

Chapter 5

Department of Natural Resources

Timber Royalties

Contents

Background	143
Scope	146
Conclusions	146
Understanding timber royalties	146
Analysis	150

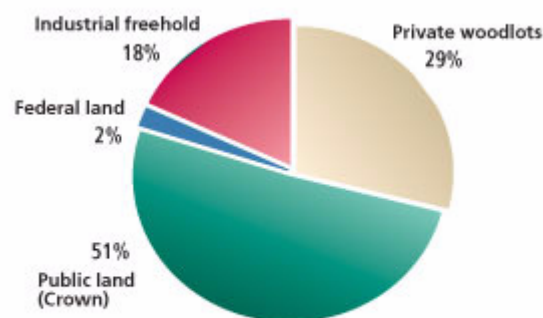
Department of Natural Resources

Timber Royalties

Background

5.1 To ensure that the Province receives fair value for timber harvested from Crown forests, the *Crown Lands and Forests Act* (the Act) imposes fair-market-value-based timber royalties. These royalties are also intended to establish equity in the timber market, where timber harvested from Crown lands competes directly with timber from other suppliers. A fair-market-value-based approach to establishing royalties is also necessary for the Province to comply with international trade agreements.

5.2 According to the Department of Natural Resources' *Forest Report 2007*, the ownership of New Brunswick's forests is distributed as follows:



Source: Department of Natural Resources

5.3 The Act defines Crown Lands as “all or any part of the lands vested in the Crown that are under the administration and control of the Minister...” The information booklet called “*Management of*

New Brunswick's Crown Forest" published by the Department of Natural Resources explains that:

The Act divides New Brunswick's Crown land into 10 timber licenses. Each timber license is leased through a 25-year forest management agreement to a large forest-based company called a licensee. Licensees are the managers of Crown licenses under the administration of the Department of Natural Resources. The 10 Crown licenses are presently leased to six licensees.

5.4 The total area of Crown land managed under these licenses is approximately 3.3 million hectares. This is a significant asset of the people of New Brunswick.

5.5 The Act makes the Minister of Natural Resources responsible for "...the development, utilization, protection and integrated management of the resources of Crown Lands..."

5.6 According to the Department's *Forest Report 2007*, the forest industry harvested 5.19 million cubic meters (m³) of timber from Crown lands in 2006-07, comprising 3.47 million m³ of softwood and 1.72 million m³ of hardwood. This increased more than 9% from the 2005-06 harvest of 4.77 million m³.

Crown Land Timber Harvest Volumes Year Ended 31 March (million m³)					
	2003	2004	2005	2006	2007
Hardwood	1.55	1.76	1.58	1.56	1.72
Softwood	3.20	3.26	3.29	3.21	3.47
Total	4.75	5.02	4.87	4.77	5.19

5.7 The timber royalty revenue raised from the harvest of Crown land timber is significant. The table below shows that net timber royalty revenue in each of the past five years has been at least \$49 million.

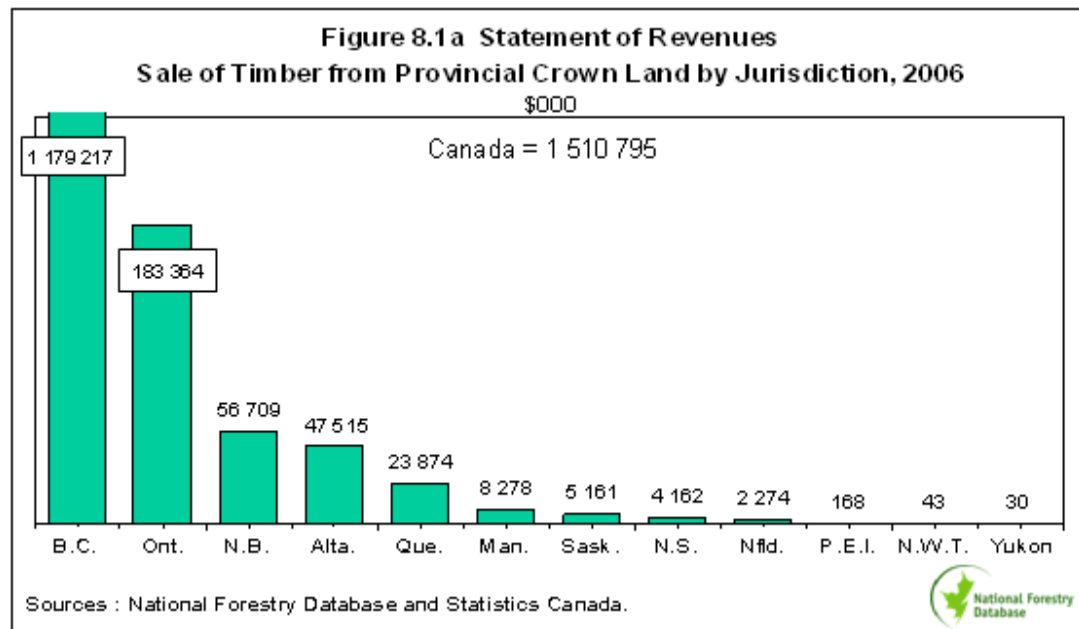
Net Timber Royalty Revenue Year Ended 31 March (\$ millions)				
2003	2004	2005	2006	2007
49.7	59.4	57.0	53.2	55.6

5.8 The timber royalty revenue reported by the Province is net of certain costs incurred by licensees in the management of the Crown forest. Section 59 (3) of the Act gives the Minister broad authority to make these adjustments to the base royalty rates established for any class of timber:

... where, in the opinion of the Minister, it is necessary for the development, utilization, protection or integrated management of the resources of Crown Lands, he may reduce the royalty for any class of timber by an amount not exceeding seventy-five per cent of the royalty payable under subsection (1).

5.9 The value of the gross revenue is therefore higher than the amount reported by the Province.

5.10 The National Forestry Database Program indicates that in 2006, New Brunswick generated the third highest revenue in Canada from the sale of timber from its Crown lands.



5.11 Understanding how New Brunswick's timber royalty revenue compares to revenue in other Canadian jurisdictions is complex. Different jurisdictions use different approaches to charging royalties. New Brunswick's approach allows it to earn significant revenue from timber royalties and have its exported timber exempt from export

charges under the *Softwood Lumber Agreement Between the Government of Canada and the Government of the United States of America*.

5.12 Differences in how jurisdictions establish timber royalties have had an impact on the treatment of exports from each jurisdiction under the softwood lumber agreement. Most softwood lumber produced in British Columbia, Ontario, Alberta, Quebec, Saskatchewan and Manitoba and exported to the United States is subject to export charges. Such border measures do not apply to exports of softwood lumber produced in the Atlantic Provinces from logs harvested in the Atlantic Provinces, or to logs harvested in the Yukon, Northwest Territories or Nunavut.

Scope

5.13 Our objectives for this review 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.

Conclusions

5.14 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 to be below market rates and in others they appear to be above.

5.15 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.

Understanding timber royalties

5.16 As described earlier, at the time of our review, the Province's Crown land was divided into ten timber licenses issued to six licensees. The size of individual licenses ranged from approximately 70,000 hectares to 620,000 hectares. The six licensees were:

- Bowater Maritimes
- UPM Kymmene
- Weyerhaeuser Company Ltd.

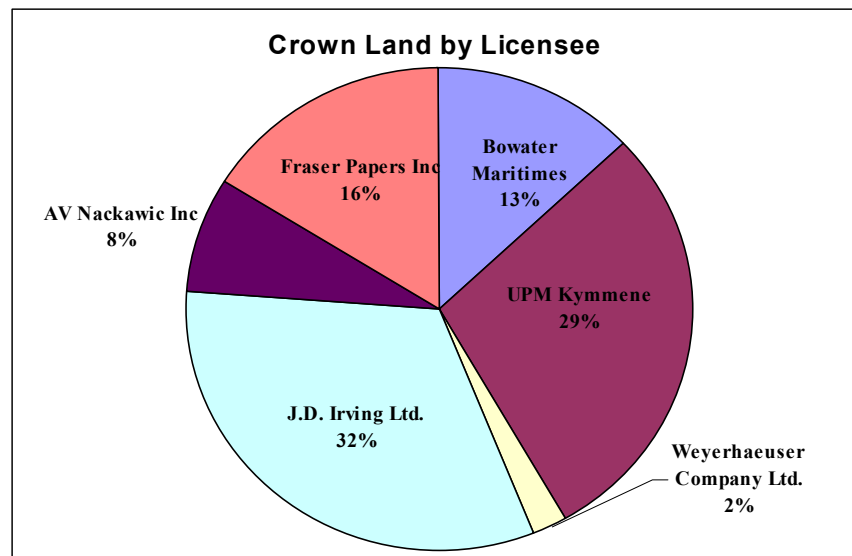
- J.D. Irving Ltd.
- AV Nackawic Inc.
- Fraser Papers Inc.

5.17 Under Section 28 of the Act, the Minister may, with the approval of the Lieutenant-Governor in Council, issue a timber license to a person who:

a) owns or operates a wood processing facility in the Province or who undertakes by agreement with the Minister to construct and operate a wood processing facility in the Province, and

b) has entered into a forest management agreement with the Minister.

5.18 The following chart shows the percentage of holdings for each licensee:



5.19 There are also sub-licensees and permit holders who harvest timber from Crown land. The Minister grants sub-licenses under the authority of Section 41(1) of the Act, and grants permits under Section 49(1).

5.20 Section 56.7 of the Act requires that:

any person who extracts, harvests or takes a resource prescribed by regulation under the authority of a licence of

occupation shall pay to the Crown the royalties prescribed by regulation.

5.21 The term royalty is defined as "...the amount prescribed by regulation that is payable to the Crown...for timber harvested on Crown lands..." Under the present royalty system, licensees are responsible for remitting royalties on all timber harvested by themselves and by all sub-licensees.

5.22 The following table shows the ten timber licenses, the licensee, the area of the license, the volume harvested from the license in the year ended 31 March 2007, and the net royalty paid on that license.

License	Current Licensee	Area of License (ha)	Volume Harvested (m ³)	2007 Net Royalty (\$)
Upsalquitch	Bowater Maritimes	425,268	688,948	7,239,914
Nepisiguit	UPM Kymmene	259,565	305,194	3,343,196
Lower-Miramichi	UPM Kymmene	291,618	356,104	4,400,965
Upper-Miramichi	UPM Kymmene	384,049	479,766	6,153,469
Kent	Weyerhaeuser Company	70,699	59,779	722,268
Queens-Charlotte	J.D. Irving	621,773	1,084,863	12,036,371
Fundy	J.D. Irving	426,190	604,108	5,814,144
York	AV Nackawic	256,375	404,898	3,286,722
Carleton	Fraser Papers	131,452	292,817	2,179,085
Restigouche-Tobique	Fraser Papers	395,819	927,565	10,244,458
Unallocated				226,160
Total		3,262,808	5,204,042	55,646,752

5.23 Section 57 of the Act says that:

Timber on Crown Lands shall be classed by species or groups of species as veneer logs, saw logs, pulpwood, poles, fuel wood, Christmas trees and such other classes as may be prescribed by regulation.

5.24 Regulation 86-160 lists more than 40 different species or groups of species of timber for the 2007-08 fiscal year. The prescribed royalties range from just over \$8 per cubic meter to nearly

\$66 per cubic meter. Pulp grade logs are at the lower end of the royalty schedule while the upper end of the schedule includes veneer logs which are used to produce more expensive end products.

5.25 Subsection 59(1) of the Act says that:

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.

5.26 Most stakeholders in the forest industry in New Brunswick agree that royalties for Crown timber should be based on fair market value. Even though there is one goal – fair market pricing for Crown timber, achieving that goal is not easy.

5.27 To set the royalty rates, the Department uses a two-part process. The first part of the process is based on a price survey. The Department hires a consulting firm periodically to survey the stumpage values of timber harvested from private woodlots. Stumpage is defined as the price paid to a landowner for standing merchantable wood. Using the survey data, the consultant averages the stumpage values for each timber class in each marketing board area, and then estimates an overall provincial fair market value for each class. The Department then recommends to government that the estimated provincial fair market values should be used to set timber royalty rates.

5.28 The Department received reports of survey results from consultants in 2003, 2005 and 2007. The price surveys on which these reports were based were conducted between 1 July and 30 November 2002; 1 December 2004 and 31 July 2005; and 1 January and 31 December 2006 respectively.

5.29 Subsection 59(2) of the Act requires that:

The royalty shall be prescribed for a twelve month period beginning on April 1 of each year, and shall be reviewed annually.

5.30 Since the stumpage surveys are not annual, the Department applies a second process in years when surveys are not conducted. The Department monitors changes in the selling prices of timber products that are bought and sold in formal markets; they determine

the change in the selling price indices of these products and apply them to the previous year's royalty schedule. After applying the index change to the previous year's royalty, the Department decides whether or not to adjust the royalty for the next year.

5.31 If, after applying this two-step process, the Minister is not satisfied that the resulting royalty is appropriate, Section 59 (3) of the Act gives the Minister broad authority to make adjustments to the base royalty rates established for any class of timber:

Notwithstanding subsection (1), where, in the opinion of the Minister, it is necessary for the development, utilization, protection or integrated management of the resources of Crown Lands, he may reduce the royalty for any class of timber by an amount not exceeding seventy-five per cent of the royalty payable under subsection (1).

Analysis

5.32 In our review of the process for establishing royalties for timber harvested from Crown land, we identified problems both with the design of the system for determining royalties and with the implementation of that system.

5.33 In our opinion, the root cause of these problems is the difficulty in establishing fair market value for timber harvested in New Brunswick, a problem that is exacerbated by the fact that neither the Act nor its regulations define fair market value or how it is to be determined.

Design Issue

5.34 The fundamental problem with the design of the system for determining royalty rates is that the timber market is not truly an open market.

5.35 As we have already described, timber royalties are based on a survey of the stumpage prices received by private landowners – a segment of the market that supplied 11.6% of the timber consumed by mills in New Brunswick in the fiscal year ended 31 March 2007. The price that is paid to the private landowners determines the price the mills will pay to the Province for timber harvested from Crown land which represents 41.5% of their source of supply. This would provide an incentive for the mills to keep the prices paid to private landowners as low as possible since those prices affect the royalties that would have to be paid in the future. Since the mills represent a very large proportion of the buyers for timber harvested in New Brunswick, they also have the market power to keep the prices paid

to private landowners low. The result could be a continual spiraling down of prices and therefore royalties.

5.36 The fact that the mills directly or indirectly control so much of the source of timber supply in New Brunswick means that the market is not truly an open market. In such a situation it is not possible to be confident that the prices paid in the market are in fact fair market value.

5.37 This flaw in the design of the system for establishing timber royalties could create a second problem. Under subsection 3(2) of the *Crown Lands and Forests Act*, “The Minister shall encourage the management of private forest lands as the primary source of timber for wood processing facilities in the Province...” If however the royalty system provides an incentive for processing facilities to keep prices paid to private land owners low, the result may be fewer private land owners who are willing to supply timber to New Brunswick mills. Crown land would then become a greater source of supply thereby creating an obstacle to the Minister in attempting to encourage private sources as the primary source of supply.

5.38 For the purposes of the Act, private woodlots are defined as:

...all forest land except

a) Crown Lands,

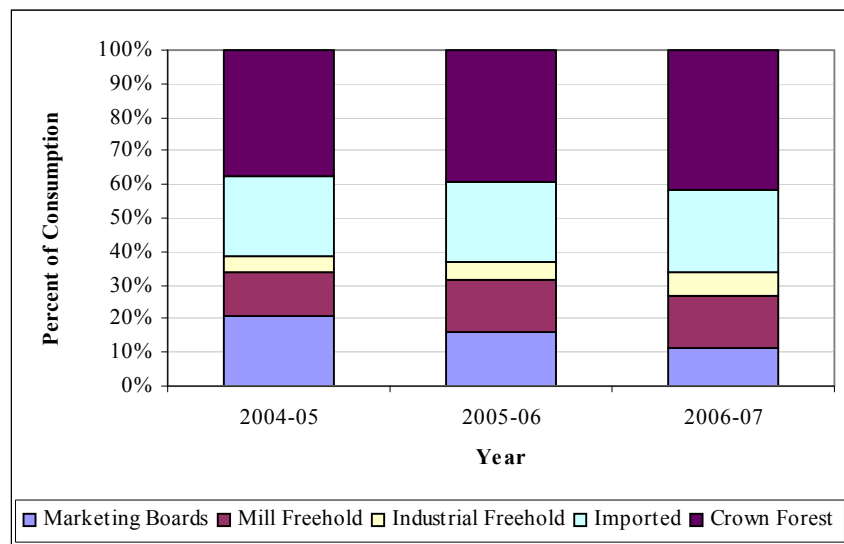
b) forest land owned by a person whose principal business is the operation of a wood processing facility, or

c) forest land consisting of an aggregate of five thousand hectares owned by one person.

5.39 The following table and chart show that timber for consumption in New Brunswick supplied by private landowners through provincial marketing boards has significantly declined in recent years, while timber from Crown forests has slightly increased:

Timber supply for Consumption in New Brunswick (000 m ³)						
Fiscal Year	Marketing boards	Own freehold	Industrial freehold	Imported	Crown land	Total
2004-05	2,680	1,737	603	3,063	4,827	12,910
2005-06	1,833	1,791	610	2,814	4,512	11,560
2006-07	1,348	1,783	791	2,895	4,840	11,657

Mill consumption by source



5.40 As the table and chart illustrate, timber from marketing boards accounted for 20.8% of timber consumed in New Brunswick in the 2004-05 fiscal year but declined to 11.6% in 2006-07. Timber harvested from Crown forests accounted for 37.4% of timber consumed in 2004-05 and increased to 41.5% in 2006-07. It should also be noted that in many cases the timber imported by New Brunswick mills is from land that they own or lease in other jurisdictions.

5.41 The primary constraint on the market power of the mills in the system is established under subsection 29(7.1) of the Act which says:

The Minister, during the process of approving an operating plan under subsection (7), shall ensure that private woodlots are a source of wood supply consistent with the principles of (a) proportional supply, and (b) sustained yield.

5.42 The Act defines proportional supply as:

...equitable sharing among the sources of wood supply identified in paragraph 29(5)(b) based on historic market share of supply to a wood processing facility.

5.43 Given that the proportion of timber harvested from Crown land has increased while the proportion harvested from private woodlots has decreased significantly, it does not appear that the Minister has used the powers created by subsection 29(7.1) to maintain proportional supply.

5.44 These figures also show that while the total consumption by New Brunswick mills declined about 9.7% between fiscal years 2004-05 and 2006-07, timber supplied from Crown forests increased slightly by 0.3% while timber supplied through marketing boards decreased 49.7%. The volume of timber consumed dropped 1,253 cubic meters during this timeframe, all of which was borne by private land owners.

5.45 In 2006 the Minister of Natural Resources re-established a Royalty Committee to review the current royalty system because of concerns about the “appropriateness and the fairness of Crown timber royalty rates”. The Committee had equal representation from the forest industry, forest marketing boards and the Department. Concerns were expressed by the various parties about the current system. In particular members of the committee expressed concerns about the surveys used to determine fair market value and with application of commodity price indices. Concerns about the survey were centered on the increasing difficulty of obtaining an adequate sample of private woodlot stumpage transactions, and the greater influence of industry over Crown stumpage “as fewer mills will have greater control over mill delivered prices.” The issues with commodity indices were that royalties were not being reduced when the indices indicated that they should have been, and were only increased when the index exceeded the historical high.

5.46 The Department, in a 27 November 2006 letter, requested the Maritime Lumber Bureau review a proposed new royalty system to determine if it conformed to the terms and conditions of the Softwood Lumber Agreement. The proposed system would not rely on a survey to determine fair market value in New Brunswick but instead “proposed that a commodity based indexing system be the only method for adjusting the fair market value of Crown timber

products”. It proposed using the values established in the 2003 market survey and revising those prices based on the change in indices for each commodity. The price would be adjusted quarterly rather than annually. The Department concluded:

...commodity based indexing reflects the value of a product traded on the global market and cannot be influenced by the forest industry, contractors or private woodlot owners. Going forward, there would be a much closer relationship between the value of the end product (commodity) and the Crown royalty rate of the timber class used to produce that product. As such, royalty rates would decrease in poor markets and increase in good markets. The forest industry has accepted this principle. Given the system's close relationship with the market, we believe that New Brunswick would be considered free and fair traders. In closing we are requesting endorsement of this system at your earliest convenience.

5.47 However, in a letter to the New Brunswick Federation of Woodlot Owners on 6 February 2007 the Minister of Natural Resources rejected the proposed system, even though the proposal was originally put forward by his Department. The Minister cited an informal response from an American lawyer representing the Maritime Lumber Bureau in which the lawyer said that to accept “...a system with drastic changes in the [currency] exchange rate would subject our royalty system to excessive scrutiny by the US Lumber Coalition...” which in turn “...would jeopardize our enviable trading position.”

5.48 The letter does not specify exactly what the concerns about currency exchange were, nor does there seem to have been much attempt at finding ways to remove those concerns.

5.49 The current royalty system is based on the standing stumpage prices that private landowners obtain in sales to mills that hold the licenses to Crown timber. In fact there are very few alternative buyers for the private landowners to sell to. This market power position of the mills makes it impossible for us to be confident that the royalties reflect fair market value. Since there is no global commodity price available for standing timber, the only way to estimate fair market value in New Brunswick would be to start with prices for related commodities and work back.

Implementation issues

5.50 We believe that the surveys of stumpage prices paid to owners of private forest lands conducted in the past have had so many data limitations that we do not have confidence that they produced an accurate estimate of fair value.

5.51 The implementation issues we will discuss in this section include:

- Setting a provincial price in a market that obviously has regional pricing differences can skew the market.
- The data used in the market surveys is often incomplete.
- Sample sizes in some regions are insufficient to establish a regional price.
- The frequency and timing of the market surveys.
- Royalty rates for the next twelve months are based on indices from the past twelve months whereas the market price of end product adjusts much more quickly.
- The Department's decision to only increase royalty rates when the average annual selling price index exceeds the highest historical average annual selling price index, and not decreasing royalty rates even when the average selling price index decreases, can skew the market.
- Market surveys have been inconsistently applied.

5.52 In the survey process, the calculation of a weighted average provincial price for each class of timber involves the following steps:

1. The consultant determines the volumes and values of forest products sold by private landowners in each marketing board region of the Province. For the purposes of this explanation, forest products means each species or group of species for each class of timber as listed in Regulation 86-160 to the Act.
2. From the survey data the consultant determines the average price for each forest product in each region.
3. The consultant estimates the provincial fair market value for each forest product by using a weighted average based on the volume

of timber delivered from each region. The weighting is done by comparing the total volume of a forest product sold by private landowners in a marketing board area in a twelve month period to the total volume of that product sold by all private landowners in the Province for that period.

4. The resulting percentage is then applied to the survey price in each area.
5. The individual results are added together to produce the provincial weighted average price.

5.53 Our review of the results of the market surveys received in 2003 and 2005 showed each timber class to have significantly different stumpage values depending upon the area of the Province from which it was harvested. As an example of these variances, the following table shows the 2002 stumpage values for spruce/fir/jack pine (SFP) saw logs and SFP pulpwood reported in the market survey received in 2003:

2002 Softwood SFP Saw Log and Pulpwood Stumpage Values by Harvest Area (\$)		
	2002 Saw Log	2002 Pulpwood
Madawaska	29.40	17.57
Carleton Victoria	26.80	15.13
York Sunbury Carleton	20.67	16.95
SNB	23.75	10.84
SENB	18.58	13.94
Northumberland	20.21	10.97
North Shore	21.06	12.17

5.54 It is obvious from this table that using an averaging approach to arrive at a provincial royalty rate will mean that Crown timber will be cheaper than private land timber in some areas of the Province and will be more expensive in others. Using provincial average prices in what the survey indicates is a regional market would, we would expect, affect which private landowners can and cannot sell a certain product.

5.55 In our audit we also looked at veneer stumpage values. We found the value used for all veneer classes harvested in Madawaska was the same, \$70.91, whereas in other regions, the value of different

classes varied significantly. For example in the North Shore region, the value of different classes ranged from \$31.16 for poplar to \$132.78 for sugar maple. This indicates a lack of survey data in the Madawaska region which could affect the weighted average prices arrived at by the process.

5.56 We found that for SFP saw logs and SFP pulpwood the 2002 survey appeared to use accurate volumes in calculating the provincial weighted average price. However we found that for most hardwood classes, and for some softwood classes, the survey was not able to determine accurate delivery volumes. Therefore the volumes used for these classes were in fact the surveyed delivery volumes of different classes of timber.

5.57 For example, in the table below, we see that the harvest volumes used for all veneer classes in a specific region were the same unless there was no harvest at all of that class of timber in the region. These same harvest volumes were used for hardwood saw logs harvested in the region.

2002 Hardwood Veneer/Saw Log Harvest Volumes by Harvest Area (m³)						
	Veneer				Saw Logs	
	Yellow Birch	Sugar Maple	Poplar	Other Hardwood	Yellow Birch	Sugar Maple
Madawaska	27,540	27,540	No harvest	27,540	27,540	27,540
Carleton Victoria	2,202	2,202	2,202	2,202	2,202	2,202
York Sunbury Carleton	1,207	1,207	1,207	1,207	1,207	1,207
SNB	4,989	4,989	4,989	4,989	4,989	4,989
SENB	1,809	1,809	1,809	1,809	1,809	1,809
Northumberland	1,514	1,514	1,514	1,514	No harvest	No harvest
North Shore	13,245	13,245	13,245	13,245	No harvest	No harvest

5.58 In cases where harvest volumes for specific timber classes were not available, and harvest volumes of other classes of timber were used instead, the resulting provincial price would be incorrect.

5.59 Through this process, the Province arrived at the following weighted average prices from the study received in 2003 for SFP saw log and SFP pulpwood classes:

SFP Saw logs and Pulpwood Stumpage Values Based on Market Survey Received in 2003		
Timber Class	Provincial Weighted Average Price	Royalty rate
SFP pulpwood	13.62	13.62
SFP saw log	23.01	22.00

5.60 If in each region we compare the average private landowners' selling price to the provincial royalty rate we find the variances reported in the following table. A negative variance indicates that private landowners would be selling timber at a price below what Crown timber would be sold for in that region. Correspondingly a positive variance indicates that private landowners would be selling at a price higher than that of Crown timber in that region.

Timber Class	Region	Provincial Royalty Rate	Regional Price	Variance (%)
SFP Saw Log	Madawaska	22.00	29.40	33.6
SFP Pulpwood	Madawaska	13.62	17.57	29.0
SFP Pulpwood	York Sunbury Carleton	13.62	16.95	24.4
SFP Saw Log	Carleton Victoria	22.00	26.80	21.8
SFP Pulpwood	Carleton Victoria	13.62	15.13	11.1
SFP Saw Log	SNB	22.00	23.75	8.0
SFP Pulpwood	SENB	13.62	13.94	2.3
SFP Saw Log	North Shore	22.00	21.06	(4.3)
SFP Saw Log	York Sunbury Carleton	22.00	20.67	(6.0)
SFP Saw Log	Northumberland	22.00	20.21	(8.1)
SFP Pulpwood	North Shore	13.62	12.17	(10.6)
SFP Saw Log	SENB	22.00	18.58	(15.5)
SFP Pulpwood	Northumberland	13.62	10.97	(19.5)
SFP Pulpwood	SNB	13.62	10.84	(20.4)

5.61 We also compared several hardwood classes using the same technique. The resulting variances in those classes ranged from -68.5% to +46.4%.

5.62 Another issue with the survey approach is the timing of the survey. If the survey is conducted in years with high prices, those high prices determine the royalty rates until the next survey is performed. Conversely if the survey is conducted in years with low prices, the prices for Crown timber will be low until the next survey.

5.63 Additionally, the royalty rates that are derived from the timber survey are usually set anywhere from six months to a year after the survey is completed with no adjustment made for changes in market indices in the meantime. This means that there is a significant risk that the royalty rates are outdated even on the first day they are put into effect.

5.64 As we noted earlier, the Act requires that the royalty for each class of timber must be reviewed annually and established for the twelve month period beginning on 1 April of each year. Since market studies are not performed each year, the Department has implemented a separate process for making the annual adjustments.

5.65 The adjustment process applies changes in North American product indices to the Province's royalty rates, and the Department then determines if an adjustment to the royalties is necessary. The indices that are used are for softwood and hardwood lumber, cedar products, pulpwood and oriented strandboard (OSB). All of these indices are adjusted by the Department to reflect the indices in Canadian dollars. The Department's policy is to only increase royalty rates when the average annual selling price index exceeds the highest historical average annual selling price index, and never to decrease royalty rates even when the average selling price index decreases. The result has been that very few adjustments have been made to royalty rates in between surveys.

5.66 For example, the royalty rate set for spruce, fir and jack pine saw logs for the fiscal year beginning 1 April 2003 was \$22.00 per cubic meter and was not changed until the fiscal year beginning 1 April 2007, when the new market study information was available. For the calendar year 2002 the average annual index for lumber was 528, which the Department used as a base. The following table shows the changes in the index between 2003 and 2006, the effect that

annually applying the index changes would have had on royalty rates, and the difference between the adjusted rates and the actual rates.

Indexed Royalty Rates – Spruce, Fir and Jack Pine Sawlogs					
Calendar Year	Average Index	Percent Change in Previous Year's Index Against Base Index	Adjusted Royalty Rate	Actual Royalty Rate	Actual in Excess of Adjusted
Base	528				
2003	473	N/A	\$22.00	\$22.00	\$0
2004	574	(10.4)	19.71	22.00	2.29
2005	515	8.7	23.91	22.00	(1.91)
2006	408	(2.5)	21.45	22.00	0.55

5.67 Even though indexing suggested that the royalty rate should be adjusted, no adjustments were made. While this shows variances between actual royalty rates and adjusted rates, what it really highlights is the need to be able to apply the adjustments on a timelier basis. If the adjustments were applied to the years in which the index changed, the price differentials would have been as follows:

Indexed Royalty Rates – Spruce, Fir and Jack Pine Sawlogs					
Calendar Year	Average Index	Percent Change in Current Year Against Base Index	Adjusted Royalty Rate	Actual Royalty Rate	Actual in Excess of Adjusted
Base	528				
2003	473	(10.4)	\$19.71	\$22.00	\$2.29
2004	574	8.7	23.91	22.00	(1.91)
2005	515	(2.5)	21.45	22.00	0.55
2006	408	(22.7)	17.01	22.00	4.99

5.68 This highlights that by applying indices in the year they change, it appears that the royalty charged in 2006 for this class of saw logs was significantly in excess of what the market price for lumber indicated that the price should have been. To make the adjustments in year, the process would have to include monthly or quarterly adjustments since the annual average indices would not be available until after the year was complete.

5.69 Without knowing all the other economic factors that go into the decision to produce lumber, this analysis would indicate that, because the royalties were set for the year, sawmills would have had an incentive to use private landowners as a source of saw logs in 2006. However if the sawmills were highly dependent on getting

their saw logs from Crown land, the result would have been that the cost of the logs would have been disproportionately high compared to the market value of the lumber produced.

5.70 Royalties for softwood timber can not be below fair market value without jeopardizing the Province's status under the *Softwood Lumber Agreement Between the Government of Canada and the Government of the United States of America*. Based on the timber classes we analyzed for the years we reviewed, it appears that, in total, the royalties for timber used to produce softwood lumber may have exceeded fair market value. While these royalties may have been below fair market value in 2004, it was offset by excess royalties in the other years. In the future, should the royalty process result in royalties that are below fair market value for these classes of timber, the Province's status under the agreement could be at risk.

5.71 We discovered that even though the Department had a market survey completed in and delivered in 2005, it did not use the results of the survey to adjust the royalties for most classes of timber. The only adjustments made to the royalty rate schedule commencing 1 April 2006 were to softwood pulpwood and to red pine sawlogs and red pine studwood. None of the changes made to the royalty rates commencing 1 April 2006 agreed to the values reported in the survey. For example the weighted average survey price for groundwood pulpwood (#1) was \$11.73 but the royalty rate remained at \$13.62. For kraft pulpwood (#2) and for pulpwood from other softwoods the surveyed prices were \$9.99 and \$7.75 respectively, but the royalty rate was set at \$6.81 for both.

5.72 When we look at the royalty set for SFP pulpwood, it appears that the royalty rates are significantly below where they would have been based on simply indexing the 2003 royalty rates. The royalty established at 1 April 2003 was \$13.62. By applying the average annual market indices to this 2003 base rate in the year the indices related to, i.e. without a one year lag, we estimate that the market value for pulpwood in the calendar year 2006 would have been \$14.24. The actual royalties put in place effective 1 April 2007 for softwood pulpwood were broken into three classes and the royalties were set at \$9.91 and \$8.14 for those classes. This indicates that producers of pulpwood, both private and Crown land, were receiving well below a global-based value for their product. However, given the difficulty that New Brunswick pulp mills have had in recent times, it probably is a reflection that the local pulp industry can only

compete on a global level through access to low-priced Crown timber.

5.73 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 for establishing fair market value mean that the royalties do not reflect fair market value – in some instances the royalty rates appear to be below market rates and in others they appear to be above. Our assessment is based on the following factors that we have described in this chapter:

- The market is not truly an open market.
- Setting a provincial price in a market that obviously has regional pricing differences can skew the market.
- The wood volume data used in the market surveys is sometimes incomplete.
- Sample sizes in some regions are insufficient to establish a regional price.
- The frequency and timing of the market surveys.
- Royalty rates for the next twelve months are based on indices from the past twelve months whereas the market price of end product adjusts much more quickly.
- The Department’s decision to only increase royalty rates when the average annual selling price index exceeds the highest historical average annual selling price index, and not decreasing royalty rates even when the average selling price index decreases, can skew the market.
- Market surveys have been inconsistently applied.

Other issues

5.74 Regulation 86-160 allows royalty revenues paid by licensees to be reduced “to offset the costs incurred by the forest industry in their management of Crown Lands.” The Province accounts for these reductions as a reduction in the royalty revenue recorded. Rather than netting the reduction from the revenue, the Province should record the gross value of its royalty revenue and record an expenditure for the amount it pays to the licensees for their management of Crown lands.

5.75 In 2007-2008 the reduction applied to royalties was \$5.65 per cubic meter. If this reduction had not been netted, the Province's timber royalty revenue and related forestry management expenditures would both have been approximately \$29 million higher. As importantly, the \$29 million expenditure would have been subject to the annual appropriation process of the Legislative Assembly.

Recommendation

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.

Departmental response

5.77 *While the Department of Natural Resources is not opposed to the recommended approach we are, however, concerned over the potential additional administration required under such an approach. DNR needs to further explore the application of this recommendation and ensure that any change to the cost administration continues to comply with legislation and be efficiently managed.*

5.78 *This being said, it is important to point out that rates and costs under the existing approach receive governmental approval and therefore provide opportunity for legislative and public scrutiny. Adding an additional administrative process for collection and payment as opposed to netting payments, does not necessarily provide better value for money. An improved system of reporting and accounting for costs may accomplish the same objective with less Government administration.*

5.79 *DNR intends to review its cost administration approach associated with Crown timber management and seek Government approval for either legislative or administrative changes prior to the 2010 fiscal year.*

Improvements

5.80 Even though mills in New Brunswick have significant influence over the market for New Brunswick timber, they have very little influence over the market for their end products which must compete in a world market. The recent closure of mills in the Province, both sawmills and pulp mills, is a strong indication that individual mills did not have the capacity to pay higher royalties than they paid; the revenue they generated from the sale of their product was not high enough. It appears to us that the royalty rates have in

some cases contributed to the closure of mills, and in other cases have resulted in financial support to mills.

5.81 We believe that, since Crown land is the largest source of supply in the timber market, the Province needs to implement a royalty setting process that better imitates the actual functioning of a fair market than the current process does. Because of the current low percentage of timber consumed in New Brunswick that is harvested from private woodlots and because of the historical problems with the harvest surveys, we believe that the surveys do not arrive at fair market value for standing timber.

5.82 Royalty rates should be indexed based on changes in world market indices. The indexing should occur on a very frequent, periodic basis. This should reduce the likelihood of royalty prices getting out of step with market prices.

5.83 Because we found that setting a provincial price in a market that obviously has regional pricing differences can skew the market, regional pricing should be put in place.

Recommendation

5.84 We recommended the Department implement a new system to determine fair market value.

Departmental response

5.85 *As indicated in the report, Government has recently approved changes to the Crown timber royalty determination and adjustment approach. DNR now tracks a set of finished product indices for each timber species and product category. Under the new approach, royalty rates will experience positive and negative changes in direct association with product indices.*

5.86 *While the new approach provides an improved rate adjustment mechanism, there are still species and product categories that require an assessment of fair market value in order to set an appropriate starting point under the new approach. In addition, all products associated with the Canada-U.S. Softwood Lumber Agreement will require regular fair market value assessments in order to maintain this province's status under the Agreement.*

5.87 *Where such fair market value assessments are necessary, the Department has committed to fully review the Terms of Reference prior to conducting the assessment.*

Recommendation

5.88 We recommended the new system establish royalty rates on a regional basis.

Departmental response

5.89 *The Department of Natural Resources does not support this recommendation and feels the report, while pointing out the complexities of determining fair market value, has failed to understand the complexities and implications associated with determining and applying regional royalty rates.*

5.90 *Being a relatively small province with most mills accessing wood fibre from all regions, there is concern that regional rates will interrupt traditional and sustainable wood flows from one region to another. The introduction of regional rates may upset a delicate balance and harmony that exists within the current market place.*

5.91 *As pointed out in the report, the Minister currently has the ability to reduce rates where it is necessary to support the development or utilization of certain products. This approach provides Government with an efficient and appropriate mechanism to address incidental regional issues and to promote proper utilization of the resource.*

Recommendation

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.**

Departmental response

5.93 *The Department of Natural Resources has already initiated a new system for timber royalties that provides a much closer link between royalty rates and finished product market indices. During the analysis and development of the new approach both Government and the Forest Industry concluded that annual rates adjustments based on the preceding 12 months of finished product market prices to be the most practical approach.*

5.94 *The annual adjustment approach lines up well with the normal operating practices in the forest industry and provides for stable pricing and employment throughout the full operating year. Applying an average royalty rate based on a complete operating year also provides for a more stable rate structure and avoids sudden and dramatic rate increases or decreases. In other jurisdictions where more frequent price setting has occurred, stable employment is sometimes jeopardized as companies strive to move timber in the periods (quarters) with the lowest price expected.*

5.95 *As the Forest Industry has a well defined annual operating season that requires yearly inventories in order for mills to operate*

while forest operations can not, quarterly pricing could seriously jeopardize some companies during the time that spring inventory levels require building. The Department feels that annual rates provide a more stable business environment for both Government and the Forest Industry of New Brunswick.

5.96 The new system for determining fair market could be based on end product pricing or could be the result of negotiations with all industry stakeholders. The consultant's report received in 2007 included an example of working back from mill prices to arrive at a stumpage value. Such a calculation is called a residual value calculation. We believe the Department should seriously examine whether a residual value calculation could be used to determine fair market values. Such a calculation would be more involved than the calculation in the 2007 market survey since it would start with the selling prices that mills receive for their end products. The negotiations that resulted in agreement between the various players regarding accepting the 2003 survey as fair market pricing is an example of negotiations that might result in an acceptable new system.

5.97 If the new method results in a royalty rate that the processors cannot afford to pay, the government would have to decide whether it wants to provide direct assistance to the processors. Such assistance would be separate from the royalty system and would require an appropriation by the Legislature.

New System for 2008-2009

5.98 We understand that the Department has implemented a new royalty system for 2008-2009. Under this system, the Department:

- Identifies a representative set of finished product indices for each species and product.
- Uses survey data from the previous ten years to establish the base fair market value rate and base index for each species and product.
- Allows fair market value to move up and down in relation to index changes annually.
- Assesses fair market value through surveys for softwood lumber products sold every three years.

- Assesses fair market value for other forest products when the government feels it is necessary.

5.99 In our opinion, this new system is slightly improved over the system that was the subject of our work. First, the use of finished product indices allows for true fair market value information to be part of the calculation, and second, the new system will result in more frequent royalty rate adjustments. However we are still concerned that many of the issues with the old system have not been fixed. These include:

- The system still relies on periodic market surveys. Since the market that is surveyed only represents 11.6% of the timber consumed in New Brunswick, and because we do not believe the market is truly open, we believe that the surveys do not provide sufficient fair value information.
- The system still results in provincial pricing for what we believe to be a regional market.
- Preparing market surveys takes time, and the information may be out of date before the royalty rates are implemented. The new system does not resolve this problem.
- The system allows annual adjustments based on indices; however we believe that royalties need to be adjusted more often to reflect changes in finished product markets.
- The weaknesses in the survey methodology that we identified have not been addressed.

5.100 The new system also introduces other concerns:

- The new system determines the base fair market value by averaging ten years of prices obtained from three surveys. However the price used for the first five years of the ten year period was derived from a survey that is more than ten years old. Because this price represents half of the data used in the average price calculation, the royalty rate produced by the new system gives a disproportionate weighting to old survey data.
- Indexing changes should be based on changes to the most recent indices, not ten year average indices.

5.101 In our opinion, the Department has not yet arrived at a system that adequately addresses the flaws we identified in this chapter.

Additional departmental comments

5.102 In addition to responding to each of our recommendations, the Department provided the following comments:

The complexity around determining a fair and accurate system for determining the royalty value of Crown timber is due largely to the fact that neither the Crown Lands and Forests Act nor its regulations define fair market value or how it is to be determined. The Act is clear, however, that the royalty for each class of timber is to be based on the fair market value of standing timber of that class. A Terms of Reference document has, over the years, guided consultants in how fair market value is to be determined. This document directed consultants to interview private woodlot owners and contractors to determine the standing value (i.e. stumpage value) the landowner received for various classes of Crown timber. While the collection of data for softwood sawlogs and hardwood and softwood pulpwood has been good, the collection of adequate data samples for the less commonly harvested products (i.e. hardwood veneer and sawlogs) has become a challenge during market downturns.

As a result of this challenge, the Department of Natural Resources in recent years, primarily, has examined alternate systems for establishing Crown royalty. The system that proposed abandoning fair market value and using commodity price indexing only was rejected by both the Province of New Brunswick and the U.S. based lawyer that advises the Maritime Lumber Bureau on the Canada-U.S. Softwood Lumber Agreement. The position of the U.S. lawyer is that a survey of a fair market value for softwood sawlogs is critical to protecting this Province's unique status.

The Province of New Brunswick is exempt from duties on softwood lumber as our Crown timber royalty rates have been determined to be based on fair market value. The other Maritimes Provinces also enjoy this enviable status as this area of Canada is considered to be fair traders of softwood lumber. The protection that is afforded to the lumber producers in this Province is recognized by the U.S.

Department of Commerce and even the U.S. Lumber Coalition.

Notwithstanding the constant scrutiny from the U.S. Lumber Coalition, the Auditor General's Office has gone to great lengths to discredit the Province's Crown timber royalty determination system. In fact, at least 80% of the report focuses on the system that was in place before the system was modified in early 2008. Many of their suggested improvements are not new in that they have been discussed in length over the years with the forest industry and to a lesser degree with forest products marketing boards.

In all fairness, the Auditor General's Office does acknowledge that the determination of Crown timber royalty is a complex exercise given the fact that there is no direction on how fair market value or royalty is to be determined. Their suggested improvement that a residual value calculation starting with the selling prices that mills receive for their end products and working backwards to establish fair market value underlines their struggles in suggesting improvements. The difficulties with this suggested approach are the many steps and many different associated costs to work backwards from the end value of a product to the value of a primary product standing on the stump. At the end of the day, this method may be less fair and reflective of fair market value than the method currently used. The Auditor General's Office itself even questions the appropriateness of this approach by suggesting if the rates are unaffordable, government would have to decide if it would provide direct assistance to the processors. Any provision of subsidy assistance to New Brunswick's softwood lumber producers would invite unwanted scrutiny by the U.S. Lumber Coalition.

In closing, the Department of Natural Resources is prepared to consider improvements to our royalty system. One of our commitments is to fully review the Terms of Reference document prior to the next scheduled fair market value study.