

REPORT OF THE

Auditor General of New Brunswick

Volume I
Performance Audit

2020

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OF NEW BRUNSWICK



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Speaker of the Legislative Assembly
Province of New Brunswick

Sir

As required under Section 15(1) of the *Auditor General Act* I am submitting Volume I of my 2020 Report to the Legislative Assembly.

Respectfully submitted,

A handwritten signature in blue ink that reads "Kim Adair-MacPherson". The signature is written in a cursive, flowing style.

Kim Adair-MacPherson, FCPA, CA, ICD.D
Auditor General

Fredericton, N. B.
August 2020

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Chapter 1

Key Messages from the Auditor General

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Key Messages from the Auditor General

Introduction

1.1 My Office's mission, as included in our 2014 to 2020 strategic plan is:

To provide objective, reliable, and timely information to the Legislative Assembly on government's performance in its delivery of programs and services to the people of New Brunswick.

1.2 In this volume of our 2020 Report, we include three performance audit chapters:

- School Infrastructure Planning;
- Ambulance Services; and
- Follow-up: 2008 Timber Royalties (Section 12 request).

***Overarching theme:
key government
decisions not always
in-line with best
interests of taxpayers
or the public***

1.3 As I reflected on the chapters contained in this report, I observed a troubling over-arching theme in the school infrastructure planning and ambulance services chapters: key government decisions in these critical areas were not always in-line with the best interests of taxpayers or the public in my view.

1.4 I find this particularly disturbing as decision making deficiencies in either of these critical areas could lead to significant implications involving safety risks, lack of availability of these vital services, or inappropriate expenditures. We found the presence of each of these risks in our work in this report.

1.5 This report details many findings and conclusions on these topics as well as provides recommendations to ensure

the deficiencies identified are remedied for future. A summary of the key points from each chapter in this volume follows.

**School
Infrastructure
Planning**

1.6 Chapter 2 of this volume presents our findings and observations from our audit of School Infrastructure Planning at the Department of Education and Early Childhood Development and School Districts. Overall, we found capital funding decisions are not always evidence-based or objective. In this regard, it is questionable whether all capital decisions were in the best interest of the taxpayer or the public, especially given the overrides of recommended proposals we noted in our work.

1.7 We also found a lack of a unified prioritization process and poor-quality data for decision making. This makes it difficult for the Department and the school districts to plan and prioritize capital improvement projects.

Successive governments made capital funding decisions that were not always evidence-based

1.8 While I am encouraged by the Department's adoption of a project assessment tool as part of its efforts to prioritize capital projects in an objective manner, successive governments have made funding decisions that were not objective and evidence-based. This needs to change.

1.9 Capital funding decisions should always be based on asset management principles and best practices. The Department needs to enhance its current tool to fully align with these principles. The Department should further ensure this tool is consistently used to prioritize and recommend capital projects.

Department needs to demonstrate clear leadership over school infrastructure planning

1.10 I am also disappointed at the lack of effective central oversight over school infrastructure planning from the Department. While aware of the education system governance structure as set out in the *Education Act*, and the need for District Education Council, School District and public consultation and input, I believe the Department, as the asset owner, should exercise its role in a more proactive, all-encompassing manner when it comes to deciding the optimal allocation of capital budget dollars.

School deferred maintenance remains a significant issue

1.11 With an estimated \$280 million of identified and yet to be completed projects as of September 2019, deferred maintenance is a significant concern for the Province's education system. However, this is not a new issue.

Risk of unanticipated school closures

1.12 In 2011, I expressed concerns regarding deferred maintenance in New Brunswick schools stating if the situation continued, additional unanticipated school closures like the 2010 mid-year school closure of Moncton High School and Polyvalente Roland-Pépin in Campbellton will continue.

Province needs to optimize capital budget dollars through long-term infrastructure planning

1.13 Further, in my 2012 report, I recommended the Province develop a comprehensive long-term infrastructure plan to ensure the sustainability and safety of all essential infrastructure, including highways, hospitals, schools, bridges etc while respecting the fiscal challenges faced by our Province.

1.14 Eight years later, although there is some improvement in the Province's overall fiscal state, challenges remain. Many school buildings continue to deteriorate and the need for long-term infrastructure planning is more obvious than ever before. The current capital budgeting process is too short-term focused and unsuitable given the long-term nature of school capital assets.

1.15 In my view, it is also not in the best interest of the taxpayer to only budget in the short term for capital construction, instead of taking a more complete asset lifecycle management approach to school infrastructure planning. Without such a comprehensive approach, infrastructure funding is unlikely allocated to achieve optimal value.

1.16 Overall, I am disappointed in the Department's response to the recommendations. As a result, I am not optimistic improvements will be made to address the findings and recommendations in this chapter.

Ambulance Services

1.17 Chapter 3 of this volume presents our findings and observations from our audit of Ambulance Services at the Department of Health and EM/ANB Inc (EM/ANB). We found the legislative framework and governance structure of EM/ANB does not provide for sufficient government oversight of ambulance services due to numerous inherent conflicts.

1.18 Also, the Department's contract with Medavie Health Service New Brunswick (MHSNB) was poorly structured. In my view, the contract structure is not in the best interests of taxpayers or the public, as it allowed for

questionable basis of payments as well as excessive use of response time exemptions. This in turn created a disincentive for MHSNB to address significant operational challenges.

Governance structure is complicated, fraught with inherent conflicts and requires significant improvement

1.19 We expected EM/ANB to have its own enabling legislation that would clarify its mandate and determine its governance structure. We found this was not the case. For a Crown corporation that is tasked with providing such a vital component of healthcare to New Brunswickers, I find this unacceptable.

1.20 Sound governance structure and clarity of mandate and direction should be pre-requisites for setting up any form of arrangement with the private sector for the provision of public services. In this case, we have a board composition that inhibits independence. All but two members of the board are employees of the Department, many with direct reporting relationships to other board members. This creates inherent conflicts of interest that may prevent board members from acting in the best interest of EM/ANB.

1.21 We found a similar conflict of interest relating to the CEO position. The contract allows MHSNB, not the board of directors, to select the corporation's CEO. The current CEO is employed and compensated by MHSNB. This not only presents a conflict of interest on the part of the CEO position, but also compromises the board's influence over this position. Considering the CEO and senior management of EM/ANB are all employees of MHSNB and that MHSNB and EM/ANB are parties to the ambulance services contract, the line between these two organizations become blurred at best.

Weak contract favours MHSNB and masks operational challenges

1.22 We found the service contract is weak and, in many ways, favours MHSNB with terms and conditions that are not always in the best interests of the taxpayer or the public, who is dependant on a reliable healthcare service. Performance measures are ambiguously stated in the contract making it difficult for the Department to hold EM/ANB accountable for maintaining expected service levels. For example, while the contract requires continuous, uninterrupted ambulance service, there is no clear definition of what constitutes a break in continuity or service interruption.

1.23 The contract effectively allows for MHSNB to be compensated for failing to fill paramedic vacancies.

MHSNB is allowed to keep a significant part of budget surplus including that attributable to unfilled staffing positions. Since MHSNB runs the operations of EM/ANB, I find this a very poor arrangement which could create a strong disincentive for EM/ANB to fill vacant paramedic positions. This would contribute to undermining the quality and continuity of ambulance service for New Brunswickers.

1.24 The contract also allows excessive use of exemptions. These are instances where MHSNB is allowed to exclude from its performance calculations, calls that exceeded the response time threshold due to certain circumstances such as: increased call volume, inclement weather or construction delays. Further, we noted invalid use of exemptions which mask operational issues including distance to remote locations, delays at hospitals, driver error and out-of-service units (often because of staffing issues). I find the excessive use of exemptions very concerning. It effectively relieves MHSNB from responsibility to address the underlying operational issues.

Rural communities disadvantaged because of the performance-base payment arrangement

1.25 I am surprised the contract allowed MHSNB to get full incentive payments while failing to meet performance targets in so many communities (19 communities in 2017/18 and 2018/19). The majority of these are rural communities with small populations and less frequency of 911 emergencies. Because payments are based on average performance targets for the Province, this created a bias towards achieving high performance in densely populated urban centres to the detriment of remote communities. A more balanced approach to performance measurement is required to overcome this biased service delivery model.

1.26 In my view, dependable ambulance service is necessary and critical for all New Brunswickers.

Missed opportunity on contract renewal to address many operational challenges

1.27 I expected the Department to seize the opportunity, when the contract came up for renewal in 2017, to negotiate a stronger contract with clear accountabilities and well-defined performance measures. Although some positive contract changes were made, the Department missed out on the opportunity to address many operational issues identified in this report.

Follow-up: Timber Royalties (Section 12 Request)

New improved rate setting process has not been used

Fair market value has not been defined in legislation or regulation

Crown royalty rates should be more responsive to changes in private stumpage market

1.28 Chapter 4 presents follow-up of recommendations made in our 2008 Timber Royalties report. We performed this work in response to a request from the Minister of Natural Resources and Energy Development, under section (12) of the *Auditor General Act*. We found the Department has fully implemented one and made significant progress on another of the four recommendations from the 2008 report. In this report we made new recommendations to the Department and the New Brunswick Forest Products Commission to further improve the Crown royalty rate setting process.

1.29 Although the Crown timber royalty rate setting process has improved significantly since 2008, the Department has not ensured Crown timber royalty rates have been reviewed and updated since these improvements were implemented in 2015. To fully address our related recommendation, the Department will need to ensure the review and update of the royalty rate at least annually, as required by the *Crown Lands and Forests Act*.

1.30 While the Department considers private wood stumpage transactions to represent “fair market value”, this term has not been clearly defined in legislation, regulation or policy. This is an obvious gap in the regulatory framework. I strongly encourage the Department to clearly define what “fair market value” means in the context of the *Crown Lands and Forests Act*, either in regulation or policy. This would help reduce any ambiguity in the use of this key term by the different forest market stakeholders.

1.31 I believe, with the improved stumpage market study, the Department can now make Crown timber royalty rates more reflective of market changes. This, however, would require further improvements to information systems and the collection of real time stumpage data from all available sources. More importantly, this will require a change to the *Crown Land and Forests Act* to allow the Minister more latitude and ability to update royalty rates on a timely basis. In my view, a more responsive system would benefit all stakeholders in the New Brunswick forest sector.

Acknowledgements **1.32** Staff in my Office worked very hard in carrying out the work reported upon in this volume of our Report. The individual chapters of this report are a reflection of their level of commitment, professionalism and diligence. I would like to express my appreciation to each for their contribution and continuing dedication to fulfilling the mandate of the Auditor General of New Brunswick.



Kim Adair-MacPherson, FCPA, CA, ICD.D
Auditor General

Chapter 2

Department of Education and Early Childhood Development and School Districts - School Infrastructure Planning

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School Infrastructure Planning – Department of Education and Early Childhood Development and School Districts

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Why Is This Important?

- Over 97,000 students depend on 294 schools throughout our province. Almost \$1 billion was budgeted for school infrastructure over last decade.
- The Auditor General previously expressed concerns regarding deferred maintenance of New Brunswick schools.
- Aging school infrastructure will require significant investments to maintain. If funding gap continues, the Department may face tough choices to either lower the quality standards for educational facilities or possibly shut down schools.

Overall Conclusions

- The Department and school districts invest significant effort preparing the annual Capital Budget, yet funding decisions are not always evidence-based or objective.
- The major capital project assessment tool (for projects greater than \$1 million) is a positive step toward evidence-based decision making. However, weaknesses in Department's design and application of this tool calls into question the objectivity of capital investment decisions.
- Lack of a comprehensive long-term plan and lack of a protected stream of predictable capital funding result in a reactionary approach.
- There is no unified prioritization process for all types of projects within the capital improvement program (projects less than \$1 million).

What We Found

Insufficient school capital planning process

- No comprehensive province-wide long-term capital plan
- Department does not exercise effective central oversight of school infrastructure planning
- No comprehensive plan to address school deferred maintenance (around \$280 million)
- Short-term and reactive planning leads to sub-optimal funding allocations while school conditions deteriorate

Inadequate capital funding prioritization process

- Deficiencies in the process prevents Department from consistently making evidence-based decisions
- Funding of school repair and maintenance projects identified by school districts is not based on the conditions of our schools or industry standards

Override of recommended proposals

- Unexplained Cabinet approval of projects different than those prioritized and recommended by Department
- Department's recommended projects do not always match those generated by its project ranking tool

Insufficient and poor-quality facility condition data

- Insufficient and poor-quality data used by school districts and the Department in planning capital improvement projects identified by school districts
- No centralized province-wide database of major building components

Key Findings and Observations Table

School Infrastructure Planning – Department of Education and Early Childhood Development and school districts

Paragraph	Key Findings and Observations
	Inadequate Capital Funding Prioritization Process
2.26	<i>School districts believe QBL analysis tool is an improvement over past practice</i>
2.27	<i>Lack of standardized QBL project submissions for major capital projects</i>
2.30	<i>QBL supporting documents for 2015-16 earlier years could not be easily obtained from the Department</i>
2.32	<i>School districts have little information on how QBL works in assigning scores to projects</i>
2.34	<i>Feedback school districts received on submitted projects is insufficient to inform planning for future major capital projects</i>
2.36	<i>Errors in Grand Bay Area School QBL score resulted in the project being improperly ranked</i>
2.37	<i>The QBL ranking for Hanwell K-8 School project did not match the one recommended by the Department</i>
2.38	<i>Improper QBL score calculation for new school projects</i>
2.43	<i>Tiered approach (outside of QBL parameters) put Hanwell K-8 and Moncton 6-8 schools as “must-dos” in 2019-2020</i>
2.44	<i>Tiered approach (outside of QBL parameters) used in 2018-2019 for École de Moncton land purchase</i>
2.45	<i>The change management process for QBL was informal and incomplete</i>
2.48	<i>Insufficient data validation and quality review process for QBL assessments</i>
2.51	<i>Several QBL indicators require improvement to increase the objectivity of capital investment decisions</i>
2.53	<i>Department’s simplified method for forecasting student population could inappropriately affect QBL ranking</i>
2.57	<i>School districts are not in full compliance with policy 409 “Multi-year School Infrastructure Planning”, and the Department does not enforce compliance</i>

Key Findings and Observations Table (Continued)

Paragraph	Key Findings and Observations
	Capital Improvement Program
2.60	<i>No standardized prioritization process for capital improvement projects across all school districts</i>
2.62	<i>Decision-making for capital improvement projects identified by school districts based on insufficient information</i>
2.63	<i>The Department's funding allocation for capital improvement projects is not based on the condition of the school buildings or industry standards</i>
2.66	<i>Student population and square footage of school facilities may not be the appropriate bases to allocate capital improvement funding</i>
2.67	<i>The prioritization process, rationale and risk assessment for capital improvement projects are not well documented at school districts</i>
2.68	<i>No clear and consistent definition of "special projects"</i>
2.70	<i>There is no unified prioritization approach for all types of capital improvement projects</i>
	Override of Recommended Proposals
2.73	<i>Several instances where the Department did not follow the QBL ranking</i>
2.76	<i>Cabinet has approved projects different than those put forward by the Department</i>
2.79	<i>Premier's Office approved Woodstock High School auditorium project outside of normal process</i>

Key Findings and Observations Table (Continued)

Paragraph	Key Findings and Observations
	Insufficient Capital Planning Process
2.84	<i>We believe the Department, as legislated owner of school facilities, is responsible for central oversight of school infrastructure planning</i>
2.86	<i>There is no comprehensive province wide long-term capital plan for schools</i>
2.90	<i>Many Canadian provinces have either multi-year infrastructure plans or support for school capital planning</i>
2.92	<i>P3 schools have a protected stream of funding, while provincially owned schools have to go through an annual budget cycle</i>
2.93	<i>The Department does not have a specific plan to address \$282.7 million in significant deferred maintenance issues</i>
2.94	<i>Lack of long-term planning impacts the ability of school districts to implement proactive lifecycle management</i>
2.96	<i>Government's reactionary approach to capital project funding creates uncertainty in the education system</i>
2.96	<i>Bessborough and Hillcrest Schools are examples of uncertainty created by government change</i>
2.98	<i>Modular classrooms increased in recent years</i>
2.100	<i>Examples showed student enrolment projections were significantly lower than actual</i>
2.101	<i>The lack of long-term planning and province-wide approach to enrolment projection may have contributed to the increased use of modular classrooms</i>
	Insufficient and Poor-Quality Facility Condition Data
2.105	<i>There is no centralized province wide database of major school building components</i>
2.107	<i>We believe the Department, as asset owner, is responsible for developing and maintaining centralized capital asset database</i>
2.108	<i>Incomplete and unreliable data used in capital improvement project planning process for projects identified by school districts</i>
2.109	<i>Risk of knowledge loss due to lack of documentation at school districts</i>
2.110	<i>School districts do not adequately document school facility condition</i>
2.111	<i>Changing facility conditions not documented in visual inspections by district staff</i>

Recommendations and Responses

Recommendation	Department's response	Target date for implementation
<p>2.29 We recommend the Department, in collaboration with school districts, develop a standardized major capital project submission form for school districts to collect and present major capital project information.</p>	<p><i>The Department and the school districts constantly communicate throughout the year to maintain and manage the infrastructure portfolio for the public school system. The Department provides resources for districts to undertake studies and analyze infrastructure requirements to identify district capital programs and projects. The districts share the results with the Department. There is a standing list of unfunded provincial infrastructure projects from the previous year's submission which is reviewed and updated annually based on the District submissions, as per the Education Act and Policy 409. In accordance with Policy 409, the DEC is required to submit the district capital project requirements to the Minister by May 31 each year. The Department then undertakes the QBL process which is designed to use centrally held and verified data, rather than use unverifiable data provided by seven different school districts. During the process, the Department staff will reach out to the district staff on a case-by-case basis to clarify project details, if required. Article 2.28 of the audit refers to a departmental ad hoc approach based on comments from two out of seven districts that were not actually verified with the department, and then concludes that a lack of standardized submissions by the DEC's puts the QBL scoring process at risk of subjective assessments. Because the QBL relies on centrally controlled data for assessment and the Department and District staff work collaboratively prior to the DEC submission on defining capital project scopes, the DEC submission format has no impact on the QBL scoring process. This being said, the Department will undertake a review of Policy 409 collaboratively with the districts in response to both recommendations 2.29 and 2.58 to ensure the policy is reflective of expected practices and provides appropriate guidance and support to the capital program process.</i></p>	<p>March 2022</p>

Recommendation	Department’s response	Target date for implementation
<p>2.31 We recommend the Department create a centralized repository for all historical and current QBL assessments and their supporting documents.</p>	<p><i>The Department has a centralized repository for QBL assessments and a standard for documentation. The QBL process did not exist earlier than the 2015-16 process. The projects from the first year the QBL implementation had not been collected on a central drive. All QBL analysis and results since implementation are now on a common drive and easily accessible.</i></p>	<p><i>Complete</i></p>
<p>2.49 We recommend the Department implement a formal change management process for the Quadruple Bottom Line Multi-Criteria Analysis. The process should include but not be limited to:</p> <ul style="list-style-type: none"> • Clear approval path depending on the significance of the change; • Consultation with all key stakeholders such as school districts changes; and • Formal approval and documentation of changes before they are applied. 	<p><i>The QBL was designed as a tool, in collaboration with the school districts, for Department staff to objectively and consistently prioritize five different types of Capital Projects. As outlined in exhibit 2.4, the QBL provides information to inform Cabinet on Capital Program budget discussions; the results of the QBL are considered confidential as advice to Cabinet. Unless the results are released by Government, the Department cannot discuss specific results publicly. There is a communication process to the DEC. After DEC elections, staff from the Department visit DEC and brief them on the Capital Program process and the QBL. As part of the QBL process, the indicators are reviewed annually based on lessons learned from the previous year. Each year, the Minister is briefed on the process prior to project analysis. Once approved, the staff gather the data and create a file for each project over a two-month period. A team is created to jointly assess all the project files over a two to three-day period to ensure consistency of assessment and scoring. This year, a formal process of QBL change management is being developed and applied involving the districts. The approval process for changes will be formally recorded and documented.</i></p>	<p><i>March 2021</i></p>

Recommendation	Department's response	Target date for implementation
<p>2.50 We recommend the Department implement a data validation and quality review process for Quadruple Bottom Line Multi-Criteria Analysis.</p>	<p><i>The Department acknowledges that lessons have been learned since the inception of the QBL process and that continuous improvement is necessary in any process. Checks and balances are in place to mitigate this potential risk of human error. As identified 2.36, there was an error in assessing the Grand Bay area school in 2017 for the 2018-19 capital program submission. In other years, the project scored consistently with the data variables between assessment years with demographic changes, building conditions, education programming changes, etc. A process is currently in place to ensure a more rigorous review process is applied.</i></p> <p><i>However, other comments in the AG report state or imply errors that require clarification, less they are taken out of context. In article 2.38, the report found a discrepancy in the application of Indicator 4. When the QBL was developed and applied the first year, the indicator was not applied to new schools because new schools have no facility condition to assess. The impact of this was not apparent until after the first application of the tool. As per the review process stated above, the QBL scoring was revisited and revised. Although a new school had no "Facility Condition", the schools in the catchment area of the new school did. Using an average of the facility condition score of these schools, the indicator was then applied to new schools. Unfortunately, the indicator documentation was not updated to reflect this change, so the report identified it as a discrepancy. A review of the application of Indicator 4 for all new school projects from the 2016-17 submission to 2019-20 reflect this consistent application. If one refers to Exhibit 2.9, it is evident how new schools initially scored low in the first year and subsequently scored higher. The Indicator 4 description was updated to reflect present practice since the report identified this documentation error.</i></p> <p><i>The two other discrepancies to clarify are the Tiering process and the 2019-20 capital program submission.</i></p> <p><i>At the time of the QBL development in 2013-14, the provincial school population had consistently decreased so the major infrastructure capital concerns were aging and underutilized schools. In 2017-18, the situation changed significantly. The rural to urban demographic shift was compounded by the influx of refugees and the impact of successful provincial efforts to increase immigration. The pressure on school space in specific areas was increasing. It was recognized that the QBL was not able to address this situation. It is approximately a four-year process from the Department submitting a New School project for</i></p>	<p><i>Complete; process used for 2020-21</i></p>

Recommendation	Department’s response	Target date for implementation
	<p><i>funding approval to a school being ready for occupancy. Subsequently the tiering process was developed. The tiering process is based on a threshold analysis of teaching platforms (classrooms, science labs, art and music rooms, vocational labs, gymnasiums). If the existing schools supporting the student population for the new school have an average deficiency of 15 percent or more of teaching platforms based on the education design guidelines, then the project is further assessed based on demographic projections. If demographic projections indicate a continual growth, the project is Tier 1. If the projections are flat or declining, the project is scored and ranked through the QBL. If there are more than one Tier 1 project they are ranked based on three factors: percentage of teaching platform deficiency; percentage increase in projected growth; and total population of students impacted. This tiering process mitigates the potential for significant overcrowding in schools. In article 2.45 the AG report indicates other schools with a significant lack of space due to the number of modular classrooms. This is a poor measure as the number of modulars do not reflect the actual pressures on conformance to the Education Guidelines for teaching platforms.</i></p> <p><i>The 2019-20 Capital Budget submission discrepancy requires context. This was an election year. The Capital Budget submission was prepared in the summer and fall using the QBL with the required briefings to senior management as described earlier. The original submission preparation followed the past years process, assuming there would be a similar call letter for the Department’s capital program requirements. A new government was elected, and the new minister received a briefing on the QBL process, the results, and the recommended Department submission. Article 2.43 refers to the direction the Department received from the new Government. The memo dated 16 November 2018, a copy of which was provided to the auditor, advised all departments to submit no new projects and to review all previously approved and funded projects under three categories: must do; can be deferred; and do not proceed. The Department identified all projects or phases of a project presently under construction as must do projects. Projects or phases of projects that were in the various stages of design were identified as “can be deferred” projects. The two exceptions proposed by the Department were École Moncton and Hanwell. These were identified as must do projects based on the Tier 1 criteria. All projects identified as “must do”, including these two projects, were approved by Government. The “can be deferred” projects were deferred by Government.</i></p>	

Recommendation	Department's response	Target date for implementation
<p>2.54 We recommend the Department use a rolling average method to predict the student enrolment trends.</p>	<p><i>Since the inception of the QBL, the tool has, and will continue to be, evaluated and modified as part of continuous improvement process. One of the greatest challenges facing the capital program for schools is forecasting student populations. The act of building a new school often influences developers and families, resulting in an increase in population that is not predictable. Similarly, the creation or closure of a large local employer will shift demographics quickly over a couple of years. Neither the methodology used by the QBL for Indicator 2 nor the rolling average methodology proposed by the report provide an accurate prognosis – both are rearward looking. Drastic changes are flattened and therefore significant shifts in trends are identified after the fact. The Department is investigating the use of more effective predictive applications for medium to long-term demographic trends. The Department will use the rolling average methodology until a better predictive tool is available.</i></p>	<p><i>Complete. Further investigation to be completed by March 2021 on a better predictive tool.</i></p>

Recommendations and Responses (continued)

Recommendation	Department’s response	Target date for implementation
<p>2.55 We recommend the Department improve the Quadruple Bottom Line Multi-Criteria Analysis tool to:</p> <ul style="list-style-type: none"> • Address the weaknesses in the indicators listed in Appendix IV of the report and increase its overall objectivity; and • Incorporate a scoring mechanism to capture space deficiencies, instead of the tiering approach. 	<p><i>As part of continuous improvement to the QBL, the Department reviewed the recommendations identified by the report in Appendix IV. This review was done with the school districts as described in 2.49 above and the documentation is being revised accordingly. The results are:</i></p> <ul style="list-style-type: none"> - <i>Indicator 4: Facility age will continue to be a factor considered as it is noted as an industry standard (As quoted in Section 2.64, “assets that have the highest average age relative to their expected lives...”</i> - <i>Indicator 6: This indicator has been updated, as has Indicator 5 to avoid possibility of double counting</i> - <i>Indicator 9 measures have been revised; measure #2 was removed. The remaining measures within the indicator will not change.</i> - <i>Indicators 14 and 15 have been revised; statistics will be confirmed and validated. References to “significant” or “moderate” impacts have been removed.</i> <p><i>The tiering approach will remain. It only applies to projects that surpass a teaching platform deficiency threshold and have a trending population increase. The data used to determine teaching platform deficiencies, the population trending and the number of students impacted is objective and the results identify an urgent requirement for additional pedagogical infrastructure.</i></p>	<p><i>Complete</i></p>
<p>2.56 We recommend the Department publicly report the annual major capital project rankings and scores based on the Quadruple Bottom Line Multi-Criteria Analysis.</p>	<p><i>Government has committed to release the ranking results of the QBL. The details of the QBL process were released in the fall of 2019.</i></p>	<p><i>Complete</i></p>

Recommendation	Department's response	Target date for implementation
<p>2.58 We recommend the Department re-evaluate the document submission requirements for school districts in Policy 409 “Multi-year School Infrastructure Planning” and enforce the policy.</p>	<p><i>As discussed in the response to 2.29, the Department will undertake a review of Policy 409 collaboratively with the districts in response to both recommendations 2.29 and 2.58 to ensure the Policy is reflective of current practices and provides appropriate guidance and support to the capital program process.</i></p>	<p>March 2022</p>
<p>2.71 We recommend the Department establish a clear definition of “special project” and apply it consistently to minimize potential for subjective interference in capital improvement funding allocation.</p>	<p><i>The process for the planning of the Capital Improvement Program involves the status of major systems across the province, federal/provincial initiatives and district priorities. This program is not discreet, it is directly impacted by the Major Capital Program as well as the maintenance program. Although the program is only funded from one fiscal year to the next, projects may overlap over fiscal years, and unforeseen costs may be incurred, particularly when dealing with older facilities. As a result, these requirements, when they occur, are funded out of the Capital Improvement budget as a priority. This approach has been consistently applied. As per the report recommendation, a formal definition of a special project has been established in writing for future reference.</i></p>	<p>Complete</p>

Recommendation	Department’s response	Target date for implementation
<p>2.72 We recommend the Department, in consultation with school districts, develop consistent criteria for the provincial prioritization of capital improvement projects. In developing the criteria, building conditions, life cycle costs, and industry standards should be used.</p>	<p><i>The Department has a defined process and criteria for the development of the priority list for the capital improvement projects. The description of the Capital Improvement Program in articles 2.16 to 2.22 and the analysis from 2.59 to 2.70 is not complete nor correct. The exhibit of 2.5 is correct. The Capital Improvement Program is managed as a balance between provincially prioritized pan-provincial projects and district priority projects.</i></p> <p><i>The province has identified the major common building systems or compliance requirements across the province and has developed industry standard inspection processes to maintain these requirements, in priority, through pan-provincial projects. The roofing program mentioned in 2.18 is one such program for the school roofing systems. Other systems include elevators, dust extractor systems, sprinkler systems, building control systems, water quality, and lighting, as well as building code compliance for radon and asbestos. The criteria used for the determination of requirements is industry-based and standard for all seven districts. The method of measurement is universal, and prioritization occurs at the provincial level. This accounts for approximately half of the Capital improvement allocation. The response to 2.71 above explains the funds that may be allocated for a special project, should the requirement arise.</i></p> <p><i>The allocation of the approximate 70/30 split of the remaining 50% of funding to the sectors is based on student population between sectors and complies with the section 44(1) of the Education Act. Although in article 2.66, the report challenges this application of equitable division and balance that the Department has established with the Districts and DEC’s, stating a view that is contrary to interpretation of the Education Act by the Department. To be clear, the Department has an objective that all schools in each education sector be in good condition. The Department relies on the professional staff at the school districts to identify district priority projects within their allocation and brief their DEC’s on the requirements. The district staff know the buildings. DEC submissions are reviewed by the Department before approval to ensure there are no anomalies in a submission. It is important to note that DEC’s are an elected body representing the school district and have a legal responsibility under the Education Act.</i></p> <p><i>Twice a year the Department host a formal two to three-day conference with all seven school districts to discuss a number of topics. The Capital Program and process is a standing item. Concerns, recommendations, provincial pilot projects, etc, are discussed and developed on a regular basis the district staff. The department will raise this recommendation with the school districts to determine if more criteria are required.</i></p>	<p>March 2021</p>

Recommendation	Department's response	Target date for implementation
<p>2.103 We recommend the Department, in consultation with school districts, re-evaluate the student enrolment projection method and implement a province-wide student population forecasting approach.</p>	<p><i>Since the inception of the QBL, the tool has, and will continue to be, evaluated and modified as part of continuous improvement process. One of the greatest challenges facing the capital program for schools is forecasting student populations. The act of building a new school often influences developers and families, resulting in an increase in population that is not predictable. Similarly, the creation or closure of a large local employer will shift demographics quickly over a couple of years. Neither the methodology used by the QBL for Indicator 2 nor the rolling average methodology proposed by the report provide an accurate prognosis – both are rearward looking. Drastic changes are flattened and therefore significant shifts in trends are identified after the fact. The Department is investigating the use of more effective predictive applications for medium to long-term demographic trends.</i></p>	<p><i>Further investigation to be completed by March 2021 on a better predictive tool.</i></p>

Recommendations and Responses (continued)

Recommendation	Department’s response	Target date for implementation
<p>2.104 We recommend the Department develop a long-term province-wide capital plan for school infrastructure. The plan should include items such as:</p> <ul style="list-style-type: none"> • Projects that are fully scoped, estimated and ready to be delivered in the short to medium term (3 to 5 years); • A broad long-term funding allocation based on an analysis of school facility data and projected budget plan; and • All key elements of the long-term infrastructure sustainability recommendation AGNB made in 2012: <ul style="list-style-type: none"> ○ the rationalization of assets (i.e. if not considered essential, remove from service); ○ a long-term approach to budgeting which includes life cycle maintenance; ○ a protected stream of a base level of funding 	<p><i>There is a long-term province-wide capital plan that is reviewed every year. The plan is adjusted based on the results of the annual capital budget process. Specific to the bullets in the recommendation:</i></p> <ul style="list-style-type: none"> • <i>Projects identified for the short to medium term are fully scoped, estimated and ready for funding approvals.</i> • <i>A broad long-term funding allocation is not within the authority of the department; however, the Department is prepared to action such a funding program.</i> • <i>With respect to all key elements of the long-term infrastructure sustainability recommendation AGNB made in 2012</i> <ul style="list-style-type: none"> ○ <i>The rationalization has successfully occurred and is incorporated in the QBL indicators. Since 2011, the number of schools in the province has decreased from 317 to 294.</i> ○ <i>As stated above, a long-term approach to budgeting is a government decision, not a departmental.</i> ○ <i>There is base line funding for maintenance for districts within the operational budget allocation for a school district. It is not protected; districts have the authority to reallocate funding within their budget to meet operational requirements. Districts may increase or decrease the baseline funding for maintenance depending on the circumstances during a fiscal year.</i> ○ <i>A 15 to 20-year planning horizon is adjusted every year, based on the results of the annual capital budget process.</i> ○ <i>As described in this AG report, new schools are only constructed when there is a clearly defined requirement as presented in the Tier process or QBL. New school projects, midlife upgrades, additions, rationalization projects and school replacement projects are first identified by the DEC as part of their obligation to determine the requirements for their constituents and submitted to the Minister. Subsequently the projects are analyzed and ranked using the QBL process, ensure the projects of</i> 	<p>N/A</p>

Recommendation	Department's response	Target date for implementation
<p>determined necessary to adequately maintain schools in service;</p> <ul style="list-style-type: none"> ○ a 20-year planning horizon; ○ a process whereby new schools are constructed only when there is a business case to support the need. This should include redirecting savings from rationalized assets (school closures) to the new school's life cycle maintenance costs; and ○ provide annual public performance reporting, which includes the 5-year project delivery plan, the actual facility condition of schools versus pre-established targets, explaining the reason for any significant variances. 	<p><i>greatest need provincially are identified and prioritized. Note. The recommendation to redirect savings from rationalized assets to the life cycle maintenance cost of the new school is not done. Following this recommendation would result in districts that have rationalized schools receiving more operational funding than districts with population increases that required new schools. This recommendation from the 2012 report appears to be contradictory to the centralization principle for allocation of resources being promoted in this AG report.</i></p> <ul style="list-style-type: none"> ○ <i>The concept of an annual report for the 294 schools at the provincial level is not supported by the budgeting process and the operational responsibilities of the DEC/district versus the Department. DEC's are accountable to their constituents and conduct their review and approval of the capital program and operational budget in public forums. A five-year delivery plan requires a five-year budget; this is not the present government funding model.</i> 	

Recommendation	Department's response	Target date for implementation
<p>2.116 We recommend the Department, in consultation with school districts, develop and maintain a centralized asset inventory that contains details of all major facility components to support the Department's capital planning.</p>	<p><i>There is an inventory of major critical components at both the provincial and district levels which are supported through provincial programs based on regulatory requirements and industry standards. These components include roofs, elevators, control systems, sprinkler systems, dust extraction systems, building controls systems as well as safety systems for radon, asbestos, water quality and energy efficiency programs for items such as lighting. Regardless, the expert consultant strongly recommended the department invest in a centralized inventory management system, a business line product of the company. In summary, the department does enforce inspection and data collection standards appropriate for the key facility systems. Facility systems are added or removed from the provincial level based on Building Code requirements, Health Canada/New Brunswick Public Health directives and Work Safe New Brunswick requirements. Other systems are added or removed such as T8/T124 light replacements, based on industry practice, in collaboration with DTI and the school districts as part of the discussions at the biannual district conference. For the next conference, the AG report will be discussed in detail.</i></p>	<p><i>Further action will be determined after consultation with the school districts.</i></p>
<p>2.117 We recommend the Department develop and enforce data collection standards and requirements for the uniform collection and aggregation of facility data across all school districts.</p>	<p><i>See 2.116 above</i></p>	<p><i>See 2.116 above</i></p>

Audit Introduction

2.1 Over 97,000 students depend on our school infrastructure to learn, play and grow on a daily basis. In our 2012 Report of the Auditor General, we emphasized the need for a comprehensive long-term infrastructure plan that will ensure the sustainability and safety of all essential infrastructure. We recognize there has been insufficient capital funding available to address all infrastructure needs within the education sector. Therefore, it is more crucial than ever for the decision makers in government to make evidence-based decisions when prioritizing school infrastructure projects.

Why we chose this topic

2.2 We chose to audit school infrastructure planning for the following reasons:

- condition of facilities has an impact not only on educational outcomes but on the well-being and safety of students and teachers;
- the Auditor General previously expressed concerns regarding deferred maintenance of New Brunswick schools. The 2011 Report stated that if the situation continues, additional unanticipated school closures like the 2010 mid-year school closure of Moncton High School and Polyvalente Roland-Pépin in Campbellton, will continue;
- the Auditor General also stated in her 2012 Report: *“Our Province needs a comprehensive long-term infrastructure plan that will ensure the sustainability and safety of all essential infrastructure, including highways, hospitals, schools, bridges, etc while respecting the fiscal challenges faced by the Province.”* We wanted to see if the Department has applied this recommendation to schools; and
- there is a significant amount of capital funding allocated to build and maintain school infrastructure every year. The total capital budget for the last ten years was \$976.5 million.

Audit Objective

2.3 The objective of this audit was to determine whether the Department of Education and Early Childhood Development (the Department) and school districts are making evidence-based decisions for prioritizing:

- **major capital projects** for school infrastructure (estimated cost greater than \$1 million); and
- **capital improvement projects** for existing school infrastructure (estimated cost from \$10,000 to \$1 million).

Audit Scope and Approach

2.4 We examined the capital asset planning process, including the prioritization of major capital projects and capital improvement projects. The primary focus of this audit is at the Department. Particularly, we tested the Quadruple Bottom Line Multi-Criteria Analysis (QBL), a tool the Department has been using since 2014 to prioritize major capital projects, and the method the Department adopted to allocate the capital improvement program budget. A brief description of the QBL can be found in Appendix I. Four Public Private Partnership (P3) schools were not included in our scope, as capital asset planning for these schools is performed by private-sector consortiums who own the facilities.

2.5 In addition, we reviewed the quality of information used by the Department and school districts to make objective, evidence-based funding decisions. We interviewed staff from the Department and school districts and visited selected school sites. We selected two school districts as our sample to perform detailed audit work. We engaged an independent expert to assist in our audit work. Findings and recommendations from the expert's work are included in this chapter.

2.6 More details on the audit objectives, criteria, scope and approach used in completing our audit can be found in Appendix II and Appendix III.

Conclusions

2.7 We concluded:

- The Department and school districts invest significant efforts in the preparation of the annual capital budget, yet capital funding decisions are not always evidence-based or objective.
- The current reactive approach to lifecycle management of school facilities is caused by the lack of comprehensive long-term capital planning and lack of a protected stream of funding.
- The Quadruple Bottom Line Multi-Criteria Analysis (QBL) adopted in 2014 appears to be an improvement towards evidence-based decision making for major capital projects. However, weaknesses in its design and application negatively impacted the objectivity of the QBL.
- There is no unified prioritization process for all types of projects within capital improvement program.
- The Department's funding allocation for capital improvement projects identified by school districts is not based on the condition of school facilities or industry standards.
- Insufficient and poor-quality school facility data makes it difficult for the Department and school districts to plan and prioritize capital improvement projects identified by school districts.

2.8 If unaddressed, weaknesses identified in this report will increase the risk of:

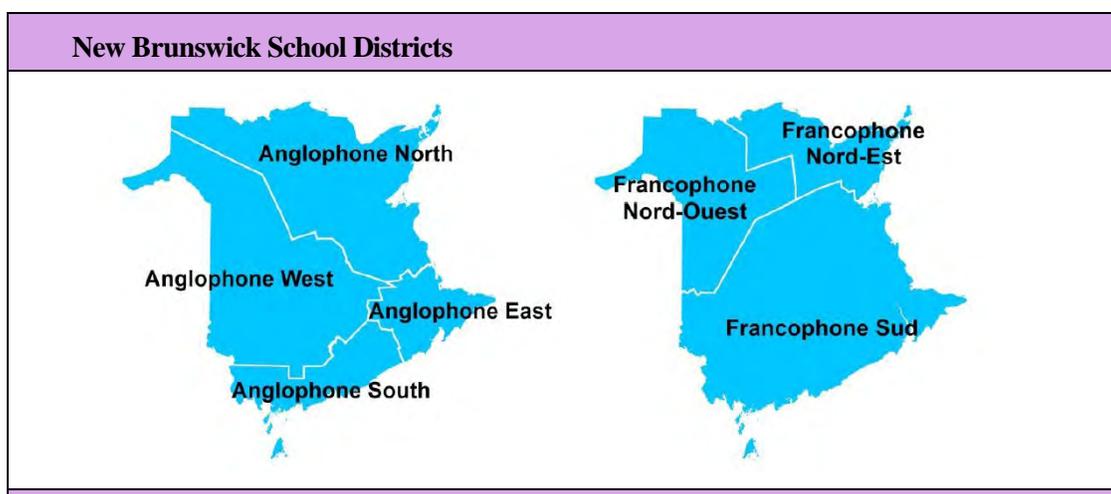
- inappropriate funding decisions;
- unplanned school shutdowns; and
- higher lifecycle cost of school assets.

Background Information

294 schools in New Brunswick with a total book value of \$1.9 billion capital assets

2.9 The condition of a school has a direct impact on students' achievement¹. Currently there are 294 schools in New Brunswick, including four Public Private Partnership schools. The total book value of capital assets used by these schools is \$1.9 billion, with a net book value of \$1 billion on the Province's financial statements as at 31 March 2019. Over 97,000 students from Kindergarten to Grade 12 are in schools each day. The Province has seven school districts, three Francophone and four Anglophone. Exhibit 2.1 shows the school districts for each sector.

Exhibit 2.1 – New Brunswick School Districts



Source: Le Guide du conseiller, Conseils d'éducation de district, Fédération des conseils d'éducation du Nouveau-Brunswick

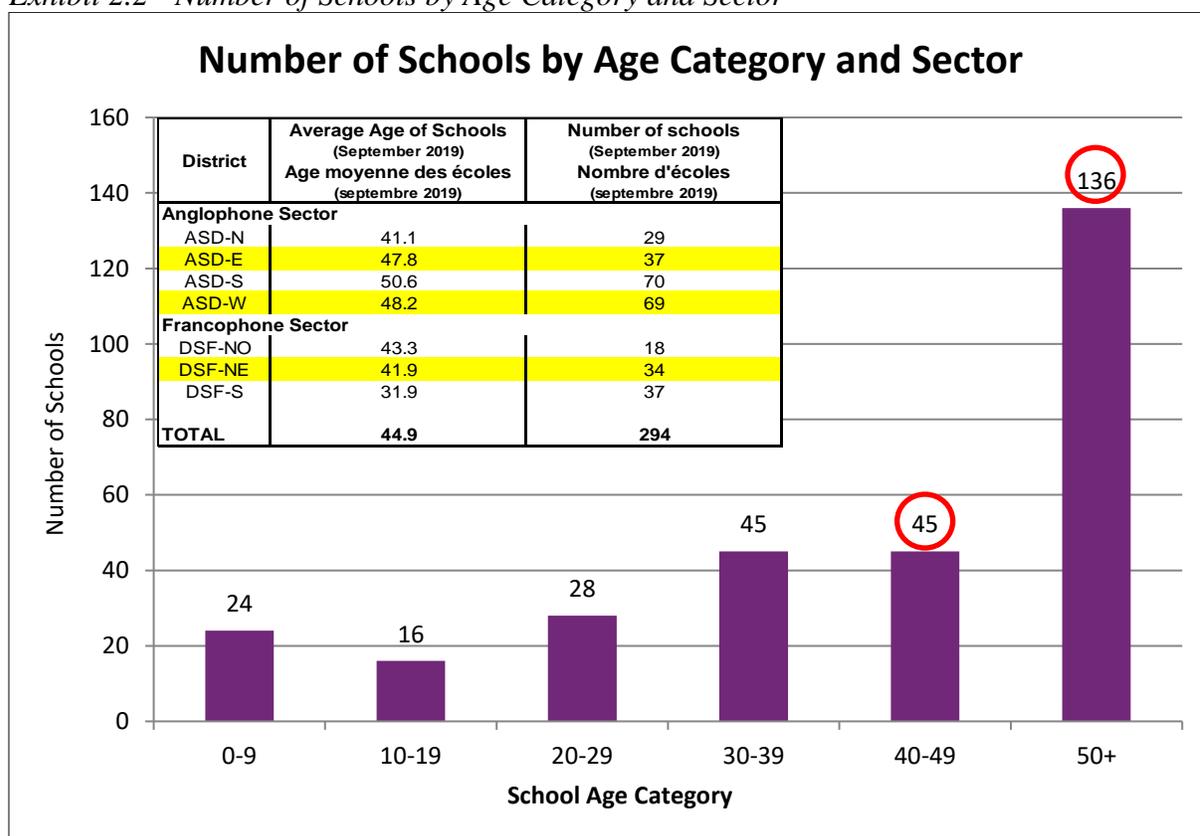
¹ A Framework for Efficient Condition Assessment of the Building Infrastructure, Shipra Singh Ahluwalia, University of Waterloo

60% of our schools are more than 40 years old

Significant investment in maintenance, renovation or replacement of New Brunswick schools required

2.10 The average age of school buildings in New Brunswick is almost 45 years and over 60% of school buildings are more than 40 years old. Exhibit 2.2 below shows a distribution of school buildings by age together with the number and average age of schools by school district. Statistics Canada estimates the service life of education buildings at about 40 years². As of September 2019, New Brunswick had 181 schools age 40 years or older. Therefore, significant investment in maintenance, renovation or replacement of New Brunswick schools is likely to be required over the next several years.

Exhibit 2.2 - Number of Schools by Age Category and Sector



Source: provided by the Department of Education and Early Childhood Development (unaudited)

² Measuring change in the age of education infrastructure, Statistic Canada
<https://www150.statcan.gc.ca/n1/pub/81-004-x/2009005/article/11049-eng.htm>

The Department of Education and Early Childhood Development is the owner of most educational facilities

2.11 The Educational Facilities and Pupil Transportation Branch within the Department provides districts with support and expertise in the planning and management of educational facilities and pupil transportation. The objective of this Branch is “*to create a healthy and secure learning and working environment as well as the implementation of a safe and efficient pupil transportation service*”. Unlike other capital assets of the Province such as highways, bridges and government buildings which are owned by the Department of Transportation and Infrastructure (DTI), the Department of Education and Early Childhood Development (Department) owns all educational facilities except:

- private schools;
- schools owned by the Saint John Diocese;
- Ecole Sainte-Anne (owned by DTI); and
- Public Private Partnership schools (Leo Hayes High School in ASD-W, Northrop Frye School and Evergreen Park School in ASD-E, and Eleanor Graham Middle School in ASD-N).

2.12 There are two types of capital programs within the Department for school infrastructure:

- **Major capital program** (estimated project cost greater than \$1 million). Projects in this program include:
 - new construction for increased population;
 - rationalization projects;
 - major renovations / additions; and
 - mid-life upgrades.
- **Capital improvement program** (estimated cost ranges from \$10,000 to \$1 million). This covers activities such as repairing electrical systems or fixing exterior walls.

Major capital program accounts for nearly 80% of total capital expenditures of the Department

2.13 The major capital program accounts for nearly 80% of total capital expenditures of the Department. Exhibit 2.3 shows the breakdown between these two programs in recent years.

Exhibit 2.3 – Capital Budget Breakdown Between Major Capital Program and Capital Improvement Program during the last 5 Years

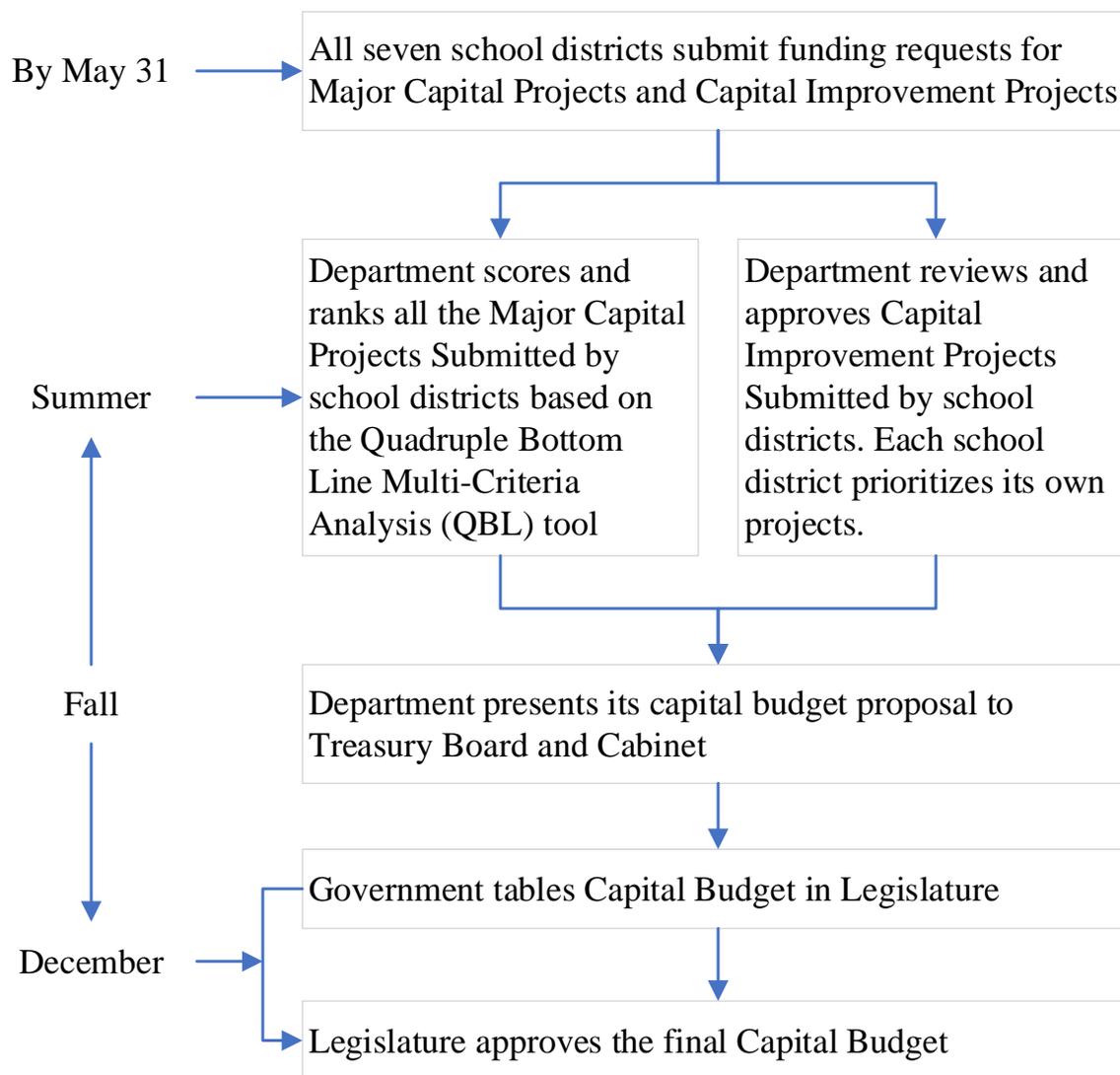
	\$ (millions)				
	2015-16	2016-17	2017-18	2018-19	2019-20
Major capital program	\$72.8	\$88.6	\$66.9	\$87.5	\$41.8
Capital improvement program	20.5	17.5	17.4	18.4	18.4
Other (lighting retrofit)	2.5	2.5	3.8	NA	NA
Total capital budget	\$95.8	\$108.6	\$88.1	\$105.9	\$60.2

Source: created by AGNB based on information provided by the Department (unaudited)

The annual government capital budgeting process is very short-term focused, given the long-term nature of the capital assets involved (i.e. schools)

2.14 Exhibit 2.4 describes the typical annual capital budgeting process for major capital program. The Government of New Brunswick tables a Capital Budget on an annual basis. It should be noted District Education Councils have an important role in both the major capital and capital improvement programs. They are actively involved in project selection and recommendations to the Department. The annual government capital budgeting process is very short-term focused, which is contrary to the long-term nature of the capital assets involved (i.e. schools).

Exhibit 2.4 – Typical Annual Capital Budgeting Process for Major Capital Program



Source: created by AGNB with information provided by the Department

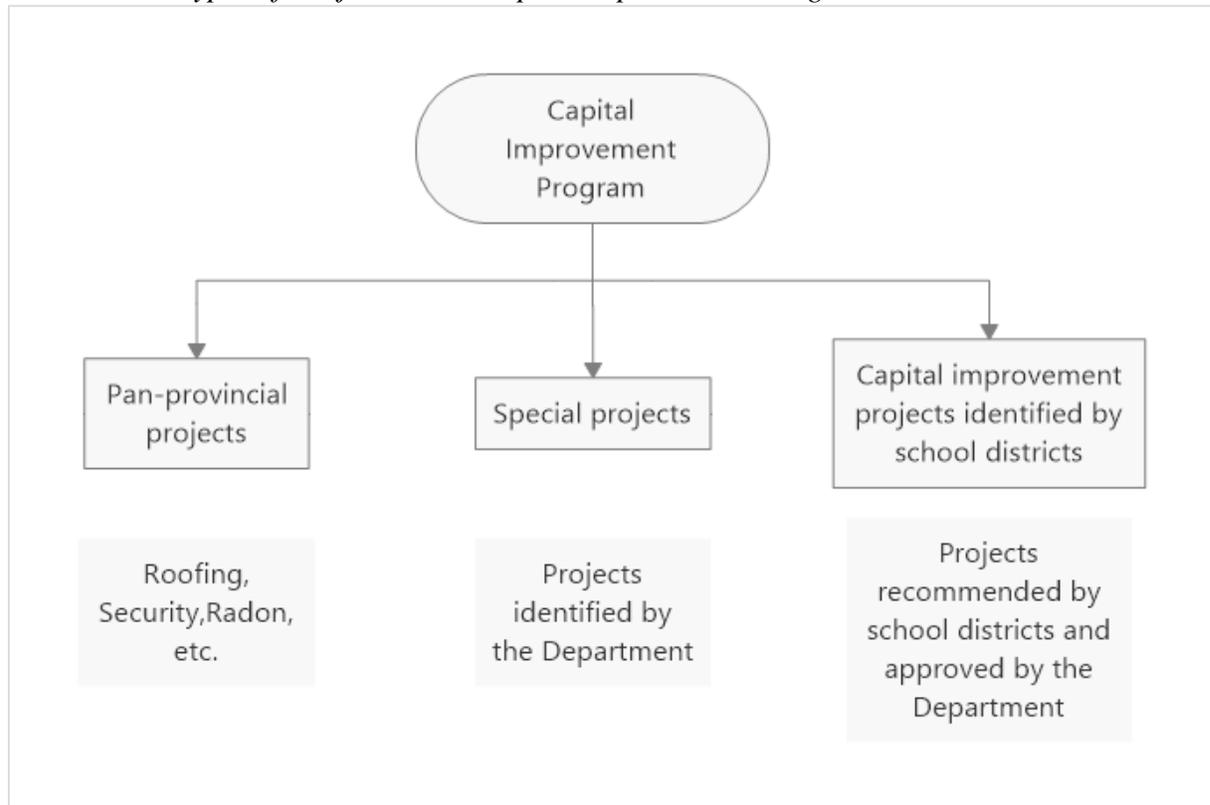
Capital Improvement Program

2.15 The capital improvement program mainly consists of three types of projects:

- special project,
- pan-provincial project; and
- project identified by school districts.

2.16 The description of each type of project can be found in Exhibit 2.5. The Department has allocated approximately \$18.4 million of its total capital budget to this program. The breakdown of 2019-2020 capital improvement budget is listed in Exhibit 2.6. The three types of projects receive different levels of priority. Funds are first available to special projects (which are deemed necessary by the Department) and pan-provincial projects. Then, the Department allocates the rest of capital improvement budget using a formula based on student population and square footage of school buildings.

Exhibit 2.5 – Types of Project within Capital Improvement Program

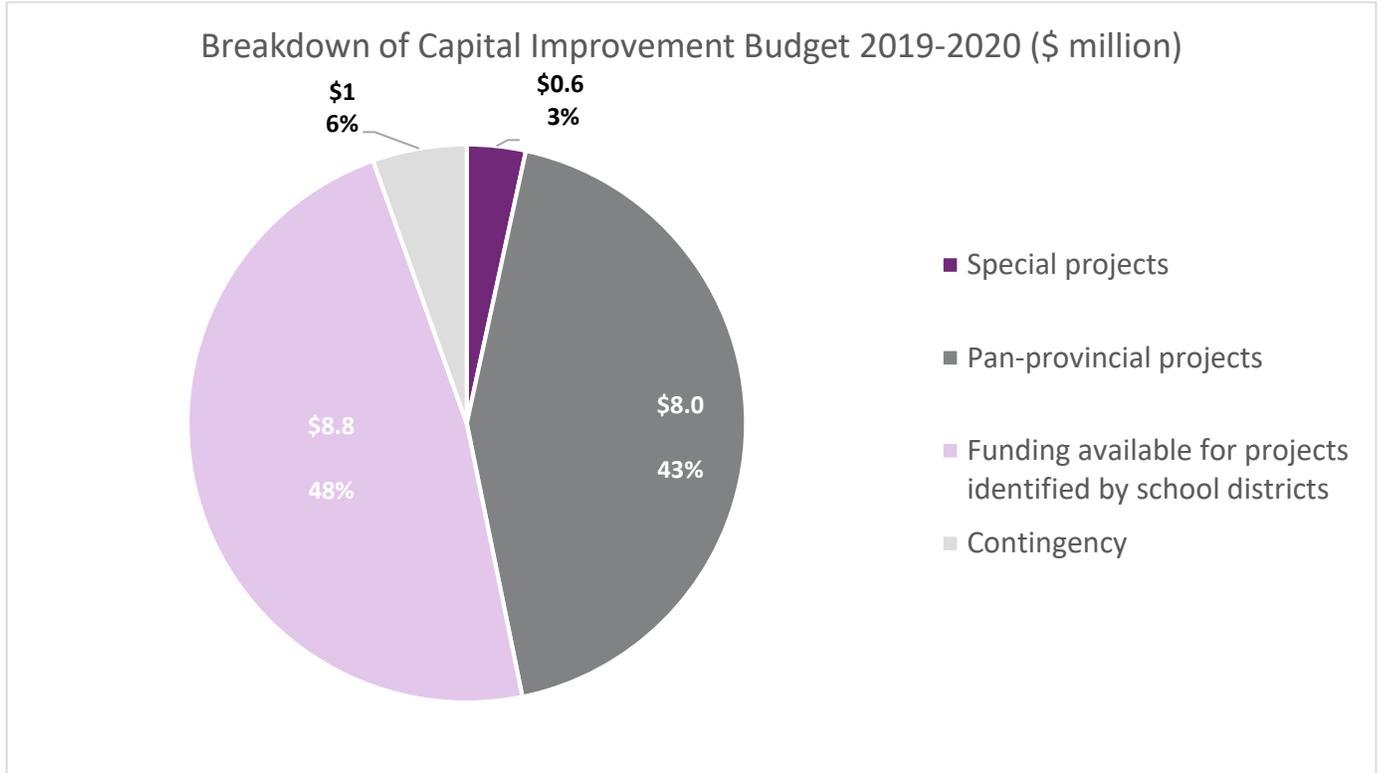


Source: created by AGNB with information provided by the Department

2.17 As shown in Exhibit 2.6 below, \$8 million was allocated to pan-provincial projects in the 2019-2020 capital budget. Of this \$8 million, \$7.7 million was for the roofing program. This program started five years ago in 2014-2015. The Department has allocated approximately \$36.8 million to this program since its inception. According to the Department, there were numerous urgent and unplanned roof repair requests from school districts. The contingency in the Department's capital budget had to be used to cover the costs of the requested work. The Department felt a pan-provincial roofing program would be appropriate to deal with the issues. It then asked the Department of Transportation and Infrastructure (DTI) to administer this program.

2.18 DTI assesses the conditions of roofs of school buildings and identifies roofing projects. DTI categorizes all roofing project into "high priority" and "low priority" with estimated costs. DTI then sends the list of projects to the Department of Education and Early Childhood Development. The Department groups the high priority projects by school districts and forwards a list to each school districts to confirm. Once they are confirmed, the Department sends a consolidated list to DTI to proceed. The Department has very little involvement in the whole process. For this reason, we decided not to include the roofing program in our audit scope.

Exhibit 2.6 – Breakdown of Capital Improvement Budget (2019-2020)



Source: created by AGNB with information provided by the Department (unaudited)

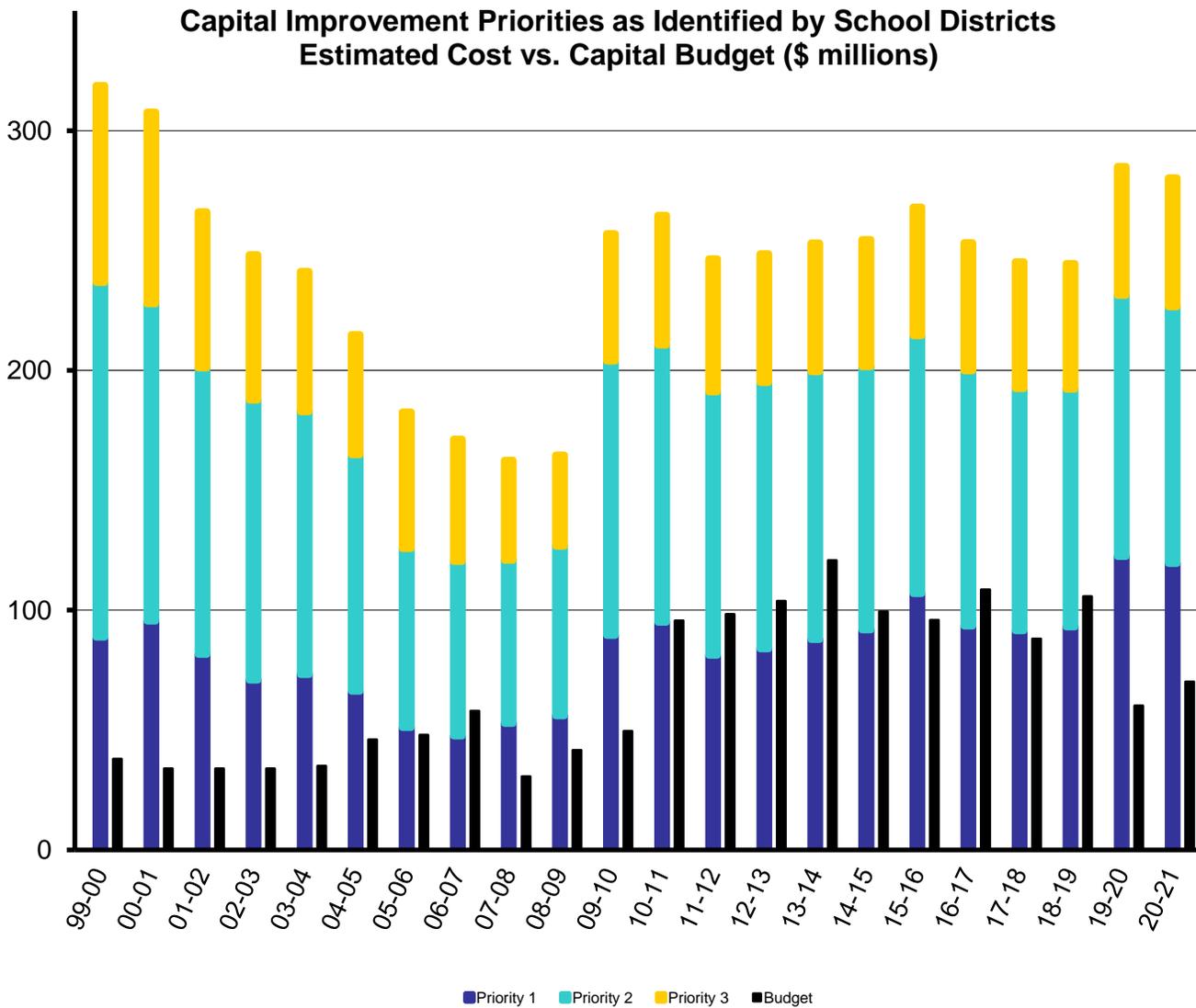
2.19 The Department administers the other two pan-provincial programs which are security (\$0.2 million) and radon (\$0.1 million). We interviewed the departmental staff and reviewed documents regarding the radon program. There is well documented Radon Testing Protocol. The goal of this program is clearly stated. The testing cycle is well defined. The data is centrally collected and stored by the Department.

2.20 Therefore, our findings primarily relate to the portion of the capital improvement program that is relevant to special projects identified by the Department (\$0.6 million in 2019-2020) and capital improvement projects identified by school districts (\$8.8 million in 2019-2020).

Total of all identified but not completed capital improvement projects was \$282.7 million at September 2019

2.21 The Department maintains a central database for tracking all capital improvement projects identified by each school district. As of September 2019, the total estimated cost of projects identified but yet to be completed was \$282.7 million. The Department categorized this as deferred maintenance. As shown in Exhibit 2.7, the total capital budget approved each year has been significantly lower than the estimated cost of identified capital improvement projects for the past 22 years.

Exhibit 2.7 - Estimated Cost of Capital Improvement Projects vs. Capital Budget (\$ millions)



Source: created by AGNB with information provided by the Department (unaudited)

For the past 22 years, the annual total capital budget has barely covered Priority 1 projects

2.22 The Department provided school districts with a guideline to prioritize capital improvement projects into three categories as follows:

- Priority 1: Occupant Health & Safety/Facility Shutdown;
- Priority 2: Essential Work, such as upgrading an electrical system; and
- Priority 3: Important but not urgent, such as upgrading lighting.

For the past 22 years, even if the entire departmental capital budget had been allocated to capital improvement projects, it would have barely covered Priority 1 projects. This would leave very little funding available for school districts to address Priority 2 projects. If this funding gap continues, building conditions will deteriorate further and many Priority 2 projects will become Priority 1 that must be dealt with.

2.23 The following four sections contain our detailed findings and observations:

- inadequate capital funding prioritization process;
- override of recommended proposals;
- insufficient capital asset planning process; and
- insufficient and poor-quality facility condition data

Inadequate Capital Funding Prioritization Process

Major Capital Program

2.24 Major capital projects are any capital projects anticipated to cost over \$1 million dollars. These projects are categorized into one of five project types as follows:

- **new schools** - projects submitted to accommodate growth and/or support cultural diversity;
- **school addition projects** - projects such as the construction of an auditorium, gymnasium, a new wing of classrooms, etc.;
- **rationalization** - projects designed to optimize the provision of infrastructure to meet pedagogical needs. These could include the construction of a new school or improvements to existing infrastructure to accommodate amalgamations;
- **complete school replacement** - projects where a new school is more cost-effective than refurbishment of existing assets due to high levels of deferred maintenance; and
- **mid-life upgrades** - projects to extend the useful life of schools through capital refurbishment.

2.25 All major capital projects are identified by school districts and must be submitted to the Department. The Department has used the Quadruple Bottom Line (QBL) assessment tool since 2014 to score and rank all projects submitted by school districts. Department personnel use the QBL ranking to create and submit a prioritized list of projects to senior management within the Department and then to the Minister of Education and Early Childhood Development for approval.

School districts believe QBL analysis tool is an improvement over past practice

2.26 The QBL analysis tool was designed by a third-party accounting firm for the Department in collaboration with school districts. School districts believe the QBL analysis tool is an improvement over the previous capital planning process, and that it has helped minimize political interference in funding decisions. Its introduction has provided greater confidence and trust in the capital planning process. School districts we interviewed also believe the Department generally applies the tool in an effort to make the prioritization process more objective.

Lack of standardized QBL project submissions for major capital projects

2.27 We found there is no standardized format for project submissions across all school districts. There are no requirements of how the school district must inform the Department other than to provide a prioritized list of projects the school districts would like to have completed. Details provided by school districts within their lists of submitted projects widely differed. Some school districts provided only the name of the project requested, while others included significant backup documentation and notes to support the project proposal.

2.28 One district indicated the Department contacts them regularly throughout the capital planning process to solicit feedback and gather additional details on proposed capital projects. Another district told us that there is some level of engagement, but not much above the occasional clarifying question. This ad-hoc approach presents a risk of relying on inconsistent information. Lack of standardized project submissions across all districts creates a risk the QBL scoring process is based on subjective assessments.

Recommendation

2.29 We recommend the Department, in collaboration with school districts, develop a standardized major capital project submission form for school districts to collect and present major capital project information.

QBL supporting documents for 2015-16 and earlier years could not be easily obtained from the Department

Recommendation

School districts have little information on how QBL works in assigning scores to projects

Feedback school districts received on submitted projects is insufficient to inform planning for future major capital projects

2.30 As part of our audit, we requested documents used by the Department to support 15 QBL assessments. There are 142 assessments performed by the Department in total. We noted supporting documents for 2015-16 and earlier were not readily available from the Department. A centralized repository of all historical and current QBL assessments would allow for standardized documentation of project details to facilitate validation and analysis of QBL scores.

2.31 We recommend the Department create a centralized repository for all historical and current QBL assessments and their supporting documents.

2.32 From our interviews with school district staff, we found there is little information available to them detailing how individual projects are assigned scores within the QBL analysis tool. There is a sense among school districts the level of feedback on major capital project submissions has decreased in recent years. The Department considers the actual project scores as confidential advice to Cabinet.

2.33 The Department informed us the ranking process was presented to school districts and which projects were ranked “high” vs “mid-range” vs “low” was discussed with district staff. Some districts have not taken the Department up on offers to present or discuss project rankings. The Department informed us it intends to make the QBL rankings and scores public. At the time we completed our report, the Department had yet to publicly report this information.

2.34 Feedback school districts received on submitted projects is insufficient to inform planning for future major capital project submissions. If districts knew how their major capital project submissions fared during the QBL assessment, they would be able to make informed decisions about re-submitting the same projects in future years or whether alternative projects should be considered to address strategic educational needs.

2.35 We also found QBL score calculation errors and discrepancies through our sample testing. For example, we found the total score for the Grand Bay Area School project changed significantly from year to year. The QBL score of this project increased 54 points in 2018-2019. In 2019-2020 it dropped 84 points, while project scope remained the same. These significant score variances did not prompt the

Department to conduct further investigation at the time to identify its causes.

Errors in Grand Bay Area School QBL score resulted in the project being improperly ranked

2.36 As a result, this project was recommended by the Department in its capital budget proposal as the top ranked project in 2018-19. However, Cabinet did not approve it. The Department informed us the score in 2018-19 was inflated due to a data input error. Had this error been discovered and corrected, the Grand Bay Area School project would have ranked third. Exhibit 2.8 shows the history of QBL scores for this project since 2016. The Anglophone South School District did not recommend this project to the Department in 2020-2021 budget cycle, hence the Department did not assess this project using QBL.

Exhibit 2.8 – QBL Scores of Grand Bay Project (2015-16 to 2019-20)

Year	Project type	QBL score	Score variance from prior year
2019-2020	Rationalization	194	-84
2018-2019	Rationalization	278	+54
2017-2018	Rationalization	224	+21
2016-2017	Rationalization	203	-27
2015-2016 (first year)	Rationalization	230	-

Source: created by AGNB based on information provided by the Department

The QBL ranking for Hanwell K-8 School project did not match the one recommended by the Department

2.37 Discrepancies related to the Hanwell K-8 School project were also noted. QBL documentation provided by the Department indicated the Hanwell K-8 School project scored 220 points in evaluation year 2019-2020. It ranked 3rd among 43 projects but the Department recommended it as the number one project in its capital budget proposal. Cabinet subsequently approved the project.

Improper QBL score calculation for new school projects

2.38 In one discrepancy, we found the Department calculated QBL indicator 4 “*Facility Condition*” for new school projects including New Moncton Metro, Nouvelle Moncton, Nouvelle Saint-Jean and Hanwell. According to the QBL indicator definition documented in the QBL analysis tool, this indicator is “*not applicable to new school construction to address growing demand.*” In the case of Hanwell, the Department assigned 65 points to this indicator, while it should have been “*not applicable*” with a score of zero. Had this error been corrected, the total score of this project would have been 155 and it would have resulted in much lower ranking among the 43 projects. It should be noted that applying this indicator to the three other new school projects did not result in any of them being proposed by the Department.

2.39 In its response to our draft report in February 2020, the Department stated: “*Hanwell, amongst others, were assigned scores for FCI where they should not have been. That affected all “new school” request. Indicator 4 was mis-applied resulting in “new schools” being improperly scored ...*”. It also stated: “*Albeit this was an error according to the definition, the same rationale was applied consistently to all new school projects including New Moncton Metro, Nouvelle Moncton, Nouvelle Saint-Jean and Hanwell. This was picked up in 20-21 and new school requests did not receive consideration under indicator 4*”.

2.40 Further, the Department commented: “*Whether a score was assigned under this indicator for Hanwell or not would have had no bearing on recommendations that were made. Even though Hanwell was not the top scoring project, it was recommended to proceed due to the space deficiencies and modular classroom situation with Fredericton South Schools.*”

2.41 However, in May 2020, the Department clarified its response in February stating: “*the “scoring mistake” for Hanwell, it was not a mistake. The mistake is with respect to the indicator definition sheet which states that the indicator for Facility Condition is ‘not applicable to new school construction to address growing demand’.* The Indicator description was not changed since 2014. In the summer of 2015 while preparing the 16-17 submission, it was identified that new school projects were not receiving a balanced scoring compared to the other 4 types of projects

(Midlife, Rationalisation, Replacement, Addition). Indicator 4 was the significant difference. The decision was made to use this indicator for new schools as well, using the average of Facility Condition score of the schools impacted by the new school project - i.e. those schools presently being attended by the students who would attend the new school. This is how the indicator has been used since (16-17, 17-18, 18-19 and 19-20). The original indicator description was not updated.

2.42 Due to contradicting responses from the Department as described above, we are unable to conclude on the objectivity and reliability of the Department's process for recommending new school projects to address growing demand. In this case, the Department applied the QBL scoring in a manner that is inconsistent with the approved methodology.

Tiered approach (outside of QBL parameters) put Hanwell K-8 and Moncton 6-8 schools as "must-dos" in 2019-2020

2.43 The other discrepancy we found was related to a "new" approach to assess school projects. The Department identified two projects as "must dos" – Hanwell K-8 and an increase of \$10M for the Moncton 6-8 school project. Both were based on a tier one requirement -a significant lack of school space, according to a newly introduced tiered approach outside of the existing QBL parameters. The Department explained the original budget plan followed the QBL results. Following direction from government that capital spending was to be reduced, the Department revised the original budget and presented it to the Deputy Ministers and the Minister along with the QBL results for that year. The revised plan included top-ranking midlife upgrades, top-ranking new school, and an increased scope of Moncton 6-8 school project. A subsequent government memo gave further direction on the intent to cut the capital program through a new analysis of all projects using specific criteria. Only existing must-do projects could be submitted, and projects that could be deferred should be identified. As a next step, the Department further revised its budget submission resulting in nine previously approved projects being deferred along with pan provincial and strategic study programs. Only Hanwell K-8 and Moncton 6-8 were submitted as "must do" projects.

Tiered approach (outside of QBL parameters) used in 2018-2019 for École de Moncton land purchase

2.44 The Department already applied this new “tiered” approach in 2018-2019 for École de Moncton land purchase. École de Moncton was ranked 15th as per QBL. The Department re-ranked the project as 4th and recommended a strategic land acquisition only. Cabinet subsequently approved the project. As per the Department, it identified École de Moncton as a special case due to the projected population growth in the area.

The change management process for QBL was informal and incomplete

2.45 We found significant lack of school space exists in many other areas as well. There are nine schools in three different school districts which have at least six modular classrooms. We believe this “tiered” approach was a significant change to the QBL assessment methodology, as it introduced a completely new class of projects outside the existing QBL parameters. We would expect a comprehensive consultation with all stakeholders and a rigorous approval process to bring about such a major change in methodology, similar to when the QBL was created. We found this was not the case. The change management process was informal and incomplete. There was no evidence school districts were consulted and no formal ministerial approval of the new “tiered” approach.

2.46 The Department later added the definition of “Tier-1 and Tier-2 Project” in the QBL template in December 2019. According to the definition, “*Tier 1 projects will have top priority for funding and approvals. They are identified as those having significant space deficiencies when compared to EECD Planning Guidelines. Project rankings within Tier 1 are based upon the number of teaching platforms missing, demographic trends, and district priority*”. These projects are not subject to QBL assessment of the 15 indicators. We believe this tiered approach diminishes the objectivity of the QBL, as there is no quantitative assessment for Tier-1 projects. Tier-1 projects effectively by-pass the QBL scoring process.

2.47 In addition to the above-mentioned issues, we found, in another case tested, key information for prioritizing major capital projects was inconsistently documented and applied. The infrastructure statistics document indicated Saint John High School was built in 1986, while the condition assessment stated it was built in 1932 (with upgrades and revitalization projects in the 1980s). As the age of a building is currently being used in conjunction with the

facility condition indicator within the QBL, changing the age of a school can impact the project's overall QBL score.

Insufficient data validation and quality review process for QBL assessments

2.48 The discrepancies we found highlight deficiencies in the Department's change management, data validation and quality review processes for QBL assessments. If these remain unaddressed, similar discrepancies could occur and result in improper project rankings in the future and ultimately significant inappropriate capital spending decisions.

Recommendation

2.49 We recommend the Department implement a formal change management process for the Quadruple Bottom Line Multi-Criteria Analysis. The process should include but not be limited to:

- Clear approval path depending on the significance of the change;
- Consultation with all key stakeholders such as school districts; and
- Formal approval and documentation of changes before they are applied.

Recommendation

2.50 We recommend the Department implement a data validation and quality review process for the Quadruple Bottom Line Multi-Criteria Analysis.

Several QBL indicators require improvement to increase the objectivity of capital investment decisions

2.51 We found seven indicators within the QBL tool require improvement. For example, indicator 4 "*Facility condition / deferred maintenance*" augments the industry standard by factoring in both the age of a facility and *Facility Condition Index (FCI)*. Common industry practice suggests FCI should be the primary consideration. Including the building age would skew the results in favour of older buildings. Details of weaknesses in other indicators can be found in Appendix IV. As demonstrated in the appendix, these weaknesses if unaddressed, could undermine the objectivity of capital funding decisions and result in capital investments that are not based on the greatest need.

2.52 As stated in the QBL instructions, the scoring for indicator 2 "*demographic forecasts*" is based upon extrapolation of the past five year average annual change in student population. For example, in the Grand Bay Rationalization project assessment, the Department forecasted student population change for the affected project area using data from year one and year five only.

Student population trends over the intermediate years were not considered in the calculation. The result was a 3.16% decline.

Department's simplified method for forecasting student population could inappropriately affect QBL ranking

2.53 We do not believe this simplified method is the most accurate for forecasting student population. A rolling average, which takes into account population change in each of the 5 years, would be a better indicator. By switching to this method, the Department can ensure enrolment projections consider changes in data from each period. The rolling average approach also reduces the impact of outliers (e.g. anomalies in one period) and improves accuracy and reasonableness of forecasting. Had this calculation method been used, the enrolment trend would have resulted in a 4.15% decline over the same period. This could result in a different QBL score and potentially affect the ranking of projects. A full illustration of this method can be found in Appendix V.

Recommendation

2.54 We recommend the Department use a rolling average method to predict student enrolment trends.

Recommendation

2.55 We recommend the Department improve the Quadruple Bottom Line Multi-Criteria Analysis tool to:

- **Address the weaknesses in the indicators listed in Appendix IV of the report and increase its overall objectivity; and**
- **Incorporate a scoring mechanism to capture space deficiencies, instead of the tiering approach.**

Recommendation

2.56 We recommend the Department publicly report the annual major capital project rankings and scores based on the Quadruple Bottom Line Multi-Criteria Analysis.

School districts are not in full compliance with policy 409 “Multi-year School Infrastructure Planning”, and the Department does not enforce compliance

2.57 We also found school districts are not in full compliance with Department Policy 409 “*Multi-year School Infrastructure Planning*”. This policy requires school districts to submit an annual Facilities Status Review for each school. This document contains all essential information regarding operational costs and general facility data. We found six out of seven school districts did not submit the required reports to comply with this requirement and that the Department is not enforcing compliance with its policy. The Department indicated this is not an issue, as it already has the data it needs to conduct QBL assessment. The Department could not explain why this requirement remains in the policy.

Recommendation

2.58 We recommend the Department re-evaluate the document submission requirements for school districts in Policy 409 “*Multi-year School Infrastructure Planning*” and enforce the policy.

Capital Improvement Program

2.59 As we described in paragraph 2.14 to 2.17, our findings related to the capital improvement program are only relevant to the special projects identified by the Department and capital improvement projects identified by school districts.

No standardized prioritization process for capital improvement projects across all school districts

2.60 There is no standardized prioritization process for school districts to evaluate capital improvement projects and develop evidence-based lists of project priorities for the Department. While there are informal processes in place, we found different criteria were applied across school districts. Also, processes were not formally documented for further review or evaluation by the Department or other key stakeholders such as parents' groups, teaching staff, and communities.

2.61 A standard and consistently applied prioritization process for capital improvement projects across all districts would ensure a comparable service standard is used in decision-making. If the prioritization process is not consistently applied there is a concern that capital funds are not being optimally allocated to address key risks to educational service delivery.

Decision-making for capital improvement projects identified by school districts based on insufficient information

2.62 Once capital improvement funds are allocated to school districts, choosing projects for completion is primarily based on the information available in the School Physical Plant Database (SPPD). The SPPD system is maintained by the Department and information including a description of each project and a budget estimate is uploaded by school districts. There are no minimum data requirements for listed projects. As a result, the amount of detail varies from one project to another. These projects neither have condition assessment data nor adequate explanation of the risks if the need is not addressed.

The Department's funding allocation for capital improvement projects is not based on the condition of the school buildings or industry standards

2.63 We found the capital improvement projects funding allocation method does not align with industry best practices. Currently, funding is allocated based on:

- first, 70% of funding is allocated to Anglophone sector and 30% to Francophone sector; and
- then funding to each sector is allocated based on a formula that considers the total square footage of school facilities and total population of students in each school district. This means that the larger the schools or the more students within a school district, the more funding the school district is likely to be allocated, regardless of building conditions.

2.64 Industry standards (International Infrastructure Management Manual) recommend that prioritization of asset rehabilitation activities should be based on the following criteria:

- assets that have a high consequence or risk of failure;
- assets that have a high utilization and subsequent impact on users;
- assets where the total value represents the greatest net value to the government;
- assets that have the highest average age relative to their expected lives; and
- assets where replacement with modern equivalent assets could yield substantive savings.

2.65 The Department indicated the 70%-30% allocation (based on student population) is required to comply with the equitable division of financial resources as per the *Education Act*. The *Education Act* states:

- *"44(1) The financial resources voted by the Legislative Assembly for school operations shall be divided by the Minister on an equitable basis between the two distinct education sectors established under subsection 4(1).*
- *44(2) The equitable division of financial resources under subsection (1) shall seek to assure to each of the education sectors established under subsection 4(1) an equivalent standard of education taking into account the needs and particular circumstances of each sector."*

Student population and square footage of school facilities may not be the appropriate bases to allocate capital improvement funding

2.66 We realize the Department must, as required by law, allocate capital improvement funding in an equitable manner as per section 44(1) of the *Education Act*. However, student population and square footage of school facilities may not be appropriate funding allocation factors to achieve an equitable division in this case. This allocation method does not consider the condition of school infrastructure. In our view, while taking needs into account, an “*equitable division*” of funding would be better supported if the objective of the Department was to have all schools in each education sector in good condition. This can be achieved by following industry standard asset management practices.

The prioritization process, rationale and risk assessment for capital improvement projects are not well documented at school districts

2.67 Once capital improvement funding is allocated to a school district, school districts prioritize projects based on needs. However, the prioritization process, rationale and risk assessment are not well documented. It is difficult to determine how life cycle cost and the condition of assets are considered in the funding allocation decision. For example, project A may be prioritized over project B based on the school district’s general understanding of the risk associated with those projects. This may be easy to determine if comparing a ventilation repair to a parking lot rehabilitation. However, it becomes more difficult to judge when choosing between two high risk projects, such as fixing exterior walls or upgrading electrical systems.

No clear and consistent definition of “special projects”

2.68 Also, the current capital improvement project funding allocation model has greater potential for subjective interference. In the 2019-2020 capital improvement project funding allocation model we reviewed, three projects were identified as receiving approved funding before the overall capital improvement budget was allocated to school districts. The three projects were:

- A.J. Savoie School in Saint-Quentin (\$210,000);
- Nashwaaksis Field House in Fredericton (\$300,000); and
- Ecole Sainte-Anne in Fredericton (\$114,000).

2.69 Effectively, these projects received higher priority than any capital improvement projects identified by school districts. As per the Department, these particular projects were either interdepartmental or health and safety related. However, there was no clear and consistent definition of special projects.

There is no unified prioritization approach for all types of capital improvement projects

2.70 Furthermore, we found there is no unified prioritization approach for all capital improvement projects. The prioritization processes for each of the three types of projects (pan-provincial, special projects identified by the Department and projects identified by school districts) are separated. Different prioritization criteria are used for each type of projects. It is impossible to assess the overall fairness and reasonableness of the prioritization across all capital improvement projects.

Recommendation

2.71 We recommend the Department establish a clear definition of “special project” and apply it consistently to minimize potential for subjective interference in the capital improvement funding allocation.

Recommendation

2.72 We recommend the Department, in consultation with school districts, develop consistent criteria for the provincial prioritization of capital improvement projects. In developing the criteria, building conditions, life cycle costs, and industry standards should be used.

Override of Recommended Proposals

Several instances where the Department did not follow the QBL ranking

2.73 Although the QBL model was adopted in 2014 by the Department to ensure objectivity of project prioritization, we found several instances where the Department did not follow the QBL ranking when preparing its budget submission to Treasury Board. When we enquired as to the reasons behind these deviations, we were informed the changes were made to address issues of overcrowding in some areas due to increased student enrolment. The QBL did not account for overall sudden growth at that time. The Department indicated it updated its QBL scoring method in September 2019 to reflect this practice.

2.74 The Department also pointed out *“The QBL Model is a living model that is updated and improved regularly. ... The point of the QBL is to make sure the projects that need to support healthy, safe and appropriate environments are prioritised. The QBL was modified. It is important to not be pedantic in application. Common sense must be applied.”*

2.75 We selected and traced projects approved by Cabinet to the Department’s capital budget proposals, and then to QBL rankings from fiscal years 2016 to 2020. The table in Exhibit 2.9 shows the results of our work. It is important to note this table is not a complete listing of all 142 projects ranked, submitted or approved in these years. It is only intended to illustrate instances where differences existed between QBL rankings, the Department proposal and final approval.

Exhibit 2.9 - Comparison between QBL result, the Department's proposal and final approval for selected projects (2016-2020)

AGNB selected projects	QBL ranking	Community	Project type as per QBL list	Estimated project cost (\$, millions)	Projects in Department's budget proposal*	Approved capital projects
2019-2020						
Mathieu Martin (grade 9-12)	1	Dieppe	Mid-life upgrades	\$36.5	Not proposed	N/A
Amirault (K-5)	2	Dieppe	Mid-life upgrades	7.0	Not proposed	N/A
Hanwell K-8 School	3	Hanwell	New School	34.0	Hanwell K-8 School	Hanwell K-8 School
2018-2019						
Grand Bay Area School (K-5)	1	Grand Bay-Westfield	Rationalization	17.0	Grand Bay Area School	Not approved
Bessborough School (K-8)	2	Moncton	Rationalization	33.0	Hanwell Area School	Not approved
Hanwell K-8 School	3	Hanwell	New School	32.0	Bessborough School	Bessborough School
École de Moncton (Ranked 15 th)	15	Moncton	New School	29.5	École de Moncton (for land purchase only)	École de Moncton

Exhibit 2.9 - Comparison between QBL result, the Department's proposal and final approval for selected projects (2016-2020)
(Continued)

AGNB selected projects	QBL ranking	Community	Project type as per QBL list	Estimated project cost (\$, millions)	Projects in Department's budget proposal*	Approved capital projects
2017-2018						
Birchmount (K-5)	1	Moncton	Mid-life upgrades	0.05	Study – Birchmount Mid-life upgrades	Study – Birchmount Mid-life upgrades
Grand Bay Area School (K-5)	2	Grand Bay-Westfield	Rationalization	14.1	Grand Bay Area School	Not approved
Abbey Landry (K-5)	3	Memramcook	Addition	1.0	Abbey Landry	Not approved
Connaught St. school (K-5)	4	Fredericton	Addition	4.0	Connaught St. school	Connaught St. School
Hanwell K-8 School	5	Hanwell	New School	23.5	Hanwell K-8 School	Not approved
2016-2017						
Arc-en-Ciel (K-8)	1	Oromocto	Replacement	19.6	Arc-en-Ciel	Arc-en-Ciel
Salisbury Elementary	2	Salisbury	Addition	0.075	Salisbury Elementary Study	Salisbury Elementary
Connaught St. School (K-5)	3	Fredericton	Addition	0.05	Connaught St. School	Not approved
Bath Middle School	4	Bath	Addition	0.075	Bath Middle School Study	Bath Middle School

*Exhibit 2.9 - Comparison between QBL result, the Department's proposal and final approval for selected projects (2016-2020)
(Continued)*

AGNB selected projects	QBL ranking	Community	Project type as per QBL list	Estimated project cost (\$, millions)	Projects in Department's budget proposal*	Approved capital projects
Campbellton K-8	5	Campbellton	Rationalizatio	21.8	Campbellton K-8	Campbellton K-8
Moncton North (6-8)	6	Moncton	New School	27.9	Moncton North	Moncton North
2015-2016						
N/A – see explanation in 2.68 to 2.72				1.1	Woodstock High: Life Safety	Woodstock High: Life Safety
Salisbury Elementary	1	Salisbury	Mid-life upgrades	0.05	Salisbury Elementary	Not approved
Lower West Saint John Elementary	2	Saint John	Rationalization	21.6	Lower West Saint John Elementary	Lower West Saint John Elementary
École Marie-Gaétane (9-12)	3	Kedgwick	Rationalization	4.8	École Marie-Gaétane	École Marie-Gaétane
Connaught St. School (K-5)	4	Fredericton	Addition	2.5	Connaught St School	Not approved
Secondaire Assomption (9-12)	5	Rogersville	Rationalization	8.0	Secondaire Assomption	Secondaire Assomption

Exhibit 2.9 - Comparison between QBL result, the Department's proposal and final approval for selected projects (2016-2020)
(Continued)

AGNB selected projects	QBL ranking	Community	Project type as per QBL list	Estimated project cost (\$, millions)	Projects in Department's budget proposal*	Approved capital projects
Grand Bay (K-5)	6	Grand Bay-Westfield	Rationalization	0.05	Study: Grand Bay Rationalization	Study: Grand Bay Rationalization
Miramichi East (K-5)	7	Miramichi	Rationalization	16.0	Miramichi East	Miramichi East
Fredericton High	8	Fredericton	Mid-life upgrades	9.8	Fredericton High	Fredericton High
Northrop Frye (K-5)	9	Moncton	New school	0.05	Northrop Frye Study	Northrop Frye P3
W.-A Losier (9-12)	10	Tracadie-Sheila	Mid-life upgrades	8.0	W.-A Losier	W.-A Losier
Harrison Trimble (9-12)	11	Moncton	Mid-life upgrades	6.4	Harrison Trimble	Harrison Trimble
JMA/SMS (5-12)	12	Salisbury	Mid-life upgrades	3.7	Not proposed	N/A
Leo Hayes (9-12)	13	Fredericton	New school	0.05	Leo Hayes Study	Leo Hayes P3
Dieppe M-8	14	Dieppe	New school	29.2	Dieppe M-8	Dieppe M-8
Moncton North (6-8)	15	Moncton	New school	16.3	Not proposed	N/A

*Exhibit 2.9 - Comparison between QBL result, the Department's proposal and final approval for selected projects (2016-2020)
(Continued)*

AGNB selected projects	QBL ranking	Community	Project type as per QBL list	Estimated project cost (\$, millions)	Projects in Department's budget proposal*	Approved capital projects
Samuel de Champlain (K-12)	16	Saint John	Addition	1.3	Samuel de Champlain	Samuel de Champlain

**projects listed as per the order in the Department's submission to Cabinet*

Shading indicates difference between (1) QBL ranking and Department's budget submission to Cabinet, (2) Department budget submission and Cabinet approval

Source: created by AGNB based on information provided by the Department

Cabinet has approved projects different than those put forward by the Department

2.76 We found in certain instances projects approved by Cabinet were different than those proposed by the Department. According to the Department, no rationale was given for those differences.

2.77 As shown in Exhibit 2.9, project priorities can be changed by Cabinet without feedback to the Department regarding the rationale behind such changes. For example, in 2018-19 the Grand Bay Area School and Hanwell School projects were not approved by Cabinet, although they were ranked highest by the QBL model and recommended by the Department. This lack of feedback creates uncertainty in the Department's capital planning process. It also counters the Department's efforts to make evidence-based decisions.

2.78 Exhibit 2.9 also showed there are differences between the QBL ranking and the Department's proposal in several instances. The lack of alignment between the QBL ranking, the Department's proposal and Cabinet's capital budget approval make it difficult for us to conclude that evidence-based decisions are being made.

Premier's Office approved Woodstock High School auditorium project outside of normal process

2.79 We also found one major capital project did not go through the normal QBL process. The Town of Woodstock initiated a project to renovate and expand the existing Woodstock high school auditorium, as a municipal project for the community. The Department indicated the Office of the Premier approved it. This project was to be funded by the Town and the Regional Development Corporation. Contrary to most capital projects involving provincial properties, this project was managed by the Town instead of DTI.

2.80 As the project was being carried out, the Office of the Fire Marshal advised it could not proceed without a commitment that the school would have a sprinkler system installed. At the time, the school was grandfathered and was not code compliant. The Office of the Fire Marshal considered this project to be a major change in building use, thus requiring a sprinkler system to be installed. A phased approach over three years to upgrade the entire school building was deemed acceptable in order for the municipal project to proceed. This unexpected expense of installing a sprinkler system had to be funded in order for the municipal project to be completed and for the school to remain open.

- 2.81** This project costed the Province \$1.5 million in total. The school district requested and was granted capital improvement funding of \$200,000 in 2014-2015 to cover the first phase of the sprinkler system work, and the Regional Development Corporation committed \$200,000 that year as well. Tender results were higher than the Town's consultants' cost estimates for the sprinkler system, leaving the project \$1.1 million short on overall budget. This work needed to be carried out, as the Office of the Fire Marshal had authority to close the school if the necessary upgrades were not completed. The \$1.1 million shortfall was eventually covered by the Department's budget for major capital projects in 2015-16.
- 2.82** The solution proposed by the Department and approved by Cabinet was to fund the outstanding work as a one-year major capital project. The Department indicated it would have resulted in other high priority improvement projects in the district being overlooked if the district had been forced to cover these overages. The negative impact on the district's capital improvement budget over two years would have been significant.
- 2.83** This resulted in the project being given priority treatment without having to compete with other major capital projects submitted and ranked through the QBL process. It may have deprived other high priority projects of necessary capital funding.

Exhibit 2.10 Woodstock High School (built in 1977)



Source: Google Map

Insufficient Capital Planning Process

We believe the Department, as legislated owner of school facilities, is responsible for central oversight of school infrastructure planning

2.84 The *Education Act* states:

- “2(1) A District Education Council may, **with the approval of the Minister** and for the purpose of providing public education, establish schools within the school district for which the District Education Council is established.”
- “45(1) **All school property is vested in the Minister.**”
- “45(2) A District Education Council shall, at all times, have management, care and control of all school property in the school district for which the District Education Council is established, until such time as the school property is declared surplus by the District Education Council.”

2.85 While we realize the management, care and control of all school property resides with school districts and District Education Councils, we believe the Department, as the owner of all school property, is responsible for central oversight of school infrastructure planning.

There is no comprehensive province wide long-term capital plan for schools

2.86 The Department has never prepared a comprehensive provincial long-term capital plan for education capital assets across the Province. However, it prepares a 10-year cash flow projection annually based on the projects identified by school districts. A provincial long-term capital plan would provide a broad overview of school facilities across the Province. It would help school districts, the Department and the Province identify long-range facility needs to support education strategies.

2.87 The “*Asset Management for Sustainable Service Delivery: A BC Framework*” identified a comprehensive long-term capital plan would have key elements, including:

- “*assets owned and their condition;*
- *gaps between the current and desired levels of service;*
- *risks to service delivery;*
- *practices, projects, and programs required to meet organizational asset management objectives, manage risks, and achieve the desired level of service in the most cost-effective way;*
- *a timeline for implementation;*
- *resources required; and*
- *necessary future improvements to the plan*”.³

2.88 Long-term capital planning would bring stability and predictability for stakeholders who are managing facilities and allow for optimized allocation of available capital funds over the long-term. School districts need long-term planning to know if projects are viable in the next 5, 10, or 20 years and make appropriate capital asset recommendations and decisions that support educational plans and objectives. Without a provincial long-term capital plan, school districts have no clear direction regarding what to expect in the long-term.

2.89 Although a capital plan is long-term in scope, industry best practice suggests this type of plan is continuously improved and regularly incorporate new information or changing requirement. The Department felt a long-term plan would not be effective, as Cabinet often rejects the Department’s funding proposals. This should not prevent the Department from developing a long-term plan. We believe a long-term plan would help highlight the risks of deviation from the plan and enable decision makers to make informed decisions.

³ Asset Management for Sustainable Service Delivery: A BC Framework, page 30

Many Canadian provinces have either multi-year infrastructure plans or support for school capital planning

2.90 British Columbia, Alberta, Ontario, Quebec and Newfoundland and Labrador all have multi-year infrastructure plans at the provincial level which would guide long-term capital planning for the education sector. For example, the Ontario's Ministry of Education has a comprehensive 10-year capital plan that is designed to meet its asset management priorities. It also standardized its asset inventory methodologies to comply with sector standards.⁴ Ministries of Education in British Columbia, Alberta and Saskatchewan all have detailed capital plan instructions and clear requirements for their school divisions to develop long-range capital plans.

2.91 Because of the lack of long-term capital planning and insufficient funding, many repair and maintenance needs remain unaddressed while building conditions deteriorate. One district informed us that in both its 2017 infrastructure reviews conducted by external consultants, all facilities were found to be in poor condition⁵.

P3 schools have a protected stream of funding, while provincially owned schools have to go through an annual budget cycle

2.92 In contrast, repair and maintenance payments included in the four Public Private Partnership school agreements between the Province and private-sector consortiums are protected due to long term signed agreements requiring the particular P3 consortium to maintain the conditions of school infrastructure to a certain standard. The payments, listed in Appendix VI, show the four P3 schools have been funded in excess of \$3 million annually for Repairs and Maintenance in each of the last 5 years. The same types of funds for provincially owned schools have to go through an annual budget cycle. This could lead to a significant number of repair and maintenance projects left unaddressed, i.e. deferred maintenance.

⁴ <https://www.ontario.ca/document/building-better-lives-ontarios-long-term-infrastructure-plan-2017/technical-appendix-assessing-ontarios-existing-infrastructure>

⁵ By definition, the FCI is defined as the ratio of current year required renewal cost to current building replacement value. Building condition is often defined in terms of the FCI as follows: (Good) 0 to 5 percent FCI, (Fair) 5 to 10 percent FCI (Poor) 10 to 30 percent FCI, (Critical) greater than 30 percent.

The Department does not have a specific plan to address \$282.7 million in significant deferred maintenance issues

2.93 Currently, the Department does not have a specific plan to address the significant deferred maintenance issue. The total cost of deferred maintenance has grown to \$282.7 million as of September 2019. It will continue to grow if there is no significant effort made to tackle this issue. The budgeted amount for the capital improvement program (approximately \$18.5 million in recent years) is arbitrary. It is not a true reflection of real needs based on facility conditions. Aging school infrastructure will require significant investments to maintain. If the existing funding gap continues in the foreseeable future, the Department may face tough choices to either lower the quality standards for educational facilities or possibly shut down schools.

Lack of long-term planning impacts the ability of school districts to implement proactive lifecycle management

2.94 This lack of long-term planning also impacts the ability of districts to implement proactive lifecycle management strategies designed to extend the life of facility components at the lowest total cost of ownership. A combination of short-term planning and reactive asset lifecycle management could result in sub-optimal funding allocations and decision paralysis, while condition of school facilities continue deteriorating.

2.95 School facilities require ongoing maintenance and major upgrades at various intervals to uphold asset condition and meet service expectations. When done strategically, maintenance and major upgrades can extend the life of facility components at a lower cost than replacement options. Without detailed maintenance and upgrade programs there is an elevated risk of unplanned school shutdown and a potential to increase total lifecycle costs of schools.

Government's reactionary approach to capital project funding creates uncertainty in the education system

Bessborough and Hillcrest Schools are examples of uncertainty created by government change

2.96 Other than the weaknesses we identified in the Department's long-term capital planning process, we also found instances where government's reactionary approach to capital project funding created significant uncertainty in the education system. For example, in 2015 the Anglophone school district East recommended the Department perform a mid-life upgrade to Bessborough school. The Department rejected the proposal based on a Building Condition Assessment Study, citing the estimated upgrade costs were more than 70% of building a new school. The school district performed a sustainability study in the following year. They carried out several rounds of public consultation with stakeholders including impacted parents and communities. The result of the study was to close Bessborough and Hillcrest schools and build a new one.

2.97 Based on the result of the sustainability study, the school district made a new proposal to the Department to close the above two schools and build a new one. It was approved by the Department and eventually the Legislature that funding of \$1.5 million in fiscal 2018-19 was allocated to scoping a new school. Department staff along with Department of Transportation and Infrastructure personnel started conducting early scoping and conceptual design work. They also initiated the land purchasing process. However, this project was not approved after a change in government in 2018. As a result, the future of this project is uncertain at this point. This uncertainty leaves concerned students, parents and communities wondering what the future of their schools might be. It also makes it difficult for the school district to determine how to tackle serious maintenance issues at these two schools.

Exhibit 2.11 Bessborough School (built in 1959)



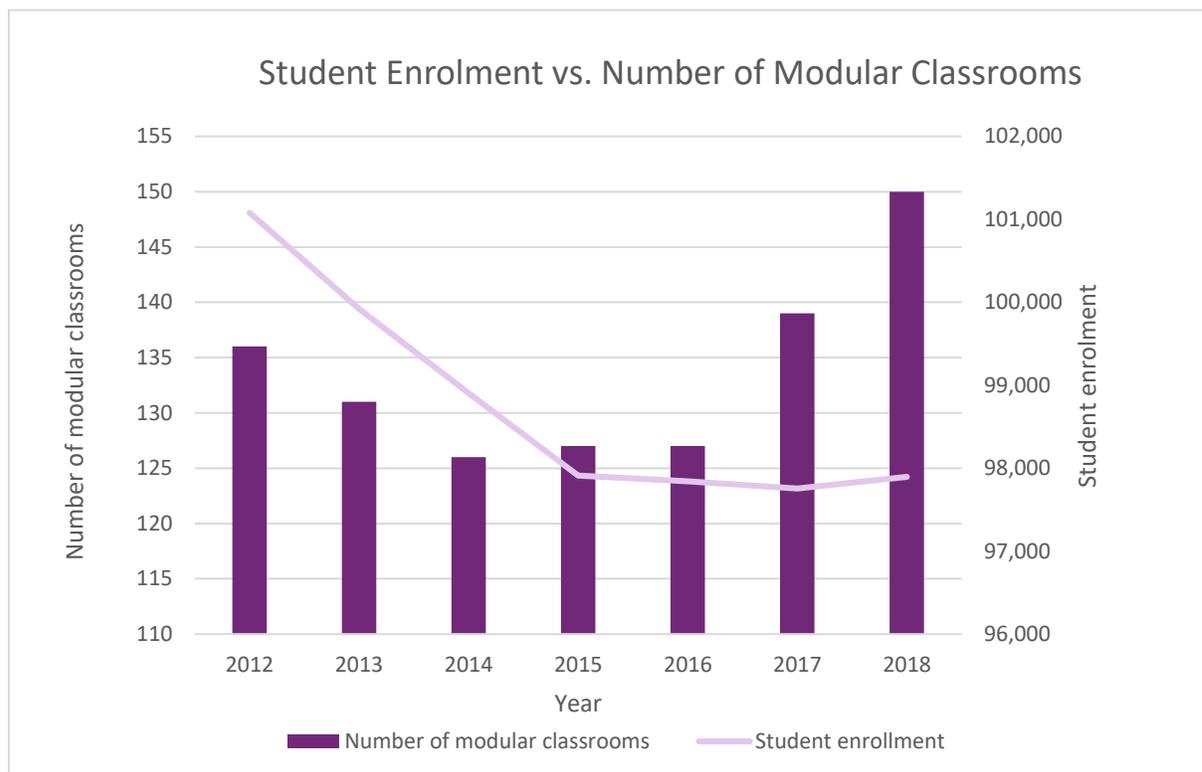
Source: <https://acadienouvelle-6143.kxcdn.com/wp-content/uploads/2018/02/Capture-5.png>

***Modular classrooms
increased in recent
years***

2.98 We believe the lack of long-term planning at least partially contributes to the rising number of modular classrooms in recent years. The Department believes if the government had approved projects in the years they were proposed, the number of portables would be significantly less. The major increase in portables also was due to the revision in French immersion and the enrolment growth due to Syrian refugees.

2.99 There were 150 modular classrooms in the Province as at 2018. This number has been steadily increasing over recent years, yet the overall student enrolment has declined. Exhibit 2.12 demonstrates this trend. Some districts have been experiencing continuous student enrolment growth, particularly in the urban centres of greater Moncton and Fredericton.

Exhibit 2.12 – Number of Modular Classrooms vs Provincial Student Enrollment

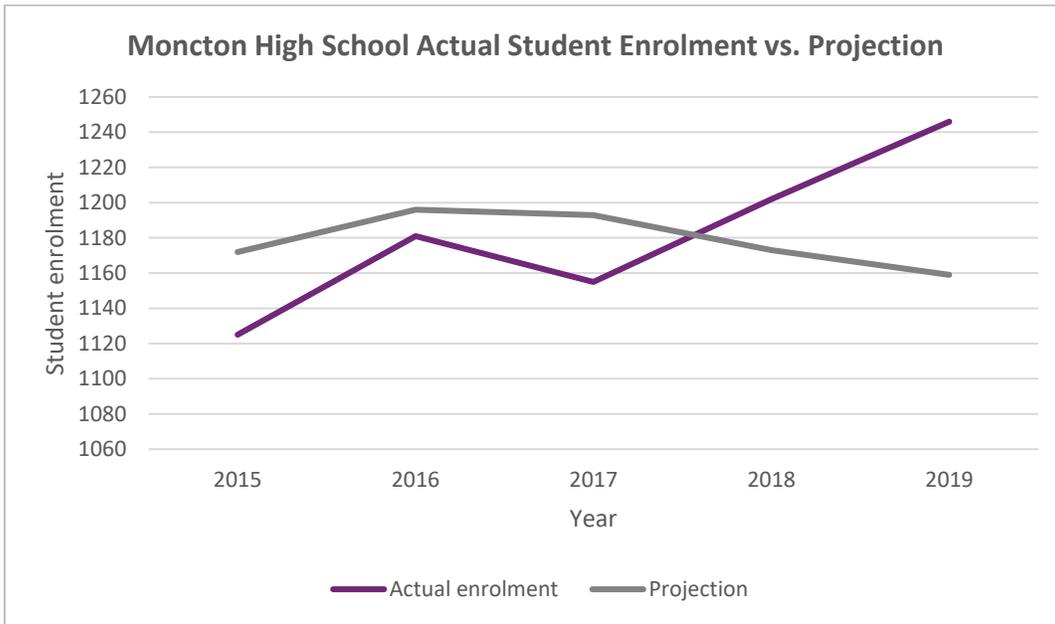
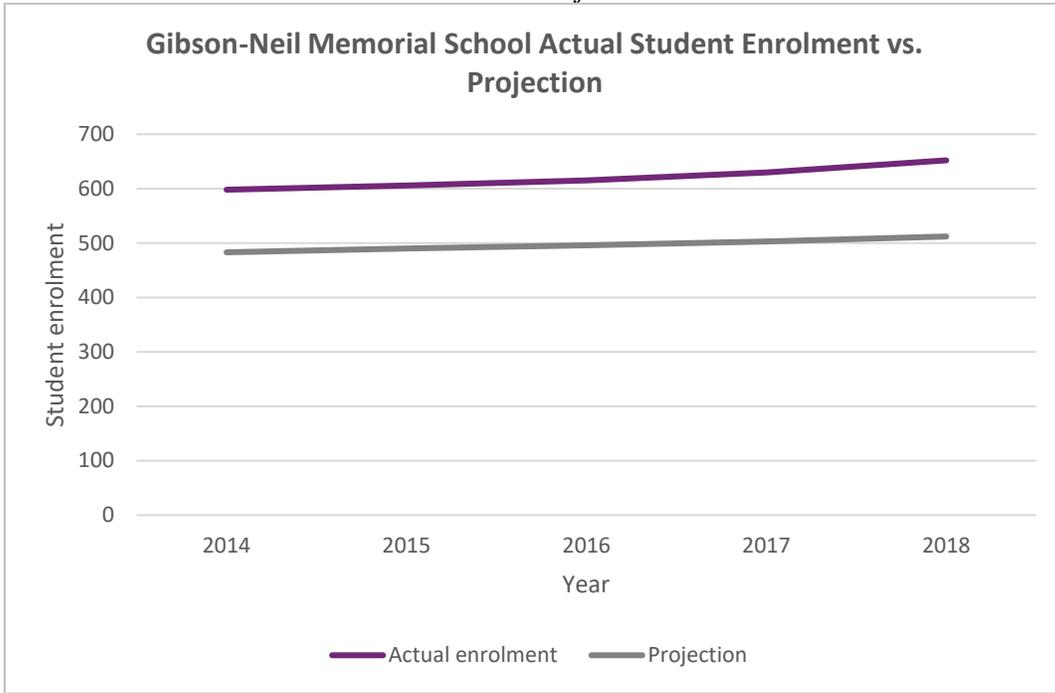


Source: chart created by AGNB with data provided by the Department (unaudited)

Examples showed student enrolment projections were significantly lower than actual

2.100 Gibson Neill Memorial Elementary School in Fredericton opened its doors in 2013, but already has seven mobile classrooms. The new Moncton High School opened in 2015 and it is already operating at full capacity. The school district has considered requesting modular classrooms. It is crucial to have a reasonably accurate student enrolment projection, so the Department can determine the proper size of a proposed school during the design phase. Exhibit 2.13 shows student population projections for both schools were significantly lower than the actual enrolments.

Exhibit 2.13 – Actual Student Enrolment vs. Projection



Source: chart created by AGNB with data provided by the Department (unaudited)

The lack of long-term planning and province-wide approach to enrolment projection may have contributed to the increased use of modular classrooms

2.101 The Department informed us it realizes the importance of changing demographics. It has been putting forward new school projects to address this issue. In 2014 the Department identified the need to implement “a province-wide student population forecasting software solution (versus relying on historical trends)”. The Department had not yet implemented this solution at the conclusion of our work. The lack of long-term planning and a province-wide approach to enrolment projections may have contributed to the increased use of modular classrooms.

2.102 The Department highlighted additional factors that contribute to the use of modular buildings, including:

- class composition changes;
- support staff space requirements; and
- early childhood space requirements.

The Department also indicated that changing government direction impacts its ability to meet capacity requirements in schools.

Exhibit 2.14 Gibson-Neill Memorial School (built in 2013) Modular Classrooms



Source: Google Map

Exhibit 2.15 Moncton High School (built in 2015)



Source: <https://secure1.nbed.nb.ca/sites/ASD-E/schools/monctonhigh/Pages/default.aspx>

Recommendation

2.103 We recommend the Department, in consultation with school districts, re-evaluate student enrolment projection method and implement a province-wide student population forecasting approach.

Recommendation

2.104 We recommend the Department develop a long-term province-wide capital plan for school infrastructure. The plan should include items such as:

- **Projects that are fully scoped, estimated and ready to be delivered in the short to medium term (3 to 5 years);**
- **A broad long-term funding allocation based on an analysis of school facility data and projected budget plan; and**
- **All key elements of the long-term infrastructure sustainability recommendation AGNB made in 2012:**
 - **the rationalization of assets (i.e. if not considered essential, remove from service);**
 - **a long-term approach to budgeting which includes life cycle maintenance;**
 - **a protected stream of a base level of funding determined necessary to adequately maintain schools in service;**
 - **a 20-year planning horizon;**
 - **a process whereby new schools are constructed only when there is a business case to support the need. This should include redirecting savings from rationalized assets (school closures) to the new school's life cycle maintenance costs; and**
 - **provide annual public performance reporting, which includes the 5-year project delivery plan, the actual facility condition of school versus pre-established targets, explaining the reason for any significant variances.**

Insufficient and Poor Quality Facility Condition Data

There is no centralized province-wide database of major school building components

2.105 There is no central database providing a comprehensive listing of all school facilities and major facility components (roof, heating and ventilation, windows and doors, exterior walls, etc.). Instead, there are two separate databases containing limited data related to facility components. They are:

- School Physical Plant Database (SPPD) which lists pending and future capital needs. It is a primary tool used to develop capital improvement project requests, but not considered by school districts as an exhaustive list of all capital needs at schools.
- Maintenance Prevention & Control (MPC) is a system for minor repair work orders which includes some maintenance schedules. It contains listings of facility component data but is considered incomplete and has not been consistently updated to reflect the current asset inventory.

2.106 Although they contain useful information, the two databases are incomplete and do not capture all necessary facility information. It would be difficult to convert these into a centralized asset inventory with complete data for all school facilities in the Province.

We believe the Department, as asset owner, is responsible for developing and maintaining centralized capital asset database

2.107 School districts we interviewed expressed interest in a centralized asset inventory; however, they are concerned about the resources required to update and maintain such a database. Currently, there is no standard approach for school districts to follow to collect facility data across the Province. We believe the Department, as the asset owner, is responsible for taking the leadership role to develop and maintain a centralized asset database. School districts can be involved in assessing asset conditions and collecting facility data.

Incomplete and unreliable data used in capital improvement project planning process for projects identified by school districts

2.108 Certain elements of facility data exist at school districts. However, this is not sufficient or reliable enough to inform the capital improvement project planning processes. We found the following basic facility data regarding major asset components such as windows and doors, heating and ventilation systems, etc. was either unavailable or incomplete:

- in-service date;
- estimated useful life;
- purchase/historical cost; and
- replacement cost.

Risk of knowledge loss due to lack of documentation at school districts

2.109 The school districts we interviewed identified much of the information used to inform asset management decision-making is based on the undocumented knowledge of current facilities staff. There is a risk this knowledge will be lost if these individuals were to leave their current roles.

School districts do not adequately document school facility condition

2.110 We found school districts do not adequately document facility condition to inform asset management planning. Asset condition data will provide a better estimate of the remaining useful life of asset components compared to age-based estimates and can optimize rehabilitation and replacement planning.

Changing facility conditions not documented in visual inspections by district staff

2.111 Visual inspections are completed by facilities staff and sometimes sub-contractors, but school facility condition is not documented. Only deficiencies are identified. School districts can regularly monitor changing asset condition of facility components to inform capital planning processes. This can be achieved through a combination of cursory assessments that can be performed by facility staff in addition to a more in-depth assessments to determine the condition of technical facility components. A cursory condition assessment criterion may be as simple as a 1-5 rating, 1 being “*very good*” and 5 being “*very poor*”.

2.112 School districts we interviewed indicated, when capital projects are completed, the Department provides them with insufficient details on facility components that have been installed or rehabilitated. Such details are required to support asset management planning and lifecycle cost analysis.

2.113 Accurate and reliable data on current school conditions allows the asset owner to determine the current state of repair of assets and inform lifecycle management strategies that result in the lowest total cost of ownership. Regular and consistent assessment of asset condition is critical to determining short, medium and long-term capital needs. Out-of-date or incomplete facility condition data may result in inconsistent and subjective asset management decisions.

2.114 The effectiveness of asset management planning to support evidence-based decisions is highly dependent on the availability, accuracy, and reliability of asset data. Without such data, there is a limit to the depth and breadth of analysis possible. Consequently, there is a risk of key stakeholders having a low level of confidence in the accuracy, reliability and fairness of asset management decision-making at the Department. To maintain the confidence of stakeholders and ensure proper asset management planning is based on accurate and reliable information, asset data must be gathered, managed, and stored systematically by the Department.

2.115 In collaboration with the province's school boards, the Ministry of Education of Quebec decided to implement an asset management system, as the Quebec school boards have been faced with such similar issues in New Brunswick as aging building stock, limited financial resources and the risks of knowledge loss.

Recommendation

2.116 We recommend the Department, in consultation with school districts, develop and maintain a centralized asset inventory that contains details of all major facility components to support the Department's capital planning.

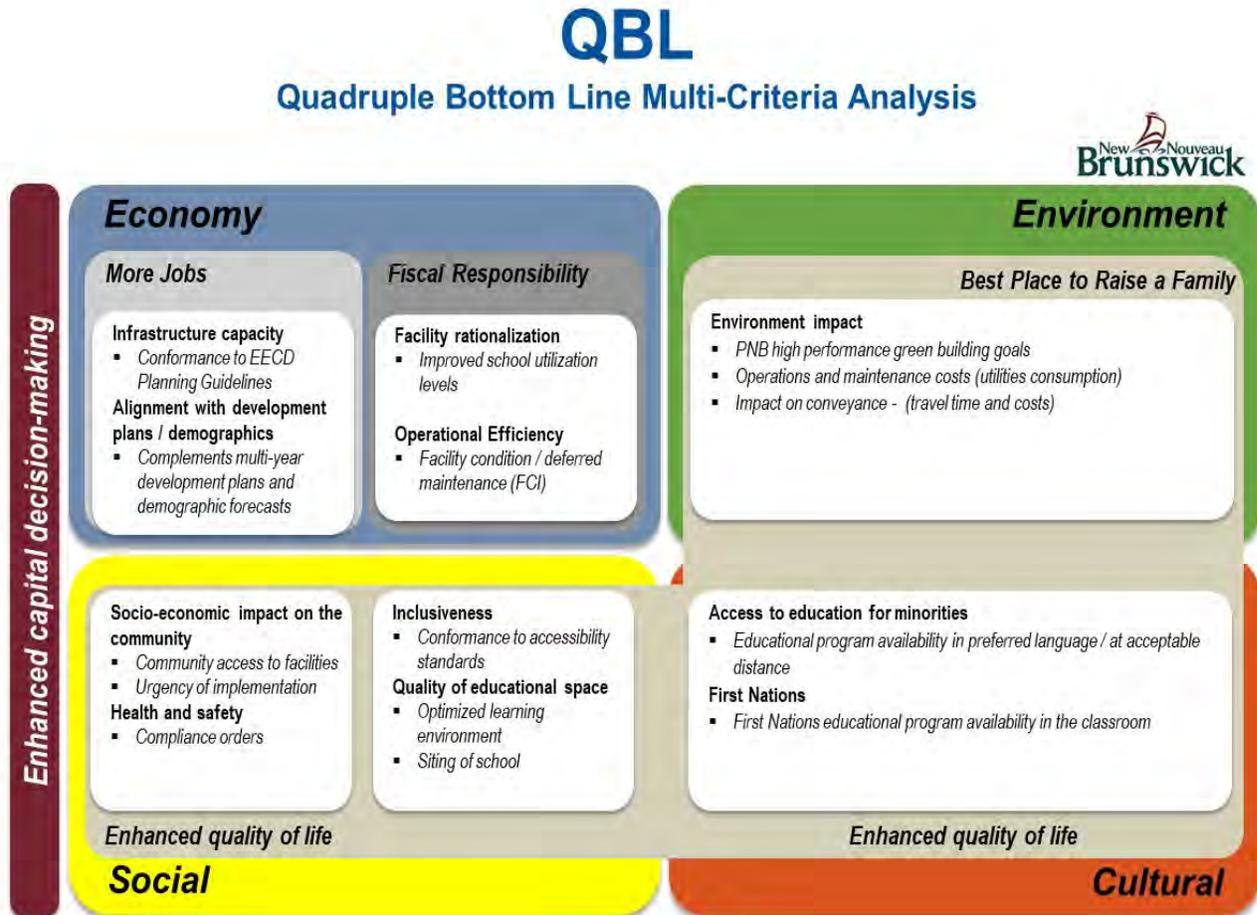
Recommendation

2.117 We recommend the Department develop and enforce data collection standards and requirements for the uniform collection and aggregation of facility data across all school districts.

Appendix I – A Brief Description of Quadruple Bottom Line Multi-Criteria Analysis (QBL)

There are two versions of QBL in this appendix. The first was the one we audited. The Department updated it in December 2019. We presented it in this appendix as a reference.

The version we audited:



Appendix I – A Brief Description of Quadruple Bottom Line Multi-Criteria Analysis (QBL) (continued)

Department Education and Early Childhood Development	
Enhanced Capital Decision Framework (Quadruple Bottom Line Multi-Criteria Analysis)	
Definitions	
Quadruple bottom line (QBL)	<p>QBL is a methodology for assessing the impact of a project against key objectives, in this case those established by the province of New Brunswick. The EECD provincial QBL includes the following four quadrants:</p> <ul style="list-style-type: none"> > Economic > Environment > Social > Cultural
Multi-criteria analysis (MCA)	A process by which projects are analysed against a common set of criteria with a weighted scoring system to consistently determine project priorities. Scoring for indicators should be reviewed annually.
Criteria	A significant impact or effect that supports EECD and/or provincial objectives relative to EECD major capital projects. Criteria should be applicable to the majority of major capital projects regardless of type.
Indicators	<p>How the effect of criteria is determined or measured.</p> <p>Note – not all criteria will have measureable indicators / some may be subjective. All criteria will have at least one indicator.</p>
Weight	Indicators are attributed a weighting factor with the sum total equaling 100 for all the indicators. The weighting factor for criteria is equal to the sum of the weighting factors for applicable indicators. Indicator weights were established through consultation with district and EECD representatives.
Indicator scores	When assessing a project, each indicator is scored on a scale of -5 to +5 (very negative to very positive) based on the project effect or impact on the respective indicator.
Weighted scores	Weighted scores are determined by multiplying the indicator weighting by the indicator score. The sum of the weighted indicator scoring is the final project score.
Project types	
New schools	Projects submitted to accommodate growth and/or support cultural diversity. These projects may include major additions where required to meet pedagogical demand.
Rationalization	Projects designed to optimize the provision of infrastructure to meet pedagogical needs. These could include the provision of a new school or improvements to existing infrastructure to accommodate amalgamations.
Replacements	Projects where a new school is more cost effective than refurbishment of existing assets due to high levels of deferred maintenance.
Mid-life upgrades	Projects to extend the useful life of signature schools through capital refurbishment.

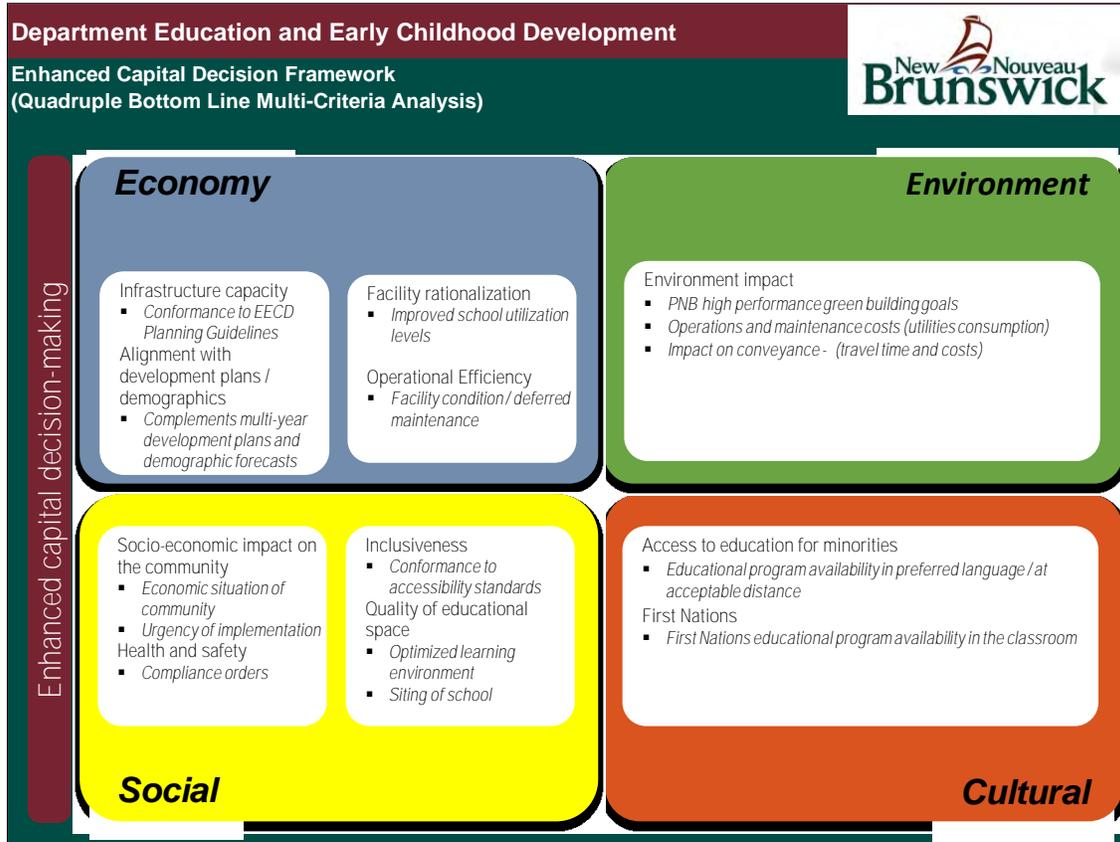
Appendix I – A Brief Description of Quadruple Bottom Line Multi-Criteria Analysis (QBL) (continued)

School Addition Project Example						
Department Education and Early Childhood Development						
Enhanced Capital Decision Framework (Quadruple Bottom Line Multi-Criteria Analysis)						
QBL MCA MERGED Anglo / Franco Draft Matrix Scoring Chart						
OBL	Provincial Objective	Criteria	Indicator Weight	Indicators	Score	Scoring Comments
Economy Indicator Weighting = 40	More Jobs Indicator Weighting = 20	Infrastructure capacity to meet educational program needs	15	Space / site conformance to EECD Planning Guidelines	5	0
		Alignment with regional / local development plans and demographics	5	Complements multi-year development plans / demographic forecasts	3	
	Fiscal Responsibility Indicator Weighting = 20	Facility rationalization	7	Improved school utilization levels	0	
		Operational Efficiency	13	Facility condition / deferred maintenance (FCI)	0	
Environment Indicator Weighting = 16		Environment Impact	7	PNB high performance green building goals	3	
			5	Operations and Maintenance costs (utilities consumption)	3	
			4	Impact on conveyance - (travel time and costs)	0	
Social Indicator Weighting = 36	Best Place to Raise a Family Indicator Weighting = 60	Socio-economic impact on the community	5	Community access to facilities (considering joint use partnerships)	0	
			5	Urgency of implementation	0	
		Health and safety	10	Compliance Orders from WorkSafe NB, Fire Marshall, Public Health, Elevator, etc	0	
		Inclusiveness	5	Conformance to accessibility standards	0	
		Quality of Educational Space	5	Optimized learning environment	3	
			6	Siting of school (considering outdoor air quality, neighbouring uses, traffic, etc).	0	
Cultural Indicator Weighting = 8		Access to education for minorities	6	Educational program availability in preferred language / at acceptable distance (in support of cultural diversity)	3	
		First Nations	2	First Nations educational program availability in the classroom	0	
100					Total project score 159	



Appendix I – A Brief Description of Quadruple Bottom Line Multi-Criteria Analysis (QBL) (continued)

The updated version completed by the Department in December 2019:



Appendix I – A Brief Description of Quadruple Bottom Line Multi-Criteria Analysis (QBL) (continued)

Department Education and Early Childhood Development	
Enhanced Capital Decision Framework (Quadruple Bottom Line Multi-Criteria Analysis)	
Definitions	
Quadruple bottom line (QBL)	<p>QBL is a methodology for assessing the impact of a project against key objectives, in this case those established by the Department of Education and Early Childhood Development in partnership with the school districts. The EECD provincial QBL includes the following four quadrants:</p> <ul style="list-style-type: none"> > Economic > Environment > Social > Cultural
Multi-criteria analysis (MCA)	A process by which projects are analysed against a common set of criteria with a weighted evaluation system to consistently determine project priorities. Indicators should be reviewed annually.
Tier-1 Project	Tier 1 projects will have top priority for funding and approvals. They are identified as those having significant space deficiencies when compared to EECD Planning Guidelines. Project rankings within Tier 1 are based upon the number of teaching platforms missing, demographic trends, and district priority.
Tier-2 Project	Tier 2 projects are projects which do not have significant space deficiencies when compared to EECD Planning Guidelines. Project rankings within Tier 2 are based upon assessment of the 15 QBL indicators.
Criteria	A significant impact or effect that supports EECD and/or provincial objectives relative to EECD major capital projects. Criteria should be applicable to the majority of major capital projects regardless of type.
Indicators	<p>How the effect of criteria is determined or measured. All criteria will have at least one indicator.</p> <p>When assessing a project, each indicator is evaluated to determine the positive or negative impact on the criteria</p> <p>Indicators are attributed a weighting factor with the sum total equaling 100 for all the indicators. Indicator weights were established through consultation with school district and EECD representatives.</p> <p>Weighted assessment is determined by multiplying each indicator's weight by its assessment. The sum of the weighted assessments equates to total project assessment.</p>
Project types	
New schools / Additions	Projects submitted to accommodate growth and/or support cultural diversity. These projects may include major additions where required to meet pedagogical demand.
Rationalization	Projects designed to optimize the provision of infrastructure to meet pedagogical needs. These could include the provision of a new school or improvements to existing infrastructure to accommodate amalgamations.
Replacements	Projects where a new school is more cost effective than refurbishment of existing assets due to high levels of deferred maintenance.
Mid-life upgrades	Projects intended to extend the useful life of a school through capital refurbishment.

Appendix I – A Brief Description of Quadruple Bottom Line Multi-Criteria Analysis (QBL) (continued)

Department Education and Early Childhood Development					
Enhanced Capital Decision Framework (Quadruple Bottom Line Multi-Criteria Analysis)					
Tier one project? Y/N					
QBL	Criteria	Indicators	Assessment	Comments	Weighted Assessment
Economy	Infrastructure capacity to meet educational program needs	Space / site conformance to EECD Planning Guidelines			
	Alignment with regional / local development plans and demographics	Complements multi-year development plans / demographic forecasts			
	Facility rationalization	Improved school utilization levels			
	Operational Efficiency	Facility condition / deferred maintenance			
Environment	Environment Impact	PNB high performance green building goals			
		Operations and Maintenance costs (utilities consumption)			
		Impact on conveyance - (travel time and costs)			
Social	Socio-economic impact on the community	Economic situation of community			
		Urgency of implementation			
	Health and safety	Compliance Orders from WorkSafe NB, Public Safety, Public Health, etc.			
	Inclusiveness	Conformance to accessibility standards			
	Quality of Educational Space	Optimized learning environment			
Siting of school (considering outdoor air quality, neighbouring uses, traffic, etc).					
Cultural	Access to education for minorities	Educational program availability in preferred language / at acceptable distance (in support of cultural diversity)			
	First Nations	First Nations educational program availability in the classroom			
Total Project Assessment					

Source: The Department

Appendix II – Audit Objectives and Criteria

The objective and criteria for our audit of the school infrastructure planning are presented below. The Department of Education and Early Childhood Development and all seven school districts reviewed and agreed with the objective and associated criteria.

Objective	<p>To determine whether the Department of Education and Early Childhood Development and school districts are making evidence-based decisions for prioritizing:</p> <ul style="list-style-type: none"> • major capital projects for school infrastructure (greater than \$1 million); and • capital improvement projects for existing school infrastructure (\$10,000 to \$1 million).
Criteria	<p>The Department should:</p> <ul style="list-style-type: none"> • Implement a provincial wide long-term capital plan for the provincial school system • Establish criteria to prioritize capital asset needs and approve capital asset projects that meet priority needs and supported by evidence • Establish lifecycle decision making process • Have a plan to address the deferred maintenance issues • Set goals and evaluate its capital plan against the goals (e.g., capacity utilization, physical condition of buildings, and reduction of deferred maintenance) • Publicly report the conditions of school buildings <p>The school districts should:</p> <ul style="list-style-type: none"> • Consistently collect accurate and complete building condition information and monitor condition • Prioritize major capital and capital improvement projects, based on evidence and consideration of life cycle costs • Comply with the Multi-year School Infrastructure Planning Policy established by the Department

Source of Criteria: Developed by AGNB based on International Infrastructure Management Manual, similar audits conducted by other Auditor General Offices, and SORP 3 by CPA Canada

Appendix III – About the Audit

This independent assurance report was prepared by the Office of the Auditor General of New Brunswick on the Department of Education and Early Childhood Development and the school districts on School Infrastructure Planning. Our responsibility was to provide objective information, advice, and assurance to assist the Legislative Assembly in its scrutiny of the Department of Education and Early Childhood Development and the school districts on school infrastructure planning practices.

All work in this audit was performed to a reasonable 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 audit work, we have complied with the independence and other ethical requirements of the Rules of Professional Conduct of Chartered Professional Accountants of New Brunswick and the Code 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 accordance with our regular audit process, we obtained the following from management:

- confirmation of management’s responsibility for the subject under audit;
- acknowledgement of the suitability of the criteria used in the audit;
- confirmation that all known information that has been requested, or that could affect the findings or audit conclusion, has been provided; and
- confirmation that the findings in this report are factually based.

Period covered by the audit:

The audit covered the period between 2015 and 2019. This is the period to which the audit conclusion applies. However, to gain a more complete understanding of the subject matter of the audit, we also examined certain matters that preceded the starting date of the audit.

Date of the report:

We obtained sufficient and appropriate audit evidence on which to base our conclusion on August 17, 2020 in Fredericton, New Brunswick.

Appendix IV – Detailed listing of QBL Indicators requiring improvement

Indicator 4 (Facility Condition – FCI) uses industry standard Facility Condition Index determine a score. Worse condition results in higher score. However, the QBL augments the industry standard by factoring in the age of the asset. This unique methodology improperly limits the facilities that are not too old but with worst condition to achieve highest score.

Indicator 6 (Utilities Consumption) automatically awards new school projects with a maximum score, regardless of the total utilities cost. The indicator states “Projects which reduce utilities consumption will score higher with this indicator”. While this indicator may be attempting to address advancements in efficiencies and design by awarding a maximum score, this presents a possible double counting with Indicator 5 (High performance and green building goals) which awards new schools a maximum score based on the assumption that the latest energy efficiency designs would be used in the new school.

Indicator 9 (Urgency of Implementation) deals with the level of urgency required for the project's completion. The project score is determined by an assessment of the wait time (since the project was first submitted by the district to the Department), or by the need for additional education space (determined by the ratio of mobiles to classrooms). This indicator ranks projects higher when the wait time has been longer or the ratio of mobile units to classrooms is higher. Within interviews with the Department, staff explained that any project that is prioritized by the school district as their number one project automatically receives a score of 3 regardless of the criteria of the project. This supersedes the indicator definition and improperly scores projects based on subjective measures.

Indicator 14 and 15 (cultural indicators) is designed to protect each linguistic group, its cultural identity and community. Projects will be assessed on the extent of improvement in educational program availability for minority communities. However, minority statistics are not confirmed or validated during the QBL assessment unless specifically addressed by the school district or previously known to the Department.

First Nation program availability is not assessed through the QBL in a quantitative manner. Definitions of “significant” or “moderate” impact are not provided thus resulting in a subjective assessment of the impact the project would have on first nation students.

Appendix V – QBL Indicator 2 - Complements multi-year development plans / demographic forecasts

Upon the conclusion of our presentation of findings and discussion of the report with the EECD, additional information related to the use of enrollment trend data was brought to our attention. This appendix serves as a summary of that discussion and the introduction of a finding on how they can improve Indicator 2 within the QBL assessment tool using improved mathematical formulas.

QBL Indicator 2 is designed to score student enrolment growth trends that allows for “improved alignment of the infrastructure to multi-year community development plans and rural/urban demographic forecasts.” By including this metric, the province can better plan for major capital projects based on changes in enrolment trends. The indicator is designed to use a 5-year average enrolment trend and provide a score based on that trend and project type.

From the discussion with the EECD, it was determined that the department was using the following formula to calculate enrolment over the 5-year assessment period.

$$\frac{[(Year\ 5 - Year\ 1)]}{5}$$

This above methodology produces the total average change in enrolment and incorporates the annual average based on the total change into the QBL score.

Difficulties arise in the calculation method as it does not account for changes in enrolment for any years in-between year 5 and year 1 as identified in the example below.

	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	EECD Methodology
Grand Bay Primary School	103	110	102	111	117	
Morna Heights School	106	102	97	78	68	
Inglewood School	82	64	62	52	79	
Total	291	276	261	241	264	$(264-291)/291/5 = -1.86\%$

We believe a simple moving average method is more appropriate:

$$\frac{\sum \frac{(Year\ 2 - Year\ 1)}{Year\ 1} + \frac{(Year\ 3 - Year\ 2)}{Year\ 2} + \dots + \frac{(Year\ N - Year\ N - 1)}{Year\ N - 1}}{N - 1}$$

By switching to this new method, the EECD can ensure that enrolment projections consider change in data from each period. The simple moving average approach also reduces the impact of outliers (e.g. anomaly in one period), improves accuracy and reasonableness in forecasting, and improves equity in decision making. However, should the EECD not incorporate the suggested method, there is a risk that projects may receive inaccurate scores within the QBL.

The example on next page displays the difference in the calculated enrolment trend between the EECD’s methodology and the proposed simple moving average approach.

Appendix V – QBL Indicator 2 - Complements multi-year development plans / demographic forecasts (continued)

	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	EECD Methodology	Simple Moving Average
Inglewood School	82	64	62	52	79	-0.73%	2.68%

Using the QBL scoring matrix below, the Inglewood School would receive a 0 score for enrolment trends using the current methodology. However, by using the suggested moving average approach, the school would receive a score of 3 (or -3 if proposed project was a rationalization). Where this indicator has a weighting of 5 points, this would cause a 15-point swing to the overall project score.

Forecasted student population change (decline is negative)	New school or Addition	Rationalization	Replacement (for deferred maintenance)	Mid-life upgrade
Significant decline (-4.1% or greater)	-5	5	-5	-5
Moderate decline (-2.0% to -4.0%)	-3	3	-3	-3
Neutral (+1.9% to -1.9%)	0	0	0	0
Moderate growth (2% to 4.0%)	3	-3	3	3
Significant growth (4.1% or greater)	5	-5	5	5

Appendix VI – Repair and Maintenance Payments to Public Private Partnership Schools from 2015 to 2019

School	Repair & Maintenance Payment (thousand \$)				
	2015	2016	2017	2018	2019
Evergreen	\$336	\$340	\$344	\$348	\$353
Leo Hayes	532	538	544	550	556
Northrup Frye	1,116	1,125	1,146	1,171	1,188
Eleanor Graham	1,116	1,113	1,134	1,163	1,180
Total	\$3,100	\$3,116	\$3,168	\$3,232	\$3,277

Chapter 3

Department of Health & EM/ANB Inc. - Ambulance Services

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Ambulance Services – Department of Health & EM/ANB Inc.

Report of the Auditor General – Volume I, Chapter 3 - August 2020

Why Is This Important?

- Quality of ambulance services matters because health outcomes could be impacted in life or death situations.
- Management of the provincial ambulance service has been contracted to the private sector, including responsibility for a \$110 million annual budget.
- Management fees paid to the private sector contractor, Medavie Health Services New Brunswick (MHSNB), averaged \$3.2 million annually and exceeded \$38 million over 12 years.

Overall Conclusions

- The legislative framework and governance structure chosen by government does not provide sufficient oversight of ambulance services due to numerous inherent conflicts and requires significant improvement.
- Poorly structured contract allowed for questionable payments for paramedic vacancies. This in turn created a disincentive for Medavie Health Services New Brunswick to fix significant operational challenges.
- Contract allowed invalid and excessive use of exemptions, which made 911 response time results inaccurate.

What We Found

Weak Governance and Control Structure

- The CEO position of EM/ANB combined with the role as President of Medavie Health Services New Brunswick (MHSNB) creates a conflict of interest
- Board composition inhibits independence from the Department of Health
- EM/ANB lacks enabling legislation and its mandate is unclear
- EM/ANB is not subject to the *Conflict of Interest Act*
- Conflicts of interest exist with no repercussions
- Contract design compromises the board's influence over its own CEO
- MHSNB employees may be inclined to develop EM/ANB's strategies toward maximizing MHSNB's financial award

Contract Allowed Questionable Basis of Payments

- Paramedic shortages created over \$8 million in payments to MHSNB, providing an incentive to maintain low staffing levels
- EM/ANB's method for budgeting payroll provided the means for questionable payments to MHSNB

Contract Allowed Excessive Use of Exemptions & Ambiguous Performance Measures

- Method of performance measurement put rural and remote communities at a disadvantage
- Contract allowed excessive use of full deployment exemptions, which caused an overstatement of response time performance
- Contract allowed exemptions when actual cause of delay was distance, out-of-service units and driver error

Key Findings and Observations Table

Ambulance Services – Department of Health & EM/ANB Inc.

Paragraph	Key Findings and Observations
	Governance, Independence and Accountability
3.46	<i>EM/ANB lacks enabling legislation and its mandate is unclear</i>
3.49	<i>Ambulance Services Act missing important governance components</i>
3.50	<i>Overall direction for ambulance services lacks clarity</i>
3.52	<i>Board composition created a complex management relationship</i>
3.53	<i>Board composition inhibits independence</i>
3.55	<i>Conflicts of interest may prevent board from acting in best interests of EM/ANB</i>
3.57	<i>Board fails to recognize and mitigate conflicts of interest</i>
3.59	<i>Despite conflicts of interest, board members did not recuse themselves from decision-making process</i>
3.60	<i>Risk of board members not acting in best interests of EM/ANB went unmitigated</i>
3.62	<i>Contract compromised the board's influence over its CEO</i>
3.64	<i>Not possible for the board to select a CEO</i>
3.65	<i>Unlikely board members could vote objectively on the selection of CEO</i>
3.66	<i>Board does not have influence over compensation paid to CEO</i>
3.67	<i>Board does not evaluate performance of CEO</i>
3.69	<i>Lack of control calls into question board's influence over CEO</i>
3.72	<i>No evidence board challenged CEO's strategy for EM/ANB to ensure alignment with obligations to Department</i>
3.75	<i>Board does not regularly review annual plans of EM/ANB</i>
3.76	<i>Neglecting to review annual plans reduced effectiveness of board's decision-making</i>
3.79	<i>Board did not receive reports from Performance Management Oversight Advisory Committee after 2017</i>
3.85	<i>PMOAC did not follow up on information request to MHSNB</i>
3.88	<i>Board did not have sufficient information to effectively oversee contract</i>

Key Findings and Observations Table (Continued)

Paragraph	Key Findings and Observations
3.89	<i>Board does not request or receive information necessary to fully assess EM/ANB's performance</i>
3.92	<i>Lack of detail recorded in the board minutes</i>
	Contract Allowed Questionable Basis of Payments
3.96	<i>Paramedic shortages created over \$8 million in surplus payments to MHSNB, providing an incentive to maintain low staffing levels</i>
3.100	<i>Budgeted payroll costs used in payment calculation assumed full utilization of ambulances</i>
3.102	<i>Overbudgeted payroll costs provided means for questionable payments to MHSNB</i>
3.104	<i>The contract does not clearly define the performance expectations or restrictions related to budget surplus payments</i>
3.106	<i>Contract did not explicitly state how budget savings could be achieved</i>
3.107	<i>Lack of restrictions in the contract on targeted savings provided opportunity for MHSNB to neglect filling vacant positions</i>
3.109	<i>Department did not hold EM/ANB or MHSNB accountable for cost savings</i>
3.111	<i>Calculation for budget surplus payments did not explain how savings were achieved</i>
3.112	<i>Process eroded Department's ability to hold MHSNB accountable for achieving savings</i>
3.114	<i>Calculations of budget surplus payments were based on subjective factors</i>
3.118	<i>Adjustments further introduced subjectivity to the budget surplus payment calculation</i>
3.119	<i>Excluded expenses would have lowered surplus payments to MHSNB</i>
	Contract Allowed Excessive Use of Exemptions & Ambiguous Performance Measures
3.121	<i>Contractual requirement of continuous and uninterrupted service not well defined</i>
3.125	<i>Unclear what would constitute service interruption</i>
3.126	<i>Lack of clarity weakens ability of Department to hold EM/ANB accountable for maintaining service levels</i>
3.127	<i>Performance-based payments introduced a quality of service bias, detrimental to rural areas</i>
3.131	<i>19 of 67 communities fell below 90% performance expectation</i>

Key Findings and Observations Table (Continued)

Paragraph	Key Findings and Observations
3.132	<i>Communities' results below performance standard had no effect on performance-based payments to MHSNB</i>
3.133	<i>Performance-based payments introduced a bias toward achieving high performance in areas of greater population density</i>
3.134	<i>Performance measures put rural and remote communities at a disadvantage</i>
3.136	<i>Contract allowed excessive use of full deployment exemptions, which overstated response time performance results</i>
3.140	<i>Exemptions brought response rate from below 90% to exceed 92%</i>
3.141	<i>76% of exemptions were for full deployment</i>
3.143	<i>No limit on how frequently full deployment exemptions are claimed</i>
3.144	<i>Saint John and Moncton appear to have higher than daily use of full deployment exemptions</i>
3.145	<i>System Status Plan appeared to understate resource requirements</i>
3.148	<i>Number of paramedics required per the System Status Plan unchanged from original contract</i>
3.150	<i>Holding System Status Plan constant increased probability of full deployment exemptions</i>
3.151	<i>Excessive use of full deployment exemptions masked apparent severity of increasing call volumes</i>
3.154	<i>Overstatement of response time performance reported</i>
3.155	<i>Eliminating all full deployment exemptions from Saint John would have eliminated performance-based payments for South region</i>
3.157	<i>Contract allowed overuse of full deployment exemptions, which masked operational challenges at EM/ANB</i>
3.160	<i>No requirement to identify actual causes of response times which exceeded contract requirements</i>
3.161	<i>Full deployment exemptions were used for distance, out-of-service units and driver error</i>
3.162	<i>Full deployment exemptions reduced emphasis on areas of improvement</i>
3.164	<i>Dynamic Deployment left wide geographic areas uncovered</i>

Key Findings and Observations Table (Continued)

Paragraph	Key Findings and Observations
	Other Performance Management Weaknesses
3.165	<i>Corporate and strategic plans lack performance measures to demonstrate outcomes</i>
3.168	<i>No clear measure of effectiveness of completed initiatives</i>
3.170	<i>Few objectives related to contractual areas other than response times</i>
3.171	<i>KPIs failed to capture and measure operational challenges</i>
3.174	<i>No KPIs used for Official Languages Plan</i>
3.176	<i>Performance-based payments do not include KPIs related to human resources, despite effect of out-of-service units on operations</i>
3.178	<i>Duration of out-of-service units totalled over 95,000 hours</i>
3.179	<i>Out-of-service units not included as part of performance-based payments</i>
3.180	<i>KPIs do not capture opportunities for improvement</i>
3.181	<i>Hospital off-load delays require paramedic to remain with patient</i>
3.182	<i>82% of arrivals at the four major hospitals had off-load delays exceeding 25 minutes.</i>
3.185	<i>Most KPIs did not include progressive targets</i>
3.186	<i>Contractual performance indicators remained largely unchanged</i>
3.188	<i>10-year contract term makes it difficult for Department to adjust service level expectations</i>
3.189	<i>No mechanism for parties to set new performance targets</i>
	Other Conflicts of Interest
3.195	<i>CEO position of EM/ANB combined with the role as President of MHSNB creates a conflict of interest</i>
3.197	<i>CEO would be inclined to act in interests of their employer, MHSNB</i>
3.198	<i>Corporate strategy for EM/ANB was drafted by employees of MHSNB</i>
3.199	<i>MHSNB's employees may be inclined to develop EM/ANB's strategies toward maximizing MHSNB's financial award</i>
3.200	<i>EM/ANB is not subject to the Conflict of Interest Act</i>
3.202	<i>EM/ANB is not listed in Schedule A of the Act's regulations</i>
3.205	<i>Conflict of interest existed with no repercussions</i>

Recommendations and Responses

Recommendation	Department's response	Target date for implementation
We recommend:		
<p>3.51 The Department formalize the mandate and governance for EM/ANB in legislation and provide mandate letters to EM/ANB with the annual budget approval.</p>	<p><i>The Department of Health will explore legislative options to reinforce oversight, accountability and governance of ambulance services.</i></p> <p><i>EM/ANB currently operates as a not-for-profit corporation under the New Brunswick Companies Act and its operation of land and air ambulance services are regulated by the Ambulance Services Act.</i></p> <p><i>EM/ANB's mandate is outlined within its bylaws as required by its current legislation and direction is provided to the organization by the Department of Health through a series of yearly budget letters.</i></p> <p><i>This legislative framework has been in place for 30 years to provide regulation and oversight to third-party ambulance providers.</i></p>	<p><i>Fiscal Year 2021-22</i></p>
<p>3.56 The board by-laws be amended to change the composition of the board to include members independent of the Department.</p>	<p><i>The Department of Health and EM/ANB agree with the recommendation.</i></p> <p><i>The addition of independent board members would increase transparency and oversight over the operations of EM/ANB. Changes to the composition of the board will be brought forward in the current fiscal year.</i></p>	<p><i>Fiscal Year 2020-21</i></p>

Recommendation	Department's response	Target date for implementation
We recommend:		
3.61 The board enforce its conflict of interest policy and periodically review the effectiveness of the policy in mitigating conflict of interest risk.	<p><i>The Department of Health and EM/ANB agrees with the recommendation.</i></p> <p><i>The current by-laws and Conflict of Interest policy denotes that members must declare a conflict of interest on any matter before the board and cannot participate in discussions and/or votes on the matter.</i></p> <p><i>The Board will continue to have Declaration of Conflict of Interest as a standing agenda item for meetings of the board and its committees and ensure adequate documentation where applicable.</i></p> <p><i>The Conflict of Interest Policy will be reviewed regularly as part of regular policy review within the board process.</i></p>	<i>Immediately</i>
3.70 EM/ANB enabling legislation strengthen and clarify board authority with respect to hiring, compensation, performance and termination of the CEO.	<i>The Department of Health will assess this recommendation in the context of its review of the governance structure and legislative oversight model.</i>	<i>Fiscal Year 2021-22</i>
3.71 The board hire an independent CEO upon future contractual amendment or renegotiation.	<i>The Department of Health will assess this recommendation in the context of its review of the governance structure and legislative oversight model.</i>	<i>Fiscal Year 2021-22</i>

Recommendation	Department’s response	Target date for implementation
We recommend:		
<p>3.77 The board evaluate EM/ANB’s annual corporate plans as part of its review of the CEO and MHSNB’s performance and compare them to EM/ANB’s annual report and obligations to the Department.</p>	<p><i>The Board of EM/ANB agrees with this recommendation.</i></p> <p><i>The Board currently reviews EM/ANB’s annual corporate plan and received quarterly reports from the CEO on the progress of initiatives against its objectives.</i></p> <p><i>MHSNB’s performance is measured against both contractual key performance indicators and as well as a broader suite of indicators that measure health and safety outcomes.</i></p> <p><i>The Board of EM/ANB will ensure that these processes are better documented through the board minutes.</i></p>	<p><i>Fiscal Year 2020-21</i></p>
<p>3.78 The board establish a performance management framework for EM/ANB and evaluate its performance annually.</p>	<p><i>The Board of EM/ANB agrees with this recommendation.</i></p> <p><i>On a quarterly basis, the committees of the board (Finance and Performance, Quality and Patient Safety, Medical and Professional Advisory) report on quarterly financial, operational and clinical outcomes from EM/ANB.</i></p> <p><i>The Board and its committees will continue efforts to enhance this performance management framework.</i></p>	<p><i>Fiscal Year 2020-21</i></p>

Recommendation	Department's response	Target date for implementation
We recommend:		
<p>3.94 The terms of reference of each standing committee require an annual written report to the Board of Directors to demonstrate the sub-committees are operating as intended.</p>	<p><i>The Board of EM/ANB agrees with the recommendation.</i></p> <p><i>The standing committees currently provide written reports to the Board at each quarterly meeting. The terms of reference of the committees will be modified to instruct an annual report in the last quarter of the fiscal year.</i></p>	<p><i>Fiscal Year 2020-21</i></p>
<p>3.95 The board improve its recording of minutes to increase transparency.</p>	<p><i>The Board of EM/ANB agrees with the recommendation.</i></p> <p><i>Board minutes will be expanded to capture additional information as it pertains to its review of documentation emanating from its committees.</i></p>	<p><i>Immediately</i></p>
<p>3.103 EM/ANB calculate budget surplus payments based on flexible budget amounts which reflect the anticipated spending for the fiscal year.</p>	<p><i>The Department of Health and EM/ANB agrees with the intent of this recommendation which ensure that the yearly budget better reflects actual costs of operating ambulance services.</i></p> <p><i>Such an amendment to the third-party management contract would be considered in the context of a future renegotiation of the agreement.</i></p>	<p><i>Fiscal Year 2021-22</i></p>

Recommendation	Department’s response	Target date for implementation
We recommend:		
<p>3.108 The board define restrictions around budget surplus payments to exclude circumstances which may decrease the quality of the delivery of ambulance services.</p>	<p><i>The Department of Health and EM/ANB agrees with the intent of this recommendation to remove any financial incentives that might lead to a decrease quality or safety of care.</i></p> <p><i>As an example, the contract which governs the Extra-Mural Program excludes clinical savings from the cost-sharing formula. This could potentially serve as a model to renew the ambulance services contract.</i></p> <p><i>Such an amendment to the third-party management contract would be considered in the context of a future renegotiation of the agreement.</i></p>	<p><i>Fiscal Year 2021-22</i></p>
<p>3.113 The board ensure EM/ANB or MHSNB substantiate how savings are achieved to demonstrate the value provided through cost savings claimed under the contract for ambulance services.</p>	<p><i>The Department of Health and EM/ANB agree with this recommendation.</i></p> <p><i>Currently, both parties receive regular financial reports from EM/ANB detailing actuals against budget and are aware of where savings are being made.</i></p> <p><i>The Board of EM/ANB will request additional information on variances through its Finance and Performance Committee to ensure that these are substantiated on the public record.</i></p>	<p><i>Fiscal Year 2020-21</i></p>

Recommendation	Department's response	Target date for implementation
We recommend:		
<p>3.135 EM/ANB introduce a more balanced suite of key performance indicators as the basis for performance-based payments to incentivise MHSNB toward high performance in all New Brunswick communities.</p>	<p><i>The Department of Health and the Board of EM/ANB agree with this recommendation.</i></p> <p><i>EM/ANB currently publishes actual performance at the community-level monthly to ensure transparency. The Board of EM/ANB will explore pay-for-performance models that would ensure a minimum standard exists across the province below which there would be financial implications for the third-party manager.</i></p> <p><i>Such an amendment to the third-party management contract would be considered in the context of a future renegotiation of the agreement.</i></p>	<p><i>Fiscal Year 2021-22</i></p>
<p>3.152 The Department and EM/ANB introduce controls to minimize the frequency of use of full deployment exemptions or discontinue the use of exemptions.</p>	<p><i>The Department and the Board of EM/AMB agree with this recommendation.</i></p> <p><i>Current exemptions have been in place since the inception of this contract to ensure that the third-party manager is only held responsible for events which it can control. Full deployment exemptions are often linked to lack of human resources which can be attributed in part to the third-party's ability to recruit and retain personnel.</i></p> <p><i>The elimination, or reduction of allowable exemptions would be considered in the context of a future renegotiation of the agreement.</i></p>	<p><i>Fiscal Year 2021-22</i></p>

Recommendation	Department's response	Target date for implementation
We recommend:		
<p>3.153 The EM/ANB board require MHSNB revise the System Status Plan to update the detailed specifications as to the ambulances, facilities and human resources required to be deployed to achieve performance standards.</p>	<p><i>The Department and the Board of EM/AMB agree with this recommendation.</i></p> <p><i>The Board of EM/ANB will undertake a review of the System Status Plan to ensure that response times are maintained at an acceptable level in all New Brunswick communities.</i></p>	<p><i>Fiscal Year 2021-22</i></p>
<p>3.163 The Department and EM/ANB revise the exemption approval guide to prevent the invalid use of full deployment exemptions or discontinue the use of exemptions.</p>	<p><i>The Department and the Board of EM/AMB agree with this recommendation.</i></p> <p><i>Current exemptions have been in place since the inception of this contract to ensure that the third-party manager is only held responsible for events which it can control. Full deployment exemptions are often linked to lack of human resources which can be attributed in part to the third-party's ability to recruit and retain personnel.</i></p> <p><i>The elimination, or reduction of allowable exemptions would be considered in the context of a future renegotiation of the agreement.</i></p>	<p><i>Fiscal Year 2021-22</i></p>

Recommendation	Department's response	Target date for implementation
We recommend:		
<p>3.191 The board implement progressive performance targets to incentivize MHSNB to achieve continuous improvement for the duration of the contract.</p>	<p><i>The Department and the Board of EM/AMB agree with this recommendation.</i></p> <p><i>The third-party contract for the management of the Extra-Mural Program includes progressive performance targets that are renewed or changed once full performance is achieved. This could serve as a model for changes to the ambulance services contract.</i></p> <p><i>Such an amendment to the third-party management contract would be considered in the context of a future renegotiation of the agreement.</i></p>	<p><i>Fiscal Year 2021-22</i></p>
<p>3.192 EM/ANB improve tracking, and follow-up of strategic and corporate initiatives and include measurable outcomes in its plans.</p>	<p><i>The Department and the Board of EM/ANB agree with this recommendation.</i></p> <p><i>The Board currently reviews EM/ANB's annual corporate and received ongoing reports from the CEO on the progress of initiatives.</i></p> <p><i>The Board will reinforce these processes and ensure they are better captured in documentation.</i></p>	<p><i>Fiscal year 2020-21</i></p>

Recommendation	Department’s response	Target date for implementation
We recommend:		
<p>3.193 The board expand key performance indicators for performance-based payments to include all areas of operations, such as human resources, fleet and official languages.</p>	<p><i>The Department and the Board of EM/ANB agree with this recommendation.</i></p> <p><i>These broader performance measures are already monitored through the board committees. They could be considered for inclusion within the contract to balance current efficiency and response time measures with quality and patient safety outcomes.</i></p> <p><i>Such an amendment to the third-party management contract would be considered in the context of a future renegotiation of the agreement.</i></p>	<p><i>Fiscal Year 2021-22</i></p>
<p>3.194 The Department coordinate with the Regional Health Authorities and EM/ANB to implement solutions to reduce the impact of off-load delays.</p>	<p><i>The Department and the Board of EM/ANB agrees with this recommendation.</i></p> <p><i>The Department of Health will direct the Regional Health Authorities and EM/ANB to define solutions to resolve the issue of offload delays which have a direct impact on ambulance response times in New Brunswick communities.</i></p> <p><i>This metric will continue to be tracked and reported on quarterly by the Board of EM/ANB as a priority.</i></p>	<p><i>Fiscal year 2020-21</i></p>

Recommendation	Department's response	Target date for implementation
We recommend:		
3.206 The Executive Council Office review the Conflict of Interest Regulation under the <i>Conflict of Interest Act</i> and amend the regulation to include all relevant Crown corporations in Schedule A, including EM/ANB Inc.	<i>There is concurrent statutory authority in the enabling legislation of many Crown corporations to develop their own conflict of interest by-laws and/or policies. Executive Council Office will explore a more consistent approach through a review of the Conflict of Interest Act and regulation.</i>	<i>Fall 2021</i>

Audit Introduction

3.1 Under the *Ambulance Services Act*, the Minister of Health is responsible for delivery of ambulance services. These services are provided through an ambulance services agreement (ambulance license) between the Department of Health (the Department) and EM/ANB Inc. (EM/ANB), formerly Ambulance New Brunswick Inc. EM/ANB, a Crown corporation, facilitates land and air ambulance services for the citizens of New Brunswick. EM/ANB has contracted the management of these services to Medavie Health Services New Brunswick Inc. (MHSNB), formerly New Brunswick EMS Inc., a private corporation and subsidiary of Medavie Inc.

3.2 The contract between EM/ANB and MHSNB provides the framework for delivery of ambulance services in New Brunswick. Amongst other contractual terms, EM/ANB and MHSNB are required to: “*assure continuous and uninterrupted Ambulance Service in the Province of New Brunswick*”¹. Consistent program delivery is critical to ensure New Brunswickers can use this essential service.

Why we chose this topic

3.3 We chose to audit ambulance services for the following reasons:

- the delivery of ambulance services is a critical component of the public health system for all citizens of New Brunswick;
- quality of ambulance services matters because health outcomes could be impacted in life or death situations;
- ambulance services are subject to a high level of public scrutiny;
- management of EM/ANB has been contracted to the private sector, including responsibility for its \$110 million annual budget; and
- Management fees paid to the private sector contractor, MHSNB, averaged \$3.2 million annually and exceeded \$38 million over 12 years.

¹ Ambulance Service Agreement between Ambulance New Brunswick Inc. and Medavie Health Services New Brunswick Inc.

Audit Objective

- 3.4** The objectives of this audit were to determine whether:
- The Department of Health’s governance structures and processes established for EM/ANB set a framework for effective oversight.
 - EM/ANB’s contract for ambulance services is designed and managed to achieve expected objectives.

Audit Scope

- 3.5** Our audit covered the Department of Health and EM/ANB’s administration of ambulance services. Our auditees were the Department of Health and EM/ANB; however, we collected audit evidence from MHSNB when deemed necessary. Through the duration of our audit, all parties involved were exceptionally accommodating and cooperative.
- 3.6** Our audit covered the period between April 1, 2017 and March 31, 2019. This is the period to which our audit conclusions apply. However, to gain a more complete understanding of the subject matter of our audit, we also examined certain matters that preceded the starting date of our audit. More details on audit objectives, criteria, scope and approach we used in completing our audit can be found in Appendix I and Appendix II.

Timeline and Subsequent Events

- 3.7** In January 2018, Ambulance New Brunswick accepted responsibility for the extra-mural nursing program in New Brunswick and became EM/ANB. Extra-mural services are beyond the scope of our audit.
- 3.8** In March 2020, EM/ANB was accredited with exemplary standing following an assessment by Accreditation Canada, a not-for-profit organization that provides accreditation for healthcare organizations across Canada. The scope of Accreditation Canada’s work focused on extra-mural services and included governance, which was also a focus of our audit. However, Accreditation Canada’s perspective did not appear to consider the relationships of EM/ANB to the Department of Health and Medavie Health Services New Brunswick. For the purposes of our audit, we did not place reliance on the content of Accreditation Canada’s final report.

3.9 A diagram of significant events which occurred during the ambulance services contracts can be found in Appendix III.

3.10 Details of subsequent events that occurred after our audit period of March 31, 2019 can be found in Appendix IV. We determined it is unlikely these events would substantially change our audit conclusions.

Definitions

3.11 A table of definitions can be found in Appendix V

Conclusions

3.12 We concluded:

- The legislative framework and governance structure chosen by government does not provide sufficient oversight of ambulance services due to conflicts of interest and requires significant improvement.
- Poorly structured contract allowed for questionable payments for paramedic vacancies. This in turn created a disincentive for Medavie Health Services New Brunswick to fix significant operational challenges.
- Contract allowed invalid and excessive use of exemptions, which made 911 response time results inaccurate and led to financial benefit for Medavie Health Service New Brunswick.

Background Information

3.13 The legal form of EM/ANB is a not-for-profit corporation under the *New Brunswick Companies Act*. Created in June 2007, EM/ANB has been delegated responsibility for delivery of ambulance services within New Brunswick. The creation of EM/ANB integrated the operations of 39 separate ambulance operators and 54 separate contracts into one central operation. As a result, EM/ANB became the employer of all paramedics in the New Brunswick.

3.14 According to EM/ANB's inaugural annual report in 2007/08, the centralization of New Brunswick's ambulance service had several advantages, including:

- enhancement of paramedic training to achieve standardized clinical skill levels;
- elimination of standby "on call" shifts and additional "on site" shifts;

- call taking and dispatch consolidation into one communications centre;
- new province-wide clinical protocols development;
- ambulances and clinical equipment standardization; and
- consistent performance expectations and measurement throughout the Province.

3.15 As per the *Ambulance Services Act*, EM/ANB is the responsibility of the Minister of Health. The Department issued the license to operate ambulances in New Brunswick to EM/ANB in December 2007. EM/ANB is governed by a board of directors comprised almost entirely of Department employees. We consider EM/ANB a Crown corporation for the following reasons:

- it is substantially funded through an operating grant provided by the Province;
- its employees are public servants under part III of government;
- it is included in the Province's public accounts as a controlled, consolidated entity of government; and
- its mandate letter, issued by the Minister of Health on November 29th, 2019, identified EM/ANB as a Crown corporation.

Contractual Responsibilities

3.16 The ambulance license outlines responsibilities of both the Minister and EM/ANB. The responsibilities of EM/ANB include:

- provide patient care and transportation services on a 24-hour basis, 365 days of the year, including but not limited to the geographic area of New Brunswick;
- retain such personnel as are required;
- ensure provision and maintenance of all assets required;
- collect and retain fees as established by the Minister; and

- prepare and submit to the Minister such reports, records and documents the Minister may require.

3.17 Under the ambulance license, responsibilities of the Minister include:

- plan, fund, regulate and monitor ambulance services;
- provide medical direction for ambulance services and establish medical protocols;
- participate in labour negotiations respecting employees of EM/ANB as required; and
- set fees for ambulance services.

3.18 EM/ANB initially entered into the contract with MHSNB in June 2007 for the management of ambulance services. The Chief Executive Officer (CEO) and executive management team of EM/ANB are employees of MHSNB, whose services are provided to EM/ANB under the contract. The CEO of EM/ANB is also President of MHSNB.

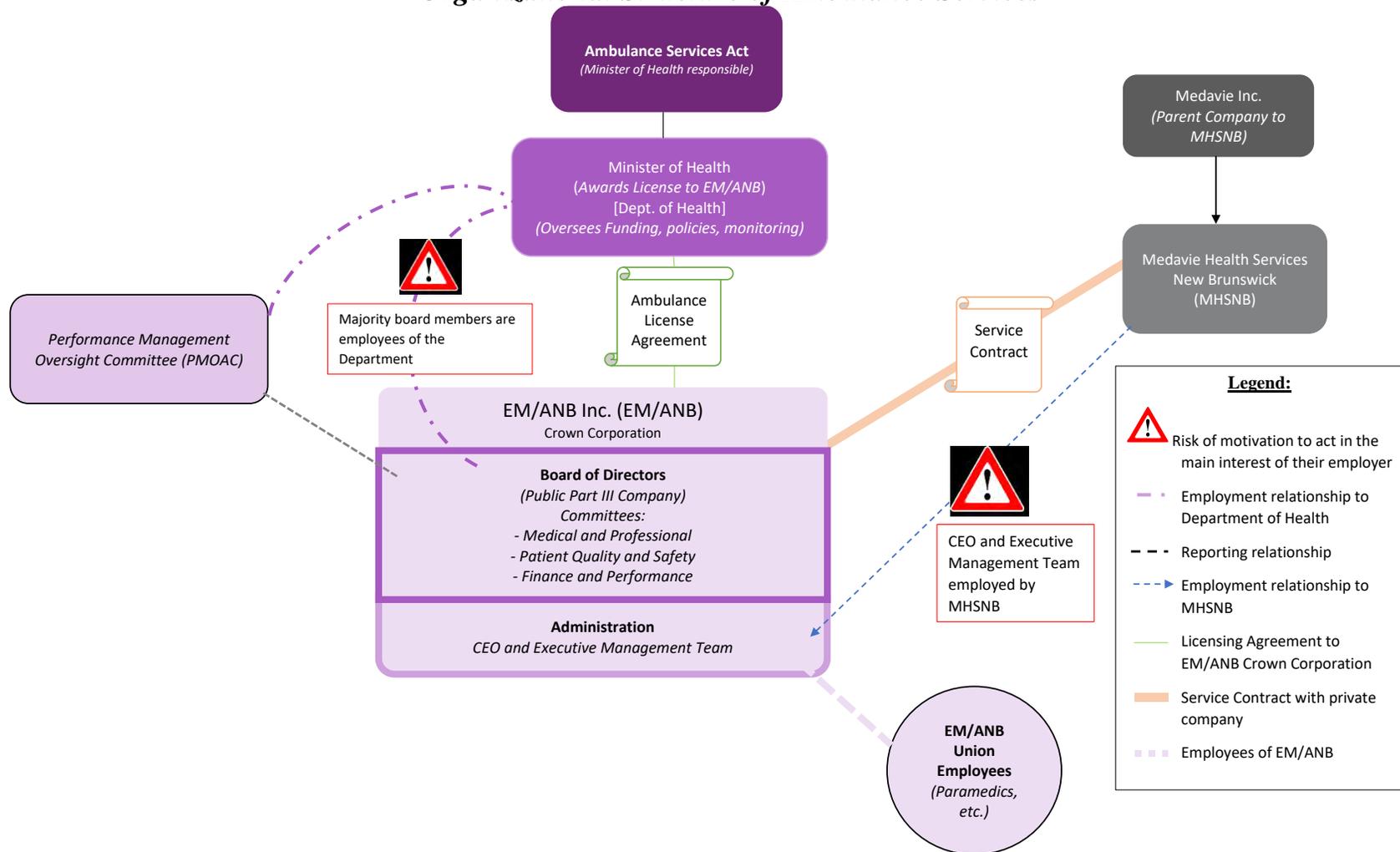
3.19 MHSNB provides management of land and air ambulance services in the Province. The scope of MHSNB's responsibility includes:

- operate the ambulance dispatch via the Medical Communications Management Centre;
- develop and maintain continual quality improvement;
- acquire, manage and maintain assets required to operate ambulance services;
- recruit, hire and dismiss on behalf of EM/ANB;
- provide EM/ANB's management function including CEO and other senior employees;
- report on performance as required by the contract; and
- provide project services upon request by EM/ANB, provided EM/ANB covers all incremental costs incurred by MHSNB.

3.20 Exhibit 3.1 shows the reporting structure for ambulance services. The role of the board is to operate its sub-committees and report to the Minister of Health. The Department is tasked with directing policies and defining standards, providing funding to EM/ANB per the ambulance license, and providing oversight over EM/ANB through monitoring activities.

Exhibit 3.1 - Organizational Structure of Ambulance Services

Organizational Structure of Ambulance Services



Source: Created by AGNB with information from the Department

- 3.21** We identified risks related to the overall organizational design for delivering ambulance services, as well as its governance structure.
- 3.22** The majority of EM/ANB's board of directors are also employees of the Department, with no impartial membership from the public. We identified the risk that both Department employees and MHSNB employees may be inclined to act in the best interest of their respective employers, rather than EM/ANB.
- 3.23** As EM/ANB and MHSNB share an executive team, it is difficult for the two organizations to operate independently which creates various inherent conflicts. The Department has formed committees and working units to help address the conflicts.
- 3.24** We discuss our findings related to these risks further in the section titled *Weak Governance and Control Structure* of this report.
- 3.25** The Department provides EM/ANB with an annual budget to cover the cost of delivering the service. The contract states budget surpluses, if they occur, are to be shared 50/50 between MHSNB and EM/ANB. In addition, there was an annual management fee. Upon expiration of the contract in 2017, a new ten-year contract was signed wherein the management fee was replaced with a performance-based payment and a cap of \$1.1 million was put on MHSNB for its share of surpluses.
- 3.26** Exhibit 3.2 shows the net cost of ambulance services to the Department for the five years ending in 2018/19. The funding grant is the sum of payments to EM/ANB from the Department to cover ambulance operations as well as contributions made by the Department to EM/ANB's Asset Replacement and System Enhancement Fund for the acquisition of capital assets.

Net Cost of Ambulance Services and Payment Structure

Exhibit 3.2 - Five-Year Net Cost of Ambulance Services (millions)

Five-Year Net Cost of Ambulance Services (\$ millions)

	Fiscal Year				
	2014/15	2015/16	2016/17	2017/18	2018/19
Funding Grant and Capital Asset Funding	\$100.08	\$100.95	\$106.13	\$110.17	\$117.72
Billing Revenue	(3.18)	(3.70)	(3.59)	(3.88)	(3.77)
Department's portion of EM/ANB surplus	(2.22)	(2.13)	(2.01)	(1.17)	(1.45)
Net cost to the Department	\$94.68	\$95.12	\$100.53	\$105.12	\$112.50

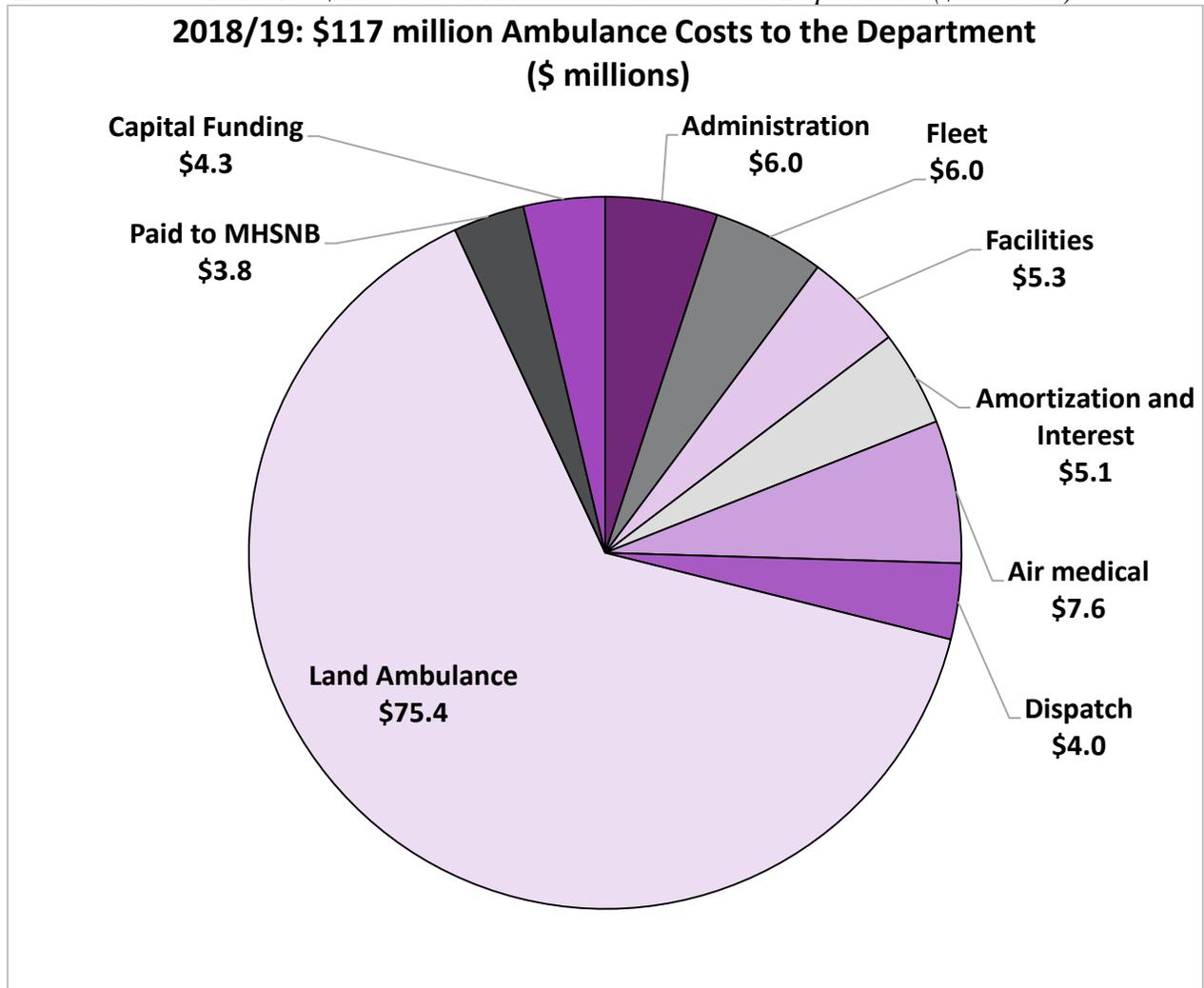
Source: Created by AGNB from EM/ANB financial statements

3.27 Cost to the Department is partially offset by billing revenue. EM/ANB charges invoices to individuals for the use of ambulances under certain conditions. Also, EM/ANB's portion of the 50% surplus arrangement was refunded to the Department.

3.28 Exhibit 3.3 shows the breakdown of the \$117 million Funding Grant and Capital Asset Funding in 2018/19. According to EM/ANB's annual report, \$75.4 million was allocated to land ambulance. This primarily paid the wages of paramedics but also included reimbursement to MHSNB for salaries of management or non-union employees.

3.29 In 2018/19, approximately 180 management or non-union positions related to ambulance services at EM/ANB were occupied by MHSNB employees. Gross earnings for those employees totalled \$8.9 million. This does not, however, include the EM/ANB CEO's salary as it is funded through the extra mural administrative budget.

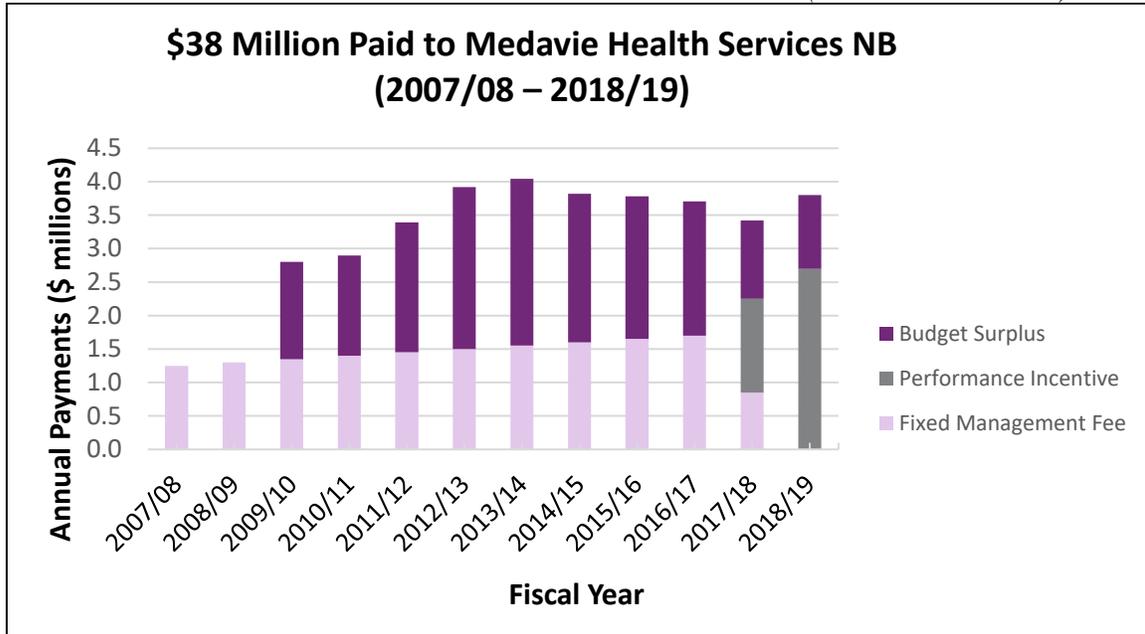
Exhibit 3.3 - 2018/19: \$117 million Ambulance Costs to the Department (\$ millions)



Source: Created by AGNB from EM/ANB 2018/19 financial statements

3.30 Exhibit 3.4 shows the historical payments made to MHSNB for management services under the initial ten-year contract and the first two years after renegotiation.

Exhibit 3.4 - \$38 Million Paid to Medavie Health Services NB (2007/08 – 2018/19)



Source: Chart prepared by AGNB with information provided by Medavie Health Services NB

3.31 The Department paid over \$38 million to MHSNB over the twelve-year period. These payments are in addition to payroll expenses for MHSNB employees and goods procured by MHSNB on behalf of EM/ANB. Total annual payments for management services have ranged from \$1.3 million in 2007/08 to \$4.1 million in 2013/14 for an average of \$3.2 million per year.

3.32 Under the contract, if EM/ANB achieves a surplus, MHSNB is entitled to 50%. Budget surplus payments in Exhibit 3.4 represent MHSNB’s portion of surpluses. The total of budget surpluses paid to MHSNB is \$18.4 million out of a total \$38 million during the 12 years. Fixed management fees accounted for \$15.6 million during the 12 years.

3.33 Upon contract renegotiation in 2017, fixed management fees were replaced with performance incentive payments. MHSNB now receives payment based on meeting or exceeding target key performance indicators (KPIs). Fiscal year 2017/18 was a transitional year where payment was made using a combination of terms between the old and new contract.

3.34 In 2018/19, the current contract removed the fixed management fee payment and the payment for budget surplus was capped at \$1.1 million. The remaining \$2.7 million was awarded upon meeting annual KPIs, for a total payment to MHSNB of \$3.8 million.

***Performance
Expectations***

3.35 In 2007, MHSNB introduced a dynamic deployment system. The concept of dynamic deployment attempts to optimize ambulance coverage at any given time. When an ambulance is dispatched to a call, nearby ambulances move strategically in an attempt to ensure no area is left without coverage.



Source: EM/ANB Annual Report 2017/18

The contract sets out resources needed to achieve performance expectations

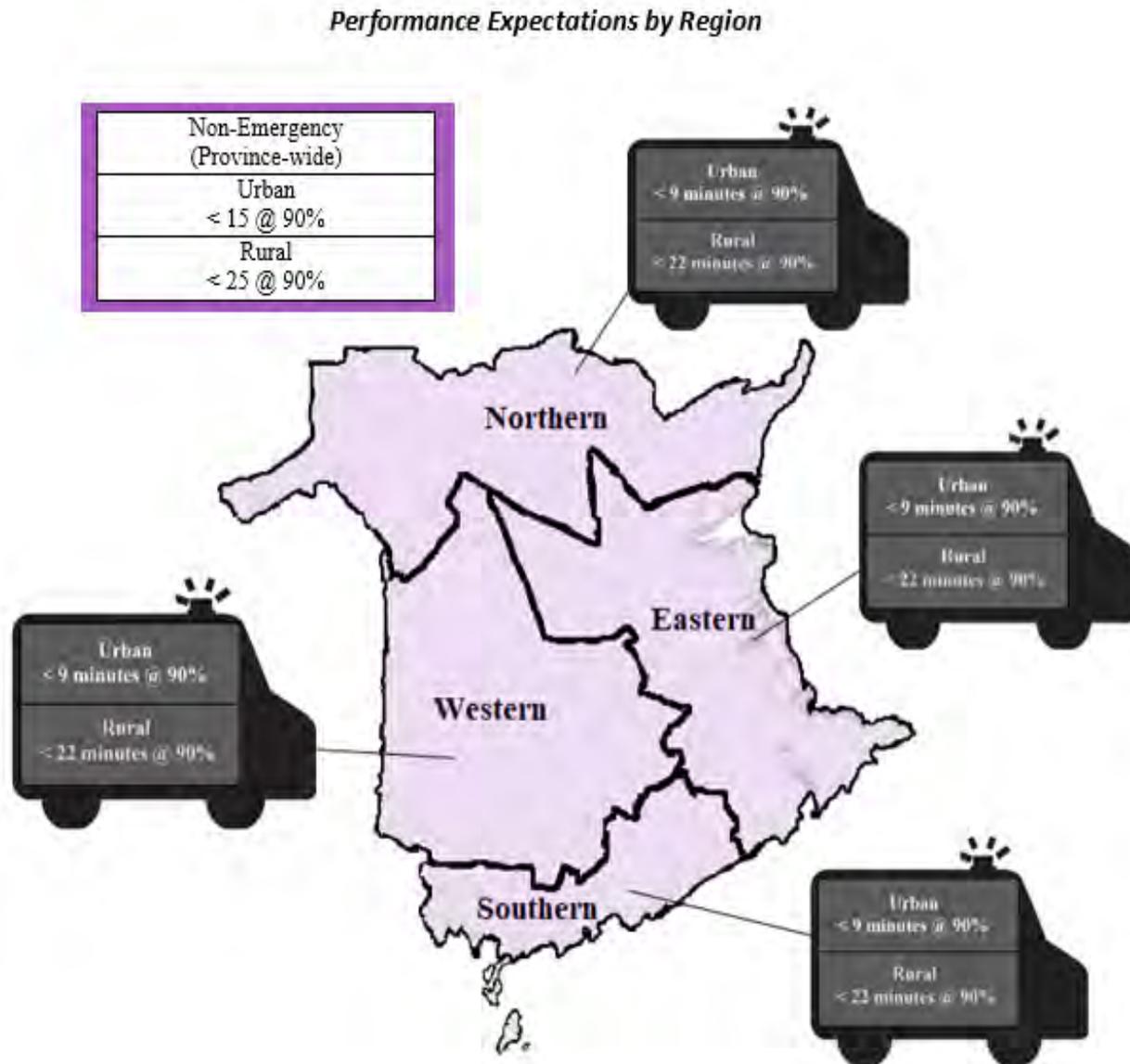
3.36 The execution of dynamic deployment is informed by MHSNB's model; the System Status Plan. Under the contract, the System Status Plan includes detailed specifications as to the ambulances, facilities and human resources to be deployed to achieve performance standards. The number of ambulances, paramedics, dispatchers, etc. are detailed in Schedule "B" of both the original contract and the renegotiated contract. MHSNB and EM/ANB agreed, by signing the contract, that these resources were sufficient to achieve the performance expectations within the contract.

Emergency response performance measured by combining rural and urban areas in each of four regions

3.37 The contract divides the Province into four geographic regions, designated Northern, Southern, Eastern and Western. Emergency and non-emergency response performance are measured by combining rural and urban areas in each of the four regions and within the Province, respectively.

3.38 Exhibit 3.5 shows the performance expectation which has been in place since inception of the original contract. The expectation has been that ambulances respond to 911 emergency calls within nine minutes in urban areas and 22 minutes in rural areas, 90% of the time. The expectation for responses to non-emergency calls, or where there is no perceived threat to life or limb, are 15 and 25 minutes, respectively.

Exhibit 3.5 - Performance Expectations by Region



Source: Created by AGNB with information from the Department

3.39 Exhibit 3.6 shows which communities are designated as urban within the ambulance system in New Brunswick. Outside of these communities, the 22-minute emergency response time expectation applies.

*Exhibit 3.6 - Communities Designated as Urban Under the Contract***Communities Designated as Urban Under the Contract**

Urban Communities (alphabetically)	
Bathurst	Moncton
Campbellton	Oromocto
Dieppe	Quispamsis
Edmundston	Riverview
Fredericton	Rothsay
Grand Bay-Westfield	Sackville
Grand Falls	Saint John
Miramichi	Woodstock

Source: Excerpt from The Ambulance Services Agreement (contract) with Medavie Health Services NB

Ambulances are moved around as needed to provide best coverage using dynamic deployment

3.40 The System Status Plan includes deployment plans which specify, by service district, how many ambulances should be deployed at any given time to respond to the anticipated call volume for each area. Service districts are groupings of communities, both rural and urban, in a given geographic area.

3.41 Each deployment plan describes what ambulance stations or posts are expected to be covered at any given time. The stations and posts are prioritized so that, when ambulances become occupied, other ambulances can be moved under dynamic deployment to provide the best coverage with the resources available.

3.42 Deployment plans also specify the minimum number of ambulances required to ensure a reasonable expectation of response within contractual times. This is referred to as the Emergency Cut-off. If one service district is below Emergency Cut-off and neighboring districts are above, the deployment plans allow for neighboring districts to provide coverage. The deployment plans make suggestions about where ambulances might be pulled from to provide additional coverage between districts if needed.

Operational Challenges

3.43 Operational challenges exist for EM/ANB, which are not made apparent within the current suite of KPIs presented in the performance compliance section of its annual reports.

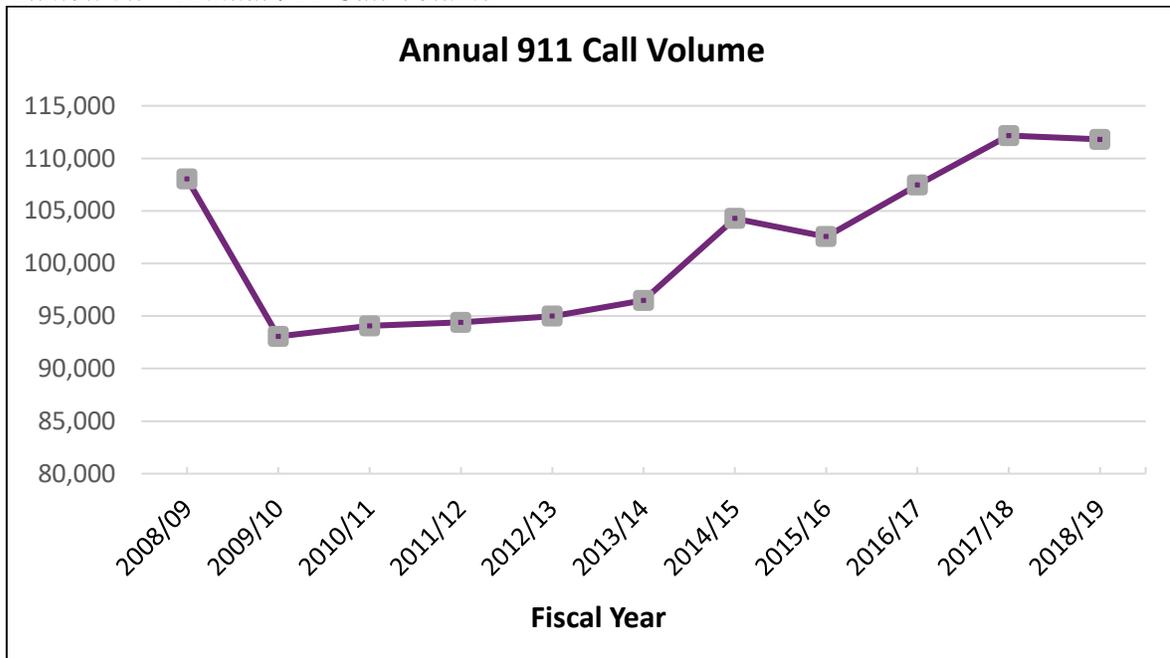
96 vacant permanent paramedic positions in 2019

3.44 In EM/ANB’s inaugural annual report for 2007/08, the self-reported number of vacant paramedic positions was 150. The report stated paramedic staffing was EM/ANB’s key challenge at that time. MHSNB indicated to us the level of vacancy has been consistent since 2007. As of 2019, MHSNB has indicated the number of vacant permanent paramedic positions is 96.

Steady increase in call volume since 2009/10

3.45 MHSNB has indicated the need for additional resources is increasing due to increasing call volume. Exhibit 3.7 shows annual call volume for the 11 years from 2008/09 fiscal through 2018/19. After a particularly high-volume year in 2008/09, the graph shows a steady increase in call volume from 93,000 ambulance calls in 2009/10 through to 112,000 in 2018/19. According to EM/ANB’s 2009/10 annual report, the decrease in call volume was attributable to a reduction in patient transfers after the introduction of ambulance fees.

Exhibit 3.7 - Annual 911 Call Volume



Source: Created by AGNB with information from EM/ANB’s annual reports

Weak Governance and Control Structure

EM/ANB lacks enabling legislation and its mandate is unclear

3.46 We found EM/ANB lacks enabling legislation and its mandate is unclear.

3.47 We expected EM/ANB, like other Crown corporations, would have an enabling act providing the overall objective of the organization, board composition, and authority. As a Crown corporation, within the group comprising the health care segment of the Province, our expectation was EM/ANB would follow a similar configuration to that of the Regional Health Authorities. Both Regional Health Authorities; Vitalité Health Network and Horizon Health Network, have enabling legislation within the *Regional Health Authorities Act*.

3.48 Similarly, we expected the Minister of Health would submit, annually, a mandate letter to EM/ANB to accompany its funding approval letter and provide a more detailed strategic direction.

Ambulance Services Act missing important governance components

3.49 We sought to review enabling legislation and mandate letters for EM/ANB to evaluate how well the contract was designed to align with EM/ANB's goals. However, we found the *Ambulance Services Act* does not contain a mandate for EM/ANB, nor does it prescribe its board composition or authority. Neither enabling legislation nor mandate letters existed to provide direction to EM/ANB during the period of our audit. However, we did note a mandate letter for EM/ANB was drafted and signed by the Minister of Health on November 29, 2019, during the conducting of our audit and subsequent to our audit period.

Overall direction for ambulance services lacks clarity

3.50 Without enabling legislation or mandate letters, the overall direction for EM/ANB lacks clarity and does not carry the weight of law. This weakens the Department's control over the Crown corporation. Without a clear mandate, it is difficult to assess whether the various agreements, contracts and corporate strategy are in alignment.

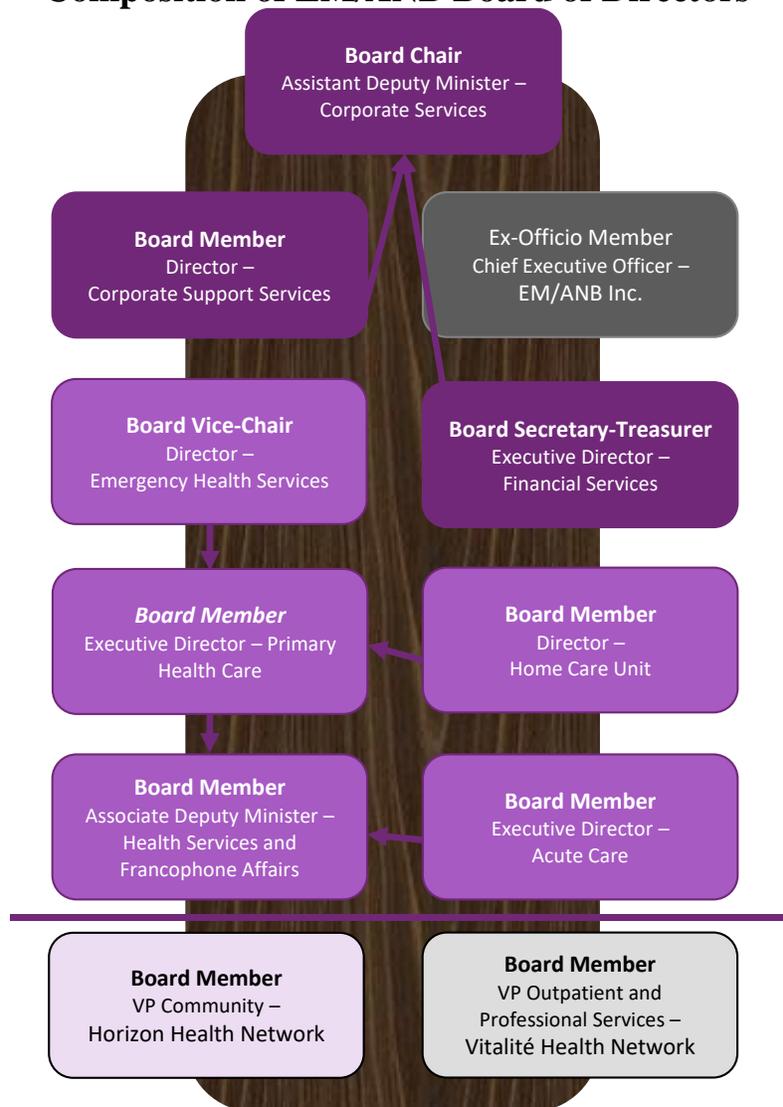
Recommendation

3.51 We recommend the Department formalize the mandate and governance for EM/ANB in legislation and provide mandate letters to EM/ANB with the annual budget approval.

Board composition created a complex management relationship

3.52 Exhibit 3.8 shows the composition of the board. All but two members of the board are employees of the Department. This created a complex management relationship within the board. For example, two board members reported directly to the board chair in their capacity as employees of the Department. Four other board members reported directly to other board members in their capacity as employees of the Department. The remaining two members were employees of the Regional Health Authorities.

Exhibit 3.8 - Composition of EM/ANB Board of Directors as of 2017/18
Composition of EM/ANB Board of Directors



Source: Created by AGNB with information provided by the Department

Board composition inhibits independence

3.53 We found the board composition inhibits independence largely due to the fact most of the board members are employees of the Department.

3.54 We expected to see public representation, or members independent of the Minister of Health, acting as board members to improve the overall independence of the board. We view this as best practice for Crown corporations to improve public accountability and objectivity by reducing competing priorities amongst board members.

Conflicts of interest may prevent board from acting in best interests of EM/ANB

3.55 Under this arrangement, it may have been difficult for individual board members to question or challenge other members of the board, given the nature of their reporting relationships within the Department. Moreover, the EM/ANB board by-laws state membership of any board member may be terminated on written notice to the company by the Minister of Health. This further creates a conflict of interest for board members, who may be inclined to act in the best interest of the Minister or the Department as opposed to EM/ANB.

Recommendation

3.56 **We recommend the board by-laws be amended to change the composition of the board to include members independent of the Department.**

Board fails to recognize and mitigate conflicts of interest

3.57 We found the board fails to recognize and mitigate perceived or actual conflicts of interest.

3.58 We expected to find board members declare potential conflicts of interest during meetings and discuss whether recusal is necessary. Due to their roles as employees of the Department, we expected occasional conflicts would arise. However, we found this practice was not followed.

Despite conflicts of interest, board members did not recuse themselves from decision-making process

3.59 In September 2017, the board delegated spending authority on the Asset Replacement and Systems Enhancement Fund to the board vice-chair and the board chair. We view any board member to be in conflict of interest where the subject of a board vote is to delegate authority to themselves. We would have expected both vice-chair and chair to recuse themselves from their respective delegation votes. Despite the conflict of interest each had in participating in the vote, neither member recused themselves from the decision-making process.

Risk of board members not acting in the best interests of EM/ANB went unmitigated

3.60 The board does have a conflict of interest policy, however; we found it was not followed. Without requiring board members follow its conflict of interest policy, and declare conflicts of interest, the risk of board members not acting in the best interest of EM/ANB went unmitigated. This left EM/ANB vulnerable to undue influence of departmental goals on corporate decision making.

Recommendation

3.61 We recommend the board enforce its conflict of interest policy and periodically review the effectiveness of the policy in mitigating conflict of interest risk.

Contract compromised the board's influence over its CEO

3.62 We found the design of the contract compromised the board's influence over its own CEO.

3.63 Typically, a corporate board of directors has a single employee; a CEO. We expected the board would employ the CEO of EM/ANB to maintain control over:

- selection;
- salary and compensation package; and
- performance evaluations of the CEO.

Not possible for the board to select a CEO

3.64 The CEO of EM/ANB is not selected by the board. MHSNB selects the CEO and presents its selection to the Minister. According to the board's bylaws, the Minister then recommends to the board the CEO be approved. It is not possible for the Minister of Health or the board to select a CEO, other than one presented by MHSNB, without being in breach of the contract.

Unlikely board members could vote objectively on the selection of CEO

3.65 The board is required to vote on the recommendation set forth by the Minister. However, due to board members' lack of independence as employees of the Minister, it is unlikely they could vote objectively on the selection of the CEO.

Board does not have influence over compensation paid to CEO

3.66 The board does not have influence over the amount or type of compensation paid to the CEO. Compensation for the CEO and executive management of EM/ANB is allocated by MHSNB from the annual contract budget provided by the Department and the board does not have influence over this compensation.

Board does not evaluate performance of CEO

3.67 The board does not evaluate performance of individuals employed by MHSNB, including the CEO. As such, the board could not have taken corrective action against the CEO should the results of any evaluations identify areas for improvement.

3.68 The board has authority to remove the CEO; however, selections for the Minister's consideration are again limited to what is put forth by MHSNB.

Lack of control calls into question board's influence over CEO

3.69 Inability to control these aspects of employment, due to the terms of the contract, calls into question whether the board has sufficient authority and influence over its CEO to ensure strong performance.

Recommendations

3.70 **We recommend EM/ANB enabling legislation strengthen and clarify board authority with respect to hiring, compensation, performance and termination of the CEO.**

3.71 **We recommend the board hire an independent CEO upon future contractual amendment or renegotiation.**

No evidence board challenged CEO's strategy for EM/ANB to ensure alignment with obligations to Department

3.72 We found no evidence the board challenged the CEO's strategy for EM/ANB to ensure it aligns with EM/ANB's obligations to the Department.

3.73 We expected to see elements of EM/ANB's corporate strategy and annual plans be discussed amongst board members and documented in board minutes. The review should have determined how well strategy and annual plans aligned with EM/ANB's mandate as prescribed by the Department.

3.74 We reviewed board minutes to determine whether the board reviews and approves corporate strategy. Each board meeting includes a CEO update; however, meeting minutes do not reflect any discussion of what was presented. The strategic plan was mentioned once in the minutes for 2018 and 2019, however, there was no detailed record of discussion.

Board does not regularly review annual plans of EM/ANB

3.75 The board does not regularly review annual plans of EM/ANB and does not compare annual plans against information in annual reports. Overall, the board does not appear to challenge the CEO on the corporate strategy of EM/ANB, nor does it use the review of annual plans as an

opportunity to evaluate the performance of the CEO and MHSNB.

Neglecting to review annual plans reduced effectiveness of board's decision-making

3.76 Not reviewing annual plans against results in EM/ANB's annual reports reduced the board's effectiveness in reviewing the overall performance of EM/ANB. This inhibits the board's ability to evaluate the vision of its CEO and the performance of MHSNB. This lack of monitoring reduced the effectiveness of the board's decision-making process in meeting its obligations to the Department under the ambulance license.

Recommendations

3.77 We recommend the board evaluate EM/ANB's annual corporate plans as part of its review of the CEO and MHSNB's performance and compare them to EM/ANB's annual report and obligations to the Department.

3.78 We recommend the board establish a performance management framework for EM/ANB and evaluate its performance annually.

Board did not receive reports from Performance Management Oversight Advisory Committee after 2017

3.79 We found the board did not receive reports from the Performance Management Oversight Advisory Committee after 2017.

3.80 We expected EM/ANB, as the holder of the contract, to be solely responsible for contract management. However, as the executive leadership of EM/ANB are employed by MHSNB, it was necessary for the Department, including board members, to perform this function.

3.81 Part of the solution was to establish the Performance Management and Oversight Advisory Committee (PMOAC) to perform the contract management function and report to each board meeting.

3.82 The chair of PMOAC was also vice-chair of the EM/ANB board and membership consisted of departmental employees and select employees of MHSNB. Existing outside of the board, the PMOAC met throughout the year and was meant to report to the board:

- reviews of KPIs for all aspects of MHSNB's operations;
- reviews of contractually required reports;

- advice on financial affairs related to EM/ANB goals; and
- recommendations relating to equipment, technology, safety and other resources.

3.83 The PMOAC performed many of the functions EM/ANB management would normally have performed, including oversight of the contractual performance of MHSNB.

3.84 From our review of PMOAC minutes, we noted the PMOAC:

- only considered performance indicators that were contained in the contract;
- was inconsistent in its follow-up on reports and information requested from MHSNB;
- chair did not provide formal reports to the board; and
- did not provide advice on financial affairs related to EM/ANB goals.

PMOAC did not follow up on information request to MHSNB

3.85 In one instance, PMOAC formally requested MHSNB's out-of-service units and human resources reports, but we did not find evidence MHSNB ever supplied them. There was no indication within the PMOAC minutes that this request was followed up on.

3.86 We expected to see records of PMOAC reports, with a detailed summary of what was presented, in board meeting minutes.

3.87 We reviewed the board minutes to determine how frequently the PMOAC reported to the board. Although the PMOAC was required to report to the board at each meeting and provide an annual report, there were no PMOAC presentations to the board after 2017.

Board did not have sufficient information to effectively oversee contract

3.88 Without including the PMOAC in its deliberations, it appeared the board did not have sufficient information to effectively oversee the contract. However; the chair of the PMOAC was also a member of the board and may have provided informal updates.

Board does not request or receive information necessary to fully assess EM/ANB's performance

3.89 We found the board does not request or receive the information necessary to fully assess the performance of EM/ANB.

3.90 In our review of the board and sub-committees, we noted:

- the Finance and Performance Committee does not appear to challenge or report on the performance of MHSNB in fulfilling the terms of the contract; and
- the Governance and Nominating Committee was created but had not met during our audit period.

3.91 We expected to see sub-committees of the board providing annual reports to the board to allow for matters of importance to be discussed amongst board members and to improve transparency.

Lack of detail recorded in the board minutes

3.92 It was unclear what was provided to the board or what was discussed during the meetings due to a lack of clarity and detail recorded in the board minutes.

3.93 Without effective use of sub-committees and a rigorous review of performance reporting, it appeared the board did not have sufficient information to effectively oversee EM/ANB.

Recommendations

3.94 We recommend the terms of reference of each standing committee require an annual written report to the Board of Directors to demonstrate the sub-committees are operating as intended.

3.95 We recommend the board improve its recording of minutes to increase transparency.

Contract Allowed Questionable Basis of Payments

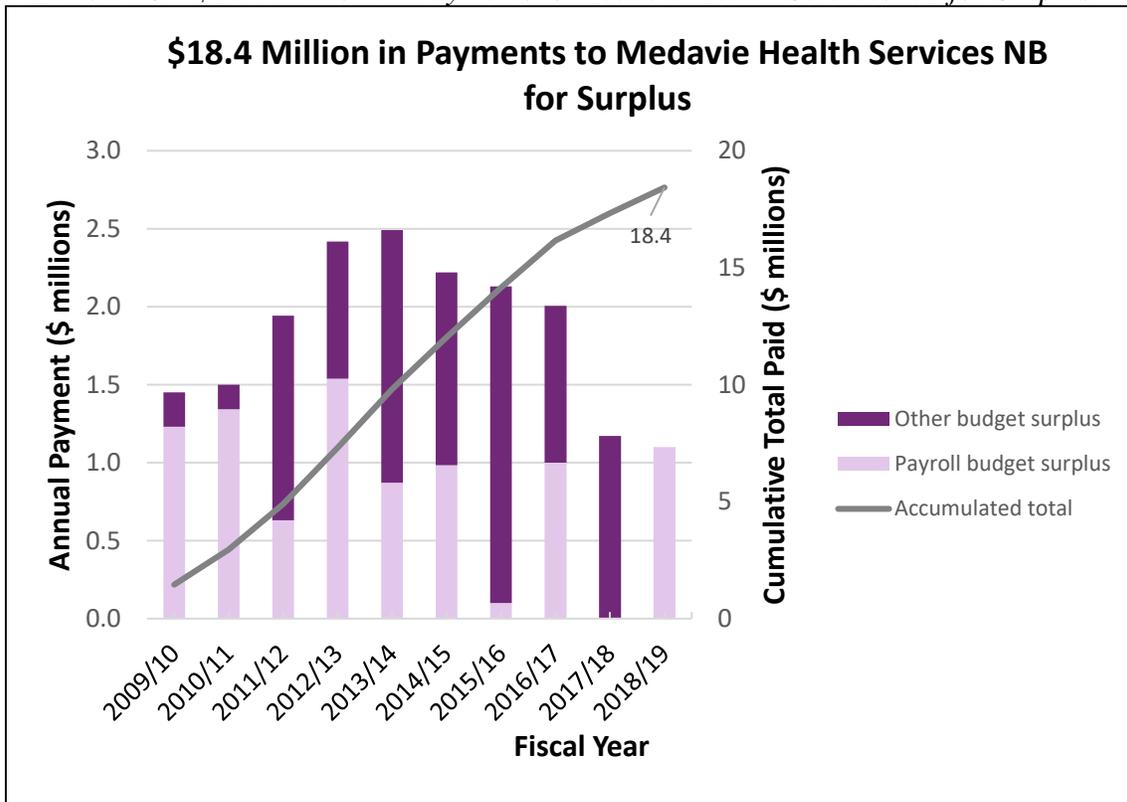
Paramedic shortages created over \$8 million in surplus payments to MHSNB, providing an incentive to maintain low staffing levels

3.96 We found paramedic shortages created over \$8 million in surplus payments to MHSNB, providing an incentive to maintain low staffing levels.

3.97 The Department provides funding for ambulance services to EM/ANB; however, these funds are managed by MHSNB. Under the contract, if MHSNB achieves a surplus they are entitled to keep 50% of the surplus amount.

3.98 Exhibit 3.9 shows surplus payments to MHSNB since the inception of the original contract. The initial two fiscal years are not shown as no surplus payment was made. MHSNB was paid a total of \$18.4 million for budget savings over the following ten-year period. Payroll variances contributed most significantly to surpluses during that time, totalling \$8.8 million.

Exhibit 3.9 - \$18.4 Million in Payments to Medavie Health Services NB for Surplus



Source: Created by AGNB with information from Medavie Health Services NB



Source: EM/ANB Annual Report 2017/18

3.99 We expected that any surplus calculation of budgeted payroll would use a flexible approach where labour costs are adjusted based on anticipated spending, given employee vacancies and typical over-time hours.

Budgeted payroll costs used in payment calculation assumed full utilization of ambulances

3.100 Budgeted annual payroll costs for paramedics, used in the budget surplus payment calculation, were determined using the System Status Plan in effect as of March 31, 2017. It assumed full utilization of ambulances and no paramedic vacancies. Full utilization would require EM/ANB hire all the paramedics needed during the year or make up for the shortage with over-time.

3.101 Payroll costs appeared to have been overbudgeted within the basic contract amount upon renegotiation of the contract and appeared to ultimately provide the payroll variance. Considering EM/ANB's history of vacancies and out-of-service time, it was unlikely this method accurately predicted labour costs. Additionally, this method of determining the budget for labour is consistent with the original contract, suggesting payroll costs have been overbudgeted over the 12 years of both contracts.

Overbudgeted payroll costs provided means for questionable payments to MHSNB

3.102 Overbudgeted expense categories directly impacted the apparent budget savings, which provided the basis for budget surplus payments under the contract. In our view, calculating labour cost based on full utilization of ambulances within the budget provided the means for

inappropriately paying MHSNB (based, circumstantially, on its failure to fill paramedic vacancies). This provided an incentive to MHSNB to overestimate the paramedic requirement or maintain low staffing levels while still meeting performance obligations.

Recommendation

3.103 We recommend EM/ANB calculate budget surplus payments based on flexible budget amounts which reflect the anticipated spending for the fiscal year.

The contract does not clearly define the performance expectations or restrictions related to budget surplus payments

3.104 We found EM/ANB’s contract with MHSNB does not clearly define performance expectations or restrictions related to budget surplus payments.

3.105 We expected the contract to have clearly defined performance expectations related to budget surplus payments, as this appears to be an incentive to encourage cost savings. We expected any payments related to achieving budget savings would have restrictions in place to avoid any negative impacts to service delivery via cost-cutting measures.

Contract did not explicitly state how budget savings could be achieved

3.106 The contract did not explicitly state how budget savings could be achieved. It was unclear where opportunities existed to achieve savings in delivery of ambulance services and the Department did not specify which budget areas could be targeted for savings.

Lack of restrictions in the contract on targeted savings provided opportunity for MHSNB to neglect filling vacant positions

3.107 In our view, it was questionable to allow MHSNB full autonomy in deciding where to reduce cost. Not placing restrictions in the contract on targeted savings provided opportunity for MHSNB to neglect filling vacant positions and maximize the budget surplus payments.

Recommendation

3.108 We recommend the board define restrictions around budget surplus payments to exclude circumstances which may decrease the quality of the delivery of ambulance services.

Department did not hold EM/ANB or MHSNB accountable for cost savings

3.109 We found the Department did not hold EM/ANB or MHSNB accountable for demonstrating how cost savings used in the surplus payment calculation were achieved.

3.110 In the 2019 Report of the Auditor General of New Brunswick, Volume II, released December 2019, we stated: *“In fulfilling its stewardship function over taxpayers’ money, government is expected to hold all funding*

recipients accountable for monies received and results achieved". In our view, any contract with incentives for budget savings should include provisions for strict monitoring of where cost savings are achieved.

Calculation for budget surplus payments did not explain how savings were achieved

3.111 We expected the Department to require MHSNB to report on initiatives implemented to achieve savings. Instead, the calculation for budget surplus payments was based on a budget-to-actual comparison report for the year. Expense categories in MHSNB's report did not match categories in budget approval documents used by the Department. Further, the report did not provide detailed budget-to-actual variance analysis to explain how savings were achieved.

Process eroded Department's ability to hold MHSNB accountable for achieving savings

3.112 Because MHSNB reported expenses did not match budget categories and lacked detailed variance analysis, it would have been difficult for the Department to reconcile this report to what was approved in the budget and perform a critical analysis prior to approving budget surplus payments. In our view, the process lacked transparency and eroded the Department's ability to hold MHSNB accountable for achieving savings.

Recommendation

3.113 We recommend the board ensure EM/ANB or MHSNB substantiate how savings are achieved to demonstrate the value provided through cost savings claimed under the contract for ambulance services.

Calculations of budget surplus payments were based on subjective factors

3.114 We found calculations of budget surplus payments were based on subjective factors.

3.115 We expected the calculation for determining the budget surplus payments would be objective. Any exclusions or adjustments in the calculation should have had the explicit purpose of maintaining the integrity of ambulance services.

3.116 We reviewed the budget surplus payment calculations, which exclude certain costs as outlined in the contract. The excluded categories related to, among other things:

- fuel;
- major medical supplies;
- incremental cost to MHSNB of any extraordinary occurrences;
- impact of inflation;

- the cost attributable to the failure of EM/ANB to replace capital assets; and
- incremental cost of kilometres driven by all vehicles in excess of contract specifications.

3.117 Adjustments to exclude fuel and medical supplies costs effectively reduced the incentive for MHSNB to pursue cost-cutting measures in these areas. As a result, the Department bears the budget risk for these categories.

Adjustments further introduced subjectivity to the budget surplus payment calculation

3.118 Categories such as extraordinary circumstances or failure to replace assets were not well defined in the contract. The extent to which MHSNB is expected to anticipate extraordinary circumstances, for example, is not clear. It is not explicit in the contract what circumstances are eligible for a claim under these adjustments, and this further introduced subjectivity to the budget surplus payment calculation.

Excluded expenses would have lowered surplus payments to MHSNB

3.119 We found excluded costs would have lowered surplus payments to MHSNB.

3.120 In our analysis of budget surplus payment calculations, we calculated the total impact of adjustments to exclude certain costs during the 10-year period. The costs adjusted out of the calculation during that time had a total impact of -\$2.5 million. Had these been included; the costs would have reduced payments to MHSNB related to budget surplus by \$1.2 million over the 10-year period.

Contract Allowed Excessive Use of Exemptions & Ambiguous Performance Measures

Contractual requirement of continuous and uninterrupted service not well defined

3.121 We found the contractual requirement of continuous and uninterrupted service is not well defined.

3.122 We compared EM/ANB's responsibilities to the Department with that of MHSNB's contractual responsibilities. We noted EM/ANB, through the contract, has delegated much of its responsibility to MHSNB.

3.123 We expected the contract would provide a clear directive for MHSNB to achieve alignment with EM/ANB's mandate.

3.124 We reviewed the contract and found section 1.1 of the contract states: "[EM/ANB] is required to assure continuous and uninterrupted Ambulance Service in the Province of New Brunswick"

Unclear what would constitute service interruption

3.125 It is unclear what would constitute a service interruption or break in the continuity of service under the contract. The ambulance license states EM/ANB is required to provide patient care and transportation services on a 24-hour basis, 365 days of the year. Without a detailed definition of either of these requirements, it is unclear whether some operational issues within the ambulance service would constitute a breach.



Source: Radio-Canada archives

Lack of clarity weakens ability of Department to hold EM/ANB accountable for maintaining service levels

Performance-based payments introduced a quality of service bias, detrimental to rural areas

3.126 This lack of clarity weakens the ability of the Department to hold EM/ANB or MHSNB accountable for maintaining service levels. The contract constitutes the primary source of resolution for any potential conflict between the interests of MHSNB and EM/ANB. As such, the integrity of ambulance services relies on the design quality of the performance measurement framework and payment structure within the contract.

3.127 Performance-based payments introduced a bias toward achieving high performance in areas of greater population density, to the detriment of rural or remote communities where 911 emergencies occur less frequently. Response times were the primary measure by which the performance incentives were paid in both 2017/18 and 2018/19. The contract also provides incentives for performance in language of service and patient transfers; however, the KPIs and targets for these responsibility areas were still in development at the time of our audit.

3.128 Under the contract, the most significant basis for performance-based payments was response time. MHSNB was eligible for an additional \$650,000 annually based on the frequency with which they responded to 911 calls within the expected response times.

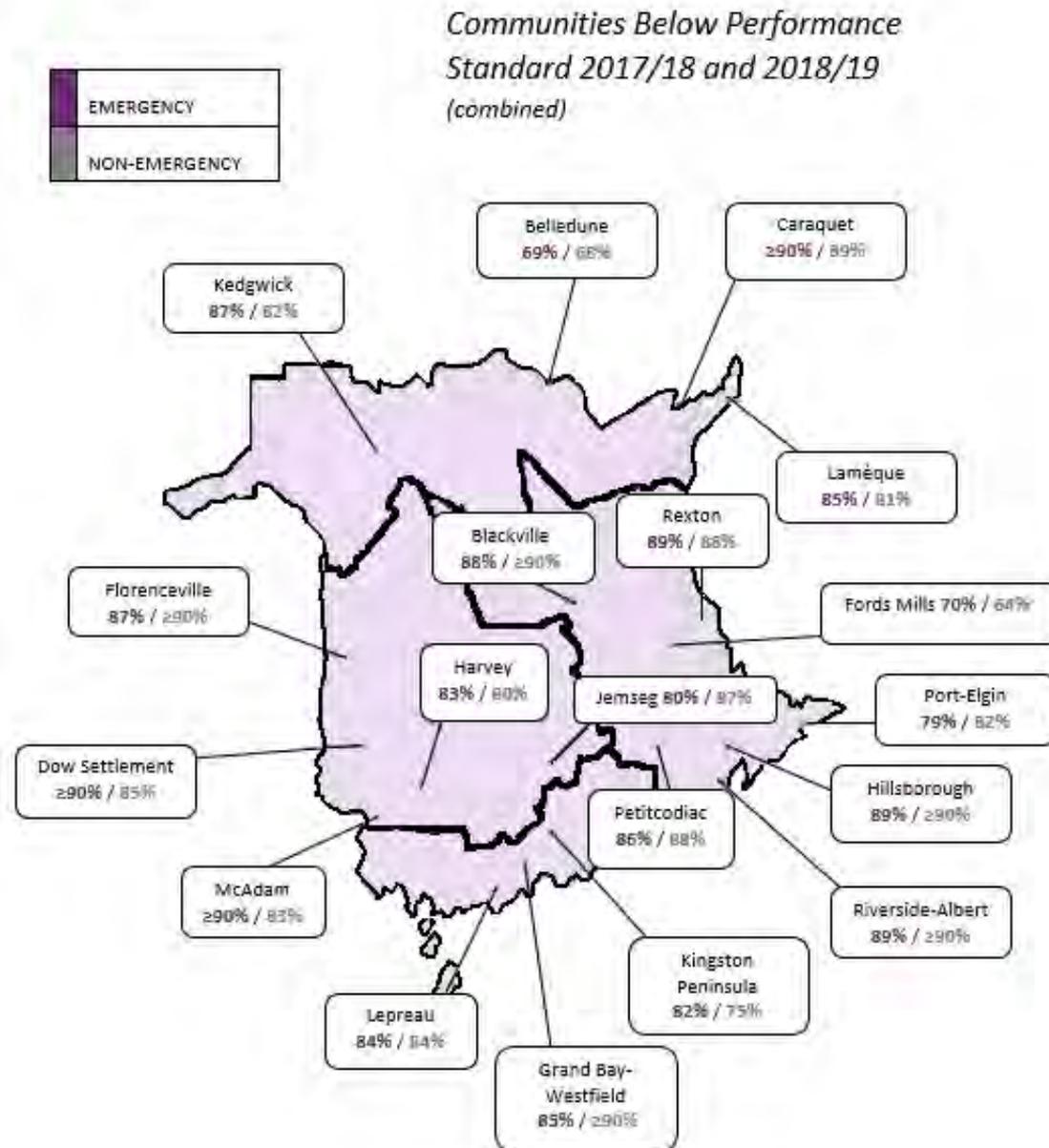
3.129 Performance based payments were awarded when ambulances arrived on-scene within the required response time, on average, 90% of the time. The incentive increased incrementally up to a target of 92%.

3.130 We analyzed ambulance call data to determine how the response time KPI may have influenced MHSNB performance in the delivery of ambulance services to New Brunswick communities.

19 of 67 communities fell below 90% performance expectation

3.131 We recalculated performance results by community for the two fiscal years 2017/18 and 2018/19 combined. Exhibit 3.10 shows, out of 67 communities, 19 fell below the 90% performance expectation in responding to emergencies, non-emergencies or both.

Exhibit 3.10 - Communities below performance standard 2017/18 and 2018/19 (combined)



Source: Created by AGNB with information from the Medavie Health Services NB

Communities’ results below performance standard had no effect on performance-based payments to MHSNB

3.132 We were surprised to find performance falling below expectation in these communities had no effect on performance-based payments to MHSNB. MHSNB received full performance-based compensation in both fiscal years 2017/18 and 2018/19. This was due to how they are combined within four major regions and communities with greater population density, like urban areas, tend to impact the performance outcome more significantly.

Performance-based payments introduced a bias toward achieving high performance in areas of greater population density

3.133 We tested various scenarios to determine if response times below performance expectation in rural communities impacted incentive payments to MHSNB. In our view, combining communities to calculate performance-based payments has introduced a bias toward achieving high performance in areas of greater population density, to the detriment of rural or remote communities where 911 calls occur less frequently.

Performance measures put rural and remote communities at a disadvantage

3.134 The resulting performance measures put rural and remote communities at a disadvantage by reducing the emphasis on achieving performance expectations in these areas. In this way, MHSNB is given the opportunity to focus resources on urban areas while having decreased performance in outlying communities and without impacting its performance-based payments.

Recommendation

3.135 We recommend EM/ANB introduce a more balanced suite of key performance indicators as the basis for performance-based payments to incentivise MHSNB toward high performance in all New Brunswick communities.

Contract allowed excessive use of full deployment exemptions, which overstated response time performance results

3.136 We found the contract allowed for excessive use of full deployment exemptions, which overstated response time performance results.

3.137 The response time percentage calculation included the use of certain exemptions for 911 calls. These exemptions were offered in addition to the 10% allowance already built in to the 90% performance expectation. Exemptions were meant to capture circumstances beyond the control of MHSNB which caused the ambulance to arrive on-scene beyond the time required under the contract. Requests were submitted by MHSNB for exemptions each month and the Department reviewed and approved the submissions. See

Appendix VI for a list of all possible exemptions listed within the exemption approval guide.

3.138 Full deployment exemptions are currently claimed for calls when the number of ambulances available in a service district is below Emergency Cut-off. Emergency Cut-off represents the minimum number of ambulances required to ensure a reasonable expectation of response within contractual times. This can happen due to a significant event requiring multiple ambulances to respond or, more frequently, due to multiple concurrent 911 calls.

3.139 We analyzed the use of exemptions to determine:

- their impact on the overall performance result;
- the appropriateness of the use of exemptions; and
- whether exemptions have been approved in accordance with the contract.

Exemptions brought response rate from below 90% to exceed 92%

3.140 Approximately 5,500 exemptions were approved during fiscal 2017/18 and 2018/19. The exempted calls represented 3.4% of total calls responded to during the period. This was significant because it changed the combined 911 emergency response rate from falling below the 90% performance expectation to exceeding the 92% maximum threshold for performance payments. In both fiscal years reviewed, MHSNB received the full financial award for meeting or exceeding 92% response rate.

76% of exemptions were for full deployment

3.141 We reviewed the composition of the 5,500 exemptions and found 76% of exemptions were for full deployment. Most full deployment exemptions, 72%, were claimed in urban areas.

3.142 Under the contract, the System Status Plan is expected to specify the ambulances, facilities and human resources required to achieve performance standards. In our view, no exemption should be provided where the System Status Plan is failing to anticipate call volumes or where the System Status Plan has not identified how many resources are required in a service district.

No limit on how frequently full deployment exemptions are claimed

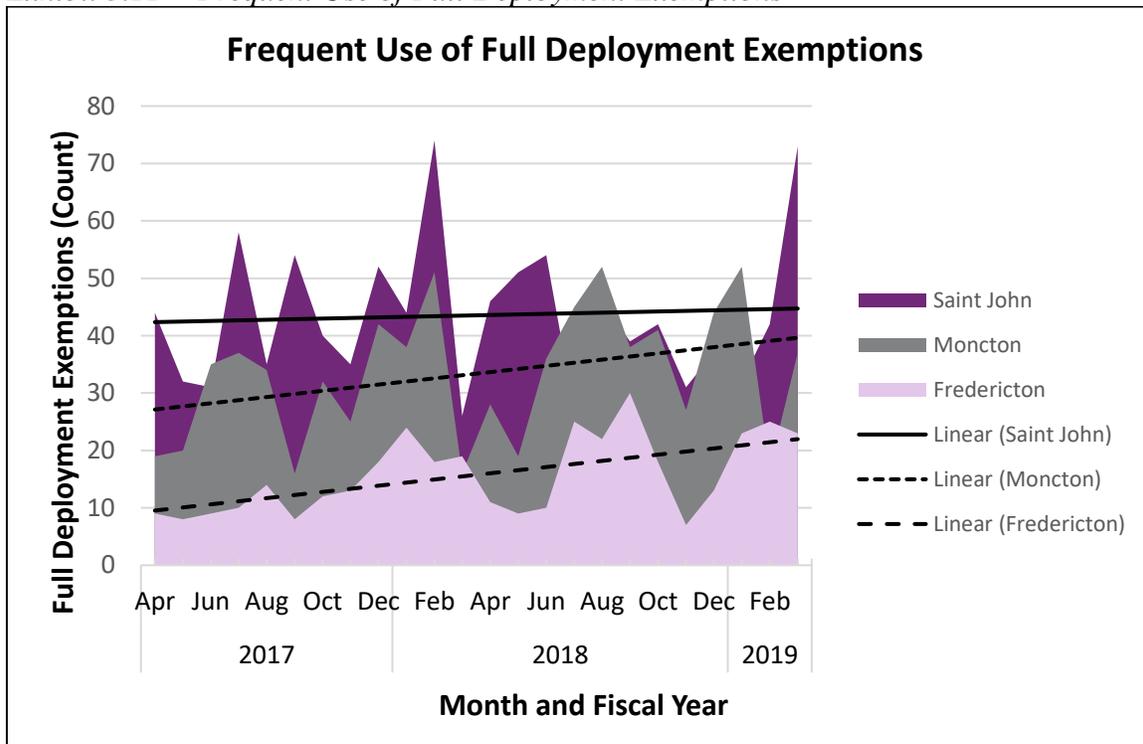
3.143 According to MHSNB and the Department, full deployment exemptions are meant to capture acute resource shortages deemed beyond the control of MHSNB. This is not explicitly stated in the exemption approval guide, and no definition of acute was provided by the Department or

MHSNB. In addition, there is no limit on how frequently full deployment exemptions can be claimed in a service district. We expected that EM/ANB would define the frequency of full deployment exemptions which would establish a predictable pattern and no longer be considered acute.

Saint John and Moncton appear to have higher than daily use of full deployment exemptions

3.144 We analyzed the frequency of use of full deployment exemptions and found over 2,000 were claimed in the three largest cities in New Brunswick during 2017/18 and 2018/19. This represents over half of all full deployment exemptions claimed in New Brunswick during that time. Exhibit 3.11 shows the usage trends in these cities. Saint John and Moncton appear to exceed a daily frequency of use of full deployment exemptions. Both cities' trend lines exceeded 30 claims per month.

Exhibit 3.11 - Frequent Use of Full Deployment Exemptions



Source: Created by AGNB with information from Medavie Health Services NB

System Status Plan appeared to understate resource requirements

3.145 We found the System Status Plan does not appear to forecast enough required resources, indicating understaffing problems are more severe than reported to us.

3.146 With this frequency of use, full deployment exemptions in the three cities appear to be routine as opposed to relating to acute resource shortages. This suggests the System Status Plan is failing to anticipate resource requirements. Designing the System Status Plan to anticipate resource requirements is an area of responsibility for MHSNB and, therefore, cannot be considered beyond its control.

3.147 We asked MHSNB and the Department what was driving the use of full deployment exemptions in Saint John. The following key factors were identified:

- increased 911 call volume;
- unscheduled transfers and increased transfer duration times;
- offload delays; and
- ambulance out-of-service time.

Number of paramedics required per the System Status Plan unchanged from original contract

3.148 MHSNB indicated the System Status Plan has remained very similar since its inception and the resources added since that time have not kept pace with the additional call volume. The number of paramedics required per the System Status Plan included in EM/ANB and MHSNB's contract renegotiation in 2017 was identical to that of the System Status Plan included in the original contract.

3.149 It appears the System Status Plan included in the 2017 contract renegotiation did not reflect the ambulances, facilities and human resources required to be deployed to achieve required performance standards. As we previously noted, budgeted annual payroll costs for paramedics, used in the budget surplus payment calculation, were determined using the System Status Plan. It assumed full utilization of ambulances and no paramedic vacancies. However, if the System Status Plan was incorrect, this also suggests paramedic vacancy is higher than what is being reported by MHSNB currently.

Holding System Status Plan constant increased probability of full deployment exemptions

3.150 Given the persistent increasing call volume, holding the System Status Plan constant increased the probability that districts would fall below Emergency Cut-off at any given time. This contributed to more frequent use of full deployment exemptions.

Excessive use of full deployment exemptions masked apparent severity of increasing call volumes

3.151 In our view, key factors driving full deployment exemptions identified above are persistent issues which have accumulated over a long period of time and do not meet the criteria of acute resource shortages beyond the control of MHSNB. The excessive use of full deployment exemptions overstated response time performance results and masked the apparent severity of increasing call volumes over time.

Recommendations

3.152 We recommend the Department and EM/ANB introduce controls to minimize the frequency of use of full deployment exemptions or discontinue the use of exemptions.

3.153 We recommend the EM/ANB board require MHSNB revise the System Status Plan to update the detailed specifications as to the ambulances, facilities and human resources required to be deployed to achieve performance standards.

Overstatement of response time performance reported

3.154 We found the excessive use of full deployment exemptions caused an overstatement of the response time performance reported.

Eliminating all full deployment exemptions from Saint John would have eliminated performance-based payments for South region

3.155 We analyzed the effect of reducing or eliminating the full deployment exemptions in Saint John on the combined 2017/18 and 2018/19 result. We used a scenario analysis, assuming a reduction to full deployment exemptions claimed for the city by half or in full. The result of halving the exemptions for Saint John would have lowered performance-based payments to MHSNB for the Southern region. Eliminating all full deployment exemptions from the city would have eliminated performance-based payments for the Southern region during this time.

3.156 In our view, the overly frequent use of full deployment exemptions in Saint John caused an overstatement of the performance result reported for the Southern region. Whether this also caused an overpayment depends on what frequency of full deployment exemptions could be considered reasonable. As such, without a contractual definition of what constitutes an acute circumstance, the overpayment is undeterminable.

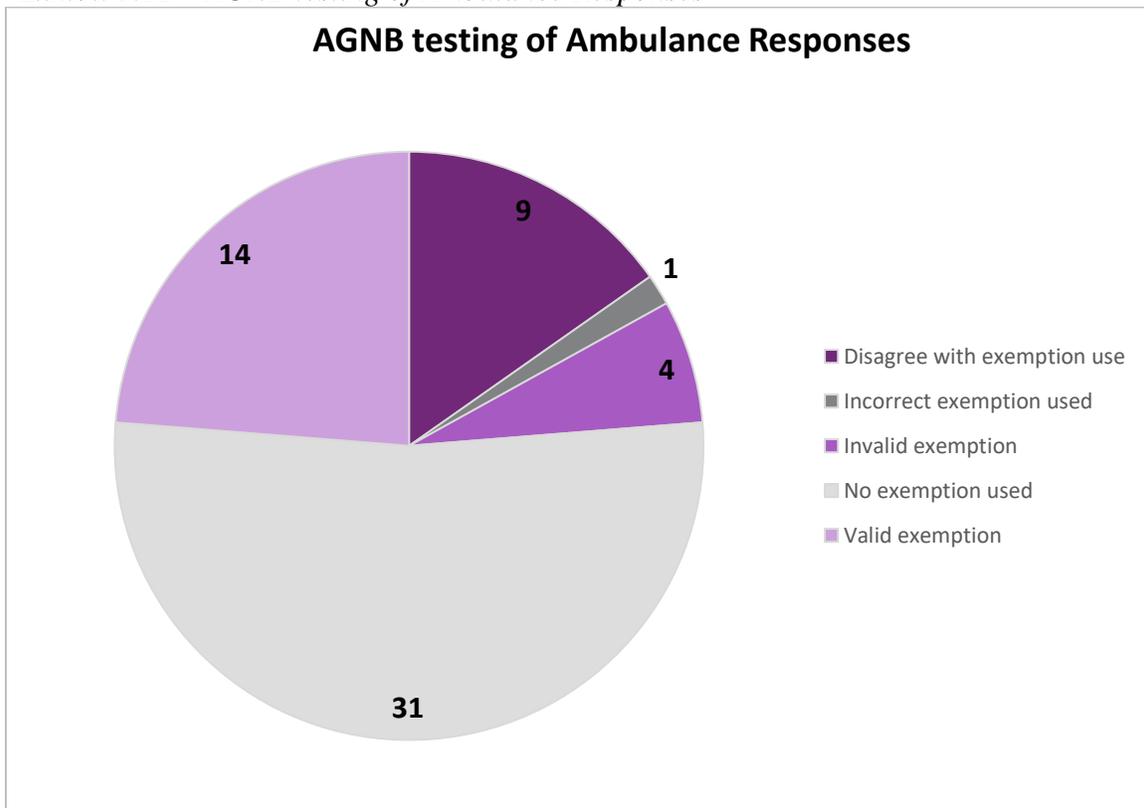
Contract allowed overuse of full deployment exemptions, which masked operational challenges at EM/ANB

3.157 The overuse of full deployment exemptions masked operational challenges at EM/ANB and allowed MHSNB to meet performance targets. The result was a reduction in the emphasis on resolving those operational challenges.

3.158 Exhibit 3.12 summarizes our testing of a sample of ambulance responses which did not meet the required response time. We selected our sample based on our assessment of risk from three main categories:

- communities with low performance results;
- communities with a wide geographic coverage area; and
- where there were out of service ambulances in the community.

Exhibit 3.12 - AGNB testing of Ambulance Responses



Source: Created by AGNB

3.159 The test consisted of a sample of 59 ambulance responses. The composition of our observations under the test follow:

- Nine responses qualified for exemptions under the guidance for approval document; but AGNB disagreed with the guideline and use of the exemption;
- one response AGNB disagreed with the use of the exemption, but the use of a different exemption would have been acceptable;
- four responses were approved for exemptions where the qualifications under the exemption approval guide were not met;
- 31 responses did not qualify for exemption and no application for an exemption was made; and
- 14 responses had exemptions which appeared to be valid.

No requirement to identify actual causes of response times which exceeded contract requirements

3.160 As shown in Exhibit 3.12, AGNB disagreed with the application of exemptions in nine of 59 responses. Although the criteria for exemption were met, a detailed review of these cases revealed that the true cause of delay related to circumstances not eligible for exemption. Exemptions are approved according to the exemption approval guide and there is no requirement to identify the actual cause of response times exceeding contract requirements. In these nine cases, this caused the use of invalid exemptions.

Full deployment exemptions were used for distance, out-of-service units and driver error

3.161 We expected full deployment exemptions would only be used where the response time could not be met because the nearest station or post was unoccupied due to call volume. However, there were cases where the actual cause of a late arrival was distance, out-of-service ambulances or driver error as described in Appendix VII.

Full deployment exemptions reduced emphasis on areas of improvement

3.162 Allowing the use of full deployment exemptions where the actual cause is not an acute resource shortage decreases the apparent severity of the actual issue. This reduces the emphasis on areas of improvement, since full deployment exemptions are considered beyond the control of MHSNB. Further, the misuse of full deployment exemptions overstates the performance result for response times.

Recommendation

3.163 We recommend the Department and EM/ANB revise the exemption approval guide to prevent the invalid use of full deployment exemptions or discontinue the use of exemptions.

Other Observations from Testing

3.164 In our testing of ambulance responses which did not meet the contractual obligation response time, we made several observations which, in our view, revealed some of the vulnerabilities within the ambulance system. Included were instances where circumstances and the use of dynamic deployment left wide geographic areas uncovered. See Appendix VII for specific examples.

Dynamic Deployment left wide geographic areas uncovered

Other Performance Management Weaknesses

- | | |
|--|---|
| <i>Corporate and strategic plans lack performance measures to demonstrate outcomes</i> | <p>3.165 We found corporate and strategic plans lack performance measures to demonstrate outcomes.</p> <p>3.166 We expected strategic plans would include objectives designed to improve performance under each area of the contract. Absence of these objectives would impede the ability of the Department and the board to critically evaluate performance under the contract.</p> <p>3.167 We reviewed corporate planning documents to determine where initiatives to improve services were targeted and whether KPIs were used to evaluate effectiveness of the initiatives.</p> |
| <i>No clear measure of effectiveness of completed initiatives</i> | <p>3.168 While objectives within these plans are presented with a target date for implementation and status indicator, there is no descriptor of the outcomes each initiative has achieved or is meant to achieve. There is no clear measure of the effectiveness of completed initiatives, or what measures will be used to determine if the objective was effectively implemented.</p> <p>3.169 For example, we noted an objective to develop a non-emergency transfer system as part of EM/ANB’s most recent strategic plan. The desired outcome of this objective was stated to “provide better customer service to our patients and health partners”. There was no indication of what metrics would be used to evaluate the degree to which better customer service was provided, or the overall effectiveness of the initiative. The absence of these details restricts the board from prioritizing and critically evaluating its strategic objectives.</p> |
| <i>Few objectives related to contractual areas other than response times</i> | <p>3.170 While some strategic objectives would impact response times, no specific objectives were designed to improve response times and there were few objectives directly related to other contractual areas.</p> |
| <i>KPIs failed to capture and measure operational challenges</i> | <p>3.171 We found EM/ANB’s key performance indicators are not comprehensive and failed to capture and measure operational challenges.</p> |

3.172 Exhibit 3.13 shows a list of MHSNB responsibility areas along with the corresponding metrics, incentives and AGNB's evaluation of each.

Exhibit 3.13 - Medavie Health Services NB Responsibility Areas and KPIs

Medavie Health Services NB responsibility areas and KPIs

<i>Contractual Responsibility</i>	<i>Current Measure of Performance</i>	<i>Contractual KPI-based Incentive or Penalty</i>	<i>AGNB Assessment of KPI</i>
Air Ambulance	Patients by priority (count)	None	Current measure indicates usage frequency but does not indicate quality of Air Ambulance performance
Fleet Management	None	None	Performance not measured
Human Resources	HR Profile (language of service) Sick time WorkSafe NB	None	Current measures lack performance targets
Land Ambulance	Percentage of responses where ambulance arrives on scene within contractual requirement (exemptions apply)	Up to \$650,000 for emergency and non-emergency responses Up to \$400,000 on achievement of milestones related to patient transfers Penalty (for falling below 90%): <ul style="list-style-type: none"> • \$50 per emergency call • \$10 per non-emergency call 	As previously mentioned: <ul style="list-style-type: none"> • Method of calculating response time percentage puts rural communities at a disadvantage. • Exemptions overstated response time performance results. No KPI for patient transfers despite performance incentive

Exhibit 3.13 - Medavie Health Services NB Responsibility Areas and KPIs (Continued)

Contractual Responsibility	Current Measure of Performance	Contractual KPI-based Incentive or Penalty	AGNB Assessment of KPI
Medical Communications Management Centre	Call Processing Times: Phone pickup/data entry completed within 90 seconds, 90% of the time	Penalty: \$10/call not meeting protocol up to 90% of the time	Penalties not considered punitive
Official Languages	None	\$350,000 awarded for development of Official Languages Plan Up to \$350,000 annually, based on metrics undrafted at the time of our audit	No KPI for Official Languages
Other: Data Entry Documentation Customer Service Reporting	Entry into database within 10 business days of the time care is provided, 90% of the time Entry into data base within 30 days of initial data entry date >90% satisfaction Contract reports provided within 5 days of due date, 100% of time	Penalties: \$10/penalty for patient care records not meeting standards \$5000 per percentage point that customer satisfaction falls below 90% (up to \$50,000 annually) \$50/late report	Penalties not considered punitive

Source: Created by AGNB with information from the Department

3.173 Certain areas of MHSNB’s responsibility, such as fleet management and human resources, did not have performance targets to measure against. Failure to measure performance in these areas creates a risk that operational challenges will not be captured. Measurable targets would

help management and the board determine opportunities for improvement in these areas.

No KPIs used for Official Languages Plan

3.174 We also found that no KPI's have been used for the Official Languages Plan, despite this being a requirement for payment under the contract beginning in April 1, 2018. Per discussion with the Department, these metrics were not agreed to until December 2019.

3.175 We did note the contract includes penalties for non-compliance with some performance targets. However, in our view, these penalties are minor, non-punitive and would be difficult to impose if MHSNB did not self-identify non-compliance.

Performance-based payments do not include KPIs related to human resources, despite effect of out-of-service units on operations

3.176 We found performance-based payments do not include KPIs related to human resources, despite the significant effect out-of-service units are having on EM/ANB operations.

3.177 According to EM/ANB's website: "*The reasons for ambulances being out of service can include stress management after a critical incident, mechanical failure on a truck, inspection, fatigue management of crew members, a motor vehicle accident and no staff available, among other reasons.*"²

Duration of out-of-service units totalled over 95,000 hours

3.178 Data obtained from EM/ANB's computer-aided dispatch system showed over 6,400 instances of out-of-service units with a duration of eight hours or more occurred during 2017/18 and 2018/19. In total, the duration of out of service units totalled over 95,000 hours during this period. In each instance, comments indicated the reason for out of service was no staff available.

Out-of-service units not included as part of performance-based payments

3.179 We note, in Appendix VII, some examples the impact out-of-service units have had on ambulance services. The effect of significant operational challenges, such as out-of-service units, does not appear to be included as part of MHSNB's performance-based payments under the contract. As MHSNB is responsible for managing human resources

² <https://ambulancenb.ca/en/accountability/data-out-of-service-hours>

under the contract, we expected to see this inclusion upon the renegotiation of the contract given this issue has persisted for several years.

KPIs do not capture opportunities for improvement

3.180 By contrast, EM/ANB’s annual reports reflect a high level of performance, routinely exceeding targets as defined under the performance-based payment structure. As such, it appears the KPIs, which form the basis for performance-based payments, do not capture opportunities for improvement in ambulance services.

Hospital off-load delays require paramedic to remain with patient

3.181 In addition to out of service units, MHSNB indicated ambulances experience delays due to long wait times at hospitals, referred to as off-load delays. Depending on the severity of the individual case, the hospital may not admit the patient immediately. Paramedics are required to remain with their patient until they are admitted to a hospital. MHSNB considers an off-load that takes longer than 25 minutes to be delayed.

82% of arrivals at the four major hospitals had off-load delays exceeding 25 minutes

3.182 Exhibit 3.14 shows arrivals to four major hospitals in New Brunswick from June 2018 through March 2019. The hours of delay indicate how long ambulances waited above the expected 25 minute off-load time for all calls. Ambulances were occupied for over 3,600 hours due to unanticipated wait times at hospitals. 82% of arrivals were delayed more than 25 minutes.

Exhibit 3.14 - Off-load Delays June 2018 through March 2019

<i>Off-load Delays June 2018 through March 2019</i>			
Hospital	Number of Ambulance Arrivals	Percentage of Arrivals Delayed (beyond 25 minutes)	Hours of Delay (beyond 25 minutes)
The Moncton Hospital	4142	86%	1724
Saint John Regional Hospital	2542	77%	702
Dr. Georges-L.-Dumont University Hospital Centre	1993	79%	887
Dr. Everett Chalmers Regional Hospital	776	81%	299
Total	9453	82%	3614 Hrs

Source: Created by AGNB from information provided by Medavie Health Services NB (unaudited)

3.183 Prior to June 2018, off-load delay tracking was less detailed. MHSNB indicated that ambulances experienced over 1300 off-load delay hours in these hospitals in calendar year 2017.

3.184 Under the renegotiated contract, performance-based payments are calculated incrementally from 90% to 92% for emergency and non-emergency response times. Scaled targets for payment can give incentive for the service provider to continue to meet service expectations and promote continuous improvement.

Most KPIs did not include progressive targets

3.185 We found all other KPIs did not include progressive targets.

Contractual performance indicators remained largely unchanged

3.186 We expected KPIs to include progressive targets, including base and stretch goals. While the renegotiated contract offered a progressive target as part of the payment model, the other contractual performance indicators remained static and largely unchanged, despite EM/ANB having consistently reported these targets as met or exceeded.

3.187 Without dynamic performance targets, there is less incentive for MHSNB to strive for improved performance over the duration of contract. The inclusion of these targets would provide further incentive for MHSNB to achieve continuous improvement.

10-year contract term makes it difficult for Department to adjust service level expectations

3.188 Given the contract term of ten years, we found it would be difficult for the Department to adjust service level expectations outside of what has been contractually stated.

No mechanism for parties to set new performance targets

3.189 We were informed MHSNB has historically met contractual performance metrics over the course of the contract. However, there was no mechanism for the parties to set new performance targets once previous targets were met.

3.190 This prevents the Department from making changes to performance measures over the course of the contract and restricts the Department from promoting continuous improvement and aligning a comprehensive KPI suite with the contract.

Recommendations

- 3.191 We recommend the board implement progressive performance targets to incentivize MHSNB to achieve continuous improvement for the duration of the contract.**
- 3.192 We recommend EM/ANB improve tracking, and follow-up of strategic and corporate initiatives and include measurable outcomes in its plans.**
- 3.193 We recommend the board expand key performance indicators for performance-based payments to include all areas of operations, such as human resources, fleet and official languages.**
- 3.194 We recommend the Department coordinate with the Regional Health Authorities and EM/ANB to implement solutions to reduce the impact of off-load delays.**

Other Conflict of Interest

- CEO position of EM/ANB combined with the role as President of MHSNB creates a conflict of interest*** **3.195** We found the CEO position of EM/ANB combined with the role as President of Medavie Health Services New Brunswick (MHSNB) creates a conflict of interest.
- 3.196** We expected to see an independent CEO appointed by the board as an employee of the board, advocating in the best interest of EM/ANB.
- CEO would be inclined to act in interests of their employer, MHSNB*** **3.197** As the CEO of EM/ANB is also President of MHSNB, a for-profit company, we believe this dual role creates a conflict of interest. It would be difficult for a CEO to act in the best interest of both parties at the same time. The CEO currently has a contract of employment with MHSNB, whereas their duty to EM/ANB is through the contract of services. In our view, a CEO in this situation would be inclined to act in the interest of their employer.
- Corporate strategy for EM/ANB was drafted by employees of MHSNB*** **3.198** The corporate strategy for EM/ANB was drafted by employees of MHSNB. As MHSNB's employees are not impartial, they could not objectively develop strategy in consideration of:
- the extent to which the contract provides avoidance of risk to EM/ANB;
 - whether the contract represents a favorable value proposition for EM/ANB; and
 - evaluating alternatives to continuing with the contract.
- MHSNB's employees may be inclined to develop EM/ANB's strategies toward maximizing MHSNB's financial award*** **3.199** MHSNB employees have a conflict of interest because they may be inclined to develop EM/ANB's strategies toward maximizing MHSNB's financial award under the contract. This would not guarantee management decision-making is optimized to provide the best quality of service possible.
- EM/ANB is not subject to the Conflict of Interest Act*** **3.200** We found EM/ANB is not subject to the *Conflict of Interest Act*.
- 3.201** We expected EM/ANB would be required to adhere to Section 4 of the *Conflict of Interest Act*, which states: "*It is a conflict of interest for a person who is a head of a Crown corporation... to be a[n]... officer of a[n]... incorporated*

company, holding or engaging in... a contract or agreement with Her Majesty, or with a... department or agency with respect to the public service of the Province or under which any public money of the Province is expended for any service or work”³

EM/ANB is not listed in Schedule A of the Act’s regulations

3.202 The Department stated EM/ANB is not in contravention of the act as EM/ANB is not listed in Schedule A of the Act’s regulations. Schedule A details which Crown corporations fall under the *Conflict of Interest Act*.

3.203 We expected the *Conflict of Interest Act* to apply to all Crown corporations. We found that only eight Crown corporations are listed under Schedule A of the Act’s regulations. In our view, this omission may undermine the effectiveness of the Integrity Commissioner, who is responsible for administering the Act. The Commissioner performs a key role in maintaining the integrity of Crown corporations.

3.204 Despite EM/ANB’s exclusion from this legislation, we expected to see the Department consider the spirit of this act as part of contractual negotiations.

Conflict of interest existed with no repercussions

3.205 Neglecting to include EM/ANB in Schedule A of the *Conflict of Interest Act* regulations allowed a conflict of interest to exist and persist with no repercussions.

Recommendation

3.206 **We recommend the Executive Council Office review the Conflict of Interest Regulation under the *Conflict of Interest Act* and amend the regulation to include all relevant Crown corporations in Schedule A, including EM/ANB Inc.**

³ *Conflict of Interest Act*, RSNB 2011, c129

Appendix I – Audit Objectives and Criteria

The objective and criteria for our audit of the Department of Health Ambulance Services are presented below. The Department of Health senior management reviewed and agreed with the objective and associated criteria.

Objective 1	To determine whether Department of Health’s governance structures and processes established for EM/ANB set a framework for effective oversight.
Criterion 1	The Department of Health’s governance and oversight structure should ensure ambulance services, provided by EM/ANB, are delivered with independence and accountability.
Criterion 2	EM/ANB’s board of Directors should select, evaluate and enable the CEO.
Criterion 3	EM/ANB’s board of Directors should approve strategic organizational goals and policies.
Criterion 4	EM/ANB’s board of Directors should have a risk management policy framework for ANB and establish appropriate risk tolerance levels.
Criterion 5	EM/ANB’s board of Directors should have a performance management framework for EM/ANB and be monitoring its performance.
Objective 2	To determine whether EM/ANB’s contract for ambulance services is designed and managed to achieve expected objectives.
Criterion 1	EM/ANB’s contract should include clearly defined and measurable performance objectives.
Criterion 2	EM/ANB should have a performance management framework for the contract and be monitoring its performance.
Criterion 3	EM/ANB’s contract should promote continuous improvement through progressive performance targets.

Source of Criteria: Developed by AGNB based on review of legislation, best practices and reports by other jurisdictions’ Auditors General. Further guidance was taken from works published by *Canadian Audit & Accountability Foundation*.

Appendix II – About the Audit

This independent assurance report was prepared by the Office of the Auditor General of New Brunswick on the Department of Health's delivery of ambulance services. Our responsibility was to provide objective information, advice, and assurance to assist the Legislative Assembly in its scrutiny of the Department of Health's governance of EM/ANB and contract management practices in its contract with Medavie Health Services New Brunswick.

All work in this audit was performed to a reasonable 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 audit work, we have complied with the independence and other ethical requirements of the Rules of Professional Conduct of 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 accordance with our regular audit process, we obtained the following from management:

- confirmation of management's responsibility for the subject under audit;
- acknowledgement of the suitability of the criteria used in the audit;
- confirmation that all known information that has been requested, or that could affect the findings or audit conclusion, has been provided; and
- confirmation that the findings in this report are factually based.

Period covered by the audit:

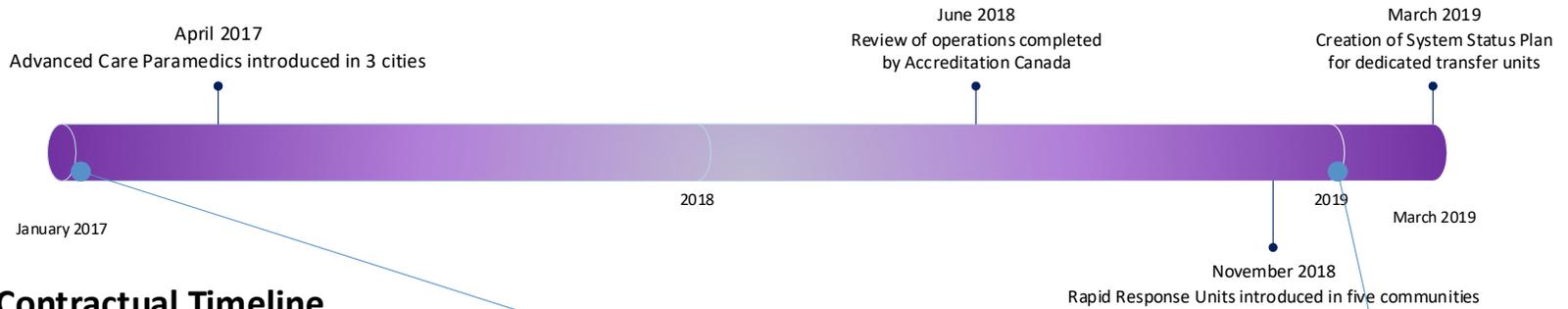
The audit covered the period between April 1, 2017 and March 31, 2019. This is the period to which the audit conclusion applies. However, to gain a more complete understanding of the subject matter of the audit, we also examined certain matters that preceded the starting date of the audit.

Date of the report:

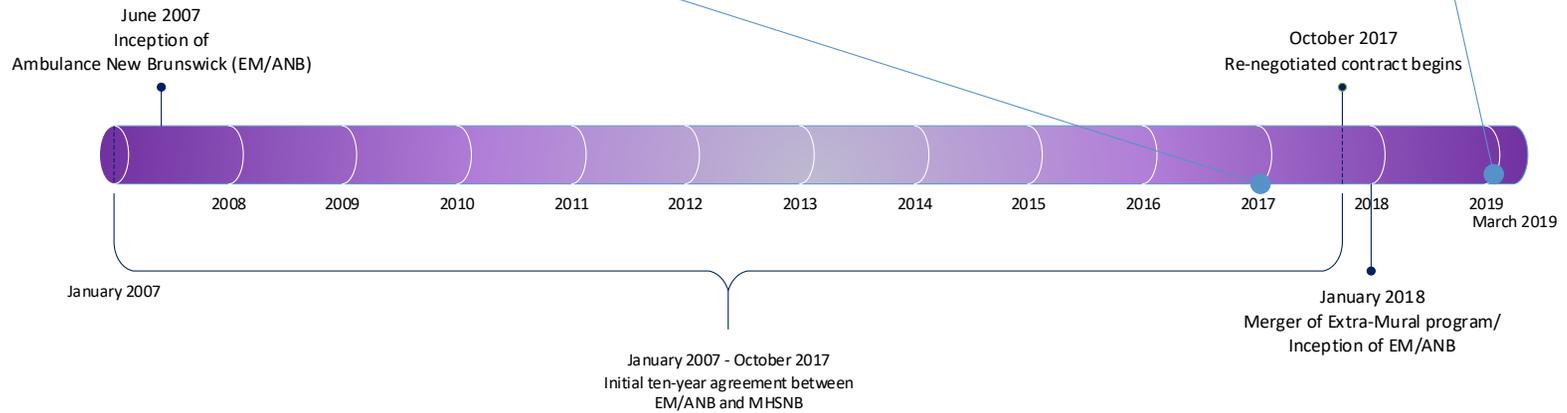
We obtained sufficient and appropriate audit evidence on which to base our conclusion on August 11, 2020, in Fredericton, New Brunswick.

Appendix III – Timeline of Events

Operational Timeline



Contractual Timeline



Appendix IV – Subsequent Events

Under 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; paragraph 66 states the following in respect to subsequent events:

When relevant to the engagement, the practitioner shall consider the effect on the underlying subject matter and on the assurance report of events up to the date of the assurance report, and shall respond appropriately to facts that become known to the practitioner after the date of the assurance report that, had they been known to the practitioner at that date, may have caused the practitioner to amend the assurance report.

The subjects below were matters which occurred outside of our period of audit but were significant undertakings by the auditee in respects to ambulance services.

Accreditation process undertaken by EM/ANB

We were informed that EM/ANB board has undertaken a governance accreditation process through Accreditation Canada. This process began in Fall 2019 and a final report was delivered in March 2020.

Dissolution of the Performance Management Oversight Committee

We were made aware the PMOAC was in the process of dissolution during December 2019, with its role to be replaced by the various board sub-committees.

Creation of System Status Plan for dedicated transfer units

We were informed the System Status Plan was amended in March 2019 to reroute part of the fleet into a second, separate System Status Plan for patient transfers. The effect of this change reduced the number of ambulances in some communities' System Status Plan for 911 calls.

Development of performance-based payments for the Official Languages Plan

Under the contract, EM/ANB and MHSNB were “to develop metrics and associated remuneration drawn from the revised ANB Official Languages Strategic Plan” for the fiscal year beginning April 1, 2018. We were informed by the EM/ANB board the KPIs associated with this plan were agreed to in principle in December 2019.

Mandate letter for EM/ANB

A mandate letter for EM/ANB was drafted and signed by the Minister of Health on November 29, 2019. We were made aware through discussions with the Department that no mandate letter had been provided in the recent preceding years.

Appendix V – Definitions

Term	Defined
The Ambulance License (Department of Health and EM/ANB)	Ambulance Services Agreement entered into in June 2007 between Ambulance New Brunswick (now EM/ANB) and the Department of Health. The ambulance license exists to outline the responsibilities of both the Minister and EM/ANB in the delivery of ambulance services.
Asset Replacement and System Enhancement Fund	A fund held in trust for the purpose of replacing tangible assets and further enhancing systems used by EM/ANB.
Billing Revenue	Amount of revenue received by EM/ANB from patients for use of land or air ambulances.
Surplus Payment	A contractual feature of the contract between EM/ANB and MHSNB in which 50% of EM/ANB's operating surplus is included as payment to MHSNB. Previously, this amount was uncapped. Under the current contract, surplus payment is capped at \$1.1 million.
The Contract (EM/ANB and MHSNB)	<i>Ambulance Services Agreement</i> , initial entered during June 2007 between Ambulance New Brunswick (now EM/ANB) and NB EMS (now Medavie Health Services New Brunswick). The contract was renegotiated and entered into in October 2017 after the ten-year term of the initial contract expired.
Deployment Plans	Model depicting the stations and posts required to be occupied by ambulances at a given time to achieve contractual required response times. Deployment plans specify the priority of stations to be maintained when resources are restricted, and where additional resources can be drawn from when circumstances warrant pulling resources from another service district.
Dynamic Deployment	<i>“An ambulance management strategy where 911 call demand coverage is maximized continuously through time. Unlike static deployment where dispatched ambulances leave a coverage gap until they return to their home-base after service, dynamic deployment redeploys idle ambulances to different locations if that leads to an increase in demand coverage.”⁴</i>

⁴ <https://repository.arizona.edu/handle/10150/603515>

Appendix V – Definitions (continued)

EM/ANB	Corporation granted the license to provide land and air services in New Brunswick. EM/ANB Inc. is under the control of the Minister of Health and management of the corporation has been contracted to Medavie Health Services New Brunswick.
Emergency Cut-Off	A level within a deployment plan which indicates the minimum amount of resources needed to ensure a reasonable expectation of response within contractual times.
Exemptions	For the purposes of calculating response times, the service time of certain calls are adjusted to be within contractual requirements due to factors considered beyond the control of MHSNB. See Appendix VI for a list of qualifiers for exemption.
Extra-mural	Health services program delivering <i>acute, palliative, chronic, rehabilitative and supportive care services</i> ⁵ to New Brunswickers in their homes and communities. The extra-mural program is under control of Minister of Health and was merged into creation of EM/ANB in January 2018.
Flexible Budget	A budget adjusted automatically to reflect planned costs for the actual level of activity during a period.
Full Deployment Exemption	A frequently used exemption caused by a deployment plan falling below Emergency Cut-Off due to increased call volume within a service district. See Appendix VI for a list of qualifiers for exemption.
Funding Grant	Annual budget amount provided by the Department of Health to EM/ANB to fund ambulance services and managed by MHSNB on behalf of EM/ANB.
KPIs	Abbreviation of Key Performance Indicators; quantifiable measures used to evaluate the success of EM/ANB/MHSNB in meeting performance objectives and standards.
Management Fee	A fixed interval fee for service included as payment to MHSNB under initial contract (2007-2017). Replaced with performance-based payment under current contract (2017 – 2027).

⁵ <https://extramuralnb.ca/en/what-we-do/>

Appendix V – Definitions (continued)

Medical Communications Management Centre	<i>“Based in Moncton, the centralized ambulance dispatch centre is known as MCMC (Medical Communications Management Centre). Working in the centre are emergency medical dispatchers (EMDs), who respond to emergency medical calls, coordinate inter-facility transfers, dispatch our EMS land and air crews, and provide moral support and life-saving advice and instruction to patients in medical distress and 911 callers.⁶”</i>
MHSNB	Medavie Health Services New Brunswick; a for-profit subsidiary of Medavie Inc. and counter-party to the contract with EM/ANB. MHSNB is responsible for providing the management of ambulance services.
Off-load Delay	Paramedics are required to wait with a patient until the patient is triaged into a hospital. During this period, paramedics are unable to respond to any emergency or non-emergency calls. Instances where an offload exceeds 25 minutes are considered off-load delays.
Out-of-service Unit	A term used to describe an instance where an ambulance cannot respond to an emergency or non-emergency call. Instances include mechanical failures, inspections, accidents, or no staff available to operate the unit.
Performance-based Payment	An incentive feature included as part of the current contract between EM/ANB and MHSNB (2017-present). Includes up to \$2.7 million payable to MHSNB upon meeting contractually-stated performance targets.
PMOAC	Performance Management Oversight Advisory Committee; a committee comprised of departmental and select MHSNB employees. The PMOAC exists external to the EM/ANB board and is responsible for reporting to the board on matters related to KPIs, performance of MHSNB under the contract, and financial affairs (amongst other things).

⁶ <https://ambulancenb.ca/en/what-we-do/services/>

Appendix V – Definitions (continued)

Response time Percentage	<p>The percentage of calls in which an ambulance arrives on-site within its contractually stated times:</p> <ul style="list-style-type: none"> • Emergency (Urban): 9 minutes • Emergency (Rural): 22 minutes • Non-emergency (Urban): 15 minutes • Non-emergency (Rural): 30 minutes <p>Response time percentage is calculated as number of calls compliant in contractual response times as a percentage of total calls (adjusted for exemptions – see <i>Exemptions</i>).</p>
Service District	Grouping of communities (rural and urban), which a deployment plan is designed to service.
System Status Plan	Detailed specifications as to the ambulances, facilities, and human resources to be deployed to achieve performance standards, as designed by MHSNB. Resources required within the System Status Plan were contractually agreed to by both parties in the 2007 contract and again, upon renegotiation, in 2017.

Appendix VI – Qualifiers for Exemptions

Below is an excerpt (paraphrased) from the Exemption & Exception Reporting & Approval Guide

Full Deployment

Assigned ambulance exceeds the contractual response time within an area in the System Status Plan when the district is below Emergency Cut-Off.

4/10 Rule

911 call is assigned less than 4 minutes (Urban) or less than ten minutes (Rural) of a previous call within a district in the System Status Plan when at Emergency Cut-Off.

Reassigned to a Higher Priority

Assigned unit is diverted to a higher priority call and one or more subsequent units must be assigned to the original call.

Higher to a Higher Priority

Non-emergency is upgraded to an emergency.

Staged Calls

Ambulance is assigned a call and requested to wait at an assigned location until it is safe to enter. The arrived at scene time will be considered when they report they are at the staged location.

Unknown Location

Response location is not clearly defined and is the cause for the delay.

Incorrect/Changed Location

Original address provided is determined to be incorrect or has changed from the actual scene, location which caused the delayed response.

Delay due to Ferry/Train

Delay due to ferry or train: the time lapse for the delay will be deducted from the total response time.

Delay due to Unknown Detour or Construction

Ambulance must change the route it was taking to get to the scene of the call or encounters construction creating a delay.

Technology Failure

Equipment fails creating a loss in communication and ability to send the responding ambulance to a call, or verify the ambulance arrived on scene.

Vehicle Failure

Responding vehicle has an issue and is delayed or cannot continue responding to the call.

Mutual Aid

Response time standards are not applicable when completed by external agencies.

Weather

Adverse weather conditions affect call response.

Appendix VII – Observations from Ambulance Response Testing

Below are observations made during the testing of ambulance responses.

Full Deployment Exemptions Used for Distance

In several instances, full deployment exemptions were used, but no station or post existed closer to the scene location as compared to where the ambulance responded from. In these cases, the responding ambulance would have been dispatched even if all ambulances were available at that time, as the System Status Plan did not provide a strategic location closer to the scene. In these cases, the issue was distance and the response times recorded should not be eligible for exemption.

We analyzed the geographic coverage of the communities' ambulances and found several are responding to remote locations where it would be unlikely they could respond within the required response time. In these areas, it is unlikely full deployment would ever be the cause of a late arrival.

Allowing full deployment exemptions in remote areas, or where the primary cause of a late arrival is distance, reduces the apparent severity of the challenges in providing full geographic coverage in New Brunswick.

In AGNB's view, allowing full deployment exemptions where distance caused the delay falsely presents favorable response time performance, reducing the emphasis on addressing geographical coverage issues.

Full Deployment Exemptions Use Based on Circumstances in Neighboring Community

System Status Plan service districts contain multiple communities. We observed one example of full deployment exemption use where an ambulance was responding to a 911 call within its own community of Grand Bay-Westfield and was eligible for full deployment exemption due to the number of ambulances occupied in the neighboring city of Saint John. This was possible because both communities are in the same service district, and the service district was below Emergency Cut-off.

Allowing exemptions in Grand Bay-Westfield based on the circumstances in Saint John reduced the objectivity of performance measure for Grand Bay-Westfield. In this case, the performance of Grand Bay-Westfield could be falsely overstated due to the ambulance activity in Saint John. This would, by extension, reduce the emphasis on addressing performance issues specific to Grand Bay-Westfield. It is possible for this to happen in any service district. However, it should be noted the risk was elevated to some degree in the service districts of Saint John, Fredericton and Moncton due to the frequent use of full deployment in those cities.

In AGNB's view, allowing circumstances in neighboring communities to drive exemptions falsely presents favourable response time performance, reducing the apparent severity of localized performance issues.

Appendix VII Observations from Ambulance Response Testing (continued)

Full Deployment Exemptions Used for Out-Of-Service Units

We observed instances where a full deployment exemption was claimed, but the closest station to the scene was unmanned due to an ambulance being out-of-service. In these cases, the stations were unmanned due to prioritization under the System Status Plan, and an ambulance would have been available to respond if all ambulances were active during the shift. The district may have been below Emergency Cut-off with or without ambulances responding from other districts under dynamic deployment, however, the actual cause of the delay was out-of-service ambulances.

Allowing full deployment exemptions where the actual cause of delay is out-of-service ambulances reduced the apparent severity of the operational challenge of providing ambulance coverage where ambulances are absent.

In AGNB's view, allowing full deployment exemptions where out-of-service is the issue provided an overstatement of response time performance, reducing the emphasis on addressing resource issues.

Full Deployment Exemptions Used for Driver Error

We observed instances of full deployment exemptions claimed where the responding ambulance was within a proximity to the scene which should have allowed a response time within the contractual requirement. In these cases, a sub optimal route was taken. Though the district was below Emergency Cut-off, the actual cause of the delay was driver error.

Allowing full deployment exemptions where the actual cause of delay is driver error reduced the apparent severity of the operational challenge of ensuring ambulances take the most efficient route to the scene.

In AGNB's view, allowing full deployment exemptions where driver error is the issue provided an overstatement of response time performance, reducing the emphasis on providing training opportunities or technical solutions to remediate the issue.

Appendix VII Observations from Ambulance Response Testing (continued)

Use of Dynamic Deployment Leaves Wide Geographic Areas Uncovered

We observed instances where the closest station to a scene was able to respond because an ambulance was backfilling the position under the design of the System Status Plan. In these cases, dynamic deployment yielded a positive result. By contrast, however, we also observed instances where ambulances backfilling under dynamic deployment left wide geographic areas uncovered:

- **Perth-Andover Service District**

- In one instance, both the Perth-Andover and Woodstock service districts had out of service units. Perth-Andover and Florenceville stations should have been manned per the Perth-Andover district's System Status Plan, but the Florenceville ambulance was in Hartland to provide support to the Woodstock service district. Whereas Florenceville station should have been able to respond in 15 minutes, the response time from Hartland was 29 minutes.

- **Bathurst and Campbellton Service Districts**

- In several instances, Belledune was left unmanned due to a combination of out-of-service units, its low priority level on the Campbellton service district System Status Plan and its proximity to the busy service district of Bathurst. The absence of an ambulance in Belledune left a wide geographic area uncovered:
 - In one instance, the Campbellton service district was brought below Emergency Cut-off to aid the Bathurst service district from Belledune. This was done as an emergency measure as Bathurst had zero ambulances available to respond at that time. Belledune, however, was not backfilled due to its priority level on Campbellton's System Status Plan.
 - In another instance, response to a scene in Bathurst took ten minutes. The scene was less than five minutes from the Bathurst station, but the Bathurst ambulance was already responding to a 911 call. An ambulance was dispatched from Belledune to respond, but the Bathurst ambulance became available and responded before Belledune arrived on scene. The Belledune ambulance was then brought into Bathurst to provide coverage and Belledune was not backfilled due to Belledune's priority level on the Campbellton district's System Status Plan.
 - In another instance, response to a scene in Belledune took 41 minutes. The scene was located less than five minutes from the Belledune station. The Belledune ambulance was out-of-service and no coverage was provided due to Belledune's priority on the

Campbellton service district's System Status Plan. In this case, the Belledune ambulance came back into service due to a shift change before aid was able to arrive from outside the community.

- In another instance, response to a scene in Lorne took 25 minutes. The scene was located less than ten minutes from the Belledune station. The Belledune ambulance was out-of-service and no coverage was provided due to Belledune's priority on the Campbellton service district's System Status Plan. The responding ambulance came from Dalhousie.

- **Sussex Service District and Blacks Harbour and St. Stephen Service District**

- In one instance, Kingston was left unmanned due to its priority on the Sussex service district's System Status Plan and its proximity to the busy service district of Saint John. Kingston is a remote area and it would be difficult to respond to that area from the nearest station in Hampton. In this instance, responding to the scene in Kingston took just under 25 minutes from Hampton whereas the Kingston station was less than five minutes away. The absence of an ambulance in Kingston left a wide geographic area uncovered. Priorities have since changed on the Sussex service district System Status Plan to ensure coverage is now maintained in Kingston.
- In one instance, the Lepreau station was left unmanned due to its proximity to the busy service district of Saint John. It was dispatched to provide coverage to the city. The absence of an ambulance in Lepreau left a wide geographic area uncovered. In this case, responding to a scene in Musquash took 23 minutes from Saint John whereas it was a ten-minute drive from the Lepreau station.

MHSNB indicated to us part of its strategy to maintain service levels in Saint John, despite resource constraints, has been to draw resources in from surrounding communities using dynamic deployment.

In our view, this reinforces our observation the design of ambulance services in New Brunswick has put rural and remote communities at a disadvantage.

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 Crown Lands and Forests Act.</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>April 1, 2022</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>April 1, 2022</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

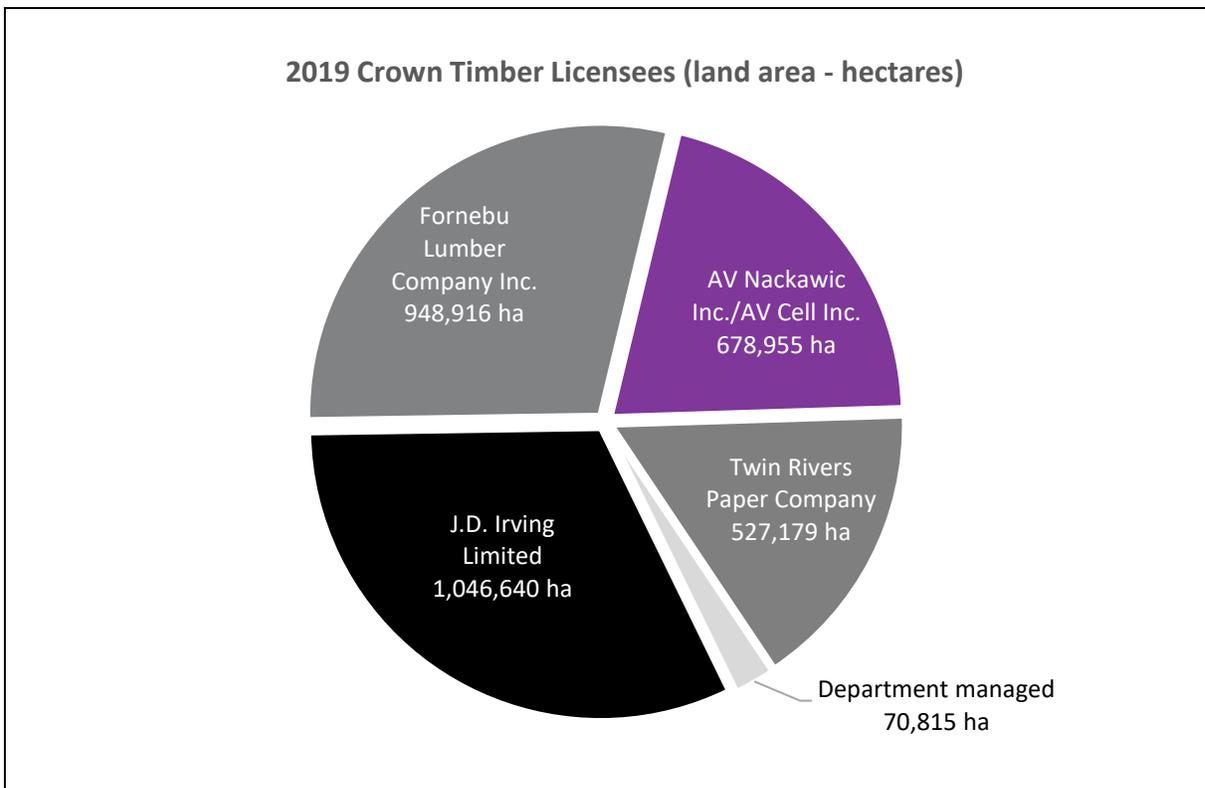
4.14 In New Brunswick, the *Crown Lands and Forests Act* (the Act) provides the Department with authority and responsibility to administer and control Crown lands. This includes responsibility under subsection 3(1) of the Act “for the development, utilization, protection and integrated management of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



231 03 0001

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", written in a cursive style.

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
Tel. / Tél. : 506-453-2510 Fax / Téléc. : 506-453-2930

www.gnb.ca

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.