



nyhart
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GASB 74/75 ACTUARIAL VALUATION

Fiscal Year Ending October 31, 2021

CITY OF EAST PROVIDENCE

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March 1, 2023

**Malcolm Moore
City of East Providence
145 Taunton Ave.
East Providence, RI 02914**

This report summarizes the GASB actuarial valuation for the City of East Providence 2020/21 fiscal year. To the best of our knowledge, the report presents a fair position of the funded status of the plan in accordance with GASB Statement No. 74 (Financial Reporting for Post-Employment Benefit Plans Other Than Pension Plans) and GASB Statement No. 75 (Accounting and Financial Reporting by Employers for Post-Employment Benefits Other Than Pensions). This report may not be appropriate for other purposes. Please contact Nyhart prior to disclosing this report to any other party or relying on its content for any purpose other than that explained above. Failure to do so may result in misrepresentation or misinterpretation of this report.

The information presented herein is based on the actuarial assumptions and substantive plan provisions summarized in this report and participant information furnished to us by the Plan Sponsor. Asset information has been provided to us by the trustee. We have reviewed the employee census provided by the Plan Sponsor for reasonableness when compared to the prior information provided but have not audited the information at the source, and therefore do not accept responsibility for the accuracy or the completeness of the data on which the information is based. When relevant data may be missing, we may have made assumptions we feel are neutral or conservative to the purpose of the measurement. We are not aware of any significant issues with and have relied on the data provided.

The discount rate, other economic assumptions, and demographic assumptions have been selected by the Plan Sponsor with the concurrence of Nyhart. Evaluation of the reasonableness of the expected rate of return on assets was outside the scope of our assignment. In our opinion, the actuarial assumptions are individually reasonable and in combination represent our estimate of anticipated experience of the Plan. All calculations have been made in accordance with generally accepted actuarial principles and practice.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

- plan experience differing from that anticipated by the economic or demographic assumptions;
- changes in economic or demographic assumptions;
- increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and
- changes in plan provisions or applicable law.

We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement.

To our knowledge, there have been no significant events prior to the current year's measurement date or as of the date of this report that could materially affect the results contained herein.

Neither Nyhart nor any of its employees has any relationship with the plan or its sponsor that could impair or appear to impair the objectivity of this report. Our professional work is in full compliance with the American Academy of Actuaries "Code of Professional Conduct" Precept 7 regarding conflict of interest. The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States.

Should you have any questions please do not hesitate to contact us.



Giovanni Gomez, ASA, EA, MAAA
Actuary



Cody Kocher, ASA, MAAA
Actuary

Executive Summary

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Summary of Results

Presented below is the summary of GASB 75 results for the fiscal year ending October 31, 2021 compared to the prior fiscal year as shown in the City's Notes to Financial Statement.

	As of October 31, 2020	As of October 31, 2021
Total OPEB Liability	\$ 40,261,604	\$ 42,906,585
Actuarial Value of Assets	\$ (22,689,142)	\$ (29,596,714)
Net OPEB Liability	\$ 17,572,462	\$ 13,309,871
Funded Ratio	56.4%	69.0%

	FY 2019/20	FY 2020/21
OPEB Expense	\$ 1,549,005	\$ 1,253,790
Annual Employer Contributions	\$ 3,409,875	\$ 4,625,490
Actuarially Determined Contribution	\$ 2,995,002	\$ 3,462,906

	As of October 31, 2020	As of October 31, 2021
Discount Rate	7.00%	7.00%
Expected Return on Assets	7.00%	7.00%

	As of October 31, 2021
Total Active Participants	385
Total Retiree Participants	186

The active participants' number above may include active employees who currently have no health care coverage. Refer to Summary of Participants section for an accurate breakdown of active employees with and without coverage.

Executive Summary

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Summary of Results

Below is a breakdown of total GASB 75 liabilities allocated to past and current service compared to the prior year. The table below also provides a breakdown of the Total OPEB Liability allocated to pre- and post- Medicare eligibility. The liability shown below includes explicit (if any) and implicit subsidies. Refer to the Substantive Plan Provisions section for complete information on the Plan Sponsor's GASB subsidies.

Present Value of Future Benefits	As of October 31, 2020	As of October 31, 2021
Active Employees	\$ 36,188,558	\$ 34,443,039
Retired Employees	18,038,849	23,630,460
Total Present Value of Future Benefits	\$ 54,227,407	\$ 58,073,499

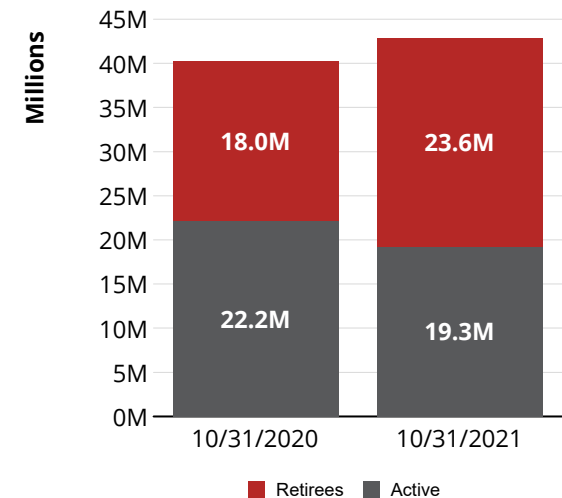
Total OPEB Liability	As of October 31, 2020	As of October 31, 2021
Active Pre-Medicare	\$ 21,691,249	\$ 18,804,343
Active Post-Medicare	531,506	471,782
Active Liability	\$ 22,222,755	\$ 19,276,125

Retiree Pre-Medicare	\$ 17,257,615	\$ 22,768,887
Retiree Post-Medicare	781,234	861,573
Retiree Liability	\$ 18,038,849	\$ 23,630,460

Total OPEB Liability	\$ 40,261,604	\$ 42,906,585
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	As of October 31, 2020	As of October 31, 2021
Discount Rate	7.00%	7.00%

Changes In Total OPEB Liability



Present Value of Future Benefits (PVFB) is the amount needed as of October 31, 2021 and October 31, 2020, to fully fund the City's retiree health care subsidies for existing and future retirees and their dependents assuming all actuarial assumptions are met.

Total OPEB Liability is the portion of PVFB considered to be accrued or earned as of October 31, 2021 and October 31, 2020. This amount is a required disclosure in the Required Supplementary Information section.

GASB Disclosures

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Schedule of Changes in Net OPEB Liability and Related Ratios

OPEB Liability	FY 2020/21	FY 2019/20	FY 2018/19	FY 2017/18	FY 2016/17
Total OPEB Liability					
Total OPEB Liability - beginning of year	\$ 40,261,604	\$ 38,221,341	\$ 44,217,599	\$ 42,820,046	\$ 36,688,606
Service cost	1,486,466	1,430,746	1,754,085	1,639,332	1,598,797
Interest	2,803,213	2,678,390	3,098,608	3,000,593	2,598,530
Change of benefit terms	2,553	0	0	0	(2,890,110)
Changes in assumptions	1,839,950	0	(345,480)	0	1,734,512
Differences between expected and actual experience	(24,295)	757,669	(7,033,053)	0	5,460,910
Benefit payments	(3,462,906)	(2,826,542)	(3,470,418)	(3,242,372)	(2,371,199)
Net change in total OPEB liability	\$ 2,644,981	\$ 2,040,263	\$ (5,996,258)	\$ 1,397,553	\$ 6,131,440
Total OPEB Liability - end of year	\$ 42,906,585	\$ 40,261,604	\$ 38,221,341	\$ 44,217,599	\$ 42,820,046
Plan Fiduciary Net Position					
Plan fiduciary net position - beginning of year	\$ 22,689,142	\$ 20,671,562	\$ 17,232,670	\$ 15,908,749	\$ 11,181,267
Contributions - employer	4,625,490	3,409,875	4,698,812	4,445,961	5,216,989
Contributions - active employees	0	230,351	0	0	0
Net investment income	5,813,016	1,250,059	2,250,197	157,530	1,911,235
Benefit payments	(3,462,906)	(2,826,542)	(3,470,418)	(3,242,372)	(2,371,199)
Trust administrative expenses	(68,028)	(46,163)	(39,699)	(37,198)	(29,543)
Net change in plan fiduciary net position	\$ 6,907,572	\$ 2,017,580	\$ 3,438,892	\$ 1,323,921	\$ 4,727,482
Plan fiduciary net position - end of year	\$ 29,596,714	\$ 22,689,142	\$ 20,671,562	\$ 17,232,670	\$ 15,908,749
Net OPEB Liability - end of year	\$ 13,309,871	\$ 17,572,462	\$ 17,549,779	\$ 26,984,929	\$ 26,911,297
Plan fiduciary net position as % of total OPEB liability	69.0%	56.4%	54.1%	39.0%	37.2%
Covered employee payroll	\$ 25,005,463	\$ 24,900,503	\$ 24,116,710	\$ 24,357,724	\$ 23,591,016
Net OPEB liability as % of covered payroll	53.2%	70.6%	72.8%	110.8%	114.1%

GASB Disclosures

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Schedule of Employer Contributions

The Actuarially Determined Contributions (ADC) shown below are based on the Annual Required Contribution (ARC) calculated in prior GASB 45 actuarial valuations as shown in the City's financial statements.

	FY 2020/21	FY 2019/20	FY 2018/19	FY 2017/18	FY 2016/17
Actuarially Determined Contribution (ADC)	\$ 3,462,906	\$ 2,995,002	\$ 4,100,211	\$ 3,945,974	\$ 4,100,391
Contributions in relation to the ADC	4,625,490	3,409,875	4,698,812	4,445,961	5,216,989
Contribution deficiency/(excess)	\$ (1,162,584)	\$ (414,873)	\$ (598,601)	\$ (499,987)	\$ (1,116,598)
Covered employee payroll	\$ 25,005,463	\$ 24,900,503	\$ 24,116,710	\$ 24,357,724	\$ 23,591,016
Contribution as a % of covered payroll	18.5%	13.7%	19.5%	18.3%	22.1%

	FY 2015/16	FY 2014/15	FY 2013/14	FY 2012/13	FY 2011/12
Actuarially Determined Contribution (ADC)	\$ 3,645,401	\$ 3,645,401	\$ 4,330,882	\$ 4,330,882	\$ 5,547,669
Contributions in relation to the ADC	7,772,836	8,721,571	3,424,015	3,424,015	3,728,228
Contribution deficiency/(excess)	\$ (4,127,435)	\$ (5,076,170)	\$ 906,867	\$ 906,867	\$ 1,819,441
Covered employee payroll	\$ 22,427,960	\$ 22,427,960	\$ 20,204,098	\$ 20,204,098	\$ 22,886,101
Contribution as a % of covered payroll	34.7%	38.9%	16.9%	16.9%	16.3%

GASB Disclosures

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

OPEB Expense

OPEB Expense	FY 2020/21	FY 2019/20
Discount Rate		
Beginning of year	7.00%	7.00%
End of year	7.00%	7.00%
Service cost	\$ 1,486,466	\$ 1,430,746
Interest	2,803,213	2,678,390
Change of benefit terms	2,553	0
Projected earnings on OPEB plan investments	(1,625,901)	(1,473,418)
Reduction for contributions from active employees	0	(230,351)
OPEB plan administrative expenses	68,028	46,163
Current period recognition of deferred outflows / (inflows) of resources		
Differences between expected and actual experience	\$ (899,955)	\$ (896,484)
Changes in assumptions	213,496	(49,354)
Net difference between projected and actual earnings on OPEB plan investments	(794,110)	43,313
Total current period recognition	\$ (1,480,569)	\$ (902,525)
Total OPEB expense	\$ 1,253,790	\$ 1,549,005

GASB Disclosures

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Deferred Outflows / (Inflows) of Resources

Deferred Outflows / (Inflows) of Resources represents the following items that have not been recognized in the OPEB Expense:

1. Differences between expected and actual experience of the OPEB plan
2. Changes of assumptions
3. Differences between projected and actual earnings in OPEB plan investments (for funded plans only)

The initial amortization period for the first two items noted above is based on expected future service lives while the difference between the projected and actual earnings in OPEB plan investment is amortized over five years. All balances are amortized linearly on a principal only basis and new bases will be created annually for each of the items above.

Differences between expected and actual experience for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of October 31, 2021
October 31, 2018	\$ 0	N/A	\$ 0	\$ 0
October 31, 2019	\$ (7,033,053)	7	\$ (1,004,722)	\$ (4,018,887)
October 31, 2020	\$ 757,669	7	\$ 108,238	\$ 541,193
October 31, 2021	\$ (24,295)	7	\$ (3,471)	\$ (20,824)

Changes in assumptions for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of October 31, 2021
October 31, 2018	\$ 0	N/A	\$ 0	\$ 0
October 31, 2019	\$ (345,480)	7	\$ (49,354)	\$ (197,418)
October 31, 2020	\$ 0	N/A	\$ 0	\$ 0
October 31, 2021	\$ 1,839,950	7	\$ 262,850	\$ 1,577,100

GASB Disclosures

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Deferred Outflows / (Inflows) of Resources (Continued)

Net Difference between projected and actual earnings in OPEB plan investments for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of October 31, 2021
October 31, 2018	\$ 996,216	5	\$ 199,243	\$ 199,244
October 31, 2019	\$ (1,003,009)	5	\$ (200,602)	\$ (401,203)
October 31, 2020	\$ 223,359	5	\$ 44,672	\$ 134,015
October 31, 2021	\$ (4,187,115)	5	\$ (837,423)	\$ (3,349,692)

As of fiscal year ending October 31, 2021	Deferred Outflows	Deferred Inflows
Differences between expected and actual experience	\$ 541,193	\$ (4,039,711)
Changes in assumptions	1,577,100	(197,418)
Net difference between projected and actual earnings in OPEB plan investments	0	(3,417,636)
Total	\$ 2,118,293	\$ (7,654,765)

Annual Amortization of Deferred Outflows / (Inflows)

The balances as of October 31, 2021 of the deferred outflows / (inflows) of resources will be recognized in OPEB expense in the future fiscal years as noted below.

FYE	Balance
2022	\$ (1,480,568)
2023	\$ (1,679,811)
2024	\$ (1,479,211)
2025	\$ (1,523,883)
2026	\$ 367,620
Thereafter	\$ 259,381

GASB Disclosures

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Sensitivity Results

The following presents the Net OPEB Liability as of October 31, 2021, calculated using the discount rate assumed and what it would be using a 1% higher and 1% lower discount rate.

- The current discount rate is 7.00%.
- The 1% decrease in discount rate would be 6.00%.
- The 1% increase in discount rate would be 8.00%.

As of October 31, 2021	Net OPEB Liability
1% Decrease	\$ 16,414,121
Current Discount Rate	\$ 13,309,871
1% Increase	\$ 10,492,128

The following presents the Net OPEB Liability as of October 31, 2021, using the health care trend rates assumed and what it would be using 1% higher and 1% lower health care trend rates.

- The current health care trend rate starts at an initial rate of 8.00%, decreasing to an ultimate rate of 4.50%.
- The 1% decrease in health care trend rates would assume an initial rate of 7.00%, decreasing to an ultimate rate of 3.50%.
- The 1% increase in health care trend rates would assume an initial rate of 9.00%, decreasing to an ultimate rate of 5.50%.

As of October 31, 2021	Net OPEB Liability
1% Decrease	\$ 9,927,192
Current Trend Rates	\$ 13,309,871
1% Increase	\$ 17,181,150

GASB Disclosures

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Asset Information

Asset Breakdown	FY 2019/20	FY 2020/21
Assets		
Cash and deposits	\$ 0	\$ 0
Securities lending cash collateral	0	0
Total cash	\$ 0	\$ 0
Receivables		
Contributions	\$ 0	\$ 0
Accrued interest	0	0
Total receivables	\$ 0	\$ 0
Investments		
Fixed income	\$ 5,218,503	\$ 7,399,179
Equities	15,655,508	19,829,798
Mutual Funds	1,815,131	2,367,737
Total investments	\$ 22,689,142	\$ 29,596,714
Total Assets	\$ 22,689,142	\$ 29,596,714
Liabilities		
Payables		
Investment management fees	\$ 0	\$ 0
Securities lending expense	0	0
Total liabilities	\$ 0	\$ 0
Net Position Restricted to OPEB	\$ 22,689,142	\$ 29,596,714

* Asset Breakdown is the expected make-up of the trust based on the target asset allocation and does not represent actual figures.

GASB Disclosures

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Asset Information (Continued)

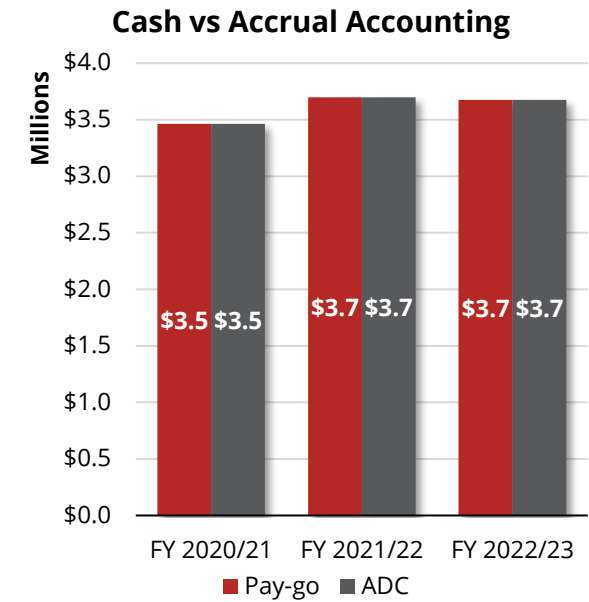
Asset Reconciliation	FY 2019/20	FY 2020/21
Additions		
Contributions Received		
Employer	\$ 3,409,875	\$ 4,625,490
Active employees	230,351	0
Total contributions	\$ 3,640,226	\$ 4,625,490
Investment Income		
Net increase in fair value of investments	\$ 1,250,059	\$ 5,813,016
Interest and dividends	0	0
Investment expense, other than from securities lending	0	0
Securities lending income	0	0
Securities lending expense	0	0
Net investment income	\$ 1,250,059	\$ 5,813,016
Total additions	\$ 4,890,285	\$ 10,438,506
Deductions		
Benefit payments	\$ 2,826,542	\$ 3,462,906
Administrative expenses	46,163	68,028
Other	0	0
Total deductions	\$ 2,872,705	\$ 3,530,934
Net increase in net position	\$ 2,017,580	\$ 6,907,572
Net position restricted to OPEB		
Beginning of year	\$ 20,671,562	\$ 22,689,142
End of year	\$ 22,689,142	\$ 29,596,714

* Asset Breakdown is the expected make-up of the trust based on the target asset allocation and does not represent actual figures.

Actuarially Determined Contributions

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

	FY 2020/21	FY 2021/22	FY 2022/23 ¹
Discount rate	7.00%	7.00%	7.00%
Payroll growth factor used for amortization	N/A	N/A	N/A
Actuarial cost method	Entry Age Normal Level % of Salary	Entry Age Normal Level % of Salary	Entry Age Normal Level % of Salary
Amortization type	Level Dollar	Level Dollar	Level Dollar
Amortization period (years)	26	25	24
Actuarial accrued liability (AAL) – beginning of year	\$ 40,261,604	\$ 42,906,585	\$ 43,818,243
Actuarial value of assets – beginning of year	(22,689,142)	(29,596,714)	(32,680,681)
Unfunded AAL – beginning of year	\$ 17,572,462	\$ 13,309,871	\$ 11,137,562
Normal Cost	\$ 1,486,466	\$ 1,620,612	\$ 1,669,230
Amortization of UAAL	1,388,734	1,067,408	907,545
Total normal cost plus amortization	\$ 2,875,200	\$ 2,688,020	\$ 2,576,775
Interest to the end of year	201,264	188,161	180,374
Actuarially Determined Contribution – Preliminary	\$ 3,076,464	\$ 2,876,181	\$ 2,757,149
Expected benefit payments	3,462,906	3,698,596	3,675,831
Actuarially Determined Contribution – Final²	\$ 3,462,906	\$ 3,698,596	\$ 3,675,831



Actuarially Determined Contribution (ADC) is the target or recommended contribution to a defined benefit OPEB plan, which if paid on an ongoing basis, will provide sufficient resources to fund future costs for services to be earned and liabilities attributed to past services. This is typically higher than the pay-as-you-go cost because it includes recognition of employer costs expected to be paid in future accounting periods.

¹ FY 2022/23 ADC is estimated based on projected assets and liabilities as shown on the following page.

² Set to be the greater of the preliminary ADC and expected benefit payments.

Projection of GASB Disclosures

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

The Total OPEB Liability (TOL) is expected to change on an annual basis as a result of expected and unexpected events. Under normal circumstances, it is generally expected to have a net increase each year. Below is a list of the most common events affecting the total OPEB liability and whether they increase or decrease the liability.

Expected Events

- Increases in TOL due to additional benefit accruals as employees continue to earn service each year
- Increases in TOL due to interest as the employees and retirees age
- Decreases in TOL due to benefit payments

Unexpected Events

- Increases in TOL when actual health care costs increase more than expected. A liability decrease occurs when the reverse happens.
- Increases in TOL when more new retirements occur than expected or fewer terminations occur than anticipated. Liability decreases occur when the opposite outcomes happen.
- Increases or decreases in TOL depending on whether benefits are improved or reduced.

Projection of Total OPEB Liability (TOL)	FY 2020/21	FY 2021/22
TOL as of beginning of year	\$ 40,261,604	\$ 42,906,585
Normal cost as of beginning of year	1,486,466	1,620,612
Exp. benefit payments during the year	(3,462,906)	(3,698,596)
Interest adjustment to end of year	2,803,213	2,989,642
Exp. TOL as of end of year	\$ 41,088,377	\$ 43,818,243
Actuarial Loss / (Gain)	1,818,208	TBD
Actual TOL as of end of year	\$ 42,906,585	\$ TBD

Discount rate as of beginning of year	7.00%	7.00%
Discount rate as of end of year	7.00%	TBD

Projection of Actuarial Value of Assets (AVA)	FY 2020/21	FY 2021/22
AVA as of beginning of year	\$ 22,689,142	\$ 29,596,714
Exp. employer contributions during the year	4,625,490	4,751,596
Exp. benefit payments during the year	(3,462,906)	(3,698,596)
Expected investment income	1,625,901	2,105,439
Exp. Trust administrative expenses	(68,028)	(74,472)
Exp. AVA as of end of year	\$ 25,409,599	\$ 32,680,681
Differences between expected and actual experience	4,187,115	TBD

AVA as of end of year	\$ 29,596,714	\$ TBD
Expected asset return as of beginning of year	7.00%	7.00%
Expected asset return as of end of year	7.00%	TBD

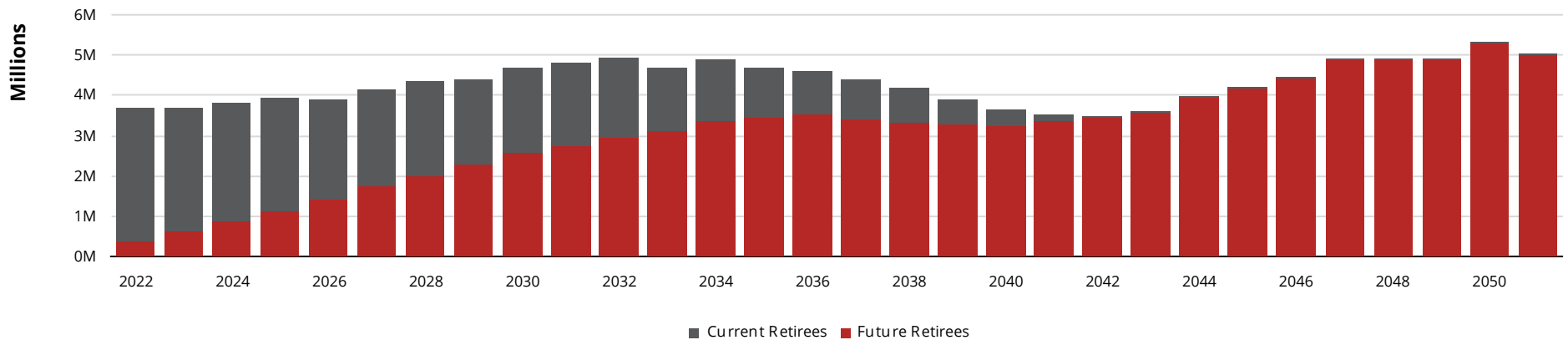
Cash Flow Projections

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

The below projections show the actuarially estimated employer-paid contributions for retiree health benefits for the next thirty years. Results are shown separately for a closed group of current/future retirees. These projections include explicit and implicit subsidies.

FYE	Current Retirees	Future Retirees*	Total	FYE	Current Retirees	Future Retirees*	Total	FYE	Current Retirees	Future Retirees*	Total
2022	\$ 3,342,652	\$ 355,944	\$ 3,698,596	2032	\$ 1,973,991	\$ 2,942,121	\$ 4,916,112	2042	\$ 47,291	\$ 3,429,627	\$ 3,476,918
2023	\$ 3,064,667	\$ 611,164	\$ 3,675,831	2033	\$ 1,581,857	\$ 3,103,977	\$ 4,685,834	2043	\$ 46,231	\$ 3,570,658	\$ 3,616,889
2024	\$ 2,937,685	\$ 865,363	\$ 3,803,048	2034	\$ 1,519,485	\$ 3,347,964	\$ 4,867,449	2044	\$ 45,099	\$ 3,924,389	\$ 3,969,488
2025	\$ 2,828,589	\$ 1,116,728	\$ 3,945,317	2035	\$ 1,239,907	\$ 3,427,833	\$ 4,667,740	2045	\$ 43,879	\$ 4,192,252	\$ 4,236,131
2026	\$ 2,495,998	\$ 1,401,505	\$ 3,897,503	2036	\$ 1,074,421	\$ 3,513,701	\$ 4,588,122	2046	\$ 42,557	\$ 4,409,943	\$ 4,452,500
2027	\$ 2,417,235	\$ 1,720,708	\$ 4,137,943	2037	\$ 970,694	\$ 3,398,450	\$ 4,369,144	2047	\$ 41,123	\$ 4,870,520	\$ 4,911,643
2028	\$ 2,356,828	\$ 1,987,554	\$ 4,344,382	2038	\$ 875,587	\$ 3,301,714	\$ 4,177,301	2048	\$ 39,543	\$ 4,877,340	\$ 4,916,883
2029	\$ 2,125,322	\$ 2,272,339	\$ 4,397,661	2039	\$ 632,233	\$ 3,266,510	\$ 3,898,743	2049	\$ 37,823	\$ 4,887,330	\$ 4,925,153
2030	\$ 2,114,539	\$ 2,545,172	\$ 4,659,711	2040	\$ 386,551	\$ 3,243,133	\$ 3,629,684	2050	\$ 35,970	\$ 5,288,946	\$ 5,324,916
2031	\$ 2,074,808	\$ 2,733,694	\$ 4,808,502	2041	\$ 170,808	\$ 3,351,868	\$ 3,522,676	2051	\$ 33,996	\$ 4,999,790	\$ 5,033,786

Projected Employer Pay-go Cost



* Projections for future retirees do not take into account future new hires.

Discussion of Discount Rates

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Under GASB 74, the discount rate used in valuing OPEB liabilities for funded plans as of the Measurement Date must be based on the long-term expected rate of return on OPEB plan investments that are expected to be used to finance future benefit payments to the extent that (a) they are sufficient to pay for the projected benefit payments and (b) the OPEB plan assets are invested using a strategy that will achieve that return. When the OPEB plan investments are insufficient to cover future benefit payments, a yield for 20-year tax-exempt general obligation municipal bonds with an average rating of AA /Aa or higher (or equivalent quality on another rating scale) must be used.

For the current valuation:

1. The long-term expected rate of return on the OPEB plan investment is assumed to be 7.00%. This was determined using a building block method in which expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These expected future real rates of return are then combined to produce the long-term expected rate of return by weighting them based on the target asset allocation percentage and adding in expected inflation. Inflation is expected to be 1.90%. The best estimates of arithmetic real rates of return for each major asset class included in the OPEB Plan's target asset allocation as of June 30, 2021 are summarized in the following table.
2. The discount rate used when the OPEB plan investments are insufficient to pay for future benefit payments is selected from the range of indices as shown in the table below, where the range is given as the spread between the lowest and highest rate shown.

Asset Class	Target Allocation	L/T Expected Real ROR
U.S. Equity	41.00%	5.30%
Non-U.S. Equity	26.00%	8.00%
U.S. Aggregate Bonds	10.00%	3.10%
Intermediate-Term Credit	7.00%	3.60%
Short-Term Credit	3.00%	3.50%
Non-U.S. Bonds	5.00%	2.80%
REITs	8.00%	4.80%
Total	100.00%	5.44%

Yield as of	November 1, 2020	October 31, 2021
Bond Buyer Go 20-Bond Municipal Bond Index	2.37%	2.28%
S&P Municipal Bond 20-Year High Grade Rate Index	2.15%	2.41%
Fidelity 20-Year Go Municipal Bond Index	2.46%	2.15%
Bond Index Range	2.15% - 2.46%	2.15% - 2.41%

3. The final equivalent single discount rate used for this year's valuation is 7.0% for accounting disclosure purposes based on the following assumptions:
 - a. The City is expected to deposit \$1.053 million pre-funding contributions annually to the Trust.
 - b. Pay-go costs will be fully paid by the City until at least FYE 2029.

Based on the above assumptions, the OPEB Trust is expected to have sufficient assets to cover all future benefit payments.

The same discount rate is also used for funding disclosure purposes (in calculating the Actuarially Determined Contribution).

Summary of Plan Participants

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Active Employees

Actives with coverage ¹	Single	Non-Single	Total	Avg. Age	Avg. Svc	Salary
HM 0005	0	0	0	N/A	N/A	\$ N/A
HM 0019	15	59	74	41.7	13.9	\$ 5,411,090
BS 0028	37	64	101	39.8	12.3	\$ 7,010,419
HM 0031	53	110	163	49.1	13.6	\$ 9,641,688
Total actives with coverage	105	233	338	44.7	13.3	\$ 22,063,197

Actives without coverage	Total	Avg. Age	Avg. Svc	Salary
Total actives without coverage	47	46.2	9.5	\$ 2,942,266

Active employees who currently have no coverage are assumed not to elect health coverage at retirement. Those that will be eligible for life insurance benefits have been included in the GASB valuation, only generating a life insurance benefit liability.

¹ Health plan mapping shown in this table is based on the assumed plan election at retirement as described on page 23 of this report.

Summary of Plan Participants

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Active Age-Service Distribution

Age	Years of Service										Total
	< 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	1	8	1								10
25 to 29	3	28	8								39
30 to 34	2	22	24	2							50
35 to 39	1	10	22	13	4						50
40 to 44	2	11	10	2	12	3					40
45 to 49	3	8	2	6	11	16	2				48
50 to 54	1	7	6	2	11	21	10	6			64
55 to 59		3	3	2	6	7	10	9	1		41
60 to 64		7	1	1	7	6	6	2	1		31
65 to 69		1	1		1	3	3	1			10
70 & up						1	1				2
Total	13	105	78	28	52	57	32	18	2	0	385

Summary of Plan Participants

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Retirees and Disabled Participants²

Retirees with coverage	Single	Non-Single	Total	Avg. Age
HM 0005	2	14	16	64.9
HM 0019	24	118	142	58.9
HM 0031	8	13	21	63.9
Classic	0	1	1	64.7
Plan 65	6	0	6	87.7
Total retirees with coverage	40	146	186	61.0

Retiree Age Distribution

Age	Retirees
< 45	
45 to 49	15
50 to 54	29
55 to 59	26
60 to 64	70
65 to 69	36
70 to 74	4
75 to 79	
80 to 84	2
85 to 89	2
90 & up	2
Total	186

² There are also 20 post-65 retired/disabled participants on WRI only coverage. The City only pays for the claims costs incurred by these WRI only retirees as they come due.

Substantive Plan Provisions

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Eligibility

General employees are eligible for retiree health benefits once they meet RI MERS pension eligibility requirements.

Police officers and Firefighters are eligible for retiree health benefits once they meet the City of East Providence Police and Fire Retirement System pension eligibility requirements:

1. Police officers hired before November 1, 2014 and Firefighters hired before January 1, 2014 – at the earlier of:
 - a. Age 60 with 10 years of service
 - b. 20 years of service (no age requirement)
2. Police officers hired on/after November 1, 2014:
 - a. Age 50 with 25 years of service
 - b. Age 60 with 10 years of service
3. Firefighters hired on/after January 1, 2014:
 - a. Age 55 with 25 years of service
 - b. Age 60 with 10 years of service

MERS Eligibility Requirements

Employees eligible to retire as of July 1, 2012 are not impacted by the new eligibility requirements described below. Prior to July 1, 2012, employees were eligible to retire at the earlier of: (i) age 58 with 10 years of service credit or (ii) 30 years of service (no age requirement).

For employees who are not eligible to retire as of July 1, 2012:

- a) Members with less than five years of contributing service credit on June 30, 2012 may retire at their Social Security normal retirement age.
- b) Members with at least five years of contributing service credit on June 30, 2012 may retire at an individually determined age, which is the result of interpolating the member's prior Retirement Date (described in previous paragraph) and the retirement age applicable to members hired after June 30, 2012 (described in item (a) above).
- c) Members with at least ten years of contributing service credit on June 30, 2012 may retire at their prior Retirement Date (described in previous paragraph) if they continue to work and contribute until that date.

All members who are within five years of reaching their retirement eligibility date (described in the paragraphs above) may retire at any time if they have at least 20 years of service.

Effective on July 1, 2015, employees are also eligible to retire upon attainment of age 65 with 30 years of service, age 64 with 31 years of service, age 63 with 32 years of service, or age 62 with at least 33 years of service. These are additional eligibility requirements, which means that if employees are eligible to retire under the current eligibility requirements, they may do so.

Substantive Plan Provisions

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Spouse Benefit

Surviving spouse receives COBRA coverage upon death of the retiree and must pay the required COBRA rate. Upon death of an active employee:

- Surviving spouses of Police officers and Firefighters receive three years of free coverage paid by the City and then must elect COBRA coverage and pay the required COBRA rate.
- Surviving spouses of General employees receive one year of subsidized coverage paid by the City and then must elect COBRA coverage and pay the required COBRA rate. City's subsidy will be at the same level as existing active employees' subsidy.

Benefit Duration

General

For employees who retired prior to November 1, 2012

Retiree health benefits cease at the later of: (a) the retiree attaining age 65 or (b) 3 years after retirement.

For employees who retired on/after November 1, 2012

General employees retiree health benefits will cease after one year after retirement plus 18 month of COBRA coverage, except for the following:

- Retiree health benefits for EPPMTEA employees with 25 years of service as of November 1, 2012 will terminate upon Medicare eligibility.
- Retiree health benefits for 15509 and 15509A employees who retire with 30 years of service will terminate upon Medicare eligibility.

Police and Fire

Retiree health benefits cease at the later of: (a) the retiree attaining age 65 or (b) 3 years after retirement.

Disability Benefit

General employees are eligible for disability health benefit from their date of hire. The disabled employee will be treated as a regular retiree. The City will pay for the full cost of coverage for both retiree and spouse until the retiree is eligible for Medicare. Spouse's disability health benefit coverage will terminate upon death of the retiree.

Police officers and Firefighters are eligible for non-line of duty disability health benefit after ten years of service. There is no age or service requirement for line of duty disability health benefit. The City will pay for the full cost of coverage for the disabled retiree (subject to annual medical documentation) until they are eligible for Medicare, at which time they will be moved to a WRI only health plan and the City will only pay for the disabled retirees claims as they are incurred. For GASB valuation purposes, there is no liability valued for these retirees enrolled in WRI only plan. Spouse coverage will be paid for by the City until the retiree is eligible for Medicare. Spouse's disability health benefit coverage will terminate upon death of the retiree.

Substantive Plan Provisions

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Retiree Cost Sharing

Police

Hired prior to October 31, 2014: None

Hired on/after October 31, 2014: Employees contribute 20% of the cost of retiree health benefits

Fire

Hired prior to January 1, 2015: None

Hired on/after January 1, 2015: Employees contribute 20% of the cost of retiree health benefits

General Employees

Retired prior to November 1, 2012: None

Retired on/after November 1, 2012: Retiree contribution requirements follow active employees, which is a percentage of premium contribution based on the employees' base pay:

- 10% of premium if base pay is less than \$30,000
- 15% of premium if base pay is less than \$46,000 but more than \$30,000
- 20% of premium if base pay is less than \$95,000 but more than \$46,000
- 25% of premium if base pay is more than \$95,000

Steelworker Employees³

Hired before January 1, 2008 and attained 30 years of service: None until Medicare eligibility. Spouse will be eligible for one year of health coverage with no co-share.

All other steelworker employees: Retiree contribution requirements follow active employees, which is a percentage of premium contribution based on the employees' base pay:

- 10% of premium if base pay is less than \$50,000
- 15% of premium if base pay is less than \$60,000 but more than \$50,000
- 20% of premium if base pay is more than \$60,000

³ 15509 and 15509A employees

Substantive Plan Provisions

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Medical Benefits

Same benefit options are available to retirees as active employees. City of East Providence pre-65 health plans are fully-insured through Rhode Island Interlocal Risk Management Trust (RI Trust). Depending on its size, the entity's experience is blended with the community pool (the community used is all of the municipal accounts in Rhode Island, not just the collaborative pool that they are a part of). There is no asset used to suppress premium rates increases. Premium rates are calculated to fund the expected costs (including claims and administrative costs). Post-65 health plans are also fully-insured through RI Trust as well but they are community-rated. The table below shows the assumed plan election at retirement for GASB 75 valuation purposes.

Employee group	Active plans	Retiree plans
Public works	0005/7/8/21	0005/31
Municipal employees	0007/8/21	0031
Police	0008/17	0019/31
Fire	0007/28	0031

The monthly premiums by plan (excluding WRI cost) effective on July 1, 2021 are as shown below.

Pre-65 Retiree Plan	Single	Family
0019 Healthmate	\$ 790.20	\$ 1,947.18
0031 Healthmate	\$ 700.07	\$ 1,717.13
0005 Healthmate	\$ 827.86	\$ 2,040.07
0028 Blue Solutions HSA	\$ 606.79	\$ 1,495.23
0012 Classic	\$ 973.48	\$ 2,398.75
Post-65 Retiree Plan⁴	Single	Family
Plan 65 C	\$ 189.70	\$ 379.40
Plan 65 G	\$ 169.06	\$ 338.12

Dental

Retirees may elect dental coverage at their own cost. Since retirees pay the full premium amount, there is no GASB 75 liability valued for this benefit.

⁴ For the October 31, 2021 valuation, all post-65 retirees were assumed to enroll in Plan 65 C

Substantive Plan Provisions

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Life Insurance

The City provides group life insurance of \$7,500 for EPPMTEA employees hired before 10/31/2017, steelworker employees hired before 11/1/2018, and police employees hired before 11/1/2019.

All fire employees who retire after 11/1/1987 are eligible for an annual \$180 life insurance payment.

Actuarial Methods and Assumptions

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

The actuarial assumptions used in this report represent a reasonable long-term expectation of future OPEB outcomes. As national economic and City experience change over time, the assumptions will be tested for ongoing reasonableness and, if necessary, updated.

The discount rate, expected return on assets, other economic assumptions, and demographic assumptions have been selected by the Plan Sponsor with the concurrence of Nyhart. In our opinion, the actuarial assumptions are individually reasonable and in combination represent our estimate of anticipated experience of the Plan. All calculations have been made in accordance with generally accepted actuarial principles and practice.

There are changes to the actuarial methods and assumptions since the last full GASB valuation, which was for the fiscal year ending October 31, 2019. Refer to Actuary's Notes section for complete information on these changes. For the current year GASB valuation, we have also updated the per capita costs. We expect to update discount rate, health care trend rates, mortality table, and per capita costs again in the next full GASB valuation, which will be for the fiscal year ending October 31, 2023.

Measurement Date	For fiscal year ending October 31, 2021, an October 31, 2021 measurement date was used.
Actuarial Valuation Date	October 31, 2021 with no adjustments to get to the October 31, 2021 measurement date. Liabilities as of November 1, 2020 are based on an actuarial valuation date of November 1, 2019 actuarially projected to November 1, 2020 on a "no loss / no gain" basis.
Discount Rate	7.00% as of November 1, 2020 and October 31, 2021 for accounting disclosure purposes. 7.00% for funding disclosure purposes (in calculating the Actuarially Determined Contribution). Refer to the Discussion of Discount Rates section for more information on selection of the discount rate. The discount rate was chosen by the plan sponsor based on the information provided in the "Discussion of Discount Rates" section above.
Inflation Rate	1.90% The inflation rate is based on the current economic environment and future expectations.
Cost Method	Allocation of Actuarial Present Value of Future Benefits for services prior and after the Measurement Date was determined using Entry Age Normal Level % of Salary method where: <ul style="list-style-type: none">• Service Cost for each individual participant, payable from date of employment to date of retirement, is sufficient to pay for the participant's benefit at retirement; and• Annual Service Cost is a constant percentage of the participant's salary that is assumed to increase according to the Payroll Growth.

Actuarial Methods and Assumptions

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Payroll Growth

Wage inflation of 3.00% plus merit/productivity increases assumed in the valuation are based on the MERS actuarial valuation as of June 30, 2021 for general employees, and the City of East Providence Police and Firefighters Retirement System 2018 experience study for police and fire. The assumptions from these state-wide valuations provide reasonable estimates of experience for municipal employers such as the City of East Providence. Sample total salary increases are shown in the table below:

YOS	Police / Fire	General
0	4.00%	7.25%
5	10.00%	5.50%
10	4.94%	3.75%
15	4.93%	3.50%
20	4.93%	3.25%
21+	4.00%	3.25%

Census Data

Census information as of October 31, 2021 was provided by the City in January 2023. We have reviewed it for reasonableness and no material modifications were made to the census data.

Asset Valuation Method

Market Value

Employer Funding Policy

City of East Providence annually funds its OPEB Trust discretionarily. Annual pay-go costs for current retirees are paid out of the General Fund.

Experience Study

Best actuarial practices call for a periodic assumption review (also referred to as an experience study). The City had an experience study completed by Nyhart's pension team in 2018 and this experience study was the basis for the assumptions used in this report.

Actuarial Methods and Assumptions

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Health Care Coverage Election Rate

Active General employees with current health coverage: 50%

Active Police/Fire employees with current health coverage: 100%

All active employees without current health coverage:

- 0% of them are assumed to elect health coverage with the City
- 100% of them are assumed to have life insurance coverage at retirement

100% of retirees with current coverage are assumed to continue coverage.

0% of retirees without current coverage are assumed to elect coverage in the future.

The health care coverage election rate assumption is based on the City's historical enrollment experience.

Mortality

Police and Fire Actives and Retirees

SOA Pub-2010 Public Safety Headcount Weighted Mortality Table fully generational using Scale MP-2021

General Actives and Retirees

SOA Pub-2010 General Headcount Weighted Mortality Table fully generational using Scale MP-2021

Disabled Police and Fire

SOA Pub-2010 Public Safety Disabled Retiree Headcount Weighted Mortality Table fully generational using Scale MP-2021

Disabled General

SOA Pub-2010 Non-Safety Disabled Retiree Headcount Weighted Mortality Table fully generational using Scale MP-2021

Surviving Spouses

SOA Pub-2010 Continuing Survivor Headcount Weighted Mortality Table fully generational using Scale MP-2021

The plan does not have sufficient data to have credible experience. Therefore, mortality assumptions are set to reflect general population trends based upon Pub-2010 Mortality tables and the most recent generational projection scale MP-2021 released by the Society of Actuaries (SOA) for future mortality improvements.

Actuarial Methods and Assumptions

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Disability

Annual disability rates are based on the City of East Providence Police and Firefighters Retirement System 2018 experience study for police and fire and RI MERS actuarial valuation as of June 30, 2021 for general employees. The assumptions from these state-wide valuations provide reasonable estimates of experience for municipal employers such as the City of East Providence. Sample annual disability rates are as shown below:

Age	Police / Fire	General	
	Unisex	Male	Female
25	0.50%	0.06%	0.03%
35	0.75%	0.10%	0.05%
45	1.80%	0.23%	0.11%
55	3.00%	0.66%	0.30%

100% of disabilities are assumed to be line of duty disability for all employee groups.

Turnover Rate

Assumption used to project terminations (voluntary and involuntary) prior to meeting minimum retirement eligibility for retiree health coverage. For general employees, the rates are based on RI MERS actuarial valuation as of June 30, 2021. For police and fire, the rates are based on the City of East Providence Police and Firefighters Retirement System 2018 experience study. The assumptions from these state-wide valuations provide reasonable estimates of experience for municipal employers such as the City of East Providence.

YOS	Police / Fire	General
0	0.00%	17.50%
5	3.14%	7.29%
10	2.07%	3.14%
15	1.00%	1.82%
20	0.00%	1.57%
26+	0.00%	0.00%

Actuarial Methods and Assumptions

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Retirement Rate

Police and Fire

Annual rates of retirement are based on the 2018 City of East Providence Police and Firefighters Retirement System experience study. The rates below are applicable after age 40 and 100% retirement is assumed at age 62.

YOS	Unisex
20	12%
21 – 23	14%
24 – 26	16%
27 – 29	18%
30+	30%

General Employees

Retirement rates are based on the assumptions used in the RI MERS actuarial valuation report as of June 30, 2021, which is a flat 20% per year retirement probability for members eligible for unreduced retirement. A 25% retirement probability at first eligibility will be applied if they have reached age 65 or with at least 25 years of service. 100% retirement is assumed at age 66. The assumptions from these state-wide valuations provide reasonable estimates of experience for municipal employers such as the City of East Providence.

Health Care Trend Rates

FYE	Medical/Rx	FYE	Medical/Rx
2022	8.0%	2026	6.0%
2023	7.5%	2027	5.5%
2024	7.0%	2028	5.0%
2025	6.5%	2029+	4.5%

The initial trend rate was based on a combination of employer history, national trend surveys, and professional judgment.

The ultimate trend rate was selected based on historical medical CPI information.

Retiree Contributions

Retiree contributions are assumed to increase according to health care trend rates.

Actuarial Methods and Assumptions

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Spousal Coverage

Spousal coverage for current retirees is based on actual data.

85% of employees are assumed to be married at retirement. Husbands are assumed to be three years older than wives.

The spousal coverage assumption is based on the City's historical experience. The spousal age difference is based on the observed age difference among the general population of married individuals who are of retirement age.

Per Capita Costs

Annual per capita costs were calculated based on the City's monthly working rates effective on July 1, 2021 actuarially increased using health index factors and current enrollment. The costs are assumed to increase with health care trend rates. Annual per capita costs by plan are as shown below:

Age	Classic		0005 Healthmate		0019 Healthmate	
	Male	Female	Male	Female	Male	Female
50 - 54	\$ 13,100	\$ 15,100	\$ 11,100	\$ 12,800	\$ 10,700	\$ 12,200
55 - 59	\$ 17,700	\$ 17,200	\$ 15,100	\$ 14,600	\$ 14,400	\$ 14,000
60 - 64	\$ 23,200	\$ 21,000	\$ 19,800	\$ 17,900	\$ 18,900	\$ 17,100

Age	0028 Blue Solutions		0031 Healthmate	
	Male	Female	Male	Female
50 - 54	\$ 8,100	\$ 9,400	\$ 9,500	\$ 10,800
55 - 59	\$ 11,000	\$ 10,700	\$ 12,800	\$ 12,300
60 - 64	\$ 14,500	\$ 13,100	\$ 16,700	\$ 15,100

Annual post-65 per capita costs are assumed to equal the Plan 65 C premium rates (\$2,276).

The per capita costs represent the cost of coverage for a retiree-only population.

Actuarial standards require the recognition of higher inherent costs for a retired population versus an active population.

Actuarial Methods and Assumptions

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Explicit Subsidy

The difference between (a) the premium rate and (b) the retiree contribution. Below is an example of the monthly explicit subsidies for a future retired general employee and his spouse enrolled in the 0031 Healthmate Plan with a base pay of \$95,000 immediately prior to retirement

	Premium Rate	Retiree Contribution	Explicit Subsidy
	A	B = 25% * A	C = A - B
Retiree	\$ 700.07	\$ 175.02	\$ 525.05
Spouse	\$ 1,017.06	\$ 254.27	\$ 762.79

Implicit Subsidy

The difference between (a) the per capita cost and (b) the premium rate. Below is an example of the monthly implicit subsidies for a male retired general employee age 62 with spouse of the same age enrolled in the 0031 Healthmate Plan.

	Per Capita Cost	Premium Rate	Implicit Subsidy
	A	B	C = A - B
Retiree	\$ 1,391.67	\$ 700.07	\$ 691.60
Spouse	\$ 1,258.33	\$ 1,017.06	\$ 241.27

All employers that utilize premium rates based on blended active/retiree claims experience will have an implicit subsidy. There is an exception for Medicare plans using a true community-rated premium rate.

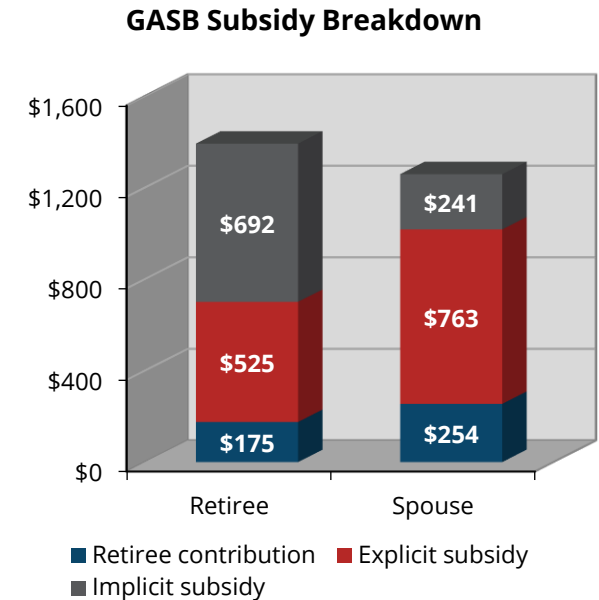
Actuarial Methods and Assumptions

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

GASB Subsidy Breakdown

Below is a breakdown of the GASB 75 monthly total cost for a male future retired general employee age 62 and his spouse enrolled in the 0031 Healthmate Plan with a base pay of \$95,000 immediately prior to retirement.

	Retiree		Spouse	
Retiree contribution	\$	175.02	\$	254.27
Explicit subsidy	\$	525.05	\$	762.79
Implicit subsidy	\$	691.60	\$	241.27
Total monthly cost	\$	1,391.67	\$	1,258.33



Models

ProVal

Valuation software developed by Winklevoss Technologies, LLC. This software is widely used for the purpose of performing postretirement medical valuations. We coded the plan provisions, assumptions, methods and participant data summarized in this report, and reviewed the liability and cost outputs for reasonableness. We are not aware of any weakness or limitations in the software and have determined it is appropriate for performing this valuation.

HealthMAPS Manual

Rating manual developed by WTW. Aging factors are used to develop per capita costs by age for plans with limited credible exposure to develop plan-specific factors. We are not aware of any weakness or limitations in the factors and have determined they are appropriate for performing this valuation.

APPENDIX

The background features a complex geometric design. It consists of several overlapping, semi-transparent shapes. A large, solid red shape is prominent in the lower right quadrant. To its left, there are various shades of gray and white shapes, some of which are semi-transparent, creating a layered effect. The overall composition is clean and modern.

Appendix

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Comparison of Participant Demographic Information

The active participants' number below may include active employees who currently have no health care coverage. Refer to Summary of Participants section for an accurate breakdown of active employees with and without coverage.

	As of October 31, 2019	As of October 31, 2021
Active Participants	383	385
Retired Participants ⁵	150	186
Averages for Active		
Age	45.7	44.9
Service	13.5	12.8
Averages for Inactive		
Age	59.9	61.0

⁵ Includes those that are disabled, and is reflective exclusively of those currently enrolled in a City health plan

Appendix

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

Detailed Actuary's Notes

Since the last full valuation, which was for the fiscal year ending October 31, 2019, cut-off dates were introduced to the City's life insurance benefits as detailed in the substantive plan provision section. In addition, the life insurance payment structure for fire employees has been altered such that those retiring after 11/1/1987 are eligible to receive an annual payment of \$180. The combined impact of this change is a slight increase in liabilities. There have been no additional substantive plan provision changes.

The following assumptions have been updated.

1. The mortality improvement scale applied to all mortality tables has been updated from MP-2019 to MP-2021. This change caused a slight increase in liabilities. This change caused a slight increase in liabilities.
2. The retirement rates for general employees have been updated based on the RI MERS actuarial valuation as of June 30, 2021. The impact of this change is a slight decrease in liabilities.
3. Health care trend rates have been updated to an initial rate of 8.0% decreasing by 0.5% annually to an ultimate rate of 4.5%. This change caused an increase in liabilities.

In addition, claims costs and premiums were updated for 2021 which caused a slight decrease in liabilities. The updated census data resulted in a slight increase in liabilities.

Appendix

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

GASB Results by Group

Below is the summary of the GASB results for fiscal year ending October 31, 2021 based on the Entry Age Normal Level % of Pay cost method with a discount rate of 7.00%.

Fund	Total OPEB Liability		Plan Fiduciary Net Position ⁶		Net OPEB Liability	
	As of October 31, 2021		As of October 31, 2021		As of October 31, 2021	
Water	\$	726,734	\$	501,297	\$	225,437
All Others	\$	42,179,851	\$	29,095,417	\$	13,084,434
Total	\$	42,906,585	\$	29,596,714	\$	13,309,871

Fund	OPEB Expense ⁶	
	FY 2020/21	
Water	\$	21,236
All Others	\$	1,232,554
Total	\$	1,253,790

⁶ Plan Fiduciary Net Position by Fund and OPEB Expense are estimated based on the allocation of the Total OPEB Liability as of October 31, 2021.

GLOSSARY



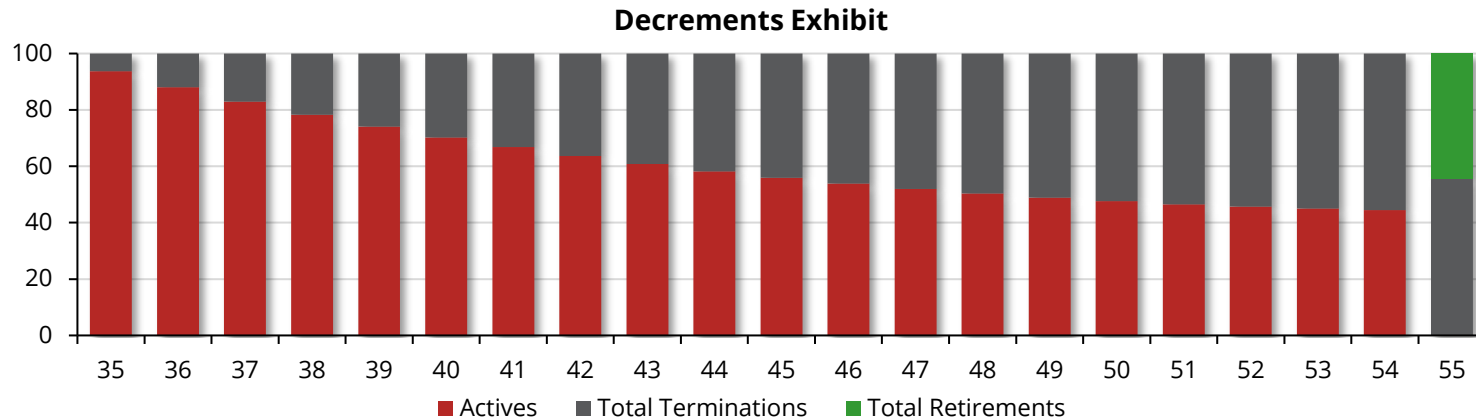
Glossary – Decrements Exhibit

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. Starting with 100 employees at age 35, the illustrated actuarial assumptions show that 44.43 employees out of the original 100 are expected to retire and could elect retiree health benefits at age 55.

Age	# Remaining Employees	# of Terminations per Year ⁷	# of Retirements per Year	Total Decrements
35	100.000	6.276	0.000	6.276
36	93.724	5.677	0.000	5.677
37	88.047	5.136	0.000	5.136
38	82.911	4.648	0.000	4.648
39	78.262	4.209	0.000	4.209
40	74.053	3.814	0.000	3.814
41	70.239	3.456	0.000	3.456
42	66.783	3.131	0.000	3.131
43	63.652	2.835	0.000	2.835
44	60.817	2.564	0.000	2.564
45	58.253	2.316	0.000	2.316

Age	# Remaining Employees	# of Terminations per Year	# of Retirements per Year	Total Decrements
46	55.938	2.085	0.000	2.085
47	53.853	1.866	0.000	1.866
48	51.987	1.656	0.000	1.656
49	50.331	1.452	0.000	1.452
50	48.880	1.253	0.000	1.253
51	47.627	1.060	0.000	1.060
52	46.567	0.877	0.000	0.877
53	45.690	0.707	0.000	0.707
54	44.983	0.553	0.000	0.553
55	44.430	0.000	44.430	44.430



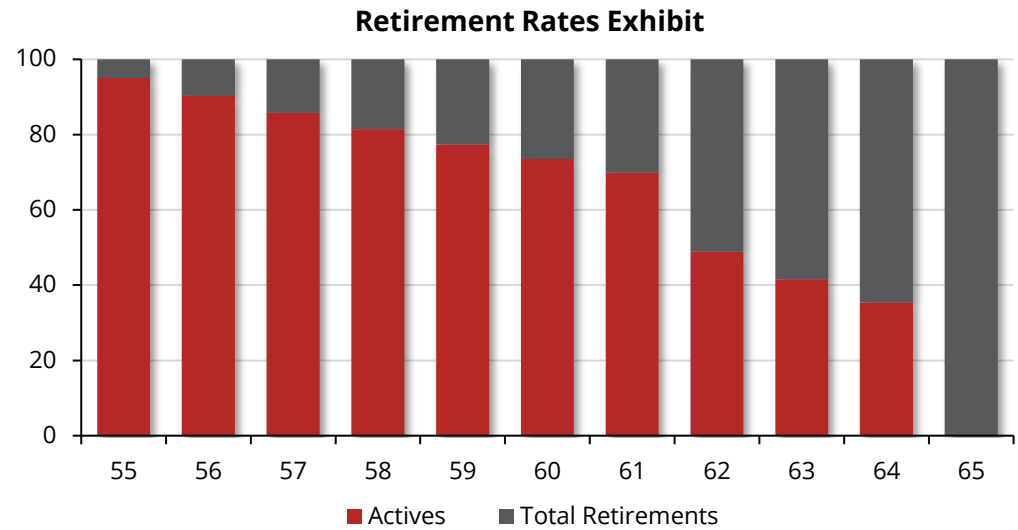
⁷ The above rates are illustrative rates and are not used in our GASB calculations.

Glossary – Retirement Rates Exhibit

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. The illustrated retirement rates show the number of employees who are assumed to retire annually based on 100 employees age 55 who are eligible for retiree health care coverage. The average age at retirement is 62.0.

Age	Active Employees BOY	Annual Retirement Rates*	# Retirements per Year	Active Employees EOY
55	100.000	5.0%	5.000	95.000
56	95.000	5.0%	4.750	90.250
57	90.250	5.0%	4.513	85.738
58	85.738	5.0%	4.287	81.451
59	81.451	5.0%	4.073	77.378
60	77.378	5.0%	3.869	73.509
61	73.509	5.0%	3.675	69.834
62	69.834	30.0%	20.950	48.884
63	48.884	15.0%	7.333	41.551
64	41.551	15.0%	6.233	35.318
65	35.318	100.0%	35.318	0.000



* The above rates are illustrative rates and are not used in our GASB calculations.

Glossary – Definitions

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

GASB 75 defines several unique terms not commonly employed in the funding of pension and retiree health plans. The definitions of the terms used in the GASB actuarial valuations are noted below.

1. **Actuarial Assumptions** – Assumptions as to the occurrence of future events affecting health care costs, such as: mortality, withdrawal, disablement and retirement; changes in compensation and Government provided health care benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.
2. **Actuarial Cost Method** – A procedure for determining the Actuarial Present Value of Future Benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Service Cost and a Total OPEB Liability.
3. **Actuarially Determined Contribution** - A target or recommended contribution to a defined benefit OPEB plan for the reporting period, determined in accordance with the parameters and in conformity with Actuarial Standards of Practice.
4. **Actuarial Present Value** – The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:
 - a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, Social Security, marital status, etc.);
 - b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned; and
 - c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.
5. **Deferred Outflow / (Inflow) of Resources** – represents the following items that have not been recognized in the OPEB Expense:
 - a. Differences between expected and actual experience of the OPEB plan
 - b. Changes in assumptions
 - c. Differences between projected and actual earnings in OPEB plan investments (for funded plans only)
6. **Explicit Subsidy** – The difference between (a) the amounts required to be contributed by the retirees based on the premium rates and (b) actual cash contribution made by the employer.
7. **Funded Ratio** – The actuarial value of assets expressed as a percentage of the Total OPEB Liability.

Glossary – Definitions

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

8. **Healthcare Cost Trend Rate** – The rate of change in the per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.
9. **Implicit Subsidy** – In an experience-rated healthcare plan that includes both active employees and retirees with blended premium rates for all plan members, the difference between (a) the age-adjusted premiums approximating claim costs for retirees in the group (which, because of the effect of age on claim costs, generally will be higher than the blended premium rates for all group members) and (b) the amounts required to be contributed by the retirees.
10. **OPEB** – Benefits (such as death benefits, life insurance, disability, and long-term care) that are paid in the period after employment and that are provided separately from a pension plan, as well as healthcare benefits paid in the period after employment, regardless of the manner in which they are provided. OPEB does not include termination benefits or termination payments for sick leave.
11. **OPEB Expense** – Changes in the Net OPEB Liability in the current reporting period, which includes Service Cost, interest cost, changes of benefit terms, expected earnings on OPEB Plan investments, reduction of active employees' contributions, OPEB plan administrative expenses, and current period recognition of Deferred Outflows / (Inflows) of Resources.
12. **Pay-as-you-go** – A method of financing a benefit plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.
13. **Per Capita Costs** – The current cost of providing postretirement health care benefits for one year at each age from the youngest age to the oldest age at which plan participants are expected to receive benefits under the plan.
14. **Present Value of Future Benefits** – Total projected benefits include all benefits estimated to be payable to plan members (retirees and beneficiaries, terminated employees entitled to benefits but not yet receiving them, and current active members) as a result of their service through the valuation date and their expected future service. The actuarial present value of total projected benefits as of the valuation date is the present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment. Expressed another way, it is the amount that would have to be invested on the valuation date so that the amount invested plus investment earnings will provide sufficient assets to pay total projected benefits when due.
15. **Real Rate of Return** – the rate of return on an investment after adjustment to eliminate inflation.

Glossary – Definitions

City of East Providence GASB 74/75 Valuation for Fiscal Year Ending October 31, 2021

16. **Select and Ultimate Rates** – Actuarial assumptions that contemplate different rates for successive years. Instead of a single assumed rate with respect to, for example, the investment return assumption, the actuary may apply different rates for the early years of a projection and a single rate for all subsequent years. For example, if an actuary applies an assumed investment return of 8% for year 20W0, then 7.5% for 20W1, and 7% for 20W2 and thereafter, then 8% and 7.5% select rates, and 7% is the ultimate rate.
17. **Service Cost** – The portion of the Actuarial Present Value of projected benefit payments that are attributed to a valuation year by the Actuarial Cost Method.
18. **Substantive Plan** – The terms of an OPEB plan as understood by the employer(s) and plan members.
19. **Total OPEB Liability** – That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Benefits which is attributed to past periods of employee service (or not provided for by the future Service Costs).