

Chapter 4

Department of Natural Resources and Energy Development - Follow-up: 2008 Timber Royalties

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Follow-up: 2008 Timber Royalties - Department of Natural Resources and Energy Development

Report of the Auditor General – Volume I, Chapter 4 – August 2020

Why Is This Important?

- AGNB received a request from the Minister of Natural Resources and Energy Development to undertake this review
- Observations, findings and recommendations from the 2008 Auditor General Timber Royalties chapter have been referenced by various stakeholders in arguing their position on timber and stumpage markets in New Brunswick
- Forestry sector employs 22,000 people and represents 5% of New Brunswick Gross Domestic Product
- 2019 Crown timber royalties represented nearly \$68 million in gross revenue to the Province

Overall Conclusions

- Crown timber royalty rate-setting process in New Brunswick has significantly improved since 2008; however, Department has yet to adjust and apply new rates as required under the *Crown Lands and Forests Act* since 2015.
- In this report, the Auditor General makes eight more recommendations to further improve the Crown timber royalty rate-setting process.

What We Found

Department has partially implemented a new system to determine fair market value

- Private woodlot stumpage market study significantly improved over 2008 survey
- Private woodlot stumpage prices can represent the fair value of transactions in the New Brunswick private wood market
- Crown timber royalty rates not updated annually as required under the *Crown Lands and Forests Act*
- Forest Products Commission does not enforce mandatory responses from all independent contractors.
- Department advisory committee required by the *Crown Lands and Forests Act* is non-existent

Recommendation to implement regional Crown timber royalty rates no longer applicable

- The use of regional Crown timber royalty rates could increase accuracy but is complex and could significantly increase cost
- The cost of implementing a more complex regional rate system could outweigh the benefits
- No clear rationale exists supporting a regional rate system at this time

Government not using stumpage study results to update Crown timber royalty rates for 4-years

- Department needs to use market indexes for updating Crown timber royalty rates until real-time data is available
- Implementation delay means Crown timber royalty rates not responsive to market changes
- Real-time data could improve responsiveness of Crown timber rate-setting process
- Minister needs latitude and ability to update Crown timber royalty rates on a more timely basis

Key Findings and Observations Table

AGNB Follow-up: 2008 Timber Royalties

Department of Natural Resources and Energy Development

Paragraph	Key Findings and Observations
4.47	<i>Department considers private wood stumpage transactions to represent fair market value</i>
4.48	<i>Department actions taken to address 2008 recommendation 5.84</i>
4.49	<i>No comprehensive Crown timber rate-setting process manual</i>
4.52	<i>Significant positive changes to key Department system since 2008 Auditor General report</i>
4.55	<i>2017-2018 private woodlot stumpage market study methodology a significant improvement over past practice</i>
4.59	<i>Commission does not enforce mandatory responses from all independent contractors</i>
4.61	<i>Commission believes enforcement of mandatory requirement too costly and likely ineffective</i>
4.65	<i>Implementation of accounting and wood tracking system across most marketing boards</i>
4.66	<i>System implementation outstanding at two of seven marketing boards</i>
4.69	<i>Commission report objectives could be enhanced to provide increased clarity and comparability</i>
4.72	<i>Department commissioned two consultants to study the New Brunswick forest market</i>
4.75	<i>One consultant's report was statistically sound and reliable</i>
4.77	<i>No definition for fair market value in legislation or regulation</i>
4.78	<i>Department has attempted to provide clarity on fair market value</i>
4.81	<i>Crown timber royalty rates not updated to private market stumpage study average stumpage prices since 2014-15</i>
4.83	<i>Department not complying with the Crown Land and Forests Act to ensure annual review and update to Crown timber royalty rates</i>
4.89	<i>Regional private wood stumpage price variances remain across the Province</i>
4.91	<i>Many factors drive regional private wood stumpage price variances</i>
4.93	<i>Regional Crown timber royalty rates could enhance accuracy but implementing the system could have a high cost</i>
4.98	<i>Crown timber royalty rates not currently responsive to market changes</i>
4.99	<i>Department no longer uses finished good market indexes for updating Crown timber royalty rates</i>
4.105	<i>Department not compliant with the Crown Lands and Forests Act requirement for advisory board</i>

Recommendations and Responses

Recommendation	Department’s response	Target date for implementation
<p>4.51 We recommend the Department of Natural Resources and Energy Development develop a comprehensive Crown timber royalty rate-setting manual that includes, at a minimum:</p> <ul style="list-style-type: none"> • a detailed description of the stumpage appraisal methodology and associated processes in place to arrive at fair market values; and • examples of all calculations required to update Crown timber royalty rates. 	<p><i>The Department will undertake this recommendation. The Department recognizes that the current “New Brunswick Private Woodlot Stumpage Values Study Methodology- July 2016” only covers the portion of fair market value evaluation that is undertaken by the Commission. The Department will describe in a single document the complete process of setting timber royalty rates and generating timber royalty revenues from Crown forests.</i></p>	<p><i>April 1, 2021</i></p>
<p>4.64 We recommend the New Brunswick Forest Products Commission develop and implement a methodology to better capture stumpage transaction data from independent contractors and/or landowners.</p>	<p><i>The Department will undertake this recommendation. As noted by the Auditor General’s office in this report, the Department and Commission believe the survey is currently a statistically sound sample of private woodlot stumpage transactions. Through continuous improvement, it is the Commission’s intention to continually grow the sample size of the study. The Commission is currently exploring ways in which reporting to the Commission in this study becomes a regular part of stumpage purchaser’s business protocols.</i></p>	<p><i>December 31, 2021</i></p>

Recommendations and Responses (continued)

Recommendation	Department's response	Target date for implementation
<p>4.68 We recommend the New Brunswick Forest Products Commission complete the implementation of accounting and wood tracking software across all marketing boards.</p>	<p><i>The Department will undertake this recommendation. The New Brunswick Forest Products Commission will require the Southern New Brunswick and Northumberland County Forest Products Marketing Boards to finalize the implementation of common accounting and wood tracking software.</i></p>	<p><i>December 31, 2020</i></p>
<p>4.71 We recommend the New Brunswick Forest Products Commission enhance the Stumpage Study Methodology and annual Stumpage Study Results reports to:</p> <ul style="list-style-type: none"> • articulate clear objectives; • provide detailed methodology information with any year over year changes; and • present the annual stumpage study results in a complete, consistent, comparable manner. 	<p><i>The Department will undertake this recommendation. The Commission will make modifications to its annual Stumpage Study Results to more clearly articulate objectives and present results in a manner that is consistent and easily interpreted. The new report format will also explain any year-over-year changes in methodology, as well as incorporate the ability to report on a more frequent basis.</i></p>	<p><i>December 31, 2020</i></p>
<p>4.79 We recommend the Department of Natural Resources and Energy Development clearly define what “fair market value” means in the context of the Crown Lands and Forests Act, either through regulatory changes or Department policy.</p>	<p><i>The Department will undertake this recommendation. The Department has worked with Government of New Brunswick Legal Services to confirm our definition of fair market value. As noted above, the Department agrees to develop a ‘timber royalty appraisal manual’ as described in Recommendation 1.51, and this document will include a written definition of fair market value.</i></p>	<p><i>April 1, 2021</i></p>

Recommendation	Department's response	Target date for implementation
<p>4.85 We recommend the Department of Natural Resources and Energy Development ensure Crown timber royalty rates are reviewed annually and updated as required by the <i>Crown Lands and Forests Act</i>.</p>	<p><i>The Department will undertake this recommendation. The Department will bring forward to government the Crown timber royalty rates using the New Brunswick Forest Product's Commission Private Woodlot Stumpage Study annually and update as required by the Crown Lands and Forests Act. As the 2020-21 operating season is well underway, the Department will focus the rest of this year on the improvements recommended by this report and will bring forward its review and recommendations to government in advance of the 2021-2022 fiscal year.</i></p>	<p><i>April 1, 2021</i></p>

Recommendations and Responses (continued)

Recommendation	Department's response	Target date for implementation
<p>4.102 We recommend the Department of Natural Resources and Energy Development:</p> <ul style="list-style-type: none"> • undertake changes to the <i>Crown Lands and Forests Act</i> to give the Minister of Natural Resources and Energy Development authority to make more timely updates to Crown timber royalty rates to be more responsive to changes in the private wood stumpage market; and • work toward getting adequate real-time data and information from all sources to better facilitate accurate and timely changes to Crown timber royalty rates, if required. 	<p><i>The Department wishes to gather and understand if more timely data from all sources would indeed suggest a need to update Crown timber royalty rates more frequently. The Department has requested the New Brunswick Forest Products Commission immediately begin collecting private woodlot stumpage information on a monthly basis. This will allow the Commission to report in-year trends in stumpage values on a 'real-time' basis. Further, the Department tracks weekly commodity price changes. Analysis and comparison of this data to the annual rate data will help inform the Department on this matter. The Department is prepared to recommend Legislative changes should the data indicate a need. If trend information from the New Brunswick Forest Products Commission stumpage study or commodity price data reveals a significant shift that needs addressing, the Department will evaluate options at that time.</i></p>	<p><i>April 1, 2022</i></p>
<p>4.107 We recommend the Department comply with the <i>Crown Lands and Forests Act</i> and re-establish an advisory board or, alternatively, undertake revisions to the Act and/or regulation to accurately address the ongoing status of the advisory board.</p>	<p><i>The Department will undertake this recommendation. The Department will add to its strategic plans the development of a terms of reference for such a board with the intent of implementing by the target date.</i></p>	<p><i>April 1, 2022</i></p>

Introduction

4.1 In 2008, the Office of the Auditor General of New Brunswick (AGNB) released Volume II of its annual report which included Chapter 5, entitled “*Department of Natural Resources – Timber Royalties*”.¹

4.2 Nearly twelve years later, on April 14, 2020, the Auditor General received a section 12 request from the Minister of Natural Resources and Energy Development (Department) under the *Auditor General Act*. The Minister requested the Auditor General “*undertake a follow-up review of the actions taken in response to the recommendations included in the 2008 Auditor General Report*”. The section 12 request is presented in Appendix I.

Why we undertook this work

4.3 AGNB typically follows up on recommendations in the fourth year after a report has been released. This was completed in 2012 for the 2008 Timber Royalties chapter.

4.4 However, the Auditor General chose to undertake the section 12 request because:

- the complex nature of the subject matter covered in the 2008 Auditor General report meant it could take the Department longer than the normal 4-year period to address the recommendations adequately;
- references have been made to the 2008 report by various stakeholders in arguing their position on timber and stumpage markets in New Brunswick;
- the forest industry and markets in the Province have changed significantly since the 2008 audit was completed; and
- we decided to address the current situation in the Province.

¹ Auditor General Report – Volume II. Chapter 5 – Department of Natural Resources – Timber Royalties. Office of the Auditor General of New Brunswick, 2008. <https://www.agnb-vgnb.ca/content/agnb-vgnb/en.html>

Objective

4.5 The objective of this follow-up review was to determine if the Department of Natural Resources and Energy Development has fully implemented four recommendations made in the 2008 Office of the Auditor General report chapter 5 entitled “*Department of Natural Resources - Timber Royalties*”.

Conclusions

4.6 Regarding the four 2008 Auditor General report recommendations, we have concluded the Department of Natural Resources and Energy Development has:

- implemented one of the four recommendations;
- partially implemented a second recommendation; and
- not implemented a third recommendation from the 2008 report.

We found one recommendation from 2008 to be no longer applicable.

4.7 In 2012, the Department had implemented recording gross revenues as recommended in the 2008 report and this has not changed.

4.8 The Department has made significant improvements to the royalty rate-setting process using private wood stumpage studies. These improvements addressed key issues identified in 2008. However, Crown timber royalty rates have not been updated as required by the *Crown Lands and Forests Act* since 2015, resulting in a partially implemented recommendation.

4.9 A recommendation aimed at increasing the frequency of changes to Crown timber royalty rates through the use of finished goods market indexes has not been implemented. In this report, given technology improvements, we now recommend the move to a real-time data process by the New Brunswick Forest Products Commission. This will improve collection and utilization of data used in the private wood survey process and allow more flexible and responsive Ministerial updates to Crown timber royalty rates. Until such time as a real-time system is implemented by the Department, the 2008 report recommendation remains not implemented.

4.10 Finally, our recommendation that the Department move to a regional royalty rate system is no longer applicable.

Improvements to the Crown timber royalty rate-setting process combined with the cost of implementing a more complex regional rate system could outweigh possible benefits in terms of accuracy. For these reasons, there is no clear rationale for a regional system at this time.

4.11 As a result of our findings in this review, we have made eight recommendations aimed at continually improving the Department's current process initiatives.

Background – Crown Timber and Royalty Rates

4.12 In 2008, the Office of the Auditor General of New Brunswick (AGNB), completed a performance audit on the rate-setting process for Crown timber royalties in the Province, administered by the then Department of Natural Resources. The Department has undergone name changes since 2008 and is now the Department of Natural Resources and Energy Development. For the purposes of this report, we will use "Department" when referring to either period.

Forest land ownership in New Brunswick

4.13 Exhibit 4.1 illustrates the ownership of forest land in New Brunswick as provided by the Department (current and 2007 – approximate percentage of provincial total). The exhibit indicates very little change in ownership has occurred since 2007. There are approximately 40,000 private woodlot owners in the Province

Exhibit 4.1 - Very Little Change to New Brunswick Forest Ownership

Very Little Change to New Brunswick Forest Ownership		
Forest Land by Owner	2019	2007
Crown	50%	51%
Private Woodlots	30%	29%
Industrial Freehold	18%	18%
Federal Land	2%	2%

Source – New Brunswick Department of Natural Resources and Energy Development (unaudited)

Crown land management

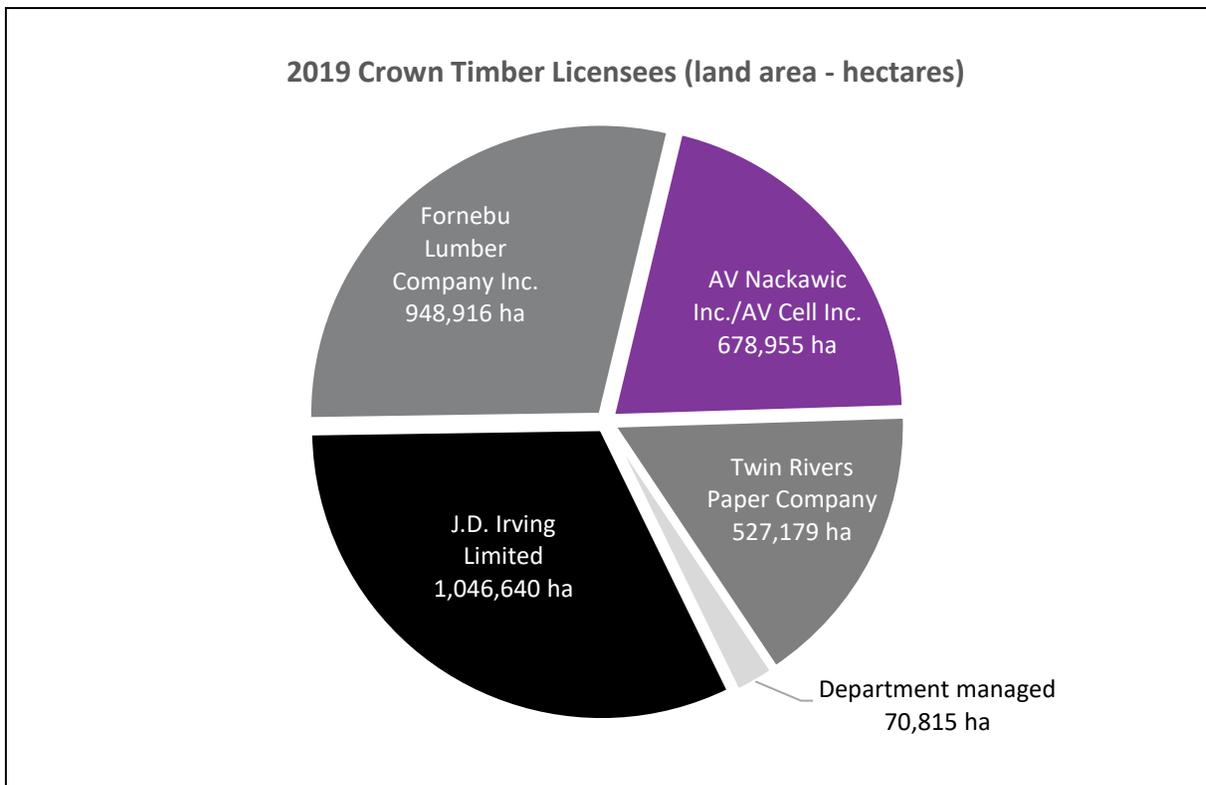
4.14 In New Brunswick, the *Crown Lands and Forests Act* (the Act) provides the Department with authority and responsibility to administer and control Crown lands. This includes responsibility under subsection 3(1) of the Act "for the development, utilization, protection and integrated management of the resources of Crown Lands."

Crown timber licenses, sub-licenses and permits

4.15 Although the Department is responsible for management of Crown land and forests under the Act, the Minister issues Crown timber licenses to persons owning or operating wood processing facilities in the Province and enters into forest management agreements with licensees to undertake forest management activities.

4.16 Exhibit 4.2 presents the four current Crown timber licensees that hold nine of the ten Crown timber licenses issued by the Province. The tenth license is managed by the Department through a hired contractor.

Exhibit 4.2 - 2019 Crown Timber Licensees



Source: New Brunswick Department of Natural Resources and Energy Development (unaudited)

4.17 A licensee enters into a management agreement with the Province governing how it will manage and use Crown lands, subject to the Minister's approval. In 2007, prior to the release of the 2008 Auditor General report, there was a total of six Crown timber licensees in New Brunswick.

4.18 The Department also issues Crown timber sub-licenses and permits that allow harvesting of timber from Crown

lands as prescribed in the Act. There are currently 27 sub-licensees in the Province.

4.19 According to the Department, the current New Brunswick forest industry:

- contributes approximately \$1.5 billion to the provincial Gross Domestic Product;
- directly and indirectly employs approximately 22,000 people, 9,700 of which are directly employed in 32 saw mills, six pulp and paper mills, five pellet mills and two board mills currently operating in the Province.

4.20 Exhibit 4.3 was presented in the 2010 New Brunswick Forestry Summit report entitled “*Our Forest Industry Fundamentals for Future Competitiveness*”, the forest industry in the Province began declining in 2007.

Exhibit 4.3 - Mill Representation by Type

Mill Representation by Type						
Year	Total	Mill Type				
		Pulp & Paper	Sawmills	Fibreboard	Panel	Wood Pellet
2005	76	9	64	1	2	0
2006	69	8	58	1	2	0
2007	64	8	54	1	1	0
2008	52	6	44	1	0	1
2009	47	6	39	1	0	1
2020	45	6	32	1	1	5

Source: Reproduced by AGNB using data presented in the 2010 New Brunswick Forestry Summit Report and current information from the New Brunswick Department of Natural Resources and Energy Development (unaudited)

4.21 Exhibit 4.3 illustrates the significance of changes to the Province’s forest industry since the Auditor General tabled the 2008 report. The forest products market structure in New Brunswick is much different today than in 2007. The Department indicated changes to the market structure has

resulted in less low-grade fiber demand and greater distance to bring forest products to market.

Crown timber royalty rate-setting process

4.22 When licensees, sub-licensees and permit holders extract or harvest Crown timber, they pay a royalty to the Province based on the class of timber harvested. Timber classes are prescribed in Schedule A of regulation 86-160 under the Act.

4.23 Subsection 59(1) of the Act states “*the royalty for each class shall be based on the fair market value of standing timber of that class, as determined by the Lieutenant-Governor in Council, and shall be prescribed by regulation.”*

Annual royalty rate review required under Crown Lands and Forests Act

4.24 Subsection 59(2) of the Act requires the royalty rates prescribed in the legislation to be reviewed annually by government. It is through this review process that royalty rates are updated to reflect ongoing fair market value.

Fair market value undefined in Crown Lands and Forests Act

4.25 It is important to note that while the Act prescribes the basis for setting royalty rates for Crown timber at fair market value, it fails to define what fair market value means in this context. The Department is then left to define what fair market value means in practice.

4.26 Exhibit 4.4 presents annual Crown timber royalty revenue and forest management expenditures as reported by the Department in the Province’s public accounts for the past five years. Forest management expenditures represent the cost of managing New Brunswick forests under the Act. Applicable forest management costs can be deducted from gross royalties to determine net revenue from Crown timber sales. The Department indicated that all charges recorded to forest management may not directly relate to generating Crown timber royalties.

Exhibit 4.4 - Crown Timber Royalties and Forest Management Expenditures (\$ million)

Crown Timber Royalties and Forest Management Expenditures (\$ million)				
Year ending March 31	Timber Royalty Revenue		Forest Management	
	Budget	Actual	Budget	Actual
2019	65.0	67.9	55.4	53.7
2018	67.8	68.7	52.5	52.4
2017	67.8	76.9	54.5	53.1
2016	86.8	75.7	63.8	56.6
2015	77.4	76.7	64.6	64.9

Source: Province of New Brunswick Public Accounts

Note – First Nations royalties are not included in this chart.

Decreasing Crown timber royalties

4.27 As shown in Exhibit 4.4, reported actual annual Crown timber royalties have decreased since 2015 by nearly \$9 million or 11% while forest management expenditures have also decreased by \$11 million or 17% over the five-year period.

Scope of work

4.28 This chapter focuses on a request by the Minister of Natural Resources and Energy Development under section 12 of the *Auditor General Act*.

4.29 Our scope of work was to review the actions taken by the Department to implement four recommendations made in the 2008 Auditor General Report – Volume II, Chapter 5 entitled “*Department of Natural Resources – Timber Royalties*”.

4.30 Our approach included documentation review, data analysis as applicable and interviews with the Department and the New Brunswick Forest Products Commission. Observations, findings and conclusions were based on:

- examination of legislation, policy, reports and data relevant to this work;
- review of documentation provided by the Department;
- interviews with Department and New Brunswick Forest Products Commission personnel.

4.31 To address the complex nature of the subject matter in this review, AGNB contracted independent experts in forestry, forest economics and econometrics. The work of the experts is incorporated in this report as applicable.

2008 Auditor General Report on Timber Royalties

2008 audit objectives and conclusions

4.32 The objectives of the 2008 audit were to:

- *“obtain a better knowledge of timber royalties and the processes and requirements surrounding them;*
- *determine if the Department is complying with its legislated requirements; and*
- *determine if there are any financial or value-for-money issues related to the timber royalties that the Department should address.”*

4.33 The 2008 audit concluded the following:

- *“While the Department does meet its legal requirement to annually review and establish royalty rates, and does use market information in this process, the flaws in the system mean that the royalties do not reflect fair market value – in some instances the royalty rates appear below market rates and in other instances they appear to be above.”*
- *“The Department should record the gross value of its royalty revenue and record an expenditure for the amount it pays to licensees for their management of Crown lands.”*

Key observations and findings from 2008 audit

4.34 In arriving at the conclusions noted above and the recommendations presented in the 2008 report, the Auditor General made several key observations and findings, including:

- the use of changes in finished product market indexes to adjust royalty rates in years where surveys were not completed was inconsistently applied;
- different private wood stumpage prices for the same product class across regions could skew market prices across the province due to the use of averaging in calculating the provincial royalty rates;

- the pre-2009 survey process to obtain stumpage prices paid to private woodlot owners and used to calculate the Crown timber royalty rates was flawed; and
- the post-2009 system was slightly improved over the previous system but many of the prior year system's issues remained.

Survey process flaws found in 2008 audit

4.35 Of importance to this follow up report are the several survey flaws identified in the 2008 report that negatively impacted the royalty rate-setting process. Key flaws in the survey process identified in 2008 were:

- incomplete data collected by the survey;
- insufficient sample sizes in some regions to establish a regional price;
- frequency and timing of market surveys; and
- inconsistently applied results of market surveys.

4.36 These observations and findings, particularly those related to the private wood market survey process used to calculate Crown timber royalty rates, were the basis for three of the four recommendations made in 2008. The Department provided consultant reports, data and documentation detailing the actions taken to address the recommendations from 2008.

Status of the 2008 Auditor General Report Recommendations

4.37 We reviewed and evaluated the information provided by the Department against the four recommendations in the 2008 Auditor General report. Exhibit 4.5 presents the status of the 2008 recommendations.

Exhibit 4.5 - Status of 2008 Auditor General Recommendations on Timber Royalties

Status of 2008 Auditor General Recommendations on Timber Royalties	
2008 Recommendations (referenced to report paragraph)	2020 Status
5.76 - We recommended the Department of Natural Resources record timber royalty revenue on a gross basis and record an expenditure for the amount deducted from royalty payments by licensees to cover the costs incurred in the management of Crown lands.	Implemented
5.84 - We recommended the Department implement a new system to determine fair market value.	Partially implemented
5.88 - We recommended the new system establish royalty rates on a regional basis.	No longer applicable
5.92 - We recommended the Department implement a new timber royalty system that allows the royalties charged to reflect changes in market indices on a frequent basis, which would be at least quarterly.	Not implemented

4.38 As noted in Exhibit 4.5, the Department has implemented the first recommendation, the second is partially implemented, the third is no longer applicable and the remaining recommendation has not been implemented. The remainder of this chapter will address the basis for our conclusions.

2008 Recommendation 5.76 Status - Recording on a Gross Basis Crown Timber Royalty Revenue and Crown Land Management Cost

4.39 As part of the AGNB follow up process in 2012, we reviewed the 2008 recommendations and found the Department had implemented recommendation 5.76. We again verified the Department has implemented this recommendation.

2008 Recommendation 5.84 Status -Implement New System to Determine Fair Market Value

4.40 As noted above, in 2008 the Auditor General recommended the Department implement a new system to determine fair market value for wood products harvested in the Province. This recommendation was made to address weaknesses in the survey process used to determine a provincial average stumpage value for the different classes of timber harvested from New Brunswick private woodlots. The Department used the survey results to adjust Crown timber royalty rates.

4.41 For the purposes of this chapter, when we refer to private woodlots and/or the private wood market, this does not include industrial freehold.

Private woodlot timber market

4.42 The price per unit paid to private woodlot owners for standing merchantable wood is called the stumpage price. Purchasers of private timber are typically:

- New Brunswick wood processing facilities, including Crown timber licensees and sub licensees (mill stumpage) purchasing approximately 10% of private wood; and
- independent contractors purchasing approximately 90% of private wood.

4.43 It is important to note that private woodlot owners do harvest their own timber and sell it on the market. However, since there is no stumpage transaction, it is not a stumpage sale and there is no value related to stumpage price. These transactions are not included in the private wood stumpage survey process.

4.44 The New Brunswick Forest Products Commission (Commission) has oversight of seven forest products marketing boards. Established in the *Forest Products Act*, the Commission takes much of its oversight and enforcement authority over forest products marketing boards from the *Natural Products Act*. The relevant sections in both Acts are administered by the Minister of Natural Resources and Energy Development. The Commission is responsible for conducting the private wood survey annually as part of a re-designed process referred to as the stumpage study methodology.

4.45 In this report, we will refer to the Commission’s new process as the “annual stumpage study”. While the survey and collection of related data is a significant part of the study, the Commission conducts additional analysis of the data in support of addressing key issues raised in the 2008 Auditor General report.

4.46 According to the Commission, in 2018-19 private woodlot timber was sold to:

- Crown timber licensees and sub-licensees (76% of harvest volume);
- other in-Province processors (7% of harvest volume); or
- exported out of Province (17% of harvest volume).

Department considers private wood stumpage transactions to represent fair market value

4.47 It is these stumpage sales transactions, completed through the private wood stumpage market, that the Department considers fair market value and uses to calculate Crown timber royalty rates. These sales transactions can be made with independent contractors, licensees and sub-licensees. The timber harvested may then be utilized in-Province or exported out of Province.

Department actions taken to address 2008 recommendation 5.84

4.48 The Department has addressed recommendation 5.84 in two ways, by:

1. changing the private wood market survey process used to determine an average provincial stumpage value twice since 2008, and
2. commissioning two reports to study the New Brunswick forestry market and, in one case, confirm the validity of the current private wood market survey methodology.

No comprehensive Crown timber rate-setting process manual

4.49 We began our review into the Department’s actions by requesting documentation to explain the overall Crown timber royalty setting process. Although good process documents exist for specific stages of the new process, the Department indicated there is no comprehensive manual detailing how this entire process is done.

4.50 We believe the Department should have such a manual to ensure the overall Crown timber rate-setting process is clearly understood, consistently applied and monitored for conformance.

Recommendation

4.51 We recommend the Department of Natural Resources and Energy Development develop a comprehensive Crown timber royalty rate-setting manual that includes, at a minimum:

- **a detailed description of the stumpage appraisal methodology and associated processes in place to arrive at fair market values; and**
- **examples of all calculations required to update Crown timber royalty rates.**

Significant positive changes to key Department system since 2008 Auditor General report

4.52 Exhibit 4.6 presents key attributes of the private wood market survey process prior to the 2008 Auditor General report and the successive changes undertaken since the 2008 report recommendations were made.

Exhibit 4.6 - Private Stumpage Survey Methodology Changes (2008 through 2018)

Private Stumpage Survey Methodology Changes (2008 through 2018)			
System Attribute	Pre-2008	2009 to 2015	2015 through 2018
Participation	Voluntary	Voluntary	Mandatory *
Period covered	12-months	12-months	12-months
System methodology	Limited New Brunswick survey, interviews & residual value calculation	Maritime – interviews and stumpage survey	Stumpage study, data collection, analysis and verification
Measurement Frequency	Periodic / inconsistent	2 to 3-year cycle	Annual
Breadth/Coverage	Provincial	Maritime	Provincial
Data	Agreements and Survey – rates paid for stumpage	Survey based – rates paid for stumpage	Transactions by source (15,000)
Sample size	About 700 price points based on limited product stumpage values	About 700 price points	3,500 to 4,000 price points
Data Verification	None	None	Annual by third party consultant
Indexing to finished goods market	Discretionary royalty rate adjustments between surveys – limited to increases only	Royalty rate changes annually between surveys	No indexing between stumpage studies

Source – Information and data collected from Department of Natural Resources and Energy Development and New Brunswick Forest Products Commission (unaudited).

*** Note that while participation is mandatory, no actions are taken against industry participants who do not provide the requested data and information.**

4.53 As highlighted in Exhibit 4.6, the system has undergone significant change through at least two iterations since 2008. In 2008, the system was based on a voluntary, inconsistently applied survey process with discretionary, upward adjustments to the royalty rates based on changes to finished product markets. The inherent weaknesses in this 2008 system increased risk that royalty rates would not be based on a statistically sound, verifiable survey/study of private wood stumpage sales.

4.54 We reviewed the private wood market survey methodologies provided by the Department for each period noted in Exhibit 4.6. We also reviewed the 2015 through

2018 annual stumpage study results. From this review we noted the Commission appears focused on continuous year over year improvement of the methodology.

2017-2018 private woodlot stumpage market study methodology a significant improvement over past practice

4.55 We found the current annual stumpage study methodology is a significant improvement over past methods for several reasons, including:

- annual, consistently applied methodology provides reasonably comparable year over year stumpage values;
- the methodology is based in sound statistical practices;
- the mandatory nature of the survey increases participation rates and can improve reliability and comparability of the annual results, when enforced;
- the representative sample data used in determining average stumpage prices is based on transactions with appropriate source documentation and appears to have improved in both quantity and quality;
- verification of the data across multiple source documents increases confidence in the process; and
- study results are publicly reported by the Commission.

4.56 In our review we noted that lump sum transaction data is collected by the Commission as well as transactional data. When a contractor purchases private wood and pays for all product classes in a single payment, this is known as a lump sum payment. Because there is only a single payment across multiple product classes, it is difficult for the Commission to calculate a stumpage price per product class, as is done for transactional data.

4.57 Lump sum purchases accounted for only about 1.6% of the total volume of data collected in 2017-18. While the Commission does not include lump sum prices in the stumpage price calculations, they did undertake a comparison of these transactions against the other data sources. This analysis found there would be no appreciable impact by not including lump sum sales in the average provincial stumpage rate.

4.58 While we found the current method to be much improved over the pre-2008 process, we identified possible improvements that we believe could further streamline the current process, increase efficiencies and promote continuous improvement.

Commission does not enforce mandatory responses from all independent contractors

4.59 We found that while the Commission has the authority to require independent contractors to provide data when requested, they do not enforce this requirement. The overall response rate of the contractors to the Commission's request was approximately 20-30%.

4.60 The Commission explained that there are over 200 of these contractors operating across the Province and many do not have accounting and wood tracking systems. These contractors would find it difficult to provide the requested information in an accurate and timely manner.

Commission believes enforcement of mandatory requirement too costly and likely ineffective

4.61 In addition, enforcing the requirement would mean an action at the Court of Queen's Bench under the *Natural Products Act*. The Commission contends this would be both costly and likely ineffective. The lack of a more effective, less costly measure to address non-participation of these independent contractors means contractors will continue to be under-represented in the annual stumpage study.

4.62 We understand the Commission's position regarding punitive action against independent logging contractors. However, we believe the Commission needs to address the low response rate from this group or find an alternative practice to capture the data required.

4.63 In discussions with the Commission, we were told they were exploring the creation of a registry of landowners and possibly requiring that timber sales be reported in this registry.

Recommendation

4.64 **We recommend the New Brunswick Forest Products Commission develop and implement a methodology to better capture stumpage transaction data from independent contractors and/or landowners.**

Implementation of accounting and wood tracking system across marketing boards

4.65 We noted the Commission has been successful at implementing a common accounting and wood tracking system in five of the seven marketing boards in the Province. The systems would promote data comparability and improved reporting.

System implementation outstanding at two of seven marketing boards

4.66 In our discussions with the Commission we were told two of the marketing boards remain outstanding. The Commission is anticipating the system implementations will be completed before April 2021.

4.67 By completing this roll-out the Commission can increase efficiencies and ensure data is comparable and consistently reported in all marketing board regions.

Recommendation

4.68 We recommend the New Brunswick Forest Products Commission complete the implementation of accounting and wood tracking software across all marketing boards.

Commission report objectives could be enhanced to provide increased clarity and comparability

4.69 In reviewing the Commission's July 2016 stumpage study methodology document and subsequent annual stumpage study reports from 2016 through 2018, we found it difficult to identify the main purpose of the reports. Numerous objectives were included with considerable overlap, making it difficult to identify the main purpose of these documents and enhance clarity and comparability year over year.

4.70 While we were able to use the information presented for our purposes, we believe report objectives should be concise with results presented in a clear and consistent manner. This would facilitate transparency in public reporting and clarify the work undertaken and completed by the Commission.

Recommendation

4.71 We recommend the New Brunswick Forest Products Commission enhance the Stumpage Study Methodology and annual Stumpage Study Results reports to:

- articulate clear objectives;
- provide detailed methodology information with any year over year changes; and
- present the annual stumpage study results in a complete, consistent, comparable manner.

Department commissioned two consultants to study the New Brunswick forest market

4.72 In addition to changes made to the private wood stumpage survey process, the Department commissioned two consultant reports to study the New Brunswick forest market. We reviewed both reports in detail to gauge if the findings and conclusions were applicable to our work.

4.73 One of the reports, entitled “*Analysis of the New Brunswick Private Woodlot Survey and the New Brunswick Private Timber Market*”² was commissioned to assess:

- “*the statistical soundness of the 2014-15 private woodlot survey*”; and
- “*whether the New Brunswick private stumpage market is distorted by the purchases of stumpage by lumber mills.*”

4.74 The consultant’s conclusions were based on results of the first year (2014-15) of the Commission’s annual stumpage study methodology. By contrast, the market structure during the period covered by the 2008 Auditor General report (2004–2007) was considerably different. Since we are reviewing current Department practices in response to the nearly 12-year old 2008 Auditor General recommendations, we believe the findings in this consultant’s report are relevant to the current market but may not reflect the situation that existed in 2008.

One consultant’s report was statistically sound and reliable

4.75 Although our review of the consultant’s report was limited, we found it to be both statistically sound and reliable. We found no reason to question the report conclusions regarding the 2015 provincial forestry market, which included:

- “*The Forest Products Commission survey was done in accordance with sound statistical practices.*”
- “*New Brunswick mills do not exercise significant market power over private stumpage prices.*”
- “*Woodlot owners have alternative uses for their timber, including simply letting the existing trees grow further until prices improve. Exercise of putative market power would be frustrated by the simple fact that woodlot owners display a high elasticity of supply, meaning that attempts to lower prices would lead to very large decreases in the stumpage offered on the market.*”

² Dr. Brian Kelly. *An Analysis of the New Brunswick Private Woodlot Survey and the New Brunswick Private Timber Market*. 2017.

- 4.76** We reviewed the second commissioned report but did not find the conclusions applicable to our work in following up on the 2008 Auditor General report recommendations. We have not relied on its contents, findings or conclusions in competing our work.
- No definition for fair market value in legislation or regulation**
- 4.77** As previously noted, the Act does not define “*fair market value*” and the Department has no policy regarding fair market value that we could review. We believe it is important for the Department to address this obvious gap in the regulatory framework.
- Department has attempted to provide clarity on fair market value**
- 4.78** Through consultant reports and enhancements to the annual stumpage study methodology, the Department and the Commission have attempted to provide some clarity regarding fair market value. However, we believe a clear definition of what fair market value means in the context of provincial timber markets, would further address the existing gap in legislation.
- Recommendation**
- 4.79** **We recommend the Department of Natural Resources and Energy Development clearly define what “*fair market value*” means in the context of the *Crown Lands and Forests Act*, either through regulatory changes or Department policy.**
- 4.80** To complete our review of the new survey implementation, we examined the Crown timber royalty rate schedule in Regulation 86-160 under the Act to determine if Crown timber royalty rates had been reviewed and updated to reflect fair market value as required under the Act.
- Crown timber royalty rates not updated to private market stumpage study average stumpage prices since 2014-15**
- 4.81** We found Crown timber royalty rates had not been updated to match the provincial average stumpage prices calculated by the Commission from the annual stumpage studies since 2014-15. Setting Crown timber royalty rates based on private land stumpage prices is the main reason the Commission undertakes the annual stumpage studies.
- 4.82** Since the Department and the Commission have taken steps to improve the private wood stumpage survey completed during the annual process, we had expected to see the Crown timber royalty rates reflect the changing private wood stumpage values. This was not the case.

Department not complying with the Crown Land and Forests Act to ensure annual review and update to Crown timber royalty rates

4.83 The Department stated they have confidence the annual stumpage study results are representative of a fair value market for private wood stumpage prices in New Brunswick. They believe much work has been done to better understand market dynamics in the Province. They agree Crown timber royalty rates require annual updates, at a minimum, to respond to market fluctuations. However, the Department indicated, given the current trade-related tension with the United States, they were reluctant to reduce Crown Timber royalty rates to match stumpage prices from the annual stumpage studies.

4.84 While we understand the Department's apprehension, we believe improvements to the annual stumpage study methodology and the associated results are statistically sound and represent accurate stumpage transactions in the current private wood market. The transactions should be reflected in annual updates to the Crown timber royalty rates as currently required by the Act.

Recommendation

4.85 **We recommend the Department of Natural Resources and Energy Development ensure Crown timber royalty rates are reviewed annually and updated as required by the *Crown Lands and Forests Act*.**

4.86 The 2008 Auditor General recommendation was for the Department to “*implement a new system to determine fair market value*”. This recommendation required the Department to develop a reliable process that, when implemented, would result in a fair market rate for standing timber. The new annual survey-based study methodology has been implemented and provides private wood market stumpage prices with appropriate statistical accuracy. The sampled transactions are between two independent parties, the private land owner and the buyer. Since the private woodlot owner chooses to sell timber, we believe this can represent a fair value transaction in this market.

4.87 However, since government has not updated the Crown timber royalty rates since 2015, the recommendation is not fully implemented. In our opinion, the revised stumpage study methodology and scope of the private land stumpage determination process has been effective to the extent that we consider recommendation 5.84 to be partially implemented.

2008 Recommendation 5.88 - Establish Royalty Rates on a Regional Basis

4.88 In 2008, the Auditor General found variances existed in stumpage rates identified by the survey across marketing board regions. The 2008 report found a risk existed that these variances could skew the provincial market and Crown timber royalty rates. Private woodlot owners across regions receive different prices for the same products.

Regional private wood stumpage price variances remain across the Province

4.89 We reviewed the annual stumpage study results from 2014-15 through 2017-18 as provided by the Commission and found stumpage price variances remain across marketing board regions in the Province during that period. This variance was more evident across some classes of timber than others.

4.90 Our review of the data suggested that while hardwood pulp prices exhibit some consistency in regional variances, softwood sawlog and studwood product classes exhibited very little consistency in regional stumpage price variance during this period.

Many factors drive regional private wood stumpage price variances

4.91 According to both the Department and the Commission, stumpage price variability both within and across regions is driven by many factors, including:

- product species and quality differences;
- land/forest conditions;
- distance from processing facilities (mills);
- harvest contractor operational efficiency differences; and
- relative competition between contractors within and across regions.

4.92 The Department contends there is no clear rationale for implementing regional rates due to improvements in the annual stumpage study methodology noted above. They further contend that increased survey and data accuracy combined with the use of weighted averaging minimize regional variances.

Regional Crown timber royalty rates could enhance accuracy but implementing the system could have a high cost

4.93 The use of regional Crown timber royalty rates could increase accuracy and comparability of Crown timber royalty rates within marketing board regions. However, application of a regional rate system would introduce more complexity, initial cost would be high and existing market contracts could be impacted negatively. It is possible changes at this time could be counter-productive to the existing system.

4.94 Given the extent of the improved annual stumpage study methodology and the lack of strong rationale for changing to a regional Crown timber rate structure at this time, we believe this recommendation is not currently applicable.

4.95 We have concluded recommendation 5.88 from the 2008 Auditor General report is not applicable at this time.

2008 Recommendation 5.92 - Quarterly Crown Timber Royalty Rate Changes tied to Finished Product Market Index Changes

4.96 The 2008 Auditor General report recommended, as part of the new timber royalty system, the Department set royalties to reflect changes in finished product market indices at least quarterly.

4.97 The reasoning for this recommendation was to ensure Crown timber royalty changes are fair, accurate, and reflect timely price information. The system at the time of the 2008 work only allowed upward changes to the Crown timber royalty rates and these changes were not consistently applied.

Crown timber royalty rates not currently responsive to market changes

4.98 As noted above, government has not adjusted Crown timber royalty rates since 2015. We believe Crown timber royalty rates should be responsive to either the private wood stumpage market or be indexed to relevant finished goods market indexes. In our opinion, this would benefit to all stakeholders in the New Brunswick forest sector.

Department no longer uses finished good market indexes for updating Crown timber royalty rates

4.99 The Department has chosen to abandon changes to the Crown timber royalty rates based on finished product market indexes entirely. They agree that private stumpage prices do diverge from finished product markets, but they contend that changes from a periodic to the annual stumpage study now make this recommendation unnecessary.

4.100 The annual stumpage study is an improvement that could reduce the requirement for indexing to finished goods markets, depending upon how responsive Crown timber royalty rates are to private wood stumpage price changes. To promote increased responsiveness, we believe the Department and the Commission should:

- pursue improvements to current information systems and data collection processes to work toward getting adequate real-time data and information from all sources. This would better facilitate accurate and timely changes to Crown timber royalty rates in response to private wood market fluctuations, if required; and
- recommend changes to the Act providing the Minister with the authority to make in-year changes to Crown timber royalty rates as required to ensure increased responsiveness to market fluctuations.

4.101 We believe a more responsive Crown timber royalty rate promotes transparency and fairness for all stakeholders, including industry, private landowners and the people of New Brunswick.

Recommendation

4.102 We recommend the Department of Natural Resources and Energy Development:

- **undertake changes to the *Crown Lands and Forests Act* to give the Minister of Natural Resources and Energy Development authority to make more timely updates to Crown timber royalty rates to be more responsive to changes in the private wood stumpage market; and**
- **work toward getting adequate real-time data and information from all sources to better facilitate accurate and timely changes to Crown timber royalty rates, if required.**

4.103 At this time, the Department has not implemented recommendation 5.92 from the 2008 Auditor General report. Should the Department successfully implement a real-time system as recommended above, we would consider the 2008 recommendation no longer applicable.

Non-compliance with Legislation

4.104 In our review of legislation regulating the Crown timber royalty rate-setting process, we found the Department has not complied with subsection 69(1) of the Act.

Department not compliant with the Crown Lands and Forests Act requirement for advisory board

4.105 Subsection 69(1) of the Act requires the Minister to establish an advisory board to advise the Minister on matters related to Crown lands. We asked the Department for the latest submission from this board to determine if it was applicable to our work. Department officials informed us the board no longer exists and no records were available.

4.106 We believe government departments should comply with provincial legislation or, if necessary, seek amendments to address weaknesses in the current Act or regulation.

Recommendation

4.107 We recommend the Department comply with the *Crown Lands and Forests Act* and re-establish an advisory board or, alternatively, undertake revisions to the Act and/or regulation to accurately address the ongoing status of the advisory board.

Appendix I – Section 12 Request



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April 14, 2020

Ms. Kim MacPherson
Auditor General of New Brunswick
P.O. Box 758
Fredericton, NB E3B 5B4

Ms. MacPherson:

The 2008 Auditor General Report raised several questions regarding the Department of Natural Resources and Energy Development's approach to determining Crown timber royalty rates. Given the importance of the Crown timber asset, the Government of New Brunswick was compelled to undertake a review of key aspects of the system used to determine Crown timber royalties. The Department has worked on a review of this system for some years.

As stipulated in Section 12 (1) of the *Auditor General Act*, I am requesting your office undertake a follow-up review of the actions taken in response to the recommendations included in the 2008 Auditor General Report. To assist with your analysis, I have attached a document entitled "Review of NB Crown Lands Timber Royalty System" with its supporting documentation. Departmental staff will work with your office to provide any additional information required to review our work regarding the recommendations.

I am of the firm belief that all participants in the New Brunswick forest sector would appreciate the view of your office on these important questions. You can be assured of the full cooperation of the Department as you undertake your review.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Holland".

Mike Holland

Enclosure

Minister / Ministre
Natural Resources and Energy Development / Ressources naturelles et du Développement de l'énergie
P.O. Box 6000 / C. P. 6000 Fredericton New Brunswick / Nouveau-Brunswick E3B 5H1
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Appendix II – About the Report

This limited assurance chapter was prepared by the Office of the Auditor General of New

Brunswick in response to a section 12 request under the *Auditor General Act*. Our responsibility was to provide limited assurance, as of July 2, 2020, on the status of recommendations published in the 2008 Auditor General report chapter 5, entitled “*Timber Royalties*”.

All work in this engagement was performed to a limited level of assurance in accordance with the Canadian Standard on Assurance Engagements (CSAE) 3001 – Direct Engagements set out by the Chartered Professional Accountants of Canada (CPA Canada) in the CPA Canada Handbook – Assurance.

AGNB applies Canadian Standard on Quality Control 1 and, accordingly, maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

In conducting the work, we have complied with the independence and other ethical requirements of the Rule of Professional Conduct of the Chartered Professional Accountants of New Brunswick and the Code of Professional Conduct of the Office of the Auditor General of New Brunswick. Both the Rules of Professional Conduct and the Code are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality, and professional behaviour.

In fulfilling our responsibilities under this engagement, we obtained the following from management:

- confirmation of management’s responsibility for the subject under review;
- confirmation that all known information that has been requested, or that could affect the findings or conclusions, has been provided; and
- confirmation that the findings in this chapter are factually based.

Date of the report:

We completed our review on August 4, 2020 in Fredericton, New Brunswick.