainable forest management among its 150 members by providing value-added marketing and processing services as well as educational and forestry services. The co-op closed its doors in 2003 because of a mounting debt load.
Sweden's Foresty Cooperatives	1930s	Cooperatives	Forty-four percent a family forest owners with 12 and 1/2 or more acres are members of seven forestry co-ops that provide a range logging and silvicultural services and also run large scale value-added processing and marketing businesses.
Public forest management incentive programs			
Minnesota Sustainable Forest Incentive Act	2002	Government program	Landowners with 20 contiguous acres, at least half of which is forested, and with forest management plans are eligible for incentive payments based on acreage.
Wisconsin Managed Forest Law	1985	Government program	MFL provides an average property tax incentive of between $20 and $30 to enrolled landowners with 10 or more contiguous, forested acres. 22% of NIPF land is enrolled in the program, all of which is now eligible for Tree Farm Certification.
Logger certification programs			
Maine Master Logger Program	1997	Logger certificaton program	The program offers a six-step process for loggers to achieve nationally-recognized certification in sustainable timber harvesting.
Wisconsin Master Logger Program	2003	Logger certificaton program	Based on the Maine program, Wisconsin Master Loggers offers a process for loggers to achieve nationally-recognized certification in sustainable timber harvesting.
Other forest management programs			
Tree Farm, United States	1941	National non-profit organization	Tree Farm is a nonprofit organization supported by the forest industry that promotes the health and well-being of family forests and encourages growing timber for the market. It has recently established a third party certification program for family forest owners.
Trust to Conserve Northeast Forestland, Northeastern United States	2004	Regional non-profit organization	The Trust is intended to bring together a range of partners committed to a sustainable and market-based approach to forest management. Its priorities are FSC certification, GIS mapping, timber inventory support, and long-term sustainable harvesting.

Seven programs were identified as being “moderately applicable.” A brief description of relevant components of each of these cases is presented at the end of this section.

The remaining 11 programs were considered “least applicable.” Note, however, that all of these case studies provide some lessons for family forest management in Minnesota. The **Lessons Learned** section of the report derived valuable lessons from these programs for Minnesota – both positive lessons and lessons about what to avoid. Note also that each case study in **Appendix A** includes a “lessons learned” section.

Programs most relevant to Minnesota

The following six programs are presented in alphabetical order.

1. **Alabama’s Treasure Forest Association**
    - A state association with a strong grassroots infrastructure from county to state level
    - Dramatic growth in membership in recent years through peer-to-peer outreach
    - Peer-to-peer forestry educational and social activities at the local level

2. **Finland’s Forest Management Associations**
    - A national program based on private forestland taxation that provides core financial support to forest management associations
    - In operation for over 50 years
    - 95% of private land under management and in Pan European Certification Program

3. **Forestry Services by Farm Supply Cooperatives**
    - Rural, community-based, member-owned businesses already in place
    - Developed infrastructure and access to capital
    - Interest by many farm supply co-ops in diversification
    - Some historical success with this model

4. **Quebec's Forest Management Associations**
    - Substantial cost-share programs for private forestry based on a forest industry timber tax, a provincial budget allocation and a forest property tax
    - Fee-for-service contracting between the provincial government and forest management associations
    - Forty-four associations carry out management plan-based services on about 20% of all private forestland in the province
    - In operation for over 30 years

5. **Trust to Conserve Northeast Forestland**
    - Planned partnership between landowners, loggers, foresters, researchers and certified product retailers that is intended to be both market-oriented and committed to multi-objective forest management
    - Access to certification
    - A potential means to alleviate distrust between landowners and forestry professionals
    - Potential role in facilitating the process of bringing certified wood to the market

6. **Wisconsin's Managed Forest Law (MFL)**
    - A significant financial incentive for forest management plans (an average of $20 to $30 per acre per year)

- A high percentage of private forestland under management (22% of the state's non-industrial private forestland enrolled in MFL -- plus 9% of NIPF land with plans, but not enrolled in MFL)
- Clear, enforced measurement of forest management
- Tree Farm Group Certification of MFL participants' land
- Landscape-level management plans and certification (in the development stage)
- Contracting with woodland owner organizations for forestry services (in the development stage)

Programs with "moderate applicability"

Seven programs were identified as having components with "moderate applicability" to family forest management in Minnesota:

- **Athol Forestry Cooperative** started out with a provincial subsidy in the 1970s, but has been providing forestry services to its members for the past ten years as an unsubsidized business.

- **Kickapoo Woods Cooperative** provides educational and forestry services to its members and has successfully built up its fee-based forestry services during the past three years.

- **Massachusetts Woodlands Cooperative** and **Massachusetts Woodlands Institute** provide an example of a sister relationship between a woodland owner business and an affiliated, non-profit educational organization.

- The **master logger programs in Maine and Wisconsin** have rigorous, certified standards that meet the requirements of Time, Inc. and other buyers of forest products, and that help landowners choose quality harvesting resources regardless of their involvement in other forest management schemes.

- **Sweden's forestry cooperatives** represent woodland owner organizations that have become major businesses providing both forestry services and forest product processing and marketing at the national level.

- **Wisconsin Family Forests** has local alliances at the township level, thus creating opportunities for neighbor-to-neighbor learning, joint activities and coordinated, multi-property forest management and certification.

Program review conclusions

In this section, the **Forest Management Programs Table** summarized the 24 case studies analyzed in the report. We also highlighted 6 programs that are "most applicable" and 7 programs that are "moderately applicable" to strengthening family forest management in Minnesota and elsewhere in the United States.

In the next section of the report, we analyze the case study and interview data from a different perspective: What are the major lessons that we can derive from these programs to help shape an effective family forest management initiative in Minnesota?

IV. Lessons Learned

The primary goal of the Blandin Foundation's Family Forest Land Management Planning Project is "to increase the number of acres of family owned forests in Minnesota under the guidance of actively implemented formal forest management plans."

Based on the case studies conducted for this report and on interviews with forestry professionals and landowners, we have developed a list of 10 components that we believe would achieve this goal. These components may also be applicable to potential family forest initiatives in other states and at the national level in the United States.

1. **Adequate financial incentives for woodland owners**

   For family forest owners to participate in a forest management incentive program, they must believe that the benefits of the program outweigh the commitment of time and money.

   While recognizing that family forest owners are motivated by many things besides money, the case studies and supplemental research overwhelmingly show that financial incentives increase acres with forest management plans and increase implementation of those plans.

   Minnesota provides a relatively small financial incentive for family forest management compared to a number of other states, including Massachusetts, Oregon, Washington and Wisconsin. These states have much higher rates of participation in their incentive programs than does Minnesota. States with high financial incentives also usually have some form of harvest tax that is used to recoup part of the cost of property tax reductions. Enrollment is high in these programs, despite this deferred harvest tax.

During the last two years, the Minnesota Sustainable Forest Incentive Act (SFIA) program paid landowners in the program between $3 and $4 per acre per year. From the beginning of the program in 2002 to the end of 2004, only 609 properties with a combined 553,000 acres have been enrolled in the program. Most of this land is owned by forest companies and non-family corporations that was transferred into SFIA in 2002 after the expiration of the Tree Growth Tax Law. Only 57,000 acres were added to the program in 2003 and 2004. (email communication, Minnesota Department of Revenue)

Even if we were to assume that all of these properties were family-owned, they would represent less than 1% of family forests with 10 or more acres in the state. Thus it is safe to say, that the vast majority of family forest owners in Minnesota are not enrolled in SFIA. This compares with 15% of family forest owners in Massachusetts, 22% in Wisconsin and 30% in Washington who have management plans and are enrolled in their states tax incentive program.

Looking at one example, Wisconsin' Managed Forest Law (MFL) reduces property taxes paid by landowners by an average of $20 to $30 per acre per year. Enrollment between 2002 and 2004 increased by about 650,000 acres, or 7.2% of NIPF acres in the state.

It is true that MFL has been in existence much longer than SFIA. That certainly explains some of the difference in enrollment between the two programs. However, MFL has grown dramatically in the last three years –an average increase of over 200,000 acres per year. Everyone we interviewed about MFL attributes this recent growth to the high property tax incentive in the program. Faced with rapidly rising property taxes in the state, more landowners than ever before in the history of the program chose to enroll in MFL during this time period.

2. **Appropriate sources of financial incentives**

There is not one right answer to the question of how a forest management incentive program should be financed. Policymakers must determine the approach that is most appropriate in each political jurisdiction.

Sources of financial support for family forest management vary dramatically among different countries, states and provinces. Finland has a special tax on all private forestland that is used to help pay for private forestry programs. Quebec combines a forest industry tax, a private forestland tax and a provincial allocation for this same purpose. Wisconsin, Minnesota and other states provide financial incentives to landowners enrolled in state forest management programs that are based on property taxes. In Wisconsin, the incentive is a property tax reduction. In Minnesota, landowners enrolled in SFIA receive a payment from the Minnesota Department of Revenue that is effectively a rebate on their forest property taxes. Minnesota's property taxes averaged about $12 per $1,000 of full value in 2004 compared to $21 in Wisconsin (Deloitte Touche memorandum: http://www.forwardwi.com /forward_docs/uploaded_documents/resources_for_economic/wi-mn_tax_comparison.pdf).

The MFL tax reduction in Wisconsin is based on the average, statewide forest property tax. It is not based on the tax assessment at the local level. One problem with this approach is the wide variation in property taxes on forestland among the state's 72 counties, 1,266 towns and 556 municipalities. For example, a woodland owner in a heavily urbanized or rapidly growing part of the state with high forest property taxes has a much stronger financial incentive to join the MFL program than a landowner in a more rural part of the state with low forest property taxes.

Because of the different tax rates in the two states and because of intra-state variations in property taxes, Minnesota may want to consider a financial incentive program that is somewhat different from Wisconsin's. For example, an expanded SFIA program in Minnesota could make use of a modified property tax incentive that adjusts for tax rate variations in different parts of the state or it could have a state income tax credit as a supplement to a property tax credit.

3. Simple application process

This point is straightforward. All other factors being equal, making the application process easier for a forest management incentive program will increase enrollment.

The State of Washington is a good case in point. About 30% of NIPF land in Washington has forest stewardship management plans. This is one of the highest rates in the country. Almost all of this land is enrolled in a forest land use program that reduces property taxes by 75%. Enrolling in the program is not complicated. Landowners fill out a simple form indicating that they have 10 or more contiguous acres of forestland; provide proof that they have a forest stewardship plan; commit to keeping the land as forestland for the next ten years; and submit this information to the county assessor's office. (Interview with Kirk Hanson, Small Forest Landowner Office, State of Washington)

4. Minimum acreage requirements or multi-property plans

It is more cost-effective to develop and implement management plans on larger parcels than on smaller ones. Most programs reviewed in this research project required a minimum of 10 or more forested acres. For example, the minimum forested acres required in Massachusetts, Washington and Wisconsin is 10 contiguous acres; the minimum for Minnesota's SFIA program is 20 contiguous acres, 50% of which must be forested.

There may, however, be cost-effective ways to encourage family forest owners with fewer than 10 acres to manage their woods. This could be accomplished by allowing nearby landowners to enroll under a multi-property management plan. This approach would facilitate incorporating more acres under management while at the same time increasing the timber supply, improving economies of scale for forestry services, and creating opportunities for landscape level management.

The development and implementation of multi-property plans are at an experimental stage in the United States, thus their use in Minnesota should begin with a small number of pilot projects to determine how feasible and cost-effective they are.

5. **Adequate time commitment**

As with sources of financing, there is no magic answer to this question.

Minnesota's SFIA requires that landowners enroll their forestland in the program for a minimum of eight years. Wisconsin's MFL has two options: 25 or 50 years. Washington and Massachusetts have 10-year commitments. All of these programs require that enrollment transfer with the property if it is sold, unless the seller or buyer pays specified penalties for withdrawing the property from the program. Some forestry professionals knowledgeable about Wisconsin's program believe that 25 years is too long of a commitment and that a shorter time period would significantly increase enrollment. Based on the time requirements in other states, we recommend that the time period should not be shorter than the current requirement of eight years in the SFIA program.

6. **Recognition of multiple forest management goals**

For most family forest owners in the United States and in Minnesota, timber production is a secondary goal. (See for example, National Resource Council, 1996, p. 183; Butler and Leatherberry, 2005). A forest management incentive program that has a strong emphasis on management for timber, but that discounts management for recreation, wildlife habitat, aesthetics and other goals will, thus, not appeal to most family forest owners.

There has been a noticeable shift in the United States in the past ten to fifteen years towards broadening the scope of forest management goals beyond timber production (National Research Council, 1996, p. 10). This is exemplified by the revised standards for USDA Forest Services' Forest Stewardship Plans, which are promoted by most state forestry programs. It is also apparent in the management plan standards for state incentive programs such as MFL, SFIA and Alabama's TREASURE Forest program.

It should be noted that sustainable forest management, regardless of the specific goals, usually requires reforestation, thinning and harvesting in order meet these goals (National Report on Sustainable Forests – 2003, FS-766, USDA, February 2004). Thus, recognizing and adapting standards in a forest management incentive program so that they fit the diversity of landowners' goals for their woods is likely to lead to an increase, rather than a decrease, in timber harvested from private lands.

7. **Accountability**

For a forest management incentive program to be effective, participants need to have:

- Clearly measurable required practices for their enrolled land;
- Specific times by which these practices must be carried out;
- A clear process for measuring the completion of these practices; and
- Significant penalties if they fail to carry them out.

For example, Wisconsin's MFL agreements have mandatory practices (as well as recommended practices), required completion dates, a field review process for evaluating performance, and a clear set of steps for notifying landowners about non-compliance and for enforcing penalties. DNR records in Wisconsin show that more than 96% of MFL participants complete their mandatory practices ("Recommendations For Wisconsin's Forestry Assistance Program," DRAFT, Department of Natural Resources, Private Forestry Study Ad Hoc Review Team, June 1, 2005). The vast majority of these landowners complete their forestry plan requirements with relatively little enforcement effort from DNR. The critical element in Wisconsin appears to be adequate technical assistance – public and private – rather than heavy-handed "enforcement." Nonetheless, clear, measurable performance criteria underlie the success of the program.

In contrast, a comparative study of MFL participants and Stewardship Incentive Program (SIP) participants in Northeastern Wisconsin in the late 1990s indicated that for SIP participants only "21% of practices prescribed in those plans were either completed or were in progress" (Schockley, 2000). This is a dramatic illustration of the difference between a contractual agreement that is enforceable and a program that encourages good management, but in which there are no consequences for non-compliance.

In Minnesota's SFIA program, the monitoring and enforcement system is not as rigorous as in Wisconsin' MFL program. All of the same components are in place except for regularly scheduled monitoring of performance. A Q&A fact sheet put out by the University of Minnesota identifies "an honor system and self-certification" as the general approach for determining compliance in SFIA. (Minnesota's Sustainable Forestry Incentive Act: Frequently Asked Questions, September 30, 2002, http://www.cnr.umn.edu/cfc/nryb/nrr/SFIA_QA.pdf#search='sfia%20mn')

If the state were to develop an expanded forest management incentive program, it should also institute a more rigorous compliance measurement and enforcement system.

8. Incentives for multi-property plans and plan implementation

Preparing, implementing and enforcing management plans is a costly process. This process is much more expensive per acre on smaller properties than on larger ones because of the time involved in getting personnel and equipment to and from properties and the inefficiencies of writing plans and carrying out practices on smaller parcels. One way to reduce these costs may be to develop management plans for multiple properties in the same geographical area. For example, a consulting forester recently used grant funding to prepare a 30,000 acre, multi-property Forestry Resource Assessment and Management Plan (FRAMP) on Washington Island in Door County, WI (Interview with Fred Clark, Consulting Forester).

Family forest owners could choose whether or not to have their properties be part of a multi-property plan and whether or not to enroll their forestland in a state forest management incentive program. In this approach, participating landowners would establish forest management goals for their properties that are consistent with the multi-property plan. They would not have to develop separate management plans, but rather would have one or two page “management schedules” that would specify recommended and required practices for their forestland.

*Note the caution presented in **Lesson 4** about starting out on a pilot level with multi-property plans.*

9. Third party-certified management plans

A state incentive program for family forest management can also provide a cost-effective means to enroll a large number of landowners in a forest certification program.

All of the non-industrial forestland in Wisconsin's MFL program has recently been approved for Tree Farm Certification. This represents about 30,000 landowners who own almost 2 million wooded acres. Participation in the certification program is voluntary, but, as of this writing, only about one percent of MFL participants have chosen to opt out of the certification program. This has been an extremely cost-effective way to increase certified acreage in the state. One important economic benefit of certification is market access to paper and wood buyers that are increasingly seeking certified wood.

Minnesota faces many of the same certification issues as Wisconsin. An expanded forest management incentive program in Minnesota could include a large group certification approach such as Wisconsin's. This could be a major win-win-win for woodland owners, the forest industry and the state economy.

If Minnesota were to include a multi-property component in its forest management incentive program, these properties could be included in the statewide group certification program

10. Financing for family forest management associations and cooperatives

A key finding from this case study review is that in all the cases where there have been successful forest owner associations and cooperatives, favorable public policy -- including public financial support -- has been a critical component of their success.

For example, in Finland, forest management associations have been supported by forest tax funds for over 50 years; and in Quebec, woodland owner associations have received subsidies from the provincial government during the past 30 years for forestry services they provide to their members.

In reviewing forestry associations and co-ops in the United States, the lack, or piecemeal nature, of public support has been a major inhibitor to their success and growth. (See the case studies of U.S. co-ops and associations presented in Appendix A of this report.)

At the same time, state and national programs intended to increase family forest management have been stymied by the cost and logistical problems related to forestry education and service programs at the local level. Wood procurement from private landowners has also proven to be an expensive and time-consuming activity for the forest industry.

Increased and systematic financial support for woodland owner organizations – both non-profits and co-ops – may provide a cost-effective means to reach landowners who are not currently managing their forests or marketing timber.

There are several ways that such financial support could be funded; for example:

- A portion of the property tax on NIPF land could be allocated to these organizations to provide forestry services;
- A portion of the property tax credit or income tax credit for land enrolled in a forest management incentive program could be allocated to forest management organizations to provide forestry services; and/or
- The forest industry could pay a procurement fee for wood received by their mills from NIPF land that would be used to pay part of the cost of procuring wood by forest management associations.

Summary of Lessons Learned

This section of the report presented ten lessons for increasing family forest acreage under management. These lessons are not intended as a blueprint, but rather as a set of ideas to be put to use in developing a new family forest initiative in Minnesota – and elsewhere in the United States.

The next section of the report provides a set of recommendations derived from the case studies and the lessons presented in this section.

V. Recommendations for a Minnesota Family Forest Initiative

There are a relatively small number of policy, funding and organizational changes that could have a dramatic impact on the number of family forest acres under sustainable management in Minnesota. These changes are outlined in five recommendations presented below.

1. **Set a measurable goal for increasing family forest management.**
   We recommend the goal of doubling the number of family forest acres under management in Minnesota by 2015. This would be an increase from about one million family forest acres with management plans in 2005 to two million acres in 2015. In this scenario, family forestland under sustainable management would increase from about 20% to 40% -- an increase of a little over 7% per year over the next 10 years.

2. **Increase funds for forest management planning and education.**
   We recommend increased funding for the preparation of Stewardship plans in Minnesota. There is currently a 3-to-12 month wait for landowners requesting cost-share funds for the preparation of these plans. Additional funds would reduce this backlog and provide an opportunity for DNR, UM Extension Service, MFA and others to encourage more landowners to apply.

   Some people interviewed for this report believe that there is a shortage of consulting foresters in Minnesota. However, DNR has not had a problem in getting foresters to bid on contracts for plan preparation. DNR staff see the primary problem as a lack of money for plans, rather than a lack of foresters. (Interview with Doug Anderson, Supervisor, Forest Management Section, Minnesota DNR.)

Increased availability of funding for Stewardship plans would also provide an opportunity for DNR, UMEX and woodland owner organizations to educate landowners about the value of management plans and how they can be tailored to meet a wide variety of family forest owner goals.

The State of Massachusetts enacted an Environmental Bond Bill in 2002 that is used in part to provide cost-share funds for Forest Stewardship plans. This may be an approach that could be adapted in Minnesota.

To the extent that there is a shortage of consulting foresters in Minnesota, there are several things that could be done to alleviate this problem:

- Promote the use of multi-property management plans under SFIA in order to reduce the time and cost per acre for foresters to prepare plans (This should start out on a pilot basis to make sure that this can be done cost-effectively.);
- Make better use of potential Stewardship plan writers in the state by revising the continuing education requirements for plan writers and by encouraging more retired foresters to prepare plans;
- Provide assistance to consulting forestry businesses through state and local economic development programs, e.g. loan guarantees or subsidies for business start-ups and expansions; and
- Expand forester training programs in the state.

3. Revise the Sustainable Forestry Incentive Act

Based on our case study research, the most important factor associated with a high level of family forest management is an effective financial incentive program. Several of the lessons described in the previous section of the report can be applied to a revision of the Sustainable Forestry Incentive Act that would make this program a far more effective resource. Improvements to SFIA would include:

- Higher incentive payments;

- A simplified application process;
- More effective promotion and implementation of the program by the Minnesota Department of Revenue (or a shift of program administration to another state agency such as DNR);
- More rigorous monitoring and enforcement of forest management agreements;
- A group certification program for SFIA participants;
- An option for multi-property forest management plans (See the caveat above about starting with a pilot approach on multi-property plans.); and
- A provision for family forest organizations to carry out fee-based, management planning and other forestry services to landowners in local communities.

4. Strengthen the statewide network of family forest organizations

This recommendation ties in with the final component of the recommendation for revising SFIA presented above – fee-based forestry services by family forest organizations.

Minnesota already has a network of family forest organizations that includes the Minnesota Forestry Association, county woodland committees and councils, and forestry cooperatives. Farm supply co-ops are potential members of this network. The forestry-related services of these organizations should be significantly strengthened in order to provide increased peer-to-peer education and a range of forestry services at the local community level.

Inclusion of these organizations as potential service providers under a revised SFIA would be one impetus for strengthening these organizations and their network. We recommend that the Vital Forests/Vital Communities Initiative identify public and private sources of financing for community-based forestry education and forestry services.

Note that this recommendation is intended to establish a complementary relationship, not a competitive one, between forest owner organizations and other forestry service providers. As private forest management expands, there should be plenty of work for all parties.

5. **Identify a combination of public and private resources to implement the above recommendations.**

   A number of people interviewed for this study have commented that not enough public funds are available to pay for a major increase in private forest management in Minnesota over the next decade. Thus, the development of a realistic public-private strategy for mobilizing funding and other resources and for setting family forest management priorities is a key next step that should be carried out by the Vital Forests/Vital Communities Initiative or by another group of public and private forestry-related leaders in Minnesota.

   As this report has indicated, there is a wide range of creative financing and volunteer strategies that have been used to improve private forest management in other states and countries that could be adapted to Minnesota. (See Lessons 2 and 10 in **IV. Lessons Learned** and the **Appendix A. Case Studies of Family Forest Management Programs**.)

Conclusion

The family forests of Minnesota are already a resource of enormous economic and ecological value. The number of acres of family forestland under sustainable management in Minnesota could double in the next 10 years if a few key changes were implemented, including:

- A revision of the Sustainable Forest Incentive Act;
- An increase in public and private funds devoted to forest management planning and education; and

- A greater involvement by family forest organizations in the provision of forestry education and services.

With these changes, Minnesota could become a national model for sustainable family forests.

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