

City of Birmingham
Retiree Health Care Plan
33rd Actuarial Valuation Report
June 30, 2022



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June 2, 2023

City of Birmingham
Birmingham, Michigan

Submitted in this report are the results of an Actuarial Valuation of the assets and liabilities associated with the employer financed retiree health benefits provided by the City of Birmingham. The date of the valuation was June 30, 2022 effective for the fiscal years July 1, 2023 to June 30, 2024 and July 1, 2024 to June 30, 2025.

This report was prepared at the request of the City of Birmingham and is intended for use by the City of Birmingham and those designated or approved by the City. This report may be provided to parties other than the City of Birmingham only in its entirety and only with the permission of the City. 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 Actuarially Computed Employer Contributions 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. This report does not satisfy Governmental Accounting Standards Board (GASB) Statements No. 74 or No. 75. A report satisfying GASB Statements No. 74 and No. 75 is provided separately.

The findings in this report are based on data and other information through June 30, 2022. 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. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

The valuation was based upon information furnished by the City of Birmingham concerning retiree health 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 of Birmingham.

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.

This report has been prepared by actuaries who have substantial experience valuing public employee retiree health plans. To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the City of Birmingham 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.

Mark Buis and Richard C. Koch Jr. are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

The signing actuaries are independent of the plan sponsor.

Respectfully submitted,
Gabriel, Roeder, Smith & Company



Mark Buis, FSA, EA, FCA, MAAA



Richard C. Koch Jr., FSA, EA, MAAA

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EXECUTIVE SUMMARY

Executive Summary

Actuarially Computed Employer Contribution and OPEB Cost

We have calculated the Actuarially Computed Employer Contribution for the fiscal years ending June 30, 2024 and June 30, 2025, using an interest rate assumption of 6.75%. Below is a summary of the results.

Fiscal Year Ending	Actuarially Computed Employer Contribution	Estimated Claims Paid for Retirees
June 30, 2024	\$1,389,006	\$3,573,897
June 30, 2025	1,375,347	3,738,647

Liabilities and Assets – As of June 30, 2022

1. Present Value of Future Benefit Payments	\$58,331,470
2. Actuarial Accrued Liability	56,037,741
3. Plan Assets	44,959,551
4. Unfunded Actuarial Accrued Liability (2) – (3)	11,078,190
5. Funded Ratio (3)/(2)	80.2%

The Present Value of Future Benefit Payments (PVFB) is the present value of all benefits projected to be paid from the plan for past and future service to current members. The Actuarial Accrued Liability is the portion of the PVFB allocated to past service by the Plan’s funding method (see the section titled “Actuarial Cost Method and Actuarial Assumptions”).

SECTION A

VALUATION RESULTS

Development of the Actuarially Computed Employer Contribution for the Other Post-Employment Benefits Fiscal Year Ending June 30, 2024 and June 30, 2025

Contributions for	Development of the Actuarially Computed Employer Contribution for July 1, 2023 - June 30, 2024
Normal Cost	
Normal Retirement	\$ 286,902
Early Retirement	12,604
Termination Benefits	29,165
Death-in-Service	5,316
Disability	14,005
Total Normal Cost	\$ 347,992
Annual Active Member Contribution	75,087
Employer Normal Cost	272,905
Amortization of Unfunded Actuarial Accrued Liabilities (Amortized over 16 years)	1,116,101
Actuarially Computed Employer Contribution	\$ 1,389,006
Projected Payroll for the Fiscal Year Ending June 30, 2024	\$ 3,754,368
Actuarially Computed Employer Contribution as a Percentage of Projected Payroll	37.00%
Actuarially Computed Employer Contribution per Active Participant	\$ 35,799
Actuarially Computed Employer Contribution for Fiscal Year July 1, 2024 - June 30, 2025	\$ 1,375,347
Projected Payroll for the Fiscal Year Ending June 30, 2025	\$ 3,513,075
Actuarially Computed Employer Contribution as a Percentage of Projected Payroll	39.15%

The unfunded actuarial accrued liabilities were amortized as a level dollar amount over a period of 16 years for fiscal year ending June 30, 2024 and decreasing by one each year thereafter.



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

A. Present Value of Future Benefits	
1. Retirees and Beneficiaries	\$42,538,598
2. Vested Terminated Members	2,052,718
3. Active Members	13,740,154
Total Present Value of Future Benefits	\$58,331,470
B. Present Value of Future Normal Cost	1,791,595
C. Present Value of Future Contributions from Current Active and Retired Members	502,134
D. Actuarial Accrued Liabilities (AAL)	56,037,741
E. Actuarial Value of Assets (AVA)	44,959,551
F. Unfunded Actuarial Accrued Liabilities (UAAL)	11,078,190
G. Funded Ratio (E./D.)	80.2%

The Unfunded Actuarial Accrued Liability (UAAL) is not booked as an expense all in one year and does not appear in the Employer's Statement of Net Assets. Nevertheless, it is reported in the Notes to the Financial Statements and in the Required Supplementary Information. These are information sections within the employer's financial statements.

Development of Funding Value of the Retiree Health Care Plan Assets June 30, 2022

	2021	2022	2023	2024	2025
A. Funding Value Beginning of Year	\$ 40,277,731	\$ 44,444,987			
B. Market Value End of Year	49,241,461	41,791,010			
C. Market Value Beginning of Year	38,107,338	49,241,461			
D. Non-Investment Net Cash Flow Member and Employer Contributions Less Benefit Payments	181,116	(1,462,803)			
E. Investment Income					
E1. Market Total: B - C - D	10,953,007	(5,987,648)			
E2. Assumed Rate (I)	6.75%	6.75%			
E3. Amount for Immediate Recognition I * (A + D / 2)	2,724,860	2,950,667			
E4. Amount for Phased-In Recognition: E1-E3	8,228,147	(8,938,315)			
F. Phased-In Recognition of Investment Income					
F1. Current Year: 0.25 x E4	2,057,037	(2,234,579)			
F2. First Prior Year	(578,877)	2,057,037	\$(2,234,579)		
F3. Second Prior Year	(216,880)	(578,877)	2,057,037	\$(2,234,579)	
F4. Third Prior Year	0	(216,881)	(578,878)	2,057,036	\$(2,234,578)
F5. Total Recognized Investment Gain	1,261,280	(973,300)	(756,420)	(177,543)	(2,234,578)
G. Funding Value End of Year: A + D + E3 + F5	44,444,987	44,959,551			
H. Difference Between Market & Funding Value	4,796,474	(3,168,541)			
I. Recognized Rate of Return	9.9 %	4.5 %			
J. Market Value Rate of Return	28.7 %	(12.3)%			
K. Ratio of Funding Value to Market Value	90.3 %	107.6 %			

The Funding Value of Assets recognizes assumed investment income (line E2) fully each year. Differences between actual and assumed investment income (line E3) are phased-in over a closed four-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. At any time, it may be either greater or less than Market Value.



Sensitivity Analysis

Contributions for	Optimistic	Intermediate	Pessimistic
Total Normal Cost	\$ 296,626	\$ 347,992	\$ 413,816
Annual Active Member Contribution	75,087	75,087	75,087
Employer Normal Cost	221,539	272,905	338,729
Amortization of Unfunded Actuarial Accrued Liabilities (Amortized over 16 years)	538,032	1,116,101	1,807,702
Actuarially Computed Employer Contribution	\$ 759,571	\$ 1,389,006	\$ 2,146,431
Projected Payroll for the Fiscal Year Ending June 30, 2024	\$ 3,754,368	\$ 3,754,368	\$ 3,754,368
Actuarially Computed Employer Contribution as a Percentage of Projected Payroll	20.23%	37.00%	57.17%
Actuarially Computed Employer Contribution per Active Participant	\$ 19,577	\$ 35,799	\$ 55,320

Assumptions Regarding Future Health Care Inflation

Year	Pre-65			Post-65		
	A	B	C	A	B	C
	Optimistic	Intermediate	Pessimistic	Optimistic	Intermediate	Pessimistic
1	6.50%	7.50%	8.50%	5.25%	6.25%	7.25%
2	6.25%	7.25%	8.25%	5.00%	6.00%	7.00%
3	5.75%	6.75%	7.75%	4.75%	5.75%	6.75%
4	5.50%	6.50%	7.50%	4.50%	5.50%	6.50%
5	5.00%	6.00%	7.00%	4.25%	5.25%	6.25%
6	4.75%	5.75%	6.75%	4.00%	5.00%	6.00%
7	4.25%	5.25%	6.25%	3.75%	4.75%	5.75%
8	4.00%	5.00%	6.00%	3.50%	4.50%	5.50%
9	3.50%	4.50%	5.50%	3.25%	4.25%	5.25%
10	3.25%	4.25%	5.25%	3.00%	4.00%	5.00%
11	2.75%	3.75%	4.75%	2.75%	3.75%	4.75%
12 & Over	2.50%	3.50%	4.50%	2.50%	3.50%	4.50%



Comments

Comment A: The computed contribution increased from \$1,302,741 in the June 30, 2020 valuation to \$1,389,006 in the June 30, 2022 valuation. The primary reasons for the increase are discussed below:

- Unfavorable claims experience served to increase liabilities by roughly \$2.5 million; and
- Resetting the health care trend cost rates increased liabilities by roughly \$2.2 million.

Partially offsetting these factors were decreases due to:

- A decrease in the active membership served to decrease the normal cost contribution.

Comment B: One of the key assumptions used in any valuation of the cost of post-employment benefits is the rate of return on Plan assets. Higher assumed investment returns will result in a lower Actuarially Computed Employer Contribution. Lower returns will tend to increase the computed Actuarially Computed Employer Contribution. Based on information from the plan sponsor, we have calculated the liability and the resulting Actuarially Computed Employer Contribution using an assumed long-term rate of investment return of 6.75%.

Comment C: The plan sponsor is required by GASB to perform actuarial valuations at least every two years or more frequently if significant changes in the OPEB are made in the interim.

Comment D: The Amortization Method is the policy used to fund the unfunded actuarially accrued liability. The current policy computes contribution amounts using a closed 16-year period beginning with the fiscal year ending June 30, 2024.

Comment E: The schedule on page A-4 shows that plan costs decline if health care inflation trends to lower than anticipated levels based on the health care trend assumption (optimistic assumptions), but can increase significantly if excess health care inflation persists at a higher level for a longer period (pessimistic assumptions).

Comment F: The retiree health care plan is closed to new members; as a result, payments of the UAAL have been calculated as level dollar amounts.

Comment G: 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, and
- The measurement is inappropriate for assessing the need for or the amount of future employer contributions.

Comments

Comment H: This valuation reflects the use of a 4-year smoothed asset valuation method. Under this asset valuation method, investment gains and losses are spread over a 4-year period. Partial recognition of this year's loss was combined with the continued phase-in of investment gains and losses from prior years resulting in a net recognized asset loss for 2022. The Funding Value of Assets now exceeds the Market Value by approximately \$3,200,000 (see page A-3), which is the net amount of unrecognized prior year gains and losses to be recognized over the coming three years.

SECTION B

BENEFIT PROJECTIONS

20-Year Benefit Projection

The table below shows projected retiree health care payments for the current population as of the valuation date (assuming no new entrants into the plan). It takes into account assumed demographic decrements, health care inflation and retiree cost sharing arrangements (where appropriate).

Year Ending June 30,	Retiree Health Payments on Behalf of Present			
	Retirees	Employees	Inactives	Total
2023	\$3,257,144	\$ 69,593	\$ 0	\$3,326,737
2024	3,390,866	152,644	30,387	3,573,897
2025	3,457,447	247,076	34,124	3,738,647
2026	3,512,952	358,999	38,133	3,910,084
2027	3,578,696	486,804	78,932	4,144,432
2028	3,502,218	613,619	87,583	4,203,420
2029	3,406,215	708,970	70,846	4,186,031
2030	3,456,191	815,622	126,156	4,397,969
2031	3,469,026	942,126	138,313	4,549,465
2032	3,436,181	1,034,446	74,673	4,545,300
2033	3,452,636	1,104,265	80,738	4,637,639
2034	3,327,924	1,185,329	136,662	4,649,915
2035	3,177,703	1,280,857	90,741	4,549,301
2036	3,127,070	1,381,061	97,564	4,605,695
2037	2,940,116	1,462,433	104,769	4,507,318
2038	2,853,478	1,548,615	168,871	4,570,964
2039	2,822,077	1,658,467	210,861	4,691,405
2040	2,776,012	1,712,224	226,450	4,714,686
2041	2,673,402	1,723,636	211,238	4,608,276
2042	2,612,966	1,769,849	194,384	4,577,199

SECTION C

RETIREE PREMIUM RATE DEVELOPMENT

Retiree Premium Rate Development

Rate Development

Initial premium rates were developed separately for each class (pre-65 and post-65). The rates were calculated by using actual paid claims and exposure data for the period of August 2019 to July 2022 adjusted for catastrophic claims, plus the load for administration and stop loss fees. The self-insured medical and prescription drug data were provided by the City of Birmingham. 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.

The City does not contribute for the cost of dental or vision for retirees. Therefore, no dental or vision rates were developed for this valuation.

Age graded and sex distinct premiums were utilized in this valuation. The premium developed by the preceding process is 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 to each combination. This process more accurately reflects health care costs in the retired population over the projection period. The tables below show the combined medical and prescription drug one-person monthly premiums at selected ages effective July 1, 2022 – June 30, 2023.

For Those Not Eligible for Medicare

Age	Male	Female
45	\$ 820.94	\$ 1,133.01
50	1,068.96	1,316.86
55	1,406.63	1,535.84
60	1,816.74	1,788.87

For Those Eligible for Medicare

Age	Male	Female
65	\$ 727.38	\$ 686.06
70	792.38	766.75
75	851.03	830.42

Based on the guidance provided by GASB on issues related to Medicare Part D payments to State and Local Governments effective as of June 30, 2006, an employer should apply the measurement requirements of GASB Statement No. 45 to determine the actuarial accrued liabilities, the annual required contribution of the employer and the annual OPEB cost without reduction for Retiree Drug Subsidy (RDS) payments. Therefore, the impact of the RDS that is part of the Medicare Prescription Drug Improvement and Modernization Act of 2003 is not reflected in this report.



Retiree Premium Rate Development

Health Care 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.

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.

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 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 premium levels will moderate over the long-term; otherwise the health care sector would eventually consume the entire GDP. It is on this basis that projected premium rate increases 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. See below for the trend vector used in this valuation.

<u>Year Beginning July 1,</u>	<u>Medical and Prescription Drugs</u>	
	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 & Later	3.50	3.50

Retiree Premium Rate Development

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 performed 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 and health care cost trend rates shown above.


James E. Pranschke, FSA, FCA, MAAA

SECTION D

SUMMARY OF BENEFIT PROVISIONS

Retiree Health Care Plan

Summary of Benefits as of June 30, 2022

Health care coverage is offered by the City through the Retiree Health Program on the following basis:

- To age and service or disability retired members of the Birmingham Employees Retirement System if the member had 15 years of service at retirement (10 years of service for hires prior to July 1, 1995).
- To vested deferred members if the member had 20 years of service (15 for Library, General, General Executive, Fire Command, and Police Officials). AFSCME employees are offered coverage if they have 20 years of service or 15 years of service and are age 55.
- To spouses of retirees during the retiree’s lifetime.
- To surviving spouses after the retiree’s death if the spouse became a beneficiary due to an optional benefit election.
- For General Non-Organized, Library, AFSCME, and Teamsters, eligibility is for employees hired prior to January 1, 2007. For Firefighters, eligibility is for employees hired prior to July 1, 2009. For General Executive, eligibility is for employees hired prior to December 1, 2010. For Police Patrol, Police Command, Police Officials, and Police Support, eligibility is for employees hired prior to July 1, 2011.

The following premiums are charged to retirees and beneficiaries electing coverage under the program:

Status	General Divisions Monthly Premiums			
	Library	General, General Executives	Police Support	AFSCME, Teamsters
Single - below age 65	\$40.00	\$30.00	Same as Patrol	\$100.00
Single - age 65 and over	\$20.00	\$15.00	Same as Patrol	\$ 50.00
Couple - below age 65	\$80.00	\$60.00	Same as Patrol	\$200.00
Couple - age 65 and over	\$40.00	\$30.00	Same as Patrol	\$100.00

For all regular full-time and regular part-time General, AFSCME, Teamsters and Library employees hired on or after January 1, 1993 (October 31, 2003 for Library), the retiree premium will be 50% of the total.

Retiree Health Care Plan

Summary of Benefits as of June 30, 2022 (Concluded)

Public Safety Divisions Monthly Premiums

Status	Police				
	Police Officials, Fire Command	Police Command Retirements Before 7/1/2015	Police Command Retirements After 7/1/2015 and Before 10/10/2016	Police Patrol Retirements Before 7/1/2015	Fire Retirements Before 7/1/2016
Single - below age 65	\$ 30.00	\$ 60.00	\$ 65.00	\$ 60.00	\$ 60.00
Single - age 65 and over	\$ 15.00	\$ 30.00	\$ 35.00	\$ 30.00	\$ 30.00
Couple - below age 65	\$ 60.00	\$120.00	\$130.00	\$120.00	\$120.00
Couple - age 65 and over	\$ 30.00	\$ 60.00	\$ 70.00	\$ 60.00	\$ 60.00

Public Safety Divisions Monthly Premiums

Status	Police Command Retirements After 10/10/2016	Police Patrol Retirements After 7/1/2015	Fire Retirements After 7/1/2016
	Single - below age 65	\$ 80.00	\$ 80.00
Single - age 65 and over	\$ 40.00	\$ 40.00	\$ 50.00
Couple - below age 65	\$160.00	\$160.00	\$200.00
Couple - age 65 and over	\$ 80.00	\$ 80.00	\$100.00

Member contributions

All Eligible Members: 2% of pay



SECTION E

SUMMARY OF PARTICIPANT DATA

Post-Retirement Premium Coverages Members Included in June 30, 2022 Valuation

Active Members

Valuation Divisions	No.	Group Averages (Years)		
		Annual Payroll	Age	Service
General Members	26	\$2,121,513	56.0	21.9
Police Members	12	1,310,983	45.1	20.5
Fire Members	5	604,218	43.2	20.2
Total Active Members	43	\$4,036,714		

Inactive Deferred Members

Valuation Divisions	No.	Group Averages (Years)	
		Present Age	Service At Termination
General Members	6	51.2	17.6
Police Members	0		
Fire Members	0		
Total Deferred Members	6		

DROP Members

Valuation Divisions	No.	Average Age (Years)
General Members	0	
Police Members	1	58.6
Fire Members	0	
Total DROP Members	1	

Retired Members with Coverage

Valuation Divisions	No.	Average Age (Years)
General Members	86	73.5
Police Members	36	69.7
Fire Members	46	70.0
Total Retired Members	168	

Retiree Health Benefit Recipients Comparative Statement

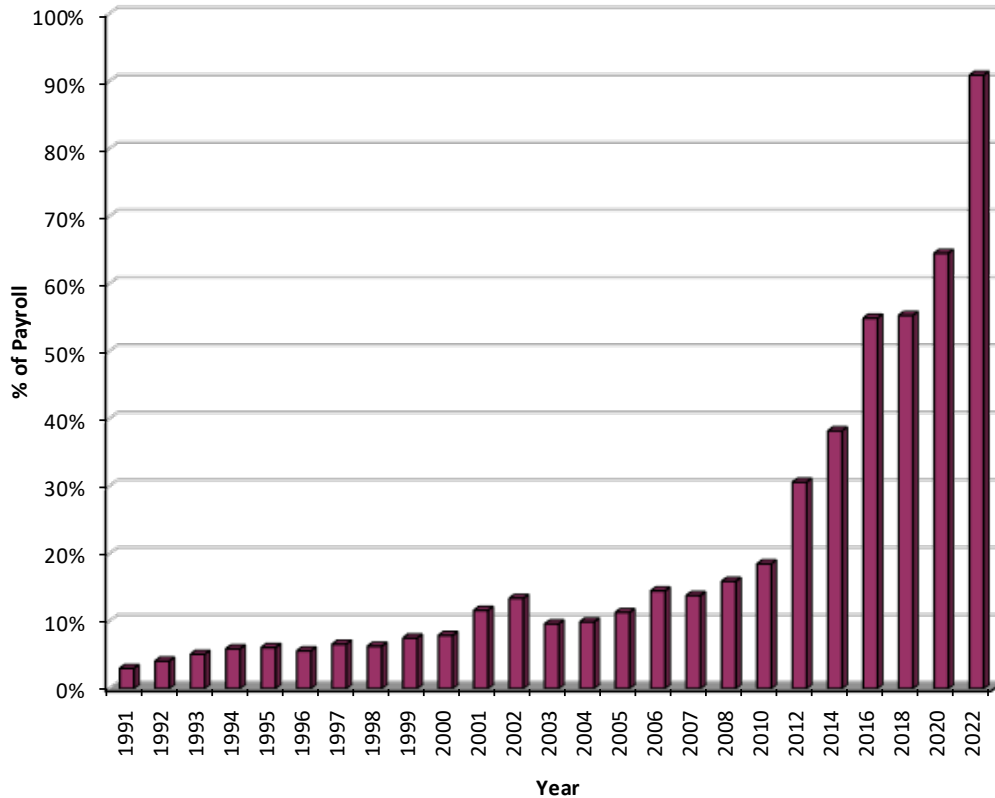
Valuation Date June 30	Number Covered	City Expenditures	City Expenditures as % of Payroll	Cost Per Person	Funded Status
1991	96	\$ 233,046	3.0 %	\$ 2,428	
1992 ¹	102	316,026	4.1 %	3,098	
1993	110	402,762	5.1 %	3,661	
1994	108	491,707	5.9 %	4,553	
1995	112	507,700	6.1 %	4,533	
1996	120	472,647	5.6 %	3,939	
1997	127	517,992	6.6 %	4,079	
1998	128	540,633	6.3 %	4,224	
1999	130	689,394	7.5 %	5,303	
2000	135	777,342	7.9 %	5,758	
2001	134	1,067,504	11.0 %	7,966	
2002	132	1,210,799	11.1 %	9,173	15.0 %
2003	134	1,058,903	9.6 %	7,902	18.0 %
2004	134	1,149,194	9.9 %	8,576	23.0 %
2005	136	1,361,646	11.3 %	10,012	26.7 %
2006	145	1,708,465	14.5 %	11,783	26.3 %
2007	145	1,600,935	13.8 %	11,041	28.3 %
2008 ²	147	1,870,747	15.9 %	12,726	25.6 %
2010	156	1,978,832	18.5 %	12,685	25.5 %
2012 ³	168	2,786,816	30.6 %	16,588	26.6 %
2014	166	3,024,248	38.2 %	18,218	41.1 %
2016	165	3,527,116	54.9 %	21,376	49.7 %
2018	169	3,099,094	52.5 %	18,338	67.9 %
2020	173	3,261,197	64.5 %	18,851	79.2 %
2022	168	3,669,149	90.9 %	21,840	80.2 %

¹ The City began pre-funding retiree health benefits.

² Beginning with the 2008 valuation, valuations only completed every two years.

³ Plan completely closed to new hires.

Post-Retirement Health Care Coverages Historical Trend of Amounts Paid by City



The plan has been closed to new hires since 2012. As a result, the active population and covered payroll is expected to continue to decline to zero over time.

Health Insurance Monthly Premium Comparative Schedule of Illustrative Premium Rates

Valuation Date June 30	Single		Couple	
	Below 65	65 & Over	Below 65	65 & Over
2005	\$ 507.09	\$500.58	\$1,014.18	\$ 1,001.16
2006	566.56	562.46	1,133.12	1,124.92
2007	648.92	624.41	1,297.84	1,248.82
2008 [^]	791.37	712.35	1,582.74	1,424.70
2010	862.02	626.88	1,512.26	1,100.78
2012	921.74	698.86	1,625.16	1,235.12
2014	884.22	716.36	1,569.06	1,276.54
2016	1,032.00	818.22	1,813.22	1,439.10
2018	1,019.22	829.66	1,844.22	1,512.50
2020	846.50	777.34	1,526.36	1,405.32
2022	837.96	783.90	1,518.42	1,422.76

[^] Beginning with the 2008 valuation, valuations only completed every two years.

Summary of Current Asset Information (Market Value)

Receipts and Disbursements for Retiree Health Care

	FY 2020	FY 2021	FY 2022
Balance - July 1	\$ 37,689,743	\$ 38,107,338	\$ 49,241,461
Receipts			
Employee contributions	102,979	101,094	90,918
Employer contributions	2,902,291	2,884,568	1,769,285
Recognized investment income (net)	2,614,114	2,612,631	12,574,602
Other Revenue ⁽¹⁾	(1,940,592)	8,763,599	(18,216,107)
Total	\$ 3,678,792	\$ 14,361,892	\$ (3,781,302)
Disbursements			
Return on Members' Contributions ⁽²⁾	0	0	0
Medical Claim Payments ⁽³⁾	2,004,795	1,679,008	2,293,887
Prescription Drug Claims ⁽⁴⁾	1,063,548	1,339,550	1,267,910
Administrative Expenses	192,854	209,211	107,352
Accrual and Expense Adjustment	0	0	0
Total	\$ 3,261,197	\$ 3,227,769	\$ 3,669,149
Balance - June 30	\$ 38,107,338	\$ 49,241,461	\$ 41,791,010
Investment income divided by mean assets	1.8%	23.1%	(13.5)%

⁽¹⁾ Other Revenue includes:

Excess contributions

Retired members health care deductibles

COBRA receipts and other miscellaneous receipts

Unrealized Gain/Loss on investments

Medicare Part D Retiree Drug Subsidy

⁽²⁾ Terminated employees refund of RHC contributions and interest earned.

⁽³⁾ Includes Stop/Loss reimbursements and accrued expense adjustment.

⁽⁴⁾ Includes Stop/Loss premiums.

Allocation of Unfunded Liability by Component Unit as of June 30, 2022

Component Unit	Unfunded Actuarial Liability (UAL)	Amortization Payment for UAL
Building	\$ 212,937	\$ 21,453
Clerk	190,120	19,154
DPS	1,904,017	191,827
DPS Garage	90,609	9,129
DPS Golf Course	62,030	6,249
Engineering	252,345	25,423
Finance	155,588	15,675
Fire	2,468,197	248,665
Fire/Admin	848,175	85,452
HR/Admin	23,757	2,393
IT	61,930	6,239
Library	214,803	21,641
Maint/Admin	20,780	2,094
Maintenance	0	0
Mgr/Admin	151,988	15,312
Museum	0	0
Parking	50,643	5,102
Planning	34,669	3,493
Police	3,113,575	313,685
Police Dispatch	362,530	36,524
Police General	276,387	27,845
Principal Shopping District	58,098	5,853
Treasury	330,310	33,278
Treasury/Assessor	73,255	7,380
Water Meter	121,447	12,235
	\$ 11,078,190	\$ 1,116,101

SECTION F

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. Unfunded actuarial accrued liabilities (UAAL) (full funding credit if assets exceed liabilities) were amortized as a level dollar amount. The UAAL was determined using the funding value of assets and actuarial accrued liability calculated as of the valuation date.

Actuarial Value of Assets. The valuation assets are developed using a four-year smoothing technique. The difference between the expected return on assets (using the valuation interest rate assumption) and the actual return on assets is phased-in over a four-year period.

Actuarial Assumptions Used for the Valuation

The rationale for the retirement rates, rates of merit and seniority salary increase, rates of separation from active membership, and disability rates used in this valuation is included in the five-year experience study for the period July 1, 2012 through June 30, 2017 issued March 2, 2018. All assumptions are expectations of future experience, not market measures.

The rate of investment is compounded annually net of expenses.

Investment Return	6.75%
Wage Inflation	3.25%
Price Inflation	2.50%
Spread Between Investment Return and Wage Inflation	3.50%
Spread Between Investment Return and Price Inflation	4.25%

These assumptions are used to equate the value of payments due at different points in time.

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

Sample Ages	Salary Increase Assumptions for an Individual Member				
	Merit & Seniority		Base (Economic)	Increase Next Year	
	General	Police/Fire		General	Police/Fire
20	2.01%	1.58%	3.25%	5.26%	4.83%
25	1.64%	1.58%	3.25%	4.89%	4.83%
30	1.41%	1.37%	3.25%	4.66%	4.62%
35	1.25%	0.58%	3.25%	4.50%	3.83%
40	1.12%	0.11%	3.25%	4.37%	3.36%
45	0.88%	0.11%	3.25%	4.13%	3.36%
50	0.60%	0.11%	3.25%	3.85%	3.36%
55	0.35%	0.05%	3.25%	3.60%	3.30%
60	0.08%	0.00%	3.25%	3.33%	3.25%
Ref.	505	506			

Actuarial Assumptions Used for the Valuation (Continued)

Mortality. This assumption is used to measure the probabilities of members dying before retirement and the probabilities of health care benefits being paid after retirement. The mortality rates utilized are based upon the RP-2014 tables, as extended, and include a margin for future mortality improvement projected using a fully generational improvement scale.

Descriptions of the tables and sample life expectancies are as follows:

- **Healthy Pre-Retirement:** The RP-2014 Employee Generational Mortality Tables, with blue-collar adjustments and extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale, resulting in a base year of 2006 with future mortality improvements assumed each year using scale MP-2017.
- **Healthy Post-Retirement:** The RP-2014 Healthy Annuitant Generational Mortality Tables, with blue-collar adjustments and extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale, resulting in a base year of 2006 with future mortality improvements assumed each year using scale MP-2017.
- **Disability Retirement:** The RP-2014 Disabled Mortality Table, extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale, resulting in a base year of 2006 with future mortality improvements assumed each year using scale MP-2017.

Sample Attained Ages	Healthy Pre-Retirement		Healthy Post-Retirement		Disabled Retirement	
	Future Life		Future Life		Future Life	
	Expectancy (Years)*		Expectancy (Years)*		Expectancy (Years)*	
	Male	Female	Male	Female	Male	Female
55	30.01	35.16	28.80	31.64	21.58	25.31
60	25.16	30.17	24.23	26.92	18.50	21.72
65	20.66	25.30	19.94	22.41	15.59	18.27
70	16.55	20.58	15.98	18.13	12.81	14.89
75	12.80	16.05	12.37	14.16	10.17	11.71
80	9.42	11.78	9.19	10.62	7.77	8.94

* Based on retirements in 2022. Retirements in future years will reflect improvements in life expectancy.

Actuarial Assumptions Used for the Valuation (Continued)

Rates of separation from active membership were as shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

Sample Ages	Years of Service	% of Active Employees Separating Within Next Year	
		General	Police/Fire
25	5 & Over	8.10%	2.70%
30		5.85%	1.65%
35		4.70%	1.05%
40		4.00%	0.60%
45		3.40%	0.36%
50		2.80%	0.33%
55		2.30%	0.30%
60		1.60%	0.30%
65		0.50%	0.30%
	Ref.	358 x 1	143 x 0.3

Rates of disability among active members.

Sample Ages	% of Active Employees Becoming Disabled Within Next Year	
	General	Police/Fire
20	0.04%	0.08%
25	0.04%	0.08%
30	0.05%	0.08%
35	0.05%	0.08%
40	0.10%	0.20%
45	0.16%	0.27%
50	0.32%	0.49%
55	0.63%	0.89%
60	1.16%	1.41%
65	1.34%	1.66%
Ref.	99	9

Actuarial Assumptions Used for the Valuation (Continued)

The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows:

Retirement Ages	General	Teamsters	Retirement Ages	Police/Fire	Retirement Service	DROP Police/Fire
55		20%				
56		20%				
57	20%	20%	50-54	30%		
58	20%	20%	55-59	30%		
59	20%	20%				
60	20%	20%	60	30%		
61	20%	20%	61	30%		
62	25%	25%	62	30%		
63	20%	20%	63	30%		
64	15%	15%	64	30%		
65	40%	40%	65	100%	30	45%
66	25%	25%	66		31	25%
67	25%	25%	67		32	25%
68	25%	25%	68		33	25%
69	25%	25%	69		34	25%
70 - 74	25%	25%	70		35	100%
75	100%	100%				
Ref	1563	1565		1875		2308

An AFSCME, General, Library, Police Support or Teamster member was assumed to be eligible for retirement after attaining age 57 (55 for Teamsters and General Executive) with 25 or more years of service (15 for General Executive) or age 60 with 10 or more years of service (or age 60 with 7 or more years of service for General and Library). A Police Patrol, Police Command, Police Official, or Fire member was assumed to be eligible for retirement after attaining age 50 (53 for Police Officials) with 25 or more years of service or age 55 with 10 or more years of service.

Actuarial Assumptions Used for the Valuation (Concluded)

Percent of eligible members electing coverage at retirement was assumed to be 100%.

Percent of eligible members electing spousal coverage: 80% of those electing coverage at retirement were assumed to elect coverage for their spouse.

Retiree Opt Out: None assumed.

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 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.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
Inflation for Flat-Dollar Retiree Contributions:	It was assumed that flat-dollar contributions for current and future retirees would not increase in the future.
Marriage Assumption:	100% of males and 100% 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.
Other Liability Adjustments:	None.
Pay Increase Timing:	Beginning of (Fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.

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 Computed Employer Contribution. The Actuarially Computed Employer Contribution is the normal cost plus the portion of the unfunded actuarial accrued liability to be amortized in the current period. The Actuarially Computed Employer Contribution 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.

Implicit Rate Subsidy. It is common practice for employers to allow retirees to continue in the employer's group health insurance plan (which also covers active employees), often charging the retiree some portion of the premium charged for active employees. Under the theory that retirees have higher utilization of services, the difference between the true cost of providing retiree coverage and what the retiree is being charged is known as the implicit rate subsidy.

Glossary

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.

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

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are 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 actuarial accrued liability."

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