

City of Grand Rapids Fire
Other Postemployment Benefits
Actuarial Valuation Report
June 30, 2021



Table of Contents

<u>Section</u>	<u>Page</u>	
	--	Cover Letter
	1	Executive Summary
A		Valuation Results
	1	Development of the Actuarially Determined Contributions
	2	Determination of Unfunded Actuarial Accrued Liability
	3	Illustrative Projections
	4	Comments
B		Retiree Premium Rate Development
	1	Retiree Premium Rate Development
C		Summary of Benefit Provisions and Valuation Data
	1	Summary of Benefits
	5	Active Member Demographic Data as of June 30, 2021
	6	Retired and Deferred Member Demographic Data as of June 30, 2021
	7	Reported Financial Information
	8	Development of Valuation Assets
D		Actuarial Cost Method and Actuarial Assumptions
	1	Valuation Methods
	2	Actuarial Assumptions
	7	Miscellaneous and Technical Assumptions
E		Supplementary Information
	1	Supplementary Information
Appendix	1	Glossary





November 22, 2021

Ms. Molly Clarin
Chief Financial Officer
City of Grand Rapids
300 Monroe Avenue, N.W.
Grand Rapids, Michigan 49503

**Re: City of Grand Rapids Fire OPEB Actuarial Valuation as of June 30, 2021
Actuarial Disclosures**

Dear Ms. Clarin:

The results of the June 30, 2021 Annual Actuarial Valuation of the Other Postemployment Benefits provided by the City of Grand Rapids for Fire Employees are presented in this report.

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

The purposes of the valuation are to measure the Plan's funding progress and to determine the employer contribution rate for the fiscal year ending June 30, 2023. 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, 2021. The valuation was based upon information furnished by the City, Blue Cross Blue Shield, and Advantage Benefits Group concerning retiree health care benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the City, Blue Cross Blue Shield, and Advantage Benefits Group.

This report was prepared using assumptions adopted by the City. All actuarial assumptions used in this report are reasonable for the purposes of this valuation. 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.

This report was prepared during the recent and still-developing COVID-19 pandemic, which is likely to influence demographic and economic experience, at least in the short term. Results in this report are developed based on available data without adjustment. We will continue to monitor these developments and their impact on the Other Postemployment Benefits Plan. Actual experience will be reflected in each subsequent report, as experience emerges.

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 Other Postemployment Benefits provided by the City of Grand Rapids for Fire Employees 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.


James D. Anderson, Abra D. Hill, and Michael D. Kosciuk 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 and Company


James D. Anderson, FSA, EA, FCA, MAAA


Abra D. Hill, ASA, FCA, MAAA


Michael D. Kosciuk, ASA, EA, ACA, MAAA

JDA/ADH/MDK:sc
C2482



EXECUTIVE SUMMARY

Executive Summary

Actuarially Determined Contribution

Please note that beginning with the fiscal year ending June 30, 2017, GASB Statement No. 43 was replaced by GASB Statement No. 74. Also, beginning with the fiscal year ending June 30, 2018, GASB Statement No. 45 will be replaced by GASB Statement No. 75. The report dated September 23, 2021 complies with the actuarial requirements of GASB Statements No. 74 and No. 75 for the fiscal year ending June 30, 2021.

We have calculated the Actuarially Determined Contribution for the fiscal year ending June 30, 2023 using an interest rate assumption of 5.0%. Below is a summary of the results.

The total Actuarially Determined Contribution (ADC) for the fiscal year ending June 30, 2023 was determined to be \$880,770 (\$682,518 for DB, \$198,252 for RHSA). The expected employer portion of the claims and premium amounts paid during the fiscal year ending June 30, 2023 are estimated to be \$2,089,250 for DB and \$2,676 for RHSA. 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 total present value of all benefits expected to be paid to current plan members as of June 30, 2021 is \$30,522,258 (\$27,663,977 for DB, \$2,858,281 for RHSA). The actuarial accrued liability, which is the portion of the \$30,522,258 attributable to service accrued by plan members as of June 30, 2021, is \$24,373,851 (\$23,869,315 for DB, \$504,536 for RHSA). The actuarial value of assets currently set aside for OPEB purposes as of June 30, 2021 are \$22,176,125. Assets are currently only allocated to the Defined Benefit portion of the plan. Thus, the Fire DB plan is 92.9% funded.

SECTION A

VALUATION RESULTS

Development of the Actuarially Determined Contributions for the Other Postemployment Benefits

Contributions for	Fire - Actuarially Determined Contribution		
	Defined Benefit ¹	RHSA ²	Total
Normal Cost			
Normal Retirement	\$ 356,221		
Termination Benefits	42,073		
Disability/Death-in-Service	<u>181,739</u>		
Total Normal Cost	\$ 580,033	\$ 155,470	\$ 735,503
Amortization of Unfunded Actuarial Accrued Liabilities (Amortized over 19 years)	\$ 102,485	\$ 42,782	\$ 145,267
Actuarially Determined Contribution for the Fiscal Year Ending June 30, 2023	\$ 682,518	\$ 198,252	\$ 880,770

¹ For City budgeting purposes related to the defined benefit plan.

² RHSA information reflects the ability of Defined Contribution RHSA participants to access the Health Care plan at reduced costs due to blended rates plus employer paid duty disability benefits.

The unfunded actuarial accrued liabilities were amortized as a level dollar amount over a closed period of 19 years beginning with the fiscal year ending June 30, 2023 and decreasing by 1 each year thereafter.

The assumptions used to calculate the results shown above include a 5.0% investment return rate.

Determination of Unfunded Actuarial Accrued Liability as of June 30, 2021

	Fire		
	Defined Benefit ¹	RHSA ²	Total
A. Present Value of Future Benefits			
1. Retirees and Beneficiaries	\$10,569,263	\$ 0	\$10,569,263
2. Vested Terminated Members	663,907	0	663,907
3. Active Members	<u>16,430,807</u>	<u>2,858,281</u>	<u>19,289,088</u>
Total Present Value of Future Benefits	\$27,663,977	\$2,858,281	\$30,522,258
B. Present Value of Future Employer Normal Costs	3,794,662	2,353,745	6,148,407
C. Actuarial Accrued Liability (A.-B.)	23,869,315	504,536	24,373,851
D. Actuarial Value of Assets	22,176,125	0	22,176,125
E. Unfunded Actuarial Accrued Liability (C.-D.)	\$ 1,693,190	\$ 504,536	\$ 2,197,726
F. Funded Ratio (D./C.)	92.9%	0.0%	91.0%

¹ For City budgeting purposes related to the defined benefit plan.

² RHSA information as required for GASB disclosure which reflects the ability of Defined Contribution RHSA participants to access the Health Care plan at reduced costs due to blended rates plus employer paid duty disability benefits.

Illustrative Projections as of June 30, 2021*

Year Ending June 30,	Asset Value BOY	Actuarially Determined Contribution	Health Care Benefits^	Investment Income	Asset Value EOY
2023	\$ 22,447,874	\$ 682,518	\$ 2,089,250	\$ 1,087,654	\$ 22,128,796
2024	22,128,796	622,007	2,177,506	1,068,027	21,641,324
2025	21,641,324	562,612	2,233,599	1,040,801	21,011,138
2026	21,011,138	511,396	2,365,197	1,004,777	20,162,114
2027	20,162,114	465,644	2,381,166	960,802	19,207,394
2028	19,207,394	420,390	2,347,037	912,791	18,193,538
2029	18,193,538	377,421	2,331,097	861,431	17,101,293
2030	17,101,293	346,928	2,444,281	803,270	15,807,210
2031	15,807,210	318,086	2,370,157	739,684	14,494,823
2032	14,494,823	294,124	2,244,197	676,584	13,221,334
2033	13,221,334	265,254	2,211,771	612,997	11,887,814
2034	11,887,814	236,228	2,062,820	549,283	10,610,505
2035	10,610,505	208,664	1,800,182	491,223	9,510,210
2036	9,510,210	183,426	1,738,068	437,118	8,392,686
2037	8,392,686	164,021	1,616,204	383,773	7,324,276
2038	7,324,276	145,772	1,443,197	334,174	6,361,025
2039	6,361,025	130,404	1,287,653	289,473	5,493,249
2040	5,493,249	119,896	1,175,933	248,584	4,685,796
2041	4,685,796	116,435	1,010,065	212,222	4,004,388
2042	4,004,388	10,122	1,006,766	175,607	3,183,351
2043	3,183,351	3,956	936,062	136,149	2,387,394
2044	2,387,394	-	752,866	100,778	1,735,306
2045	1,735,306	-	563,742	72,844	1,244,408
2046	1,244,408	-	412,665	52,030	883,773
2047	883,773	-	378,268	34,847	540,352
2048	540,352	-	267,842	20,403	292,913
2049	292,913	-	96,106	12,272	209,079
2050	209,079	-	104,370	7,877	112,586
2051	112,586	-	79,360	3,669	36,895
2052	36,895	-	37,806	911	-

* The projected results above are based on the existing Defined Benefit active, deferred, and retired members on the valuation date. Any benefits and/or contributions associated with Defined Contribution RHSA members, or members hired after the valuation date have not been included in these results.

^ Health Care Benefit payments were loaded to reflect children's coverage.

Unfunded actuarial accrued liabilities were amortized over a 19-year period.

Comments

Comment A: The Actuarially Determined Contributions (ADC) for the fiscal year ending June 30, 2023 decreased from the ADC determined in the previous valuation report. Factors contributing to this decrease include, but are not limited to:

- Favorable investment experience relative to expectations;
- Lower than expected claims experience; and
- Decreasing the load for child coverage from 7.0% to 4.0%.

Offsetting these factors are increases due to:

- Resetting the health care trend rates with an initial rate of 7.50%.

The combined impact of decreasing the load for child coverage and resetting the health care trend rates increased the liability by approximately \$224,000.

Comment B: Liabilities decreased this year for the reasons stated in Comment A. Premiums developed in the trend report published September 24, 2021 are based on three years of experience. This horizon is reasonable for the purpose of developing near-term premium rates, as these rates are re-evaluated each year. Actuarial funding and accounting valuations serve a different purpose relating to long term stability and funding of the Health Care fund over a much longer time horizon. Due to this difference in time horizons, unexpected changes in the per capita claims will be magnified in the actuarial funding and accounting valuations. If claims costs increase unexpectedly in future years, significant increases in liabilities are possible.

Comment C: One of the key assumptions used in any valuation of the cost of postemployment benefits is the long-term rate of investment return on the plan assets that will be used to pay plan benefits. The June 30, 2021 valuation investment return assumption is 5.0%, as requested by the City.

Comment D: The contribution rates shown include amortization of the unfunded actuarial accrued liability over a closed period of 19 years beginning with the fiscal year ending June 30, 2023.

Comment E: The cost of health care coverage for the children of retirees has increased since the last measurement. A 4.0% load was applied to all health care liabilities and projections of benefits paid to value the additional cost of children's coverage.

Comment F: Projections presented in this report will differ from those provided in the Trend Report dated September 24, 2021 due to:

- Age-based projection methodology used in this report versus non-age-based projections used in the Trend Report;
- Data variances;
- Projected cash flows in this report are net of retiree contributions; and
- The valuation year starts July 1st while the rating year (for Trend Report purposes) starts January 1st.

Comments

Comment G: 100% of future eligible RHSA retirees were assumed to participate in the City of Grand Rapids Retiree Health Care Plan. The ADC for the RHSA was provided for GASB reporting purposes. The City of Grand Rapids decides whether to pre-fund the RHSA portion of the ADC, if at all. RHSA balances were not provided, and have not been used to offset benefits for future Duty Disability Retirements.

Comment H: The GASB issued Statement Nos. 74 and 75 for OPEB valuations. GASB Statement No. 74 for the plan OPEB disclosures is effective for fiscal years beginning after June 15, 2016. GASB Statement No. 75 for employer OPEB disclosures is effective for employer fiscal years beginning after June 15, 2017. The GASB implementation guide for Statements No. 74 and No. 75 provides additional clarification related to the implementation of these Statements. The City has complied with GASB Statements No. 74 and No. 75 (please see the report dated September 23, 2021). The basis for the June 30, 2022 GASB Statement No. 74 and GASB Statement No. 75 information will be this valuation (as of June 30, 2021), where roll-forward techniques will be applied.

Comment I: The calculations within this report have been performed incorporating \$22,176,125 in retiree health valuation (or “smoothed”) assets. We understand from the plan sponsor that market value assets totaling \$25,300,286 reside in a qualifying trust.

Comment J: Unless otherwise indicated, a funded status measurement presented in this report is based upon the actuarial accrued liability and the actuarial value of assets. Unless otherwise indicated, with regards to any funded status measurements presented in this report:

- The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan’s benefit obligations;
- A funded status measurement in this report of 100% is not synonymous with no required future contributions. If the funded status were 100%, the Plan would still require future normal cost contributions (i.e., contributions to cover the cost of the active membership accruing an additional year of service credit); and
- The measure is inappropriate for assessing the need for or the amount of future employer contributions.

Comment K: Michigan Public Act 202 of 2017 created new reporting and other requirements for local units of government. The information needed to satisfy PA 202 reporting requirements was supplied in the GASB Statement Nos. 74/75 report issued September 23, 2021.

SECTION B

RETIREE PREMIUM RATE DEVELOPMENT

Retiree Premium Rate Development

The initial per capita health care costs are an important part of a retiree health valuation. The per capita health care costs used in this valuation are based on analysis performed in connection with the 2021 Trend Report prepared for the City dated September 24, 2021. The following process is used to determine per capita health costs for the valuation from the results provided in the Trend Report:

- The pre-65 retiree only “2022 Calculated Premium Rates” developed on page 19 of the 2022 Trend Report serve as the basis of pre-65 per capita costs used in the valuation. The per contract rates are converted to per member rates and then converted to age-graded rates.
- Beginning in 2019 the foundation of the participants contribution changed to be based on a percentage of the blended (active and pre-65 retiree) tier rate but since no experience is available under this new scheme and to be conservative, the 2022 overall blended (pre-65 retiree and active composite rate) implemented rates (page 20 of the Trend Report) serve as the basis for pre-65 retiree contributions.
- The post-65 retirees pay 100% of the true cost developed on page 20 (2022 Implemented Premium Rates).

Please see the 2022 Trend Report for other important details regarding the rate setting process. A general description of the process follows.

Background

Eligible City retirees (and eligible spouses) receive benefits from the self-insured plan. For Non-Medicare retirees, there is one benefit option and for Medicare retirees, there is a choice of four options with the same medical benefits but differing drug copays.

Rate Development

For the self-insured medical plans and prescription drugs plans, initial per capita costs were developed separately for pre-65 and post-65 retirees using claims experience from July 2019 to June 2021 supplied by Advantage Benefits Group in conjunction with exposure data for the retired members of the health care program. These claims were projected on an incurred claim basis, adjusted for plan design changes, and loaded for administrative expenses. Due to unusual claim levels as a result of the coronavirus pandemic in 2020 and 2021, claims for April 2020 through June 2021 were modified.

The initial medical and drug premium rates used in the valuation are a weighted average cost of the 2-year experience period to smooth out any large year to year fluctuations.

Age graded and sex distinct per capita costs are utilized by this valuation. The initial costs developed 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. This process more accurately reflects health care costs in the retired population over the projection period.



Retiree Premium Rate Development

The table below shows the combined medical and prescription drug one-person monthly per capita costs at select ages.

Current and Future Retirees				
For Those Not Eligible for Medicare				
Age		Male		Female
45	\$	468.21	\$	646.20
50		609.67		751.05
55		802.25		875.94
60		1,036.15		1,020.26

The dental and vision per capita costs used in this valuation of the plan were not “age graded” since these claims do not vary significantly by age. The monthly dental per capita cost used in this valuation is \$47.06 for single coverage and \$91.76 for two-person or family coverage per month. The monthly vision per capita cost used in this valuation is \$20.72 for single coverage and \$40.40 for two-person or family coverage per month.

Retiree Premium Rate Development

Health Care Cost Trend Assumption

The health care cost trend rate is the rate of change in per capita health care claims over time as a result of factors such as medical inflation, utilization of health care services, plan design, and technological improvements. It is a crucial economic assumption that is required for measuring retiree health care benefit obligations.

Retiree health care valuations use a health care cost trend assumption (trend vector) that changes over the years. The trend vector used in this valuation begins with a near-term trend assumption and declines over a time to an ultimate trend rate. The near-term rates reflect the increases in the current cost of health care goods and services. The process of trending down to a lower ultimate trend relies on the theory that premiums will moderate over the long term, otherwise the health care sector would eventually consume the entire GDP. It is on this basis that we project premium rate increases will continue to exceed wage inflation for the next twelve years, but by less each year until leveling off at an ultimate rate, assumed to be 3.50% in this valuation.

While experience is often the best starting point for future costs, GRS does not rely on a group's experience in setting the near-term trend assumptions since trends vary significantly from year to year and are not credible for most groups. Therefore, professional judgment, trends from GRS' book of business and industry benchmarks (e.g., trend reports from various Pharmacy Benefit Management (PBM) organizations and national health care benefit consulting firms) are used in conjunction with a group's historical experience to establish the trend assumptions.

Health care trend rates used in the valuation were as shown below:

Year	Medical and Prescription Drugs	Dental	Vision
2022	7.50 %	3.50 %	3.50 %
2023	7.25	3.50	3.50
2024	6.75	3.50	3.50
2025	6.50	3.50	3.50
2026	6.00	3.50	3.50
2027	5.75	3.50	3.50
2028	5.25	3.50	3.50
2029	5.00	3.50	3.50
2030	4.50	3.50	3.50
2031	4.25	3.50	3.50
2032	3.75	3.50	3.50
2033 & Later	3.50	3.50	3.50

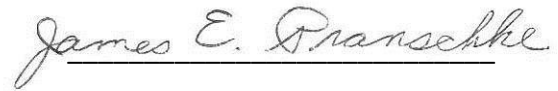
Retiree Premium Rate Development

Actuarial Disclosures

The premium rates used in this valuation were developed using the proprietary Excel models which in James E. Pranschke's professional judgment provide the 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 the 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

SECTION C

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA

City of Grand Rapids Fire Retiree Health Care Plan

Defined Benefit Health Care

Summary of Benefits as of June 30, 2021

Plan Participants

Fire and IAFF members of the City of Grand Rapids Retiree Health Care Plan are eligible to receive retiree health care benefits. The City covers up to 100% of retiree health care coverage up to age 65.

Benefit Amount

Defined Benefit Retiree Health covers up to 100% of retiree health care coverage up to age 65 based on an accrual schedule. As of 9/12/2011, future retirees will pay a minimum of 20% of BLENDED active/pre-65 retiree cost per contract. This is applied before the accrual schedule shown below. Active employees with less than 10 years are no longer eligible for the Defined Benefit plan.

Retiree Health Care Blended Composite Premium Sharing

Years	Months	Contract	City	Blended	Premium
		City%	Maximum	City%	EE%
10	120	40%	80%	32.0%	68.0%
11	132	44%	80%	35.2%	64.8%
12	144	48%	80%	38.4%	61.6%
13	156	52%	80%	41.6%	58.4%
14	168	56%	80%	44.8%	55.2%
15	180	60%	80%	48.0%	52.0%
16	192	64%	80%	51.2%	48.8%
17	204	68%	80%	54.4%	45.6%
18	216	72%	80%	57.6%	42.4%
19	228	76%	80%	60.8%	39.2%
20	240	80%	80%	64.0%	36.0%
21	252	84%	80%	67.2%	32.8%
22	264	88%	80%	70.4%	29.6%
23	276	92%	80%	73.6%	26.4%
24	288	96%	80%	76.8%	23.2%
25	300	100%	80%	80.0%	20.0%
Age 55 & 10 years svc.		100%	80%	80.0%	20.0%
Disability Retirement		100%	80%	80.0%	20.0%



City of Grand Rapids Fire Retiree Health Care Plan

Defined Benefit Health Care

Summary of Benefits as of June 30, 2021

Normal Retirement Eligibility

Age 55 with 10 years. Firefighter members may also retire at the age their service reaches the pension service credit limit.

Deferred Retirement Benefits

Deferred retiree health care is available to terminated Firefighter members with 10 or more years of service. Deferred benefits begin at age 55.

Duty/Non-Duty Death-in-Service Retirement Benefits

No age or service requirement. Benefits are immediate.

Duty/Non-Duty Disabled Retirement Benefits

No age or service requirement. Benefits commence immediately for qualified disabled member.

Benefits for Spouses of Retired Employees

Spouses of retired employees are eligible to receive health care benefits as long as the retiree is eligible. Coverage continues to surviving spouses of deceased retirees until the earlier of when retiree would have reached age 65 or when the spouse reaches age 65.

Medicare-Eligible Provisions

Retirees are required to enroll in Medicare once eligible. Retiree is responsible for paying the full premium for retiree Medicare coverage offered through the City.

Dental/Vision Coverage

Same as Retiree Health Care Eligibility Conditions.

Life Insurance Coverage

The City does not provide life insurance for retirees.

Opt-Out

The City does not provide Opt-Out payments or payment in lieu of retiree health care coverage for retirees.

Other Employment and Compensation

A retiree, spouse or other dependent who has coverage from an employer who provides medical coverage should coordinate benefits, making the City's coverage secondary.

This is a brief summary of the City of Grand Rapids Retiree Health Care Plan 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.



City of Grand Rapids Fire Retiree Health Care Plan

RHSA Members

Summary of Benefits as of June 30, 2021

Plan Participants

Fire and IAFF members participating in RHSA through the City of Grand Rapids are eligible to purchase retiree health care benefits until Medicare eligible.

Benefit Amount

Defined Contribution RHSA members can purchase retiree health care coverage through the City by paying the full blended (active/pre-65 retiree) premium. For Duty Death-In-service retirements and Duty Disability retirements, after RHSA is exhausted, the City will resume paying the premiums less any applicable premium sharing amount until such time as the covered person would have reached age 65.

Normal Retirement Eligibility

Age 55 with 10 years. Firefighter members may also retire at the age their service reaches the pension service credit limit.

Deferred Retirement Benefits

Retiree health care is not available to deferred retirees whose coverage ceases during deferral period. RHSA members can purchase retiree health care coverage through the City by paying the full blended (active/pre-65 retiree) premium.

Duty Death-in-Service Retirement Benefits

No age or service requirement for duty death-in-service. Benefits are immediate. Premiums shall be first paid to the City from funds in the employee's RHSA account if the surviving spouse and/or eligible dependents wish to continue to receive retiree health care. When RHSA is exhausted, the City shall resume paying the premiums, less any applicable premium sharing amount until such time as the covered person would have reached age 65.

Non-Duty Death-in-Service Retirement Benefits

No age or service requirement for Duty Death-in-Service. Benefits are immediate.

Duty Disabled Retirement Benefits

No age or service requirement. Benefits commence immediately for qualified disabled member. Premiums shall be first paid to the City from funds in the employee's RHSA account if the surviving spouse and/or eligible dependents wish to continue to receive retiree health care. When RHSA is exhausted, the City shall resume paying the premiums, less any applicable premium sharing amount until such time as the covered person would have reached age 65.

Non-Duty Disabled Retirement Benefits

No age or service requirement. Benefits commence immediately for qualified disabled member.



City of Grand Rapids Fire Retiree Health Care Plan

RHSA Members

Summary of Benefits as of June 30, 2021

Benefits for Spouses of Retired Employees

Spouses of retired employees are eligible to receive health care benefits as long as the retiree is eligible. Coverage continues to surviving spouses of deceased retirees until the earlier of when retiree would have reached age 65 or when the spouse reaches age 65.

Medicare-Eligible Provisions

Retirees are required to enroll in Medicare once eligible. Retiree is responsible for paying the full premium for retiree Medicare coverage offered through the City.

Dental/Vision Coverage

Same as Retiree Health Care Eligibility Conditions.

Life Insurance Coverage

The City does not provide life insurance for retirees.

Opt-Out

The City does not provide Opt-Out payments or payment in lieu of retiree health care coverage for retirees.

Other Employment and Compensation

A retiree, spouse or other dependent who has coverage from an employer who provides medical coverage should coordinate benefits, making the City's coverage secondary.

This is a brief summary of the City of Grand Rapids Retiree Health Care Plan 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.



City of Grand Rapids Fire Active Member Demographic Data as of June 30, 2021

Age	Years of Service to Valuation Date							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
25-29	13	2						15
30-34	13	13	7					33
35-39	8	8	9	2				27
40-44	9	9	9	5	4			36
45-49		1		6	14	3		24
50-54			1	4	9	16	2	32
55-59		1		1	4	15	6	27
60-64						1	1	2
65 & Over						1		1
Totals	43	34	26	18	31	36	9	197

The active member counts above include current active employees who participate in the City's defined contribution plan and are eligible to purchase retiree health benefits through the City.

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

	<u>DB</u>	<u>RHSA</u>	<u>Total</u>
Count:	103	94	197
Age (Years):	50.4	35.1	43.1
Service (Years):	23.5	5.7	15.0

City of Grand Rapids Fire Retired and Deferred Member Demographic Data as of June 30, 2021

Fire Retirees

Age	Number of Retirees		
	Male	Female	Total
Under 55	11	2	13
55-59	28	10	38
60-64	51	3	54
65 & Over	0	0	0
Totals	90	15	105

The above exhibit includes only defined benefit retirees receiving health care benefits from the City. There are no RHSA Fire retirees.

Fire Vested Deferred

Age	Number of Deferred Members		
	Male	Female	Total
Under 40	1	0	1
40-44	0	0	0
45-49	2	0	2
50 & Over	0	0	0
Totals	3	0	3

Only retirees and vested deferred members valued in this report are shown in the exhibits above.

City of Grand Rapids – Fire Other Postemployment Benefits Reported Financial Information (Market Value)

	June 30, 2021
Additions	
Contributions	
Employer	\$ 1,421,902
Federal Grants	29,313
Nonemployer contributing entities	-
Active Employees	-
Other	-
Total Contributions	\$ 1,451,215
Investment Income	
Net Appreciation in Fair Value of Investments	\$ 5,320,479
Interest and Dividends	3,443
Less Investment Expense	-
Net Investment Income	\$ 5,323,922
Other	-
Total Additions	\$ 6,775,137
Deductions	
Benefit payments, including refunds of employee contributions*	\$ 1,700,811
OPEB Plan Administrative Expense	140,796
Other	-
Total Deductions	\$ 1,841,607
Net Increase in Net Position	\$ 4,933,530
Market Value of Assets for OPEB	
Beginning of Year (July 1, 2020)	\$ 20,366,756
End of Year (June 30, 2021)	\$ 25,300,286

* Benefit payments exclude \$339,878 in retiree contributions.

City of Grand Rapids – Fire Other Postemployment Benefits Development of Valuation Assets

Year Ended June 30	2020	2021	2022	2023	2024	2025
A. Funding Value Beginning of Year	\$20,398,971	\$20,782,090				
B. Market Value End of Year	\$20,366,756	25,300,286				
C. Market Value Beginning of Year	20,398,971	20,366,756				
D. Non-Investment Net Cash Flow	(519,997)	(390,392)				
E. Investment Income						
E1. Market Total: B - C - D	487,782	5,323,922				
E2. Assumed Rate of Investment Return	5.00%	5.00%				
E3. Amount for Immediate Recognition	1,006,949	\$1,029,345				
E4. Amount for Phased-In Recognition: E1 - E3	(519,167)	4,294,577				
F. Phased-In Recognition of Investment Income						
F1. Current Year: (1/5) x E4	(103,833)	858,915				
F2. First Prior Year	0	(103,833)	\$ 858,915			
F3. Second Prior Year	0	0	(103,833)	\$ 858,915		
F4. Third Prior Year	0	0	0	(103,833)	\$ 858,915	
F5. Fourth Prior Year	0	0	0	0	(103,835)	\$ 858,917
F6. Total Recognized Investment Gain	(103,833)	755,082	755,082	755,082	755,080	858,917
G. Funding Value End of Year A + D + E3 + F6	20,782,090	22,176,125				
H. Difference between Market & Funding Value	(415,334)	3,124,161				
I. Recognized Rate of Return	4.48 %	8.67 %				
J. Market Rate of Return	2.42 %	26.39 %				
K. Ratio of Funding Value to Market Value	102.04 %	87.65 %				

In the year of implementation, the Beginning of Year Funding Value of Assets is set equal to the Beginning of Year Market Value of Assets. The Funding Value of Assets recognizes assumed investment return (line E3) fully each year. Differences between actual and assumed investment return (line E4) are phased-in over a closed 5-year period. During periods when investment performance exceeds the assumed rate, Funding Value of Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will tend to be greater than Market Value. The Funding Value of Assets is unbiased with respect to Market Value. If assumed rates are exactly realized for 4 consecutive years, it will become equal to Market Value.



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 Normal 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 19-year period beginning with the fiscal year ending June 30, 2023. 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 19-year amortization factor used is 12.3850.

Actuarial Value of Assets. Last year's valuation assets are increased by contributions, expected investment income on last year's valuation assets and non-investment net cash flow, and reduced by refunds, benefit payments and expenses. To this amount is added the phased-in recognition of investment income. The phased-in recognition is the sum over the five years ending on the valuation date of 20% of the difference between each year's expected return and actual market return.

Actuarial Assumptions

The rationale for the retirement rates, rates of merit and seniority salary increases, rates of separation from active membership, and disability rates used in this valuation is included in the 5-year experience study for the period January 1, 2015 through December 31, 2019 issued July 27, 2020. All assumptions are expectations of future experience, not market measures.

Rates of Investment Return used in the valuation was 5.0% per year, compounded annually, net of expenses. This assumption is used to equate the value of payments due at different points in time.

The total number of active defined benefit retiree health care participants is expected to decline in the future.

The rates of Price Inflation are not specifically used for this valuation. However, a rate of price inflation of 2.25% 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. The assumption is used to project a member's current salary to the salaries upon which future contributions will be based.

Service at Beginning of Year	% Increase in Salary		
	Merit & Seniority	Base (Economic)	Increase Next Year
1	17.00 %	3.00 %	20.00 %
2	7.00	3.00	10.00
3	6.00	3.00	9.00
4	5.00	3.00	8.00
5	4.00	3.00	7.00
6 & Beyond	1.00	3.00	4.00

Actuarial Assumptions (Continued)

The mortality tables

- **Health Pre-Retirement:** The Pub-2010 Amount-Weighted, Safety, Employee, Male and Female tables, a base year of 2010 and future mortality improvements projected using scale MP-2019.
- **Healthy Post-Retirement:** The Pub-2010 Amount-Weighted, Safety, Healthy Retiree, Male and Female tables, with a base year of 2010 and future mortality improvements projected using scale MP-2019.
- **Disability Retirement:** The Pub-2010 Amount-Weighted, Safety, Disabled Retiree, Male and Female tables, with a base year of 2010 and future mortality improvements projected using scale MP-2019.

The following sample rates are based on the Healthy Post-Retirement tables:

Sample Age Now	Pre-Retirement Future Life Expectancy (Years)*		Healthy Post-Retirement Future Life Expectancy (Years)*		Disabled Retirement Future Life Expectancy (Years)*	
	Men	Women	Men	Women	Men	Women
	50	38.81	41.32	35.67	37.68	34.21
55	33.68	36.17	30.60	32.56	29.34	31.45
60	28.64	31.08	25.71	27.65	24.67	26.85
65	23.73	26.04	21.09	23.00	20.31	22.52
70	18.98	21.07	16.79	18.59	16.27	18.38
75	14.46	16.28	12.86	14.50	12.52	14.46
80	10.24	11.77	9.42	10.88	9.29	10.88

* Based on retirements in 2021. Retirements in future years will reflect improvements in life expectancy.

These rates were first used for the June 30, 2020 valuation.

Actuarial Assumptions (Continued)

The rates of normal retirement used to measure the probability of eligible members retiring under normal retirement conditions during the next year, were as follows. These rates were first used for the June 30, 2020 valuation.

Retirement Ages	Percent of Eligible Active Members Retiring within Next Year
	Fire
50	30 %
51	30
52	30
53	30
54	30
55	35
56	35
57	35
58	35
59	35
60	50
61	60
62	70
63	80
64	90
65	100

A member is eligible for pension retirement after both attaining age 55 and completing 10 or more years of service. Prior to the above eligibility, members who are eligible for early reduced retirement are assumed to elect this option at a 3% rate per year until eligible for normal retirement. Firefighters with 34 or more years of service are assumed to retire within the next year.

Actuarial Assumptions (Concluded)

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 withdrawal rates do not apply to members eligible to retire, and do not include separation on account of death or disability.

Sample rates of separation from active employment are shown below. These rates were first used for the June 30, 2020 valuation.

Sample Ages	Fire % of Active Members Separating within Next Year
25	2.07 %
30	1.71
35	1.17
40	0.81
45	0.63
50	0.54
55	0.54

Rates of disability among active members are used to estimate the incidence of member disability in future years. 75% of disabilities were assumed to be duty related and 25% of disabilities are assumed to be non-duty related.

Sample Ages	Percent Becoming Disabled within Next Year
20	0.12 %
25	0.12
30	0.12
35	0.27
40	0.59
45	1.05
50	1.68
55	2.51

Miscellaneous and Technical Assumptions

Decrement Operation:	Disability and mortality decrements do not operate during the first five years of service. Disability also does not operate during retirement eligibility.
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.
Marriage Assumption:	90% of Fire males and 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.
Medicare Coverage:	Assumed to be available for all covered employees on attainment of age 65.
Covered Children:	A 4.0% load was applied for children's coverage.
Election Percentage:	(Fire) It was assumed that 100% of retirees would choose to receive retiree health care benefits through the City. Of those assumed to elect coverage, 75% of retirees 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 100% of the time, if eligible. A load of 75% was applied to deferred member liabilities to reflect future election rates.
Retiree Opt-Outs:	Retirees and spouses who have opted-out of coverage are assumed to not re-enroll.
Patient Protection and Affordable Care Act:	In general, changes related to the Patient Protection and Affordable Care Act are reflected to the extent that they are already implemented in the Plan and future changes will be reflected as they become effective. Per the City, no load was applied to the valuation results in anticipation of future cost increases resulting from this Act.
Deferred and Retired Members:	All retired members valued in this valuation were assumed to be part of the Defined Benefit plan. Current deferred members not electing to continue coverage through the deferral period are ineligible to participate in the Defined Benefit Retiree Health Care plan. Pension data as of December 31, 2020 was used as a proxy for deferred member OPEB data.

SECTION E

SUPPLEMENTARY INFORMATION

This information is presented in draft form for review by the Plan and/or City auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the Plan and/or City financial statements.

Supplementary Information

Valuation Date	June 30, 2021
Actuarial Cost Method	Individual Entry Age Normal Cost
Amortization Method	Level Dollar Closed
Remaining Amortization Periods	19 Years
Asset Valuation Method	5-Year Smoothed Value of Assets
Actuarial Assumptions:	
Discount Rate	5.0% Per Year
Projected Salary Increases	
Fire	4.00% - 20.00%
Valuation Health Care Cost Trend Rate:	
Medical and Drug	7.50% in 2022 grading to 3.50% in 2033
Dental and Vision	3.50% in All Years

Supplementary Information

Schedule of Funding Progress

Actuarial Valuation Date June 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b)-(a)	Funded Ratio (a)/(b)
2012	\$ 6,190,800	\$ 32,755,074	\$ 26,564,274	18.9 %
2013	8,003,318	38,953,456	30,950,138	20.5
2014	10,276,569	39,586,693	29,310,124	26.0
2015	12,289,119	38,287,273	25,998,154	32.1
2016	14,421,497	38,620,175	24,198,678	37.3
2017	16,828,854	40,143,680	23,314,826	41.9
2018	19,156,719	34,173,533	15,016,814	56.1
2019	20,398,971	27,563,234	7,164,263	74.0
2020	20,782,090	27,696,969	6,914,879	75.0
2021	22,176,125	24,373,851	2,197,726	91.0

The above exhibit shows results for both the Defined Benefit group and the RHSA group combined.

APPENDIX

GLOSSARY

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.

Actuarially Determined Contribution (ADC) - The ADC is the normal cost plus the portion of the unfunded actuarial accrued liability to be amortized in the current period. The ADC 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.

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.

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.