

# Manchester Employees' Contributory Retirement System

GASB Statement Nos. 74 and 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions  
December 31, 2020





May 5, 2021

Board of Trustees  
City of Manchester Employees'  
Contributory Retirement System  
1045 Elm Street, Suite 403  
Manchester, New Hampshire 03101-1824

Dear Board Members:

This report provides information related to the City of Manchester Employees' Contributory Retirement System (MECRS) in connection with the Governmental Accounting Standards Board (GASB) Statement Nos. 74 and 75. GASB Statement No. 74 is the accounting standard, which applies to other postemployment benefits (OPEB) plans that are administered through trusts or equivalent arrangements. GASB Statement No. 75 establishes accounting and financial reporting requirements for State and local government employers that provide their employees with postemployment benefits other than pensions.

The calculation of the liability associated with the benefits described in this report was performed for the purpose of satisfying the requirements of GASB Statement Nos. 74 and 75. The calculation of the plan's liability for this report is not applicable for funding purposes of the plan. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement Nos. 74 and 75 may produce significantly different results. This report may be provided to parties other than MECRS and/or the City only in its entirety and only with the permission of MECRS and/or the City. GRS is not responsible for unauthorized use of this report.

This report is based upon information, furnished to us by MECRS, concerning other postemployment benefits (OPEB), active members, deferred vested members, retirees and beneficiaries, and financial data. This information was checked for internal consistency, but it was not audited.

The data, actuarial assumptions, and benefit provisions used in this report are the same as those used in the December 31, 2020 actuarial valuation unless otherwise noted. Please refer to this valuation for additional discussion regarding the data, assumptions, benefit provisions, and the nature of actuarial calculations.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

Based on the available data, the information contained in this report is accurate and fairly represents the actuarial position of the retiree health subsidy provided by the City of Manchester Employees' Contributory Retirement System as of the reporting date. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as the Actuarial Standards of Practice. If you have reason to believe that the information provided in this report is inaccurate, or is in any way incomplete, or if you need further information in order to make an informed decision on the subject matter of this report, please contact the authors of the report prior to making such decision.

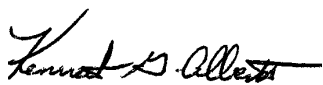
The benefits provided by MECRS are dollar benefits. Although the City may provide health insurance access, MECRS does not. The liabilities computed herein are based on the dollar benefits, not claims costs or premiums. Therefore, this report comprises only a portion of the City's reporting under GASB Statement No. 75. It is our understanding that liabilities associated with any implicit subsidies are provided from other sources. A review of those liabilities was outside the scope of this engagement.

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; and changes in plan provisions or applicable law.

Section G of the report details the calculation of the single discount rate and is not required to be included in your financial statements. However, this information may be requested by your auditors; therefore, we have included it in this report.

Heidi G. Barry and Kevin T. Noelke are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The signing individuals are independent of the plan sponsors.

Respectfully submitted,



Kenneth G. Alberts



Heidi G. Barry, ASA, FCA, MAAA



Kevin T. Noelke, ASA, MAAA

KGA/HGB:ah



Auditor's Note – This information is intended to assist in preparation of the financial statements of the retiree health subsidy provided by the Manchester Employees' Contributory Retirement System. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.



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# SECTION A

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## EXECUTIVE SUMMARY

# Executive Summary as of December 31, 2020

Actuarial Valuation Date	December 31, 2020
Measurement Date of the Net OPEB Liability	December 31, 2020
Employer's Fiscal Year Ending Date (Reporting Date)	June 30, 2021

## Membership

Number of	
- Retirees and Beneficiaries	394
- Inactive, Nonretired Members	112
- Active Members	1,088
- Total	1,594
Covered Payroll <sup>^</sup>	\$ 54,254,463

## Net OPEB Liability

Total OPEB Liability	\$ 35,238,659
Plan Fiduciary Net Position	17,419,162
Net OPEB Liability	\$ 17,819,497
Plan Fiduciary Net Position as a Percentage of Total OPEB Liability	49.43 %
Net OPEB Liability as a Percentage of Covered Payroll	32.84 %

## Development of the Single Discount Rate

Single Discount Rate	6.75 %
Long-Term Expected Rate of Investment Return	6.75 %
Long-Term Municipal Bond Rate*	2.00 %
Last year ending December 31 in the 2021 to 2120 projection period for which projected benefit payments are fully funded	2120

<b>Total OPEB Expense</b>	<b>\$ 1,787,211</b>
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## Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future OPEB Expenses#

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ 588,575	\$ 193,456
Changes in assumptions	3,928,857	0
Net difference between projected and actual earnings on OPEB plan investments	632,466	1,670,722
<b>Total</b>	<b>\$ 5,149,898</b>	<b>\$ 1,864,178</b>

<sup>^</sup> Based on valuation payroll as of December 31, 2020.

\*Source: Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of December 31, 2020. In describing this index, Fidelity notes that the municipal curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax-exempt securities.

# The deferred outflows and inflows originating from before 2019 that were used in the City's prior year's financial reports were provided by the City's auditor.



# Discussion

## Accounting Standard

For post-employment (OPEB) benefit plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 74, “Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans,” replaces the requirements of GASB Statement No. 43, “Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans.” Similarly, GASB Statement No. 75 establishes standards for State and local government employers (as well as non-employer contributing entities) to account for and disclose net OPEB liability, OPEB expense, and other information associated with providing OPEB to their employees (and former employees) on their financial statements.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain information, such as notes regarding accounting policies and investments, is not included in this report. As a result, the plan sponsor will be responsible for preparing and disclosing the non-actuarial information needed to comply with these accounting standards.

## Financial Statements

GASB Statement No. 75 requires State and local government employers to recognize the net OPEB liability and the OPEB expense on their financial statements, along with the related deferred outflows and inflows of resources. The net OPEB liability is the difference between the total OPEB liability and the plan’s fiduciary net position. In traditional actuarial terms, this is analogous to the accrued liability less the market value of assets.

GASB Statement No. 75 states the employer contributions made to the OPEB plan subsequent to the measurement date and before the end of the employer’s reporting period should be reported as a deferred outflow of resources. The information contained in this report does not incorporate any employer contributions made subsequent to the measurement date of December 31, 2020.

The OPEB expense recognized each fiscal year is equal to the change in the net OPEB liability from the beginning of the year to the end of the year, adjusted for deferred recognition of the liability and investment experience.

GASB Statement No. 74 requires defined benefit OPEB plans which are administered as trusts or equivalent arrangements to present two financial statements: a statement of fiduciary net position and a statement of changes in fiduciary net position. The statement of fiduciary net position presents the assets and liabilities of the OPEB plan at the end of the OPEB plan’s reporting period. The statement of changes in fiduciary net position presents the additions, such as contributions and investment income, and deductions, such as benefit payments and expense, and net increase or decrease in the fiduciary net position.



# Discussion

## Notes to Financial Statements

GASB Statement No. 75 requires the notes of the employer's financial statements to disclose the total OPEB expense, the OPEB plan's liabilities and assets, and deferred outflows of resources and inflows of resources related to OPEB.

GASB Statement Nos. 74 and 75 require the notes of the financial statements for employers and OPEB plans to include certain additional information. The list of disclosure items should include:

- The name of the OPEB plan, the administrator of the OPEB plan, and the identification of whether the OPEB plan is a single-employer, agent, or cost-sharing OPEB plan;
- A description of the benefits provided by the plan;
- A brief description of changes in benefit terms or assumptions that affected the measurement of the total OPEB liability since the prior measurement date;
- The number of plan members by category and if the plan is closed;
- A description of the plan's funding policy, which includes member and employer contribution requirements;
- The OPEB plan's investment policies;
- The OPEB plan's fiduciary net position and the net OPEB liability (if applicable);
- The net OPEB liability using +/- 1% on the discount rate;
- The net OPEB liability using +/- 1% on the healthcare trend rate;
- Significant assumptions and methods used to calculate the total OPEB liability;
- Inputs to the discount rates; and
- Certain information about mortality assumptions and the dates of experience studies.

OPEB plans that are administered through trusts or equivalent arrangements are required to disclose additional information in accordance with GASB Statement No. 74. This information includes:

- The composition of the OPEB plan's Board and the authority under which benefit terms may be amended;
- A description of how fair value is determined;
- Information regarding certain reserves and investments, which include concentrations of investments greater than or equal to 5%, receivables, and insurance contracts excluded from plan assets; and
- Annual money-weighted rate of return.

# Discussion

## Required Supplementary Information

GASB Statement No. 74 requires a 10-year fiscal history of:

- Sources of changes in the net OPEB liability;
- Information about the components of the net OPEB liability and related ratios, including the OPEB plan's fiduciary net position as a percentage of the total OPEB liability, and the net OPEB liability as a percent of covered-employee payroll;
- Comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy; and
- For plans with an actuarially determined contribution, the schedule covering each of the 10 most recent fiscal years of the actuarially determined contribution, contributions to the OPEB plan and related ratios.

## Frequency and Timing of the Actuarial Valuation

An actuarial valuation to determine the total OPEB liability is required to be performed at least every two years. For the employer's financial reporting purposes, the net OPEB liability and OPEB expense should be measured as of the employer's "measurement date," which may not be earlier than the employer's prior fiscal year-end date. If the actuarial valuation used to determine the total OPEB liability is not calculated as of the measurement date, the total OPEB liability is required to be rolled forward from the actuarial valuation date to the measurement date.

The total OPEB liability shown in this report is based on an actuarial valuation performed as of December 31, 2020 and a measurement date of December 31, 2020.

## Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate (SDR) that reflects (1) a long-term expected rate of return on OPEB plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits), and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on OPEB plan investments is 6.75%; the municipal bond rate is 2.00% (based on the daily rate closest to but not later than the measurement date of the Fidelity "20-Year Municipal GO AA Index"); and the resulting Single Discount Rate is 6.75%.

Analysis of any implicit rate subsidy that may exist was outside the scope of this engagement. In particular we have not analyzed whether or not the implicit subsidy would affect the calculation of the SDR; nor have we been provided the data to perform such an analysis.

# Discussion

## Actuarial Assumptions

A number of assumptions were modified as a result of the experience study for the 3-year period ended December 31, 2019.

**Demographic Assumptions:** Rates used to model mortality, salary increases, withdrawals, and retirements were updated for the December 31, 2020 valuation. In addition, the marriage assumption for active employees was reduced from 75% to 50% and the load used to account for end of career payments was increased from 10% to 12%.

**Economic Assumptions:** The expected rate of investment return was lowered from 7.00% to 6.75%, the price inflation was reduced from 2.25% to 2.00%, and the wage inflation rate was reduced from 2.75% to 2.50% for the December 31, 2020 valuation.

**Administrative Expenses:** To better reflect the System's observed historical administrative expenses, the normal cost load was increased from 1.00% to 1.25% of active member payroll.

Note some of the assumption changes only apply to the pension portion of the trust. For a more complete description of the changes please see alternate 2 of our Experience Study dated October 15, 2020.

## Future Uncertainty or Risk

Future results may differ from those anticipated in this valuation. Reasons include, but are not limited to:

- Actual medical trend differing from expected;
- Changes in the healthcare plan designs offered to active and retired members; and
- Participant behavior differing from expected, e.g.,
  - Elections at retirement;
  - Time of retirement or termination.

## Benefits Valued

The benefit provisions that were valued are described in Section E. The valuation is required to be performed on the current benefit terms and existing legal agreements. Consideration is to be given to the written plan document as well as other communications between the employer and plan members and an established pattern of practice for cost sharing. The summary of major plan provisions is designed to outline principal plan benefits. If the plan summary is not in accordance with the actual provisions, please alert the actuaries IMMEDIATELY, so they can both be sure the proper provisions are valued.

## Benefit Changes

There were no benefit changes during the year.



## SECTION B

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### FINANCIAL STATEMENTS

Auditor's Note – This information is intended to assist in preparation of the financial statements of the Manchester Employees' Contributory Retirement System. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

# Statement of OPEB Expense under GASB Statement No. 75

## Fiscal Year Ended December 31, 2020

### A. Expense

1. Service Cost	\$	750,882
2. Interest on the Total OPEB Liability		2,103,564
3. Current-Period Benefit Changes		0
4. Employee Contributions (made negative for addition here)		(702,739)
5. Projected Earnings on Plan Investments (made negative for addition here)		(1,054,328)
6. OPEB Plan Administrative Expense		58,908
7. Other Changes in Plan Fiduciary Net Position		128
8. Recognition of Outflow (Inflow) of Resources due to Liabilities		928,683
9. Recognition of Outflow (Inflow) of Resources due to Assets		(297,887)
<b>10. Total OPEB Expense</b>	<b>\$</b>	<b>1,787,211</b>

# Statement of Outflows and Inflows Arising from Current Reporting Period Fiscal Year Ended December 31, 2020

## A. Outflows (Inflows) of Resources due to Liabilities

1. Difference between expected and actual experience of the Total OPEB Liability (gains) or losses	\$ (158,010)
2. Assumption Changes (gains) or losses	\$ 3,525,938
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	6.7747
4. Outflow (Inflow) of Resources to be recognized in the current OPEB expense for the difference between expected and actual experience of the Total OPEB Liability	\$ (23,324)
5. Outflow (Inflow) of Resources to be recognized in the current OPEB expense for assumption changes	\$ 520,457
6. Outflow (Inflow) of Resources to be recognized in the current OPEB expense due to Liabilities	\$ 497,133
7. Deferred Outflow (Inflow) of Resources to be recognized in future OPEB expenses for the difference between expected and actual experience of the Total OPEB Liability	\$ (134,686)
8. Deferred Outflow (Inflow) of Resources to be recognized in future OPEB expenses for assumption changes	\$ 3,005,481
9. Deferred Outflow (Inflow) of Resources to be recognized in future OPEB expenses due to Liabilities	\$ 2,870,795

## B. Outflows (Inflows) of Resources due to Assets

1. Net difference between projected and actual earnings on OPEB plan investments (gains) or losses	\$ (1,013,890)
2. Recognition period for Assets {in years}	5.0000
3. Outflow (Inflow) of Resources to be recognized in the current OPEB expense due to Assets	\$ (202,778)
4. Deferred Outflow (Inflow) of Resources to be recognized in future OPEB expenses due to Assets	\$ (811,112)

# Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods

## Fiscal Year Ended December 31, 2020

### A. Outflows and Inflows of Resources by Source to be Recognized in Current OPEB Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	\$ 135,452	\$ 43,451	\$ 92,001
2. Assumption changes	836,682	0	836,682
3. Net difference between projected and actual earnings on OPEB plan investments	<u>316,234</u>	<u>614,121</u>	<u>(297,887)</u>
<b>4. Total</b>	<b>\$ 1,288,368</b>	<b>\$ 657,572</b>	<b>\$ 630,796</b>

### B. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future OPEB Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
1. Differences between expected and actual experience	\$ 588,575	\$ 193,456	\$ 395,119
2. Assumption changes	3,928,857	0	3,928,857
3. Net difference between projected and actual earnings on OPEB plan investments	<u>632,466</u>	<u>1,670,722</u>	<u>(1,038,256)</u>
<b>4. Total</b>	<b>\$ 5,149,898</b>	<b>\$ 1,864,178</b>	<b>\$ 3,285,720</b>

### C. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future OPEB Expenses

Year Ending June 30	Net Deferred Outflows of Resources
2022	\$ 630,795
2023	818,005
2024	478,083
2025	429,807
2026	543,900
Thereafter	<u>385,130</u>
<b>Total</b>	<b>\$ 3,285,720</b>

Employer contributions that were made subsequent to the measurement date of the net OPEB liability and prior to the end of the employer's reporting period should be reported by the employer as a deferred outflow of resources related to OPEB. The information contained in this report does not incorporate any contributions made subsequent to the measurement date.

See paragraph 44 of GASB 75 for single and agent employers with trusted plans.

Also, Question 4.32 of Implementation Guide No. 2017-1 provides additional guidance for trusted plans.

# Recognition of Deferred Outflows and Inflows of Resources

## Fiscal Year Ended December 31, 2020

(Reporting) Year Established	Initial Amount	Initial Recognition Period	Current Year Recognition	Remaining Recognition	Remaining Recognition Period
<b>Deferred Outflow (Inflow) due to Differences Between Expected and Actual Experience on Liabilities</b>					
2018	\$ (139,278)	6.9200#	\$ (20,127)	\$ (58,770)	2.9200
2019	871,321	7.2683	119,880	511,681	4.2683
2020	108,038	6.9381	15,572	76,894	4.9381
2021	(158,010)	6.7747	(23,324)	(134,686)	5.7747
<b>Total</b>			<b>\$ 92,001</b>	<b>\$ 395,119</b>	
<b>Deferred Outflow (Inflow) due to Assumption Changes</b>					
2018	\$ 2,188,276	6.9200#	\$ 316,225	\$ 923,376	2.9200
2019	-	7.2683	-	-	4.2683
2020	-	6.9381	-	-	4.9381
2021	3,525,938	6.7747	520,457	3,005,481	5.7747
<b>Total</b>			<b>\$ 836,682</b>	<b>\$ 3,928,857</b>	
<b>Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments</b>					
2018	\$ (936,056)	5.0000	\$ (187,211)	\$ (187,212)	1.0000
2019	1,581,168	5.0000	316,234	632,466	2.0000
2020	(1,120,662)	5.0000	(224,132)	(672,398)	3.0000
2021	(1,013,890)	5.0000	(202,778)	(811,112)	4.0000
<b>Total</b>			<b>\$ (297,887)</b>	<b>\$ (1,038,256)</b>	

# Provided to GRS by City auditor.

Differences between expected and actual experience and changes in assumptions are recognized in OPEB expense using a systematic and rational method over a closed period equal to the average of the expected remaining service lives of all employees that are provided with OPEB through the OPEB plan (active employees and inactive employees) determined as of the beginning of the measurement period.

At the beginning of the current measurement period, the expected remaining service lives of all active employees in the plan was approximately 10,873 years. Additionally, the total plan membership (active employees and inactive employees) was 1,605. As a result, the average of the expected remaining service lives for purposes of recognizing the applicable deferred outflows and inflows of resources established in the current measurement period is 6.7747 years.

Additionally, differences between projected and actual earnings on OPEB plan investments should be recognized in OPEB expense using a systematic and rational method over a closed five-year period. For this purpose, the deferred outflows and inflows of resources are recognized in the OPEB expense as a level dollar amount over the closed period identified above.



## Statement of Fiduciary Net Position as of December 31, 2020

### Assets

Cash and Deposits	\$	4,904,417
Receivables		
Accounts Receivable - Sale of Investments	\$	379,728
Accrued Interest and Other Dividends		23,771
Additional Contribution Account		1,096,323
Property, Plant, Equipment		18,909
Total Receivables	\$	<u>1,518,731</u>
Investments	\$	272,961,898
<b>Total Assets</b>	<b>\$</b>	<b><u>279,385,046</u></b>

### Liabilities

Payables		
Accounts Payable and Accrued Expenses	\$	291,195
Payable for Investments Purchased		-
Benefits Payable		1,745,329
Total Liabilities	\$	<u>2,036,524</u>
Assets Held for Pensions	\$	<u>259,929,360</u>
Net Position Restricted for OPEB	\$	<u>17,419,162</u>

## Statement of Changes in Fiduciary Net Position for Year Ended December 31, 2020

### Additions

Contributions	
Employer	\$ 1,252,923
Nonemployer contributing entities	0
Active Employees	702,739
Other	0
Total Contributions	<u>\$ 1,955,662</u>
Investment Income	
Net Appreciation in Fair Value of Investments	\$ 1,936,393
Interest and Dividends	187,907
Less Investment Expense	(50,261)
Net Investment Income	<u>\$ 2,074,039</u>
Other	<u>\$ 0</u>
<b>Total Additions</b>	<u><u>\$ 4,029,701</u></u>

### Deductions

Benefit Payments	\$ 1,318,384
OPEB Plan Administrative Expense	58,908
Other	128
<b>Total Deductions</b>	<u>\$ 1,377,420</u>
<b>Net Increase in Net Position</b>	\$ 2,652,281

### Net Position Restricted for OPEB

Beginning of Year	\$ 14,772,702
Prior Year Adjustment	(5,821)
End of Year	<u><u>\$ 17,419,162</u></u>

## Schedule of Proportionate Employer Share for Year Ended December 31, 2020

		Deferred Outflows of Resources							
Covered Payroll	Employer	Prop. Share End of Year	Prop. Share Beginning of Year	Net OPEB Liability	Differences Between Expected and Actual Experience	Changes of Assum.	Changes in Proportion and Differences Between Employer Cont. and Share of Cont.	Total Deferred Outflows of Resources	
\$ 4,789,581	Airport	8.83%	9.60%	\$ 1,573,462	\$ 51,971	\$ 346,918	\$ 476,134	\$ 875,023	
559,939	Parking Control	1.03%	1.09%	183,541	6,062	40,468	58,848	105,378	
2,589,040	Environmental Protection	4.77%	4.28%	849,990	28,075	187,406	180,246	395,727	
8,800,799	School District	16.22%	16.99%	2,890,322	95,467	637,261	-	732,728	
5,402,173	Water Works	9.96%	9.49%	1,774,822	58,622	391,314	531,767	981,703	
32,112,931	General Fund City Departments	59.19%	58.55%	10,547,360	348,378	2,325,490	-	2,673,868	
<b>\$ 54,254,463</b>	<b>Total for All Employers</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$ 17,819,497</b>	<b>\$ 588,575</b>	<b>\$ 3,928,857</b>	<b>\$ 1,246,995</b>	<b>\$ 5,764,427</b>	

## Schedule of Proportionate Employer Share for Year Ended December 31, 2020 (Concluded)

Deferred Inflows of Resources					OPEB Expense			
Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on OPEB Plan Investments*	Changes of Assum.	Changes in Proportion and Differences Between Employer Cont. and Share of Cont.	Total Deferred Inflows of Resources	Prop. Share of Plan OPEB Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer OPEB Expense	
\$ 17,082	\$ 91,678	\$ -	\$ -	\$ 108,760	\$ 157,811	\$ 82,452	\$ 240,263	
1,993	10,694	-	-	12,687	18,408	10,191	28,599	
9,228	49,525	-	-	58,753	85,250	31,214	116,464	
31,379	168,405	-	525,019	724,803	289,886	(90,918)	198,968	
19,268	103,410	-	-	122,678	178,006	92,086	270,092	
114,506	614,544	-	721,976	1,451,026	1,057,850	(125,025)	932,825	
<b>\$ 193,456</b>	<b>\$ 1,038,256</b>	<b>\$ -</b>	<b>\$ 1,246,995</b>	<b>\$ 2,478,707</b>	<b>\$ 1,787,211</b>	<b>\$ -</b>	<b>\$ 1,787,211</b>	

\* We understand that the recommendation of the American Institute of Certified Public Accountants (AICPA) is for the deferred inflows resulting from the net difference between projected and actual investment earnings on pension plan investments to be shown net of the respective outflows resulting from this difference. Beginning in the 2019 report only the net amount is shown.



## SECTION C

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### REQUIRED SUPPLEMENTARY INFORMATION

Auditor's Note – This information is intended to assist in preparation of the financial statements of the Manchester Employees' Contributory Retirement System. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

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# Schedule of Changes in Net OPEB Liability and Related Ratios

## Current Reporting Period

### Fiscal Year Ended December 31, 2020

<b>A. Total OPEB liability</b>	
1. Service cost	\$ 750,882
2. Interest on the total OPEB liability	2,103,564
3. Changes of benefit terms	0
4. Difference between expected and actual experience of the total OPEB liability	(158,010)
5. Changes of assumptions	3,525,938
6. Benefit payments, including refunds of employee contributions	<u>(1,318,384)</u>
<b>7. Net change in total OPEB liability</b>	<b>4,903,990</b>
<b>8. Total OPEB liability – beginning</b>	<b><u>30,334,669</u></b>
<b>9. Total OPEB liability – ending</b>	<b><u><u>\$ 35,238,659</u></u></b>
<b>B. Plan fiduciary net position</b>	
1. Contributions – employer	\$ 1,252,923
2. Contributions – nonemployer contributing entities	0
3. Contributions – employee	702,739
4. Net investment income	2,074,039
5. Benefit payments, including refunds of employee contributions	(1,318,384)
6. OPEB plan administrative expense	(58,908)
7. Other	<u>(128)</u>
<b>8. Net change in plan fiduciary net position</b>	<b>2,652,281</b>
<b>9. Plan fiduciary net position – beginning*</b>	<b><u>14,766,881</u></b>
<b>10. Plan fiduciary net position – ending</b>	<b><u><u>\$ 17,419,162</u></u></b>
<b>C. Net OPEB liability</b>	<b><u><u>\$ 17,819,497</u></u></b>
<b>D. Plan fiduciary net position as a percentage of the total OPEB liability</b>	<b>49.43 %</b>
<b>E. Covered-employee payroll</b>	<b>\$ 54,254,463</b>
<b>F. Net OPEB liability as a percentage of covered-employee payroll</b>	<b>32.84 %</b>

\* Net of post-valuation adjustment (if any).

# Schedules of Required Supplementary Information

## Schedule of Changes in Net OPEB Liability and Related Ratios Multiyear

Ultimately 10 Fiscal Years will be displayed (which may be built prospectively)

Fiscal year ending June 30,	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
<b>Total OPEB liability</b>										
Service cost	\$ 750,882	\$ 722,950	\$ 667,057							
Interest on the total OPEB liability	2,103,564	1,993,098	1,834,405							
Changes of benefit terms	0	0	0							
Difference between expected and actual experience	(158,010)	108,038	871,321							
Changes of assumptions	3,525,938	0	0							
Benefit payments, including refunds of employee contributions	(1,318,384)	(1,201,543)	(1,065,835)							
<b>Net change in total OPEB liability</b>	<b>4,903,990</b>	<b>1,622,543</b>	<b>2,306,948</b>							
<b>Total OPEB liability - beginning</b>	<b>30,334,669</b>	<b>28,712,126</b>	<b>26,405,178</b>							
<b>Total OPEB liability - ending (a)</b>	<b>\$ 35,238,659</b>	<b>\$ 30,334,669</b>	<b>\$ 28,712,126</b>							
<b>Plan fiduciary net position</b>										
Employer contributions	\$ 1,252,923	\$ 1,075,844	\$ 856,677							
Nonemployer contributing entities contributions	0	0	0							
Employee contributions	702,739	682,470	674,011							
OPEB plan net investment income	2,074,039	2,002,516	(688,995)							
Benefit payments, including refunds of employee contributions	(1,318,384)	(1,201,543)	(1,065,835)							
OPEB plan administrative expense	(58,908)	(47,490)	(37,111)							
Other	(128)	(2,239)	(3,484)							
<b>Net change in plan fiduciary net position</b>	<b>2,652,281</b>	<b>2,509,558</b>	<b>(264,737)</b>							
<b>Plan fiduciary net position - beginning</b>	<b>14,772,702</b>	<b>12,268,459</b>	<b>12,535,536</b>							
<b>Adjustment</b>	<b>(5,821)</b>	<b>(5,315)</b>	<b>(2,340)</b>							
<b>Plan fiduciary net position - ending (b)</b>	<b>\$ 17,419,162</b>	<b>\$ 14,772,702</b>	<b>\$ 12,268,459</b>							
<b>Net OPEB liability - ending (a) - (b)</b>	<b>\$ 17,819,497</b>	<b>\$ 15,561,967</b>	<b>\$ 16,443,667</b>							
<b>Plan fiduciary net position as a percentage of total OPEB liability</b>	<b>49.43 %</b>	<b>48.70 %</b>	<b>42.73 %</b>							
<b>Covered-employee payroll</b>	<b>\$ 54,254,463</b>	<b>\$ 52,895,992</b>	<b>\$ 51,787,265</b>							
<b>Net OPEB liability as a percentage of covered-employee payroll</b>	<b>32.84 %</b>	<b>29.42 %</b>	<b>31.75 %</b>							
<b>Notes to Schedule:</b>										
N/A										



# Schedules of Required Supplementary Information

## Schedule of the Net OPEB Liability Multiyear

(Ultimately 10 Years Will Be Displayed)

Plan Year Ending December 31,	Total OPEB Liability	Plan Net Position	Net OPEB Liability	Plan Net Position as a % of Total OPEB Liability	Covered Payroll*	Net OPEB Liability as a % of Covered Payroll
2017	\$ 26,405,178	\$ 12,535,536	\$ 13,869,642	47.47 %	\$ 53,364,536	25.99 %
2018	28,712,126	12,268,459	16,443,667	42.73 %	51,787,265	31.75 %
2019	30,334,669	14,772,702	15,561,967	48.70 %	52,895,992	29.42 %
2020	35,238,659	17,419,162	17,819,497	49.43 %	54,254,463	32.84 %

*\*Based on valuation payroll as of plan year ending December 31.*



## Schedule of Contributions Multiyear Last 10 Years

Plan Year Ending June 30,	Actuarially Determined Contribution (ADC) <sup>#</sup>	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll*	Actual Contribution as a % of Covered Payroll
2018	\$ 715,870	\$ 715,870	\$ 0	\$ 53,364,536	1.34 %
2019	856,677	856,677	0	51,787,265	1.65 %
2020	1,075,844	1,075,844	0	52,895,992	2.03 %
2021	1,252,923	1,252,923	0	54,254,463	2.31 %

\* Based on valuation payroll as of plan year ending December 31.

# Employer contributions based on percent of payroll. Employer pays ADC percentage.

# Notes to Schedule of Contributions

**Valuation Date:** December 31, 2018 and December 31, 2019  
**Notes** Actuarially determined contribution rates are calculated as of December 31 for the contribution period starting 6 months later. Actual contributions reported during the plan year are therefore based on two consecutive ADCs.

## Methods and Assumptions Used to Determine Fiscal Year 2020 Contribution Rate:

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percentage of Payroll, Closed
Remaining Amortization Period	21 years
Asset Valuation Method	5-Year smoothed market; 20% corridor
Wage Inflation	2.75%
Salary Increases	3.75% to 7.43%, including inflation
Investment Rate of Return	7.00% (net of investment expenses)
Retirement Age	Age and Experience-based table of rates that are specific to the type of eligibility condition.
Mortality	RP-2014 Mortality Table projected to 2026 for males and females using projection scale MP-2017.
Expense Load	None.
Increases	Annual health subsidy amounts are assumed to increase by 4% annually.
Health Care Trend Rates	Not applicable, given that the benefits are fixed stipends.
Aging Factors	Not applicable, given that the benefits are fixed stipends.

## Other Information:

**Notes** None.

## Methods and Assumptions Used to Determine Fiscal Year 2021 Contribution Rate:

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percentage of Payroll, Closed
Remaining Amortization Period	20 years
Asset Valuation Method	5-Year smoothed market; 20% corridor
Wage Inflation	2.75%
Salary Increases	3.75% to 7.43%, including inflation
Investment Rate of Return	7.00% (net of investment expenses)
Retirement Age	Age and Experience-based table of rates that are specific to the type of eligibility condition.
Mortality	RP-2014 Mortality Table projected to 2026 for males and females using projection scale MP-2017.
Expense Load	None.
Increases	Annual health subsidy amounts are assumed to increase by 4% annually.
Health Care Trend Rates	Not applicable, given that the benefits are fixed stipends.
Aging Factors	Not applicable, given that the benefits are fixed stipends.

## Other Information:

**Notes** None.



## SECTION D

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### NOTES TO FINANCIAL STATEMENTS

Auditor's Note – This information is intended to assist in preparation of the financial statements of the Manchester Employees' Contributory Retirement System. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

## Single Discount Rate

A Single Discount Rate of 6.75% was used to measure the total OPEB liability. This Single Discount Rate was based on the expected rate of return on OPEB plan investments of 6.75%. The projection of cash flows used to determine this Single Discount Rate assumed that employer contributions will be made at rates equal to the actuarially determined contribution rate. Based on these assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

## Summary of Population Statistics

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	394
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	112
Active Plan Members	<u>1,088</u>
Total Plan Members	1,594

## Sensitivity of Net OPEB Liability

Regarding the sensitivity of the net OPEB liability to changes in the Single Discount Rate, the following presents the plan's net OPEB liability, calculated using a Single Discount Rate of 6.75%, as well as what the plan's net OPEB liability would be if it were calculated using a Single Discount Rate that is one percent lower or one percent higher:

### Sensitivity of Net OPEB Liability to the Single Discount Rate Assumption

	<b>1% Decrease 5.75%</b>	<b>Current Single Discount Rate Assumption 6.75%</b>	<b>1% Increase 7.75%</b>
Total OPEB Liability (TOL)	\$ 40,085,487	\$ 35,238,659	\$ 31,221,396
Net Position Restricted for OPEB	17,419,162	17,419,162	17,419,162
Net OPEB Liability	\$ 22,666,325	\$ 17,819,497	\$ 13,802,234

# SECTION E

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## SUMMARY OF BENEFITS

## Summary of Health Subsidy Benefits

Current and future retired members who are in receipt of an annuity benefit may elect to participate in a monthly health insurance subsidy. Spouses, dependents, and/or beneficiaries are not eligible for any subsidy. The full amount of the monthly health insurance subsidy is \$200 as of January 1, 2006 and increases by 4% annually beginning January 1, 2007. The full \$200 is prorated based on the member's service at retirement, as shown in the schedule below. Members who were already retired as of March 2006 are entitled to 50% of the subsidy available to members retired after March 2006. Active members must contribute 1.25% of pay. Member contributions for the health subsidy are non-refundable.

Service at Retirement	% of Full Subsidy Payable	
	Active on or after March 1, 2006	Terminated Vested or Retired on March 1, 2006
Less than 10 years	25.0%	12.5%
10 years or more, but less than 15 years	50.0%	25.0%
15 years or more, but less than 20 years	75.0%	37.5%
20 years or more	100.0%	50.0%

**SECTION F**

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**ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS**



## Actuarial Cost Method

**Normal cost and the allocation of benefit values** between service rendered before and after the valuation date was determined using the *individual entry-age actuarial cost method*. GASB Statement Nos. 74 and 75 require the use of this method having the following characteristics:

- The annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement;
- Each annual normal cost is a constant percentage of the member's year-by-year projected covered pay; and
- The use of Market Value of Assets for the Net Position Restricted for OPEB.

## Actuarial Assumptions Used for the Valuation

The contribution requirements and benefit values of the System are calculated by applying actuarial assumptions to the benefit provisions and member information furnished, using the actuarial cost method described on the previous page.

The principal areas of financial risk which require assumptions about future experience are:

- Long-term rates of investment return to be generated by the assets of the System;
- Patterns of pay increases to members;
- Rates of mortality among members, retirees and beneficiaries;
- Rates of withdrawal of active members;
- Rates of disability among members; and
- The age patterns of actual retirement.

In a valuation, the monetary effect of each assumption is calculated for as long as a present covered person survives - - - a period of time which can be as long as a century.

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Actual experience of the System will not coincide exactly with assumed experience, regardless of the accuracy of the assumptions, or the skill of the actuary and the precision of the many calculations made. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments (usually small) to the computed contribution rate.

From time to time it becomes appropriate to modify one or more of the assumptions, to reflect experience trends (but not random year-to-year fluctuations). The Board has established a policy of performing an Experience Study every 3-5 years to evaluate/modify valuation assumptions. Assumptions used in this report are based on the January 1, 2017 – December 31, 2019 experience study of the MECRS and were adopted by the Board. These assumptions were first used in the December 31, 2020 actuarial valuation. We believe the assumptions are reasonable individually and in the aggregate.

## Valuation Assumptions

**The rate of investment return was 6.75% per year**, compounded annually (net of investment expenses). This assumption is used to make money payable at one point in time equal in value to a different amount of money payable at another point in time. The assumed real rate of return (the net return in excess of the wage inflation rate) is 4.25%. Experience over the last 5 years has been as follows:

	Year Ended December 31					5-Year Average
	2020	2019	2018	2017	2016	
1) Nominal rate of return#	8.6 %	5.6 %	3.4 %	7.4 %	6.3 %	6.2 %
2) Increase in CPI	1.4 %	2.3 %	1.9 %	2.1 %	2.1 %	2.0 %
3) Average Salary Increase (ASI)	5.5 %	4.2 %	(0.1)%	1.2 %	1.1 %	2.4 %
4) Real Return						
- Total: CPI (1) - (2)						4.3 %
- Total: ASI (1) - (3)						3.9 %
- Assumption	4.25 %	4.25 %	4.25 %	4.25 %	4.25 %	4.3 %

# The nominal rate of return was computed using the approximate formula:  $i = I$  divided by  $\frac{1}{2}(A+B-I)$ , where  $I$  is realized investment income net of expenses,  $A$  is the beginning of year asset funding value and  $B$  is the end of year funding asset value.

**The rate of assumed price inflation** was 2.00% per year. This results in a real rate of return over price inflation of 4.75%.

These economic assumptions were updated for the December 31, 2020 valuation.

## Valuation Assumptions (Continued)

*The rates of salary increase* used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefit amounts will be based.

Years of Service	Salary Increase Assumptions for an Individual Member		
	Merit & Seniority	Base (Economic)	Increase Next Year
1	3.46%	2.50%	5.96%
2	4.43%	2.50%	6.93%
3	4.22%	2.50%	6.72%
4	3.70%	2.50%	6.20%
5	3.38%	2.50%	5.88%
6	2.93%	2.50%	5.43%
7	2.55%	2.50%	5.05%
8	2.26%	2.50%	4.76%
9	2.06%	2.50%	4.56%
10	1.85%	2.50%	4.35%
15	1.08%	2.50%	3.58%
20	0.77%	2.50%	3.27%
25	0.75%	2.50%	3.25%
30	0.75%	2.50%	3.25%
35	0.75%	2.50%	3.25%
40	0.75%	2.50%	3.25%
Ref:	733		

If the number of active members remains constant, then the total active member payroll will increase 2.50% annually, the base portion of the individual salary increase assumptions. This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities.

Rates of salary increase were updated for the December 31, 2020 valuation.

## Valuation Assumptions (Continued)

*The rates of retirement* used to measure the probability of eligible members retiring during the next year were updated for the December 31, 2020 valuation and are as follows:

Active Members Retiring Next Year Under Normal Retirement			Active Members Retiring Next Year Under Early Retirement			
Ages	% Retiring		Ages	% Retiring		Rule of 80
	Male	Female		Age and Service		
				Male	Female	
60	12%	8%	50			10%
61	11%	15%	51			4%
62	22%	19%	52			7%
63	18%	10%	53			5%
64	18%	10%	54			5%
65	24%	19%	55	5%	10%	5%
66	38%	27%	56	5%	15%	4%
67	15%	19%	57	5%	8%	8%
68	39%	15%	58	5%	7%	8%
69	15%	22%	59	5%	7%	10%
70	27%	25%				
71	50%	19%				
72	42%	19%				
73	50%	19%				
74	50%	19%				
75	100%	19%				
76	100%	19%				
77	100%	19%				
78	100%	19%				
79	100%	19%				
80	100%	100%				
Ref.	999	999		2357	2754	2755

A member was assumed to be eligible for normal retirement after attaining age 60 regardless of service. A member was assumed to be eligible for early retirement after attaining age 55 with at least 20 years of service or if the sum of age and service is at least 80.

## Valuation Assumptions (Continued)

**The post-retirement healthy mortality table** was the Pub-2010 General Healthy Retiree Tables projected to 2039 using projection scale MP-2019.

Sample Attained Ages	Single Life Retirement Values					
	Present Value of \$1 Monthly for Life		Percent Dying Next Year		Future Life Expectancy (Years)	
	Male	Female	Male	Female	Male	Female
50	\$158.10	\$162.48	0.2552%	0.1899%	34.83	37.64
55	150.84	156.27	0.3655%	0.2572%	30.30	33.01
60	141.83	148.25	0.5441%	0.3494%	25.91	28.46
65	130.71	137.94	0.7880%	0.5138%	21.66	23.99
70	117.05	125.04	1.2298%	0.8314%	17.58	19.67
75	101.05	109.55	2.0765%	1.4535%	13.77	15.59
80	83.40	91.89	3.6906%	2.6437%	10.36	11.86
Ref:	2705 x 1.00 sb 0	2706 x 1.00 sb 0				

This assumption is used to measure the probabilities of members dying after retirement. The projection to 2039 is the margin for mortality improvement.

**Post-retirement disabled mortality table** is the Pub-2010 General Disabled Retiree Tables projected to 2039 using projection scale MP-2019.

**Pre-retirement mortality** is modeled using the Pub-2010 General Employee Tables projected to 2039 using projection scale MP-2019.

These tables were updated for the December 31, 2020 valuation in accordance with an experience study for the System of the 3-year period ended December 31, 2019.

## Valuation Assumptions (Concluded)

**Rates of separation from active membership** are shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment. These rates were updated for the December 31, 2020 valuation.

Sample Ages	Years of Service	% of Active Members Separating within Next Year	
		Male	Female
	0-1	24.00%	36.00%
	1-2	18.00%	26.00%
	2-3	13.00%	22.00%
	3-4	7.00%	14.00%
	4-5	7.00%	14.00%
	5-6	n/a	11.00%
30	5 & Up (Men)	4.00%	6.89%
35	6 & Up (Women)	2.96%	5.79%
40		2.33%	5.01%
45		2.00%	4.42%
50		1.87%	3.84%
Ref.		1331 77 x 0.35	1332 37 x 1.3

**Rates of disability** are divided two-thirds toward duty and one-third toward non-duty disability and are as follows:

Sample Ages	% of Active Members Becoming Disabled within Next Year	
	Male	Female
20	0.003%	0.003%
25	0.003%	0.003%
30	0.003%	0.003%
35	0.013%	0.013%
40	0.051%	0.051%
45	0.105%	0.105%
50	0.173%	0.173%
55	0.256%	0.256%
60	0.382%	0.382%
Ref.	37 x 0.36	37 x 0.36

## Miscellaneous and Technical Assumptions December 31, 2020

<b>Decrement Timing:</b>	Decrements of all types are assumed to occur mid-year.
<b>Eligibility Testing:</b>	Eligibility for benefits is determined based upon the age nearest birthday and exact fractional service on the date the decrement is assumed to occur.
<b>Decrement Relativity:</b>	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
<b>Decrement Operation:</b>	Disability and withdrawal decrements do not operate after member reaches retirement eligibility.
<b>Benefit Service:</b>	Exact fractional service as of the valuation date is used to determine the amount of benefit payable.
<b>Incidence of Contributions:</b>	Contributions are assumed to be received continuously throughout the year based upon the actual payroll payable at the time contributions are made.
<b>Subsidy COLA Assumption:</b>	The only increases in subsidy benefits valued are the 4% annual increases called for in the plan provisions.
<b>Utilization:</b>	55% of current actives and 25% of current terminated vested members were assumed to elect to receive the post-retirement health subsidy upon retirement. Current retirees were assumed not to alter their initial election after retirement.
<b>Data Processing:</b>	The Retirement System provides data in Excel format. GRS reviews the data for reasonableness and completeness. Questions are sent to the System. Data is then modified based on the answers provided. For new members with less than one year of earnings, reported pay is annualized based on reported service.
<b>Data Adjustments:</b>	For members indicated to have been furloughed or had another absence, their prior year's salary was used to estimate their current annualized salary.



## **SECTION G**

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### **CALCULATION OF THE SINGLE DISCOUNT RATE**

## Calculation of the Single Discount Rate

GASB Statement No. 74 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total OPEB Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a municipal bond rate is required, as described in the following paragraph.

The Single Discount Rate (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects (1) the long-term expected rate of return on OPEB plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on OPEB plan investments is 6.75%; the municipal bond rate is 2.00%; and the resulting Single Discount Rate is 6.75%.

The tables in this section provide background for the development of the Single Discount Rate.

The **Projection of Contributions** table shows the development of expected contributions in future years. Normal Cost contributions for future hires are not included (nor are their liabilities).

The **Projection of Plan Fiduciary Net Position** table shows the development of expected asset levels in future years.

The **Present Values of Projected Benefit Payments** table shows the development of the Single Discount Rate. It breaks down the benefit payments into present values for funded and unfunded portions and shows the equivalent total at the SDR.

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan. Contribution amounts shown are strictly for the purpose of testing for a GASB depletion date and may differ from those determined by a funding valuation.

This analysis was performed without regard to any implicit rate subsidy that might exist. An analysis of how the implicit rate subsidy (if any) affects this calculation was outside the scope of this engagement.

# Single Discount Rate Development

## Projection of Contributions Ending December 31 for 2021 to 2070

Year	Projected Payroll for Current Employees	Projected Contributions from Current Employees	Projected Service Cost and Expense Contributions	Projected UAL Contributions	Projected Total Contributions
2020	\$ 54,254,463				
2021	56,620,812	\$ 707,760	\$ 146,608	\$ 1,362,770	\$ 2,217,139
2022	52,768,386	659,605	116,087	1,396,840	2,172,532
2023	49,844,305	623,054	97,534	1,431,761	2,152,348
2024	47,188,644	589,858	85,246	1,467,555	2,142,659
2025	44,779,378	559,742	71,552	1,504,243	2,135,538
2026	42,471,891	530,899	61,319	1,541,850	2,134,067
2027	40,176,867	502,211	51,406	1,580,396	2,134,013
2028	37,972,146	474,652	44,631	1,619,906	2,139,188
2029	35,777,702	447,221	38,133	1,660,403	2,145,758
2030	33,659,173	420,740	31,075	1,701,913	2,153,728
2031	31,626,146	395,327	25,918	1,744,461	2,165,707
2032	29,712,380	371,405	21,554	1,788,073	2,181,032
2033	27,889,571	348,620	17,220	1,832,775	2,198,614
2034	26,196,260	327,453	13,618	1,878,594	2,219,665
2035	24,552,948	306,912	9,806	1,925,559	2,242,277
2036	22,994,504	287,431	7,289	1,973,698	2,268,418
2037	21,549,492	269,369	4,712	2,023,040	2,297,121
2038	20,168,675	252,108	2,299	2,073,616	2,328,023
2039	18,908,693	236,359	353	2,125,457	2,362,168
2040	17,633,949	220,424	0	0	220,424
2041	16,490,071	206,126	0	0	206,126
2042	15,403,462	192,543	0	0	192,543
2043	14,382,461	179,781	0	0	179,781
2044	13,383,323	167,292	0	0	167,292
2045	12,409,187	155,115	0	0	155,115
2046	11,488,833	143,610	0	0	143,610
2047	10,541,814	131,773	0	0	131,773
2048	9,673,060	120,913	0	0	120,913
2049	8,765,414	109,568	0	0	109,568
2050	7,938,906	99,236	0	0	99,236
2051	7,094,471	88,681	0	0	88,681
2052	6,327,098	79,089	0	0	79,089
2053	5,576,324	69,704	0	0	69,704
2054	4,862,539	60,782	0	0	60,782
2055	4,194,872	52,436	0	0	52,436
2056	3,558,162	44,477	0	0	44,477
2057	2,972,944	37,162	0	0	37,162
2058	2,457,704	30,721	0	0	30,721
2059	1,994,263	24,928	0	0	24,928
2060	1,561,428	19,518	0	0	19,518
2061	1,217,331	15,217	0	0	15,217
2062	940,886	11,761	0	0	11,761
2063	710,655	8,883	0	0	8,883
2064	542,163	6,777	0	0	6,777
2065	396,999	4,962	0	0	4,962
2066	286,077	3,576	0	0	3,576
2067	202,653	2,533	0	0	2,533
2068	142,875	1,786	0	0	1,786
2069	98,558	1,232	0	0	1,232
2070	66,097	826	0	0	826

# Single Discount Rate Development

## Projection of Contributions Ending December 31 for 2071 to 2120

Year	Projected Payroll for Current Employees	Projected Contributions from Current Employees	Projected Service Cost and Expense Contributions	Projected UAL Contributions	Projected Total Contributions
2071	\$ 44,474	\$ 556	\$ 0	\$ 0	556
2072	30,010	375	0	0	375
2073	20,627	258	0	0	258
2074	12,218	153	0	0	153
2075	8,596	107	0	0	107
2076	5,189	65	0	0	65
2077	3,818	48	0	0	48
2078	1,885	24	0	0	24
2079	884	11	2	0	13
2080	266	3	0	0	3
2081	0	0	0	0	0
2082	0	0	0	0	0
2083	0	0	0	0	0
2084	0	0	0	0	0
2085	0	0	0	0	0
2086	0	0	0	0	0
2087	0	0	0	0	0
2088	0	0	0	0	0
2089	0	0	0	0	0
2090	0	0	0	0	0
2091	0	0	0	0	0
2092	0	0	0	0	0
2093	0	0	0	0	0
2094	0	0	0	0	0
2095	0	0	0	0	0
2096	0	0	0	0	0
2097	0	0	0	0	0
2098	0	0	0	0	0
2099	0	0	0	0	0
2100	0	0	0	0	0
2101	0	0	0	0	0
2102	0	0	0	0	0
2103	0	0	0	0	0
2104	0	0	0	0	0
2105	0	0	0	0	0
2106	0	0	0	0	0
2107	0	0	0	0	0
2108	0	0	0	0	0
2109	0	0	0	0	0
2110	0	0	0	0	0
2111	0	0	0	0	0
2112	0	0	0	0	0
2113	0	0	0	0	0
2114	0	0	0	0	0
2115	0	0	0	0	0
2116	0	0	0	0	0
2117	0	0	0	0	0
2118	0	0	0	0	0
2119	0	0	0	0	0
2120	0	0	0	0	0

# Single Discount Rate Development Projection of Plan Net Position Ending December 31 for 2021 to 2070

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 6.75%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
2021	\$ 17,419,162	\$ 2,217,139	\$ 997,027	\$ 0	\$ 1,216,300	\$ 19,855,573
2022	19,855,573	2,172,532	1,149,588	0	1,374,212	22,252,728
2023	22,252,728	2,152,348	1,308,496	0	1,530,074	24,626,655
2024	24,626,655	2,142,659	1,466,486	0	1,684,747	26,987,575
2025	26,987,575	2,135,538	1,635,721	0	1,838,255	29,325,646
2026	29,325,646	2,134,067	1,814,487	0	1,990,091	31,635,317
2027	31,635,317	2,134,013	1,995,854	0	2,139,971	33,913,446
2028	33,913,446	2,139,188	2,176,668	0	2,287,913	36,163,879
2029	36,163,879	2,145,758	2,362,466	0	2,433,867	38,381,038
2030	38,381,038	2,153,728	2,543,691	0	2,577,774	40,568,848
2031	40,568,848	2,165,707	2,728,799	0	2,719,703	42,725,460
2032	42,725,460	2,181,032	2,907,839	0	2,859,839	44,858,492
2033	44,858,492	2,198,614	3,080,241	0	2,998,679	46,975,544
2034	46,975,544	2,219,665	3,251,942	0	3,136,579	49,079,846
2035	49,079,846	2,242,277	3,413,179	0	3,274,017	51,182,961
2036	51,182,961	2,268,418	3,566,089	0	3,411,769	53,297,058
2037	53,297,058	2,297,121	3,716,213	0	3,550,439	55,428,405
2038	55,428,405	2,328,023	3,862,666	0	3,690,469	57,584,232
2039	57,584,232	2,362,168	3,994,929	0	3,832,730	59,784,200
2040	59,784,200	220,424	4,119,464	0	3,905,990	59,791,150
2041	59,791,150	206,126	4,237,566	0	3,902,063	59,661,774
2042	59,661,774	192,543	4,342,624	0	3,889,392	59,401,085
2043	59,401,085	179,781	4,436,955	0	3,868,240	59,012,151
2044	59,012,151	167,292	4,519,885	0	3,838,819	58,498,376
2045	58,498,376	155,115	4,590,062	0	3,801,405	57,864,833
2046	57,864,833	143,610	4,650,702	0	3,756,246	57,113,988
2047	57,113,988	131,773	4,701,717	0	3,703,477	56,247,520
2048	56,247,520	120,913	4,740,916	0	3,643,329	55,270,845
2049	55,270,845	109,568	4,770,913	0	3,576,030	54,185,530
2050	54,185,530	99,236	4,782,680	0	3,502,038	53,004,125
2051	53,004,125	88,681	4,782,229	0	3,421,958	51,732,535
2052	51,732,535	79,089	4,766,812	0	3,336,319	50,381,130
2053	50,381,130	69,704	4,744,213	0	3,245,538	48,952,158
2054	48,952,158	60,782	4,715,861	0	3,149,727	47,446,806
2055	47,446,806	52,436	4,668,729	0	3,049,403	45,879,916
2056	45,879,916	44,477	4,604,397	0	2,945,510	44,265,506
2057	44,265,506	37,162	4,527,034	0	2,838,863	42,614,497
2058	42,614,497	30,721	4,439,402	0	2,730,115	40,935,932
2059	40,935,932	24,928	4,344,301	0	2,619,777	39,236,336
2060	39,236,336	19,518	4,240,180	0	2,508,331	37,524,005
2061	37,524,005	15,217	4,125,541	0	2,396,412	35,810,093
2062	35,810,093	11,761	4,004,572	0	2,284,624	34,101,906
2063	34,101,906	8,883	3,878,826	0	2,173,401	32,405,364
2064	32,405,364	6,777	3,750,020	0	2,063,090	30,725,211
2065	30,725,211	4,962	3,620,110	0	1,953,933	29,063,996
2066	29,063,996	3,576	3,488,837	0	1,846,113	27,424,848
2067	27,424,848	2,533	3,356,858	0	1,739,817	25,810,340
2068	25,810,340	1,786	3,224,689	0	1,635,201	24,222,638
2069	24,222,638	1,232	3,092,551	0	1,532,400	22,663,718
2070	22,663,718	826	2,960,525	0	1,431,542	21,135,562



# Single Discount Rate Development

## Projection of Plan Net Position

### Ending December 31 for 2071 to 2120

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 6.75%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
2071	21,135,562	556	2,828,475	0	1,332,767	19,640,410
2072	19,640,410	375	2,696,256	0	1,236,227	18,180,756
2073	18,180,756	258	2,563,832	0	1,142,093	16,759,275
2074	16,759,275	153	2,430,900	0	1,050,553	15,379,080
2075	15,379,080	107	2,297,318	0	961,823	14,043,693
2076	14,043,693	65	2,163,166	0	876,137	12,756,728
2077	12,756,728	48	2,028,564	0	793,735	11,521,946
2078	11,521,946	24	1,893,760	0	714,861	10,343,070
2079	10,343,070	13	1,759,005	0	639,761	9,223,839
2080	9,223,839	3	1,624,724	0	568,670	8,167,788
2081	8,167,788	0	1,491,459	0	501,811	7,178,140
2082	7,178,140	0	1,359,923	0	439,376	6,257,593
2083	6,257,593	0	1,230,899	0	381,523	5,408,217
2084	5,408,217	0	1,105,220	0	328,363	4,631,360
2085	4,631,360	0	983,780	0	279,956	3,927,537
2086	3,927,537	0	867,514	0	236,308	3,296,331
2087	3,296,331	0	757,341	0	197,359	2,736,349
2088	2,736,349	0	654,104	0	162,988	2,245,233
2089	2,245,233	0	558,515	0	133,011	1,819,729
2090	1,819,729	0	471,100	0	107,192	1,455,821
2091	1,455,821	0	392,208	0	85,247	1,148,860
2092	1,148,860	0	322,029	0	66,857	893,689
2093	893,689	0	260,563	0	51,674	684,799
2094	684,799	0	207,609	0	39,332	516,522
2095	516,522	0	162,768	0	29,462	383,215
2096	383,215	0	125,469	0	21,702	279,448
2097	279,448	0	95,018	0	15,708	200,138
2098	200,138	0	70,636	0	11,164	140,666
2099	140,666	0	51,505	0	7,785	96,947
2100	96,947	0	36,803	0	5,322	65,465
2101	65,465	0	25,749	0	3,564	43,281
2102	43,281	0	17,623	0	2,336	27,994
2103	27,994	0	11,789	0	1,498	17,703
2104	17,703	0	7,702	0	939	10,940
2105	10,940	0	4,911	0	575	6,605
2106	6,605	0	3,055	0	344	3,894
2107	3,894	0	1,853	0	201	2,242
2108	2,242	0	1,096	0	115	1,261
2109	1,261	0	632	0	64	694
2110	694	0	355	0	35	374
2111	374	0	195	0	19	198
2112	198	0	105	0	10	103
2113	103	0	55	0	5	52
2114	52	0	29	0	3	26
2115	26	0	15	0	1	13
2116	13	0	7	0	1	6
2117	6	0	4	0	0	3
2118	3	0	2	0	0	1
2119	1	0	1	0	0	0
2120	0	0	0	0	0	0

# Single Discount Rate Development

## Present Values of Projected Benefits

### Ending December 31 for 2021 to 2070

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Projected Benefit Payments	Unfunded Portion of Projected Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of All Benefit Payments using Single Discount Rate (SDR)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v <sup>(a)-.5</sup>	(g)=(e)*vf <sup>(a)-.5</sup>	(h)=(c)/(1+SDR) <sup>(a)-.5</sup>
2021	\$ 17,419,162	\$ 997,027	\$ 997,027	\$ 0	\$ 964,990	\$ 0	\$ 964,990
2022	19,855,573	1,149,588	1,149,588	0	1,042,295	0	1,042,295
2023	22,252,728	1,308,496	1,308,496	0	1,111,354	0	1,111,354
2024	24,626,655	1,466,486	1,466,486	0	1,166,784	0	1,166,784
2025	26,987,575	1,635,721	1,635,721	0	1,219,141	0	1,219,141
2026	29,325,646	1,814,487	1,814,487	0	1,266,865	0	1,266,865
2027	31,635,317	1,995,854	1,995,854	0	1,305,382	0	1,305,382
2028	33,913,446	2,176,668	2,176,668	0	1,333,623	0	1,333,623
2029	36,163,879	2,362,466	2,362,466	0	1,355,934	0	1,355,934
2030	38,381,038	2,543,691	2,543,691	0	1,367,633	0	1,367,633
2031	40,568,848	2,728,799	2,728,799	0	1,374,386	0	1,374,386
2032	42,725,460	2,907,839	2,907,839	0	1,371,954	0	1,371,954
2033	44,858,492	3,080,241	3,080,241	0	1,361,401	0	1,361,401
2034	46,975,544	3,251,942	3,251,942	0	1,346,407	0	1,346,407
2035	49,079,846	3,413,179	3,413,179	0	1,323,807	0	1,323,807
2036	51,182,961	3,566,089	3,566,089	0	1,295,657	0	1,295,657
2037	53,297,058	3,716,213	3,716,213	0	1,264,825	0	1,264,825
2038	55,428,405	3,862,666	3,862,666	0	1,231,542	0	1,231,542
2039	57,584,232	3,994,929	3,994,929	0	1,193,173	0	1,193,173
2040	59,784,200	4,119,464	4,119,464	0	1,152,569	0	1,152,569
2041	59,791,150	4,237,566	4,237,566	0	1,110,644	0	1,110,644
2042	59,661,774	4,342,624	4,342,624	0	1,066,210	0	1,066,210
2043	59,401,085	4,436,955	4,436,955	0	1,020,487	0	1,020,487
2044	59,012,151	4,519,885	4,519,885	0	973,828	0	973,828
2045	58,498,376	4,590,062	4,590,062	0	926,415	0	926,415
2046	57,864,833	4,650,702	4,650,702	0	879,301	0	879,301
2047	57,113,988	4,701,717	4,701,717	0	832,736	0	832,736
2048	56,247,520	4,740,916	4,740,916	0	786,585	0	786,585
2049	55,270,845	4,770,913	4,770,913	0	741,510	0	741,510
2050	54,185,530	4,782,680	4,782,680	0	696,336	0	696,336
2051	53,004,125	4,782,229	4,782,229	0	652,244	0	652,244
2052	51,732,535	4,766,812	4,766,812	0	609,031	0	609,031
2053	50,381,130	4,744,213	4,744,213	0	567,816	0	567,816
2054	48,952,158	4,715,861	4,715,861	0	528,734	0	528,734
2055	47,446,806	4,668,729	4,668,729	0	490,351	0	490,351
2056	45,879,916	4,604,397	4,604,397	0	453,015	0	453,015
2057	44,265,506	4,527,034	4,527,034	0	417,240	0	417,240
2058	42,614,497	4,439,402	4,439,402	0	383,291	0	383,291
2059	40,935,932	4,344,301	4,344,301	0	351,363	0	351,363
2060	39,236,336	4,240,180	4,240,180	0	321,257	0	321,257
2061	37,524,005	4,125,541	4,125,541	0	292,807	0	292,807
2062	35,810,093	4,004,572	4,004,572	0	266,250	0	266,250
2063	34,101,906	3,878,826	3,878,826	0	241,582	0	241,582
2064	32,405,364	3,750,020	3,750,020	0	218,792	0	218,792
2065	30,725,211	3,620,110	3,620,110	0	197,857	0	197,857
2066	29,063,996	3,488,837	3,488,837	0	178,625	0	178,625
2067	27,424,848	3,356,858	3,356,858	0	161,000	0	161,000
2068	25,810,340	3,224,689	3,224,689	0	144,882	0	144,882
2069	24,222,638	3,092,551	3,092,551	0	130,159	0	130,159
2070	22,663,718	2,960,525	2,960,525	0	116,724	0	116,724



# Single Discount Rate Development

## Present Values of Projected Benefits

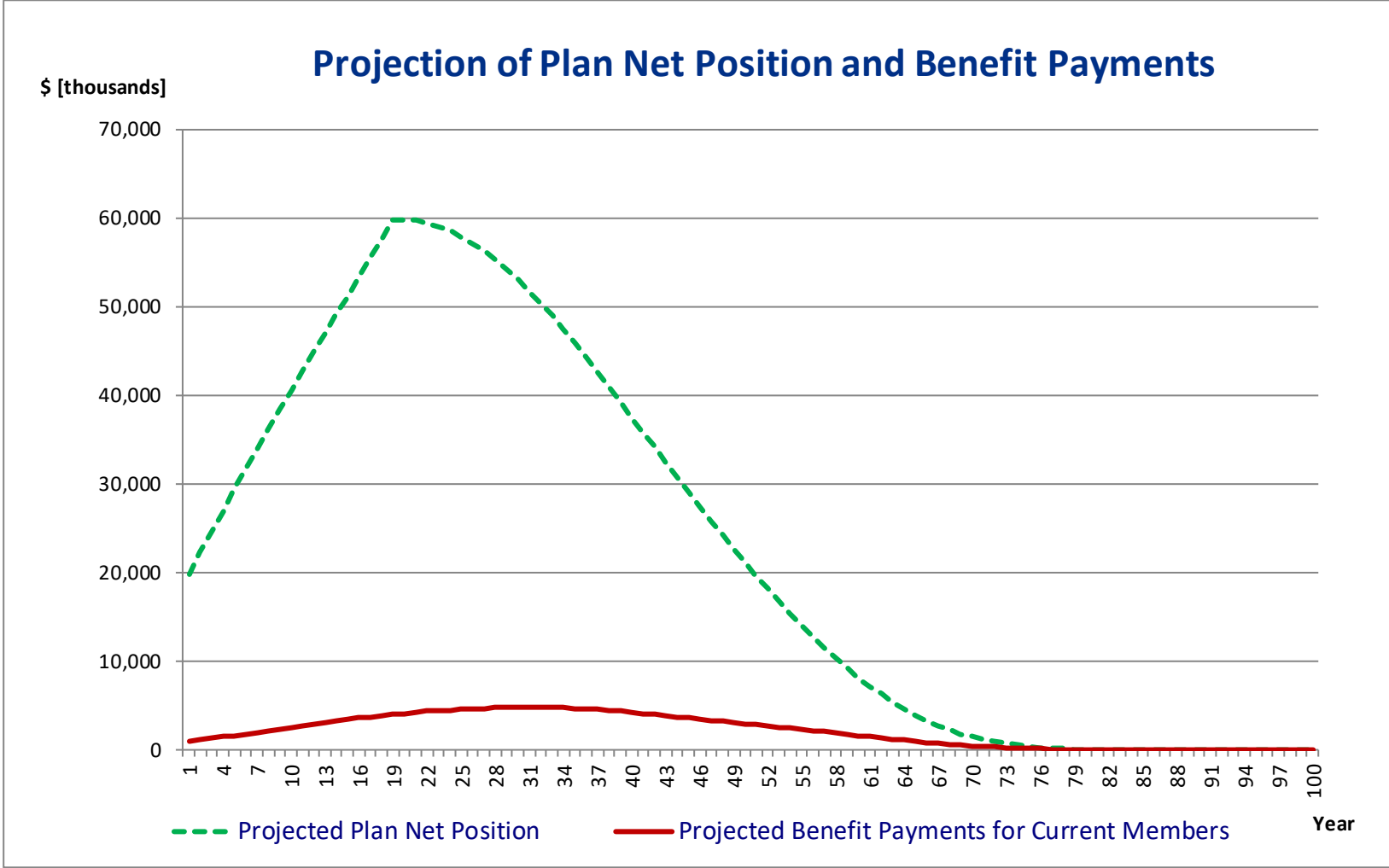
### Ending December 31 for 2071 to 2120

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Projected Benefit Payments	Unfunded Portion of Projected Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of All Benefit Payments using Single Discount Rate (SDR)	
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v <sup>(a)-5</sup>	(g)=(e)*vf <sup>(a)-5</sup>	(h)=(c)/(1+SDR) <sup>(a)-5</sup>	
2071	\$ 21,135,562	\$ 2,828,475	\$ 2,828,475	\$ 0	\$ 104,466	\$ 0	\$ 104,466	
2072	19,640,410	2,696,256	2,696,256	0	93,286	0	93,286	
2073	18,180,756	2,563,832	2,563,832	0	83,095	0	83,095	
2074	16,759,275	2,430,900	2,430,900	0	73,805	0	73,805	
2075	15,379,080	2,297,318	2,297,318	0	65,339	0	65,339	
2076	14,043,693	2,163,166	2,163,166	0	57,633	0	57,633	
2077	12,756,728	2,028,564	2,028,564	0	50,629	0	50,629	
2078	11,521,946	1,893,760	1,893,760	0	44,276	0	44,276	
2079	10,343,070	1,759,005	1,759,005	0	38,525	0	38,525	
2080	9,223,839	1,624,724	1,624,724	0	33,334	0	33,334	
2081	8,167,788	1,491,459	1,491,459	0	28,665	0	28,665	
2082	7,178,140	1,359,923	1,359,923	0	24,484	0	24,484	
2083	6,257,593	1,230,899	1,230,899	0	20,760	0	20,760	
2084	5,408,217	1,105,220	1,105,220	0	17,462	0	17,462	
2085	4,631,360	983,780	983,780	0	14,560	0	14,560	
2086	3,927,537	867,514	867,514	0	12,028	0	12,028	
2087	3,296,331	757,341	757,341	0	9,836	0	9,836	
2088	2,736,349	654,104	654,104	0	7,958	0	7,958	
2089	2,245,233	558,515	558,515	0	6,366	0	6,366	
2090	1,819,729	471,100	471,100	0	5,030	0	5,030	
2091	1,455,821	392,208	392,208	0	3,923	0	3,923	
2092	1,148,860	322,029	322,029	0	3,017	0	3,017	
2093	893,689	260,563	260,563	0	2,287	0	2,287	
2094	684,799	207,609	207,609	0	1,707	0	1,707	
2095	516,522	162,768	162,768	0	1,254	0	1,254	
2096	383,215	125,469	125,469	0	905	0	905	
2097	279,448	95,018	95,018	0	642	0	642	
2098	200,138	70,636	70,636	0	447	0	447	
2099	140,666	51,505	51,505	0	305	0	305	
2100	96,947	36,803	36,803	0	204	0	204	
2101	65,465	25,749	25,749	0	134	0	134	
2102	43,281	17,623	17,623	0	86	0	86	
2103	27,994	11,789	11,789	0	54	0	54	
2104	17,703	7,702	7,702	0	33	0	33	
2105	10,940	4,911	4,911	0	20	0	20	
2106	6,605	3,055	3,055	0	11	0	11	
2107	3,894	1,853	1,853	0	7	0	7	
2108	2,242	1,096	1,096	0	4	0	4	
2109	1,261	632	632	0	2	0	2	
2110	694	355	355	0	1	0	1	
2111	374	195	195	0	1	0	1	
2112	198	105	105	0	0	0	0	
2113	103	55	55	0	0	0	0	
2114	52	29	29	0	0	0	0	
2115	26	15	15	0	0	0	0	
2116	13	7	7	0	0	0	0	
2117	6	4	4	0	0	0	0	
2118	3	2	2	0	0	0	0	
2119	1	1	1	0	0	0	0	
2120	0	0	0	0	0	0	0	
<b>Totals</b>	\$	41,613,375	\$	0	\$	0	\$	41,613,375





## Projection of Plan Net Position and Benefit Payments



## SECTION H

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### GLOSSARY OF TERMS

## Glossary of Terms

<b>Accrued Service</b>	Service credited under the system that was rendered before the date of the actuarial valuation.
<b>Actuarial Accrued Liability (AAL)</b>	The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as “accrued liability” or “actuarial liability.”
<b>Actuarial Assumptions</b>	These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.
<b>Actuarial Cost Method</b>	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the OPEB trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.
<b>Actuarial Equivalent</b>	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.
<b>Actuarial Gain (Loss)</b>	The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.
<b>Actuarial Present Value (APV)</b>	The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future payments at predetermined rates of interest and probabilities of payment.
<b>Actuarial Valuation</b>	The actuarial valuation report determines, as of the actuarial valuation date, the service cost, total OPEB liability, and related actuarial present value of projected benefit payments for OPEB.
<b>Actuarial Valuation Date</b>	The date as of which an actuarial valuation is performed.

## Glossary of Terms

<b>Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)</b>	A calculated contribution into an OPEB plan for the reporting period, most often determined based on the funding policy of the plan. Typically the Actuarially Determined Contribution has a normal cost payment and an amortization payment.
<b>Amortization Method</b>	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be “open” (meaning, reset each year) or “closed” (the number of years remaining will decline each year).
<b>Amortization Payment</b>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<b>Cost-of-Living Adjustments</b>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<b>Cost-Sharing Multiple-Employer Defined Benefit OPEB Plan (cost-sharing OPEB plan)</b>	A multiple-employer defined benefit OPEB plan in which the OPEB obligations to the employees of more than one employer are pooled and OPEB plan assets can be used to pay the benefits of the employees of any employer that provides benefits through the OPEB plan.
<b>Covered-Employee Payroll</b>	The payroll of employees that are provided with benefits through the OPEB plan.
<b>Deferred Inflows and Outflows</b>	The deferred inflows and outflows of OPEB resources are amounts used under GASB Statement No. 75 in developing the annual OPEB expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in the OPEB expense should be included in the deferred inflows or outflows of resources.
<b>Discount Rate</b>	For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically: <ol style="list-style-type: none"><li>1. The benefit payments to be made while the OPEB plans’ fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and</li><li>2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.</li></ol>

## Glossary of Terms

### **Entry Age Actuarial Cost Method (EAN)**

The EAN is a cost method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit age(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.

### **Fiduciary Net Position**

The fiduciary net position is the market value of the assets of the trust dedicated to the defined benefit provisions.

### **GASB**

The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.

### **Long-Term Expected Rate of Return**

The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.

### **Money-Weighted Rate of Return**

The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 74, the money-weighted rate of return is calculated as the internal rate of return on OPEB plan investments, net of OPEB plan investment expense.

### **Multiple-Employer Defined Benefit OPEB Plan**

A multiple-employer plan is a defined benefit OPEB plan that is used to provide OPEB payments to the employees of more than one employer.

### **Municipal Bond Rate**

The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.

### **Net OPEB Liability (NOL)**

The NOL is the liability of employers and non-employer contributing entities to plan members for benefits provided through a defined benefit OPEB plan.

### **Non-Employer Contributing Entities**

Non-employer contributing entities are entities that make contributions to an OPEB plan that is used to provide OPEB payments to the employees of other entities. For purposes of the GASB accounting statements, plan members are not considered non-employer contributing entities.

# Glossary of Terms

<b>Normal Cost</b>	The portion of the actuarial present value allocated to a valuation year is called the normal cost. For purposes of application to the requirements of this Statement, the term normal cost is the equivalent of service cost.
<b>Other Postemployment Benefits (OPEB)</b>	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits regardless of the manner in which they are provided. Other post-employment benefits do not include termination benefits.
<b>Real Rate of Return</b>	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
<b>Service Cost</b>	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.
<b>Total OPEB Expense</b>	The total OPEB expense is the sum of the following items that are recognized at the end of the employer's fiscal year: <ol style="list-style-type: none"><li>1. Service Cost</li><li>2. Interest on the Total OPEB Liability</li><li>3. Current-Period Benefit Changes</li><li>4. Employee Contributions (made negative for addition here)</li><li>5. Projected Earnings on Plan Investments (made negative for addition here)</li><li>6. OPEB Plan Administrative Expense</li><li>7. Other Changes in Plan Fiduciary Net Position</li><li>8. Recognition of Outflow (Inflow) of Resources due to Liabilities</li><li>9. Recognition of Outflow (Inflow) of Resources due to Assets</li></ol>
<b>Total OPEB Liability (TOL)</b>	The TOL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.
<b>Unfunded Actuarial Accrued Liability (UAAL)</b>	The UAAL is the difference between actuarial accrued liability and valuation assets.
<b>Valuation Assets</b>	The valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of GASB Statement Nos. 74 and 75, the valuation assets are equal to the market value of assets.



May 5, 2021

Mr. William Shea  
Executive Director  
City of Manchester Employees'  
Contributory Retirement System  
1045 Elm Street, Suite 403  
Manchester, New Hampshire 03101-1824

Dear Bill:

Please find enclosed copies of the GASB Statement Nos. 74 and 75 "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions" report of the Manchester Employees' Contributory Retirement System.

Sincerely,

A handwritten signature in black ink that reads "Kenneth G. Alberts". The signature is written in a cursive style with a prominent initial "K".

Kenneth G. Alberts

KGA:ah  
Enclosures