



Family Forest Network

Working Together for Nova Scotia's Woodlands

Project Summary

Eleven organizations that serve small-woodland owners and contractors are working together to develop a Family Forest Network (FFN) in Nova Scotia. The network will promote – and significantly increase its capacity to support – the adoption of ecological forestry on non-industrial woodlands through outreach, demonstration and research.

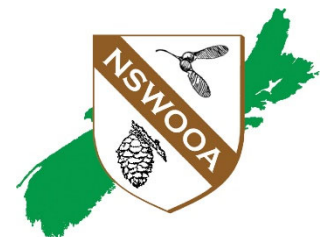
Building on programs and services currently offered by these organizations, the FFN will be the starting point for woodland stewards who want to learn more about forest practices that mimic natural processes, promote biodiversity, and restore ecosystem health – the key recommendations of William Lahey, author of the *“Independent Review of Forest Practices in Nova Scotia.”* There is clear value in having a single, collaborative, highly visible point of contact that promotes such practices.

To begin the process of transforming forest management in Nova Scotia, the FFN will conduct a large-scale pilot of ecologically sensitive forest treatments in a wide range of woodland conditions across the province. Special emphasis will be placed on restoring degraded stands to their natural diversity and productivity.

This pilot will be the first concrete step taken to implement the recommendations of the Independent Review on non-industrial, private woodlands. While the techniques of ecological forestry have been the focus of numerous research studies, there has been no large-scale pilot in Nova Scotia that compares the costs and benefits of ecological and industrial approaches to forest management. The FFN harvesting pilot will study not only the short-term economics, but also the long-term impacts on forest value, carbon storage, soil fertility, biodiversity, and other non-timber values. This work will provide fresh opportunities for learning, and we will work closely with academic and Mi’kmaq partners to base future forest management on sound scientific research and Indigenous knowledge.

Detailed pre- and post-harvest assessments of site conditions, annual monitoring, and modelling of expected future growth will yield critically important information for the sector. Forest stewards will be able to make better decisions about management options. Forest professionals will gain experience in ecologically sensitive management, and an assurance that such practices have value in the long term. Contractors and woods workers will learn how to efficiently perform such work. The sites will also become living laboratories that showcase the potential of ecological management to restore Nova Scotia’s woodlands.

The development of a steward-led network that focuses on addressing the key challenges facing family forest owners, and the creation of a large-scale pilot to quantify and promote the benefits of innovation in forest management through the adoption of ecological forestry, are fully consistent with FITT’s mission. The Family Forest Network begins the process of achieving Bill Lahey’s vision by actually doing the work that he recommended.



Family Forest Network

Application for Funding

Vision

The Family Forest Network (FFN) envisions a time when the ecological health, diversity, and resilience of Nova Scotia's woodlands is the foremost concern of woodland stewards, forest service providers, wood products firms and government.

In a reinvigorated forest sector, FFN is a trusted place for landowners to get the information, advice, services and market access they need to be exemplary stewards and profitable managers. Service providers have the workers, training and equipment they need to help these stewards to achieve their goals while earning a fair return for their work. Forest products firms benefit from a stable supply of high-quality raw material from well-managed woodlands that support a broad-based and resilient rural economy. The provincial government is committed to making Nova Scotia a global model for ecologically sensitive, economically productive and socially responsible forest management.

Goals

In August 2018, William Lahey released his *"Independent Review of Forest Practices in Nova Scotia."* Commissioned by the government of the day, and subsequently endorsed by all political parties, the report concludes that diverse, older, natural forests are the foundation for all the benefits – economic, ecological, and social -- that Nova Scotians receive from our woodlands.

We wholeheartedly agree. In fact, the founders of the Family Forest Network were the first – and remain the largest – group of forest service providers to publicly endorse and practice the recommendations of the Independent Review. These organizations have a firm commitment and a demonstrated capacity to help woodland stewards adopt the techniques of ecological forestry.

Through the implementation of Bill Lahey's recommendations, the Family Forest Network will support:

- healthy and productive woodlands that are managed in accordance with ecological principles;
- robust and sustainable contributions by the forest sector to the economy of Nova Scotia; and
- equitable compensation for products and services, including for the stewardship of healthy and productive woodlands.

Management Model: Collaborative Approach to Achieve Common Goals

Responding to the Forest Innovation Transition Trust's search for an innovative, integrative and collaborative approach to the challenge of forest-sector transformation, 11 organizations that serve the stewards of smaller, non-industrial private woodlands in Nova Scotia have come together to create the Family Forest Network. This unique collaboration marks the start of a coordinated effort among the organizations to promote the widespread adoption of ecological forestry on non-industrial forestlands through outreach, demonstration, and research.

Many of these same organizations embraced the conclusions of the Independent Review immediately after its release in August 2018. They have been meeting for three years to develop the FFN. The network will be operated initially as a program of the Nova Scotia Woodlot Owners and Operators Association. It will be guided by a steering committee composed of representatives from organizations that are committed to full implementation of Lahey's recommendations.

Currently, members of the steering committee, and the organizations they represent, include:

- Jane Barker, **Mersey Tobeatic Research Institute**, Kempt
- Greg Watson, **North Nova Forest Owners Co-op**, Wentworth
- Patrick Wiggin, **Federation of Nova Scotia Woodland Owners**, Brookfield
- Ian Ripley, **Athol Forestry Cooperative**, Amherst
- Patricia Amero, **Western Woodlot Services Co-op**, Church Point
- Peter Burchill, **Nova Scotia Landowners and Forest Fibre Producers Association**, Port Hawkesbury
- Mary Jane Rodger, **Medway Community Forest Cooperative**, Caledonia
- Leif Helmer, **Nova Scotia Community College**, Dartmouth
- John Lynch, **Nova Scotia Federation of Anglers and Hunters**, Halifax
- Zach Melanson, **Community Forests International**, Sackville, NB
- Andy Kekacs, **Nova Scotia Woodlot Owners and Operators Association**, Truro.

Resumes of steering committee members are attached in Appendix D. Collectively, their organizations reach more than 18,000 Nova Scotians annually, including an estimated 12,590 woodland owners. Many have been working with these stewards for more than 40 years.

The steering committee welcomes the participation of other small-landowner service providers that share the twin goals of implementing the Lahey recommendations and working to transform the management of forests in Nova Scotia. There is a lot of work to be done, and no single organization, approach or tool can address all the needs.

Governance

The Nova Scotia Woodlot Owners and Operators Association (NSWOOA) is serving as sponsor of the FFN and as applicant to the Nova Scotia Forestry Innovation Transition Trust (FITT) in seeking funding for the network. The role of sponsor also includes convening, project management and administrative capabilities. The NSWOOA carries the risk and bears the ultimate financial responsibility for the project.

Founded in 1969, NSWOOA is the oldest association of family forest owners and managers in Nova Scotia. For the past several decades, its members have taken the lead in promoting environmentally centered, socially responsible, and economically balanced forestry. Since 2012, NSWOOA has been the primary provider of information about forest management to small woodland stewards in the province under contract to the Nova Scotia Department of Lands and Forestry. It has a wide variety of outreach tools (online stewardship goals self-assessment, websites, toll-free phone, Facebook pages, field days/workshops, etc.) that connect with 8,000-10,000 forest landowners annually.

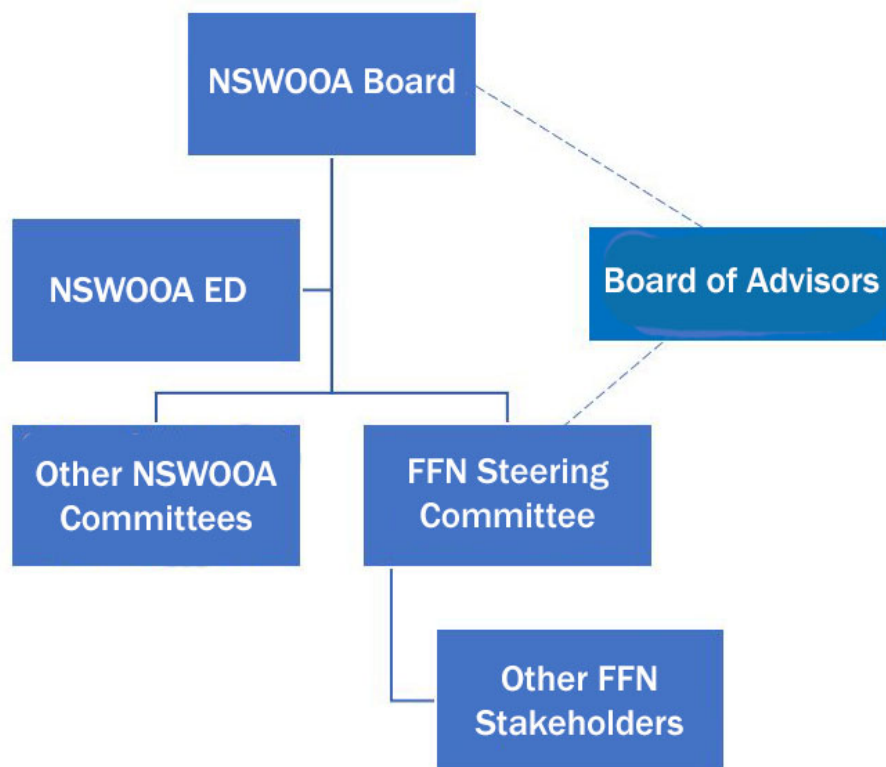


Fig. 1: Organizational relationships of NSWOOA and the Family Forest Network

Under our initial governance structure, the FFN will operate as a program of NSWOOA. This approach allows the pilot project to proceed as a proof-of-concept while a longer-term plan for the structure of the network is developed. Further organizational work will be undertaken by the steering committee beginning in the second half of Year 1, and continuing into Year 2. The goal is to build a long-lasting, self-sustaining alliance between the partners by designing an appropriate governance structure and organizational architecture.

For now, members of FFN Steering Committee will be nominated by the NSWOOA board and serve as the lead stakeholders in the project. The committee will make decisions on the implementation of ecological forestry and the achievement of all project deliverables, subject to the funding agreement with FITT.

Other stakeholders may be invited to engage with the FFN through standing and ad hoc subcommittees that will be established in the early months of the project. Such panels will be advisory in nature. Currently, the steering committee envisions that a Board of Advisors will be convened to weigh in primarily on issues of a technical nature, while standing subcommittees on rural economic development and sectoral transformation (which will include industry representation) will consider ways to increase economic benefits from the forest while safeguarding ecological, recreational and other values.

Project Objective: Advance Ecological Forestry in Nova Scotia

Building on programs and services currently offered by members of the steering committee, the Family Forest Network will be the starting place for woodland stewards who want to learn more about practices that mimic natural processes, promote biodiversity, and restore ecosystem health – the key recommendations of the Independent Review. There is clear value in having a single, collaborative, highly visible point of contact that studies, demonstrates, and promotes such practices.

William Lahey directly referenced an early version of the Family Forest Network proposal – then called the Acadian Centre of Excellence in Family Forestry – in the conclusions of the Independent Review. Lahey saw the centre as a way to organize and support the robust forest research program that he recommended:

“Another critical element is encouraging and supporting research by Nova Scotia’s forestry sector, including partnering with the sector on its research endeavours [This] should include support for research on innovation opportunities for woodlot owners. One option for doing so may be the centre of excellence concept suggested during this Review by the executive director of the Nova Scotia Woodlot Owners and Operators Association at a workshop convened at the request of the Review by the Mersey Tobetic Research Institute.” (Conclusion 148)

Undertake a Large-Scale Eco-Forestry Pilot

The FFN proposes to begin the work of implementing Lahey’s recommendations on small woodlands by conducting a large-scale pilot of ecological forestry. To help woodland stewards and forest professionals make better decisions about management options, the pilot will undertake an estimated 192 ecological forestry treatments in diverse eco-sites and forest conditions throughout Nova Scotia. Using methods that restore natural diversity and productivity, special attention will be paid to failed plantations, unproductive stands that have been degraded due to poor forest practices, and other challenging situations.

Build a Business Case for Eco-Forestry

The pilot will show “how forestry is best managed and practised in Nova Scotia within an ecological forestry paradigm,” as Lahey wrote. The steering committee believes this is the best way to demonstrate that there are economically viable and ecologically preferable alternatives to intensive management. Using a whole-cost accounting approach, the pilot will quantify the economic, environmental and social benefits and costs of ecological forestry, and produce evidence-based recommendations for conducting ecologically sensitive management on small woodlands across a wide range of forest conditions. Demonstrating that fair returns and healthy, diverse forests are possible through improved management may also encourage more small, private owners to participate in the forest economy, which would have a significant, positive impact on the supply of wood for local forest-products firms.

Grow Local Eco-Forestry Knowledge

While a large body of forest research and real-world experience shows that ecologically sensitive forest management offers a productive alternate to more intensive forms of management, there has been very little research into the actual costs and benefits of such management in Nova Scotia. Several variables are at play, including the size and location of the parcels being managed; the current state and desired future condition of the sites; the experience of the harvester with the concepts and techniques of ecological forestry; and the type of harvesting equipment that is available.

Advance Eco-Forestry Tools and Practices

Working with willing landowners, contractors and forest professionals, the FFN harvesting pilot will essentially create the guidebook for exemplary management in a Nova Scotia context. It will use all of the tools currently available to ensure that woodland management achieves the goals of the Independent Review, including biodiversity assessments and carbon modelling that inform the development of ecologically sensitive harvest prescriptions on each parcel. These harvests will become open-air laboratories where forest stewards and service providers can observe, question, and ultimately judge the value of these techniques for themselves.

Apply Collective Impact Principles to Improve Forestry Practices

Bill Lahey set a high bar for forest practices in Nova Scotia. By any measure, this groundbreaking collaboration among 11 organizations with a long history of success in serving family forest owners has the experience, the assets and the commitment needed to help the province achieve its interconnected goals of implementing Lahey’s recommendations on small woodlands while supporting the ongoing transformation of the forest sector.

An Integrated Solution

At a facilitated session convened by FITT in July 2021, five applicants for funding were encouraged to consider ways to work together to develop a shared solution to the challenge of forest sector transformation. One FITT trustee asked participants: “What is the long vision? What do we need to do to get there? That would be huge ...” Coming after a divisive debate surrounding the proposed Biodiversity Act just a few months earlier, the meeting was critically important. Partners in the Family Forest Network are keenly aware of the need to work together and in partnership with willing

landowners. After that first facilitated session, the steering committee immediately reached out to the other applicants. As a result, four of the five participants agreed to work together on an integrated solution. In addition to the harvesting pilot, other key components of this collaborative approach are discussed briefly below. By linking regional service providers with province-wide organizations that specialize in areas ranging from legacy planning to species at risk, resources and expertise can be shared, services streamlined, and duplication avoided. Because of this, the FFN is much greater than the sum of its parts.

All of these “plug-in” elements – which are, in fact, subcontracts – are described in full detail in Appendix C.

1. Biodiversity and Carbon Assessments

Forest management in Nova Scotia has an important role to play in two looming crises: Regional threats to the survival of species due to management practices that fail to fully consider human impacts on the forest; and global risks to all life due to human-induced climate change. Both issues are considered in this proposal. Biodiversity and carbon assessments will be performed on every parcel in the pilot. The data collected will inform the forest treatment chosen, the layout of roads and trails that may be needed for the work, and other aspects of the harvest. The biodiversity and carbon assessments will set a higher standard for decision-making by both woodland stewards and forest professionals, and create some of the building blocks needed to support the growth of markets that could one day compensate landowners for positive environmental impacts that are not currently monetized.

2. Working Woodlands Trust

Studies show that most forest stewards in Nova Scotia (and throughout North America) are older than 55. That means a very high percentage of woodland in the province will change hands in the next 20-30 years. While research indicates that conveying healthy and productive woodland to their children is a primary goal of family forest owners, many offspring say they don't want to take on the duties that come with forest stewardship. The Working Woodlands Trust, a project of the Medway Community Forest Cooperative, seeks to offer a responsible alternative to stewards throughout the province.

3. Partnership with NSCC

The Nova Scotia Community College system will play a leading role in creating a workforce that is capable of profitably and effectively performing ecologically sensitive forest management. The FFN will engage with and provide valuable learning opportunities for interns from NSCC in a variety of roles throughout the pilot: forest management, biodiversity assessment, mapping, and other activities. The full costs of the interns – including insurance and stipends – are included in the NSCC subcontract.

A Brief Outline of the Pilot

With the recent addition of the Nova Scotia Landowners and Forest Fibre Producers Association / Cape Breton Privateland Partnership to the steering committee, the ecological forestry pilot can now be conducted throughout Nova Scotia, in a wide range of forested stands and on a wide variety of soils. Sites will be chosen by an independent project scientist in consultation with the steering committee. Since existing forest landowner co-ops and service areas do not cover all of province, the applicant will gradually hire extension forestry staff to help stewards who cannot otherwise get professional services.

During the debate over the Biodiversity Act in spring 2021, opponents expressed strong concerns about the provincial government imposing unfunded mandates on unwilling landowners. The Family Forest Network approaches this issue from a different direction: Working only with willing stewards, each parcel in the pilot will have robust pre- and post-harvest assessments of biodiversity and carbon stocks; high-level mapping of watercourses, wet areas and other places of special concern; and the more-traditional inventory of forest composition, timber value and harvest revenues and costs. The information will be used to create harvest treatments that respect natural processes in the forest while creating conditions for healthier, more diverse, and more valuable woodlands in the future. Data collection, mapping and analysis will be undertaken at no cost to the stewards for all treatments in the harvesting pilot.

The project will perform an estimated 192 ecological forestry treatments. This number may vary slightly because of the forest conditions encountered, which can dramatically affect harvesting costs. Service areas and co-ops are expected to oversee 160 harvests, while the project's own forest extension professionals are ready to conduct the remaining treatments if needed. This is a purely voluntary network; none of the steering committee members will be required to conduct harvests or engage in other activities unless they are confident they can do an exemplary job.

Likewise, all of the landowners will be willing participants. If funding allows, the network will offer an additional 225 biodiversity assessments at deeply discounted cost to stewards who are not participating in the pilot.

Personnel

Management and Technical Expertise: Employees

Executive director

Andrew Kekacs, executive director of the Nova Scotia Woodlot Owners and Operators Association, will serve as chief administrative officer for the Family Forest Network. Since 2012, he has been responsible for administering a provincially funded outreach program for small woodlands. He also oversees all administrative functions at NSWOOA, including budgeting, program delivery, member

services, and supervision of staff and contractors. In 2015-17, he successfully managed The Forestry Lab, an 18-month effort to engage a wide range of stakeholders in exploring solutions to key challenges facing the forest sector in Nova Scotia. The \$253,000 project received financial support from both the federal and provincial governments. In addition, Andy owned a small business for 13 years in which he served in two primary roles: as a consultant in media relations, internal and external communications, and grant writing (primarily for natural-resource projects undertaken by academic, governmental and nonprofits); and as a writer, editor and publisher specializing in natural-resource utilization and sustainable rural development issues. Andy's full resume is included in Appendix D. This position is budgeted at 16 hours per week.

Supervisory forest professional

One full-time-equivalent forester or forest technician, not yet hired, will serve as the primary liaison between NSWOOA, other organizations participating in FFN, and their field staffs. With the assistance of the program director, the supervisor will ensure that the project deliverables remain on time and within budget. The supervisor will also monitor performance across all activities; perform harvest assessments to ensure the protocols established by the project scientist are carefully followed; and verify the accurate collection of data by other forest professionals and subcontractors. In addition, they will supervise the extension forest professionals that will be hired by the applicant.

Forest extension professionals

Three full-time extension professionals will be hired in phases to deliver "on-the-ground" services to stewards who are not in a co-operative or service area. In addition, they will work with landowners, woods workers, other forest professionals and members of the public who want to learn more about the harvesting pilot or ecological forestry in general. They also will conduct field days, technical workshops, and regional meetings on topics related to ecological forestry. This will effectively recreate the provincial forestry extension program that ended some years ago, giving small landowners a trustworthy and impartial place to find answers to their forest management questions.

Program director

The program director will track the weekly activities of the Family Forest Network to ensure that all partners and all deliverables remain on track. They will be responsible for collecting and managing data related to the project; for producing weekly reports to the partners about significant developments in the project; for designing, scheduling and managing internal and external events; and for referring questions about the project to the appropriate team member.

Management and Technical Expertise: Contractors

Project scientist

At the start of the pilot, the FFN steering committee will contract with a project scientist to serve as lead researcher. The scientist's first job will be to conduct a review of existing research on the costs and benefits of managing woodlands under an ecological forestry paradigm. The review will establish what is known, and what we need to learn, about harvesting small woodlands using ecologically sensitive management techniques. Working in collaboration with forest professionals and other staff

from the partner organizations – and with the advice of an advisory committee that will include academics, forest professionals, harvesting contractors, and stewards – the project scientist will also develop the research parameters and protocols for the project. Innovation in the design of treatments, and the adaptation of existing equipment to the new management paradigm, will be primary goals of their work. The project scientist will receive nominations from field staff for parcels and treatments to be considered for the pilot. These will be assessed against the research criteria before being accepted. The process will result in the identification of a large number of stand conditions and associated ecological forestry treatments to be included in the study. The fifth year of the project will largely be devoted to assessing and documenting the outcome of the treatments that have been conducted. Costs and benefits of ecological harvesting on family forests will be fully described, and compared to life-cycle costs and impacts of intensive forest management. Findings will be broadly shared with stewards, forest professionals and the public. FFN will seek additional provincial, federal or foundation funding in the future to continue monitoring of all sites for at least 10 years.

Controller

The controller will be responsible for managing the financial relationship between FFN, FITT and the provincial government. They will process payroll, ensure that timely and well-documented payments are made to partners, track actual expenditures against budgeted costs, prepare and submit all required financial reporting, and work closely with our accountant to ensure that the project adheres to the highest financial standards. This is budgeted as a half-time position.

Mi'kmaw naturalist

The Mi'kmaw are the original stewards of the woodlands in what is now Nova Scotia, and the Family Forest Network believes that their perspectives on caring for the land have an important role to play in our future decisions about the forest. Like the Mi'kmaw, we hope to be guided by the concept of netukulimk – a deep relationship with the land that is rooted in respect, balance, and humility. As Mi'kmaw elder Albert Marshall said, “So this is what we truly believe. This is what reinforces our spiritualities: that no one being is greater than the next, that we are part and parcel of the whole, we are equal, and that each one of us has a responsibility to the balance of the system.” In support of that goal, the Family Forest Network will directly involve a Mi'kmaw naturalist in the work of the steering committee, the conduct of our harvesting pilot, and in our public and professional outreach events. We are in discussion with the Mi'kmawey Forestry program of the Confederacy of Mainland Mi'kmaw on the best way to structure this relationship.

Communications

The steering committee will work with a communications consultant to prepare:

- a communication plan (including the selection of designated spokespeople and a protocol for answering media, government and public inquiries);
- a plan for landowner outreach and engagement; and
- a plan to assess the long-term impact of the project on the understanding and attitudes of woodland stewards, forest professionals, contractors and the public on the key concepts of ecological forestry.

The consultant will also create a logo and other branding for the project, and design various outreach tools including a project website and a template for press releases.

Other Subject Matter Experts

The budget includes limited funding for hiring other subject matter experts as needed, for example bringing in a civil engineer to work with field staff on road layout and construction specifications that result in reduced impacts on biodiversity.

Measures of Success

We believe that thoroughly evaluating the accomplishments of this project will provide essential data to support the ongoing transformation of the forest sector. Evaluation will take place throughout the life of the project, and will be focused not only on performance but also on success.

If FITT chooses to fund this project, we anticipate that the funding stream will be “stage-gated.” Therefore, project deliverables will be tracked constantly and reported regularly. These are measures of performance, however, not necessarily measures of success. Did we reach our targets – numbers of outreach activities conducted, for example, or numbers of parcels harvested under the pilot? Were our activities performed on time and within budget?

Stage-gating will allow FITT to be certain that the Family Forest Network is delivering on its commitments under the contract. These measures of performance are spelled out in Appendix C, which details the expected deliverables and associated funding for six stages of the project.

Evaluating success is a more complicated – and arguably more important – task. For the past 50 years, forest management and policy in Nova Scotia largely have ignored the long-term impacts of harvesting on the future economic, ecological and social values that we receive from the forest. In the *“Independent Review of Forest Practices in Nova Scotia,”* William Lahey argued strongly against this single-minded focus on short-term economics:

“My conclusion is that environmental, social, and economic values should be balanced by using forest practices that give priority to protecting and enhancing ecosystems and biodiversity ... A number of reasons are given for this conclusion, but the primary reason is that ***ecosystems and biodiversity are the foundation on which the other values, including the economic ones, ultimately depend.***”

For FITT to achieve its mission, and for the Family Forest Network to succeed in its work, there must be widespread acceptance of the need to change – and concrete actions to adopt the new management paradigm by forest stewards, service providers and mills.

Neither FITT nor the Family Forest Network have sufficient resources to guarantee the successful transformation of the sector. That will require the sustained commitment of all Nova Scotians for several decades. The essential questions for FFN are:

- Did the project succeed in demonstrating that ecological forestry offers a better way for the province to steward its woodlands, and did it inspire Nova Scotians to begin taking action to improve forest practices?
- What do impact-oriented surveys tell us about the extent to which the project resulted in new knowledge and increased capacity to carry out ecological forestry among woodland stewards, forest professionals, woods workers, and others who participated in the pilot or the related outreach activities?
- Is there a growing network of service providers committed to ecological forestry and available to work with the stewards of smaller forested parcels? Are stewards more informed, confident and engaged in the principles of ecological forestry, and are they better positioned to benefit from the multiple values of a healthy forest?
- Are the FFN partners satisfied with the program delivery and accomplishments? Did we reach the goals that we set? Did we pick the right goals? How can we continue to improve our relationships with each other and with woodland stewards, service providers, forest-products firms, and the people of Nova Scotia?

For more information, please contact:
Andrew Kekacs, Executive Director
Nova Scotia Woodlot Owners and Operators Association
902-817-4763 / andy.nswooa@gmail.com