MEMBERS OF THE HOUSE OF ASSEMBLY RETIRING ALLOWANCES ACT – REGISTERED PENSION PLAN

REPORT ON THE ACTUARIAL VALUATION AS AT DECEMBER 31, 2018

CRA REGISTRATION NO. 0285940

DECEMBER 2019

PREPARED BY:

ECKLER

1969 UPPER WATER STREET, SUITE 503
HALIFAX, NOVA SCOTIA
B3J 3R7

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Summary of Results

Going Concern Financial Position	December 31, 2018	December 31, 2015
Going concern value of assets	$24,999,000	$22,490,000
Going concern liability	28,457,000	25,080,000
Going concern excess / (unfunded liability)	($3,458,000)	($2,590,000)

Solvency Financial Position and Hypothetical Wind-Up Financial Position	December 31, 2018	December 31, 2015
Solvency assets	$24,819,000	$22,310,000
Solvency liabilities	40,487,000	37,590,000
Solvency excess / (deficit)	($15,668,000)	($15,280,000)

Funding Requirements (Annualized)		Year Following December 31, 2018
	% of Payroll	$
Estimated contributory payroll		4,055,000
Required member contributions	9.0	365,000
Government matching required contributions	9.0	365,000
Total required contributions	18.0	730,000
Total value of benefits earned in the year	18.4	745,000
Estimated contribution deficit	(0.4)	(15,000)
Maximum eligible government contribution[1]		16,048,000

[1] *Equal to wind-up deficiency plus eligible current service cost net of member contributions*

SECTION I INTRODUCTION AND PURPOSE OF VALUATION

At the request of the Government of Newfoundland and Labrador (the "Government"), we have completed an actuarial valuation of the *Members of the House of Assembly Retiring Allowances Act* – Registered Pension Plan (the "Plan") as of December 31, 2018.

The purposes of this actuarial valuation are as follows:

- to determine the financial position of the Plan on going concern, solvency, and hypothetical wind-up bases;
- to establish the minimum and maximum contributions to the Plan until the next valuation; and
- to meet the statutory filing requirements under the Newfoundland and Labrador *Pension Benefits Act, 1997* and the *Income Tax Act*.

The *Members of the House of Assembly Retiring Allowances Act* consists of a registered pension plan under the *Income Tax Act* and a supplementary plan ("SERP"), which provides benefits that may exceed the restrictions under the *Income Tax Act*. This report focuses only on the registered pension plan ("RPP"). It does not include the liabilities regarding the SERP.

In this report, we provide the valuation results, along with an actuarial opinion with funding levels for use until the next valuation. The data, actuarial assumptions and methodology used in valuing both the assets and the liabilities of this pension plan is provided by way of appendices for ease of reference.

The intended users of this report are the Government of Newfoundland and Labrador, the Newfoundland and Labrador Office of the Superintendent of Pensions and the Canada Revenue Agency. This report is not intended or necessarily suitable for purposes other than those listed above. Any party reviewing this report for other purposes should have their own actuary or other qualified professional assist in their review to ensure that the party understands the assumptions, results and uncertainties inherent in our estimates.

The next valuation of the Plan must be completed as at a date no later than December 31, 2021.

Subsequent Events

We are not aware of any events that occurred between the valuation date and the report date that would have a material impact on the results of this valuation.

Reliance

We have relied on the asset information as provided in the plan's financial statements from the annual Pensions Investment Committee reports. We have also relied on the Plan administrator to provide all relevant data and to confirm the pertinent Plan terms.

SECTION II PLAN CHANGES AND SUBSEQUENT EVENTS

The current pension plan for the Members of the House of Assembly has been in effect since 1976, and was established for individuals who have been elected to the House of Assembly of the province of Newfoundland and Labrador.

Since the last valuation, the plan has been amended through the following Plan amendments:

Effective December 7, 2017, the plan has been amended through Bill 21 "An Act to Amend the Members of the House of Assembly Retiring Allowances Act and the Portability of Pensions Act". This act revised the pension accrual rates and early retirement eligibility for members elected to the House of Assembly on or after November 30, 2015. This amendment has been reflected in the results of this report. This change was also reflected in the December 31, 2015 valuation.

A more detailed description of the current plan provisions of the Plan is contained in Appendix D, at the end of this report.

There were no other Plan changes since the last valuation as at December 31, 2015.

Actuarial Assumptions

There have been changes to the going concern assumptions since the last valuation. The going concern discount rate has changed from 6.50% per annum to 6.15% per annum. The adjustment factors applied to the assumed mortality table have been changed from 0.75 (Male) and 0.926 (Female) to 0.90 and 0.95 respectively. In addition, the underlying inflation assumption has been changed from 2.25% per annum to 2.00% per annum. Accordingly, the assumed future increase to the YMPE and DB limit have been revised downward by 0.25% as well. Finally, it has been assumed that salaries will have a 0.00% growth rate for the next 4 years, and will then grow at a rate of 3.00% per annum.

The change in the going concern discount rate has increased going concern liabilities by $1,144,000 and increased the current service cost by $45,000. The change in the mortality adjustment factors has decreased the going concern liabilities by $406,000 and decreased the current service cost by $10,000. The change in the inflation and salary assumption has decreased the going concern liabilities by $153,000 and decreased the current service cost by $35,000.

The solvency assumptions have also been changed to reflect market conditions at the valuation date.

The actuarial assumptions used in the valuation are provided in Appendix B.

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SECTION III FINANCIAL POSITION OF THE PLAN

A. Going Concern Basis: Financial Position as at December 31, 2018

Our calculations show that the total actuarial present value as at December 31, 2018 for all benefits accrued to active and inactive members, retirees and survivors is $28,457,000 (rounded to the nearest $1,000). This compares to going concern assets of $24,999,000 and results in a going concern unfunded liability of $3,458,000 as at December 31, 2018. The valuation balance sheet shown below summarizes the going concern financial position of the Plan as at December 31, 2018 and as at December 31, 2015 for comparative purposes.

FINANCIAL POSITION – GOING CONCERN BASIS

	December 31, 2018	December 31, 2015
Going concern assets		
Market value of assets	$24,041,000	$21,470,000
Receivables / (payables)	958,000	1,020,000
Total going concern assets	$24,999,000	$22,490,000
Going concern liabilities		
Actives	$4,821,000	$2,490,000
Retirees and survivors	18,669,000	16,470,000
Deferred vested members	4,826,000	5,630,000
Non-vested terminated members	141,000	490,000
Total going concern liabilities	$28,457,000	$25,080,000
New going concern excess / (unfunded liability)	**($3,458,000)**	**($2,590,000)**
Going concern funding ratio	**87.8%**	**89.7%**

As shown above, the December 31, 2018 actuarial valuation has revealed a going concern unfunded liability in the amount of $3,458,000. This compares to a going concern unfunded liability at the previous valuation of $2,590,000. The plan is not required to fund this deficit due to the exemptions from funding requirements.

Sensitivity Analysis

Below we show the impact on the going concern actuarial liability as at December 31, 2018 of a one percentage point drop in the discount rate assumption (i.e., from 6.15% per annum to 5.15% per annum). All other assumptions were kept unchanged.

GOING CONCERN SENSITIVITY

	Impact 1% Drop
Total Going Concern Actuarial Liability	$32,071,000

The change in the actuarial liability would have the impact of increasing the liability by $3,614,000 or 12.7% as at December 31, 2018.

Reconciliation of Going Concern Financial Position

The reconciliation provides an independent cross-check of the calculations performed, and also determines the chief reasons leading to the change in the surplus and/or unfunded liabilities (deficiencies) that have occurred since the previous valuation date.

Although a complete analysis down to the final dollar can be made, such an analysis requires the processing of a considerable amount of detailed data relating to the Plan; the expense of which would not normally be justified unless there were special circumstances.

However, it is possible to make an approximate analysis along broader lines and, under normal circumstances, this type of analysis will produce meaningful results.

The table below summarizes the results of our reconciliation of change in financial position over the past year.

RECONCILIATION OF GOING CONCERN FINANCIAL POSITION

Going concern excess / (unfunded liability) as at December 31, 2015	($2,590,000)
In-transit as at December 31, 2015 misstated	(1,020,000)
Revised going concern excess / (unfunded liability) as at December 31, 2015	($3,610,000)
Interest on unfunded liability at 6.50%	(802,000)
Contributions in excess of current service cost	345,000
Investment experience	1,871,000
Salary increases different than expected	12,000
Mortality experience	(263,000)
Retirement experience	190,000
Termination experience	(27,000)
Change in discount rate assumption	(1,144,000)
Change in mortality adjustment assumption	406,000
Change in salary scale assumption	153,000
Data corrections	(540,000)
Other gain and loss items	(49,000)
Going concern excess / (unfunded liability) as at December 31, 2018	($3,458,000)

B. Solvency Basis: Financial Position as at December 31, 2018

The “solvency basis” is a hypothetical construct intended to portray the funded status of the Plan had it terminated or wound-up effective on the valuation date. That is, an assessment is made as to whether the assets of the pension fund would be sufficient if no further benefits are provided and all members were paid their entitlements as an annuity, a deferred annuity, or as a commuted value.

The financial position of the Plan on a solvency basis as at December 31, 2018 and as at December 31, 2015 for comparison purposes is as follows:

Financial Position – Solvency Basis

	December 31, 2018	December 31, 2015
Solvency assets		
Market value of assets	$24,041,000	$21,470,000
Receivables / (payables)	958,000	1,020,000
Termination expense provision	(180,000)	(180,000)
Total solvency assets	$24,819,000	$22,310,000
Solvency liabilities		
Active members	$7,793,000	$4,450,000
Retirees and survivors	24,687,000	22,450,000
Deferred vested members	7,866,000	10,200,000
Terminated members – pending payment	141,000	490,000
Total solvency liabilities	$40,487,000	$37,590,000
Solvency excess / (deficiency)	**($15,668,000)**	**($15,280,000)**
Solvency concern ratio	**61.3%**	**59.4%**

As shown above, the solvency valuation has revealed a solvency deficiency of $15,668,000 as at December 31, 2018. This compares to a solvency deficiency of $15,280,000 as at the previous valuation.

The Plan is not required to fund this deficit at this time due to the exemption from funding requirements.

Sensitivity Analysis

Below we show the impact on the solvency actuarial liability as at December 31, 2018 of a one percentage point drop in the discount rate assumption. All other assumptions were kept unchanged.

SOLVENCY SENSITIVITY

	Impact 1% Drop
Total Solvency Actuarial Liability	$46,980,000

The change in the actuarial liability would have the impact of increasing the liability by $6,493,000 or 16.0% as at December 31, 2018.

Incremental Cost

In accordance with the Canadian Institute of Actuaries' Standard of Practice, we have estimated the incremental cost of the solvency liability as at December 31, 2018. This is the present value of the expected aggregate change in solvency liability between December 31, 2018 and the next valuation date, adjusted upwards for expected benefit payments. The next valuation is expected to be as at December 31, 2021.

The estimated incremental cost for the period December 31, 2018 to December 31, 2021 is $3,317,000. The estimated incremental cost does not impact the funding requirements of the Plan under the Newfoundland and Labrador *Pension Benefits Act, 1997* and is for information purposes only.

The methodology for calculating the incremental cost was to determine the solvency liability as at the end of the cost period, allowing for new benefits expected to accrue in the interim. New benefits include future pension accruals and future qualification for early retirement benefits, if applicable. The present value of this future liability (adjusted for the impact of benefit payments made) was then compared to the current solvency liability to determine the incremental cost.

<u>C. Hypothetical Wind-up Basis: Financial Position as at December 31, 2018</u>

The wind-up financial position of the Plan as at December 31, 2018 would be the same as the solvency financial position. Therefore, if the Plan were to wind-up as at December 31, 2018, there would be a wind-up deficit of $15,668,000.

SECTION IV FUNDING REQUIREMENTS

A. Current Service Costs

The Plan's current service cost is the value of the benefits accruing to members in the year following the valuation determined on a going concern basis.

The table below summarizes the results of the Plan's current service cost for the 12-month period from December 31, 2018 and the comparison with the required member contributions over this period. The cost of benefits accruing in respect of the year following the valuation date is $745,000 This amounts to 18.4% of active contributory payroll.

CURRENT SERVICE COST

	% of Payroll	$
Estimated contributory payroll for 2019 service		4,055,000
Member required contributions	9.0	365,000
Government matching required contributions	9.0	365,000
Estimated total required contributions	18.0	730,000
Total value of benefits for service	18.4	745,000
Estimated contribution deficit	(0.4)	(15,000)

The total current service cost is 18.4% of contributory payroll as of December 31, 2018. This compares to the total current service cost of 15.7% of contributory payroll as at the previous valuation.

CURRENT SERVICE COST RECONCILIATION

	% of Payroll
Current service cost as at January 1, 2016	15.7
Changes in Plan demographics	2.6
Change in discount rate assumption	1.2
Change in mortality adjustment factor assumption	(0.3)
Change in salary scale assumption	(0.8)
Current service cost as at January 1, 2019	18.4

Sensitivity Analysis

Below we show the impact on the current service cost as at December 31, 2018 of a one percentage point drop in the discount rate assumption. All other assumptions were kept unchanged.

CURRENT SERVICE COST SENSITIVITY

	Impact 1% Drop
Total Current Service Cost	$887,000

The change in the discount rate would have the impact of increasing the current service cost by $142,000 or 19.1% as at December 31, 2018.

B. Special Payments

The Plan is subject to a funding exemption as per Section 41 of the Newfoundland and Labrador *Pension Benefits Act Regulations*, and therefore no special payments are required to amortize the Plan's solvency deficiency. Further, Government contributions are not required to cover any deficiency in the total current service cost. As an illustration, if the Plan was required to fund the going concern unfunded liability, the schedule of fixed annual payments over various time-periods would be as follows:

ANNUAL SPECIAL PAYMENTS DETERMINED AS AT DECEMBER 31, 2018

Payment Type	Amortized over 15 years	Amortized over 20 years	Amortized over 25 years
Going Concern	$346,000	$294,000	$264,000

C. Maximum Contribution

The maximum government contribution prior to the next valuation is equal to the hypothetical wind-up deficit plus the total current service cost, net of member contributions, totaling $16,048,000.

SECTION V ACTUARIAL OPINION

The following represent our primary conclusions as a result of our actuarial valuation as at December 31, 2018:

1. As at December 31, 2018 the Plan has a going concern unfunded liability of $3,458,000.

2. In accordance with the Newfoundland and Labrador *Pension Benefits Act, 1997*, we have conducted tests of solvency, and have found the Plan has a solvency deficiency of $15,668,000 determined as at December 31, 2018.

3. Pursuant to paragraph 41(2.1)(b) of the Newfoundland and Labrador *Pension Benefits Act Regulations*, the Plan is exempt from funding requirements. Therefore, no special payments are required to be made at this time.

4. The cost of benefits accruing in respect of the year following the valuation date is $745,000 which amounts to 18.4% of active contributory payroll. Member contributions are 9.0%, and are matched by government in accordance with the plan text. This results in an estimated contribution deficit of 0.4% of payroll, as total expected contributions are less than total cost of benefits for the year.

5. The next valuation of the Plan must be completed as at a date no later than December 31, 2021.

6. If the Plan were to be wound up on the valuation date, there would be a deficit of $15,668,000.

7. The maximum government contribution permitted in 2019 is estimated to be $16,048,000.

8. The solvency ratio of the Plan is 61.3%.

9. Pursuant to the *Income Tax Act,* there is no excess surplus as of the valuation date.

10. We are not aware of any events that occurred between the valuation date and the date this report was completed that would have a material impact on the results of this valuation. Any investment experience occurring between the valuation date and the report date, which differs from the assumption made, is not reported on in this valuation report and will be reported on in future valuations.

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11. In our opinion,

    a. the data on which the valuation is based are sufficient and reliable for the purposes of the valuation as described in Section I;

    b. the assumptions described herein are appropriate for the purposes of the valuation; and

    c. the methods employed in the valuation are appropriate for the purposes of the valuation.

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

Nonetheless, emerging experience, differing from the assumptions, will result in gains or losses which will be revealed in future valuations.

Respectfully submitted,

Jennifer Urquhart, FSA, FCIA

Appendix A Plan Assets

The pension fund is held in trust by CIBC Mellon Global Securities Service. We have relied upon audited financial statements of the Plan for 2016, 2017, and 2018.

The following is a summary of the market value of Plan assets by category as at December 31, 2018:

Plan Assets as at December 31, 2018

December 31, 2018	% actual	% target
Cash & cash equivalents	0	0
Fixed income	20	20
Canadian equity	26	25
Global equity	54	55
Total	**100**	**100**

Reconciliation of Plan Assets

A summary of pension fund transactions for the period January 1, 2016 to December 31, 2018 is summarized below:

Reconciliation of Assets

Year Ending December 31	2016	2017	2018
Net Assets Available for Benefits January 1	$21,470,000	$23,557,000	$26,375,000
Plus:			
Member Contributions	428,000	391,000	386,000
Government Contributions	391,000	527,000	288,000
Investment income	3,219,000	3,726,000	(413,000)
Less:			
Retirement benefits	1,577,000	1,613,000	1,629,000
Lump sum refunds	237,000	51,000	779,000
Administrative costs	137,000	162,000	187,000
Total	**$23,557,000**	**$26,375,000**	**$24,041,000**
Payables / receivables			958,000
Going concern assets			**$24,999,000**

Performance of Plan Assets

The rate of return on the pension fund's assets since the last valuation is shown below:

ANNUALIZED RATES OF RETURN

Year Ending	Gross Rate of Return	Net of Expenses Return
December 31, 2016	15.40%	14.70%
December 31, 2017	16.13%	15.37%
December 31, 2018	(1.63%)	(2.35%)

The average rate of return since the last valuation was 9.97% per year, or 9.24% net of expenses.

APPENDIX B ACTUARIAL METHODS AND ASSUMPTIONS

A. Going Concern Valuation

Asset Valuation Method

For the purposes of the going concern valuation, the value of invested assets is the market value of assets, adjusted for payments in-transit. This method was also used in the previous valuation.

Actuarial Cost Method

For the purposes of the going concern valuation, we have used the Projected Unit Credit actuarial cost method in the determination of current service contributions as well as the accrued liabilities.

In using the Projected Unit Credit method, as a first step, a calculation is made of the liability in respect of all benefits that have accrued to members for service up to and including the valuation date based on projected final average earnings. This represents the "accrued liability".

As a completely separate process, the current service cost has been calculated. This represents the cost of providing the benefits that will accrue in respect of the 12-month period following the valuation date. This is compared with the amount of required member contributions over that period. The difference represents the required additional contribution necessary in order for those benefits to be properly funded.

Under this funding method, the cost of a dollar per year of deferred pension commencing at retirement age increases with the age of a member. Thus, the dollar cost rises steadily over an individual's working life. However, for the group as a whole, if the average age remains reasonably constant (which can occur through the retirement of older members and the addition of new, young members), the recommended contribution rate will remain relatively stable. If the Plan membership's average age increases, on the other hand, the current service costs will also increase. Such increases would be revealed in future valuations.

Actuarial Cost Method

For the purposes of the going concern valuation, we select actuarial assumptions with a long-term focus. That is, we anticipate that the Plan will continue indefinitely into the future. Actuarial assumptions are selected giving consideration to historical trends, future expectations and Plan specific experience, where possible. The assumptions chosen are expected to produce a stable pattern of funding and meet the Plan sponsor's desire to minimize potential for significant shortfalls or deficits in the future.

The purpose of this part of our analysis is to determine an appropriate method and series of assumptions to make proper allowance of the Plan's future liabilities by way of payment of pensions and other benefits. In making these calculations, assumptions must be made:

1. as to the probability that a particular payment will be made at a certain time (for example, depending upon whether or not the individual concerned survives to that date); and
2. the expected amount of such payment.

In order to do this, the actuary must make a series of assumptions in connection with the many factors which will have a bearing upon the future financial operation of the Pension Plan. These include the following:

(a) future salary increases;

(b) future rates of mortality (and the corresponding life expectancies of the Plan members);

(c) future rates of employee turnover (withdrawal from the Plan);

(d) retirement experience.

Finally, the actuary must give consideration to the rate of interest that will be earned on the assets of the pension fund in future years.

As part of our process of analysis, all of these factors have received consideration. Where applicable, we have taken into account the actual experience of this Plan. However, it should be noted that, from a statistical point of view, actual experience data developed from a single pension plan has limited validity unless the number of plan members is very large. Therefore, it becomes necessary to take into account statistics developed from many other pension plans.

Going Concern Discount Rate Assumption

The selection of the discount rate for this valuation was based on reasonable expectations for the relationships between key economic variables over the long term, as well as the expected impact of those economic variables on the investment performance of the pension fund given the fund's investment policy.

Based on the assumed inflation rate and other key economics expectations over the long term, and taking into account a margin for adverse deviations, the going concern discount rate assumption was developed as follows:

GOING CONCERN DISCOUNT RATE

Discount Rate Components	
"Best estimate" return reflecting the Plan's investment policy	6.30%
Diversification / rebalancing	0.40%
Added value from active management	0.30%
Provision for expenses	(0.70%)
Estimated net investment return	6.30%
Provisions for adverse deviation	(0.15%)
Going concern discount rate assumption	**6.15%**

The resulting discount rate assumption is 6.15% per annum, a decrease from the 6.50% per annum used in the previous valuation.

Inflation

The inflation assumption has a direct bearing on the assumption with respect to active member salary increases, and increases in the YMPE and Defined Benefit Limit. The inflation assumption from 2015 of 2.25% per annum has been changed to 2.00% per annum, as it is in alignment with our overall economic outlook. This rate is within the Bank of Canada's 1% - 3% inflation-control target range.

Committee Assumption

We have assumed that members who are currently not appointed to Secretarial / Committee positions will be appointed prior to death or retirement. For the purpose of calculating benefits, an additional $5,200 has been added to their 2019 salaries. This amount in consistent with the assumption used in the prior valuation.

YMPE and CRA Defined Benefit Limit Increase

We have assumed the Year's Maximum Pensionable Earnings (YMPE) would increase at a rate of 2.75% per annum from the current known level of $57,400 in 2019.

We have assumed the Canada Revenue Agency defined benefit limit would also increase at a rate of 2.75% per annum from the current known level of $3,025.56 for 2019. In combination with a member's pensionable service and their year of retirement, this limit determines the maximum pension that may be payable from a registered defined benefit pension plan under the *Income Tax Act.*

These assumptions have changed since the previous valuation, due to the reduction in the underlying inflation assumption.

Salary Increases

We have assumed no salary increases for the first 4 years, and 3.00% per annum thereafter. This renews the same salary increase assumption used in the previous valuation, due to government's expectation of future salary increases.

Mortality

For this valuation, we have continued to use the CPM 2014 Public Sector Mortality Table (CPM2014Publ), and we have assumed mortality improvements in accordance with CPM Improvement Scale B (CPM-B). The CPM 2014 Public table represents the best available information to date on the mortality patterns of Canadians participating in, or retired from, defined benefit pension plans in the public sector. Adjustment factors of 0.90 for males and 0.95 for females were applied to the mortality table. The mortality assumption table and scale has not changed since the previous actuarial valuation, but there has been a change to the adjustment factors applied.

Retirement Age

We have assumed that 8% of members who achieve eligibility for unreduced retirement under the SERP will retire each year for members under 60, and 60% per year for members between 60 and 64. It is assumed that 100% of members retire upon reaching age 65.

Marital Status

We have assumed that at the earlier of retirement or death, 90% of members will have an eligible spouse. Further, we have continued to assume that male spouses are 3 years older than female spouses.

Termination Rates

We have assumed that 8% of all members are assumed to terminate each year after vesting, until they reach eligibility for an unreduced pension under the SERP.

The following table details the actuarial assumptions that have been used in the going concern valuation.

GOING CONCERN VALUATION ACTUARIAL ASSUMPTIONS

	December 31, 2018	December 31, 2015
Discount rate:	6.15% per annum	6.50% per annum
Salary increases:	0.00% for 4 years, 3.00% thereafter	0.00% for 4 years, 3.00% thereafter
Maximum pension and YMPE:	2019: $3,025.56 and $57,400 2020+: Increase at 2.75% per annum	2015: $2,818.89 and $53,600 2016+: Increase at 3.00% per annum
Mortality:	Male: 90% of CPM 2014 Public Sector Mortality Table projected generationally with CPM Improvement Scale B Female: 95% of CPM 2014 Public Sector Mortality Table projected generationally with CPM Improvement Scale B	Male: 75.0% of CPM 2014 Public Sector Mortality Table projected generationally with CPM Improvement Scale B Female: 92.6% of CPM 2014 Public Sector Mortality Table projected generationally with CPM Improvement Scale B
Retirement age:	Upon reaching eligibility for an unreduced pension under the SERP, 8% per year for members under age 60; 60% per year for members between 60 to 64; 100% upon reaching age 65	Upon reaching eligibility for an unreduced pension under the SERP, 8% per year for members under age 60; 60% per year for members between 60 to 64; 100% upon reaching age 65
Marital status:	At retirement or death: 90% (male spouse is 3 years older)	At retirement or death: 90% (male spouse is 3 years older)
Termination rates:	For members with at least 5 years of service (i.e., vested), 8% per year, ceasing upon reaching eligibility for an unreduced pension under the SERP	For members with at least 5 years of service (i.e., vested), 8% per year, ceasing upon reaching eligibility for an unreduced pension under the SERP
Actuarial method:	Projected Unit Credit	Projected Unit Credit

B. Solvency Valuation

The Newfoundland and Labrador *Pension Benefits Act, 1997* prescribes a solvency valuation. A solvency valuation permits the regulator to assess the solvency of the Plan should it terminate or wind-up effective on the valuation date. That is, an assessment is made as to whether the assets of the pension fund would be sufficient if no further benefits were provided and all Members were paid their entitlements. If solvency assets are not sufficient to fund solvency liabilities (i.e., the Plan has a solvency deficiency), then special payments are required in order to eliminate the deficiency, unless the Plan is subject to solvency relief in accordance with the Newfoundland and Labrador *Pension Benefits Act Regulations*.

Benefits are assumed to be settled through a lump sum transfer for 100% of active members who are not retirement eligible as at the date of valuation. Benefits are assumed to be settled through the purchase of annuities for members who are eligible for retirement at the date of valuation and for all pensioners and deferred pensioners.

For active members whose benefits are assumed to be settled through lump sum transfer, the interest rate used for calculating solvency liabilities was 3.20% per annum for 10 years and 3.40% per annum thereafter. These rates were determined in accordance with Section 3500 of the Canadian Institute of Actuaries ("CIA") Standards of Practice – Pension Commuted Values with rates in effect for the month of December 2018. The mortality assumption used was the CPM-2014 (Combined) mortality table projected with Scale CPM-B.

For those members whose benefits are assumed to be settled through purchase of annuities, the solvency liabilities were calculated using an interest rate of 3.23% per annum and mortality at CPM-2014 (Combined) mortality table projected with Scale CPM-B. These assumptions represent the estimated basis for settlement of the Plan's obligations for retired lives by the purchase of insured annuities on the valuation date and are in accordance with the Canadian Institute of Actuaries Educational Note entitled "Assumptions for Hypothetical Wind-Up and Solvency Valuations with Effective Dates Between December 31, 2018 and December 30, 2019".

In accordance with the CIA Transfer Value Recommendations, the retirement age assumption incorporates the retirement age which provides the maximum value.

Note that the solvency valuation does not make any assumptions about future pay increases or future terminations of employment, since all members are assumed to terminate on the valuation date. In accordance with Directive #9 of the Newfoundland and Labrador *Pension Benefits Act, 1997,* the commuted value payable to members who are assumed to elect a transfer on wind-up is calculated to be not less than the estimated cost to purchase an annuity equal to the accrued pension from an insurance company.

The actuarial assumptions for the solvency valuation are described in the following table:

SOLVENCY VALUATION ACTUARIAL ASSUMPTIONS

	December 31, 2018	December 31, 2015
Interest rates for benefits to be settled through annuity purchase:	3.23% per annum	3.13% per annum
Interest rates for benefits to be settled through lump sum transfer:	3.20% per annum for 10 years and 3.40% thereafter	2.10% per annum for 10 years and 3.70% thereafter
Pre-retirement mortality:	None	None
Post-retirement mortality:	CPM-2014 Combined mortality, projected with Scale CPM-B	CPM-2014 Combined mortality, projected with Scale CPM-B
Retirement age:	Age that maximizes the value of the pension. All members are assumed to retire at the earliest date that they are eligible.	Age that maximizes the value of the pension. All members are assumed to retire at the earliest date that they are eligible.
Salary scale:	None	None
Married assumption:	90% married (male spouse is 3 years older)	90% married (male spouse is 3 years older)
Actuarial cost method:	Termination Method	Termination Method
Wind-up expenses	$180,000	$180,000

C. Wind-Up Valuation

The wind-up valuation liability assumptions are the same as those used in the solvency valuation.

APPENDIX C MEMBERSHIP DATA

The membership data in respect of this Plan is maintained by the Government's Pensions Administration Division.

The data was reviewed by us as to accuracy and reasonableness and we are satisfied that the data are complete. In addition, we have performed various checks of reasonableness on dates of employment, plan membership and birth. We also compared lists of active members with lists of inactive and retired members to check for duplicates. In all cases, we found the data to be sufficient and reliable for the purposes of the valuation.

Appendix E contains confirmation by Government's Pensions Administration Division as to the accuracy and completeness of the data provided.

Plan membership data are summarized below. For comparison, we have also summarized corresponding data from the previous valuation.

MEMBERSHIP DATA

	December 31, 2018	December 31, 2015
Active Members		
Number	38	39
Average age	51.9	48.8
Total pensionable earnings	$4,292,617	$4,480,812
Average pensionable earnings	$112,964	$114,893
Average years of pensionable service		
▪ Member service	5.2	2.8
▪ Minister service	1.4	0.5
▪ Other service	0.5	0.5
Deferred Members in RPP and SERP		
Number	4	6
Average age	44.2	45.9
Total annual pension		
▪ total	$180,189	$363,677
▪ from RPP	$74,356	$192,988
▪ from SERP	$105,833	$170,689
Average annual pension		
▪ total	$45,047	$60,613
▪ from RPP	$18,589	$32,165
▪ from SERP	$26,458	$28,448
Total annual offset at age 65		
▪ total	$10,217	$27,406
▪ from RPP	$695	$1,774
▪ from SERP	$9,522	$25,632
Average annual offset at age 65[1]		
▪ total	$2,554	$4,568
▪ from RPP	$347	$591
▪ from SERP	$2,381	$4,272

1 Excludes members with no offset

	December 31, 2018	December 31, 2015
Deferred Members in RPP but retired in SERP		
Number	20	21
Average age	55.8	55.2
Total annual pension		
▪ total	$904,894	$996,375
▪ from RPP	$439,281	$496,862
▪ from SERP	$465,613	$499,513
Average annual pension		
▪ total	$45,245	$47,446
▪ from RPP	$21,964	$23,660
▪ from SERP	$23,281	$23,786
Total annual offset at age 65		
▪ total	$48,172	$52,939
▪ from RPP	$9,819	$9,761
▪ from SERP	$38,353	$43,177
Average annual offset at age 65[1]		
▪ total	$3,441	$3,529
▪ from RPP	$982	$976
▪ from SERP	$2,739	$2,878
Pensioners and survivors		
Number in RPP	49	43
Number in SERP	138	140
Average age	73.5	72.1
Total annual pension		
▪ total	$6,504,938	$6,484,034
▪ from RPP	$1,506,159	$1,330,567
▪ from SERP	$4,998,779	$5,153,467
Average annual pension		
▪ total	$47,137	$46,315
▪ from RPP[2]	$30,738	$30,943
▪ from SERP	$36,223	$36,810
Total annual offset at age 65		
▪ total	$68,488	$91,103
▪ from RPP	$9,468	$17,502
▪ from SERP	$59,020	$73,601
Average annual offset at age 65[1]		
▪ total	$4,566	$4,555
▪ from RPP	$1,052	$1,250
▪ from SERP	$3,935	$3,680
Non-vested terminated members		
Number	5	14
Average age	60.2	55.1
Accumulated contributions with interest	$141,005	$490,536

1 Excludes members with no offset

2 Excludes member with no RPP pension

The membership movement for all categories of membership since the previous actuarial valuation is as follows:

RECONCILIATION OF MEMBERSHIP

	Active Members	Non-Vested Terminated Members	Deferred RPP / Deferred SERP	Deferred RPP / Retired SERP	Pensioners and Survivors	Total
Total at December 31, 2015	**39**	**14**	**6**	**21**	**140**	**220**
New members	2					2
Terminations paid out	(1)	(9)				(10)
Terminations to deferred	(1)		1			0
Return to active						0
Retirement in SERP	(1)		(3)	4		0
Retirement in RPP				(5)	5	0
New Survivor					4	4
Deaths (paid out)						0
Deaths (with survivor)					(4)	(4)
Deaths (no survivor)					(8)	(8)
Pension ceased						0
New Ex-Spouse				1		1
Data adjustments				(1)	1	0
Record (consolidation)/split						0
Total at December 31, 2018	**38**	**5**	**4**	**20**	**138**	**205**

The distribution of the active members' pensionable earnings by age and pensionable service as at December 31, 2018, is summarized as follows

AGE/SERVICE DISTRIBUTION FOR ACTIVE MEMBERS

Age|Service:	<5	5-10	10-15	15-20	20+	Total
<25						
25-30	1					**1**
30-35			1			**1**
35-40	4		1			**5**
40-45						
45-50	2	2	1			**5**
50-55	4	5		1	1	**11**
55-60	4	3	1			**8**
60-65	1	2		1	1	**5**
65>	1	1				**2**
Total	**17**	**13**	**4**	**2**	**2**	**38**

The distribution of deferred vested members as at December 31, 2018 is as follows:

DISTRIBUTION OF DEFERRED VESTED MEMBERS

Deferred in RPP & Deferred in SERP				
	Total Pension		Age 65 Offset	
Age	**Number**	**Average Annual Pension**	**Number**	**Average Annual Pension**
Under 45	3	$50,192	3	$2,861
45-50				
50-55	1	<>	1	<>
55-60				
Total	**4**	**$45,047**	**4**	**$2,554**

Deferred in RPP & Retired in SERP				
	Total Pension		Age 65 Offset	
Age	**Number**	**Average Annual Pension**	**Number**	**Average Annual Pension**
Under 45				
45-50	1	<>		
50-55	9	$61,078	7	$4,685
55-60	8	$35,715	7	$2,196
60+	2	$28,025		
Total	**20**	**$45,245**	**14**	**$3,441**

<> Data with only one or two people has been suppressed for privacy reasons

The distribution of the pensioners by age as at December 31, 2018, is summarized as follows:

Distribution of Pensioners Total Pensions

	Total Pension		Age 65 Offset	
Age	**Number**	**Average Annual Pension**	**Number**	**Average Annual Pension**
Under 55	1	<>	1	<>
55-60	3	$69,562	3	$6,187
60-65	13	$54,781	11	$3,638
65-70	24	$57,314		
70-75	44	$42,440		
75-80	32	$49,100		
80-85	8	$41,508		
85-90	10	$22,671		
90+	3	$37,807		
Total	**138**	**$47,137**	**15**	**$4,566**

Distribution of Pensioners RPP Pensions

	Total Pension		Age 65 Offset	
Age	**Number**	**Average Annual Pension**	**Number**	**Average Annual Pension**
Under 55	1	<>		
55-60	2	<>	1	<>
60-65	11	$54,781	8	$1,055
65-70	17	$57,314		
70-75	13	$42,440		
75-80	5	$49,100		
80-85				
85-90				
90+				
Total	**49**	**$30,738**	**9**	**$1,052**

APPENDIX D SUMMARY OF PLAN PROVISIONS

Introduction

The *Members of the House of Assembly Retiring Allowances Act* is sponsored by the Government of Newfoundland and Labrador. This valuation is based on the provisions of the registered pension plan portion of the Plan, in effect on December 31, 2018. The following is a summary of the Plan's main provisions in effect on December 31, 2018. It is not intended as a complete description of the Plan.

Eligibility for Membership

A member who has been elected to a term of service in the House of Assembly is eligible to join the plan. If a member chooses not to join the plan, they must provide evidence that they are contributing and will continue to contribute to another registered pension plan or registered retirement savings plan.

A member who has been elected for a second or subsequent term of service in the House of Assembly is required join the plan.

Contributions

Members are required to contribute 9.0% of their MHA and minister salary to the registered pension plan, up to the maximum allowed under the *Income Tax Act.* The following members are not required to make contributions:

- members elected prior to the 44th General Assembly once they have accrued 17 years of Member and Minister service.
- members elected after the 43rd General Assembly once they have accrued 20 years of Member and Minister service.

The Government contributes based on the recommendations of the Plan's actuary.

Normal Retirement Date

A member in the Registered Pension Plan is eligible to retire once they have reached age 60 or have at least 30 years of pensionable service. The member must have served in two General Assemblies, or for at least five years.

Supplementary Pension Plan

A member in the Supplementary Plan who was first elected before January 1, 2010 is eligible to retire when the total of the years of Member service and the member's age are greater than or equal to 60. The Premier is eligible to retire when the total of the year of Member service and the member's age are greater than or equal to 55.

A member in the Supplementary Plan who was first elected between January 1, 2010 and November 29, 2015 is eligible to retire at age 55. The member must have served in two General Assemblies, or for at least five years.

A member in the Supplementary Plan who was first elected on or after November 30, 2015 is eligible to retire at age 60. The member must have served in two General Assemblies, or for at least five years.

Early Retirement Date

Supplementary Pension Plan

A member in the Supplementary Plan who was first elected between January 1, 2010 and November 29, 2015 is eligible to retire with a reduced pension as early as age 50. The member must have served in two General Assemblies, or for at least five years.

Pension at Normal Retirement

A member who was first elected before or during the 43rd General Assembly will be entitled to the sum of the following amounts upon retirement:

- 2.0% of the average of the member's best three years of MHA salary for each year of MHA service, up to a maximum of 17 years;
- 2.0% of the average of the member's best three years of Minister salary for each year of Minister service, up to a maximum of 17 years;
- 2.0% of the sum of the average of the member's best three years of MHA salary and the average of the member's best three years of Minister salary times their years of other service.

Once the member reaches age 65, their entitlement as described will be reduced by 0.6% of the member's three year average YMPE for each year of MHA service between January 1, 1998 and December 31, 2004.

A member who was first elected after the 43rd General Assembly but prior to November 30, 2015 will be entitled to the sum of the following amounts upon retirement:

- 2.0% of the average of the member's best three years of MHA salary for each year of MHA service, up to a maximum of 20 years;
- 2.0% of the average of the member's best three years of Minister salary for each year of Minster service, up to a maximum of 20 years;
- If the member was first elected before the 46th General Assembly: 2.0% of the sum of the average of the member's best three years of MHA salary and the average of the member's best three years of Minister salary for each year of other service;
- If the member was first elected after the 45th General Assembly: 2.0% of the average of the member's best three years of MHA salary for each year of other service.

Once the member reaches age 65, their entitlement as described will be reduced by 0.6% of the member's average YMPE for each year of MHA service between January 1, 1998 and December 31, 2004.

A member who was first elected on or after November 30, 2015 will be entitled to the sum of the following amounts upon retirement:

- 2.0% of the average of the member's best three years of MHA salary for each year of MHA service, up to a maximum of 20 years;
- 2.0% of the average of the member's best three years of Minister salary for each year of Minister service, up to a maximum of 20 years;
- 2.0% of the average of the member's best three years of MHA salary for each year of service purchased under the past service purchase provisions described in the plan text.

Maximum Pension

The total annual pension payable under the provisions of the Plan upon retirement, death or termination of employment cannot exceed the maximum pension as determined under the *Income Tax Act*.

Death Benefits Before Retirement

If a member dies after serving in two General Assemblies and for at least five years, but prior to their normal retirement date and before any pension payments have begun, the member's surviving principal beneficiary is eligible to receive one of the following two benefits:

1. a survivor pension of 60% of the member's entitlement,

   or

2. a lump sum payment equal to the greater of the following:
   a) the commuted value of the survivor pension; or
   b) the commuted value of the member's entitlement assuming they died at age 65.

If the surviving principal beneficiary dies after the original member, the survivor benefit will be paid to their surviving children while they are under the age of 18, or 25 if they are in school.

If a member who has served in two General Assemblies and for at least 5 years dies without a principal beneficiary, the commuted value of the member's entitlement will be paid to the member's estate.

Death Benefits After Retirement

The normal form of payment for a member without a principal beneficiary is a lifetime pension. The normal form of pension for a member with a principal beneficiary is a joint and survivor 60% pension. If the surviving principal beneficiary dies after the original member, the survivor benefit will be paid to their surviving children while they are under the age of 18, or 25 if they are in school.

There is a guarantee that when payments cease, the difference between the member's contributions with interest at the date the pension commenced and the total of all benefit payments will be paid to the person whose benefits ceased or to that person's estate.

Disability Benefits

If a member becomes totally and permanently disabled within the meaning of the *Income Tax Act* while serving as an MHA or Minister, the member is permitted to retire. The disability must also be approved by the Minister of Finance.

In such a case, they are eligible to receive the pension they would have been eligible to receive at age 65.

Termination Benefits

If a member's employment terminated for reasons other than death or retirement after serving in two General Assemblies and for at least five years, they are eligible to receive one of the two following benefits:

1) a commuted value transfer; or
2) a deferred lifetime pension beginning at their normal retirement date.

APPENDIX E ADMINISTRATOR CERTIFICATION

On behalf of the Administrator of the *Members of the House of Assembly Retiring Allowances Act* – Registered Pension Plan, I hereby certify that the employee data provided to Eckler Ltd. for the purposes of the actuarial valuation as at December 31, 2018 are accurate and complete.

Janice Butt
Name

Janice Butt
Signature

Director
Title

December 23/19
Date