Norfolk County Contributory Retirement System

Information Required Under Governmental Accounting Standards Board Statement No. 67 as of December 31, 2023, and Statement No. 68 as of June 30, 2024

November 2024





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November 2024

Norfolk County Retirement Board 480 Neponset Street, #15 Canton, MA 02021

Gallagher is pleased to present this report to the Norfolk County Retirement System providing certain disclosure requirements under Governmental Accounting Standards Board Statements Nos. 67 for the plan year ending December 31, 2023 and 68 for the plan sponsor's fiscal year ending June 30, 2024, using a measurement date of December 31, 2023.

Purpose of this Report

Gallagher was retained by Norfolk County to prepare this report for use in review of the operation of the plan and as a source of information for the financial statements of the plan and of the plan sponsor.

Use of this report for any other purpose may not be appropriate and may result in mistaken conclusions due to failure to understand applicable assumptions, methodologies, or inapplicability of the report for that purpose. Because of the risk of misinterpretation of actuarial results, Gallagher recommends requesting an advance review of any statement, document, or filing based on information contained in this report. Gallagher will accept no liability for any such statement, document or filing make without prior review by Gallagher.

Data Used

Gallagher performed the calculations using participant data as of January 1, 2024 and financial data as of December 31, 2023 both supplied by the Retirement Board. Gallagher reviewed the data for reasonableness and consistency with data for the 2024 valuation but performed no audit of the data. The accuracy of the results of the valuation is dependent on the accuracy of the data. Proportions used to determine GASB 68 proportionate shares are provided by the Board.

Actuarially Determined Contributions and Related Information

Actuarial Standard of Practice No. 4 ("ASOP 4") requires certain disclosures be provided when an actuary determines or recommends contribution amounts for a pension plan. Any estimates of sponsor contributions are solely for the purpose of calculating accounting costs, are not projections of sponsor contributions, and this does not constitute a funding report.

Actuarial Certification

Actuarial Standard of Practice No. 56 ("ASOP 56") provides guidance to actuaries when performing actuarial services with respect to designing, developing, selecting, modifying, using, reviewing, or evaluating models. Gallagher uses third-party software in the performance of annual actuarial valuations and projections. The model is intended to calculate the liabilities associated with the provisions of the plan using data and assumptions as of the measurement date under the accounting rules specified in this report. The output from the third-party vendor software is used as input to an internally developed model that applies applicable accounting rules and policies to the liabilities derived and other inputs, such as plan assets and contributions, to generate many of the exhibits found in this report. Gallagher has an extensive review process whereby the



results of the liability calculations are checked using detailed sample output, changes from year to year are summarized by source, and significant deviations from expectations are investigated. Other funding outputs and the internal model are similarly reviewed in detail and at a high level for accuracy, reasonability, and consistency with prior results. Gallagher also reviews the third-party model when significant changes are made to the software. The review is performed by experts within the company who are familiar with applicable accounting rules as well as the manner in which the model generates its output. If significant changes are made to the internal model, extra checking and review are completed. Significant changes to the internal model that are applicable to multiple clients are generally developed, checked, and reviewed by multiple experts within the company who are familiar with the details of the required changes.

Actuarial Standards of Practice (ASOPs) 27 and 35 require the actuary to identify the economic and demographic assumptions that have a significant effect on the measurement and, for those that are prescribed by another party, to provide the information and analysis the actuary performed to determine that the assumption does not significantly differ from what the actuary deems reasonable for the purpose of the measurement.

The assumptions used in this valuation are based on an experience study covering the six-year period ending December 31, 2023, which established the assumptions for the valuation interest rate, inflation, annual salary increases, rates of retirement, termination, disability, and mortality and the marital percentage.

The combined effect of the assumptions is expected to have no significant bias.

-The report was prepared under our supervision and in accordance with all applicable Actuarial Standards of Practice. We are Enrolled Actuaries and Members of the American Academy of Actuaries. Hilja is a Fellow of the Society of Actuaries and Jason is an Associate of the Society of Actuaries. We meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein, and we are available to discuss this report with you.

Respectfully Submitted,

Buck Global, LLC (Buck), Gallagher Benefit Services, Inc. (hereinafter "Gallagher")

Hilja Videmann

Hilja Viidemann, FSA, MAAA, EA Director, U.S. Defined Benefit Consulting and Administration <u>11/19/24</u>

Date

ason Fine, ASA, MAAA, EA, FCA Principal, U.S. Defined Benefit Consulting and Administration

<u>11/19/24</u>

Date



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Section I – Membership Data

In order to calculate the aggregate liabilities and assets on account of members of the System as of January 1, 2024, data was needed with respect to each active and retired member and beneficiary of the System. The data with respect to active, retired and terminated members and beneficiaries were furnished to the actuary by the Retirement Board.

From the data, tabulations were made showing, as of January 1, 2024, the number and annual compensation of active members classified by age and years of service and the number and annual retirement allowances of retired members and beneficiaries as of January 1, 2024, classified by age. These tables are presented in Schedule C.

The following tables show the number of active and retired members of the Retirement System as of January 1, 2024.

Table I - The Number and Annual Compensation of Active Members as of January 1, 2024

Group	Number	Compensation
General employees	5,051	\$ 243,889,322
Police and Fire	<u>1,155</u>	<u>\$ 112,931,388</u>
Total	6,206	\$ 356,820,710

Table II - The Number and Annual Retirement Allowances of Retired Members and Beneficiaries as of January 1, 2024

Annual Retirement Allowance				
Group	Number	Pension ¹		
Service Retirements	3,115	\$ 100,759,240		
Disability Retirements	367	\$ 16,003,501		
Beneficiaries of Deceased Members	<u>476</u>	<u>\$ 10,350,652</u>		
Grand Total	3,958	\$ 127,113,393		

In addition, there are 3,164 members with accumulated contributions valued at \$34,253,127.

¹ Pension amounts exclude cost-of-living adjustments applied after July 1, 1981, and prior to July 1, 1998, which are funded by the Commonwealth of Massachusetts.



Section II – Accounting Information

Information required under Statement No. 67 of the Governmental Accounting Standard Board (GASB) is shown below:

Summary of Significant Accounting Policies

Method used to value investments

Investments are reported at fair value.

Actuarial cost method

Entry Age Normal—Level Percent of Pay.

Plan Description

Plan administration

Norfolk County, Massachusetts administers the Contributory Retirement System (Plan), a defined benefit pension plan that covers all employees of participating units except teachers, elected officials, and those employees in service at the time of its establishment who elected not to become members. Eligible employees in the County who enter service on or after the date the System became operative for their classification may become members of the Retirement System on their own application.

Plan membership

Plan membership is summarized in Section V.

Benefits provided

Please see Section III of the report for a summary of plan provisions.

Contributions

The County establishes contributions based on an actuarially determined contribution recommended by an independent actuary. The actuarially determined contribution is developed using the Entry Age Normal Actuarial Cost Method. For the sponsor fiscal year ended June 30, 2024, the County contributed \$97,107,703 to the plan.

Investments

Rate of return

For the year ended December 31, 2023, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was estimated to be approximately 9.75%¹. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Receivables

No receivable contributions have been included in plan assets.

¹ The GASB standard requires a dollar-weighted rate of return calculation with cash flows determined at least monthly. The information provided does not have sufficient detail to perform this calculation, therefore, we used a common standard estimation technique to provide a reasonable representation of the rate of return. A more refined calculation of the rate of return can be determined if the actual dates of contribution and a monthly breakdown of benefit payments and expenses are provided.



Net Pension Liability

The components of the net pension liability at December 31, 2023 were as follows:

Components of Net Pension Liability	
Total pension liability	\$ 2,081,210,309
Plan fiduciary net position	(1,385,889,485)
County's net pension liability	695,320,824
Plan fiduciary net position as a percentage of the total pension liability	66.59%

Actuarial Assumptions

The December 31, 2023 total pension liability was determined by using the following actuarial assumptions, applied to all periods included in the measurement:

Actuarial Assumptions			
Inflation	2.75%		
	It is assumed that following rates.	salaries including l	ongevity will incre
		Assun	nption
	Years of Service	General Employees	Police and Fire
	0	5.5%	5.5%
	1	5.5%	7.5%
	2	5.0%	8.0%
	3	4.5%	7.5%
	4	4.5%	6.0%
	5	4.0%	5.0%
	6+	3.5%	4.0%
		nsion plan investme n rate of 3.00% an	

Plan liabilities as of January 1, 2024 were valued using rates taken from *Pub-2010 Public Retirement Plans Mortality Tables Report* from the Society of Actuaries dated January 2019. These rates are applied as follows:

Participant Group	Non-disabled	Disabled
General Employees	PubG-2010 Healthy, males set forward 1 year	PubG-2010 Disabled
Police and Fire	PubS-2010 Healthy	RP-2000 set forward 2 years
Contingent survivors	Contingent survivors table (total dataset)	N/A

All non-disabled rates are amount-weighted and projected generationally with Scale MP-2021. Separate annuitant and non-annuitant rate tables were used.



The Board selected 7.625% as the long-term expected rate of return on Fund investments. It was supported using best-estimate ranges of expected future nominal rates of return (expected returns, net of investment expense and inflation) developed for each major asset class using an econometric model that forecasts a variety of economic environments and then calculates asset class returns based on functional relationships between the economic variables and the asset classes. Best estimates of arithmetic rates of return for each major asset class included in the pension plan's target asset allocation as of December 31, 2023 are summarized in the following table:

Asset Class	Long-Term Expected Rate of Return
Equity	9.15%
Fixed income	5.66%
Alternatives	8.32%
Real Estate	9.99%

Discount rate

The discount rate used to measure the total pension liability was 7.625%. The projection of cash flows used to determine the discount rate assumed that County contributions will continue to follow the current funding policy. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Had there been a point where assets were projected to be depleted, a municipal bond rate of 4.00% would have been used in the development of the blended GASB discount rate after that point. The 4.00% rate is based on the S&P Municipal Bond 20 Year High Grade Rate Index.

Sensitivity of the net pension liability to changes in the discount rate

The following presents the net pension liability, calculated using the discount rate of 7.625%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.625%) or 1-percentage-point higher (8.625%) than the current rate:

	1% Decrease	Current Discount Rate	1% Increase
	(6.625%)	(7.625%)	(8.625%)
Net Pension Liability	\$ 916,433,023	\$ 695,320,824	\$ 507,450,952



Schedules of Required Supplementary Information

Schedule of Changes in County's Net Pension Liability and Related Ratios

Total pension liability	
Service cost	\$ 41,192,753
Interest	140,425,062
Changes of benefit terms	0
Differences between expected and actual experience	51,808,503
Changes of assumptions	147,833,624
Benefit payments	(138,992,886)
Net change in total pension liability	\$ 242,267,056
Total pension liability-beginning	\$ 1,838,943,253
Total pension liability-ending (a)	\$ 2,081,210,309
Plan fiduciary net pension	
Contributions-employer	\$ 97,107,703
Contributions-employee	41,878,382
Net investment income	123,055,800
Benefit payments, including refunds of employee contributions	(138,992,886)
Administrative expense	(1,600,889)
Other payments	3,790,053
Net change in plan fiduciary net position	\$ 125,238,163
Plan fiduciary net position-beginning	\$ 1,260,651,322
Plan fiduciary net position-ending (b)	\$ 1,385,889,485
County's net pension liability-ending (a)-(b)	\$ 695,320,824
Covered payroll ¹	\$ 356,820,710
Net pension liability as a percentage of covered payroll	194.87%

Notes to Schedule:

A. Benefit changes

None.

B. Changes of assumptions

The assumptions used in this valuation are based on an experience study covering the six-year period ending December 31, 2023, which established the assumptions for the rate of investment return, inflation, annual salary increases, rates of retirement, termination, disability, and mortality and the marital percentage.

¹ The covered payroll shown here is based off census data provided for the January 1, 2024 actuarial valuation. According to GASB Statement Nos. 67 and 68, as amended by GASB Statement No. 82, this should be payroll on which contributions are based for the measurement period. Therefore, this number may need to be updated for inclusion in financial statements.



Schedules of Required Supplementary Information (continued)

Schedule of Contributions

	20	24	2	023
Actuarially determined contribution	\$ 97,10	07,703	\$91,	885,045
Contributions related to the actuarially determined contribution	<u>(97,10</u>	<u>)7,703)</u>	(91,	<u>885,045)</u>
Contribution deficiency (excess)	\$	0	\$	0

Notes to Schedule:

A. Valuation date

Actuarially determined contribution rates are calculated as of January 1 in the fiscal year preceding the fiscal year in which contributions are made. That is, the contribution calculated as of January 1, 2024 will be made during the fiscal year ended June 30, 2025.

B. Methods and assumptions used to determine contribution rates:

Please see Section II of the report.

Schedule of Investment Returns

	2023	2022
Annual money-weighted rate of return, net of investment expenses ¹	9.75%	(11.65)%

¹ The GASB standard requires a dollar-weighted rate of return calculation with cash flows determined at least monthly. The information provided does not have sufficient detail to perform this calculation, therefore, we used a common standard estimation technique to provide a reasonable representation of the rate of return. A more refined calculation of the rate of return can be determined if the actual dates of contribution and a monthly breakdown of benefit payments and expenses are provided.



Section III - GASB 68 Information

1. The determination of the average expected remaining service lives of all members as of the beginning of the measurement period is as follows:

Remaining Service Lives			
Group	Number	Service	Average
Retired paid from fund	3,958	0	
Terminated with deferred benefit	3,164	0	
Active	6,206	65,106	
Total	13,328	65,106	4.88

2. The determination of pension expense for the fiscal year as shown below:

Pension Expense	Fiscal Year Ending June 30, 2024
Service Cost	
	\$ 41,192,753
Interest Cost on Total Pension Liability	140,425,062
Differences between Expected and Actual Experience	20,755,242
Changes of Assumptions Contributions-Member	30,293,775
	(41,878,382)
Projected Earnings on Plan Investments	(97,783,466)
Differences between Projected and Actual Earnings	(778,698)
Administrative Expenses	1,600,889
Other	
Total Pension Expense	\$ 93,827,175
3. The schedule of changes in Net Pension Liability:	
Change in Net Pension Liability	Fiscal Year Ending June 30, 2024
Net pension liability at June 30, 2023	\$ 578,291,931
Changes for the year:	
Service Cost	41,192,753
Interest Cost of Total Pension Liability	140,425,062
Projected Earnings on Plan Investments	(97,783,466)
Contributions-Employer	(97,107,703)
Contributions-Member	(41,878,382)
Administrative Expenses	1,600,889
Plan Changes	0
Deferred Inflows/(Outflows)	
Changes in Assumptions	147,833,624
Differences between Expected and Actual Liability Experience	51,808,503
Difference between Projected and Actual Earnings	(25,272,334)
Revenue	(3,790,053)
Net Change in Net Pension Liability	117,028,893
Net pension liability at June 30, 2024	\$ 695,320,824



Section IV – Schedule of Deferred Inflows and Outflows

Schedule of Differences between Projected and Actual Earnings

Fiscal Year Ending 6/30	2018	2019	2020	2021	2022	2023	2024	Outflows	Inflows	Total
Amount Established	\$ (58,699,395)	\$127,723,896	\$ (85,246,700)	\$ (40,896,153)	\$ (129,087,718)	\$ 276,609,422	\$ (25,272,334)			
Recognition Period	5.00	5.00	5.00	5.00	5.00	5.00	5.00			
Amount Recognized in FY:				•		•		^		
2019	\$ (11,739,879)	-	\$-	\$ -	\$ -	\$-	\$-	\$ -	,	\$ (11,739,879)
2020	(11,739,879)	25,544,779	-	-	-	-	-	25,544,779	(11,739,879)	13,804,900
2021	(11,739,879)	25,544,779	(17,049,340)	-	-	-	-	25,544,779	(28,789,219)	(3,244,440)
2022	(11,739,879)	25,544,779	(17,049,340)	(8,179,231)	-	-	-	25,544,779	(36,968,450)	(11,423,671)
2023	(11,739,879)	25,544,779	(17,049,340)	(8,179,231)	(25,817,544)	-	-	25,544,779	(62,785,994)	(37,241,215)
2024	-	25,544,780	(17,049,340)	(8,179,231)	(25,817,544)	55,321,884	-	80,866,664	(51,046,115)	29,820,549
2025	-	-	(17,049,340)	(8,179,231)	(25,817,544)	55,321,884	(5,054,467)	55,321,884	(56,100,582)	(778,698)
2026	-	-	-	(8,179,229)	(25,817,544)	55,321,884	(5,054,467)	55,321,884	(39,051,240)	16,270,644
2027	-	-	-	-	(25,817,542)	55,321,884	(5,054,467)	55,321,884	(30,872,009)	24,449,875
2028	-	-	-	-	-	55,321,886	(5,054,467)	55,321,886	(5,054,467)	50,267,419
2029	-	-	-	-	-	-	(5,054,466)	-	(5,054,466)	(5,054,466)
2030	-	-	-	-	-	-	- 1	-	-	-
2031	-	-	-	-	-	-	-	-	-	-

Fiscal Year Ending 6/30	2018	2019	2020	2021	2022	2023	2024	Outflows	Inflows	Total
Deferred Balance at 6/30:										
2019	\$ (46,959,516)	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$ (46,959,516)	\$ (46,959,516)
2020	(35,219,637)	102,179,117	-	-	-	-	-	102,179,117	(35,219,637)	66,959,480
2021	(23,479,758)	76,634,338	(68,197,360)	-	-	-	-	76,634,338	(91,677,118)	(15,042,780)
2022	(11,739,879)	51,089,559	(51,148,020)	(32,716,922)	-	-	-	51,089,559	(95,604,821)	(44,515,262)
2023	-	25,544,780	(34,098,680)	(24,537,691)	(103,270,174)	-	-	25,544,780	(161,906,545)	(136,361,765)
2024	-	-	(17,049,340)	(16,358,460)	(77,452,630)	221,287,538	-	221,287,538	(110,860,430)	110,427,108
2025	-	-	-	(8,179,229)	(51,635,086)	165,965,654	(20,217,867)	165,965,654	(80,032,182)	85,933,472
2026	-	-	-	-	(25,817,542)	110,643,770	(15,163,400)	110,643,770	(40,980,942)	69,662,828
2027	-	-	-	-	-	55,321,886	(10,108,933)	55,321,886	(10,108,933)	45,212,953
2028	-	-	-	-	-	-	(5,054,466)	-	(5,054,466)	(5,054,466)
2029	-	-	-	-	-	-	-	-	-	-
2030	-	-	-	-	-	-	-	-	-	-



Section IV - Schedule of Deferred Inflows and Outflows (continued)

Fiscal Year Ending 6/30	2018	2019	2020	2021	2022	2023	2024	Outflows	Inflows	Total
Amount Established	\$ 61,837,812	\$-	\$ 41,916,868	\$-	\$ 33,610,962	\$-	\$ 51,808,503			
Recognition Period	4.27	0.00	4.19	0.00	4.08	0.00	4.88			
Amount Recognized in FY:										
2019	\$ 14,481,923	\$-	\$-	\$-	\$-	\$-	\$-	\$ 14,481,923	\$-	\$ 14,481,923
2020	14,481,923	-	-	-	-	-	-	14,481,923	-	14,481,923
2021	14,481,923	-	10,004,026	-	-	-	-	24,485,949	-	24,485,949
2022	14,481,923	-	10,004,026	-	-	-	-	24,485,949	-	24,485,949
2023	3,910,120	-	10,004,026	-	8,237,981	-	-	22,152,127	-	22,152,127
2024		-	10,004,026	-	8,237,981	-	-	18,242,007	-	18,242,007
2025	-	-	1,900,764	-	8,237,981	-	10,616,497	20,755,242	-	20,755,242
2026		-	-	-	8,237,981	-	10,616,497	18,854,478	-	18,854,478
2027	-	-	-	-	659,038	-	10,616,497	11,275,535	-	11,275,535
2028	-	-	-	-	-	-	10,616,497	10,616,497	-	10,616,497
2029	-	-	-	-	-	-	9,342,515	9,342,515	-	9,342,515
2030	-	-	-		-	-	-	-	-	-
2031	-	-	-		-	-	-	-	-	-

Schedule of Difference between Actual and Expected Experience

Fiscal Year Ending 6/30	2018	2019	2020	2021	2022	2023	2023	Outflows	Inflows	Total
Deferred Balance at 6/30:										
2019	\$ 47,355,889	\$-	\$-	\$-	\$-	\$-	\$-	\$ 47,355,889	\$-	\$ 47,355,889
2020	32,873,966	-	-	-	-	-	-	32,873,966	-	32,873,966
2021	18,392,043	-	31,912,842	-	-	-	-	50,304,885	-	50,304,885
2022	3,910,120	-	21,908,816	-	-	-	-	25,818,936	-	25,818,936
2023	-	-	11,904,790	-	25,372,981	-	-	37,277,771	-	37,277,771
2024	-	-	1,900,764	-	17,135,000	-	-	19,035,764	-	19,035,764
2025	-	-	-	-	8,897,019	-	41,192,006	50,089,025	-	50,089,025
2026	-	-	-	-	659,038	-	30,575,509	31,234,547	-	31,234,547
2027	-	-	-	-	-	-	19,959,012	19,959,012	-	19,959,012
2028	-	-	-	-	-	-	9,342,515	9,342,515	-	9,342,515
2029	-	-	-	-	-	-	-	-	-	-
2030	-	-	-	-	-	-	-	-	-	-



Section IV - Schedule of Deferred Inflows and Outflows (continued)

Schedule of Changes in Assumptions

Fiscal Year Ending 6/30	2018	2019	2020	2021	2022	2023	2024	Outflows	Inflows	Total
Amount Established	\$ 36,207,214	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 147,833,624			
Recognition Period	4.27	0.00	0.00	0.00	0.00	0.00	4.88			
Amount Recognized in FY:										
2019	\$ 8,479,441	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,479,441	\$ -	\$ 8,479,441
2020	8,479,441	-	-	-	-	-	-	8,479,441	-	8,479,441
2021	8,479,441	-	-	-	-	-	-	8,479,441	-	8,479,441
2022	8,479,441	-	-	-	-	-	-	8,479,441	-	8,479,441
2023	2,289,450	-	-	-	-	-	-	2,289,450	-	2,289,450
2024	-	-	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	30,293,775	30,293,775	-	30,293,775
2026	-	-	-	-	-	-	30,293,775	30,293,775	-	30,293,775
2027	-	-	-	-	-	-	30,293,775	30,293,775	-	30,293,775
2028	-	-	-	-	-	-	30,293,775	30,293,775	-	30,293,775
2029	-	-	-	-	-	-	26,658,524	26,658,524	-	26,658,524
2030	-	-	-	-	-	-	-	-	-	-
2031	-	-	-	-	-	-	-	-	-	-

Fiscal Year Ending 6/30	2019	2020	2021	2022	2023	2024	2024	Outflows	Inflows	Total
Deferred Balance at 6/30:										
2019	\$ 27,727,773	\$-	\$-	\$-	\$-	\$-	\$-	\$ 27,727,773	\$-	\$ 27,727,773
2020	19,248,332	-	-	-	-	-	-	19,248,332	-	19,248,332
2021	10,768,891	-	-	-	-	-	-	10,768,891	-	10,768,891
2022	2,289,450	-	-	-	-	-	-	2,289,450	-	2,289,450
2023	-	-	-	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	117,539,849	117,539,849	-	117,539,849
2026	-	-	-	-	-	-	87,246,074	87,246,074	-	87,246,074
2027	-	-	-	-	-	-	56,952,299	56,952,299	-	56,952,299
2028	-	-	-	-	-	-	26,658,524	26,658,524	-	26,658,524
2029	-	-	-	-	-	-	-	-	-	-
2030	-	-	-	-	-	-	-	-	-	-



Section V - GASB 68 Allocations

	Avon					Canton
	Housing	Town of	Town of	Bellingham	Town of	Housing
Schedule of Pension Amounts	Auth.	Avon	Bellingham	Hous. Auth.	Canton	Auth.
Current Proportional Share	0.014578%	1.901616%	4.286140%	0.024986%	7.537714%	0.130591%
Prior Proportional Share	0.017100%	1.822100%	3.846700%	0.058500%	7.541000%	0.129100%
Net Pension Liability	101,362	13,222,335	29,802,424	173,729	52,411,296	908,028
Deferred Outflows Of Resources						
1. Change in Benefits	0	0	0	0	0	0
2. Differences Between Expected and						
Actual Experience	7,302	952,501	2,146,886	12,515	3,775,567	65,412
3. Net Difference Between						
Projected and Actual Investment Earnings	24,194	3,156,030	7,113,520	41,468	12,510,016	216,736
Changes of Assumptions	17,135	2,235,157	5,037,922	29,368	8,859,818	153,497
5. Changes in Proportion	3	352,259	1,572,457	22,911	15,812	14,916
Deferred Inflows Of Resources						
1. Change in Benefits	0	0	0	0	0	0
2. Differences Between Expected and						
Actual Experience	0	0	0	0	0	0
3. Net Difference Between						
Projected and Actual Investment Earnings	(11,667)	(1,521,905)	(3,430,291)	(19,997)	(6,032,597)	(104,515)
Changes of Assumptions	0	0	0	0	0	0
5. Changes in Proportion	(9,153)	0	(823,824)	(119,598)	(11,726)	(421)
Pension Expense						
1. Proportional Share of Pension Expense	13,678	1,784,233	4,021,564	23,443	7,072,424	122,530
2. Changes in Proportion	(6,394)	118,989	(355,742)	(9,914)	25,110	4,628
3. Total Employer Pension Expense	7,284	1,903,222	3,665,822	13,529	7,097,534	127,158
Revenue	(552)	(72,072)	(162,447)	(947)	(285,683)	(4,949)
	Avon					Canton
	Housing	Town of	Town of	Bellingham	Town of	Housing
Reconciliation of Net Pension Liability	Auth.	Avon	Bellingham	Hous. Auth.	Canton	Auth.
1. Net Pension Liability at Beginning of Year	98,888	10,537,057	22,245,156	338,301	43,608,995	746,575
2. Pension Expense	7,284	1,903,222	3,665,822	13,529	7,097,534	127,158
3. Employer Contributions	(14,156)	(1,846,616)	(4,162,172)	(24,263)	(7,319,701)	(126,814)
4. Change in Deferred Outflows/(Inflows)	9,898	2,700,744	8,216,065	(152,891)	9,310,152	166,058
5. Revenue	(552)	(72,072)	(162,447)	(947)	(285,683)	(4,949)
5. Net Pension Liability at End of Year	101,362	13,222,335	29,802,424	173,729	52,411,296	908,028



	Cohasset					
	Housing	Town of	Charles Riv.	County of	Town of	Dover/Shear
Schedule of Pension Amounts	Auth.	Cohasset	Poll. Cont.	Norfolk	Dover	borne Schl.
Current Proportional Share	0.002918%	3.580548%	0.184760%	4.972683%	1.748931%	0.966354%
Prior Proportional Share	0.022800%	3.732100%	0.196800%	4.929400%	1.725100%	
Net Pension Liability	20,292	24,896,296	1,284,674	34,576,100	12,160,685	6,719,257
Deferred Outflows Of Resources						
1. Change in Benefits	0	0	0	0	0	0
2. Differences Between Expected and						
Actual Experience	1,462	1,793,462	92,544	2,490,768	876,023	484,037
3. Net Difference Between						
Projected and Actual Investment Earnings	4,844	5,942,480	306,638	8,252,945	2,902,625	1,603,815
4. Changes of Assumptions	3,430	4,208,571	217,166	5,844,884	2,055,691	1,135,851
5. Changes in Proportion	0	604,530	249	154,457	88,633	38,140
Deferred Inflows Of Resources						
	0	0	0	0	0	0
1. Change in Benefits	0	0	0	0	0	0
2. Differences Between Expected and	0	0	0	0	0	0
Actual Experience 3. Net Difference Between	0	0	0	0	0	0
Projected and Actual Investment Earnings	(2,336)	(2 965 501)	(1/7 967)	(2 070 747)	(1 200 709)	(773,394)
4. Changes of Assumptions	(2,330)	(2,865,591) 0	(147,867) 0	(3,979,747) 0	(1,399,708) 0	(773,394)
5. Changes in Proportion	(71,996)	(540,822)	(96,491)	(287,206)	(241,922)	(303,817)
5. Changes in Froportion	(71,990)	(340,022)	(90,491)	(207,200)	(241,922)	(303,817)
Pension Expense						
1. Proportional Share of Pension Expense	2,738	3,359,527	173,355	4,665,728	1,640,973	906,702
2. Changes in Proportion	(19,367)	347,062	(59,267)	(309,035)	(196,120)	(253,213)
3. Total Employer Pension Expense	(16,629)	3,706,589	114,088	4,356,693	1,444,853	653,489
Revenue	(111)	(135,705)	(7,002)	(188,467)	(66,285)	(36,625)
	Cohasset					
	Housing	Town of	Charles Riv.	County of	Town of	Dover/Shear
Reconciliation of Net Pension Liability	Auth.	Cohasset	Poll. Cont.	Norfolk	Dover	borne Schl.
1. Net Pension Liability at Beginning of Year	131,851	21,582,433	1,138,079	28,506,322	9,976,114	5,529,627
2. Pension Expense	(16,629)	3,706,589	114,088	4,356,693	1,444,853	653,489
3. Employer Contributions	(2,834)	(3,476,988)	(179,416)	(4,828,858)	(1,698,347)	(938,404)

Revenue	(111)	(135,705)	(7,002)	(188,467)
Net Pension Liability at End of Year	20,292	24,896,296	1,284,674	34,576,100

(91,984)

3,219,967

218,926

6,730,410

2,504,350

12,160,685

(66,285)

Change in Deferred Outflows/(Inflows)

1,511,170

6,719,257

(36,625)

4. 5.

5.



	Foxboro	Franklin			Holbrook	
	Housing	Housing	Town of	Town of	Housing	Town of
Schedule of Pension Amounts	Auth.	Auth.	Foxboro	Franklin	Auth	Holbrook
Current Proportional Share	0.124365%	0.125199%	6.294625%	7.725258%	0.053952%	3.080530%
Prior Proportional Share	0.132100%	0.123000%	6.390300%	7.817600%	0.067300%	2.801200%
Net Pension Liability	864,736	870,536	43,767,839	53,715,332	375,143	21,419,567
Deferred Outflows Of Resources						
1. Change in Benefits	0	0	0	0	0	0
2. Differences Between Expected and						
Actual Experience	62,293	62,711	3,152,916	3,869,507	27,024	1,543,007
3. Net Difference Between						
Projected and Actual Investment Earnings	206,403	207,788	10,446,916	12,821,276	89,543	5,112,622
Changes of Assumptions	146,178	147,159	7,398,693	9,080,257	63,416	3,620,850
5. Changes in Proportion	33,676	8,150	5,110	154,457	15,464	998,821
Deferred Inflows Of Resources						
1. Change in Benefits	0	0	0	0	0	0
2. Differences Between Expected and						
Actual Experience	0	0	0	0	0	0
3. Net Difference Between						
Projected and Actual Investment Earnings	(99,532)	(100,200)	(5,037,726)	(6,182,693)	(43,179)	(2,465,415)
4. Changes of Assumptions	0	0	0	0	0	0
5. Changes in Proportion	(28,304)	(14)	(459,720)	(329,526)	(48,264)	(83,663)
Pension Expense						
1. Proportional Share of Pension Expense	116,688	117,471	5,906,069	7,248,392	50,622	2,890,374
2. Changes in Proportion	27,689	1,874	(137,552)	123,704	(2,531)	158,531
3. Total Employer Pension Expense	144,377	119,345	5,768,517	7,372,096	48,091	3,048,905
Revenue	(4,713)	(4,745)	(238,570)	(292,791)	(2,045)	(116,754)
	Foxboro	Franklin			Holbrook	
	Housing	Housing	Town of	Town of	Housing	Town of
Reconciliation of Net Pension Liability	Auth.	Auth.	Foxboro	Franklin	Auth	Holbrook
1. Net Pension Liability at Beginning of Year	763,924	711,299	36,954,589	45,208,550	389,190	16,199,114
2. Pension Expense	144,377	119,345	5,768,517	7,372,096	48,091	3,048,905

		/ -	,)	-,,	,	-,,
2.	Pension Expense	144,377	119,345	5,768,517	7,372,096	48,091	3,048,905
3.	Employer Contributions	(120,768)	(121,578)	(6,112,566)	(7,501,821)	(52,392)	(2,991,432)
4.	Change in Deferred Outflows/(Inflows)	81,916	166,215	7,395,869	8,929,298	(7,702)	5,279,734
5.	Revenue	(4,713)	(4,745)	(238,570)	(292,791)	(2,045)	(116,754)
5.	Net Pension Liability at End of Year	864,736	870,536	43,767,839	53,715,332	375,143	21,419,567



						Medfield	Medway
		Massachusetts		Town of	Town of	Housing	Housing
	hedule of Pension Amounts	Respiratory	Reg School	Medway	Medfield	Auth.	Auth.
	rrent Proportional Share	0.00000%	1.074849%	3.819738%	3.394453%	0.002221%	0.115415%
	or Proportional Share	0.00000%	1.024700%	3.820400%	3.626400%	0.019900%	0.093100%
Ne	t Pension Liability	0	7,473,647	26,559,434	23,602,337	15,446	802,506
De	ferred Outflows Of Resources						
1.	Change in Benefits	0	0	0	0	0	0
2.	Differences Between Expected and						
	Actual Experience	0	538,381	1,913,270	1,700,248	1,113	57,810
3.	Net Difference Between						
	Projected and Actual Investment Earnings	0	1,783,880	6,339,453	5,633,626	3,687	191,550
4.	Changes of Assumptions	0	1,263,376	4,489,714	3,989,835	2,611	135,659
5.	Changes in Proportion	0	207,680	421,877	7,147	23	79,867
De	ferred Inflows Of Resources						
1.	Change in Benefits	0	0	0	0	0	0
2.	Differences Between Expected and						
	Actual Experience	0	0	0	0	0	0
3.	Net Difference Between						
	Projected and Actual Investment Earnings	0	(860,225)	(3,057,020)	(2,716,655)	(1,778)	(92,369)
4.	Changes of Assumptions	0	0	0	0	0	0
5.	Changes in Proportion	0	0	(2,361)	(946,293)	(63,855)	(38,201)
Ре	nsion Expense						
1.	Proportional Share of Pension Expense	0	1,008,500	3,583,952	3,184,919	2,084	108,291
2.	Changes in Proportion	0	49,799	394,321	(290,409)	(17,117)	(16,868)
3.	Total Employer Pension Expense	0	1,058,299	3,978,273	2,894,510	(15,033)	91,423
Re	venue	0	(40,737)	(144,770)	(128,652)	(84)	(4,374)
						Medfield	Medway
		Massachusetts	King Phillip	Town of	Town of	Housing	Housing
Re	conciliation of Net Pension Liability	Respiratory	Reg School	Medway	Medfield	Auth.	Auth.
1.	Net Pension Liability at Beginning of Year	0	5,925,757	22,093,065	20,971,179	115,080	538,390
2.	Pension Expense	0	1,058,299	3,978,273	2,894,510	(15,033)	91,423
3.	Employer Contributions	0	(1,043,761)	(3,709,260)	(3,296,275)	(2,157)	(112,077)
4.	Change in Deferred Outflows/(Inflows)	0	1,574,089	4,342,126	3,161,575	(82,360)	289,144
 5.	Revenue	0	(40,737)	(144,770)	(128,652)	(84)	(4,374)
-	Net Deceler Liebility at End of Veen	0	(40,101)	(144,770)	(120,002)	(04)	(4,014)

0

7,473,647 26,559,434 23,602,337

5. Net Pension Liability at End of Year

15,446

802,506



		Millis	Norfolk			
	Town of	Housing	Housing	Norfolk Cnty	Town of	Town of
Schedule of Pension Amounts	Millis	Auth.	Auth.	Mos. Con.	Norfolk	Plainville
Current Proportional Share	2.793408%	0.067465%	0.036197%	0.239059%	3.171450%	2.321776%
Prior Proportional Share	2.572300%	0.067300%	0.045900%	0.282400%	3.016400%	2.794700%
Net Pension Liability	19,423,144	469,101	251,686	1,662,229	22,051,750	16,143,789
Deferred Outflows Of Resources						
1. Change in Benefits	0	0	0	0	0	0
2. Differences Between Expected and						
Actual Experience	1,399,191	33,793	18,131	119,742	1,588,548	1,162,955
3. Net Difference Between						
Projected and Actual Investment Earnings	4,636,097	111,969	60,074	396,756	5,263,517	3,853,350
Changes of Assumptions	3,283,367	79,299	42,546	280,990	3,727,717	2,729,012
5. Changes in Proportion	983,813	10,301	26	2,459	553,809	218,447
Deferred Inflows Of Resources						
1. Change in Benefits	0	0	0	0	0	0
2. Differences Between Expected and						
Actual Experience	0	0	0	0	0	0
3. Net Difference Between						
Projected and Actual Investment Earnings	(2,235,625)	(53,994)	(28,969)	(191,324)	(2,538,180)	(1,858,168)
Changes of Assumptions	0	0	0	0	0	0
5. Changes in Proportion	0	(220)	(35,593)	(154,664)	(6,226)	(1,687,658)
Pension Expense						
1. Proportional Share of Pension Expense	2,620,975	63,301	33,963	224,303	2,975,682	2,178,456
2. Changes in Proportion	375,425	10,234	(9,517)	(37,968)	136,308	(235,474)
3. Total Employer Pension Expense	2,996,400	73,535	24,446	186,335	3,111,990	1,942,982
Revenue	(105,872)	(2,557)	(1,372)	(9,060)	(120,200)	(87,997)
		Millis	Norfolk			
	Town of	Housing	Housing	Norfolk Cnty	Town of	Town of
Reconciliation of Net Pension Liability	Millis	Auth.	Auth.	Mos. Con.	Norfolk	Plainville
1. Net Pension Liability at Beginning of Year	14,875,403	389,190	265,436	1,633,096	17,443,598	16,161,525
2. Pension Expense	2.996.400	73.535	24.446	186.335	3.111.990	1.942.982

Ζ.	Pension Expense	2,996,400	73,535	24,440	180,335	3,111,990	1,942,982
3.	Employer Contributions	(2,712,614)	(65,514)	(35,150)	(232,145)	(3,079,722)	(2,254,623)
4.	Change in Deferred Outflows/(Inflows)	4,369,827	74,447	(1,674)	84,003	4,696,084	381,902
5.	Revenue	(105,872)	(2,557)	(1,372)	(9,060)	(120,200)	(87,997)
5.	Net Pension Liability at End of Year	19,423,144	469,101	251,686	1,662,229	22,051,750	16,143,789



Schedule of Pension Amounts	Town of Randolph	Norfolk County Ret BD	Randolph Housing Auth	Town of Sharon	Sharon Housing Auth.	Stoughton Hous. Auth.
Current Proportional Share	8.067324%	0.000000%	0.108462%	5.656946%	0.044371%	0.135008%
Prior Proportional Share	8.213900%	0.000000%	0.133400%	5.764300%	0.047900%	0.133500%
Net Pension Liability	56,093,782	0	754,161	39,333,921	308,522	938,738
Deferred Outflows Of Resources						
1. Change in Benefits	0	0	0	0	0	0
2. Differences Between Expected and	Ŭ	Ũ	0	Ũ	Ũ	0
Actual Experience	4,040,844	0	54,328	2,833,509	22,225	67,624
3. Net Difference Between	.,,	-	,	_,,	,	,
Projected and Actual Investment Earnings	13,388,987	0	180,010	9,388,587	73,641	224,067
4. Changes of Assumptions	9,482,320	0	127,486	6,649,165	52,154	158,688
5. Changes in Proportion	1,443	0	408	11,520	40,825	35,827
Deferred Inflows Of Resources						
1. Change in Benefits	0	0	0	0	0	0
2. Differences Between Expected and						
Actual Experience	0	0	0	0	0	0
3. Net Difference Between						
Projected and Actual Investment Earnings	(6,456,455)	0	(86,805)	(4,527,377)	(35,511)	(108,050)
Changes of Assumptions	0	0	0	0	0	0
5. Changes in Proportion	(697,756)	0	(89,614)	(616,666)	(12,593)	0
Pension Expense						
1. Proportional Share of Pension Expense	7,569,342	0	101,767	5,307,752	41,632	126,674
2. Changes in Proportion	(229,747)	0	(12,901)	(286,227)	29,902	31,073
3. Total Employer Pension Expense	7,339,595	0	88,866	5,021,525	71,534	157,747
Revenue	(305,756)	0	(4,111)	(214,401)	(1,682)	(5,117)

			Norfolk	Randolph		Sharon	
		Town of	County Ret	Housing	Town of	Housing	Stoughton
Re	conciliation of Net Pension Liability	Randolph	BD	Auth	Sharon	Auth.	Hous. Auth.
1.	Net Pension Liability at Beginning of Year	47,500,321	0	771,441	33,334,482	277,002	772,020
2.	Pension Expense	7,339,595	0	88,866	5,021,525	71,534	157,747
3.	Employer Contributions	(7,833,993)	0	(105,325)	(5,493,330)	(43,088)	(131,103)
4.	Change in Deferred Outflows/(Inflows)	9,393,616	0	3,290	6,685,645	4,756	145,191
5.	Revenue	(305,756)	0	(4,111)	(214,401)	(1,682)	(5,117)
5.	Net Pension Liability at End of Year	56,093,782	0	754,161	39,333,921	308,522	938,738



	hamHous. Auth.877%0.033340%900%0.037000%
Current Proportional Share8.194342%6.921890%6.880683%0.073526%2.974Prior Proportional Share7.827500%6.971300%7.153400%0.078800%2.811Net Pension Liability56,976,96748,129,34047,842,820511,23720,68	877% 0.033340% 900% 0.037000%
Prior Proportional Share 7.827500% 6.971300% 7.153400% 0.078800% 2.811 Net Pension Liability 56,976,967 48,129,340 47,842,820 511,237 20,68	900% 0.037000%
Net Pension Liability 56,976,967 48,129,340 47,842,820 511,237 20,68	
· · · · · · · · · · · ·	4,941 231,822
Deferred Outflows Of Resources	
1. Change in Benefits 0 0 0 0 0	0 0
2. Differences Between Expected and	
Actual Experience 4,104,466 3,467,107 3,446,467 36,828 1,49	0,087 16,700
3. Net Difference Between	
Projected and Actual Investment Earnings 13,599,793 11,487,959 11,419,570 122,027 4,93	7,275 55,333
4. Changes of Assumptions 9,631,617 8,135,979 8,087,544 86,422 3,49	6,666 39,188
5. Changes in Proportion 1,316,507 234,491 5,029 1,823 58	7,198 26
Deferred Inflows Of Resources	
1. Change in Benefits0000	0 0
2. Differences Between Expected and	
Actual Experience 0 0 0 0	0 0
3. Net Difference Between	
Projected and Actual Investment Earnings (6,558,110) (5,539,739) (5,506,761) (58,844) (2,38	0,859) (26,683)
4. Changes of Assumptions0000	0 0
5. Changes in Proportion(65,867)(176,324)(1,074,939)(18,822)(8	2,694) (15,260)
Pension Expense	
1. Proportional Share of Pension Expense 7,377,952 6,232,270 6,195,169 66,200 2,67	8,494 30,019
2. Changes in Proportion 327,416 97,904 (339,213) (3,463) 10	3,381 (4,920)
3. Total Employer Pension Expense 7,705,368 6,330,174 5,855,956 62,737 2,78	1,875 25,099

					Walpole		
		Town of	Town of	Town of	Housing	Town of	Wrentham
Re	conciliation of Net Pension Liability	Stoughton	Walpole	Westwood	Auth.	Wrentham	Hous. Auth.
1.	Net Pension Liability at Beginning of Year	45,265,801	40,314,465	41,367,535	455,694	16,260,991	213,968
2.	Pension Expense	7,705,368	6,330,174	5,855,956	62,737	2,781,875	25,099
3.	Employer Contributions	(7,957,337)	(6,721,688)	(6,681,673)	(71,399)	(2,888,835)	(32,376)
4.	Change in Deferred Outflows/(Inflows)	11,963,136	8,206,389	7,301,002	64,205	4,530,911	25,131
5.	Net Pension Liability at End of Year	56,976,967	48,129,340	47,842,820	511,237	20,684,941	231,822



		Dedham-	Metacomet	
		Westwood	Emergency	
Scl	hedule of Pension Amounts	Water Dist	Comm	Total
	rrent Proportional Share	0.635964%	0.481488%	100.00000%
Prie	or Proportional Share	0.729600%	0.425600%	100.00000%
Net	Pension Liability	4,421,990	3,347,886	695,320,824
Det	ferred Outflows Of Resources			
1.	Change in Benefits	0	0	0
2.	Differences Between Expected and			
-	Actual Experience	318,548	241,173	50,089,025
3.	Net Difference Between		700 405	
	Projected and Actual Investment Earnings	1,055,482	799,105	165,965,654
4.	Changes of Assumptions	747,511	565,940	117,539,849
5.	Changes in Proportion	1,316	782,399	9,584,306
Do	ferred Inflows Of Resources			
1.	Change in Benefits	0	0	0
2.	Differences Between Expected and	0	0	0
۷.	Actual Experience	0	0	0
3.	Net Difference Between	Ŭ	0	Ŭ
0.	Projected and Actual Investment Earnings	(508,976)	(385,345)	(80,032,182)
4.	Changes of Assumptions	0	0	0
5.	Changes in Proportion	(342,233)	0	(9,584,306)
Pe	nsion Expense			
1.	Proportional Share of Pension Expense	596,707	451,767	93,827,175
2.	Changes in Proportion	(121,217)	590,826	0
3.	Total Employer Pension Expense	475,490	1,042,593	93,827,175
Re	venue	(24,103)	(18,249)	(3,790,053)
		Dedham-	Metacomet	
		Westwood	Emergency	
	conciliation of Net Pension Liability	Water Dist	Comm	Total
1.	Net Pension Liability at Beginning of Year	4,219,218	2,461,210	578,291,931
2.	Pension Expense	475,490	1,042,593	93,827,175
3.	Employer Contributions	(617,570)	(467,562)	(97,107,703)
4. 5	Change in Deferred Outflows/(Inflows)	368,955	329,894	124,099,474
5.	Revenue	(24,103)	(18,249)	(3,790,053)
5.	Net Pension Liability at End of Year	4,421,990	3,347,886	695,320,824



Section VI – Actuarial Methods and Assumptions

The actuarial cost method, factors, and assumptions used in determining cost estimates are presented below.

Member Data

The member data used in the determination of cost estimates consist of pertinent information with respect to the active, inactive, retired, and disabled members of the employer as supplied by the employer to the actuary.

Actuarial Cost Method

Individual entry-age normal cost method.

Rate of Investment Return

It is assumed that the assets of the fund will accumulate at a compound annual rate of 7.625% per annum.

Interest rate for accounting

7.625% per year, compounded annually. Projected benefit payments that are expected to be paid from available plan assets are discounted at the valuation interest rate of 7.60%. After the point where plan assets are not available to pay benefits, projected benefit payments are discounted at the municipal bond rate. The valuation rate for accounting purposes is the effective rate resulting from this process.

Municipal bond rate

4.00%. This rate is based on the S&P Municipal Bond 20 Year High Grade Rate Index as of December 31, 2023 the Measurement date for GASB 67 purposes.

Salary Scale

It is assumed that salaries including longevity will increase at the following rates.

	Assumption						
Years of Service	General Employees	Police and Fire					
0	5.5%	5.5%					
1	5.5%	7.5%					
2	5.0%	8.0%					
3	4.5%	7.5%					
4	4.5%	6.0%					
5	4.0%	5.0%					
6+	3.5%	4.0%					

Cost-of-Living Increases

Retirement benefits were assumed to increase annually at the assumed inflation rate of 2.75%, up to the applicable annual maximum.

Form of Payment

Future retirees are assumed to elect a Life Annuity. Future vested terminations are assumed to elect a refund of contributions unless specifically reported by the plan sponsor to be eligible for an annuity benefit.



Section VI – Actuarial Methods and Assumptions (continued)

Value of Investments

Assets held by the fund are valued at market value as reported by the Public Employees' Retirement Administration Commission (PERAC).

Separations from Active Service

Representative values of the assumed annual rates of withdrawal and vesting, disability and service retirement, all based on an analysis of experience, are as follows:

General Employees-Annual Rates of

Service Retirement							
Age	Disability	Hired befo	re 4/2/2012		n or after 2012	Years of Service	Rates of Withdrawal
		Male	Female	Male	Female		
25	.010%					0	18.21%
30	.015					1	20.80
35	.035					2	17.62
40	.066	0.55%	0.79%	0.00%	1.40%	3	14.82
45	.097	0.55	0.79	0.00	1.40	4	12.20
50	.127	2.99	5.97	0.00	10.53	5	10.20
55	.157	5.33	4.64	1.99	0.96	10	6.50
60	.182	7.74	5.59	5.42	5.93	15	4.17
62	.190	11.40	11.01	5.42	6.23	20	4.00
65	.158	23.74	19.99	14.11	9.25	25	4.00
69	.140	26.39	21.28	18.24	13.44	30+	0.00

Police and Fire-Annual Rates of

Age	Disability	Hired before 4/2/2012	Hired on or after 4/2/2012	Years of Service	Rates of Withdrawal
		Male & Female	Male & Female		
25	.087%			0	2.74%
30	.087			1	2.74
35	.263			2	2.74
40	.197	1.38%	0.00%	3	2.74
45	.467	1.38	0.00	4	2.74
50	.785	1.11	0.72	5	2.66
55	.788	9.65	3.89	10	1.97
60	.730	11.58	14.55	15	0.59
62	1.224	24.50	27.41	20	0.41
65	1.031	79.57	100.00	25	0.00
69	1.031	100.00	100.00	30+	0.00



Section VI – Actuarial Methods and Assumptions (continued)

It is assumed for the general employees that 20% of all disabilities are ordinary (80% are service connected). For police and fire employees, 10% of all disabilities are assumed to be ordinary (90% are service connected). A load was applied to the accidental disability liability to account for the additional benefit payable for each dependent child upon the member's disability. Loads of approximately 2% and 11.7% were developed for Group 1 and Group 4, respectively, taking into account the higher likelihood of Group 4 accidental disabilities at younger ages, thus the likelihood of Group 4 having more dependent children than Group 1 accidental disability retirees.

Mortality

Plan liabilities as of January 1, 2024 were valued using rates taken from *Pub-2010 Public Retirement Plans Mortality Tables Report* from the Society of Actuaries dated January 2019. These rates are applied as follows:

Participant Group	Non-disabled	Disabled
General Employees	PubG-2010 Healthy, males set forward 1 year	PubG-2010 Disabled
Police and Fire	PubS-2010 Healthy	RP-2000 set forward 2 years
Contingent survivors	Contingent survivors table (total dataset)	N/A

All non-disabled rates are amount-weighted and projected generationally with Scale MP-2021. Separate annuitant and non-annuitant rate tables were used.

It is assumed that 80% of all active deaths are ordinary (20% are service connected).

Marital Percentage

60% of participants are assumed to be married at death. Husbands are assumed to be 3 years older than their wives.

Future actuarial measurements

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, changes expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions, applicable law or regulations. An analysis of the potential range of such future differences is beyond the scope of this report.

GASB 67 and 68 Measurement Date

December 31, 2023.

Loading or Contingency Reserve

None.

Changes since the Prior Valuation

The assumptions used in this valuation are based on an experience study covering the six-year period ending December 31, 2023, which established the assumptions for the rate of investment return, inflation, annual salary increases, rates of retirement, termination, disability, and mortality and the marital percentage.

These assumption changes increased the plan's actuarial accrued liability by approximately \$147.8 million.



Section VII – Summary of System Provisions

Membership

The Retirement System covers all employees of participating units except teachers, elected officials and those employees in service at the time of its establishment who elected not to become members. Eligible employees in the County who enter service on or after the date the System became operative for their classification may become members of the Retirement System on their own application.

Summary of Benefit and Contribution Provisions

A summary of the main benefit and contribution provisions of the Retirement System, as interpreted for the valuation, is presented below.

The terms "Group 1" and "Group 4" are used to denote "general employees" and "police and fire", respectively.

Benefits

Final Average Salary (FAS)

For those hired prior to April 2, 2012, the average of a member's three highest consecutive years' compensation. For those hired on or after April 2, 2012, the average of a member's five highest consecutive years' compensation. For those hired on or after January 1, 2011, salary taken into account for benefit purposes is capped at 64% of the IRC Section 401(a)(17) limit (indexed).

Superannuation Retirement

Eligibility

For those hired prior to April 2, 2012: Age 65 for Group 1; Age 55 for Group 4. Maximum retirement age is 70 for Group 1 and 65 for Group 4.

For those hired on or after April 2, 2012: Age 67 for Group1; Age 57 for Group 4 if member has completed 30 years of service, or age 62 otherwise.

Allowance

2.5% per year of service times FAS. Maximum total allowance is 80% of FAS. Veterans receive additional \$15 annually per year of service to a maximum of \$300 annually.

Early Retirement

Eligibility

For those hired prior to April 2, 2012: 20 years of service, or age 55 with 10 years of service.

For those hired on or after April 2, 2012: age 60 and 10 years of service for Group 1; Age 55 and 10 years for Group 4.

Allowance

Calculated as a superannuation retirement allowance (including veteran's benefits) except accrual rate is equal to 2.5% reduced by .1% for each year age at retirement is below either 65 for Group 1 or 55 for Group 4. Those hired on or after April 2, 2012 who retire with fewer than 30 years of service, the accrual rate of 2.5% is reduced by .15% for each year age at retirement precedes age 67 for Group 1 or age 57 for Group 4. Those hired on or after April 2, 2012 who retire with at least 30 years of service, the accrual rate of 2.5% is reduced by .15% for each year age at retirement precedes age 67 for Group 1 or age 57 for Group 4. Those hired on or after April 2, 2012 who retire with at least 30 years of service, the accrual rate of 2.5% is reduced by .15% for each year age at retirement precedes age 62 for Group 1 or age 57 for Group 4.

The minimum allowance after 30 years of service is equal to:

- (1) An annuity which is the actuarial equivalent of member's accumulated deductions; and
- (2) A pension equal to 1/3 of FAS and any veteran's benefits as described under superannuation retirement.



Section VII – Summary of System Provisions (continued)

Vested Retirement

Eligibility

10 years of service. For certain involuntary terminations, this is reduced to 6 years.

Allowance

A superannuation retirement allowance commencing at age 55 for Group 1 members (age 60 if hired on or after April 2, 2012) and age 45 for Group 4 members (age 55 if hired on or after April 2, 2012) or later, where the accrual rate is determined by the age of the member at the time the allowance commences.

In lieu of the deferred pension benefit, a member may elect to receive a refund of their accumulated contributions.

Ordinary Disability

Eligibility

10 years of service.

Allowance

An immediate allowance equal to the age 55 rate (age 60 for Group 1 members hired on or after April 2, 2012) per year of service times FAS.

Veterans receive an allowance equal to:

- (1) An annuity which is the actuarial equivalent of their accumulated deductions; and
- (2) A pension which is the greater of 50% of current salary and the service retirement allowance to which they are eligible, if any.

Accidental Disability

Eligibility

Permanent incapacity for further duty as a result of personal injury sustained while in the performance of duties.

Allowance

An immediate allowance equal to:

- (1) An annuity which is the actuarial equivalent of the member's accumulated deductions; and
- (2) A pension equal to 72% of current salary; and
- (3) A supplement equal to \$1,092.60 per year per child who is under 18 at the time of the member's retirement, with no age limitation if the child is mentally or physically incapacitated from earning. The additional pension may continue up to age 22 for any child who is a full-time student at an accredited educational institution.

The maximum total allowance is 100% of current salary.

Accidental Death Benefit

Eligibility

Death due to an occupational injury.

Allowance

An immediate allowance equal to:

- (1) A lump sum payment equal to the accumulated deductions at death; and
- (2) A pension equal to 72% of current salary and payable to the surviving spouse, dependent children, or the dependent parents; and
- (3) A supplement of \$1,092.60 per year per child payable to the spouse or legal guardian until all children reach age 18, or 22 if a full-time student, unless mentally or physically incapacitated.

The maximum total allowance is 100% of current salary.



Section VII – Summary of System Provisions (continued)

Death in Active Service

Eligibility

Death of a member due to a non-occupational injury.

Allowance

An immediate allowance that would have been payable had the member retired and elected the 2/3 joint and survivor option on the day before his death. For death occurring prior to the minimum superannuation retirement age, the age 55 (age 60 if hired on or after April 2, 2012) and age 45 (age 55 if hired on or after April 2, 2012) accrual rates are used, respectively, for Group 1 and Group 4 members. The minimum annual allowance payable to the surviving spouse of a member in service who dies with at least two years of creditable service is \$6,000, provided that the member and the spouse were married for at least one year and living together on the member's date of death.

For members with at least 2 years of service at death, the surviving spouse receives an additional allowance equal to the sum of \$1,440 per year for the first child and \$1,080 per year for each additional child until all dependent children reach age 18 or 22 if a full-time student, unless mentally or physically incapacitated. If there is no designated beneficiary or surviving spouse, then member contributions are returned. If there are dependent children but no surviving spouse, they may elect minimum survivor benefits of \$3,000 per year plus \$1,440 for the first child and \$1,080 for each additional child.

The maximum total allowance is 100% of salary at the date of death.

Normal Form of Benefit

Reduced modified cash refund annuity.

Optional Forms of Benefit

- (1) Option A Life annuity.
- (2) Option B Modified cash refund annuity.
- (3) Option C 66-2/3% joint and survivor allowance. If the beneficiary predeceases the retiree, the benefit payable increases based on the factor used to determine the Option C benefit at retirement.

Return of Contribution

If no other benefit is payable upon termination, the member's accumulated deductions are returned.

Post-Retirement Adjustments

In accordance with the adoption of Chapter 17 of the Acts of 1997, the granting of a cost-of-living adjustment will be determined by an annual vote by the Retirement Board. The amount of increase will be based upon the Consumer Price Index, limited to a maximum of 3.0%, beginning on July 1. All retirees, disabled retirees, and beneficiaries who have been receiving benefits payments for at least one year as of July 1 are eligible for the adjustment. The maximum amount of pension benefit subject to a COLA is \$18,000. All COLAs granted to members after 1981 and prior to July 1, 1998 are deemed to be an obligation of the State and are not the liability of the Retirement System:



Section VII – Summary of System Provisions (continued)

Member Contributions

Members contribute a percentage of annual regular compensation in accordance with their respective dates of hire, as shown below:

Date of Hire	Rate of Contribution
Prior to January 1, 1975	5%
On or after January 1, 1975	7%
On or after January 1, 1984	8%
On or after July 1, 1996	9%

Members hired on or after January 1, 1979 contribute an additional 2% of compensation in excess of \$30,000.

The contribution rate for Group 1 participants hired on or after April 2, 2012 and who attain 30 years of service is reduced by three percentage points.



Section VIII – Membership Tables

Attained Age	Average Salary < 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
Under 25	360 24,604									360 24,604
25-29	511 40,116	65 67,632				1 3,538				577 43,153
30-34	462 41,353	188 72,353	43 80,332		1 34,110					694 52,155
35-39	250 40,490	161 71,867	111 86,498	30 94,682						552 61,838
40-44	242 35,386	98 62,257	80 77,739	115 93,402	23 99,919	1 196,995			1 87,763	560 61,085
45-49	272 33,569	124 52,757	56 73,456	78 83,977	65 103,153	20 110,157				615 57,308
50-54	244 35,144	135 50,794	85 58,641	76 74,251	79 95,492	105 116,011	31 120,103	2 72,509		757 65,592
55-59	220 36,392	177 51,776	117 54,552	105 56,799	94 74,693	79 96,664	51 116,745	18 95,457	2 76,907	863 60,256
60-64	214 34,650	119 45,745	84 59,914	139 56,854	123 62,480	73 78,173	27 88,629	22 112,268	4 111,399	805 55,273
65-69	47 31,415	46 53,999	26 53,593	43 55,687	55 51,844	42 75,802	4 70,364	7 72,248	4 98,597	274 54,617
70+	24 29,423	25 39,604	11 47,849	27 56,139	19 50,776	19 54,336	12 56,300	5 77,528	7 59,942	149 48,445
Total Employees Average Salary	2,846 36,001	1,138 59,008	613 68,039	613 71,047	459 76,478	340 94,541	125 104,218	54 96,787	18 83,398	6,206 55,087

Age/Service Distribution with Salary as of January 1, 2024



Section VIII – Membership Tables (continued)

	Servic	e Retirements Disability Retirements		Beneficiaries		
Age	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
Under 20	0	0	0	0	1	14,585
20 - 24	0	0	0	0	2	18,837
25 - 29	0	0	0	0	1	12,177
30 - 34	0	0	0	0	2	40,981
35 - 39	0	0	2	122,792	2	11,060
40 – 44	1	73,363	5	318,935	7	146,445
45 - 49	4	143,844	7	336,676	3	42,079
50 - 54	17	717,237	26	1,143,194	15	363,979
55 - 59	126	5,373,698	55	2,753,465	31	707,447
60 - 64	332	12,062,665	62	2,885,899	55	932,970
65 - 69	680	23,082,294	59	2,513,445	59	1,417,889
70 - 74	715	23,412,122	55	2,436,957	64	1,432,979
75 - 79	530	16,954,160	52	1,977,594	89	1,983,713
80 - 84	384	11,172,245	26	927,045	57	1,313,215
85 - 89	203	5,272,728	13	453,163	47	1,129,523
90 - 94	90	1,993,698	4	114,025	32	625,255
95 - 99	29	475,247	1	20,311	8	152,194
100 and over	4	25,939	0	0	1	5,324
Total	3,115	100,759,240	367	16,003,501	476	10,350,652

The Number and Annual Pensions of Retired Members Distributed by Age as of January 1, 2024



Section IX – Glossary of Terms

This glossary summarizes the technical terms contained in this report.

Actuarial Accrued Liability

That portion of the Actuarial Present Value of plan benefits that is not provided for by future employer Normal Costs or employee contributions.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting the Retirement System such as:

- Rates of investment returns
- Increases in a member's salary
- Inflation
- The probability of mortality, turnover, disablement
- Retirement at each age and other relevant items

Actuarial Cost Method

A procedure for allocating the Actuarial Present Value of pension plan benefits between Normal Cost and Actuarial Accrued Liability.

Actuarial Present Value

The single sum amount required at the valuation date that is required to provide for anticipated future events based upon the terms of the plan and the Actuarial Assumptions.

Forecast

A projection of future benefit payments or contribution requirements based upon the terms of the plan, the current asset amounts, the Actuarial Assumptions, and additional assumptions as to the replacement of terminating employees with new employees.

Normal Cost

That portion of the Actuarial Present Value of future benefits that is assigned to the current year.

Unfunded Actuarial Accrued Liability

That portion of the Actuarial Accrued Liability that is not provided for by current actuarial value of assets.

Valuation Method

The method used to divide the cost of future benefits among the Actuarial Accrued Liability, the current year's Normal Costs, and future years' Normal Costs. The resulting current funding requirement is then determined as the current year's Normal Cost plus the payment necessary to amortize the Unfunded Actuarial Liability.

Vested Liability

That portion of the Actuarial Present Value of Accrued Benefits that a member would be entitled to if the member terminated employment with the employer as of the valuation date.

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