

City of Madison Heights General
Employees' Retiree Health Care Trust
Actuarial Valuation Report
as of June 30, 2022



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February 13, 2023

Board of Trustees
City of Madison Heights
General Employees' Retiree Health Care Trust
Madison Heights, Michigan

Dear Trustees:

The results of the June 30, 2022 Actuarial Valuation of the City of Madison Heights General Employees' Retiree Health Care Trust are presented in this report.

This report was prepared at the request of the Board and is intended for use by the plan and those designated or approved by the Board. This report may be provided to parties other than the plan only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purpose of the valuation is to measure the plan's financial status and to determine the Actuarially Determined Contribution for the fiscal years ending June 30, 2024 and June 30, 2025. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

The contribution rate in this report is determined using the actuarial assumptions and methods disclosed in Section D of this report. This report does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

The findings in this report are based on data and other information through June 30, 2022. The valuation was based upon information furnished by the City concerning plan benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the City.

This report was prepared using assumptions adopted by the Board. All actuarial assumptions used in this report are reasonable for the purposes of this valuation. All actuarial assumptions and methods used in the valuation follow the guidance in the applicable Actuarial Standards of Practice. Additional information about the actuarial assumptions is included in the section of this report entitled Actuarial Cost Method and Actuarial Assumptions.

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. We are relying on the GRS actuaries and Internal Software, Training, and Processes Team who developed and maintain the model.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.


This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the City of Madison Heights General Employees' Retiree Health Care Trust as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Brad Lee Armstrong and Jamal J. Adora are Members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein.

The signing actuaries are independent of the plan sponsor.

Gabriel, Roeder, Smith & Company will be pleased to review this valuation and report with the Board of Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,
Gabriel, Roeder, Smith & Company


Brad Lee Armstrong, ASA, EA, FCA, MAAA


Jamal J. Adora, ASA, EA, MAAA

BLA/JJA:dj

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EXECUTIVE SUMMARY

Executive Summary

Actuarially Determined Contribution

We have calculated the Actuarially Determined Contribution (ADC) for the fiscal years ending June 30, 2024, and June 30, 2025 under the interest rate assumption of 6.50%.

The Actuarially Determined Contribution (ADC) for the fiscal year ending June 30, 2024 was determined to be \$0. The expected employer portion of the claims and premium amounts paid is estimated to be \$903,475 for the fiscal year ending June 30, 2024. These amounts reflect the employer portion of the retiree only premium rates and the implicit subsidy for retirees and covered spouses.

The Actuarially Determined Contribution (ADC) for the fiscal year ending June 30, 2025 was determined to be \$0. The expected employer portion of the claims and premium amounts paid is estimated to be \$975,959 for the fiscal year ending June 30, 2025. These amounts reflect the employer portion of the retiree only premium rates and the implicit subsidy for retirees and covered spouses.

For additional details, please see Section A of the report.

Liabilities and Assets

The present value of all benefits expected to be paid to current plan members as of June 30, 2022 is \$12,928,690. The actuarial accrued liability, which is the portion of the above amounts attributable to service accrued by plan members as of June 30, 2022 is \$12,538,231. The assets currently set aside for GASB OPEB purposes as of June 30, 2022 are \$16,130,224.

SECTION A

VALUATION RESULTS

Development of the Actuarially Determined Contribution for the Other Postemployment Benefits

Contributions for	Development of the Actuarially Determined Contribution for Fiscal Years Ending June 30, 2024 and June 30, 2025						
	Dept Heads/ Non-Union	Supervisors	Municipal	Dispatchers	DPS	Courthouse	Total
Normal Cost							
Normal Retirement	\$ 12,515	\$ 2,125	\$ 15,255	\$ 8,755	\$ 11,057	\$ 2,350	\$ 52,057
Early Retirement	1,208	616	2,170	1,806	1,872	0	7,672
Termination Benefits	242	277	566	164	790	431	2,470
Death-in-Service	193	43	126	146	205	16	729
Disability	435	0	0	292	0	44	771
Life Insurance	<u>97</u>	<u>12</u>	<u>126</u>	<u>73</u>	<u>88</u>	<u>11</u>	<u>407</u>
Total Normal Cost	\$ 14,690	\$ 3,073	\$ 18,243	\$ 11,236	\$ 14,012	\$ 2,852	\$ 64,106
Amortization of Unfunded Actuarial Accrued Liabilities	\$ (60,128)	\$ (51,677)	\$ (61,935)	\$ (20,324)	\$ (165,369)	\$ (19,731)	\$ (379,164)
Amortization Period	18 years	18 years	18 years	18 years	14 years	14 years	
Actuarially Determined Contribution (ADC)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Projected Payroll for the Fiscal Year Ending June 30, 2024	\$483,187	\$61,598	\$314,526	\$182,389	\$292,513	\$ 54,528	\$1,388,741
Actuarially Determined Contribution (ADC) as a Percentage of Projected Payroll	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Actuarially Determined Contribution (ADC) for the Fiscal Year Ending June 30, 2025	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Projected Payroll for the Fiscal Year Ending June 30, 2025	\$426,941	\$ 61,697	\$260,360	\$177,247	\$259,458	\$54,677	\$1,240,380
Actuarially Determined Contribution (ADC) as a Percentage of Projected Payroll	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

The assumptions used to calculate the liabilities shown above include a 6.5% investment return rate.

The unfunded actuarial accrued liabilities were amortized as a level dollar amount over 14 years for Court and DPS and 18 years for other groups.

The ADC for the fiscal year ending June 30, 2023 was \$1,646,700. See Comment A on Page A-4 for a discussion of causes leading to the reduction in the ADC.



Determination of Unfunded Actuarial Accrued Liability as of June 30, 2022

	Dept Heads/ Non- Union	Supervisors	Municipal	Dispatchers	DPS	Courthouse	Total
A. Present Value of Future Benefits							
1. Retirees and Beneficiaries	\$1,270,292	\$1,666,329	\$ 962,508	\$ 0	\$4,068,193	\$385,097	\$ 8,352,419
2. Vested Terminated Members	0	0	0	0	0	0	0
3. Active Members	<u>930,929</u>	<u>175,965</u>	<u>1,330,414</u>	<u>790,928</u>	<u>1,113,558</u>	<u>234,477</u>	<u>4,576,271</u>
Total Present Value of Future Benefits	\$2,201,221	\$1,842,294	\$2,292,922	\$790,928	\$5,181,751	\$619,574	\$12,928,690
B. Present Value of Future Employer Normal Costs	75,801	31,080	100,854	70,873	97,240	14,611	390,459
C. Present Value of Future Contributions from Current Active Members	0	0	0	0	0	0	0
D. Actuarial Accrued Liability (A.-B.-C.)	2,125,420	1,811,214	2,192,068	720,055	5,084,511	604,963	12,538,231
E. Market Value of Assets ¹	2,734,317	2,330,096	2,820,059	926,339	6,541,138	778,275	16,130,224
F. Unfunded Actuarial Accrued Liability (D.-E.)	(608,897)	(518,882)	(627,991)	(206,284)	(1,456,627)	(173,312)	(3,591,993)
G. Funded Ratio (E./D.)	128.6%	128.6%	128.6%	128.6%	128.6%	128.6%	128.6%

¹ Allocated based on Actuarial Accrued Liability.

The assumptions used to calculate the liabilities shown above include a 6.5% investment return rate.

The funded ratio measurement shown above is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the City's benefit obligations.

The Unfunded Actuarial Accrued Liability (UAAL) as of June 30, 2020 was \$1,445,178 and the funded ratio was 90.9%.



Schedule of Funding Progress

Rounded to the Nearest \$1,000

Actuarial Valuation Date June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b)-(a)	Funded Ratio (a)/(b)	Active Member Covered Payroll (c)	Unfunded AAL as a Percentage of Active Member Covered Payroll ((b-a)/c)
2010	\$ 3,876	\$21,930	\$18,053	17.7 %	\$3,848	469.2 %
2012	6,249	33,130	26,881	18.9	3,650	736.4
2014	9,329	32,177	22,847	29.0	3,137	728.4
2016	9,887	37,824	27,938	26.1	2,989	934.6
2018	13,264	31,578	18,314	42.0	2,521	726.5
2020	14,373	15,819	1,445	90.9	1,856	77.9
2022	16,130	12,538	(3,592)	128.6	1,531	(234.6)

2020 includes a benefit change effective after June 30, 2020 and prior to June 30, 2021 where the retiree health plan options mirror those available to active members.

Comments and Recommendations

Comment A: The Actuarially Determined Contribution (ADC) and Actuarial Accrued Liability (AAL) have decreased from the last valuation. Reasons for the decrease include, but are not limited to:

- More favorable premium experience than projected. A large premium gain is consistent with the current health care environment. Large year-to-year reductions in premiums are likely temporary; and
- The bulk of retirees moved to the \$5/\$40/\$80 prescription co-pay plans

Partially offsetting these factors is favorable experience attributable to, but not limited to the following assumption change:

- Resetting the initial healthcare cost trend rate.

The impact of the assumption change noted above increased liability by approximately \$400,000.

Comment B: One of the key assumptions used in any valuation of the cost of postemployment benefits is the rate of return on plan assets. Higher assumed investment returns will result in a lower ADC. Lower assumed returns will result in a higher ADC. Since the City has established a trend of contributing a greater percentage of the prior ADCs for several years, we have calculated the liability and the resulting ADC using an assumed long-term rate of investment return of 6.5% beginning with the June 30, 2014 valuation. This assumes continuation of the trend for the City toward contributing 100% of the ADC in the future.

Comment C: The health care inflation assumption was updated. See report Section D for a further discussion of the actuarial assumptions used.

Comment D: For the fiscal year ending June 30, 2024 and June 30, 2025, the estimated claims and/or premiums paid by the employer on behalf of retirees (including the effect of the implicit rate subsidy) is \$903,475 and \$975,959, respectively.

Comment E: The contribution rates shown include amortization of the unfunded actuarial accrued liability over 18 years for non-Court/DPS members, and 14 years for Court/DPS members beginning July 1, 2023. A shorter amortization period would result in a higher ADC.

Comment F: All groups are now closed to new entrants; therefore, their unfunded actuarial accrued liability is amortized as a level dollar amount.

Recommendation 1: We recommend a review of the assumed long-term rate of investment return.

Recommendation 2: The assets in the trust continue to grow. Our understanding is that the employer continues to pay benefits outside of the trust on a pay-go basis. The payment of these benefits does not appear in the assets provided to us either as benefit payment or as an employer contribution. We recommend a review of how benefits are paid out of the trust and how employer contributions are billed. We understand that this recommendation is being considered.

Recommendation 3: We recommend the Board consider the use of an asset smoothing method.



SECTION B

RETIREE PREMIUM RATE DEVELOPMENT

Retiree Premium Rate Development

Initial premium rates were developed for the two classes of retirees (pre-65 and post-65). The rates were calculated by using actual paid claims and exposure data for the period of January 2020 to June 2022, adjusted for catastrophic claims, plus the load for administration, network access fees, and stop loss premiums. The Self-insured Medical and prescription drug data were provided by the City of Madison Heights. The Medical data was analyzed for the pre-65 and post-65 participants separately since Medicare is available for the post-65 participants and has a significant impact on the claim experience. Furthermore, since the prescription drug claims and the medical claims exhibit different trends and claim payment patterns, we analyzed these claims separately as well. There are very few post-65 members that are using the self-insured program since most have chosen the Medicare Advantage program; therefore, since the self-insured data is not credible for this portion of the benefit program we used strictly the MA rates.

Age graded and sex distinct premiums are utilized by this valuation. The premiums developed by the preceding process are appropriate for the unique age and sex distribution currently existing. Over the future years covered by this valuation, the age and sex distribution will most likely change. Therefore, our process “distributes” the average premium over all age/sex combinations and assigns a unique premium for each combination. The age/sex specific premiums more accurately reflect the health care utilization and cost at that age.

Retiree Premium Rate Development (Concluded)

The combined monthly one-person medical and drug premiums at select ages are shown below:

Future Retirees

For Those Not Eligible for Medicare

Age		Male		Female
45	\$	651.56	\$	899.24
50		848.40		1,045.15
55		1,116.40		1,218.94
60		1,441.89		1,419.77

Current Retirees

For Those Not Eligible for Medicare

Age		Male		Female
45	\$	661.36	\$	912.77
50		861.17		1,060.87
55		1,133.20		1,237.28
60		1,463.59		1,441.13

For Those Eligible for Medicare

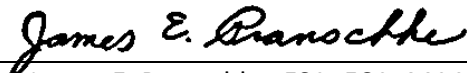
Age		Male		Female
65	\$	256.27	\$	241.71
70		279.17		270.14
75		299.83		292.57

Actuarial Disclosures

The premium rates used in this valuation were developed using proprietary Excel models which in James E. Pranschke's professional judgment provide initial projected costs which are consistent with the purposes of the valuation. We perform tests to ensure that the models, in their entirety, reasonably represent that which is intended to be modeled.

Aging factors used in the premium development models were developed based on information and data from a 2013 study commissioned by the Society of Actuaries entitled "Health Care Costs – From Birth to Death."

James E. Pranschke is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to certify the per capita retiree health care rates shown above.



James E. Pranschke, FSA, FCA, MAAA



Health Cost Trend Assumption

Background

Retiree health care valuations require an assumption about how the health costs that the plan is absorbing will change over the years. This assumption includes more than just “health inflation.” It includes the impact of:

- The introduction of new procedures and medications and how they are priced.
- The utilization of services and products by covered retirees and their dependents and how that utilization changes over the years.

Retiree health valuations use a health cost trend assumption that changes over the years. The near-term rates reflect the fact that currently employers are seeing sharp increases in the cost of health goods and services. However, they do not anticipate that health costs will increase at these rates indefinitely. To do so would be to ignore the real-world implications of this sort of projection. For example, if health costs represent 20% of disposable income initially and grow at 12% per year for the next 10 years while disposable income increases at 4% would imply that after 10 years health would absorb 40% of our disposable income. Over a 20-year period, these rates of increase would imply that at the end of the 20-year period, health costs would absorb almost 80% of our disposable income.

The valuation attempts to deal with the future by recognizing that it is more reasonable to assume that current trends will have to change in the future before we reach the absurd situation of having little or no money to spend on things that are not related to health (including food, shelter, clothes, etc.). Health costs are assumed to increase at rates greater than general inflation for a temporary “cooling off” period. At the end of the cooling off period, health costs are assumed to increase in line with general inflation. As years elapse, there are fewer remaining years in the cooling off period. A summary of the rates of medical inflation used in this valuation of the program are shown on the next page. Retirees pay the premium rates shown at the bottom of the prior page. These premiums were assumed to increase with medical inflation. The assumed rate of increase is shown below:

Year	Medical and Prescription Drugs	
	Pre-65	Post-65
2023	7.50 %	6.25 %
2024	7.25	6.00
2025	6.75	5.75
2026	6.50	5.50
2027	6.00	5.25
2028	5.75	5.00
2029	5.25	4.75
2030	5.00	4.50
2031	4.50	4.25
2032	4.25	4.00
2033	3.75	3.75
2034	3.50	3.50
2035	3.50	3.50
2036	3.50	3.50
2037	3.50	3.50
2038 and later	3.50	3.50

SECTION C

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA

City of Madison Heights General Employees' Retiree Health Care Trust Summary of Benefits as of June 30, 2022

Plan Participants

Employees of the City of Madison Heights General Employees' Retiree Health Care Trust are eligible to receive retiree health care benefits.

Normal Retirement Benefits

Eligibility conditions for retiree health care benefits under a normal retirement are as follows:

Non-Union and Department Heads Members: Age 55 with 25 years of service. Employees hired after 9/28/2009 will not have retiree health care benefits. Instead, they will have a Health Care Savings Plan (established through MERS) and will purchase their own insurance.

Supervisors and Assistants Members: Age 55 with 25 years of service. Employees hired after 8/24/2009 will not have retiree health care benefits. Instead, they will have a Health Care Savings Plan (established through MERS) and will purchase their own insurance.

MEU Members: Age 55 with 25 years of service. Employees hired after 5/27/2009 will not have retiree health care benefits. Instead, they will have a Health Care Savings Plan (established through MERS) and will purchase their own insurance.

Court Members: Age 55 with 25 years of service. Employees hired after 10/1/2006 will not have retiree health care benefits. Instead, they will have a Health Care Savings Plan (established through MERS) and will purchase their own insurance.

DPS Members: Age 55 with 25 years of service. Employees hired after 7/1/2005 will not have retiree health care benefits. Instead, they will have a Health Care Savings Plan (established through MERS) and will purchase their own insurance.

Dispatch Members: Age 55 with 25 years of service. Employees hired after 7/1/2009 will not have retiree health care benefits. Instead, they will have a Health Care Savings Plan (established through MERS) and will purchase their own insurance.

Deferred Retirement Benefits

The City of Madison Heights does not provide deferred retiree health care coverage for members terminating employment with less than 25 years of service.



City of Madison Heights General Employees' Retiree Health Care Trust Summary of Benefits as of June 30, 2022

Duty Disability Retirement Benefits

Eligibility conditions for retiree health care benefits under a duty disability retirement are as follows:

Non-Union & Department Heads, Court and Dispatch Members: No age or service restrictions. Benefits commence immediately.

MEU and DPS Members: Health insurance continues for 18 months from date of injury.

Supervisors and Assistants: Health insurance continues for two years from date of injury.

Non-Duty Disability Retirement Benefits

City of Madison Heights General Employees' Retiree Health Care Trust does not provide retiree health care coverage for members retiring under non-duty disability retirement with less than 25 years.

Duty Death-in-Service Retirement Benefits

Eligibility conditions for retiree health care benefits under a duty death retirement are as follows:

All Members: No age or service restrictions. Benefits commence immediately.

Non-Duty Death-in-Service Retirement Benefits

Eligibility conditions for retiree health care benefits under a non-duty death retirement are as follows:

All Members: 25 years of service. Benefits commence immediately.

Benefits for Retired Employees

All Members:

Member: City pays 100% of the premiums for base plan. **Medical and prescription benefits will mirror active employees.**

Non-Union & Department Heads, Court and Dispatch Spouse: City pays 100% of premiums for retiree's spouse at time of retirement. Coverage continues to surviving spouses of deceased retirees. (Limited to spouse at time of retirement.) Medical and prescription benefits will mirror active employees.

Supervisors & Assistants, MEU and DPS Spouse: City continues to pay 100% of premiums for the City plan. Medical and prescription benefits will mirror active employees.



City of Madison Heights General Employees' Retiree Health Care Trust Summary of Benefits as of June 30, 2022

With the exception of Court and Dispatch members, all members who retire after March 2, 2019 are eligible to receive retiree health care benefits until Medicare age, after which they shall be entitled to a \$300 monthly stipend for them and their eligible spouse for purchasing Medicare Supplemental insurance, at which point all city obligations shall cease.

Court and Dispatch members who retire on or after July 1, 2019 are eligible to receive retiree health care benefits until Medicare age, after which they shall be entitled to a \$300 monthly stipend for them and their eligible spouse for purchasing Medicare Supplemental insurance, at which point all city obligations shall cease.

If retiree obtains employment from an employer who provides medical coverage, the member, spouse and eligible dependent are not covered by City's coverage where applicable for duration of employment.

Non-Medicare and Medicare-Eligible Provisions

All retirees are required to enroll in Medicare Part A and B once eligible.

Life Insurance Coverage

City provides life insurance coverage of retirees in the amount of \$10,000.

This is a brief summary of the City of Madison Heights General Employees' Retiree Health Care Trust provisions. In the event that any description contained herein differs from the actual eligibility or benefit, the appropriate employee contract or governing document will prevail.



Active Members as of June 30, 2022 by Attained Age and Years of Service

Non-Union/Department Heads

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
30-34									
35-39									
40-44									
45-49				1				1	\$ 133,529
50-54					1			2	224,208
55-59									
60-64						2	1	3	176,122
65 & Over									
Totals				1	1	2	2	6	\$ 533,859

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 56.8 Years
Service: 26.6 Years
Annual Pay: \$88,977

Supervisors & Assistants

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
30-34									
35-39									
40-44				1				1	\$ 60,423
45-49									
50-54									
55-59									
60-64									
65 & Over									
Totals				1				1	\$ 60,423

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 41.5 Years
Service: 19.5 Years
Annual Pay: \$60,423



Active Members as of June 30, 2022 by Attained Age and Years of Service

MEU

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
30-34									
35-39									
40-44				1				1	\$ 47,259
45-49					1			1	47,259
50-54						1	1	2	102,811
55-59					1	1		2	95,525
60-64						1		1	47,259
65 & Over							1	1	45,481
Totals				1	2	3	2	8	\$ 385,594

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 55.5 Years
Service: 28.9 Years
Annual Pay: \$48,199

Dispatchers

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
30-34									
35-39									
40-44									
45-49					2			2	\$ 89,792
50-54						1		1	44,896
55-59				1				1	44,896
60-64									
65 & Over									
Totals				1	2	1		4	\$ 179,584

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 51.4 Years
Service: 23.0 Years
Annual Pay: \$44,896



Active Members as of June 30, 2022 by Attained Age and Years of Service

Court

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
30-34									
35-39									
40-44									
45-49						1		1	\$ 53,383
50-54									
55-59									
60-64									
65 & Over									
Totals						1		1	\$ 53,383

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 46.6 Years
Service: 27.1 Years
Annual Pay: \$53,383

DPS

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
30-34									
35-39									
40-44				1	1			2	\$ 107,495
45-49									
50-54						1	1	2	104,460
55-59				1				1	52,787
60-64					1			1	53,683
65 & Over									
Totals				2	2	1	1	6	\$ 318,425

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 51.0 Years
Service: 23.7 Years
Annual Pay: \$53,071



Retired Members as of June 30, 2022 by Attained Age

Dept. Heads/Non-Union

Attained Age	Number of Retirees		
	Male	Female	Total
Under 55	0	0	0
55-59	2	0	2
60-64	1	1	2
65 & Over	3	2	5
Totals	6	3	9

Supervisors

Attained Age	Number of Retirees		
	Male	Female	Total
Under 55	0	1	1
55-59	1	0	1
60-64	1	0	1
65 & Over	6	3	9
Totals	8	4	12

Municipal

Attained Age	Number of Retirees		
	Male	Female	Total
Under 55	0	1	1
55-59	0	0	0
60-64	0	1	1
65 & Over	1	10	11
Totals	1	12	13

Courthouse

Attained Age	Number of Retirees		
	Male	Female	Total
Under 55	0	0	0
55-59	0	1	1
60-64	0	0	0
65 & Over	1	0	1
Totals	1	1	2

DPS

Attained Age	Number of Retirees		
	Male	Female	Total
Under 55	0	0	0
55-59	2	0	2
60-64	5	1	6
65 & Over	20	2	22
Totals	27	3	30

Five members that are listed as having opted-out of coverage are not included above. They are assumed to be receiving retiree life insurance only.



Statement of Fiduciary Net Position as of June 30,

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Assets			
Cash and Deposits	\$ 126,696	\$ 0	\$ 0
Receivables			
Accounts Receivable - Sale of Investments	\$ 0	\$ 0	\$ 0
Accrued Interest and Other Dividends	270	23,532	13
Contributions	0	0	0
Accounts Receivable - Other	0	0	0
Total Receivables	<u>\$ 270</u>	<u>\$ 23,532</u>	<u>\$ 13</u>
Investments			
Investment Fund	\$ 0	\$ 0	\$ 0
ETF's	8,777,900	11,650,069	8,737,573
Mutual Funds	5,966,193	6,728,339	5,635,749
Other	1,259,165	0	0
Total Investments	<u>\$ 16,003,258</u>	<u>\$ 18,387,408</u>	<u>\$ 14,373,322</u>
Total Assets	<u>\$ 16,130,224</u>	<u>\$ 18,410,940</u>	<u>\$ 14,373,335</u>
Liabilities			
Payables			
Accounts Payable	\$ 0	\$ 0	\$ 0
Accrued Expenses	0	0	0
Accounts Payable - Other	0	0	0
Total Liabilities	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 0</u>
Net Position Restricted for OPEB	<u>\$ 16,130,224</u>	<u>\$ 18,410,940</u>	<u>\$ 14,373,335</u>

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

	2022	2021	2020
Additions			
Contributions			
Employer	\$ 0	\$ 135,530	\$ 118,949
Nonemployer Contributing Entities	0	0	0
Active Employees	0	0	0
Other	0	0	0
Total Contributions	<u>\$ 0</u>	<u>\$ 135,530</u>	<u>\$ 118,949</u>
Investment Income			
Net Appreciation in Fair Value of Investments	\$ (2,659,024)	\$ 3,606,990	\$ 163,047
Interest and Dividends	665,322	336,920	320,208
Less Investment Expense	0	0	0
Net Investment Income	<u>\$ (1,993,702)</u>	<u>\$ 3,943,910</u>	<u>\$ 483,255</u>
Other	\$ 0	\$ 0	\$ 0
Total Additions	<u>\$ (1,993,702)</u>	<u>\$ 4,079,440</u>	<u>\$ 602,204</u>
Deductions			
Benefit Payments	\$ 250,000	\$ 0	\$ 0
OPEB Plan Administrative Expense	37,014	41,835	35,345
Other	0	0	0
Total Deductions	<u>\$ 287,014</u>	<u>\$ 41,835</u>	<u>\$ 35,345</u>
Net Increase in Net Position	<u>\$ (2,280,716)</u>	<u>\$ 4,037,605</u>	<u>\$ 566,859</u>
Net Position Restricted for OPEB			
Beginning of Year	<u>\$ 18,410,940</u>	<u>\$ 14,373,335</u>	<u>\$ 13,806,476</u>
End of Year	<u>\$ 16,130,224</u>	<u>\$ 18,410,940</u>	<u>\$ 14,373,335</u>

SECTION D

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

Valuation Methods

Actuarial Cost Method. Normal cost and the allocation of benefit values between service rendered before and after the valuation date was 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. The Unfunded Actuarial Accrued Liabilities (UAAL) were determined using the funding value of assets and actuarial accrued liability calculated as of the valuation date and projected 12 months to the beginning of the fiscal year reflecting anticipated contributions.

Non-Union, MEU, Department Heads and Supervisors & Assistants - The UAAL amortization payment is the level dollar required to fully amortize the UAAL over a closed 18-year period beginning on the first day of the fiscal year for which the contributions in this report have been calculated.

Court and DPS - The UAAL amortization payment is the level dollar required to fully amortize the UAAL over a closed 14-year period beginning on the first day of the fiscal year for which the contributions in this report have been calculated.

The following amortization factors were used in developing the Annual Required Contribution for the fiscal years shown:

	All Other Groups		Court and DPS	
	Fiscal Year Ending June 30,		Fiscal Year Ending June 30,	
	2024	2025	2024	2025
Years Remaining	18	17	14	13
Amortization Factor	10.76796	10.43572	9.30372	8.87630

Actuarial Assumptions

All assumptions are expectations of future experience, not market measures. The rationale for the rates of merit and longevity salary increase, base wage inflation, rates of mortality, normal retirement rates, early retirement rates, rates of separation from active membership, disability rates, and marriage assumption used in this valuation is included in the MERS five-year experience study for the period January 1, 2014 to December 31, 2018, issued February 14, 2020. These assumptions were first used in the June 30, 2020 OPEB Funding Valuation.

Rate of Investment Return. 6.5% per year, compounded annually, net of investment and administrative expenses. This assumption is used to equate the value of payments due at different points in time.

Rates of price inflation are not specifically used for this valuation. However, a rate of price inflation of 2.50% would be consistent with other assumptions in this report.

The rates of salary increase used for individual members are in accordance with the following table.

Percentage Increase in Salary at Sample Years of Service							
Sample Years of Service	Base (Wage Inflation)	Merit and Longevity	Total Percentage Increase in Pay	Sample Years of Service	Base (Wage Inflation)	Merit and Longevity	Total Percentage Increase in Pay
0	3.00 %	6.70 %	9.70 %	21	3.00 %	0.60 %	3.60 %
1	3.00	4.60	7.60	22	3.00	0.50	3.50
2	3.00	3.20	6.20	23	3.00	0.40	3.40
3	3.00	2.70	5.70	24	3.00	0.40	3.40
4	3.00	2.30	5.30	25	3.00	0.40	3.40
5	3.00	1.90	4.90	26	3.00	0.30	3.30
6	3.00	1.70	4.70	27	3.00	0.30	3.30
7	3.00	1.30	4.30	28	3.00	0.30	3.30
8	3.00	1.20	4.20	29	3.00	0.30	3.30
9	3.00	1.20	4.20	30	3.00	0.20	3.20
10	3.00	1.10	4.10	31	3.00	0.20	3.20
11	3.00	1.10	4.10	32	3.00	0.20	3.20
12	3.00	0.90	3.90	33	3.00	0.20	3.20
13	3.00	0.90	3.90	34	3.00	0.20	3.20
14	3.00	0.80	3.80	35	3.00	0.10	3.10
15	3.00	0.70	3.70	36	3.00	0.10	3.10
16	3.00	0.70	3.70	37	3.00	0.10	3.10
17	3.00	0.60	3.60	38	3.00	0.10	3.10
18	3.00	0.60	3.60	39	3.00	0.10	3.10
19	3.00	0.60	3.60	40 and Over	3.00	0.00	3.00
20	3.00	0.60	3.60				

Actuarial Assumptions (Continued)

The rates of mortality used for individual members are based upon the sex distinct Pub-2010 tables, as published by the Society of Actuaries, and include a margin for future mortality improvements projected using a fully generational improvement scale. The tables used were as follows:

- **Healthy Pre-Retirement Mortality:** Sex distinct Pub-2010 General Employees table without adjustment. The base year is 2010 and future mortality improvements are assumed each year using scale MP-2019, as published by the Society of Actuaries. Ninety percent (90%) of active member deaths are assumed to be non-duty deaths and 10% of the deaths are assumed to be duty related.
- **Healthy Post-Retirement Mortality:** Sex distinct Pub-2010 General Healthy Retiree tables scaled by a factor of 106%. The base year is 2010 and future mortality improvements are assumed each year using scale MP-2019, as published by the Society of Actuaries.
- **Disability Retirement Mortality:** Sex distinct PubNS-2010 Disabled tables without adjustment. The base year is 2010 and future mortality improvements are assumed each year using scale MP-2019, as published by the Society of Actuaries.

Note that the Pub-2010 tables do not include rates at all ages. For purposes of selecting mortality rates that are not otherwise published, we use the corresponding Employee or Healthy Retiree rates as applicable.

The life expectancies and mortality rates projected for employees are shown below for selected ages, based on retirements in 2022. Retirements in future years will reflect improvements in life expectancy:

Age	Expected Years of Life Remaining		Mortality Rates	
	Male	Female	Male	Female
20	70.17	72.88	0.04%	0.01%
25	64.88	67.55	0.03	0.01
30	59.60	62.23	0.05	0.02
35	54.36	56.94	0.07	0.03
40	49.17	51.67	0.09	0.04
45	44.01	46.43	0.10	0.06
50	38.88	41.21	0.14	0.08
55	33.80	36.04	0.21	0.13
60	28.84	30.95	0.33	0.20
65	24.00	25.95	0.47	0.29
70	19.27	21.03	0.65	0.44
75	14.63	16.23	0.99	0.73
80	10.10	11.57	1.57	1.23
85	6.97	8.11	7.90	5.87
90	4.85	5.62	13.68	10.92

Actuarial Assumptions (Continued)

The life expectancies and mortality rates projected for non-disabled retirees are shown below for selected ages, based on retirements in 2022. Retirements in future years will reflect improvements in life expectancy:

Age	Expected Years of Life Remaining		Mortality Rates	
	Male	Female	Male	Female
20	66.94	70.24	0.04%	0.02%
25	61.57	64.84	0.04	0.01
30	56.20	59.44	0.05	0.02
35	50.89	54.07	0.07	0.03
40	45.61	48.73	0.09	0.05
45	40.36	43.42	0.11	0.06
50	35.15	38.13	0.30	0.22
55	30.27	33.16	0.44	0.31
60	25.57	28.30	0.67	0.43
65	21.09	23.58	0.97	0.63
70	16.85	19.05	1.50	1.01
75	12.93	14.81	2.55	1.79
80	9.49	11.01	4.58	3.30
85	6.68	7.81	8.38	6.22
90	4.62	5.37	14.50	11.58

The life expectancies and mortality rates projected for disabled retirees are shown below for selected ages, based on retirements in 2022. Retirements in future years will reflect improvements in life expectancy.

Age	Expected Years of Life Remaining		Mortality Rates	
	Male	Female	Male	Female
20	52.54	56.29	0.44%	0.26%
25	47.71	51.11	0.34	0.20
30	42.85	45.97	0.50	0.36
35	38.33	41.21	0.68	0.55
40	34.08	36.82	0.84	0.75
45	30.00	32.70	1.05	0.98
50	26.18	28.87	1.50	1.42
55	22.73	25.44	2.04	1.81
60	19.63	22.25	2.59	2.08
65	16.74	19.04	3.06	2.18
70	13.93	15.69	3.63	2.57
75	11.16	12.41	4.67	3.59
80	8.59	9.48	6.65	5.57
85	6.39	7.10	9.95	8.83
90	4.62	5.31	15.15	12.99

Actuarial Assumptions (Continued)

Retirement Rates

A schedule of retirement rates is used to measure the probability of eligible members retiring during the next year. Certain retirement service amounts (normal retirement) or age (early reduced pension retirement) may not apply, depending on the benefit age of first eligibility.

Normal Retirement – Unreduced Pension Benefit Service Based Retirement Rates

Sample Years of Service	Percent of Eligible Active Members Retiring within Next Year [#]	Sample Years of Service	Percent of Eligible Active Members Retiring within Next Year [#]
Under 5	15.00 %	23	26.00 %
5	15.00	24	30.00
6	15.00	25	34.00
7	15.00	26	25.00
8	15.00	27	25.00
9	15.00	28	25.00
10	20.00	29	25.00
11	20.00	30	25.00
12	20.00	31	28.00
13	20.00	32	28.00
14	20.00	33	28.00
15	20.00	34	28.00
16	20.00	35	25.00
17	20.00	36	25.00
18	20.00	37	25.00
19	20.00	38	25.00
20	20.00	39	25.00
21	22.00	40 and Over	25.00
22	24.00		

All members who reach eligibility for normal retirement pension benefits before reaching eligibility for retiree health benefits are assumed to retire at the rate of 3% per year during the period when they are not eligible for health.

Rates of retirement are set to 100% beginning at age 85.



Actuarial Assumptions (Continued)

Early Retirement - Reduced Pension Benefit Age Based Retirement Rates

Retirement Ages	Percent of Eligible Active Members Retiring within Next Year
50	4.00 %
51	4.00
52	4.00
53	4.00
54	4.00
55	4.00
56	4.00
57	4.00
58	4.00
59	4.00

In the case a member's eligibility for early reduced pension retirement precedes eligibility for OPEB retirement, the percent of eligible active members retiring within the next year is as described in the table above or 3%, whichever is smaller.

Actuarial Assumptions (Continued)

Rates of separation from active membership are used to estimate the number of employees at each age that are expected to terminate employment before qualifying for retirement benefits. The rates of separation from active membership do not apply to members eligible to retire, and do not include separation on account of death or disability. The assumed rates of separation applied in the current valuation are based on years of service and different rates apply to public safety and all other groups. Sample rates of separation from active employment are shown below.

Sample Years of Service	Percent of Active Members Withdrawing within the Next Year	
	Public Safety	All Others
0	13.90 %	23.40 %
1	11.60	19.50
2	9.40	15.80
3	7.40	12.50
4	6.10	10.30
5	4.90	8.30
6	4.30	7.20
7	3.90	6.60
8	3.60	6.00
9	3.40	5.70
10	3.20	5.40
11	3.10	5.20
12	2.80	4.70
13	2.70	4.50
14	2.50	4.20
15	2.40	4.00
16	2.30	3.90
17	2.20	3.70
18	2.00	3.40
19	1.90	3.20
20	1.80	3.10
21	1.80	3.00
22	1.70	2.80
23	1.70	2.80
24	1.60	2.70
25 and Over	1.50	2.60

Actuarial Assumptions (Concluded)

Disability Rates

Disability rates are used in the valuation to estimate the incidence of member disability in future years. The assumed rates of disablement at various ages are shown below:

Sample Ages	Percent Becoming Disabled within the Next Year
20	0.02 %
25	0.02
30	0.02
35	0.05
40	0.08
45	0.20
50	0.29
55	0.38
60	0.39
65	0.39

80% of the disabilities are assumed to be non-duty and 20% of the disabilities are assumed to be duty related.

Supplementary Information

Valuation Date	June 30, 2022
Actuarial Cost Method	Individual Entry Age
Amortization Method	
Non-Union, MEU, Department Heads and Supervisors & Assistants	Level Dollar Closed
Court and DPS	Level Dollar Closed
Remaining Amortization Periods	
Non-Union, MEU, Department Heads and Supervisors & Assistants	18 Years
Court and DPS	14 Years
Asset Valuation Method	Market Value
Actuarial Assumptions:	
Discount Rate	6.50% Per Year
Projected Salary Increases	3.00%
Valuation Health Care Cost Trend Rate	Pre-65: 7.50% in year 1, grading to 3.50% in year 12 Post-65: 6.25% in year 1, grading to 3.50% in year 12

Miscellaneous and Technical Assumptions

Decrement Operation:	Disability and withdrawal do not operate during retirement eligibility.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Future Service:	Members are assumed to earn 1.0 years of service in each future year.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed contribution in this report.
Marriage Assumption:	80% of males and 80% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.
Data Adjustments:	<p>It was assumed that one deferred member would elect two-person coverage upon eligibility.</p> <p>Retirees that are currently opting-out of benefits are assumed to continue opting out in the future.</p>
Medicare Coverage:	Assumed to be available for all covered employees on attainment of age 65. Disabled retirees were assumed to be eligible for Medicare coverage at age 65.
Election Percentage:	<p>It was assumed that 100% of eligible retirees will elect to receive retiree health care benefits through the City. Of those assumed to elect coverage, 80% were assumed to elect two-person coverage, if eligible. For those that elect two-person coverage, it was assumed that coverage would continue to the spouse upon death of the retiree, if eligible.</p> <p>For active employees who have opted-out of the City's active health care plan, it was assumed they would elect retiree health care coverage upon retiring.</p> <p>Active members who have chosen an HSA instead of city sponsored retiree health care have been excluded from the valuation.</p>

Glossary

Accrued Service - The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Accrued Liability - The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

Actuarial Assumptions - Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision 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 future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent - A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

Actuarial Present Value - The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization - Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Annual Required Contribution (ARC) - The ARC is the normal cost plus the portion of the unfunded actuarial accrued liability to be amortized in the current period. The ARC is an amount that is actuarially determined in accordance with the requirements so that, if paid on an ongoing basis, it would be expected to provide sufficient resources to fund both the normal cost for each year and the amortized unfunded liability.

Governmental Accounting Standards Board (GASB) - GASB is the private, nonpartisan, nonprofit organization that works to create and improve the rules U.S. state and local governments follow when accounting for their finances and reporting them to the public.

Medical Trend Rate (Health Care Inflation) - The increase in the cost of providing health care benefits over time. Trend includes such elements as pure price inflation, changes in utilization, advances in medical technology, and cost shifting.

Normal Cost - The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Glossary (Concluded)

Other Postemployment Employee Benefits (OPEB) - OPEB are postemployment benefits other than pensions. OPEB generally takes the form of health insurance and dental, vision, prescription drugs or other health care benefits.

Reserve Account - An account used to indicate that funds have been set aside for a specific purpose and is not generally available for other uses.

Unfunded Actuarial Accrued Liability - The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."

Valuation Assets - The value of current plan assets recognized for valuation purposes.



February 13, 2023

Ms. Linda A. Kunath
Finance Director/Treasurer
City of Madison Heights
300 West Thirteen Mile Road
Madison Heights, Michigan 48071

**Re: City of Madison Heights General
Employees' Retiree Health Care Trust**

Dear Ms. Kunath:

Enclosed is our report of the actuarial valuation of the City of Madison Heights General Employees' Retiree Health Care Trust.

Respectfully submitted,
Gabriel, Roeder, Smith & Company

A handwritten signature in black ink, appearing to read "Brad Lee Armstrong". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Brad Lee Armstrong, ASA, EA, FCA, MAAA

BLA:dj
Enclosures