TELUS Health

New Brunswick Teachers' Pension Plan

Actuarial Valuation Report as at August 31, 2024

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Introduction

This report was prepared for the Board of Trustees ("Trustees") of the New Brunswick Teachers' Pension Plan ("NBTPP" or "Plan") for the following purposes:

- to document the results of the funding valuation, as required under subsection 17(1) of the New Brunswick *Teachers' Pension Plan Act* ("TPPA") and provide the related actuarial opinion;

- to document the results of the going-concern actuarial valuation required under subsection 16(1) of the TPPA in order to determine the maximum eligible employer contribution to the NBTPP under subsection 147.2(2) of the *Income Tax Act (Canada)* ("ITA") and provide the related actuarial opinion;

- to document the results of a hypothetical wind-up valuation of the NBTPP as required under the Canadian Institute of Actuaries Standards of Practice, and provide the related actuarial opinion; and

- to document the results of the risk management procedures as required under section 15 of the TPPA.

The Board of Trustees is also seeking the approval of the Superintendent of Pensions for the following items, as required under the TPPA, the *Pension Benefits Act* ("PBA") and accompanying Regulations:

- approval of the generational mortality table used in the funding valuation as required under sub-paragraph 17(9)(c)(ii) of the TPPA;

- approval of the asset liability model used, as described in Section 4 of the report, including the stochastic projection assumptions found under Appendix C, as required under subsection 15(1) of Regulation 2012-75; and

- approval of the economic assumptions used in the asset liability model, as described under Appendix C, as required under subsection 15(3) of Regulation 2012-75.

The Trustees for the NBTPP retained the services of TELUS Health to prepare this report. The report is suitable for filing with the Superintendent of Pensions and with the Canada Revenue Agency.

The last actuarial valuation report prepared for the NBTPP and filed with both the Superintendent of Pensions and the Canada Revenue Agency was performed as at August 31, 2022.

The next actuarial valuation report for the NBTPP will be due no later than August 31, 2027.

Changes since last valuation

The hypothetical wind-up basis has been updated to reflect market conditions as at the valuation date.

On June 22, 2022, the Actuarial Standards Board (ASB) approved changes to the Practice Specific Standards for Pension Plans (Part 3000) of the Canadian Institute of Actuaries (CIA) effective December 1, 2022. This report takes these updates into account.

Section 5.6 of the plan text was eliminated effective June 5, 2024. This section had previously limited a teacher's accrued pension upon termination of employment or retirement to not exceed what would have been accrued

under the former Teacher's Pension Act. This change does not have any immediate impact on the funding liability and normal cost.

Subsequent Events

The CIA recently published a research report on mortality improvement trends in Canada. This report suggests that future mortality improvements may be greater than previously assumed. At this time, the CIA has not recommended or mandated the use of a mortality improvement assumption to replace the CPM-B tables for the purpose of calculating commuted values for defined benefit pension plans or for hypothetical wind-up valuations. As such, the results of this valuation will not take into account the impact of adopting the mortality improvement assumption consistent with the findings of the research report at this time. If a change in the mortality improvement assumption is adopted by the CIA in the future for the above purposes, the impact of changing the mortality improvement scale for the Plan will be considered at that time.
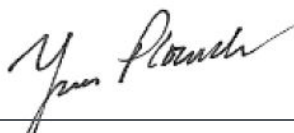
We are not aware of any other events subsequent to the valuation date which may have a material impact on the results of this valuation.

The recommendations and opinions are given exclusively from a financial viewpoint. This valuation report does not constitute a legal opinion on the rights and duties of the Trustees or the members of the Plan over the pension fund.

Actuarial valuation results are only estimates. Actuarial valuations are performed based on assumptions and methods that are in accordance with sound actuarial principles. Emerging experience differing from these assumptions will result in gains or losses, which will be revealed in future valuations.

The undersigned is available to provide supplementary information and explanation as appropriate, concerning this report.

Respectfully submitted,

Yves Plourde, FSA, FCIA

Randy Pelletier, ACIA

May 30, 2025

May 30, 2025

Date

Date

This report has been peer reviewed by Eric Ouellette, FSA, FCIA.

Telus Health
Knowledge Park
40 Crowther Lane, Suite 300
Fredericton, NB   E3C 0J1

May 2025

Section 1 – Funding Valuation

A funding valuation is required under subsection 17(1) of the TPPA. The results of the funding valuation of the NBTPP as at August 31, 2024 are found below.

The funding valuation results presented in this section are based on asset information found in Appendix A, membership data found in Appendix B, and Plan provisions summarized in Appendix D. The methods and assumptions used in the funding valuation are presented later in this section.

Funding Valuation Funded Status

The funding valuation funded status of the NBTPP is determined by comparing the fair market value of the assets to the funding valuation actuarial liabilities. The funding valuation actuarial liabilities are based on the benefits earned up to the valuation date assuming the Plan continues indefinitely.

Table 1.1 – Funding Valuation Funded Status

	August 31, 2024	August 31, 2022
	$M	$M
Actuarial value of assets		
- Fair market value of assets	$7,268.2	$6,441.4
Funding valuation actuarial liabilities		
- Active members	2,097.2	1,835.1
- Retirees and survivors	4,007.5	3,814.5
- Deferred vested and suspended members	98.1	80.2
- Total	$6,202.8	$5,729.8
Funding valuation excess (unfunded liability)	$1,065.4	$711.6
Termination value funded ratio [calculated in accordance with subsection 17(7) of the TPPA]	117.2%	112.4%

The termination value funded ratio is used in the calculation of the "termination value" of any individual's pension benefits at termination of employment, death, marriage breakdown, or retirement, as the case may be, in accordance with the terms of the Plan. It is calculated in accordance with subsection 17(7) of the TPPA.

Funding Valuation Normal Cost and Excess Contributions

The table below provides the funding valuation normal cost, being the value of the pension benefits accrued in the twelve-month period after the valuation date. It compares the funding valuation normal cost to the level of member and employer contributions in order to determine the level of contributions being made to the NBTPP in excess of the funding valuation normal cost. Results for the year following August 31, 2024 are presented below, along with the results found in the previous actuarial valuation as at August 31, 2022.

Table 1.2 – Funding Valuation Normal Cost and Excess Contributions

	Year following August 31, 2024		Year following August 31, 2022	
	$M	% of payroll	$M	% of payroll
A. Funding valuation normal cost	$122.6	15.61%	$107.2	15.41%
B. Contributions:				
- Members	$81.6	10.39%	$72.2	10.38%
- Employer initial contributions	75.7	9.64%	67.0	9.63%
- Employer temporary contributions:				
- for 5 years after 1.7.2014	0.0	0.00%	0.0	0.00%
- for 10 years after 1.7.2014	0.0	0.00%	5.2	0.75%
- for 15 years after 1.7.2014	5.9	0.75%	5.2	0.75%
Total	$163.2	20.78%	$149.6	21.51%
C. Excess contributions (B. – A.)	$40.6	5.17%	$42.4	6.10%
Estimated payroll for following year	$785.5 M		$695.6 M	

Reconciliation of Funding Valuation Funded Status with Previous Valuation

The table below reconciles the change in the Plan's funded status between the last funding valuation as at August 31, 2022 to this funding valuation as at August 31, 2024:

Table 1.3 – Reconciliation of Funded Status

	$M	$M
Funding valuation excess (unfunded liability) as at August 31, 2022		$711.6
Expected changes in funded status		
- Interest on funding excess (unfunded liability)	91.7	
- Total contributions in excess of normal cost (shortfall) with interest	92.6	
- Total		$184.3
Expected funding valuation excess (unfunded liability) as at August 31, 2024		$895.9
Experience gains (losses) due to the following factors:		
- Investment return on actuarial value of assets different than assumed	360.8	
- Incidence of retirement	2.2	
- Incidence of termination of employment	1.0	
- Incidence of mortality	52.5	
- Incidence of disability	2.5	
- Indexing of accrued pensions and pensions in payment different than assumed	(198.4)	
- Other factors	(13.3)	
- Total		$207.3
Impact of changes in actuarial assumptions		($37.8)
Funding valuation excess (unfunded liability) as at August 31, 2024		1,065.4

Reconciliation of Total Normal Cost

The factors contributing to the change in the total normal cost from the last funding valuation as at August 31, 2022 to this funding valuation as at August 31, 2024 are shown below:

Table 1.4 – Reconciliation of Total Normal Cost

	% of payroll
Total normal cost as at August 31, 2022	15.41%
Impact of changes in demographics	0.09%
Impact of changes in assumptions	0.11%
Total normal cost as at August 31, 2024 (see Table 1.2)	15.61%

Funding Valuation Actuarial Methods

Asset Valuation Method

The assets used for the funding valuation are equal to the fair market value of the assets.

Actuarial Cost Method

The funding valuation actuarial liabilities and normal cost were calculated using the accrued benefit (or unit credit) actuarial cost method in accordance with the requirements of subsection 17(9) of the TPPA.

The funding valuation actuarial liabilities are equal to the actuarial present value of benefits earned by members for services prior to the valuation date, taking into account the actuarial assumptions as indicated hereafter. The actuarial liabilities take into account future increases in accrued pensions due to regular cost-of-living adjustments granted to active and retired members.

The funding valuation normal cost is equal to the actuarial present value of benefits expected to be earned by members in the year following the valuation date. A salary increase has been estimated for the year following the valuation date to calculate the estimated normal cost and estimated member and employer contributions for the year following the valuation date.

The ratio of the total normal cost to the covered payroll for the period will tend to stabilize over time if the demographic characteristics of the active members remain stable. All other things being equal, an increase in the average age of the active members will result in an increase in this ratio.

For valuation purposes, to determine eligibility for benefits and for any other use, the age used is the age on the date of the nearest birthday.

Funding Valuation Actuarial Assumptions

The main actuarial assumptions employed for the funding valuation are summarized in the following table. Emerging experience differing from these assumptions will result in gains or losses, which will be revealed in future funding valuations. Experience gains and losses emerging in future funding valuations will impact the

funded ratio of the Plan, which in turn will impact the types and timing of any actions to be taken by the Trustees in accordance with the Funding Policy. All rates and percentages are annualized unless otherwise noted.

Table 1.5 – Funding Valuation Actuarial Assumptions

	August 31, 2024	August 31, 2022
Discount rate	6.25% per annum	6.25% per annum
Inflation	2.10% per annum	2.10% per annum
Indexing of active members accrued pensions	2025 : 3.11% 2026+ : 100% of inflation[1]	2023 : 4.75% 2024+ : 100% of inflation[1]
Indexing of retiree pensions and other inactive members accrued pension	2025 : 2.33% 2026+ : 75% of inflation[1]	2023 : 3.56% 2024+ : 75% of inflation[1]
Salary increase for year following valuation (for normal cost purposes only)	2.60% plus merit and promotion based on service	2.60% plus merit and promotion based on service
YMPE increase for year following valuation (for normal cost purposes only)	2.60%	2.60%
Mortality	**Regular Members:** CPM2014 Public Sector generational mortality using improvement scale CPM-B, adjusted by 0.95 for males and 0.90 for females **Disabled Members:** CPM2014 Public Sector generational mortality using improvement scale CPM-B, adjusted by 1.50 for males and 1.50 for females	**Regular Members:** CPM2014 Public Sector generational mortality using improvement scale CPM-B, adjusted by 0.95 for males and 0.90 for females **Disabled Members:** CPM2014 Public Sector generational mortality using improvement scale CPM-B, adjusted by 1.50 for males and 1.50 for females
Spousal age difference	Males 2 years older than females	Males 2 years older than females
Retirement[3]	20% at 81 points 30% at 85 points 30% at 89 points 20% at 91 points but not later than attainment of 35 years of service or age 62	If unreduced retirement age[2] attained within 10 years of 1.1.2014: 20% at 81 points 35% at 85 points 35% at 87 points 10% at 90 points but not later than attainment of 35 years of service or age 60

				If unreduced retirement age[2] attained after 10 years of 1.1.2014: 20% at 81 points 40% at 89 points 40% at 91 points but not later than attainment of 35 years of service or age 62		
Disability (sample annual rates)	Age	Male	Female	Age	Male	Female
	25 - 29	0.01%	0.01%	25 - 29	0.01%	0.01%
	30 - 34	0.03%	0.02%	30 - 34	0.03%	0.02%
	35 - 39	0.06%	0.03%	35 - 39	0.06%	0.03%
	40 - 44	0.08%	0.05%	40 - 44	0.08%	0.05%
	45 - 49	0.11%	0.07%	45 - 49	0.11%	0.07%
	50 - 54	0.17%	0.12%	50 - 54	0.17%	0.12%
	55 - 59	0.25%	0.21%	55 - 59	0.25%	0.21%
	60 and over	0.30%	0.30%	60 and over	0.30%	0.30%
Proportion of members with a spouse or common-law partner	Active males: 85% Active females: 75% Deferred and pensioners: Varies by age			Active males: 85% Active females: 75% Deferred and pensioners: Varies by age		

[1] Inflation is adjusted down by 0.10% per annum for purposes of indexing to take into account the impact of the 4.75% cap applied under the Plan for indexing purposes.

[2] Unreduced retirement age determined in accordance with the provisions of the Plan applicable to service before July 1, 2014.

[3] Members who have attained assumed retirement age are assumed to retire in one year from the valuation date.

Rationale for Material Actuarial Assumptions

The assumptions have been reviewed in light of current economic and demographic conditions.

Inflation

Given the historical increases in consumer prices in Canada, the rates expected by the market, the portfolio managers' expectation, the Bank of Canada policy and the long-term forecasts of the Conference Board of Canada, TELUS Health believes that the expected long-term rate of inflation should be between 1.75% and 2.25%.

Consistent with this range, we have used an inflation assumption of 2.10% per annum. Canadian inflation has remained near the Bank of Canada's target during a sustained period of economic growth and stimulus following the 2008 economic downturn which has provided some evidence of the Bank of Canada's ability to manage inflation. Despite a recent increase in inflation in 2021, 2022, and 2023, it has now come back down to the above long-term levels. We believe that our long-term assumption remains appropriate. There is no change from the previous valuation.

Discount Rate Development

The elements considered in the development of the discount rate assumption for purposes of the funding valuation are summarized in the table below.

Table 1.6 – Development of Funding Valuation Discount Rate

	%
Expected long-term nominal return (based on the long-term target asset mix, including impact of rebalancing and diversification, and added value for active management)	6.85
Expected investment and administration expenses paid from the fund	(0.20)
Assumed margin for adverse deviation	(0.40)
Discount rate	6.25

The long-term target asset mix used in our analysis is found in Table A.4 and is in accordance with the Statement of Investment Policies adopted by the Trustees for the NBTPP up to and including September 17, 2024. The expected long-term nominal return by asset class is provided in Appendix C. It should be noted that the return assumptions for bonds has been determined mainly on current market conditions while the return assumptions for equities and alternative investments are based more on long-term expectations.

Expenses

The allowance for investment management and administrative expenses paid from the fund built into the discount rate is 0.20% of assets based on recent Plan history and our expectation for future expenses.

Rate of Salary Increase

Salary increases consist of a combination of inflation, productivity growth (i.e. real increase in average employment earnings in excess of inflation) and merit and promotional increase.

We use a salary increase assumption of 2.60% per annum, based on a difference of 0.5% per annum above inflation.

In addition to the above salary increase, we include a promotional scale to reflect the various steps in pay scales and promotions during the career of a member. The recommended promotional salary scale varies by service and is greater early in a career in order to reflect the seniority increases typically granted in accordance with the collective agreement. The recommended scale was developed using the Teachers' most recent collective agreement, where the increases reflect the negotiated increases over and above inflationary increases for teachers in the first 10 years of employment, as well as a long-term merit scale assumption for teachers who move between different certification levels over their careers.

The promotion scale assumption employed is summarized in the following table.

Table 1.7 – Promotional and Merit Scale as at August 31, 2024

Years of Service	Merit and Promotion
0 – 4	4.8% per annum
5 – 10	3.5% per annum
11+	0.1% per annum

Mortality

This valuation report uses the mortality table CPM-2014 Public Sector adjusted by 95% for males and 90% for females, with mortality improvement scale CPM-B, varying by gender, age and calendar year. This remains unchanged from the prior valuation.

For existing disability pensioners, we continue to use the mortality table CPM-2014 Public Sector with mortality improvement scale CPM-B, varying by gender, age and calendar year, with adjustment factors of 150% for males and 150% for females, based on a prior mortality study from 2013 to 2019. This remains unchanged from the prior valuation.

Rate of Increase in YMPE

We have continued to assume in this valuation that the YMPE will increase at the same rate as salary (before merit and promotional increase). As a result, we have used a rate of 2.60% per annum. The YMPE is automatically updated to its revised base level at each valuation date.

Retirement

The retirement assumption last set at August 31, 2019 expected that teachers would start delaying retirement age due to amendments made to the Plan effective July 1, 2014. A review of Plan experience since 2019 suggests

that this delay in retirement age has not happened. In fact, experience dating back to 2014 indicates that retirement patterns among teachers had not yet been materially impacted by the change in early retirement provisions introduced for service after July 1, 2014.

We have modified our retirement assumption by eliminating the select period from our prior assumption and revising our long-term retirement assumption to reflect recent experience. This had the impact of decreasing the expected average retirement age among actives by about 0.7 years. We will continue to monitor this assumption for reasonableness.

Difference in Age between Spouses

The assumed age difference between spouses is used for active, deferred and suspended members as well as some retirees. The assumed spousal age difference is for males to be 2 years older than females. This assumption is the same as at August 31, 2022.

Proportion with a Spouse or Common-law Partner

The assumption for proportion of active members with a spouse or common-law partner at retirement remains the same as the assumption used as at August 31, 2022.

The assumed proportion of deceased retirees with a spouse or common-law partner at death is also unchanged from the previous valuation and is found below:

Table 1.8 – Proportion of Deceased Retirees With a Spouse or Common-law Partner at Death

Ages	Males	Females
59 or younger	85.0%	75.0%
60-64	85.0%	75.0%
65-69	82.5%	72.5%
70-74	80.0%	70.0%
75-79	77.5%	60.0%
80-84	72.5%	50.0%
85-89	60.0%	35.0%
90-94	45.0%	17.5%
95 or older	10.0%	5.0%

Opinion on Funding Valuation

In our opinion, for the purposes of the funding valuation section of the report:

- The membership data on which the valuation is based are sufficient and reliable for the purposes of the valuation.

- The assumptions are appropriate for the purposes of the valuation.

- The methods employed in the valuation are appropriate for the purposes of the valuation.

This funding valuation report has been prepared, and our opinions given, in accordance with accepted actuarial practice in Canada.

The assumptions used under the funding valuation of this report were reasonable and consistent with the objectives of the Plan at the time this actuarial valuation report was prepared. The funding valuation assumptions are consistent with the stochastic model inputs.

Respectfully submitted,

Yves Plourde, FSA, FCIA	Randy Pelletier, ACIA
May 30, 2025	May 30, 2025
Date	Date

Section 2 – Going-Concern Valuation

The going-concern valuation is conducted in accordance with subsection 16(1) of the TPPA in order to determine the maximum eligible employer contribution to the NBTPP under subsection 147.2(2) of the *Income Tax Act (Canada)* ("ITA") and provide the required actuarial opinion.

The going-concern valuation results presented in this section are based on asset information found in Appendix A, membership data found in Appendix B, and Plan provisions as summarized under Appendix D. The methods and assumptions used in the going-concern valuation are described later in this section.

Going-Concern Funded Status

The funded status of the Plan on the going-concern basis is determined by comparing the actuarial value of the assets to the actuarial liabilities. The actuarial liabilities are based on the benefits earned up to the valuation date assuming the Plan continues indefinitely. It also has a provision for future regular cost-of-living adjustments to be provided by the Trustees in accordance with the Plan terms and the Funding Policy. Such a provision is acceptable under paragraph 147.2(2)(c) of the ITA.

Table 2.1 – Going-Concern Funded Status

	August 31, 2024	August 31, 2022
	$M	$M
Actuarial value of assets		
- Fair market value of assets	7,268.2	6,441.4
Going-concern actuarial liabilities		
- Active members	2,328.4	1,993.4
- Retirees and survivors	4,225.8	3,970.3
- Deferred vested and suspended members	107.3	86.3
- Total	6,661.5	6,050.0
Going-concern valuation excess (unfunded liability)	606.7	391.4
Going-concern funded ratio	109.1%	106.5%

Going-Concern Residual Normal Cost

The table below summarizes the estimated going-concern residual normal cost of pension benefits being earned in the twelve-month period after the valuation date.

Table 2.2 – Going-Concern Residual Normal Cost

	As at August 31, 2024		As at August 31, 2022	
	$M	% of payroll	$M	% of payroll
Total normal cost	134.1	17.1	114.0	16.4
Less Member contributions	81.6	10.4	72.2	10.4
Residual normal cost	52.5	6.7	41.8	6.0
Estimated payroll for the following year	785.5		695.6	

Maximum Eligible Employer Contribution Under the Income Tax Act

The maximum eligible employer contribution in accordance with the ITA is equal to the residual normal cost, plus the greater of the going-concern unfunded liability and the hypothetical wind-up deficiency.

On the basis of the methods and assumptions in this report, the maximum eligible employer contribution for the year following August 31, 2024 is equal to $132.7M.

When spreading the greater of the going-concern unfunded liability and the hypothetical wind-up deficiency over the next three years (period for which this going-concern valuation is valid under the PBA), the maximum eligible employer contribution for the three years following August 31, 2024 (ignoring interest and salary increases) would be as follows:

Table 2.3 – Maximum Eligible Employer Contributions Spread Over Three Years

Year Following	Greater of Going-Concern Unfunded Liability and Hypothetical Wind-up Deficiency	Residual Normal Cost	Total	
	$M	$M	$M	% of payroll
August 31, 2024	80.2	52.5	132.7	16.9%
August 31, 2025	80.2	52.5	132.7	16.9%
August 31, 2026	80.2	52.5	132.7	16.9%

Based on the above, the employer contribution requirements under the terms of the NBTPP of 10.38% of payroll (comprised of 9.63% of payroll in initial contributions, and 0.75% of payroll in temporary contributions) are eligible contributions under the ITA. Furthermore, should employer contributions be increased by a maximum of 1.5% of payroll as may be required under the Funding Policy if a deficit recovery plan is applied, those higher employer

contributions would also be eligible contributions under the ITA up to the date of the next going-concern valuation scheduled for no later than August 31, 2027.

Going-Concern Valuation Actuarial Methods

The asset valuation method and the actuarial cost method under the going-concern valuation are identical to the asset valuation method and the actuarial cost method under the funding valuation. The going-concern valuation assumptions are also identical, except for the discount rate.

Discount Rate

In order to balance the need to fund intended benefits in a secure and responsible manner, while recognizing the necessity for CRA to monitor the impact of over-conservatism in assumptions, the Funding Policy provides a methodology to select an appropriate discount rate which we believe balances those concerns. The discount rate selected is determined by using the nominal investment return expected from the long-term asset mix of the NBTPP over the next 20 years at its 75th percentile. This leads to a nominal discount rate of 5.65% per annum.

Other going-concern actuarial assumptions

All other assumptions in our going-concern valuation are identical to the assumptions used under the funding valuation detailed in Table 1.5 of Section 1 of this report, and the rationale for the choice of those assumptions also applies for the going-concern valuation.

Emerging experience differing from these assumptions will result in gains or losses, which will be revealed in future going-concern valuations.

Opinion on Going-Concern Valuation
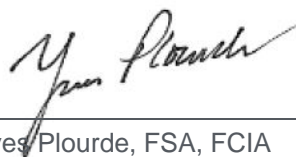
In our opinion, for the purposes of the going-concern valuation section of the report:

- The membership data on which the valuation is based are sufficient and reliable for the purposes of the valuation.

- The assumptions are appropriate for the purposes of the valuation.

- The methods employed in the valuation are appropriate for the purposes of the valuation.

This going-concern valuation report has been prepared, and our opinions given, in accordance with accepted actuarial practice in Canada.

The assumptions used under the going-concern valuation of this report were reasonable at the time this actuarial valuation report was prepared.

Respectfully submitted,

_____
Yves Plourde, FSA, FCIA

_____
Randy Pelletier, ACIA

___May 30, 2025_____
Date

___May 30, 2025_____
Date

Section 3 – Hypothetical Wind-up Valuation

A hypothetical wind-up valuation assumes that the Plan is wound-up on the valuation date and members' benefit entitlements are calculated as of that date. Although this type of valuation is not required under Part 2 of the PBA for a plan allowed under the TPPA, the Standards of Practice of the Canadian Institute of Actuaries require that actuarial valuation reports provide information with respect to hypothetical wind-up situations.

Postulated scenario at August 31, 2022

Subsection 16(3) of Regulations 2012-75 under the PBA prescribes that if a shared risk plan is wound-up by the persons who established the plan within 5 years of its conversion date, the conversion of the plan is void and the plan has to be wound-up as a defined benefit plan under Part 1 of the PBA. In addition, effective January 1, 2018, subsection 16(3.1) of Regulation 2012-75 provides that if the wind-up occurs between 5 and 10 years after the plan conversion date, the Superintendent may determine that the conversion is void and may require that the plan be wound-up as a defined benefit plan under Part 1 of the PBA.

It is important to note that the Former TPA was not subject to the PBA and the procedures to be followed if a wind-up occurred were not defined within the Former TPA. As a result, the procedures for payments at wind-up were not defined. In conducting the hypothetical wind-up valuation as at August 31, 2022, we therefore made the assumption that the conversion to a plan allowed under the TPPA would be void, and that the NBTPP would be wound-up as at August 31, 2022 in accordance with rules found under Part 1 of the PBA. This assumption was made solely on the basis that subsection 16(3.1) would apply on August 31, 2022 and does not represent a legal opinion on the validity of this scenario.

In order to estimate the accrued pensions of active members at August 31, 2022 under a scenario in which the conversion would have been void, we increased the accrued pensions by the differential between cost-of-living granted since the conversion date and the salary increase assumption under the funding policy basis. No adjustments were made to retiree pensions for this purpose. We also valued the hypothetical wind-up liability using discount rates consistent with the requirements of the PBA for plan wind-ups under Part 1.

Postulated scenario at August 31, 2024

Effective December 1, 2022, the CIA revised the standards of practice related to the hypothetical wind-up valuations of target pension arrangements. Section 3570 of the revised Standards define a target pension arrangement as "a pension plan for which the applicable legislation contemplates the reduction to the accrued pensions of plan members and beneficiaries while the plan is ongoing as one of the available options for maintaining the funded status of the pension plan, and where the reduction in accrued pensions is not necessarily caused by the financial distress of the plan sponsor or sponsors." The NBTPP is considered a target pension arrangement.

Under the revised Standards of Practice, a hypothetical wind-up valuation for the NBTPP must value the target benefits for each member as defined on the funding valuation basis. Plan liabilities are to be determined based on the group annuity marketplace at the hypothetical wind-up date. Accordingly, we have followed the CIA's recommendations to determine the estimated cost of indexed annuities as at August 31, 2024. In accordance with Plan terms, inactive members including retirees receive a target cost of living adjustment of 75% of CPI on their accrued deferred vested pension and pensions in payment respectively.

Hypothetical Wind-Up Funded Status

The hypothetical wind-up funded status under the scenario postulated above, including the results of the last hypothetical wind-up valuation, is as follows:

Table 3.1 – Hypothetical Wind-Up Funded Status

	August 31, 2024	August 31, 2022
	$M	$M
Assets		
Market value of assets	7,268.2	6,441.4
Provision for expenses	(4.4)	(3.0)
Total	7,263.8	6,438.4
Hypothetical wind-up liabilities		
Active members	2,534.0	3,653.0
Retirees and survivors	4,851.2	5,523.1
Deferred vested and suspended members	119.3	156.1
Total	7,504.5	9,332.2
Assets less liabilities on the hypothetical wind-up basis	(240.7)	(2,893.8)

The hypothetical wind-up funded status is presented for information purposes. There is no requirement under the TPPA and PBA to fund any hypothetical wind-up deficit of the NBTPP while it is not in a wind-up state.

Furthermore, the postulated scenario for the August 31, 2024 hypothetical wind-up valuation under which group annuities would be purchased for all members is a scenario which is mandated by CIA Standards. In an actual wind-up of the Plan, section 100.62 of the PBA and section 16 of Regulation 2012-75 would apply, and as a result, the funding valuation basis would be used to allocate a share of the assets of the Plan to every member upon wind-up. Once a share of assets is allocated to each member, such member will be provided with options to settle their entitlement in accordance with the requirements of the PBA on wind-up.

Incremental Cost on the Hypothetical Wind-Up Basis

The incremental cost on the hypothetical wind-up basis represents the present value of the expected aggregate change in the actuarial liabilities from August 31, 2024 to August 31, 2027, adjusted for benefit payments in the inter-valuation period. This incremental cost is estimated to be $607.1M as at August 31, 2024.

Hypothetical Wind-Up Asset Valuation Method

Wind-up assets are equal to the market value of assets less an allowance for wind-up expenses. This valuation method is the same as the one used in the last valuation.

Hypothetical Wind-Up Actuarial Cost Method

The hypothetical wind-up liabilities are determined using the accrued benefit (or unit credit) actuarial cost method. The hypothetical wind-up liabilities are equal to the actuarial present value of all benefits earned by members for services prior to the valuation date assuming the NBTPP is wound up on the valuation date. This method is the same as the one used in the last valuation.

For valuation purposes, to determine eligibility for benefits and for any other uses, the age used is the age on the date of the nearest birthday. This method is the same as the one used in the last valuation.

Hypothetical Wind-Up Actuarial Assumptions

The main actuarial assumptions used in the hypothetical wind-up valuation correspond to those prescribed by the Standards of Practice published by the Canadian Institute of Actuaries ("CIA").

In the previous valuation, the main actuarial assumptions used in the hypothetical wind-up valuation corresponded to those that would prevail assuming the Plan conversion was void, in accordance with the postulated scenario at August 31, 2022 described earlier in this section. Under that scenario, we followed the Canadian Institute of Actuaries' recommendations for the estimated cost of fully indexed annuity purchases as at August 31, 2022.

The main actuarial assumptions employed for the hypothetical wind-up actuarial valuation as at August 31, 2024 are summarized in the following table. They are consistent with the postulated scenario at August 31, 2024 described earlier in this section. All rates and percentages are annualized unless otherwise noted. The rates below represent estimated annuity purchase rates.

Table 3.2 – Hypothetical Wind-Up Actuarial Assumptions

	August 31, 2024	August 31, 2022
Interest rate for active members and deferred vested members under 55	4.76% per annum (2.34% per annum when net of assumed cost-of-living increases of 75% of CPI)	4.56% per annum (0.64% per annum when net of assumed cost-of-living increases)
Interest rate for retired members and other members 55 and over	4.76% per annum (2.34% per annum when net of assumed cost-of-living increases of 75% of CPI)	4.56% per annum (0.64% per annum when net of assumed cost-of-living increases)
Salary increases	None	None
Mortality	CPM2014 generational mortality using improvement scale CPM-B	CPM2014 generational mortality using improvement scale CPM-B
Wind-up expenses	$4,400,000	$3,000,000
Retirement	Age which maximizes the value of the pension	Age which maximizes the value of the pension

The Canadian Institute of Actuaries ("CIA") collects data annually from insurance companies and annually determines interest rates suitable for estimating the cost of single premium group annuities in hypothetical wind-up valuations. For retirees and survivors and for active members and deferred vested and suspended members

eligible for immediate retirement at the valuation date, the interest rate used in the hypothetical wind-up valuation is an estimate of the rate that would be used by insurance companies in pricing indexed single premium group annuities for annuitants already retired, based on the suggested rates for such annuitants published by the CIA.

The hypothetical wind-up liability is valued under the assumption that accrued benefits at the date of the valuation would be settled by a single annuity purchase agreement, regardless of any capacity constraints in the Canadian group annuity market. However, given the magnitude of the purchase under consideration, it is possible that in reality such a purchase would be difficult to underwrite. In the event of a Plan wind-up, other alternatives may need to be considered, which may require regulatory approval or even legislative change.

The discount rate used for active members and deferred vested and suspended members not eligible for immediate retirement is the rate used for retirees and survivors without adjustment, as suggested by the CIA as an appropriate estimate of the cost of deferred annuities based on their survey data from insurance companies.

Emerging experience differing from these assumptions will result in gains or losses, which will be revealed in future hypothetical wind-up actuarial valuations.

Termination Scenario

The termination scenario used in the hypothetical wind-up valuation as at August 31, 2024 includes the following assumptions:

- Plan wind-up would not result from employer insolvency.

- All assets could be realized at their reported market value.

- Annuities would be purchased for all Plan members.

Margin for Adverse Deviations

As specified by the Standards of Practice of the Canadian Institute of Actuaries, the hypothetical wind-up assumptions do not include a margin for adverse deviations.

Provision for Fees

Allowance has been made for administrative, actuarial and legal costs which would be incurred if the NBTPP were to be wound up, based on sufficient and reliable data. It is assumed that the wind-up date, the calculation date and the settlement date are coincident, and as such, expenses related to investment policy reviews, investment and custodial fees are not included. Expenses related to the resolution of surplus and deficit issues are not taken into account. The amount of expenses is only an approximation and may differ significantly from real expenses incurred on Plan wind-up, for example, in case of litigation, bankruptcy and eventual replacement by a third-party administrator.

Hypothetical Wind-Up Incremental Cost

The method used to calculate the hypothetical wind-up incremental cost may be described as follows:

1. Present value of expected benefit payments between August 31, 2024 and August 31, 2027 discounted to August 31, 2024;

Plus

2. Projected hypothetical wind-up liabilities as at August 31, 2027, discounted to August 31, 2024;

Less

3. Hypothetical wind-up liabilities as at August 31, 2024.

Opinion on Hypothetical Wind-up Valuation

In our opinion, for the purposes of the hypothetical wind-up valuation section of the report:

- The membership data on which the valuation is based are sufficient and reliable for the purposes of the valuation.

- The assumptions are appropriate for the purposes of the valuation.

- The methods employed in the valuation are appropriate for the purposes of the valuation.

This hypothetical wind-up valuation report has been prepared, and our opinions given, in accordance with accepted actuarial practice in Canada.

The assumptions used under the hypothetical wind-up valuation of this report were reasonable at the time this actuarial valuation report was prepared.

Respectfully submitted,

_____
Yves Plourde, FSA, FCIA

_____
Randy Pelletier, ACIA

___May 30, 2025___

Date

___May 30, 2025___

Date

Section 4 – Risk Management Goals and Procedures

Meeting Risk Management Goal

The NBTPP was designed to achieve or exceed the risk management goal prescribed under the TPPA. Certain procedures were developed to test whether this goal can be achieved. The goal and procedures are described separately below, along with the relevant results of the stochastic analysis required under the TPPA as at August 31, 2024.

Risk Management Goal

The risk management goal under the TPPA is to achieve a 97.5% probability that past base benefits at the end of each year will not be reduced over the 20 years following the valuation.

The goal is measured by taking into account the following funding management plans:

1. the funding deficit recovery plan except for reduction in past base benefits, and

2. the funding excess utilization plan excluding permanent benefit changes.

The funding deficit recovery plan and the funding excess utilization plan are described in Sections IV and V of the Funding Policy, respectively.

For the purposes of meeting this goal, base benefits include the accrual of extra service of members and any regular indexing insofar as it is based on the financial performance represented by each scenario tested.

If as a result, through the testing process, a scenario allows for indexing in a given future year, then this regular indexing amount becomes part of the base benefits that is to be protected. In other words, the base benefit is dynamically adjusted based on the stochastic results for each economic scenario tested.

Risk Management Procedures

The risk management goal is measured using an asset liability model with future economic scenarios developed using a stochastic process. The asset liability model and its inputs are further described in Appendix C.

The risk management goal was tested as at August 31, 2024. The result of this test combined with the results of the funding valuation at the same date will determine the actions the Board of Trustees are required to take, or can consider, under the terms of the Funding Policy.

The risk management goal must be achieved or exceeded:

- At July 1, 2014;

- At the date a permanent benefit change as defined in the Regulations is made;

- At the date a benefit improvement as defined in the Regulations is made excluding any catch-up related to the level of regular indexing; or

- At the date the contribution adjustments exceeding those set out in the Funding Policy are applied.

The definitions of permanent benefit change and benefit improvement are as follows:

- "permanent benefit change" means a change that is intended to permanently change the formula for the calculation of the base benefits or ancillary benefits after the date of the change, including a change made in accordance with the funding excess utilization plan.

- "benefit improvement" means an escalated adjustment for past periods, other than an improvement in scheduled escalated adjustments, or an increase in other ancillary benefits allowed under the Funding Policy.

Additional Assumptions on a Funding Basis for Purpose of the Stochastic Analysis

Other assumptions are needed for the stochastic analysis required under the risk management procedures for the Plan. These additional assumptions are used to establish future Plan membership as well as future earnings, so as to determine the level of future cash flows to and from the Plan, such as member and employer contributions, normal costs, benefit payments and expenses for the next 20 years. These cash flows are calculated on a deterministic basis for each year following the valuation date for a period of 20 years, and allow the determination of the funding liability and assets at each future date, as well as the present value of possible future funding corrections set out in the Funding Policy.

Table 4.1 – Additional Assumptions for Purpose of the Stochastic Analysis

			August 31, 2024
New entrants			New entrants replace active members at death or retirement such that the total active population under the NBTPP remains stable thereafter.
Distribution of new entrants and salary at entry	Age	Distribution	Average Salary at Entry
	25	25.0%	$67,500
	28	25.0%	$67,500
	33	25.0%	$67,500
	45	25.0%	$67,500
			75% female/25% male
Salary at Entry increases			2.60% per annum
Salary increases (after entry)			2.60% per annum plus merit and promotions as described under the funding valuation
YMPE increases			2.60% per annum

Results of Stochastic Analysis as at August 31, 2024

The stochastic analysis undertaken as at August 31, 2024, took into account the main following items:

- Membership Data as at August 31, 2024 summarized in Appendix B;

- Economic and demographic assumptions as at August 31, 2024 for the funding valuation summarized in Section 1 and the additional assumptions in Table 4.1;

- Pension fund target asset mix as summarized in Table A.4 of Appendix A;

- Stochastic projection assumptions as summarized in Appendix C;

- Risk management procedures described above;

- NBTPP provisions summarized in Appendix D;

- Funding deficit recovery plan found under Section IV of the NBTPP's Funding Policy (except for reduction in past base benefits);

- Funding excess utilization plan found under Section V of the NBTPP's Funding Policy (excluding permanent benefit changes).

Based on the above, the result of the stochastic analysis for the risk management goal as at August 31, 2024 is as follows:

Table 4.2 – Risk Management Goal

	Minimum Requirement under TPPA	Result for NBTPP as at August 31, 2024
Risk Management Goal [Subsection 11(1) of TPPA] - There is at least a 97.5% probability that the past base benefits at the end of each year will not be reduced over a 20-year period	97.5%	99.9% PASSED

As indicated in the table above, the risk management goal under the TPPA was achieved as at August 31, 2024, since the 99.9% probability exceeds the minimum requirement of 97.5% under the TPPA.

Section 5 – Plausible Adverse Scenarios

The Plan actuary is required to select Plausible Adverse Scenarios for various risks underlying the Plan, and disclose in the report the impact such scenarios would have on the funded status and risk management test results of the Plan. The results of this analysis are contained in this Section 5.

The Standards of the CIA continue to require that valuation reports disclose the sensitivity of the liabilities to changes in the discount rate assumption. As these sensitivities are also a form of stress test, we have included them in this Section 5 for completeness.

Description of the Plausible Adverse Scenarios

A Plausible Adverse Scenario would be a scenario of adverse but plausible assumptions relative to the best estimate assumptions outlined in Section 1 of this report. As a result, these scenarios are stress tests on a selection of risks to which the Plan is subject. This selection is not meant to consider all of the risks to which the Plan is subject.

The following is a description of the four scenarios analyzed.

Scenario I - Interest Rate Risk

In this Scenario, we will model the impact of a sudden drop in fixed income yield, which will impact the level of the discount rate, and the value of the fixed income assets in the Fund. The magnitude of the drop will be such that there is a 1 in 10 likelihood of such a reduction happening in accordance with our economic model underlying our stochastic analysis.

Based on the outcome with a 1 in 10 likelihood of occurrence under our economic model, yields on fixed income assets are assumed to decrease by 0.98% immediately, leading to a 0.21% decrease in the expected return of the Plan's investments. We have not reflected any change of the assumed margin for adverse deviation to compensate for the decrease in expected return and have therefore reflected a decrease in the discount rate to 6.04% per annum for this valuation. While the Funding Policy states that intent of the discount rate is to remain stable over time, we have illustrated the impact should the Board of Trustees change the discount rate.

In valuing the effect of this change on the Plan assets, the impact of the interest rate risk was restricted to the asset classes deemed to be fixed income investments, and results in a 13.47% increase on the market value of the affected asset classes, which translates into a 3.77% increase on the market value of the Fund as a whole.

All other assumptions and methods used for this valuation were maintained, and no other compensating adjustments were made.

Scenario II - Deterioration of Asset Values

In this Scenario, we will model the impact of a sudden drop in the value of assets other than fixed income assets, with no change in the level of the discount rate or any other assumptions. The magnitude of the drop will be such that there is a 1 in 10 likelihood of such a reduction happening for such asset classes in accordance with our economic model underlying our stochastic analysis.

Based on the outcome with a 1 in 10 likelihood of occurrence under our economic model, all assets other than fixed income assets were assumed to decrease by 10.12% immediately, resulting in a 7.29% decrease on the market value of the total Fund. No changes to funding valuation actuarial liabilities and normal cost were considered under this scenario. All assumptions and methods used for this valuation were maintained.

Scenario III - Longevity Risk

In this Scenario, we will model the impact of an increase in the average life expectancy of all plan members relative to our assumption used in our valuation. The magnitude of the increase will be such that the life expectancy is increased by 10% from the underlying mortality table assumption used in our valuation.

To test the impact of an average life expectancy increase of 10% for all ages over the current assumption on the funding valuation actuarial liabilities and normal cost, a multiplier of 0.7 was applied to all mortality rates used for this valuation. All other assumptions and methods used for this valuation were maintained.

Scenario IV - Decrease in Contribution Base

 In this Scenario, we will model the impact of a decrease in contribution base, where an undefined event triggers an immediate 10% reduction in active members contributing and accumulating benefits under the plan.

A decrease of 10% in payroll for the year following the valuation date is assumed. We assume that the demographic profile of the active membership is unchanged as a result of the decrease in payroll. For purposes of this scenario, we assume that the market value of assets and funding valuation actuarial liabilities are unchanged, and due to the decrease in payroll we assume a 10% reduction in contributions and normal cost for each year following the valuation date. All other assumptions and methods used for this valuation were maintained.

Plausible Adverse Scenarios - Funding Valuation

The following table illustrates the impact of certain plausible adverse scenarios on the funding valuation liabilities and corresponding funded statuses and legislated risk management test. The scenarios have been applied and reported on separately.

Table 5.1 – Plausible Adverse Scenarios Impact on the Funding Valuation Results

	Funding Valuation Results as at August 31, 2024	Plausible Adverse Scenario Results as at August 31, 2024			
		Scenario I Interest Rate Risk	Scenario II Deterioration of Asset Values	Scenario III Longevity Risk	Scenario IV Decrease in Contribution Base
	$M	$M	$M	$M	$M
Market value of assets	7,268.2	7,542.4	6,738.5	7,268.2	7,268.2
Funding valuation actuarial liabilities	6,202.8	6,346.8	6,202.8	6,564.3	6,202.8
Funding valuation excess (unfunded liability)	1,065.4	1,195.6	535.7	703.9	1,065.4
Impact on funding valuation excess		130.2	(529.7)	(361.5)	-
Termination value funded ratio	117.2%	118.8%	108.6%	110.7%	117.2%
Funding valuation normal cost	122.6	127.1	122.6	126.3	110.4
Impact on funding valuation normal cost		4.5	-	3.7	(12.2)
Results of stochastic analysis for the risk management goal					
- Risk Management Goal [Subsection 11(1) of TPPA]	99.9% PASS	99.9% PASS	99.7% PASS	99.5% PASS	99.9% PASS

Discount Rate Sensitivity Results

The Standards of the CIA require that valuation reports disclose the sensitivity of the liabilities to changes in the discount rate assumption. The discount rate sensitivity results for the funding valuation, going concern, and hypothetical wind-up bases are presented below.

Sensitivity Analysis on the Funding Valuation Basis

The table below illustrates the effect of a 1% decrease in the discount rate on the funding valuation actuarial liabilities. With the exception of the discount rate, all other assumptions and methods used for this valuation were maintained.

Table 5.2 – Sensitivity of Actuarial Liabilities on the Funding Valuation Basis

	August 31, 2024	Discount Rate 1% Lower
	$M	$M
Funding valuation actuarial liabilities		
- Active members	2,097.2	2,519.8
- Retirees and survivors	4,007.5	4,383.6
- Deferred vested and suspended members	98.1	116.7
- Total funding valuation actuarial liabilities	6,202.8	7,020.1
Increase in actuarial liabilities		817.3

Sensitivity Analysis on the Funding Valuation Total Normal Cost

The table below illustrates the effect on the total normal cost of using a discount rate 1% lower than the one used for the funding valuation. All other assumptions and methods, as used in this valuation, were maintained.

Table 5.3 – Sensitivity of Funding Valuation Total Normal Cost

	August 31, 2024		Discount Rate 1% Lower	
	$M	% of payroll	$M	% of payroll
Total normal cost	122.6	15.6	150.6	19.2
Increase in total normal cost			28.0	3.6

Sensitivity Analysis on the Going Concern Basis

The table below illustrates the effect of 1% decrease in the discount rate on the going concern actuarial liabilities. With the exception of the discount rate, all other assumptions and methods used for this valuation were maintained.

Table 5.4 – Sensitivity of Actuarial Liabilities on the Going Concern Basis

	August 31, 2024	Discount Rate 1% Lower
	$M	$M
Going concern actuarial liabilities		
- Active members	2,328.4	2,830.6
- Retirees and survivors	4,225.8	4,640.8
- Deferred vested and suspended members	107.3	129.5
- Total	6,661.5	7,600.9
Increase in actuarial liabilities		939.4

Sensitivity Analysis on the Going Concern Normal Cost

The table below illustrates the effect on the normal cost of using a discount rate 1% lower than the one used for the going concern valuation. All other assumptions and methods, as used in this valuation, were maintained.

Table 5.5 – Sensitivity of Going Concern Residual Normal Cost

	Year Following August 31, 2024		Discount Rate 1% Lower	
	$M	% of payroll	$M	% of payroll
Total normal cost	134.1	17.1	169.0	21.5
Less member contributions	81.6	10.4	81.6	10.4
Residual normal cost	52.5	6.7	87.4	11.1
Increase in residual normal cost			34.9	4.4

Sensitivity Analysis on the Hypothetical Wind-up Basis

The table below illustrates the effect on the actuarial liabilities of using discount rates 1% lower than those used for the hypothetical wind-up valuation. All other assumptions and methods, as used in this valuation, were maintained.

Table 5.6 – Sensitivity of Actuarial Liabilities on the Hypothetical Wind-up Basis

	August 31, 2024	Discount Rate 1% Lower
	$M	$M
Actuarial liabilities		
- Active members	2,534.0	3,207.4
- Retirees and survivors	4,851.2	5,381.5
- Deferred vested and suspended members	119.3	149.8
- Total	7,504.5	8,738.7
Increase in actuarial liabilities		1,234.2

Appendix A – Assets

Description of Plan Assets

The assets of the Plan are held in a trust fund and are being managed by Vestcor Inc. ("Vestcor"). Vestcor provided the information on fund assets as at August 31, 2024.

Statement of Market Value

The following table shows the market value of the assets split by broad investment categories as identified in the Plan's unaudited financial statements provided by Vestcor as at August 31, 2024.

Table A.1 – Statement of Market Value

	August 31, 2024
	$M
Market value of assets	
- Fixed income	2,403.9
- Equities	2,496.8
- Inflation-linked assets	1,500.0
- Alternative pools	838.1
- Other	27.3
- Cash and amounts receivable/payable	2.1
Total market value of assets	7,268.2

Changes to Plan Assets

The following table shows changes to the NBTPP assets during the inter-valuation period, based on market values. The reconciliation from August 31, 2022 to August 31, 2024 is based on unaudited financial statements issued by Vestcor.

Table A.2 – Reconciliation of Assets

	Sept 1, 2023 to August 31, 2024 ($M)	Sept 1, 2022 to August 31, 2023 ($M)
Assets at beginning of period	6,621.7	6,441.4
Receipts		
- Member contributions	90.4	75.0
- Employer contributions	98.3	78.0
- Investment income plus realized and unrealized capital appreciation and depreciation	819.4	373.6
- Total receipts	1,008.1	526.6
Disbursements		
- Pensions paid and refunds	349.1	334.5
- Expenses (fees)	12.5	11.8
- Total disbursements	361.6	346.3
Assets at end of period	7,268.2	6,621.7

Return on Assets

The Plan assets earned the following rates of return, net of investment management fees and other expenses charged to the Fund, based on our calculations which assume cash flow occurred in the middle of the period:

Table A.3 – Net Investment Return

Year	%
September 1, 2022 to August 31, 2023	5.7%
September 1, 2023 to August 31, 2024	12.3%
September 1, 2022 to August 31, 2024 (annualized)	9.0%

The Statement of Investment Policies for the NBTPP, as adopted by the Board of Trustees, provides for the following long-term target asset mix.

Table A.4 – Target Asset Mix

	Target Allocation (%)
Asset classes	
Fixed income:	
- Short term assets	0.0%
- Government bonds	15.0%
- Corporate bonds	18.0%
Inflation linked:	
- Real return bonds	5.0%
- Real estate	12.0%
- Infrastructure	6.5%
Public equity (market capitalization):	
- Canadian equities	3.0%
- Canadian small cap equities	1.5%
- Global developed markets (ex-Canada) equities	10.0%
- Global developed markets (ex-Canada) small cap equities	2.0%
- Emerging markets	3.0%
Public equity (low volatility):	
- Canadian equities	3.0%
- Global developed markets (ex-Canada) equities	10.0%
- Emerging markets	4.0%
Private equity	7.0%
Total	100.0%

In addition, the Board has introduced an Absolute Return Overlay. This strategy provides exposure to the absolute return asset class to a notional amount of about 10% of the portfolio without having to allocate actual underlying portfolio assets to the asset class. For the purpose of the stochastic analysis in this valuation, we have modelled the strategy by allocating -10% to short term assets (the equivalent of providing a short-term loan) and +10% to the absolute return asset class to achieve a total net allocation of 100%.

This long-term target asset mix was used to conduct the stochastic analysis required under the NBTPP to assess the risk management goal.

Appendix B – Membership Data

Description of Membership Data

Data on Plan membership was provided by Vestcor. The data was provided as at August 31, 2024.

The data was matched and reconciled with the data provided for the previous valuation as at August 31, 2022. Basic data checks were performed to ensure that age, salary and service data were reasonable for the purposes of the valuation and to ensure that the data was accurate, complete and consistent with previous data.

Summary of Membership Data

The following tables were prepared using data provided by Vestcor as at August 31, 2024:

- B.1   Summary of Membership Data

- B.2   Changes in Plan Membership

- B.3   Age/Service Distribution for Active Members as at August 31, 2024

- B.4   Distribution of Retirees and Survivors by Age Groups as at August 31, 2024

- B.5   Distribution of Deferred Vested and Suspended Members by Age Groups as at August 31, 2024

Table B.1 –Summary of Membership Data

		August 31, 2024	August 31, 2022
Active members	Number	9,113	8,737
	Total covered payroll	$784,335,000	$694,278,800
	Average salary	$86,100	$79,500
	Average accrued lifetime pension	$17,800	$16,500
	Average accrued bridge pension	$6,000	$5,500
	Average age	43.5	43.2
	Average credited service	13.3 years	13.4 years
Retirees and survivors	Number	9,926	9,860
	Average annual lifetime pension	$33,200	$31,000
	Average annual bridge benefit[1]	$11,700	$10,700
	Average age	73.7 years	73.0 years
Deferred vested and suspended members	Number	1,758	1,617
	Average accrued lifetime pension	$4,600	$4,200
	Average accrued bridge pension	$1,700	$1,600
	Average age	48.5 years	48.4 years

[1] *Average for those entitled to or receiving a bridging benefit.*

Table B.2 – Changes in Plan Membership

	Active Members	Retirees and Survivors	Deferred Vested and Suspended Members	Total
Members at August 31, 2022	8,737	9,860	1,617	20,214
New members	1,110	-	-	1,110
Retirements	(435)	471	(36)	-
Members who returned to active status	126	(6)	(120)	-
Terminations				
- with refunds or transfers out	(35)	-	(75)	(110)
- with deferred pensions	(376)	-	376	-
Deaths				
- with survivor benefits	(6)	(193)	-	(199)
- with no continuing benefits	(2)	(405)	(2)	(409)
New survivor pensions	-	199	-	199
Adjustments	(6)	-	(2)	(8)
Members at August 31, 2024	9,113	9,926	1,758	20,797

Table B.3 – Age/Service Distribution for Active Members as at August 31, 2024

Years of Service		Under 25	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 – 54	55 - 59	60 and over	Total
						Age					
0 - 4	Number	189	711	429	350	271	159	123	63	40	2,335
	Tot. Sal.	11,488,971	45,580,470	29,149,959	25,049,096	19,511,986	11,772,690	8,829,539	4,328,857	2,306,870	158,018,438
	Avg. Sal.	60,788	64,108	67,949	71,569	72,000	74,042	71,785	68,712	57,672	67,674
5 - 9	Number	0	81	450	472	228	106	81	38	19	1,475
	Tot. Sal.	0	6,076,150	36,762,482	41,052,636	19,566,177	9,099,223	6,649,309	3,169,742	1,468,317	123,844,036
	Avg. Sal.	0	75,014	81,694	86,976	85,817	85,842	82,090	83,414	77,280	83,962
10 - 14	Number	-	-	31	418	426	142	87	36	14	1,154
	Tot. Sal.	0	0	2,912,422	39,185,050	39,782,122	13,151,776	7,844,119	3,147,375	1,265,223	107,288,086
	Avg. Sal.	0	0	93,949	93,744	93,385	92,618	90,162	87,427	90,373	92,971
15 - 19	Number	-	-	-	75	746	474	239	116	45	1,695
	Tot. Sal.	0	0	0	7,400,888	71,244,554	45,043,618	22,144,985	10,532,076	4,222,246	160,588,367
	Avg. Sal.	0	0	0	98,679	95,502	95,029	92,657	90,794	93,828	94,742
20 - 24	Number	-	-	-	-	56	576	495	161	50	1,338
	Tot. Sal.	0	0	0	0	5,490,714	55,371,382	46,212,662	14,828,073	4,653,043	126,555,875
	Avg. Sal.	0	0	0	0	98,048	96,131	93,359	92,100	93,061	94,586
25 - 29	Number	-	-	-	-	-	81	615	184	19	899
	Tot. Sal.	0	0	0	0	0	7,814,742	59,335,338	17,799,640	1,784,955	86,734,676
	Avg. Sal.	0	0	0	0	0	96,478	96,480	96,737	93,945	96,479
30 - 34	Number	-	-	-	-	-	-	76	115	8	199
	Tot. Sal.	0	0	0	0	0	0	7,517,500	11,294,268	755,481	19,567,248
	Avg. Sal.	0	0	0	0	0	0	98,914	98,211	94,435	98,328
35 and over	Number	-	-	-	-	-	-	-	4	14	18
	Tot. Sal.	0	0	0	0	0	0	0	362,549	1,376,085	1,738,634
	Avg. Sal.	0	0	0	0	0	0	0	90,637	98,292	96,591
Total number		189	792	910	1,315	1,727	1,538	1,716	717	209	9,113
Total salaries		11,488,971	51,656,620	68,824,864	112,687,670	155,595,553	142,253,432	158,533,453	65,462,580	17,832,219	784,335,361
Average of salaries		60,788	65,223	75,632	85,694	90,096	92,492	92,385	91,301	85,322	86,068

Average age: 43.5 years

Average number of years of service: 13.3 years

Notes:

The age is computed at the nearest birthday.

The salary used is the member's salary rate as at August 31, 2024.

Years of service means the number of years credited for pension plan purposes, fractional parts being rounded to the nearest integer.

Membership for active members is composed of 2,106 males and 7,007 females.

Table B.4 – Distribution of Retirees and Survivors by Age Groups as at August 31, 2024

Age Group	Number	Total Annual Payments	
		Lifetime	Bridge
Under 55	125	$2,881,617	$620,742
55 - 59	751	$27,413,642	$8,290,052
60 - 64	1,092	$40,263,886	$12,110,489
65 - 69	1,237	$42,859,915	---
70 - 74	2,029	$66,715,464	---
75 - 79	2,216	$70,112,711	---
80 - 84	1,399	$44,244,655	---
85 - 89	719	$23,740,365	---
90 and over	358	$11,396,221	---
Total	9,926	$329,628,476	$21,021,283

Average age: 73.7 years

Note: Age groups are based on exact age. The pension used is the pension payable as at August 31, 2024. Membership for pensioners is composed of 3,253 males and 6,673 females.

Table B.5 – Distribution of Deferred Vested and Suspended Members by Age Groups as at August 31, 2024

Age Group	Number	Total Annual Payments	
		Lifetime	Bridge
Under 25	8	$2,236	$1,204
25 - 29	75	$83,657	$44,083
30 - 34	154	$277,241	$134,706
35 - 39	229	$603,028	$263,004
40 - 44	290	$1,375,198	$542,859
45 - 49	239	$1,414,281	$507,733
50 - 54	249	$2,027,800	$697,815
55 - 59	206	$1,279,299	$436,699
60 - 64	169	$627,076	$237,806
65 and over	139	$368,784	$125,010
Total	1,758	$8,058,600	$2,990,918

Average age: 48.5 years

Note: Age groups are based on exact age. Membership for deferred pensioners is composed of 427 males and 1,331 females.

Appendix C – Stochastic Projections Assumptions and Disclosures

The model inputs for our stochastic analysis are built each year using Conference Board of Canada (CBoC) forecasts, internal research, inflation expectations and by surveying the asset manager universe. This ensures we are not using inputs that are out of touch with broader expectations. We strive for accuracy in our assumptions, as high or low expectations can lead to biased results. However, when deciding between equally reasonable modeling choices, we err on the side of conservatism.

The methodology used to develop key assumptions used within the model is described below.

Economic Assumptions

Economic stochastic projection assumptions are updated annually by TELUS Health Asset and Risk Management using a multi-stage process.

Inflation

We select a long-term inflation rate assumption based primarily on the current Bank of Canada Monetary Policy. Volatility for inflation is based on historical data since the early 1990's when the current monetary policy was introduced. Historical volatility is used to estimate consumer price index volatility for future years. We also develop an assumption for market implied inflation which is used to determine fixed-income yields in any given year. We use current market data for the initial rate and then use an autoregressive time-series model to determine the market implied inflation assumption rates over the first ten projection years, at which point the rate remains stable, such that the long-term implied market inflation is consistent with our assumption for the change in the consumer price index.

Table C.1 – Market implied inflation

August 31	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034 and after
Market implied inflation (%)	1.62	1.68	1.74	1.80	1.86	1.91	1.97	2.03	2.09	2.15	2.20

Interest Rates

We use a building block approach to estimate the long-term interest rates for government bonds and Canadian bond indices. The three components that make up the long-term interest rate estimate are: Inflation, real return, and credit spread. After careful consideration, we assume that both real yields and credit spreads revert to projected long-term rates. Although some research papers suggest that the possibility that interest rates follow a random walk process (that is, they do not mean-revert) cannot be rejected, mean reversion is intuitive and increases the likelihood that rates will remain within a reasonable range. Therefore, we assume each building block moves from the value in the market as of the valuation date towards its long-term level over a projected period of 10 years (and remains at the long-term level thereafter). Each of the building blocks follow a modified discrete version of the Vasicek model, using an instantaneous volatility determined from historical data.

Canadian Bond Indices

We generate expected return levels and standard deviations for Canadian bond indices in a stochastic simulation approach. We assume that the only components needed to model the returns are: yield and variation of interest rates. We make the assumption that interest rates follow a Vasicek model. To determine the impact of yield variation on return we extract the duration and convexity as of the valuation date for the FTSE Canadian bond indices and assume that it will remain constant in the future. Using the Vasicek model, we simulate 10,000 interest rate paths which we use to create 10,000 return series for various Canadian bond indices. The geometric average of the 10,000 simulated returns is taken as the return level assumption. The mean annual standard deviation of returns is taken as the standard deviation of returns.

Fixed income asset classes that were used in our modeling include, but are not limited to Canadian federal, provincial, and corporate bond indices. The following initial and ultimate average credit spreads and average nominal yields were used as at August 31, 2024.

Table C.2 – Credit Spreads and Yields by Bond Index

Asset Class	Initial Credit Spread	Ultimate Credit Spread	Initial Yield	Ultimate Yield
FTSE Canada Federal Bonds	n/a	n/a	2.96%	2.67%
FTSE Canada Federal Short Term Bonds	n/a	n/a	2.90%	2.43%
FTSE Canada Federal Mid Term Bonds	n/a	n/a	2.96%	2.83%
FTSE Canada Federal Long Term Bonds	n/a	n/a	3.15%	3.25%
FTSE Canada Corporate Bonds	1.15%	1.27%	4.10%	3.94%
FTSE Canada Short Term Corporate Bonds	0.86%	0.92%	3.76%	3.34%
FTSE Canada Mid Term Corporate Bonds	1.26%	1.35%	4.22%	4.18%
FTSE Canada Long Term Corporate Bonds	1.61%	1.76%	4.76%	5.01%
FTSE Canada Universe Provincial Bonds	0.69%	0.88%	3.65%	3.54%
FTSE Canada Short Term Provincial Bonds	0.09%	0.24%	2.99%	2.66%
FTSE Canada Mid Term Provincial Bonds	0.42%	0.51%	3.38%	3.34%
FTSE Canada Long Term Provincial Bonds	0.93%	0.83%	4.08%	4.08%

The credit spread reflects the excess average yield for the index over the federal bond index of similar maturity.

Fixed income asset classes' returns and standard deviations must be consistent. We perform a check on the relationships between indices and sub-indices, and make adjustments if necessary.

Equity

The process for determining the nominal equity return assumptions uses a forward-looking building block approach. We utilize multiple sources of information, including our inflation assumptions, historical data, GDP and other economic data, growth forecasts and dividend information.

The building blocks are the change in the consumer price index assumptions determined above, the expected dividend yield for the index (adjusted for share issues and buy-backs), and Consensus Economics' GDP forecasts.

The building block approach results in equity return assumptions in the local currency of the asset classes. For foreign equity, we used Consensus Economics' estimates for purchasing power parity between the local currency and the Canadian dollars. We assume that the current exchange rate will trend linearly towards purchasing power parity over a period of 10 years.

Standard deviations and correlations of equity returns are mainly derived from historical data. To ensure consistency between indices covering different regions, we use an iterative calibration process.

We also consider differences in capitalization levels and investment styles. Small-cap equities and large-cap equities have different risk-return profiles. We use historical data to measure the return and volatility spreads between small-cap and large-cap equities.

Alternative Asset Classes

Alternative asset classes include real estate, infrastructure, hedge funds, private equity, foreign fixed income and high yield bonds.

Real estate indices do not include leverage; however, some real estate funds and strategies use leverage. Moreover, some real estate indices are only updated quarterly, resulting in an appraisal lag. Other indices are transaction based rather than appraisal based. Therefore, we must exercise some subjective judgement to estimate return levels, standard deviations and correlations.

Hedge fund indices usually include survivorship and backfill biases. Moreover, hedge fund strategies can differ from the index due to their characteristics. Most hedge funds have an absolute return target that can guide in the selection of the assumption.

Private equity may be viewed as public equity, adjusted with a liquidity risk premium. Private equity managers usually target a spread of 3% to 5% over public equities.

Infrastructure return level assumption is based on the 10-year Government of Canada bond returns, plus a spread. The spread varies on whether the investment is in infrastructure debt or in infrastructure equity.

For foreign fixed income, we utilize the same model used for Canadian fixed income except that the credit spread and real yield components are not separated due to a lack of reliable data.

Correlations & Standard Deviations

Correlations and standard deviations are mainly derived from historical data. However, recent trends and experience can potentially lead us to perform modifications on the historical correlations. Although exchange rates have little impact on long-term equity return levels, they do have an impact on correlations.

Correlations between certain pairs of asset classes are unstable through time, particularly for alternative asset classes. Historical correlations may show a large diversifying advantage for certain assets, which may not be properly supported by theoretical evidence. In cases of a strong negative correlation, we consider whether this correlation should be trended back towards zero.

The correlation matrix must be consistent. Consistency is required for theoretical accuracy and in stochastic simulations. We use an algorithmic approach to ensure consistency of the correlation matrix.

Returns, Volatility, and Correlations by Asset Class

The following expected return and volatility by asset class were used as at August 31, 2024. For reference, we have also included the return and volatility as at the date of the previous valuation, August 31, 2022.

Table C.3 – Expected Long-term Return and Volatility (standard deviation) by Asset Class

	August 31, 2024		August 31, 2022	
	Expected Annualized Long-term Return	Volatility of Annual Return	Expected Annualized Long-term Return	Volatility of Annual Return
Inflation (change in the consumer price index)	2.10%	1.35%	2.10%	1.35%
Asset Classes				
Fixed income:				
• Short term assets	2.45%	1.60%	1.75%	1.00%
• Government bonds	3.20%	8.45%	3.20%	6.80%
• Corporate bonds	4.00%	6.60%	4.20%	4.80%
Inflation linked:				
• Real return bonds	3.50%	11.05%	3.10%	11.20%
• Real estate	6.80%	9.60%	5.70%	9.40%
• Infrastructure	7.85%	12.00%	7.25%	12.40%
Public equity (market capitalization):				
• Canadian equities	7.05%	16.30%	6.85%	16.20%
• Canadian small cap equities	7.30%	21.20%	7.00%	21.30%
• Global developed markets (ex-Canada) Equities	6.00%	14.90%	6.90%	15.30%
• Global developed markets (ex-Canada) small cap equities	6.50%	17.20%	7.40%	17.60%
• Emerging Market Equities	9.55%	22.50%	9.50%	23.00%
Public equity (low volatility)[1]:				
• Canadian low vol	6.55%	13.05%	6.45%	12.95%
• Global developed markets (ex-Canada) low vol	5.50%	11.60%	6.50%	12.20%
• Emerging market low vol	9.05%	18.00%	9.00%	18.40%
Private equity	9.10%	23.50%	9.50%	22.60%

Absolute return strategy	6.45%	9.50%	5.55%	9.70%

[1] *For purposes of our stochastic analysis at August 31, 2024, specific assumptions were made for the public equities (low volatility) strategies. The methodology for deriving assumptions for such strategies was approved by the Superintendent of Pensions in a letter dated August 18, 2015. The conditions ultimately imposed by the Superintendent of Pensions for such strategies are as follows:*

- *Expected long term rate of return of 0.25% to 0.5% lower than regular market capitalization index.*
- *Volatility of 80% of the regular market capitalization index*
- *Correlation of 30% lower than regular market capitalization index*
- *Maximum of 25% of the funds in such strategies for modeling purposes, with any excess modeled using the regular market capitalization index assumptions*

The following is the correlation among the various asset classes identified in Table C.3 used as at August 31, 2024. For fixed income asset classes, the correlations are based on the real yields of the assets, whereas for non-fixed income asset classes, the correlations are based on the asset returns:

Table C.4 – Simulation Correlations Among Asset Classes and Fixed Income Yields

Asset Classes	Inflation	Short Term Assets	Real Return Bonds	Government Bonds	Corporate Bonds	Canadian Equities	Canadian Low Vol	Canadian small	Global Dev Mrkt Equities	Global Dev Mrkt Equities Small	Global Dev Mrkt Equities Low Vol	Emerging Markets	Real Estate	Infrastructure	Private Equity	Absolute Return	Emerging Market Low Vol
Inflation	1.00	0.66	0.39	0.59	0.63	0.02	0.01	(0.06)	(0.15)	(0.26)	(0.19)	(0.21)	0.11	(0.06)	(0.10)	0.02	(0.14)
Short Term Assets		1.00	0.41	0.71	0.65	0.18	0.13	(0.00)	0.00	(0.08)	(0.05)	0.06	0.23	0.11	(0.01)	0.21	0.04
Real Return Bonds			1.00	0.84	0.81	0.07	0.05	0.07	(0.07)	(0.03)	(0.22)	0.13	(0.02)	0.25	(0.07)	0.23	0.09
Government Bonds				1.00	0.93	0.24	0.17	0.09	0.04	(0.01)	(0.12)	0.24	0.23	0.22	0.02	0.34	0.17
Corporate Bonds					1.00	0.02	0.01	(0.13)	(0.14)	(0.23)	(0.23)	0.02	0.13	0.25	(0.14)	0.08	0.01
Canadian Equities						1.00	0.70	0.83	0.65	0.69	0.35	0.75	0.27	0.08	0.61	0.83	0.53
Canadian Low Vol							1.00	0.58	0.45	0.48	0.24	0.53	0.19	0.06	0.43	0.58	0.37
Canadian small cap								1.00	0.41	0.62	0.14	0.67	0.08	0.06	0.48	0.75	0.47
Global Dev Mrkt Equities									1.00	0.86	0.80	0.54	0.18	(0.05)	0.67	0.54	0.38
Global Dev Mrkt Equities Small Cap										1.00	0.69	0.59	0.18	0.02	0.62	0.63	0.42
Global Dev Mrkt Equities Low Vol											1.00	0.19	0.28	(0.03)	0.47	0.20	0.13
Emerging Markets												1.00	0.16	0.03	0.49	0.84	0.70
Real Estate													1.00	0.10	0.15	0.28	0.11
Infrastructure														1.00	0.01	0.03	0.02
Private Equity															1.00	0.52	0.34
Absolute Return																1.00	0.59
Emerging Market Low Vol																	1.00

The correlations are assumed to remain constant over the entire projection period.

Forecasted Funding Valuation Liabilities

As required under paragraph 15(2)(c) of Regulation 2012-75, the projection of the liability and future cash flows under the stochastic analysis uses the same demographic assumptions as used for the calculation of the funding valuation liability. As such, the funding valuation assumptions are used to project the demographics of the Plan on a deterministic basis 20 years into the future. Both the economic and demographic assumptions in Table 1.5 and Table 4.1 are used to project the number of members and their salaries, with each active member being replaced at death or retirement by a new entrant, resulting in the membership profile outlined herein. The following table contains the results of the deterministic projection, in particular the number of active members, along with their average credited service, average age, and average pensionable earnings for the year for each of the 20 years in the projection period.

Table C.5 – Projection Statistics for Active Members

Date	Active Members	Average Age (years)	Average Pensionable Service (years)	Average Salary[1] ($)
31-Aug-2025	9,113	44.4	14.2	$90,050
31-Aug-2026	9,113	43.6	13.4	$91,991
31-Aug-2027	9,113	43.9	13.6	$95,315
31-Aug-2028	9,113	44.2	13.8	$98,540
31-Aug-2029	9,113	44.3	13.9	$101,583
31-Aug-2030	9,113	44.5	13.9	$104,443
31-Aug-2031	9,113	44.5	13.9	$107,283
31-Aug-2032	9,113	44.5	13.8	$110,103
31-Aug-2033	9,113	44.6	13.8	$113,061
31-Aug-2034	9,113	44.7	13.8	$116,145
31-Aug-2035	9,113	44.8	13.8	$119,044
31-Aug-2036	9,113	44.9	13.8	$121,770
31-Aug-2037	9,113	44.9	13.8	$124,695
31-Aug-2038	9,113	45.0	13.8	$127,614
31-Aug-2039	9,113	45.1	13.8	$130,603
31-Aug-2040	9,113	45.2	13.8	$133,820
31-Aug-2041	9,113	45.4	13.8	$137,121
31-Aug-2042	9,113	45.6	13.9	$140,751
31-Aug-2043	9,113	45.2	13.7	$143,405
31-Aug-2044	9,113	45.3	13.8	$147,089

[1] These are average salaries in each year reflecting the expected salary increase. The inflationary component of actual salary increases for a particular simulation are adjusted to be consistent with the inflationary increase within that simulation.

The following table contains the results of the deterministic projection, in particular the number of inactive members, along with the total expected benefits in payment to inactive members over the projection period. Note that inactive members include all members who are not active members (including but not limited to deferred vested members and pensioners). In addition, the benefit payments outlined in the table below include future expected scheduled escalated adjustments.

Table C.6 – Projection Statistics for Inactive Members

Date	Inactive Members	Inactive Benefits in Payment ($ thousands)
31-Aug-2025	10,103	352,040
31-Aug-2026	10,638	388,328
31-Aug-2027	10,775	391,172
31-Aug-2028	10,915	401,533
31-Aug-2029	11,090	413,935
31-Aug-2030	11,266	426,400
31-Aug-2031	11,441	440,036
31-Aug-2032	11,616	453,565
31-Aug-2033	11,746	464,621
31-Aug-2034	11,850	475,614
31-Aug-2035	11,948	486,324
31-Aug-2036	12,021	495,982
31-Aug-2037	12,099	506,302
31-Aug-2038	12,132	514,522
31-Aug-2039	12,174	525,210
31-Aug-2040	12,190	532,665
31-Aug-2041	12,191	541,644
31-Aug-2042	12,168	547,141
31-Aug-2043	12,162	564,003
31-Aug-2044	12,105	565,985

The following table contains the results of the deterministic projection, in particular the total liability at the beginning of each year. The total liability is further split by actives and inactives. The liabilities outlined in the table below include expected future scheduled escalated adjustments and are all calculated using the funding valuation discount rate.

Table C.7 – Projection of Actuarial Liabilities ($ millions)

Date	Total Liability	Active Liability	Inactive Liability
31-Aug-2025	6,353	2,348	4,004
31-Aug-2026	6,474	2,161	4,313
31-Aug-2027	6,605	2,245	4,361
31-Aug-2028	6,740	2,315	4,425
31-Aug-2029	6,875	2,357	4,518
31-Aug-2030	7,011	2,395	4,616
31-Aug-2031	7,145	2,417	4,728
31-Aug-2032	7,277	2,436	4,841
31-Aug-2033	7,410	2,481	4,930
31-Aug-2034	7,546	2,529	5,017
31-Aug-2035	7,683	2,573	5,110
31-Aug-2036	7,823	2,625	5,198
31-Aug-2037	7,966	2,665	5,301
31-Aug-2038	8,113	2,721	5,392
31-Aug-2039	8,263	2,757	5,505
31-Aug-2040	8,420	2,816	5,604
31-Aug-2041	8,583	2,878	5,705
31-Aug-2042	8,758	2,975	5,783
31-Aug-2043	8,928	2,991	5,937
31-Aug-2044	9,112	3,094	6,018

Stochastic Model Projection Methodology

The economic assumptions and forecasted funding valuation liabilities outlined above are combined together to form an asset-liability model and used in a Monte Carlo simulation technique to model 10,000 series of alternative economic scenarios over 20 years (this exceeds the minimum requirements under the PBA of 1,000 series of economic scenarios for 20 years). This model is used to measure whether the Plan achieves its risk management goals.

For each of these scenarios and for each year, the financial position of the Plan is measured. For each of these measurements, a decision consistent with the funding deficit recovery plan or the funding excess utilization plan,

as applicable, is modeled. Notably, only step 1 and step 2 of the funding excess utilization plan and steps 1 through 5 of the funding deficit recovery plan are modeled. When modeling the funding deficit recovery plan actions over the 20-year period of each economic scenario, each of the five steps identified in the funding deficit recovery plan under Section IV of the Funding Policy is implemented in sequence until such time as the Plan expects to achieve a closed group funded ratio of 100% over a period of no more than 15 years. A "benefit reduction trial" is recorded (for purposes of the primary risk management goal calculation) when step 6 or 7 of the funding deficit recovery plan found in Section IV of the Funding Policy is triggered (i.e. a reduction in past base benefits) at any point in the 20-year period of an economic scenario. The primary risk management measure is therefore the proportion of those 10,000 scenarios that do not lead to a base benefit reduction over a 20-year period. In order to pass the primary risk management goal, at least 9,750 of those 10,000 scenarios must not trigger a "benefit reduction trial" at any point over the 20-year period.

For every year in the 20-year projection, passive investment management and non-investment expenses are deducted from the expected return to account for the payment of expenses from the Plan. We assume the additional cost of any active management activities is expected to be offset by additional returns over the expected returns shown above, and it is therefore not included in the analysis. The amount of annual expenses deducted from the expected return are outlined the following table.

Table C.8 – Annual expenses deducted from projected stochastic returns

Expenses type	Annual expense
Passive investment management	0.08% of assets
Non-investment	0.04% of assets

For the purpose of the stochastic analysis, the funding valuation discount rate remains fixed at 6.25% per annum throughout the projection period. The funding valuation discount rate is used to project the funding valuation liability and determine the value of any funding correction under the Funding Policy. The projection of the liability and future cash flows under the stochastic analysis uses the same demographic assumptions as used for the calculation of the funding valuation liability, as required under paragraph 15(2)(c) of Regulation 2012-75 and which are shown above.

Stochastic Model Projection Outputs

The following tables were prepared using the outputs of the stochastic projection model. They represent key portfolio statistics of return on assets net of investment expenses, total funding valuation liabilities, total market value of assets, and closed group funded ratio. The distribution of results is summarized by the use of percentiles, mean, standard deviation, and Conditional Tail Expectation ("CTE"). The CTE reflects the average result of the worst-case scenarios for the indicated percentile.

The summary statistics shown in Table C.9 below for the Fund return are shown for each year as well as over a 20-year period.

Table C.9 – Distribution of Projected Fund Return (Net of Investment Expenses)

Plan Year (September 1 / August 31)	2.5% CTE	5% CTE	5th Percentile	25th Percentile	50th Percentile	75th Percentile	95th Percentile	Mean	Standard Deviation
2024/2025	-9.41%	-7.53%	-4.63%	2.17%	6.87%	11.47%	18.30%	6.85%	6.96%
2025/2026	-9.67%	-7.81%	-4.93%	1.97%	6.75%	11.72%	18.83%	6.86%	7.22%
2026/2027	-10.18%	-8.01%	-4.85%	2.22%	6.93%	11.82%	18.48%	6.93%	7.11%
2027/2028	-10.03%	-8.08%	-5.08%	2.02%	6.90%	11.74%	18.61%	6.87%	7.17%
2028/2029	-10.10%	-8.14%	-5.12%	1.98%	6.79%	11.64%	18.55%	6.79%	7.20%
2029/2030	-10.49%	-8.46%	-5.27%	1.89%	6.90%	11.69%	18.68%	6.80%	7.32%
2030/2031	-9.71%	-7.68%	-4.70%	2.16%	6.94%	11.81%	18.82%	7.00%	7.20%
2031/2032	-9.82%	-7.78%	-4.77%	2.18%	6.97%	11.66%	18.65%	6.97%	7.12%
2032/2033	-9.89%	-7.86%	-4.77%	2.08%	7.07%	11.80%	18.62%	6.97%	7.17%
2033/2034	-10.10%	-8.06%	-4.91%	2.02%	7.01%	11.86%	18.49%	6.94%	7.18%
2034/2035	-10.26%	-8.14%	-4.92%	2.03%	6.89%	11.74%	18.54%	6.90%	7.20%
2035/2036	-10.05%	-7.98%	-4.85%	2.16%	6.89%	11.72%	18.71%	6.93%	7.17%
2036/2037	-9.65%	-7.69%	-4.58%	2.01%	6.81%	11.75%	18.70%	6.91%	7.13%
2037/2038	-9.58%	-7.66%	-4.71%	2.23%	7.02%	11.94%	18.75%	7.04%	7.17%
2038/2039	-9.84%	-7.93%	-5.13%	1.97%	6.85%	11.75%	18.48%	6.85%	7.20%
2039/2040	-9.90%	-7.88%	-4.82%	2.07%	6.95%	11.74%	18.70%	6.91%	7.18%
2040/2041	-10.03%	-8.12%	-5.12%	2.09%	6.99%	11.87%	18.58%	6.92%	7.21%
2041/2042	-9.94%	-7.97%	-4.93%	2.01%	6.95%	11.68%	18.64%	6.89%	7.17%
2042/2043	-10.10%	-8.11%	-5.02%	2.07%	6.98%	11.72%	18.85%	6.91%	7.19%
2043/2044	-9.95%	-7.96%	-4.97%	2.03%	6.89%	11.63%	18.53%	6.85%	7.13%
Total (annualized)	3.07%	3.51%	4.17%	5.64%	6.67%	7.72%	9.16%	6.67%	1.53%

The stochastic model projects a distribution of the total funding valuation liabilities and assets for the portfolio over the projection period. The liabilities include scheduled escalated adjustments and exclude any reduction in past base benefits.

Table C.10 – Distribution of Projected Total Funding Valuation Liability ($ millions)

Date	2.5% CTE*	5% CTE*	5th Percentile	25th Percentile	50th Percentile	75th Percentile	95th Percentile	Mean	Standard Deviation
31-Aug-2025	6,353	6,353	6,353	6,353	6,353	6,353	6,353	6,353	0
31-Aug-2026	6,474	6,474	6,474	6,474	6,474	6,474	6,474	6,474	0
31-Aug-2027	6,605	6,605	6,605	6,605	6,605	6,605	6,605	6,605	2
31-Aug-2028	6,740	6,740	6,740	6,740	6,740	6,740	6,740	6,740	8
31-Aug-2029	6,875	6,875	6,875	6,875	6,875	6,875	6,875	6,875	12
31-Aug-2030	7,011	7,011	7,011	7,011	7,011	7,011	7,011	7,010	19
31-Aug-2031	6,954	6,954	7,145	7,145	7,145	7,145	7,145	7,143	26
31-Aug-2032	7,053	7,053	7,277	7,277	7,277	7,277	7,277	,273	37
31-Aug-2033	7,130	7,130	410	7,410	7,410	7,410	7,410	7,406	48
31-Aug-2034	7,248	7,248	7,546	7,546	7,546	7,546	7,546	7,540	57
31-Aug-2035	7,387	7,387	7,683	7,683	7,683	7,683	7,683	7,676	63
31-Aug-2036	7,451	7,492	7,823	7,823	7,823	7,823	7,823	7,814	72
31-Aug-2037	7,503	7,589	7,966	7,966	7,966	7,966	7,966	7,954	89
31-Aug-2038	7,561	7,676	8,113	8,113	8,113	8,113	8,113	8,099	107
31-Aug-2039	7,638	7,798	8,263	8,263	8,263	8,263	8,263	8,246	119
31-Aug-2040	7,710	7,910	8,420	8,420	8,420	8,420	8,420	8,401	132
31-Aug-2041	7,797	8,039	8,583	8,583	8,583	8,583	8,583	8,562	144
31-Aug-2042	7,886	8,167	8,758	8,758	8,758	8,758	8,758	8,734	159
31-Aug-2043	7,969	8,287	8,928	8,928	8,928	8,928	8,928	8,901	174
31-Aug-2044	8,014	8,405	9,112	9,112	9,112	9,112	9,112	9,081	196

Note that the CTE is calculated on the lowest liability scenarios, since scenarios where the liability is reduced due to the funding deficit recovery plan represent scenarios that have had more negative investment returns.

The stochastic model produces a distribution of the market value of assets over the projection period. The following table shows a summary of the projected distribution for each year.

Table C.11 – Distribution of Projected Market Value of Assets ($ millions)

Date	2.5% CTE	5% CTE	5th Percentile	25th Percentile	50th Percentile	75th Percentile	95th Percentile	Mean	Standard Deviation
31-Aug-25	6,382	6,517	6,724	7,211	7,548	7,877	8,367	7,546	499
31-Aug-26	6,194	6,367	6,632	7,306	7,779	8,291	9,050	7,808	738
31-Aug-27	6,072	6,294	6,617	7,439	8,057	8,714	9,738	8,098	947
31-Aug-28	6,023	6,267	6,650	7,615	8,334	9,111	10,373	8,399	1,134
31-Aug-29	5,975	6,243	6,671	7,780	8,625	9,546	10,999	8,707	1,320
31-Aug-30	5,942	6,234	6,687	7,925	8,905	9,978	11,712	9,019	1,537
31-Aug-31	5,947	6,264	6,767	8,101	9,220	10,443	12,464	9,359	1,743
31-Aug-32	5,984	6,320	6,858	8,315	9,515	10,898	13,195	9,710	1,953
31-Aug-33	6,012	6,365	6,916	8,519	9,842	11,418	13,958	10,080	2,183
31-Aug-34	6,020	6,390	6,961	8,701	10,201	11,956	14,781	10,467	2,419
31-Aug-35	6,053	6,443	7,068	8,935	10,559	12,489	15,715	10,870	2,669
31-Aug-36	6,034	6,472	7,176	9,198	10,947	13,073	16,714	11,298	2,926
31-Aug-37	6,063	6,512	7,247	9,434	11,333	13,663	17,642	11,749	3,211
31-Aug-38	6,088	6,567	7,322	9,693	11,781	14,308	18,807	12,246	3,537
31-Aug-39	6,115	6,625	7,437	9,950	12,200	14,982	19,880	12,748	3,868
31-Aug-40	6,145	6,686	7,561	10,202	12,699	15,717	21,007	13,284	4,200
31-Aug-41	6,203	6,761	7,654	10,490	13,187	16,457	22,270	13,861	4,590
31-Aug-42	6,232	6,851	7,828	10,792	13,728	17,310	23,641	14,471	4,992
31-Aug-43	6,263	6,915	7,954	11,141	14,273	18,192	25,127	15,110	5,404
31-Aug-44	6,338	7,041	8,147	11,466	14,812	19,174	26,713	15,794	5,867

The stochastic model produces a distribution of the closed group funded ratio over the projection period. The following table shows a summary of the projected distribution for each year, before any corrective action required under the Funding Policy.

Table C.12 – Distribution of Projected Closed Group Funded Ratio

Date	2.5% CTE	5% CTE	5th Percentile	25th Percentile	50th Percentile	75th Percentile	95th Percentile	Mean	Standard Deviation
31-Aug-25	100%	103%	106%	114%	119%	124%	132%	119%	8%
31-Aug-26	96%	98%	102%	113%	120%	128%	140%	121%	11%
31-Aug-27	92%	95%	100%	113%	122%	132%	147%	123%	14%
31-Aug-28	89%	93%	99%	113%	124%	135%	154%	125%	17%
31-Aug-29	87%	91%	97%	113%	125%	139%	160%	127%	19%
31-Aug-30	85%	89%	95%	113%	127%	142%	167%	129%	22%
31-Aug-31	83%	88%	95%	113%	129%	146%	174%	131%	24%
31-Aug-32	82%	87%	94%	114%	131%	150%	181%	133%	27%
31-Aug-33	81%	86%	93%	115%	133%	154%	188%	136%	29%
31-Aug-34	80%	85%	92%	115%	135%	158%	196%	139%	32%
31-Aug-35	79%	84%	92%	116%	137%	163%	205%	141%	35%
31-Aug-36	77%	83%	92%	118%	140%	167%	214%	144%	37%
31-Aug-37	76%	82%	91%	118%	142%	172%	221%	147%	40%
31-Aug-38	75%	81%	90%	119%	145%	176%	232%	151%	44%
31-Aug-39	74%	80%	90%	120%	148%	181%	241%	154%	47%
31-Aug-40	73%	79%	90%	121%	151%	187%	249%	158%	50%
31-Aug-41	72%	79%	89%	122%	154%	192%	259%	161%	53%
31-Aug-42	71%	78%	89%	123%	157%	198%	270%	165%	57%
31-Aug-43	70%	77%	89%	125%	160%	204%	281%	169%	61%
31-Aug-44	70%	77%	89%	126%	163%	210%	293%	173%	64%

The following table is the average correlation matrix for the asset classes outlined in Table C.4. The matrix represents the correlations between asset classes produced by the stochastic simulation.

Table C.13 – Average Correlation Among Asset Classes

Asset Classes	Inflation	Short Term Assets	Real Return Bonds	Government Bonds	Corporate Bonds	Canadian Equities	Canadian Low Vol	Canadian Small Cap cap	Global Dev Mrkt Equities	Global Dev Mrkt Equities Small Cap	Global Dev Mrkt Equities Low Vol	Emerging Markets	Real Estate	Infrastructure	Private Equity	Absolute Return	Emerging Market Low Vol
Inflation	1.00	0.32	(0.18)	(0.25)	(0.25)	0.02	0.01	(0.06)	(0.15)	(0.26)	(0.19)	(0.21)	0.11	(0.06)	(0.10)	0.02	(0.14)
Short Term Assets		1.00	0.22	0.39	0.38	0.00	0.00	0.00	0.00	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Real Return Bonds			1.00	0.84	0.81	(0.07)	(0.05)	(0.07)	0.06	0.03	0.21	(0.12)	0.02	(0.24)	0.06	(0.22)	(0.09)
Government Bonds				1.00	0.93	(0.23)	(0.16)	(0.09)	(0.04)	0.00	0.11	(0.22)	(0.21)	(0.20)	(0.02)	(0.32)	(0.16)
Corporate Bonds					1.00	(0.02)	(0.01)	0.12	0.13	0.21	0.21	(0.02)	(0.13)	(0.23)	0.12	(0.08)	(0.01)
Canadian Equities						1.00	0.70	0.83	0.65	0.69	0.35	0.75	0.27	0.08	0.61	0.83	0.53
Canadian Low Vol							1.00	0.58	0.45	0.48	0.24	0.53	0.19	0.06	0.43	0.58	0.37
Canadian Small Cap								1.00	0.41	0.62	0.14	0.67	0.08	0.06	0.48	0.75	0.47
Global Dev Mrkt Equities									1.00	0.86	0.80	0.54	0.18	(0.05)	0.67	0.54	0.38
Global Dev Mrkt Equities Small Cap										1.00	0.69	0.59	0.18	0.02	0.62	0.63	0.42
Global Dev Mrkt Equities Low Vol											1.00	0.19	0.28	(0.03)	0.47	0.20	0.13
Emerging Markets												1.00	0.16	0.03	0.49	0.84	0.70
Real Estate													1.00	0.10	0.15	0.28	0.11
Infrastructure														1.00	0.01	0.03	0.02
Private Equity															1.00	0.52	0.34
Absolute Return																1.00	0.59
Emerging Market Low Vol																	1.00

The disclosures in this report have been prepared in compliance with the Canadian Institute of Actuaries Standard of Practice, subsection 3270 - Disclosure for Stochastic Models Used to Comply with Specific Regulatory Pension Plan Funding Requirements.

Limitations of Analysis for Risk Management Tests

This report contains analysis and results that rely on assumptions about future events. While we believe that the model inputs and assumptions are reasonable at the time this report has been prepared, other reasonable model inputs and assumptions could be used, resulting in potentially very different distributions of forecasted outcomes.

Future events and actual experience will vary from the simulated outcomes produced with this analysis. As these differences arise, contribution levels and benefits payable under the Plan will be adjusted in accordance with the priorities set out under the Funding Policy.

It is not possible or practical to reflect every variable in a model that is based in the real world. Therefore, we use summary information, estimates, and simplifications to facilitate the modeling of future events. We also exclude factors or data that we consider immaterial.

The results presented in this report are not intended nor should they be interpreted to represent a guarantee or warranty with respect to the future financial condition of the Plan. Furthermore, any determination of probabilities based on the model represent simulated outcomes and should not be interpreted as being actual probabilities.

Appendix D – Summary of Plan Provisions

The following is a brief summary of the main provisions of the New Brunswick Teachers' Pension Plan ("NBTPP") as at August 31, 2024. For an authoritative statement of the provisions of the NBTPP, reference must be made to the official NBTPP documents.

Introduction

The New Brunswick Teachers' Federation/Fédération des enseignants du Nouveau-Brunswick, the Province of New Brunswick and the Minister of Finance, in his capacity as governor and administrator of the Former TPA entered into a Memorandum of Understanding pursuant to which they agreed to convert the Former TPA to the NBTPP effective July 1, 2014. As of that date, the *Teachers' Pension Act* ("Former TPA") was repealed by *An Act Respecting Pensions Under the Teachers' Pension Plan Act* (New Brunswick) which provided that the Former TPA be converted to a plan allowed under the TPPA.

Effective July 1, 2014, the NBTPP was created and is administered by an independent Board of Trustees.

Eligibility and Participation

Each Member of the Former TPA joins the NBTPP on July 1, 2014. Each Teacher is required to join the Plan upon employment.

Effective September 1, 2016, Supply Teachers as defined in the Collective Agreement between Board of Management and the New Brunswick Teachers' Federation/la Fédération des enseignants du Nouveau-Brunswick, March 1, 2012 to February 29, 2016 are required to participate in the NBTPP with an "opt-out" option if they meet the following eligibility requirements:

- earn a minimum of 35% of the Year's Maximum Pensionable Earnings (the "YMPE") for each of the prior two consecutive calendar years; and

- have a minimum of 24 months of continuous employment from their most recent hire date.

Required Contributions

From January 1, 2014 to June 30, 2014, each member is required to contribute 7.3% of earnings up to the YMPE, plus 9.0% of earnings in excess of the YMPE.

From July 1, 2014 to June 30, 2015, each member is required to contribute 8.5% of earnings up to the YMPE, plus 10.2% of earnings in excess of the YMPE.

From July 1, 2015 to June 30, 2016, each member is required to contribute 9.0% of earnings up to the YMPE, plus 10.7% of earnings in excess of the YMPE.

From July 1, 2016 to June 30, 2017, each member is required to contribute 9.5% of earnings up to the YMPE, plus 11.2% of earnings in excess of the YMPE.

From July 1, 2017 to June 30, 2029, each member is required to contribute 10.0% of earnings up to the YMPE, plus 11.7% of earnings in excess of the YMPE.

As of July 1, 2029, each member is required to contribute consistent with a contribution formula of 9.25% of earnings up to the YMPE, plus 10.95% of earnings in excess of the YMPE, as defined in the Funding Policy.

From July 1, 2014 to June 30, 2019, the employer is required to contribute 11.5% of earnings up to the YMPE, plus 13.2% of earnings in excess of the YMPE.

From July 1, 2019 to June 30, 2024, the employer is required to contribute 10.75% of earnings up to the YMPE, plus 12.45% of earnings in excess of the YMPE.

From July 1, 2024 to June 30, 2029, the employer is required to contribute 10.0% of earnings up to the YMPE, plus 11.70% of earnings in excess of the YMPE.

From July 1, 2029, the employer is required to match the teachers' contributions.

Contribution rates are subject to change in accordance with triggers found under the Funding Policy for the NBTPP.

Normal Retirement

The normal retirement date is the first day of the month following the member's sixty-fifth birthday.

A member's annual normal retirement pension is equal to the sum of:

A.   In respect of service before July 1, 2014, the product of:

   i.   the number of years of the member's pensionable service before July 1, 2014, and

   ii.   1.3% of the annual average of the best five (5) consecutive years of earnings at July 1, 2014, up to the annual average YMPE for 2014, 2013 and 2012, plus 2.0% of the excess of the annual average of the best five (5) consecutive years of earnings at July 1, 2014 over the annual average YMPE for 2014, 2013 and 2012;

   and

B.   In respect of service from July 1, 2014, the sum of (i) and (ii) for each calendar year (or pro-rated for a portion thereof):

   iii.   1.3% of the Member's annualized earnings for the calendar year, up to the YMPE for the calendar year; and

   iv.   2.0% of the portion of the Member's annualized earnings for the calendar year that are in excess of the YMPE for the calendar year.

Pensions accrued above are subject to regular indexing every January 1st following July 1, 2014, equal to 100% of the increase in the Consumer Price Index (CPI) (subject to a maximum CPI of 4.75%) while the Teacher is active, and equal to 75% of CPI (subject to a maximum CPI of 4.75%) after the Teacher's termination of employment, and contingent on the NBTPP's financial condition as outlined in the Funding Policy.

Normal and Optional Forms of Pension

The normal form of pension is a pension payable in equal monthly instalments commencing on the member's pension commencement date and continuing thereafter during the lifetime of the member. For a member with a spouse or common-law partner at the time of the member's death, 50% of the member's pension (before application of reductions for early retirement) continues to such spouse or common-law partner in equal monthly instalments for the life of the spouse or common-law partner. Should the member have dependent children at the time of his/her death, such dependent children may be entitled to a pension if there is no spouse or common-law partner or after the death of such spouse or common-law partner. A minimum amount of pension equal to the member's own contribution with interest to retirement will be payable in total.

Optional forms of pension are also available on an actuarially equivalent basis.

Early Retirement and Bridge Benefit

Early retirement is permitted as of the earliest of age 55, or 35 years of pensionable service or the age at which the member reaches 80 points (or 84 points if the member became a teacher after July 1, 2014).

On early retirement, an annual bridge benefit is payable in addition to the lifetime pension found under "Normal Retirement". The annual bridge benefit is payable to age 65 or to the death of the member, if earlier, and is equal to the sum of:

A.   In respect of service before July 1, 2014, the product of:

    i.   the number of years of the member's pensionable service before July 1, 2014, and

    ii.   0.7% of the annual average of the best five (5) consecutive years of earnings at July 1, 2014 up to the annual average YMPE for 2014, 2013 and 2012;

    and

B.   In respect of service from July 1, 2014, for each calendar year (or pro-rated for a portion thereof), 0.7% of the Member's annualized earnings for the calendar year up to the YMPE for the calendar year.

The portions of the lifetime pension and bridge benefit accrued for service before July 1, 2014 are unreduced if the pension and bridge commence to be paid upon or after fulfilment of one of the following criteria:

• Achievement of the 87 points rule (age + years of pensionable service)

• Age 60 and 20 years of pensionable service

• 35 years of pensionable service

• Age 65 and 5 years of continuous service or 2 years of pensionable service or Plan membership

If payment commences before any of these criteria are met, the lifetime pension and bridge benefit shall each be reduced by 5/12% per month (5% per year) that the pension and bridge commencement date precedes the first day of the month in which the criterion is met.

The portions of the lifetime pension and bridge benefit accrued for service on and after July 1, 2014 are reduced by 5/12% per month (5% per year) that the pension and bridge commencement date precedes the first day of the month following the first of the following events:

- Achievement of the 91 points rule (age+ years of pensionable service)

- Age 62 and 20 years of pensionable service

- 35 years of pensionable service

- Age 65 and 5 years of continuous service or 2 years of pensionable service or Plan membership.

Benefits on Termination of Employment

If a member terminates employment prior to completing 5 years of continuous service and prior to completing 2 years of pensionable service or Plan membership, the member is entitled to a refund of the total amount of his/her contributions to the NBTPP and Former TPA, if any, with interest.

If a member terminates employment before age 55 but after completing at least 5 years of continuous service or 2 years of pensionable service or Plan membership, the member may elect to receive:

i. a deferred lifetime pension payable from the normal retirement date equal to the accrued pension to which the member is entitled as at his/her date of termination in accordance with the formula specified above for the normal retirement pension; or

ii. to transfer the termination value calculated in accordance with the TPPA, to a registered retirement savings arrangement as allowed under the PBA.

Members electing a deferred lifetime pension will also be entitled to retire early in accordance with the "Early Retirement" section, and will also be eligible for a bridge benefit.

Death Benefits

If a member dies prior to completing 5 years of continuous service and prior to completing 2 years of pensionable service or Plan membership, the benefit payable is a refund of the member's own contributions to the NBTPP and Former TPA, if any, with interest.

If the member dies after completing at least 5 years of continuous service or 2 years of pensionable service or Plan membership, but before pension commencement, the death benefit is as follows:

- a pension of 50% of the accrued lifetime pension payable to the surviving spouse or surviving common-law partner; or to dependent children if there is no surviving spouse or following the death of the surviving spouse an amount equal to the spouse's pension (split equally among dependent children). Any amount by which the Termination Value exceeds the aggregate of all pension payments made above, shall be paid to the designated beneficiary(ies) or estate.

- If no pension is payable to the surviving spouse or the surviving common-law partner, and if there is no dependent child or dependent at the time of death, the benefit payable is a refund of the member's own contributions to the NBTPP and Former TPA, if any, with interest, to the estate.

In the event of death after pension commencement, the benefit payable is determined in accordance with the form of pension selected by the member at retirement.

Primary Goal, Benefit Security and Cost-of-Living Adjustments

The primary goal of the NBTPP is to provide pensions to eligible teachers after retirement and until death in respect of their service as teachers. A further purpose of this NBTPP is to provide secure pension benefits to members without an absolute guarantee but with a risk-focused management approach delivering a high degree of certainty that full base benefits will be payable in the vast majority of potential future economic scenarios. As a plan allowed under the TPPA, all future cost-of-living adjustments and other ancillary benefits under the NBTPP shall be provided only to the extent that funds are available for such benefits, as determined by the Board of Trustees in accordance with applicable laws and the Funding Policy

Appendix E – Plan Administrator Confirmation Certificate

With respect to the Actuarial Valuation Report of the New Brunswick Teachers' Pension Plan as at August 31, 2024, I hereby confirm that to the best of my knowledge:

- the data regarding Plan members and beneficiaries provided to TELUS Health as at August 31, 2024 constitutes a complete and accurate description of the information contained in our files;

- copies of the official Plan text, Funding Policy and Statement of Investment Policies of the NBTPP and all amendments to date were provided to TELUS Health; and

- there are no subsequent events or any extraordinary changes to the Plan membership from August 31, 2024 which would materially affect the results, other than those noted in this report.

The NBTPP Board of Trustees

Signature

Name: ___Larry I. Jamieson_____

Title: ___Chair_____

Date: ___May 26, 2025_____

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