

City of Royal Oak Retiree Health Care Plan

GASB Statement Nos. 74 and 75, Accounting and Financial
Reporting for Postemployment Benefits Other Than Pensions
June 30, 2023





September 29, 2023

Board of Trustees
City of Royal Oak Retiree Health Care Plan
Royal Oak, Michigan

Dear Trustees:

This report provides information on behalf of the City of Royal Oak Retiree Health Care Plan 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 the City of Royal Oak Retiree Health Care Plan only in its entirety and only with the permission of the City. GRS is not responsible for unauthorized use of this report.

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

Based on the available data, the information contained in this report is accurate and fairly represents the actuarial position of the City of Royal Oak Retiree Health Care Plan 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.

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.

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.

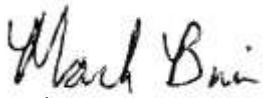
Section I of the report details the calculation of the single discount rate and is not required to be included in your financial statements. However, this information may be requested by your auditors; therefore, we have included it in this report.

In addition, Section J of this report contains some of the information necessary to complete the OPEB reporting requirements for the State of Michigan's Local Government Retirement System Annual Report (Form 5572). This information is not required to be included in your financial statements.

The signing actuaries are independent of the plan sponsor.

Mark Buis and Michael D. Kosciuk 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.

Respectfully submitted,
Gabriel, Roeder, Smith & Company



Mark Buis, FSA, EA, FCA, MAAA



Michael D. Kosciuk, FSA, EA, FCA, MAAA

MB/MDK:ah

C3249



Auditor's Note – This information is intended to assist in preparation of the financial statements of the City of Royal Oak Retiree Health Care Plan. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

Table of Contents

Page

Section A Executive Summary

Executive Summary	1
Discussion	2

Section B Financial Statements

Statement of OPEB Expense Under GASB Statement No. 75.....	6
Statement of Outflows and Inflows Arising from Current Reporting Period	7
Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods	8
Recognition of Deferred Outflows and Inflows of Resources	9
Statement of Fiduciary Net Position.....	10
Statement of Changes in Fiduciary Net Position	11

Section C Required Supplementary Information

Schedule of Changes in Net OPEB Liability and Related Ratios Current Reporting Period	12
Schedule of Changes in Net OPEB Liability and Related Ratios Multiyear	13
Schedule of the Net OPEB Liability Multiyear	14
Schedule of Contributions Multiyear	15
Notes to Schedule of Contributions	16
Schedule of Investment Returns Multiyear	17

Section D Notes to Financial Statements

Asset Allocation	18
Single Discount Rate	19
Summary of Membership Information.....	19
Sensitivity of Net OPEB Liability	20

Section E Summary of Benefits.....21

Section F Development of Baseline Claims Costs22

Section G Summary of Participant Data23

Section H Valuation Methods and Actuarial Assumptions24

Section I Calculation of the Single Discount Rate

Calculation of the Single Discount Rate.....	25
Projection of Contributions	26
Projection of Plan Net Position.....	27
Present Values of Projected Benefits	29

Section J Michigan Public Act 202.....31

Section K Glossary of Terms.....33



SECTION A

EXECUTIVE SUMMARY

Executive Summary as of June 30, 2023

	2023
Actuarial Valuation Date	June 30, 2022
Measurement Date of the Net OPEB Liability	June 30, 2023
Employer's Fiscal Year Ending Date (Reporting Date)	June 30, 2023

Membership

Number of ¹	
- Retirees and Beneficiaries	439
- Inactive, Nonretired Members	1
- Active Members	97
- Total	537
Covered Payroll ²	\$ 10,603,701

Net OPEB Liability

Total OPEB Liability	\$ 155,013,081
Plan Fiduciary Net Position	144,239,399
Net OPEB Liability	\$ 10,773,682
Plan Fiduciary Net Position as a Percentage of Total OPEB Liability	93.05 %
Net OPEB Liability as a Percentage of Covered Payroll	101.60 %

Development of the Single Discount Rate

Single Discount Rate	7.25 %
Long-Term Expected Rate of Investment Return	7.25 %
Long-Term Municipal Bond Rate ³	3.86 %
Last year ending June 30 in the 2024 to 2123 projection period for which projected benefit payments are fully funded	2123

Total OPEB Expense	\$ 3,949,690
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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	\$ 0	\$ 4,138
Changes in assumptions	5,262	0
Net difference between projected and actual earnings on OPEB plan investments	15,760,239	12,444,979
Total	\$ 15,765,501	\$ 12,449,117

¹ As of the actuarial valuation date; GRS does not have membership counts as of June 30, 2023. City staff and auditors may decide that providing membership counts as of the valuation date is sufficient to meet GASB disclosure requirements. Alternatively, City staff may decide to update the membership counts to be as of the Plan's fiscal year end.

² Payroll provided separately by the employer.

³ 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 GO AA Index" as of June 30, 2023. 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.



Discussion

Accounting Standard

For Other Post-Employment Benefit (OPEB) 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.

GASB Statement Nos. 74 and 75 are effective for fiscal years beginning after June 15, 2016 and June 15, 2017, respectively.

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 June 30, 2023.

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.

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;
- 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.

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 June 30, 2022 and a measurement date of June 30, 2023.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate 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 7.25%; the municipal bond rate is 3.86% (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 7.25%.

Actuarial Assumptions

The actuarial assumptions used to value the liabilities are outlined in detail in Section H. The assumptions include details on the healthcare trend assumption, the aging factors, as well as the cost method used to develop the OPEB expense.



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;
 - One-person versus two-person coverage elections; and
 - 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.

Effective Date and Transition

GASB Statement Nos. 74 and 75 are effective for fiscal years beginning after June 15, 2016, and June 15, 2017, respectively.

SECTION B

FINANCIAL STATEMENTS

Auditor's Note – This information is intended to assist in preparation of the financial statements of the City of Royal Oak Retiree Health Care Plan. 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 June 30, 2023

A. Expense

1. Service Cost	\$	631,433
2. Interest on the Total OPEB Liability		10,592,512
3. Current-Period Benefit Changes		0
4. Employee Contributions (made negative for addition here)		0
5. Projected Earnings on Plan Investments (made negative for addition here)		(9,822,979)
6. OPEB Plan Administrative Expense		31,462
7. Other Changes in Plan Fiduciary Net Position		(278,333)
8. Recognition of Outflow (Inflow) of Resources due to Liabilities		1,482,236
9. Recognition of Outflow (Inflow) of Resources due to Assets		1,313,359
10. Total OPEB Expense	\$	3,949,690

Recognition of Deferred Outflows and Inflows of Resources

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 537 years. Additionally, the total plan membership (active employees and inactive employees) was 537. 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 1.0006 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 Outflows and Inflows Arising from Current Reporting Period Fiscal Year Ended June 30, 2023

A. Outflows (Inflows) of Resources Due to Liabilities

1. Difference between expected and actual experience of the Total OPEB Liability (gains) or losses	\$ (6,901,502)
2. Assumption Changes (gains) or losses	\$ 8,774,515
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	1.0006
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	\$ (6,897,364)
5. Outflow (Inflow) of Resources to be recognized in the current OPEB expense for assumption changes	\$ 8,769,253
6. Outflow (Inflow) of Resources to be recognized in the current OPEB expense due to Liabilities	<u>\$ 1,871,889</u>
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	\$ (4,138)
8. Deferred Outflow (Inflow) of Resources to be recognized in future OPEB expenses for assumption changes	\$ 5,262
9. Deferred Outflow (Inflow) of Resources to be recognized in future OPEB expenses due to Liabilities	<u>\$ 1,124</u>

B. Outflows (Inflows) of Resources Due to Assets

1. Net difference between projected and actual earnings on OPEB plan investments (gains) or losses	\$ (1,959,869)
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	\$ (391,974)
4. Deferred Outflow (Inflow) of Resources to be recognized in future OPEB expenses due to Assets	\$ (1,567,895)



Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Fiscal Year Ended June 30, 2023

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	\$ 0	\$ 7,287,017	\$ (7,287,017)
2. Assumption changes	8,769,253	0	8,769,253
3. Net difference between projected and actual earnings on OPEB plan investments	7,143,876	5,830,517	1,313,359
4. Total	\$ 15,913,129	\$ 13,117,534	\$ 2,795,595

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	\$ 0	\$ 4,138	\$ (4,138)
2. Assumption changes	5,262	0	5,262
3. Net difference between projected and actual earnings on OPEB plan investments	15,760,239	12,444,979	3,315,260
4. Total	\$ 15,765,501	\$ 12,449,117	\$ 3,316,384

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
2024	\$ 550,633
2025	(1,140,408)
2026	4,298,132
2027	(391,973)
2028	0
Thereafter	0
Total	\$ 3,316,384

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.

Recognition of Deferred Outflows and Inflows of Resources

Fiscal Year Ended June 30, 2023

Year Established	Initial Amount	Initial Recognition Period	Current Year Recognition	Remaining Recognition	Remaining Recognition Period
Deferred Outflow (Inflow) Due to Differences Between Expected and Actual Experience on Liabilities					
2022	\$ (1,481,728)	1.3568	\$ (389,653)	\$ 0	0.0000
2023	(6,901,502)	1.0006	(6,897,364)	(4,138)	0.0006
Total			\$ (7,287,017)	\$ (4,138)	
Deferred Outflow (Inflow) Due to Assumption Changes					
2022	\$ 0	1.3568	\$ 0	\$ 0	0.0000
2023	8,774,515	1.0006	8,769,253	5,262	0.0006
Total			\$ 8,769,253	\$ 5,262	
Deferred Outflow (Inflow) Due to Differences Between Projected and Actual Earnings on Plan Investments					
2019	\$ 3,819,245	5.0000	\$ 763,849	\$ 0	0.0000
2020	8,449,599	5.0000	1,689,920	1,689,919	1.0000
2021	(27,192,713)	5.0000	(5,438,543)	(10,877,084)	2.0000
2022	23,450,534	5.0000	4,690,107	14,070,320	3.0000
2023	(1,959,869)	5.0000	(391,974)	(1,567,895)	4.0000
Total			\$ 1,313,359	\$ 3,315,260	

Statement of Fiduciary Net Position as of June 30, 2023

	<u>2023</u>
Assets	
Cash and Deposits	\$ 0
Receivables	
Accounts Receivable - Sale of Investments	\$ 0
Accrued Interest and Other Dividends	0
Contributions	0
Accounts Receivable - Other	3,820
Total Receivables	<u>\$ 3,820</u>
Investments	
Fixed Income	\$ 0
Domestic Equities	0
International Equities	0
Real Estate	0
Other - Mutual Funds	144,670,262
Total Investments	<u>\$ 144,670,262</u>
Total Assets	<u>\$ 144,674,082</u>
Liabilities	
Payables	
Accounts Payable - Purchase of Investments	\$ 0
Accrued Expenses	70,945
Accounts Payable - Other	363,738
Total Liabilities	<u>\$ 434,683</u>
Net Position Restricted for OPEB	<u>\$ 144,239,399</u>

Statement of Changes in Fiduciary Net Position for Year Ended June 30, 2023

	<u>2023</u>
Additions	
Contributions	
Employer	\$ 1,431,059
Nonemployer contributing entities	0
Active Employees	0
Other	0
Total Contributions	<u>\$ 1,431,059</u>
Investment Income	
Net Appreciation in Fair Value of Investments	\$ 9,370,761
Interest and Dividends	3,374,683
Less Investment Expense	(962,596)
Net Investment Income	<u>\$ 11,782,848</u>
Other	<u>\$ 278,333</u>
Total Additions	<u><u>\$ 13,492,240</u></u>
 Deductions	
Benefit Payments	\$ 7,743,547
OPEB Plan Administrative Expense	31,462
Other	0
Total Deductions	<u>\$ 7,775,009</u>
 Net Increase in Net Position	 \$ 5,717,231
 Net Position Restricted for OPEB	
Beginning of Year	<u>\$ 138,522,168</u>
End of Year	<u><u>\$ 144,239,399</u></u>

SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

Auditor's Note – This information is intended to assist in preparation of the financial statements of the City of Royal Oak Retiree Health Care Plan. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

Schedule of Changes in Net OPEB Liability and Related Ratios

Current Reporting Period

Fiscal Year Ended June 30, 2023

A. Total OPEB Liability	
1. Service cost	\$ 631,433
2. Interest on the Total OPEB Liability	10,592,512
3. Changes of benefit terms	0
4. Difference between expected and actual experience of the Total OPEB Liability ¹	(6,901,502)
5. Changes of assumptions	8,774,515
6. Benefit payments, including refunds of employee contributions	(7,743,547)
7. Net change in Total OPEB Liability	<u>5,353,411</u>
8. Total OPEB Liability – Beginning	<u>149,659,670</u>
9. Total OPEB Liability – Ending	<u><u>\$ 155,013,081</u></u>
B. Plan Fiduciary Net Position	
1. Contributions – employer	\$ 1,431,059
2. Contributions – nonemployer contributing entities	0
3. Contributions – employee	0
4. Net investment income	11,782,848
5. Benefit payments, including refunds of employee contributions	(7,743,547)
6. OPEB plan administrative expense	(31,462)
7. Other	278,333
8. Net change in Plan Fiduciary Net Position	<u>5,717,231</u>
9. Plan Fiduciary Net Position – Beginning	<u>138,522,168</u>
10. Plan Fiduciary Net Position – Ending	<u><u>\$ 144,239,399</u></u>
C. Net OPEB Liability	<u><u>\$ 10,773,682</u></u>
D. Plan Fiduciary Net Position as a percentage of the Total OPEB Liability	93.05 %
E. Covered-employee payroll²	\$ 10,603,701
F. Net OPEB Liability as a percentage of covered-employee payroll	101.60 %

¹ Includes difference between actual and expected benefit payments.

² Payroll separately provided by the employer.



Schedules of Required Supplementary Information

Schedule of Changes in Net OPEB Liability and Related Ratios Multiyear

Last 10 Fiscal Years (which may be built prospectively)

Fiscal year ending June 30,	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total OPEB Liability										
Service cost	\$ 631,433	\$ 682,280	\$ 691,092	\$ 854,604	\$ 727,780	\$ 703,060	\$ 733,902			
Interest on the Total OPEB Liability	10,592,512	10,455,359	10,032,197	9,863,756	9,494,786	9,329,734	9,160,807			
Changes of benefit terms	-	-	-	-	-	-	-			
Difference between expected and actual experience ¹	(6,901,502)	(1,481,728)	(1,393,664)	(645,224)	(10,208,287)	(438,850)	(192,395)			
Changes of assumptions	8,774,515	-	4,288,384	-	20,859,970	-	-			
Benefit payments, including refunds of employee contributions	(7,743,547)	(7,733,894)	(7,819,881)	(7,516,243)	(7,282,202)	(7,670,977)	(7,343,424)			
Net change in Total OPEB Liability	5,353,411	1,922,017	5,798,128	2,556,893	13,592,047	1,922,967	2,358,890			
Total OPEB Liability - Beginning	149,659,670	147,737,653	141,939,525	139,382,632	125,790,585	123,867,618	121,508,728			
Total OPEB Liability - Ending (a)	\$ 155,013,081	\$ 149,659,670	\$ 147,737,653	\$ 141,939,525	\$ 139,382,632	\$ 125,790,585	\$ 123,867,618			
Plan Fiduciary Net Position										
Employer contributions ²	\$ 1,431,059	\$ 1,535,406	\$ 962,809	\$ 1,086,472	\$ 695,837	\$ 716,492	\$ 119,383,923			
Nonemployer contributing entities contributions	-	-	-	-	-	-	-			
Employee contributions	-	-	-	-	-	-	-			
OPEB plan net investment income	11,782,848	(12,300,159)	36,176,429	940,267	6,227,182	6,858,726	3,500,699			
Benefit payments, including refunds of employee contributions	(7,743,547)	(7,733,894)	(7,819,881)	(7,516,243)	(7,282,202)	(7,670,977)	(7,343,424)			
OPEB plan administrative expense	(31,462)	(21,973)	(37,268)	(23,788)	(40,178)	(257,029)	(126,663)			
Other	278,333	268,576	263,247	(7)	393,885	506,996	(288,792)			
Net change in Plan Fiduciary Net Position	5,717,231	(18,252,044)	29,545,336	(5,513,299)	(5,476)	154,208	115,125,743			
Plan Fiduciary Net Position - Beginning³	138,522,168	156,774,212	127,228,876	132,742,175	132,747,651	132,323,704	16,868,443			
Plan Fiduciary Net Position - Ending (b)	\$ 144,239,399	\$ 138,522,168	\$ 156,774,212	\$ 127,228,876	\$ 132,742,175	\$ 132,477,912	\$ 131,994,186			
Net OPEB Liability - Ending (a) - (b)	\$ 10,773,682	\$ 11,137,502	\$ (9,036,559)	\$ 14,710,649	\$ 6,640,457	\$ (6,687,327)	\$ (8,126,568)			
Plan Fiduciary Net Position as a percentage of Total OPEB Liability	93.05%	92.56%	106.12%	89.64%	95.24%	105.32%	106.56%			
Covered-employee payroll⁴	\$ 10,603,701	\$ 10,818,348	\$ 11,642,228	\$ 12,401,383	\$ 13,668,537	\$ 14,183,345	\$ 14,971,828			
Net OPEB Liability as a percentage of covered-employee payroll	101.60%	102.95%	(77.62)%	118.62%	48.58%	(47.15)%	(54.28)%			

Notes to Schedule:

- ¹ Includes difference between actual and expected benefit payments.
- ² 2017 Employer Contributions includes \$107,971,344 from February 2017 issuance of bonds.
- ³ Beginning of year Plan Fiduciary Net Position was revised in 2018 and 2019.
- ⁴ Payroll separately provided by the employer.



Schedules of Required Supplementary Information

Schedule of the Net OPEB Liability Multiyear

Last 10 Fiscal Years (which may be built prospectively)

<u>FY Ending June 30,</u>	<u>Total OPEB Liability</u>	<u>Plan Net Position</u>	<u>Net OPEB Liability</u>	<u>Plan Net Position as a % of Total OPEB Liability</u>	<u>Covered Payroll¹</u>	<u>Net OPEB Liability as a % of Covered Payroll</u>
2014						
2015						
2016						
2017	\$ 123,867,618	\$ 131,994,186	\$ (8,126,568)	106.56 %	\$ 14,971,828	(54.28)%
2018	125,790,585	132,477,912	(6,687,327)	105.32 %	14,183,345	(47.15)%
2019	139,382,632	132,742,175	6,640,457	95.24 %	13,668,537	48.58 %
2020	141,939,525	127,228,876	14,710,649	89.64 %	12,401,383	118.62 %
2021	147,737,653	156,774,212	(9,036,559)	106.12 %	11,642,228	(77.62)%
2022	149,659,670	138,522,168	11,137,502	92.56 %	10,818,348	102.95 %
2023	155,013,081	144,239,399	10,773,682	93.05 %	10,603,701	101.60 %

¹ Payroll separately provided by the employer.

Schedule of Contributions Multiyear

Last 10 Fiscal Years

FY Ending June 30,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll[^]	Actual Contribution as a % of Covered Payroll
2014					
2015					
2016					
2017	\$ 11,412,360	\$ 119,383,923	* \$ (107,971,563)	\$ 14,971,828	797.39 %
2018	389,082	716,492	(327,410)	14,183,345	5.05 %
2019	369,967	695,837	(325,870)	13,668,537	5.09 %
2020	1,021,651	1,086,472	(64,821)	12,401,383	8.76 %
2021	940,979	962,809	(21,830)	11,642,228	8.27 %
2022	1,498,790	1,535,406	(36,616)	10,818,348	14.19 %
2023	1,390,614	1,431,059	(40,445)	10,603,701	13.50 %

* Includes \$107,971,344 from February 2017 issuance of bonds.

[^] Payroll separately provided by the employer.



Notes to Schedule of Contributions

Methods and Assumptions Used to Determine Contribution Amounts for the Fiscal Year Ending June 30, 2023*:

Actuarial Cost Method	Individual Entry Age Normal
Amortization Method	Level Dollar, Closed
Remaining Amortization Period	17 years
Asset Valuation Method	Market Value of Assets
Inflation	3.00%
Salary Increases	3.0% to 5.2%, including inflation.
Investment Rate of Return	7.25%, net of OPEB plan investment expense, including inflation.
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition.
Mortality	<ul style="list-style-type: none"> • Healthy Pre-Retirement: The RP-2014 Employee Generational Mortality Table, with blue-collar adjustments and extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale, resulting in a base year of 2006 with future mortality improvements assumed each year using scale MP-2017. • Healthy Post-Retirement: The RP-2014 Healthy Annuitant Generational Mortality Table, with blue-collar adjustments and extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale, resulting in a base year of 2006 with future mortality improvements assumed each year using scale MP-2017. • Disability Retirement: The RP-2014 Disabled Mortality Table, extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale, resulting in a base year of 2006 with future mortality improvements assumed each year using scale MP-2017.
Health Care Trend Rates	Pre-65: 7.50% trend for the first year, gradually decreasing to 3.25% in year 12. Post-65: 6.25% trend for the first year, gradually decreasing to 3.25% in year 12.
Aging Factors	Based on the 2013 SOA Study "Health Care Costs - From Birth to Death"
Expenses	Investment expenses are net of the investment returns; administrative expenses are included in the premium costs.

Other Information:

Notes	N/A
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** Based on valuation assumptions used in the June 30, 2020 valuation.*

Schedule of Investment Returns Multiyear

Last 10 Fiscal Years

FY Ending June 30,	Annual Return¹
2014	
2015	
2016	
2017	5.73 %
2018	5.52 %
2019	5.09 %
2020	0.71 %
2021	29.40 %
2022	(7.87)%
2023	8.87 %

¹ Annual money-weighted rate of return, net of investment expenses.

SECTION D

NOTES TO FINANCIAL STATEMENTS

Auditor's Note – This information is intended to assist in preparation of the financial statements of the City of Royal Oak Retiree Health Care Plan. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

Long-Term Expected Return on Plan Assets

The assumed rate of investment return was adopted by the plan's trustees after considering input from the plan's investment consultant(s). Additional information about the assumed rate of investment return is included in our actuarial valuation report as of June 30, 2022.

The long-term expected rate of return on OPEB plan investments 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 real rates of return are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. For each major asset class that is included in the OPEB plan's target asset allocation as of June 30, 2023, these best estimates are summarized in the following table:

Asset Allocation

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*
Domestic Large Cap	30.00 %	5.37 %
Domestic Small/ Mid	15.00 %	6.53 %
International Developed	15.00 %	6.22 %
International Emerging	5.00 %	8.22 %
Domestic Fixed Income	15.00 %	1.20 %
Real Estate	10.00 %	4.87 %
Private Equity	10.00 %	10.05 %
Total	100.00 %	

** Based on inflation of 2.45%.*

The figures in the above table were supplied by the City of Royal Oak. Gabriel, Roeder, Smith & Company does not provide investment advice.

Single Discount Rate

A Single Discount Rate of 7.25% 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 7.25%. 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 Membership Information¹

The following table provides a summary of the number of participants in the plan:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	439
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	1
Active Plan Members	97
Total Plan Members	537

¹ As of the actuarial valuation date; GRS does not have membership counts as of June 30, 2023. City staff and auditors may decide that providing membership counts as of the valuation date is sufficient to meet GASB disclosure requirements. Alternatively, City staff may decide to update the membership counts to be as of the Plan’s fiscal year end.

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 7.25%, 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

1% Decrease	Current Single Discount	1% Increase
6.25%	Rate Assumption	8.25%
7.25%		
\$ 28,537,709	\$ 10,773,682	\$ (4,048,849)

Regarding the sensitivity of the net OPEB liability to changes in the health care cost trend rates, the following presents the plan's net OPEB liability, calculated using the assumed trend rates as well as what the plan's net OPEB liability would be if it were calculated using a trend rate that is one percent lower or one percent higher:

Sensitivity of Net OPEB Liability to the Health Care Cost Trend Rate Assumption

1% Decrease	Current Health Care Cost	1% Increase
Trend Rate Assumption		
\$ (5,479,901)	\$ 10,773,682	\$ 30,149,157

SECTION E

SUMMARY OF BENEFITS

Summary of Benefits

This report complements the actuarial valuation report prepared as of June 30, 2022, and information herein should be considered along with the information from that report, especially for additional discussions of the nature of actuarial calculations and for more information related to benefit provisions.

SECTION F

DEVELOPMENT OF BASELINE CLAIMS COSTS

Development of Baseline Claims Costs

This report complements the actuarial valuation report prepared as of June 30, 2022, and information herein should be considered along with the information from that report, especially for additional discussions of the nature of actuarial calculations and for more information related to baseline claims costs.

SECTION G

SUMMARY OF PARTICIPANT DATA

Summary of Participant Data

This report complements the actuarial valuation report prepared as of June 30, 2022, and information herein should be considered along with the information from that report, especially for additional discussions of the nature of actuarial calculations and for more information related to participant data.

SECTION H

VALUATION METHODS AND ACTUARIAL ASSUMPTIONS

Valuation Methods and Actuarial Assumptions Used for the Valuation

Actuarial Cost Method. Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

- (i) 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; and
- (ii) Each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains/(losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

Financing of Unfunded Actuarial Accrued Liabilities. Unfunded Actuarial Accrued Liabilities (UAAL) were amortized on a level dollar basis. The UAAL were determined using the funding value of assets and actuarial accrued liability calculated as of the valuation date. The UAAL amortization payment is the amount required to fully amortize the UAAL over the 16-year period beginning with the fiscal year ending June 30, 2024. This UAAL payment reflects payments expected to be made between the valuation date and the fiscal year for which the contributions in this report have been calculated. The 16-year amortization factor used is 9.6251.

Actuarial Assumptions

This report complements the actuarial valuation report prepared as of June 30, 2022, and information herein should be considered along with the information from that report, especially for additional discussions of the nature of actuarial calculations and for more information related to actuarial assumptions.

SECTION I

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 7.25%; the municipal bond rate is 3.86%; and the resulting SDR is 7.25%.

The tables in this section provide background for the development of the SDR.

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 Benefits** table shows the development of the SDR. 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.

There may be cases where schedules do not add or where they do not exactly balance to other related schedules due to rounding.

The projection of cash flows used to determine the SDR assumed the following:

- In all years, the total contributions will be equal to the actuarially computed employer contribution; and
- Contributions and benefit payments occur halfway through the year.

Single Discount Rate Development

Projection of Contributions

Year	Projected Contributions from Current Employees	Projected Service Cost and Expense Contributions	Projected UAL Contributions	Projected Total Contributions
1	\$ 0	\$ 636,930	\$ 882,730	\$ 1,519,660
2	0	579,201	805,075	1,384,276
3	0	511,108	1,185,549	1,696,656
4	0	441,216	1,185,549	1,626,764
5	0	370,253	1,185,549	1,555,802
6	0	296,172	1,185,549	1,481,721
7	0	237,358	1,185,549	1,422,906
8	0	187,130	1,185,549	1,372,678
9	0	138,099	1,185,549	1,323,648
10	0	102,601	1,185,549	1,288,150
11	0	78,814	1,185,549	1,264,362
12	0	61,762	1,185,549	1,247,310
13	0	47,636	1,185,549	1,233,185
14	0	36,536	1,185,549	1,222,085
15	0	28,286	1,185,549	1,213,834
16	0	22,067	1,185,549	1,207,616
17	0	17,080	0	17,080
18	0	13,022	0	13,022
19	0	10,015	0	10,015
20	0	7,347	0	7,347
21	0	4,973	0	4,973
22	0	3,262	0	3,262
23	0	2,176	0	2,176
24	0	1,363	0	1,363
25	0	758	0	758
26	0	375	0	375
27	0	206	0	206
28	0	97	0	97
29	0	39	0	39
30	0	10	0	10
31	0	0	0	0
32	0	0	0	0
33	0	0	0	0
34	0	0	0	0
35	0	0	0	0
36	0	0	0	0
37	0	0	0	0
38	0	0	0	0
39	0	0	0	0
40	0	0	0	0
41	0	0	0	0
42	0	0	0	0
43	0	0	0	0
44	0	0	0	0
45	0	0	0	0
46	0	0	0	0
47	0	0	0	0
48	0	0	0	0
49	0	0	0	0
50	0	0	0	0

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.



Single Discount Rate Development

Projection of Plan Net Position

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 7.250%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(d)	(f)=(a)+(b)-(c)+(d)
1	\$ 144,239,399	\$ 1,519,660	\$ 9,769,875	\$ 0	\$ 10,163,519	\$ 146,152,703
2	146,152,703	1,384,276	10,314,158	0	10,278,026	147,500,848
3	147,500,848	1,696,656	10,921,108	0	10,365,276	148,641,672
4	148,641,672	1,626,764	11,455,669	0	10,426,457	149,239,224
5	149,239,224	1,555,802	11,889,049	0	10,451,817	149,357,794
6	149,357,794	1,481,721	12,292,317	0	10,443,412	148,990,610
7	148,990,610	1,422,906	12,637,010	0	10,402,420	148,178,927
8	148,178,927	1,372,678	12,940,159	0	10,330,988	146,942,434
9	146,942,434	1,323,648	13,161,903	0	10,231,698	145,335,877
10	145,335,877	1,288,150	13,356,390	0	10,107,032	143,374,668
11	143,374,668	1,264,362	13,501,325	0	9,958,835	141,096,541
12	141,096,541	1,247,310	13,324,898	0	9,799,347	138,818,300
13	138,818,300	1,233,185	13,169,883	0	9,639,192	136,520,794
14	136,520,794	1,222,085	13,112,294	0	9,474,279	134,104,863
15	134,104,863	1,213,834	13,071,269	0	9,300,291	131,547,720
16	131,547,720	1,207,616	12,960,519	0	9,118,621	128,913,437
17	128,913,437	17,080	12,862,502	0	8,888,725	124,956,741
18	124,956,741	13,022	12,752,715	0	8,605,630	120,822,678
19	120,822,678	10,015	12,582,670	0	8,311,859	116,561,882
20	116,561,882	7,347	12,357,322	0	8,010,883	112,222,790
21	112,222,790	4,973	12,080,880	0	7,706,060	107,852,943
22	107,852,943	3,262	11,801,200	0	7,399,146	103,454,151
23	103,454,151	2,176	11,492,248	0	7,091,198	99,055,277
24	99,055,277	1,363	11,190,639	0	6,782,993	94,648,994
25	94,648,994	758	10,855,211	0	6,475,462	90,270,003
26	90,270,003	375	10,538,814	0	6,169,241	85,900,805
27	85,900,805	206	10,245,787	0	5,862,904	81,518,128
28	81,518,128	97	9,918,087	0	5,556,828	77,156,966
29	77,156,966	39	9,586,887	0	5,252,437	72,822,556
30	72,822,556	10	9,260,654	0	4,949,810	68,511,722
31	68,511,722	0	8,919,217	0	4,649,435	64,241,940
32	64,241,940	0	8,563,575	0	4,352,542	60,030,907
33	60,030,907	0	8,196,406	0	4,060,320	55,894,820
34	55,894,820	0	7,819,752	0	3,773,868	51,848,936
35	51,848,936	0	7,418,836	0	3,494,820	47,924,921
36	47,924,921	0	7,007,178	0	3,224,991	44,142,733
37	44,142,733	0	6,608,799	0	2,964,971	40,498,905
38	40,498,905	0	6,208,350	0	2,715,056	37,005,611
39	37,005,611	0	5,808,689	0	2,476,026	33,672,947
40	33,672,947	0	5,412,193	0	2,248,529	30,509,284
41	30,509,284	0	5,021,518	0	2,033,078	27,520,844
42	27,520,844	0	4,638,899	0	1,830,043	24,711,988
43	24,711,988	0	4,266,291	0	1,639,672	22,085,369
44	22,085,369	0	3,905,097	0	1,462,106	19,642,377
45	19,642,377	0	3,557,268	0	1,297,378	17,382,487
46	17,382,487	0	3,226,094	0	1,145,330	15,301,723
47	15,301,723	0	2,912,112	0	1,005,658	13,395,269
48	13,395,269	0	2,614,505	0	878,039	11,658,803
49	11,658,803	0	2,334,150	0	762,131	10,086,784
50	10,086,784	0	2,072,371	0	657,483	8,671,896

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.



Single Discount Rate Development

Projection of Plan Net Position (Concluded)

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 7.250%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(d)	(f)=(a)+(b)-(c)+(d)
51	\$ 8,671,896	\$ 0	\$ 1,828,443	\$ 0	\$ 563,591	\$ 7,407,044
52	7,407,044	0	1,602,409	0	479,940	6,284,574
53	6,284,574	0	1,394,937	0	405,950	5,295,587
54	5,295,587	0	1,205,627	0	340,991	4,430,951
55	4,430,951	0	1,034,361	0	284,404	3,680,994
56	3,680,994	0	880,420	0	235,515	3,036,089
57	3,036,089	0	743,770	0	193,627	2,485,946
58	2,485,946	0	623,376	0	158,029	2,020,599
59	2,020,599	0	518,411	0	128,030	1,630,217
60	1,630,217	0	427,498	0	102,965	1,305,684
61	1,305,684	0	349,306	0	82,221	1,038,599
62	1,038,599	0	283,274	0	65,209	820,535
63	820,535	0	228,017	0	51,368	643,886
64	643,886	0	181,977	0	40,200	502,109
65	502,109	0	144,083	0	31,271	389,298
66	389,298	0	113,224	0	24,191	300,265
67	300,265	0	88,300	0	18,624	230,588
68	230,588	0	68,314	0	14,285	176,559
69	176,559	0	52,858	0	10,918	134,619
70	134,619	0	41,115	0	8,296	101,800
71	101,800	0	31,861	0	6,246	76,184
72	76,184	0	24,558	0	4,649	56,275
73	56,275	0	18,768	0	3,412	40,919
74	40,919	0	14,176	0	2,462	29,205
75	29,205	0	10,548	0	1,742	20,399
76	20,399	0	7,702	0	1,205	13,902
77	13,902	0	5,494	0	812	9,221
78	9,221	0	3,816	0	533	5,937
79	5,937	0	2,575	0	339	3,700
80	3,700	0	1,681	0	208	2,228
81	2,228	0	1,056	0	124	1,296
82	1,296	0	638	0	71	729
83	729	0	369	0	40	400
84	400	0	205	0	22	216
85	216	0	113	0	12	115
86	115	0	62	0	6	58
87	58	0	33	0	3	28
88	28	0	17	0	1	12
89	12	0	9	0	1	4
90	4	0	4	0	0	0
91	0	0	0	0	0	0
92	0	0	0	0	0	0
93	0	0	0	0	0	0
94	0	0	0	0	0	0
95	0	0	0	0	0	0
96	0	0	0	0	0	0
97	0	0	0	0	0	0
98	0	0	0	0	0	0
99	0	0	0	0	0	0
100	0	0	0	0	0	0

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.

Single Discount Rate Development

Present Values of Projected Benefits

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^((a)-.5)	(g)=(e)*vf ^((a)-.5)	(h)=(c)/(1+SDR)^(a-.5)
1	\$ 144,239,399	\$ 9,769,875	\$ 9,769,875	\$ 0	\$ 9,433,880	\$ 0	\$ 9,433,880
2	146,152,703	10,314,158	10,314,158	0	9,286,196	0	9,286,196
3	147,500,848	10,921,108	10,921,108	0	9,167,976	0	9,167,976
4	148,641,672	11,455,669	11,455,669	0	8,966,644	0	8,966,644
5	149,239,224	11,889,049	11,889,049	0	8,676,794	0	8,676,794
6	149,357,794	12,292,317	12,292,317	0	8,364,666	0	8,364,666
7	148,990,610	12,637,010	12,637,010	0	8,017,923	0	8,017,923
8	148,178,927	12,940,159	12,940,159	0	7,655,258	0	7,655,258
9	146,942,434	13,161,903	13,161,903	0	7,260,084	0	7,260,084
10	145,335,877	13,356,390	13,356,390	0	6,869,335	0	6,869,335
11	143,374,668	13,501,325	13,501,325	0	6,474,478	0	6,474,478
12	141,096,541	13,324,898	13,324,898	0	5,957,924	0	5,957,924
13	138,818,300	13,169,883	13,169,883	0	5,490,547	0	5,490,547
14	136,520,794	13,112,294	13,112,294	0	5,097,006	0	5,097,006
15	134,104,863	13,071,269	13,071,269	0	4,737,584	0	4,737,584
16	131,547,720	12,960,519	12,960,519	0	4,379,900	0	4,379,900
17	128,913,437	12,862,502	12,862,502	0	4,052,938	0	4,052,938
18	124,956,741	12,752,715	12,752,715	0	3,746,708	0	3,746,708
19	120,822,678	12,582,670	12,582,670	0	3,446,853	0	3,446,853
20	116,561,882	12,357,322	12,357,322	0	3,156,291	0	3,156,291
21	112,222,790	12,080,880	12,080,880	0	2,877,093	0	2,877,093
22	107,852,943	11,801,200	11,801,200	0	2,620,500	0	2,620,500
23	103,454,151	11,492,248	11,492,248	0	2,379,391	0	2,379,391
24	99,055,277	11,190,639	11,190,639	0	2,160,321	0	2,160,321
25	94,648,994	10,855,211	10,855,211	0	1,953,909	0	1,953,909
26	90,270,003	10,538,814	10,538,814	0	1,768,726	0	1,768,726
27	85,900,805	10,245,787	10,245,787	0	1,603,308	0	1,603,308
28	81,518,128	9,918,087	9,918,087	0	1,447,112	0	1,447,112
29	77,156,966	9,586,887	9,586,887	0	1,304,231	0	1,304,231
30	72,822,556	9,260,654	9,260,654	0	1,174,685	0	1,174,685
31	68,511,722	8,919,217	8,919,217	0	1,054,895	0	1,054,895
32	64,241,940	8,563,575	8,563,575	0	944,366	0	944,366
33	60,030,907	8,196,406	8,196,406	0	842,774	0	842,774
34	55,894,820	7,819,752	7,819,752	0	749,693	0	749,693
35	51,848,936	7,418,836	7,418,836	0	663,176	0	663,176
36	47,924,921	7,007,178	7,007,178	0	584,035	0	584,035
37	44,142,733	6,608,799	6,608,799	0	513,595	0	513,595
38	40,498,905	6,208,350	6,208,350	0	449,860	0	449,860
39	37,005,611	5,808,689	5,808,689	0	392,448	0	392,448
40	33,672,947	5,412,193	5,412,193	0	340,942	0	340,942
41	30,509,284	5,021,518	5,021,518	0	294,947	0	294,947
42	27,520,844	4,638,899	4,638,899	0	254,055	0	254,055
43	24,711,988	4,266,291	4,266,291	0	217,854	0	217,854
44	22,085,369	3,905,097	3,905,097	0	185,930	0	185,930
45	19,642,377	3,557,268	3,557,268	0	157,920	0	157,920
46	17,382,487	3,226,094	3,226,094	0	133,536	0	133,536
47	15,301,723	2,912,112	2,912,112	0	112,392	0	112,392
48	13,395,269	2,614,505	2,614,505	0	94,084	0	94,084
49	11,658,803	2,334,150	2,334,150	0	78,318	0	78,318
50	10,086,784	2,072,371	2,072,371	0	64,834	0	64,834

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.

Single Discount Rate Development

Present Values of Projected Benefits (Concluded)

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^((a)-.5)	(g)=(e)*vf ^((a)-.5)	(h)=(c)/(1+SDR)^(a-.5)
51	\$ 8,671,896	\$ 1,828,443	\$ 1,828,443	\$ 0	\$ 53,336	\$ 0	\$ 53,336
52	7,407,044	1,602,409	1,602,409	0	43,583	0	43,583
53	6,284,574	1,394,937	1,394,937	0	35,375	0	35,375
54	5,295,587	1,205,627	1,205,627	0	28,507	0	28,507
55	4,430,951	1,034,361	1,034,361	0	22,804	0	22,804
56	3,680,994	880,420	880,420	0	18,098	0	18,098
57	3,036,089	743,770	743,770	0	14,256	0	14,256
58	2,485,946	623,376	623,376	0	11,141	0	11,141
59	2,020,599	518,411	518,411	0	8,638	0	8,638
60	1,630,217	427,498	427,498	0	6,642	0	6,642
61	1,305,684	349,306	349,306	0	5,060	0	5,060
62	1,038,599	283,274	283,274	0	3,826	0	3,826
63	820,535	228,017	228,017	0	2,872	0	2,872
64	643,886	181,977	181,977	0	2,137	0	2,137
65	502,109	144,083	144,083	0	1,578	0	1,578
66	389,298	113,224	113,224	0	1,156	0	1,156
67	300,265	88,300	88,300	0	841	0	841
68	230,588	68,314	68,314	0	606	0	606
69	176,559	52,858	52,858	0	437	0	437
70	134,619	41,115	41,115	0	317	0	317
71	101,800	31,861	31,861	0	229	0	229
72	76,184	24,558	24,558	0	165	0	165
73	56,275	18,768	18,768	0	117	0	117
74	40,919	14,176	14,176	0	83	0	83
75	29,205	10,548	10,548	0	57	0	57
76	20,399	7,702	7,702	0	39	0	39
77	13,902	5,494	5,494	0	26	0	26
78	9,221	3,816	3,816	0	17	0	17
79	5,937	2,575	2,575	0	11	0	11
80	3,700	1,681	1,681	0	6	0	6
81	2,228	1,056	1,056	0	4	0	4
82	1,296	638	638	0	2	0	2
83	729	369	369	0	1	0	1
84	400	205	205	0	1	0	1
85	216	113	113	0	0	0	0
86	115	62	62	0	0	0	0
87	58	33	33	0	0	0	0
88	28	17	17	0	0	0	0
89	12	9	9	0	0	0	0
90	4	4	4	0	0	0	0
91	0	0	0	0	0	0	0
92	0	0	0	0	0	0	0
93	0	0	0	0	0	0	0
94	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0
96	0	0	0	0	0	0	0
97	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0
99	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0
Totals					\$ 157,919,880	\$ 0	\$ 157,919,880

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.



SECTION J

MICHIGAN PUBLIC ACT 202

State Reporting Assumptions as of June 30, 2023

The Protecting Local Government Retirement and Benefits Act, Public Act 202 of 2017 (PA 202), was put into law effective December 20, 2017. One outcome of the law is the requirement for the local unit of government to provide select reporting disclosures to the State. Section 5(1) of the Act provides the State treasurer with the authority to annually establish uniform actuarial assumptions for purposes of developing the requisite disclosures. Below you will find information which may be used to assist the local unit of government with required reporting.

Uniform Assumptions, as applicable to the measurement and the required disclosures under uniform assumptions are denoted below. Additional discussion of PA 202 and uniform assumptions may be found on the State website in the *Public Act 202: Selection of the Uniform Assumptions for Fiscal Year 2023* memo dated April 4, 2023.

Uniform Assumption	PA 202	Valuation Assumption Used	Uniform Assumption Used
Investment Rate of Return Discount Rate	Maximum of 6.85% ¹	7.25%	6.85%
Salary Increase	Minimum of 3.25% or based on experience study within last 5 years	3.00% + Merit and longevity (based on experience study dated September 28, 2018)	3.25%
Mortality	A version of Pub-2010 mortality tables with future mortality improvement projected generationally using scale MP-2021 or based on experience study within last 5 years	A version of RP-2014 (based on experience study dated September 28, 2018)	A version of Pub-2010 mortality tables with future mortality improvement projected generationally using scale MP-2021
Healthcare Inflation (for Medical and Drug)	Non-Medicare: Initial rate of 7.25% decreasing 0.25% per year to a 4.50% long-term rate Medicare: Initial rate of 5.50% decreasing 0.25% per year to a 4.50% long-term rate	Non-Medicare: Initial rate of 7.50% decreasing to a long-term rate of 3.50% in year 12 Medicare: Initial rate of 6.25% decreasing to a long-term rate of 3.50% in year 12	Non-Medicare: Initial rate of 7.25% decreasing 0.25% per year to a 4.50% long-term rate Medicare: Initial rate of 5.50% decreasing 0.25% per year to a 4.50% long-term rate
Amortization of the Unfunded Accrued Actuarial Liability: Period	Maximum Period of 26 Years	17 years ²	17 years ²
Method	Closed Plans: Level Dollar Open Plans: Level Percent of Payroll or Level Dollar	Level Dollar	Level Dollar
Type	Closed	Closed	Closed

¹ A blended rate calculated using GASB Statement No. 75 methodology. For periods in which projected plan assets are sufficient to make projected benefit payments – maximum of 6.85%; for periods in which projected plan assets are NOT sufficient to make projected benefit payments – 3.54%.

² For the fiscal year ending June 30, 2023.

State Reporting as of June 30, 2023

The following information has been prepared to provide some of the information necessary to complete the OPEB reporting requirements for the State of Michigan's Local Government Retirement System Annual Report (Form 5572). The local unit of government is required to complete/develop all of the remaining reporting requirements necessary for Form 5572. Additional resources are available on the State website.

Line	Descriptive Information	
19	Actuarial Assumptions¹	
20	Assumed Rate of Investment Return	7.25%
21	Enter discount rate	7.25%
22	Amortization method utilized for funding the system's unfunded actuarial accrued liability, if any	Level Dollar
23	Amortization period utilized for funding the system's unfunded actuarial accrued liability, if any ²	17
24	Is each division within the system closed to new employees?	yes
25	Health care inflation assumption for the next year	See Below ³
26	Health care inflation assumption - Long-Term Trend Rate	3.50%
27	Uniform Assumptions⁴	
28	Enter retirement health care system's actuarial value of assets using uniform assumptions	\$ 144,255,383
29	Enter retirement health care system's actuarial accrued liabilities using uniform assumptions	\$ 171,392,878
30	Funded ratio using uniform assumptions	84.2%
31	Actuarially Determined Contribution (ADC) using uniform assumptions ⁵	\$ 3,563,019
32	All systems combined ADC/Governmental fund revenues	Auto ⁶

¹ Information on lines 20-26 can be found in the June 30, 2022 funding valuation report, dated November 23, 2022.

² For the fiscal year ending June 30, 2023.

³ 7.50% Non-Medicare age; 6.25% Medicare age.

⁴ Information on lines 28-32 is based on the Uniform Assumptions Used, listed on the prior page, as of the most recent valuation date, June 30, 2022.

⁵ For the fiscal year ending June 30, 2023.

⁶ Automatically calculated by State of Michigan Form 5572.

SECTION K

GLOSSARY OF TERMS

Glossary of Terms

Accrued Service	Service credited under the system that was rendered before the date of the actuarial valuation.
Actuarial Accrued Liability (AAL)	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.”
Actuarial Assumptions	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.
Actuarial Cost Method	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.
Actuarial Equivalent	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.
Actuarial Gain (Loss)	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.
Actuarial Present Value (APV)	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.
Actuarial Valuation	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.
Actuarial Valuation Date	The date as of which an actuarial valuation is performed.

Glossary of Terms

Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)	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.
Amortization Method	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).
Amortization Payment	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
Cost-of-Living Adjustments	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
Cost-Sharing Multiple-Employer Defined Benefit OPEB Plan (cost-sharing OPEB plan)	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.
Covered-Employee Payroll	The payroll of employees that are provided with benefits through the OPEB plan.
Deferred Inflows and Outflows	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.
Discount Rate	<p>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:</p> <ol style="list-style-type: none">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; and2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.

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

Normal Cost	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.
Other Postemployment Benefits (OPEB)	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.
Real Rate of Return	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
Service Cost	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.
Total OPEB Expense	<p>The total OPEB expense is the sum of the following items that are recognized at the end of the employer's fiscal year:</p> <ol style="list-style-type: none">1. Service Cost2. Interest on the Total OPEB Liability3. Current-Period Benefit Changes4. Employee Contributions (made negative for addition here)5. Projected Earnings on Plan Investments (made negative for addition here)6. OPEB Plan Administrative Expense7. Other Changes in Plan Fiduciary Net Position8. Recognition of Outflow (Inflow) of Resources due to Liabilities9. Recognition of Outflow (Inflow) of Resources due to Assets
Total OPEB Liability (TOL)	The TOL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.
Unfunded Actuarial Accrued Liability (UAAL)	The UAAL is the difference between actuarial accrued liability and valuation assets.
Valuation Assets	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.