ACTUARIAL COST CERTIFICATE

Retirement Plan for the Employees of the Municipality of the District of East Hants
Registration Number: 0370015

As at December 31, 2023

The most recent actuarial valuation at December 31, 2022 for the Retirement Plan for the Employees of the Municipality of the District of East Hants (the "Plan") revealed a ratio of solvency assets to solvency liabilities of less than 0.85. As a result, a cost certificate must be filed as at December 31, 2023. This cost certificate provides an estimate of the Plan's financial position as at December 31, 2023 and the current service cost for 2024.

Going Concern Financial Position

The following table shows the estimated going concern funded status as at December 31, 2023 and the estimated 2024 current service cost. We have shown results using two interest rate assumptions: (1) 6.00% per annum, which was the assumption used in the actuarial valuation as at December 31, 2022; and (2) 5.65% per annum, which is the assumption based on financial market conditions at December 31, 2023. For comparison purposes, we also show the results from the most recent actuarial valuation as at December 31, 2022.

	December 31, 2022	December 31, 2023	December 31, 2023
Annual Interest Rate	**6.00%**	**6.00%**	**5.65%**
Going Concern Funded Status			
Actuarial value of assets	$ 13,231,308	$14,656,570	$14,656,570
Actuarial liabilities	14,279,892	15,283,250	15,887,612
Provision for Adverse Deviations[1]	642,595	687,746	714,943
Actuarial surplus (deficit)	($1,691,179)	($1,314,426)	($1,945,985)
Current Service Cost	**2023**	**2024**	**2024**
Current service cost	$654,762	$654,762	$688,029
Member contributions	$360,130	$360,130	$360,130
Member contributions as a % of payroll	6.50%	6.50%	6.50%
Employer contribution	$294,632	$294,632	$327,899
Employer contribution as a % of payroll	5.32%	5.32%	5.92%
Employer contribution as a % of member contributions	81.81%	81.81%	91.05%

[1] The Provision for Adverse Deviations is 4.50% of actuarial liabilities.

Solvency Financial Position

The following table shows the estimated solvency and hypothetical wind-up financial position as at December 31, 2023. For comparison purposes, we also show the results from the most recent actuarial valuation as at December 31, 2022.

	December 31, 2022	December 31, 2023
Interest Rates		
Lump sum settlements	4.10% for 10 years; 4.50% thereafter	4.50% for 10 years; 4.50% thereafter
Annuity purchases	4.91%	4.55%
Assets		
Actuarial value of assets	$13,231,308	$14,656,570
Provision for wind-up expenses	(90,000)	(90,000)
Total solvency assets	$13,141,308	$14,566,570
Liabilities		
Solvency liabilities	$16,193,673	$17,942,869
Value of grow-in benefits	1,198,518	1,210,759
Hypothetical wind-up liabilities	$17,392,191	$19,153,628
Hypothetical wind-up surplus (deficit)	($4,250,883)	($4,587,058)
Solvency ratio (excluding grow-in)	0.82	0.82
Transfer ratio (including grow-in)	0.76	0.77

Previous Year Credit Balance

The previous year credit balance is $0.

Method for Estimating Liabilities

Liabilities as at December 31, 2023 have been determined by calculating liabilities as at December 31, 2022 using actuarial assumptions in effect as at December 31, 2023. The re-determined liabilities were then extrapolated forward to December 31, 2023 by adding the 2023 current service cost (the incremental cost was used instead for the solvency/hypothetical wind-up liabilities), the increase in liabilities due to Amendments 1 and 2, subtracting the 2023 benefit payments, and adding the net interest on the liabilities, current service cost, amendments, and benefit payments.

Actuarial Assumptions and Methods

The actuarial assumptions and methods used to determine the liabilities are the same as those detailed in our December 31, 2022 actuarial valuation report with the following exceptions:

	December 31, 2022	**December 31, 2023**
Going concern interest rate:	6.00% per annum net of all expenses	5.65% per annum net of all expenses
Interest rate for solvency liabilities assumed to be settled by lump sum (active members under age 50):	4.10% per annum for 10 years; 4.50% per annum thereafter	4.50% per annum for 10 years; 4.50% per annum thereafter
Interest rate for solvency liabilities assumed to be settled by annuity purchase (active members 50 and over, deferred vested members, and pensioners):	4.91% per annum	4.55% per annum

A full summary of the actuarial assumptions and methods used, except for the changes noted above, are included in the December 31, 2022 actuarial valuation report.

Membership Data

The membership data used in our calculations is the same as was used in the actuarial valuation as at December 31, 2022. A summary of the membership data is included in the December 31, 2022 actuarial valuation report.

Assets

In preparing this cost certificate, we have relied on the 2023 financial statements prepared by Manulife. A reconciliation of the Plan's assets since the actuarial valuation as at December 31, 2022 is provided in the Appendix.

Plan Provisions

Since the actuarial valuation as at December 31, 2022, the Plan has been amended as follows:

- Amendment 1, effective February 1, 2023, upgraded the earnings basis used in the Plan's benefit formula for a retiring member.
- Amendment 2:
    - Effective July 1, 2023, upgraded the earnings basis used in the Plan's benefit formula for a retiring member; and
    - Effective December 1, 2023, upgraded the earnings basis used in the Plan's benefit formula for a retiring member.

The plan provisions used to estimate the liabilities as of December 31, 2023 and the current service cost for 2024 are the same as those described in our December 31, 2022 actuarial valuation report, except that the above noted amendments have been taken into account as applicable.

Subsequent Events

There are no subsequent events that we are aware of that impact the cost of the Plan.

Actuarial Opinion

I, the undersigned, hereby certify that in my opinion for the purpose of this cost certificate as of December 31, 2023:

- the membership data on which the valuation and extrapolation are based are sufficient and reliable;

- the assumptions are appropriate; and

- the methods employed in the valuation and extrapolation are appropriate.

Further, in my opinion, the value of the Plan assets would be less than the actuarial liabilities if the Plan were to be wound up on the valuation date.

Emerging experience, differing from the assumptions, will result in gains or losses that will be revealed in future valuations.

This cost certificate has been prepared, and my opinions given, in accordance with accepted actuarial practice in Canada.

________________________	______________________________
Date signed	Paul Burnell, F.C.I.A., F.S.A.

APPENDIX

Reconciliation of Plan Assets

The changes in the market value of assets since the actuarial valuation as at December 31, 2022 are reconciled as follows:

MARKET VALUE	**Year Ended December 31, 2022**	**Year Ended December 31, 2023**
INCREASE IN ASSETS		
Investment income and gains	(1,041,240)	1,205,735
Employee contributions	359,888	366,311
Employer contributions	788,085	709,432
Total increase in assets	106,733	2,281,478
DECREASE IN ASSETS		
Fees and expenses	117,020	144,879
Benefit payments	838,373	720,184
Total decrease in assets	955,393	865,063
NET INCREASE IN TOTAL ASSETS DURING THE YEAR	(848,660)	1,416,415
TOTAL ASSETS BEGINNING OF YEAR	14,088,815	13,240,155
TOTAL ASSETS END OF YEAR	13,240,155	14,656,570
Contributions in-transit	(8,847)	0
TOTAL ASSETS INCLUDING CONTRIBUTIONS IN TRANSIT	13,231,308	14,656,570
Annual investment rate of return[2]	(8.13%)	7.91%

[2] The Annual Investment Rate of Return (net of all expenses) has been estimated with the assumption that all payments in and out of the funds occur in the middle of the year.