



FORESTRY FUTURES TRUST ONTARIO

2021/22 Annual Committee Report

Forestry Futures Trust Committee

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Forest Observations - 2022

On the Matter of Budworm Control in the Northern Forests:

The Ministry of Natural Resources and Forestry (MNRF) undertook its most recent foray into budworm control starting in 2019, focusing initially on a major jackpine budworm outbreak centered in the Red Lake District of Northwestern Ontario. Due to the restrictions of Covid-19, the control program was placed on hold in 2020 but then reintroduced during 2021 in concert with a smaller spruce budworm control program in Northeastern Ontario. For the summer of 2022, MNRF cancelled the Northwest jackpine budworm control program due to declining populations, however, the spruce budworm program was expanded in both spray area and intensity due to rising populations in the Northeast. The collapse of the jackpine budworm program was not unexpected as it followed historical short-term infestation patterns within the province. Similarly, the increased need for spruce budworm control was also anticipated as outbreaks of this pest insect are known to be much more persistent over time and to require several years of repeated applications of aerial insecticide, in this case *Bacillus thuringiensis* (Bt), a budworm-specific species of soil bacteria. As in past years, MNRF's operational budworm control programs have been carried out with efficacy.

As the overall area infested by both budworms has continued to expand in Ontario, FFTC has become increasingly uncomfortable with the rising financial support requested (~\$20 million through 2019 - 2022) to fund the extensive aerial spray program. In both cases, but particularly for jackpine budworm, the Forestry Futures Trust Committee (FFTC) perceives the long-term cost/benefit case for the program as not yet convincing. During 2021/22, FFTC requested improved cost/benefit analyses from MNRF on the impact and alternative options for jackpine budworm management (accelerated harvest, salvage cutting, reallocations, etc.). Unfortunately, to date, this has not been provided. Apparently MNRF opted not to use its standard Socio-Economic Impact Model this year for the spruce budworm program, instead working through some provincial-level assumptions to estimate the potential economic and business impacts of the outbreak. It would seem prudent to the Committee to have these assumptions independently assessed, not only to rationalize the continued significant provincial investment in aerial sprays for stand protection, but also to help identify gaps and updates in our knowledge for the working model.

On the Matter of Independent Forest Audits:

Ontario Regulation 319/20 on Independent Forest Audits requires that a review of the implementation of the Regulation be carried out once every 10 years; the last review of the process was undertaken in 2013 and MNRF has determined that another review needs to be initiated in 2022 to meet the 2023 deadline. The scope of the 2022 review will be the managed forests of Ontario, responsibility for the review has been assigned to MNRF's Crown Forest and Lands Policy Branch, and the actual review will be undertaken by a team from the Ontario Internal Audit Division (OIAD). The results of the review are intended to be communicated to stakeholders and the public.

FFTC will request that the review assess what FFTC believes to be three key strategic issues:

- i) Independence: By design the Independent Forest Audits are intended to assess quality of direct management by a) Sustainable Forest Licencees in respect of the conditions of the licence they hold as issued by the Minister, and b) the quality of the oversight of the management actions of those sustainable licence holders by assigned MNRF staff. FFTC is aware of concerns in some quarters that the notion of independence on the part of MNRF is compromised, or certainly seen to be compromised, by MNRF's key role in managing essential elements of an audit process in which it is a crucial auditee.

ii) Accountability: Transparency is a key element to ensure accountability. The question is whether there is today sufficient transparency in the follow-up to any given IFA such that the auditees, both SFL and MNRF, can be readily held accountable for 'fixing' whatever is identified by the audit as 'broken'. Until recently, a specific IFA action plan was required to be jointly developed by the SFL and MNRF setting out the proposed 'fixes' to the identified "findings"; because the action plan was a public document the proposed actions and results could be readily tracked in the Status Report. Currently, the responses by the SFL and the District to the audit are to be now included in the licensee's Annual Report on the Forest where it has the potential to get buried. At the same time IFA-identified MNRF policy issues are intended to be actioned by the Ministry not in a timely one-off way but in the regular (and often sluggish) process of updating policy. Such an approach facilitates a lack of clarity and resultant accountability within the system as people retire or get promoted.

iii) Timeliness: Ontario Regulation 319/20 extended the time frame between IFAs to 10 and 12 years, a period that can be considered reasonable when dealing with licencees that pursue management excellence in the forest. However, as the IFA process has demonstrated over the past two decades, all licencees are not created equal in their approach to forest management. Such leads to the notion that if something goes awry in management on a specific forest in year two, by year 10/12 the Minister could well have a significant issue/crisis at hand! The OIAD needs to consider the need in the IFA process of a defined mechanism that would allow, nay require, an interim formal IFA to be reintroduced within the 10/12-year term.

On the Matter of Forest Genetics Resource Management:

Since 2015 FFTC has been directed to provide FFT funding for Forest Genetics Resource Management in Ontario via three incorporated provincial associations (the Forest Gene Conservation Association in Southern Ontario; the Northeastern Seed Management Association in Northeastern Ontario; and Superior Woods Tree Improvement Association in the Northwest) which may be composed of representatives of the Forest Industry, nongovernmental organizations, interested individuals, and MNRF and designed to further the goals of seed collection, storage, and associated tree rehabilitation and improvement. As reported in this column in 2021 the Associations in 2017 were asked to provide to FFTC a 5-year operational plan outlining their intended initiatives over the period; requests for funding that followed those plans were generally approved. The tenure of those initial plans dissolves in 2022. To replace them FFTC has proposed, and the Associations have accepted, a facilitated process to cooperatively work to develop individual 10-year strategic plans designed to set out direction for their operations over the next decade. At the same time it will allow the Associations to provide a stronger presence in discussions with MNRF in the upcoming development of an updated Ontario Tree Improvement Master Plan, the original version of which was delivered in 1987. Given anticipated continued climate change in Ontario such Master Plan will be a key, critical element in the successful achievement of Ontario's future forest.

R. A. Riley

Chair

WHO WE ARE & WHAT WE DO

Forestry Futures Trust

The Forestry Futures Trust (FFT) was established under the authority of the *Crown Forest Sustainability Act* (1994), Part V. Section 51 of this Act states that the Minister may appoint a Forestry Futures Trust Committee to provide advice on the following matters:

1. *The funding of silvicultural expenses in Crown forests where forest resources have been killed or damaged by fire or natural causes.*
2. *The funding of silvicultural expenses on land that is subject to a forest resource license, if the licensee becomes insolvent.*
3. *The funding of intensive stand management and pest control in respect of forest resources in Crown forests.*
4. *Such other purposes as may be specified by the Minister.*

(Source: *Crown Forest Sustainability Act, Part V, Section 51(3)*)

Other purposes specified by the Minister for which the Trust fund is currently used include:

- Independent Forest Audit Program
- Forest Tenure Modernization
 - Enhanced Sustainable Forest License - design and development
 - Local Forest Management Corporation – design, development and transition
 - Forest Management Component – FMC – forestry on forests returned to the Crown
- Enhanced Forest Resource Inventory production and delivery
- Forest Genetic Resource Management Program
- Treaty Settlement Transition Program

The Trust fund is managed by RBC Investor Services Trust. Funds are allocated to

successful applicants under the direction of the Forestry Futures Trust Committee Chair, supported by decisions made through consensus by the Forestry Futures Trust Committee. The Committee members are appointed by the Minister for a three-year term, which may be renewed at the discretion of the Minister. The Trust is funded by harvest volume charges on Crown timber.

Forestry Futures Trust Committee CHAIR



R.A. (Ray) Riley, P Eng., R.P.F. (Hon) (member since February 2016). Ray holds degrees in geology from Acadia and Queens and has been a member of the Professional Engineers Ontario for over 40 years. He comes to the FFTC after 30 years with the Ontario government culminating as Assistant Deputy Minister of Operations for Ontario's Ministry of Natural Resources. Subsequent to his career in government, he was active as a consultant for some 21 years focusing on natural resource management.

MEMBERS



Mike Barker, (member since 1999) enjoyed a 32-year career in natural resource management, holding positions such as District Manager within the Ministry of Natural Resources, and Assistant Deputy Minister for the Ministry of Northern Development and Mines. He now runs his own consulting firm.



Herb Bax, R.P.F. (member since 2012) is a forestry consultant with over 35 years of experience. He is the past president of the OPFA and has served on numerous international committees and boards. Herb's work as an environmental and forest auditor across Canada and the US brings an international perspective to the Committee.



W.D. (Bill) Baker, (member since February 2016) had a 30-plus year career in natural resource management primarily as a senior manager with the Ontario Ministry of Natural Resources. Bill has worked throughout Ontario in a variety of capacities but has spent much of his career in northwestern Ontario and Thunder Bay.



James Harrison, (member since February 2016) holds a Forestry Degree (1975) from Lakehead University. His 39-year career with industry included positions with Kimberly-Clark of Canada and Greenmantle Forest Inc. James sits as the FFTC representative on the Provincial Forest Inventory Advisory Committee.



Dr. Sandy M Smith, (member since January 2017) is a Professor in Forestry at the University of Toronto, having served as Dean of the Faculty of Forestry (2010-2012), published 140+ papers, supervised 65+ graduate students. She specializes in forest health and urban forests, specifically natural controls to manage invasive species. She is a Fellow of the Royal Entomological Society (UK), Minjiang Scholar (China), Past President of the Entomological Societies of Canada and Ontario, and currently serves on the Boards of Trees Canada and the Ontario Invasive Plant Council. She has been an Associate Editor of the Can J of Forest Research and participated on national NSERC grant review panels as well as Federal and Provincial invasive species science panels (ALHB, EAB, *Sirex*, Hemlock Woolly Adelgid).

Our Support Team

Assisting the Committee is a small team reporting to the Chair:

- Peter Street, R.P.F., Independent Forest Audit and Treaty Settlement Transition Coordinator
- Shelley Vescio, R.P.F., Silviculture, Genetics and FRI Program Coordinator
- Anastasia Frisby, R.P.F., Office Administrator, Forest Tenure Programs Coordinator

FFT Secretariat – Ministry of Natural Resources and Forestry

Since its inception in 1995, the FFTC has enjoyed a productive working relationship with the Ministry of Natural Resources and Forestry (MNR) staff. As the Committee's mandate expanded over the decade, the lines of communication and the number of Ministry contacts correspondingly increased. In this regard, the Secretariat functions are provided by Director Peter Henry, and Rhonda Hancherow of Forest Guides and Silviculture Section, and Cathy Hamor of Forest Tenure and Economics Branch. Key staff are listed below by program area.

- *Independent Forest Audit Program* – Linda Touzin, R.P.F., Nic Baggs, R.P.F.
- *Forest Resource Inventory Program* – Michelle Colley, Derek Landry, Ian Sinclair, R.P.F. and Geordie Robere-McGugan, R.P.F.
- *Tenure Modernization* – John Harvey R.P.F., and Andy Lemmetty R.P.F.
- *Forest Genetic Resource Management* – Ken Elliott, R.P.F. (retired)
- *Treaty Settlement Transition Component*: Hugh Loughheed, Jennifer Card, Erin Banton R.P.F.

The MNR's FFT Secretariat continues to fulfil its role while honouring the principle of committee independence on all matters related to funding allocations for projects. The FFTC thanks the Directors and staff of Crown Forests and Lands Policy Branch, Operations Branch, Forest Tenure and Economic Branch, Integration, Science and Research Branch (including FRI and Growth and Yield) and Business Development Branches for their continued support.

State of the Trust

The Forestry Futures Trust fund is in a healthy position and has fully recovered from the economic difficulties that previously affected the sector. The fiscal financials, which provide the details, are available through our website, www.forestryfutures.ca once tabled in the Provincial Legislature.



Forestry Futures Trust Committee 2020

Committee Operations Budget 2021/22

Available Funds	
Received from the <i>Forestry Futures Trust Fund</i> accounts	286,525
2020/21 unspent balance	93,860
TOTAL Funds Available	380,385
Expenditures	
Meetings/Travel	18,494
Committee Honorariums	77,290
Professional /Administrative/Contract Staff	195,152
Supplies (Communication/Consumables)	11,933
Equipment / Signage	4180
Overhead	51,103
TOTAL Expenses	358,152

OUR PROGRAMS

Silviculture Program

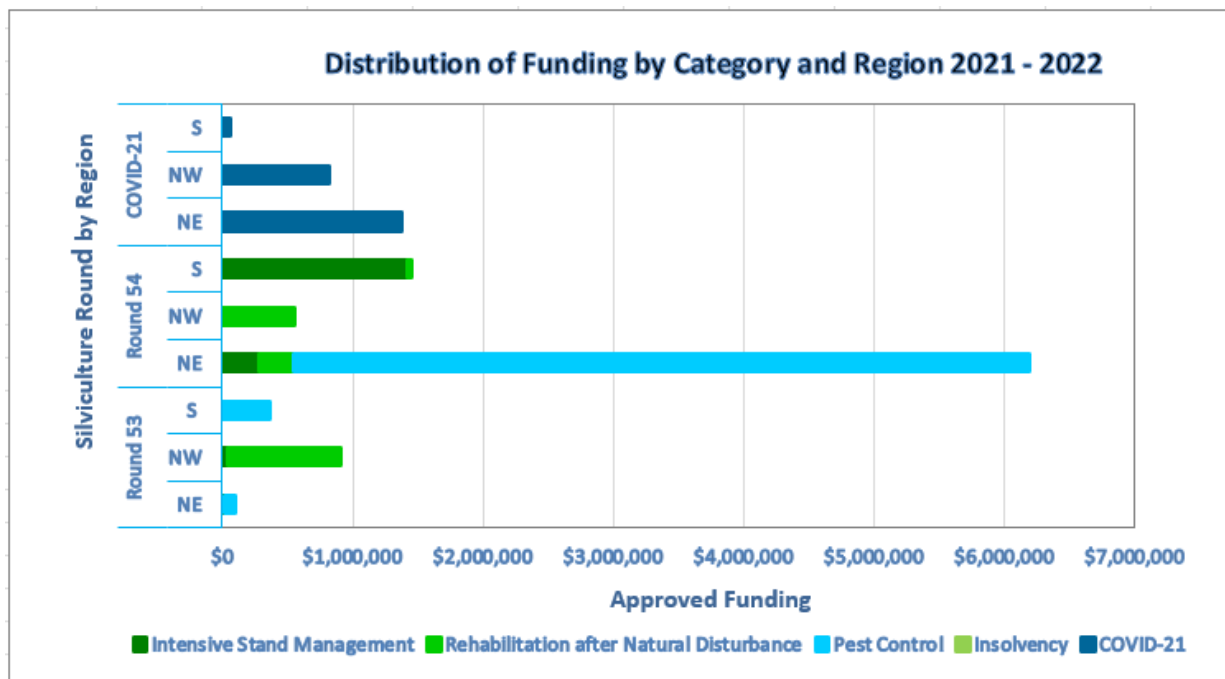
The Silviculture Program funds silviculture needs resulting from forces of natural depletion such as fire, wind, insects, disease, and flooding, as well as remediation of the forest land base due to historic harvesting practices. Funding requests are received in five categories: 1. Intensive Stand Management; 2. Rehabilitation after Natural Disturbances; 3. Pest Control; 4. Insolvency; and 5. Other, as designated by the Minister. Details on each category can be found on the FFTC website.

Silviculture Rounds 53 and 54

The Committee extended invitations to SFLs to submit applications for the funding of projects under Rounds 53 and 54 of the FFT Silviculture Program. In 2021-22, \$9.6 M was approved in project funding, with \$1.4 M and \$8.2 M allotted to Rounds 53 and 54, respectively. Of the Round 54 budget, \$5.6 M was allocated to the Northeast Spruce Budworm Insect Pest Management Programs for activities that are to be completed in summer of 2022.

The chart below illustrates the amount of funding approved under each round for projects submitted under the four silviculture categories for each of the South, Northwest and Northeast regions in 2021-2022. Among regions, 36% of the funding was awarded to the Northwest, 61% to the Northeast, and 3% to the South. Among categories, three Pest Control projects received 64% of approved funds, nine Intensive Stand Management projects received 19%, and twelve Rehabilitation after Natural Disturbance projects were awarded 18% of the approved funding.

In 2021-2022, the FFTC started collecting data on the number of employment days that were generated from its silviculture projects. Not all SFLs supplied that information in their annual reports but, **of the 40 that did, 6,302 person days were estimated to have been generated through the various silviculture activities conducted.**



COVID-19 2021 Incremental Silviculture Cost Program

On April 7, 2021, the MNRF Minister of the day announced an extension to the COVID-19 Incremental Silviculture Cost Program that had been initiated in 2020. Its objective was to help cover additional costs associated with the health and safety protocols required during tree planting operations in Ontario. Due to continuation of the pandemic into 2021, \$3 M in funding from the Forestry Futures base charge was assigned to the COVID-19 2021 Incremental Silviculture Cost Program.

Thirty-six SFLs applied for funding through the Program and submitted reimbursement requests by the December 2021 deadline; however, most were deemed to be unacceptable by the FFTC due to their lack of transparency and supporting documents that could be used to substantiate claims.

Forest Genetic Resource Management Program

On December 17, 2021, the Minister provided a five-year extension for the Forestry Futures Trust to continue funding the Forest Genetic Resource Management (FGRM) Program. Funding of activities within this Program benefit Crown forests and are carried out by the Superior Woods Tree Improvement Association, Northeast Seed Management and the Forest Gene Conservation Association.

Annual funding for this purpose is not to exceed \$675,000 per annum, providing the three regional associations with \$375,000 in core funding and eligibility for \$300,000 in project funding for five fiscal years ending March 31, 2027. The FGRM program is financed from the Forestry Futures Trust base charge.

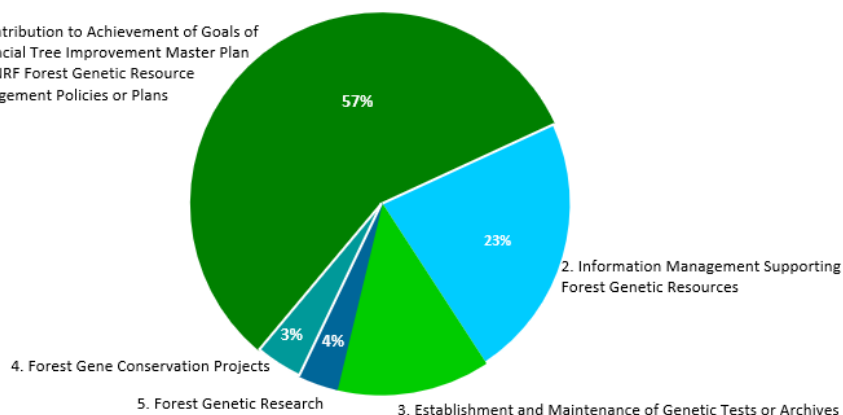
At the time of this publication, 59% of resubmitted requests have been approved. Using a combination of both actual and predicted values, **it is anticipated that \$2.2 M in funding will have been provided for the planting of 74.2 million trees in 2021.** The Northeast Region will have received 60% of the funding, while the Northwest and Southern Regions will have received 35% and 3%, respectively. Two additional reimbursements were approved for incremental expenses associated with lifting trees in a nursery in the NW Region and another for incremental costs associated with a Forest Genetics Resource Management project; these three projects were categorized as Other and accounted for 2% of Program funding.

Note: Lists of New, Ongoing and Completed FFT Silviculture Program projects can be found on the FFTC website www.forestryfutures.ca

In 2021-2022, the Associations directed the majority of funding to 1 of 5 approved categories with (57%) toward activities that Contributed to the Achievement of the Province's Tree Improvement Master Plan Goals or toward those of its FGRM Policies or Plans, 23% to Information Management Supporting Forest Genetics Resources, 13% to the Establishment and Maintenance of Genetic Tests or Archives, 3% to Forest Genetic Research, and 4% to Forest Gene Conservation Projects (see chart below).

Forest Genetics Resource Management (FGRM)

1. Contribution to Achievement of Goals of Provincial Tree Improvement Master Plan or MNRF Forest Genetic Resource Management Policies or Plans



Percent Breakdown of 2021-2022 Funding by FGRM Categories

FGRM 2021-22 Projects		
Association Project #	FGRM Category	Project Name
SWTIA 2021-1	1	Monitor and treat Eton-Rugby second-generation jack pine orchard to control jack pine budworm
SWTIA 2021-2	2	Measure the Lake Nipigon West black spruce second-generation series 1 open-pollinated progeny tests
SWTIA 2021-3	3	Clear brush and update Lac Seul spruce budworm second-generation open-pollinated tests
SWTIA 2021-4	1	Clear brush in the Rugby white spruce clonal orchard
SWTIA 2021-5	1	Maintain Rainy Lake second-generation clonal orchard
SWTIA 2021-6	3	Maintain Dryden Tree Nursery second-generation clonal archives
NeSMA 2021-1	1	Jack pine seed source deployment trials
NeSMA 2021-2	3	Site maintenance of genetic tests/climate studies
NeSMA 2021-3	1	Jack pine crown management
NeSMA 2021-4	1	Flower induction efficacy test comparison
FGCA 2021-1	1	Sustainable Forest Licence assisted-migration network
FGCA 2021-2	1	Westwind Forest Stewardship seed production area using United States seed sources
FGCA 2021-3	2	Westwind Forest Stewardship vulnerability - assist in climate adaptation project in the French Severn Forest
FGCA 2021-4	2	Seed quality guidelines
FGCA 2021-5	1, 3, 4, 5	Planting of Westmeath white pine assisted-migration seed-production areas
FGCA 2021-6	1	Final southern white pine seed-orchard thinning - Cayuga and Scugog seed orchards
FGCA 2021-7	1, 2, 4	FGRM Shortcourse delivery to members and associates to address the need for more deliberate recognition and application of basic gene-conservation principles in forest management

Independent Forest Audit Program

The Forestry Futures Trust Committee has traditionally implemented the annual Independent Forest Audit (IFA) Program for the MNRF. FFTC responsibilities have included the allocation of funds to cover the cost of the audits; contract management of and communication with the audit firms and key audit participants; attending audit meetings and field examinations; ensuring the audit program is implemented according to the IFA process and protocol; reviewing all draft reports and ensuring final reports are of the highest quality. The Committee also provides recommendations to MNRF concerning revisions to the audit program and IFA process and protocol, coordinates auditor orientation sessions with MNRF, and makes recommendations to the Minister of Natural Resources and Forestry as required or appropriate

Four (4) Independent Forest Audits (IFAs) were completed in 2021 using the 2021 Independent Forest Audit Process and Protocol (IFAPP). The IFAPP has been updated to reflect Ontario Regulation 319/20 and related policy changes:

- Elimination of the trend analysis report; reliance on additional annual report requirements to assess the achievement of management objectives and forest sustainability;
- Elimination of the requirement to table final audit report before the legislature; continue to post on a publicly accessible website;
- Replacement of the requirement for an action plan status report with a requirement to report on progress towards the completion of actions in management unit annual reports;
- Provisions of the 2020 FMPM, Forest Information Manual (FIM), and Forest Operations and Silviculture Manual (FOSM);

- Clarifications around audit scope, risk assessment, sampling approach, and health and safety measures;
- Consideration of forest certification status and the results of certification assessments and/or annual audits in the auditor risk assessment; and
- Clarification around Principle 1 and 5 audit criteria in relation to forest certification and applicability to NDMNRF.

The four audits-conducted in 2021:

- Algoma Forest – managed by Clergue Forest Management Inc. under Sustainable Forest License # 542257.
- French-Severn Forest – managed by Westwind Forest Stewardship Inc. (a not-for-profit community-based forest management company) under Sustainable Forest license #542411.
- Lakehead Forest – managed by Greenmantle Forest Inc. under Sustainable Forest License # 542460
- Temagami Management Unit –a former Crown forest managed by the North Bay District of the Ministry of Natural Resources and Forestry.

On all four of the audits, **the auditors found that the management was generally in compliance with the legislation, regulations, and policies that were in effect during the term covered by the audit**, and that the Forests were being managed in compliance with the terms and conditions of their Sustainable Forest Licenses. Three “best practices”-were issued to the Algoma, French-Severn and Temagami Forests management teams and is are discussed below.

- Table 1 summarizes by category the number of findings in all four audits. Detailed action plans to address the findings presented in the audit reports are being prepared and will be posted on the Ontario government website

alongside the audit reports. All four reports have now been accepted by the Minister or his delegated authority.

Table 1. Summary of the 2021 Audit Findings and Best Practices for all four audits with respect to the eight IFA Principles

IFA Principles	# Findings	Percentage %*	Best Practice
1 Commitment	1	3	1
2 Public consultation and Aboriginal involvement	0	0	0
3 Forest Management Planning	10	35	1
4 Plan assessment and implementation	10	35	1
5 System support	0	0	0
6 Monitoring	6	21	0
7 Achievement of management objectives and forest sustainability	1	3	0
8 Contractual Obligations	1	3	
Total	29	100	3

- *rounded to the nearest whole number.

The four (4) audits were awarded at a total cost of \$228,134.88 (including HST), or on average \$57,033.72 (as compared to 2020 which averaged out to \$71,660.83 (including HST), on three (3) audits.

Common Findings

While most of the findings from the 2021 audits were unique to the Forest being audited, there were a few findings that were common to two or more reports. These common findings have been grouped below by IFA principles:

Best Practices

Three audits (Algoma, French-Severn and Temagami Forests) identified unique forest management practices addressing; Species at Risk (West Virginia White Butterfly), an invasive species (Beech Bark Disease) and collaboration between forest managers, the Local Citizens Committee and affected

Indigenous communities. While the Best Practices differ by topic, they do show that the management of these forests is maturing and that all parties are working collaboratively together for the sustainability of the forest.

Principle 3 - Forest Management Planning

Two audits (Temagami Management Unit and Lakehead Forest) identified issues dealing with reliable access and road maintenance.

Principle 4 - Plan Assessment and Implementation

Three out of four audits (Algoma, French-Severn, and the Lakehead Forests), identified that the operational standards for forest aggregate pits identified in their forest management plans were not consistently met.

Principle 6 - Monitoring

Two audits (Algoma and Lakehead Forests) identified that the NDMNRF did not fulfil its Silviculture Effectiveness Monitoring (SEM) obligations

Additional FFTC Comments

The FFTC noted that for the Temagami Management Unit, seven findings (7) dealing with P3 - Forest Management Planning, were identified by the Audit Team within the most recent Forest Management Planning experience. The Committee commended the Team's efforts on their detailed review of how the Plan was prepared.



SWTIA Project 2021-06:
Maintain Dryden Tree Nursery
second-generation clonal archives
(Photo credit Paul Charette)

NeSMA Project 2021-2:
Site maintenance of genetic
tests/climate studies
(Photo credit Cheryl Wilkins)



Tenure Modernization Programs

Forest Management Component Program

When Sustainable Forest Licenses (SFLs) are returned to the Crown due to bankruptcy or insolvency, MNRF assumes responsibility for all forest management activities on that management unit. Forest Management expenditures incurred by the Crown to do this work are funded from additional revenue paid to the Forestry Futures Trust from the Crown stumpage system. The additional funds are generated by a management fee charged for each cubic metre of wood harvested in the area. This has been termed the Forest Management Component (FMC).

FMC accounts are open for Pic, Kenogami, Wabadowgang Noopming (formerly Armstrong), Pic, Whiskey Jack, Missinaibi (formally Magpie Forest now amalgamated with Martel), Pic River, Ogoki, and Sapawe forests.

Enhanced Sustainable Forest License

The Enhanced Sustainable Forest License (eSFL) program was established in late 2011, as an outcome of the Ministry's tenure modernization initiative, with an allocation of the remaining funds (\$1.8 M) from the SFL Conversion program. In 2012, the Committee developed an application process and the first application was submitted in April of 2013.

All remaining projects finalized invoicing and closed in 2021-22:

- ESFL 007-2018: Boundary Waters (Crossroute and Sapawe Forest)
- ESFL 001-2013 Kenogami Forest



2021 Lakehead Forest
Field portion of IFA

Local Forest Management Corporation Conversion Program

In August 2012, the MNRF added funding of the Local Forest Management Corporation (LFMC) Conversion Program to the Forestry Futures Trust Fund. The purpose is to provide financial support to the establishment and start-up of Ontario LFMCs. The Trust serves as an interim mechanism to capture redirected Crown stumpage charges required for forest management activities on the proposed LFMC land area until such time as the Sustainable Forest Licenses are issued to the LFMC.

The first LFMC, Nawiinginokiima Forest Management Corporation (NPMC), was established in May 2012. NPMC has been issued the SFLs for Pic, White River and Pic River forests.

For more information follow the links on the MNRF website: www.ontario.ca/page/forest-tenure-modernization or visit the NPMC website: <https://npmcforestry.ca/>

The government approved the establishment of the Temagami Forest Management Corporation December 2020. FFTC approved the application for financial support in June 2021. For more information follow the links on their website: <https://www.temagamiforest.com/>



*2021 French Severn Forest
Field portion of IFA*



Silviculture Project 922-1-R42
Algonquin Park Forest
(submitted by Algonquin
Forestry Authority)



2021 Temagami Forest
Field portion of IFA

Forest Resource Inventory Program

The Forest Resources Inventory (FRI) Program is designed to develop a new Forest Resource Inventory utilizing current technologies within the provincial “Area of the Undertaking” as defined by the Timber Class Environmental Assessment. Funds for this program come from harvest volume charges paid by the Sustainable Forest Licensees for on Crown timber. These funds are administered from a separate account within the Forestry Futures Trust.

The FFTC administers the FRI program funding, in partnership with the MNRF. The FRI is a MNRF-designed program with work contracted to qualified firms through the government procurement process. The FFTC has the lead on designing and co-delivering the knowledge transfer and tool development (KTTD) component of the FRI.

The 2021/22 fiscal was the 15th year of the FRI Program that built on an earlier forest inventory program. The bullets below describe MNRF Program accomplishments for 2021/22.

1. Acquired 98,448 km² of LiDAR in support of forest inventory development. Optical imagery was not scheduled in 2021-22 so that aircraft resourcing and airspace for LiDAR acquisition would be freed up
2. Employed the Vegetation Sampling Network protocol as an integrated approach to field data collection for calibrating LiDAR models and monitoring forest resources. Data were collected on 125 plots in the Kenogami Forest, 205 plots on the Boundary Waters Forest, 125 plots on the Hearst Forest, 125 plots on the Black Spruce Forest, and 215 plots on the Nipissing Forest.
3. Made significant progress developing and testing aspects of the long-term cloud-based data management solution for FRI with the Land and Resources Cluster and its Microsoft vendor
4. Mapping and Information Resources Branch (MIRB) developed Web Raster Services (an ArcGIS-based web service) that will make selected, foundational provincial geospatial imagery and elevation data collections available for viewing and general use by a broad public;
5. Completed a white paper proposing the development of baseline and annual update processes to developing a continuously updated forest resources inventory.

Knowledge Transfer and Tool Development (KTTD) Component of FRI

The goal of the KTTD program is to support the Provincial Forest Resource Inventory Program in advancing its mandate by facilitating the development of open-source tools and research that addresses identified needs and transferring that knowledge back to government, industry, academia, and the forestry community.

Three rounds have been held to date in 2015, 2018, and 2021, respectively, with a fourth scheduled for the 2024. Fifteen projects were funded under the Round 3 \$1.5M budget and three of those are now complete. The remainder are progressing and on-going as shown in the table below.

Researcher	KTTD Project Title	Status
Small-Scale Project: up to \$25,000 and one year in duration		
Craig Robinson, Forsite Consultants Ltd.	Enhancements for eFRI Next Generation Handhelds - for VSN Plots	complete
Donald Robinson, ESSA Technologies Ltd.	Linking FRI Data to FVS-Ontario	on-going
Alain Richard, Ducks Unlimited Canada	eFRI Wetland Crosswalk and Applied Products	complete
Adam Anderson, Resource Innovations Inc.	Development of LiDAR-based Geospatial Tools to Aid in Operational Planning in Ontario	on-going
Dr. Ben DeVries, University of Guelph; Dr. Chris MacQuarrie, Natural Resources Canada	Developing an Inventory of Eastern Hemlock for Ontario	on-going
John Pineau, Ontario Woodlot Association	Private Land Inventory and Economics Study	complete
Andy Welch, JWRL Geomatics Inc.	Assisting Ottawa Valley Forest Transition to T2 FRI	on-going
Large-Scale Project: greater than \$25,000 and two years in duration		
Alexander Bilyk, Overstory Consultants	Assessing Site Productivity from Remote Sensing and Historic Information	on-going
Dr. Nicholas Coops, University of British Columbia	Automated Road and Attribute Extraction from SPL Data	on-going
Dr. Nicholas Coops, University of British Columbia	Integration of Photo Interpreted and LIDAR Attributes Into a Polygonal Forest Inventory Framework Attributes	on-going
Dr. Margaret Penner, Forest Analysis Ltd.	Automated Characterization of Forest Vertical Structure using Single Photon LIDAR	on-going
Dr. Mahadev Sharma, Ontario Forest Research Institute, Ministry of Natural Resources and Forestry	Developing Growth and Yield Models for White Pine and White Spruce Plantations	on-going
Craig Robinson, Forsite Consultants Ltd.	FIM Compliant LiDAR Inventory of Selected Areas in the Romeo-Malette Forest	on-going
Dr. Kara Webster, Canadian Forest Service, Natural Resources Canada	Advancing Digital Soil Mapping Tools in Support of Forest Resource Inventory, Planning, and Decision Making	on-going
Murray Woods, TreeDimensions	Accelerating the Implementation of Enhanced Forest Inventories in Ontario	on-going

For more detailed information and project deliverables, refer to

<http://www.forestryfutures.ca/enhanced-forest-resource-inventory>.

A symposium to showcase KTTD Round 3 projects is tentatively scheduled for the fall of 2023, pending public health restrictions. If social gatherings are not permitted, a webinar series will be developed to transfer the knowledge and tools that were development through the projects.

Treaty Settlement Transition Component

On December 8, 2020 a new purpose was designated to the Forestry Futures Trust Committee to provide Indigenous communities with funding for capacity building and economic development related to forestry on proposed treaty settlement lands. This new purpose will be referred to as the “Treaty Settlements Transition Component”.

The intent for this new FFT purpose is to use the revenue resulting from Crown dues charges to timber harvested on proposed settlement lands to be held in trust for the Indigenous communities to whom the lands would be transferred through a settlement agreement. The FFT will make Treaty Settlements Transition Component funds available to the Indigenous communities for capacity building and economic development related to forestry.

The Ministry of Natural Resources and Forestry (MNRF) and the Forestry Futures Committee will work with Indigenous communities to whom treaty settlement lands are proposed to be transferred, to establish the specifics of how this new purpose will be implemented with respect to those lands, including: eligible activities, funding eligibility criteria, the application (including evaluation and approval criteria) and the disbursement process.



2021 Temagami Forest
IFA field portion



*Silviculture Project 1120-1-R53
Photo provided by Hearst
Forest Management Inc.*

