

**NORFOLK COUNTY
CONTRIBUTORY RETIREMENT SYSTEM**

December 31, 2022 Actuarial Valuation Report

GASB 67 & 68

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Introduction

This report presents the Governmental Accounting Standards Statements 67 & 68 based on the findings of an actuarial valuation as of January 1, 2022, of the Norfolk County Contributory Retirement System. Liabilities were rolled forward to December 31, 2022 assuming all actuarial assumptions were realized.

The actuarial valuation is based on:

- Provisions of Chapter 32 of the Massachusetts General Laws, "M.G.L", as of January 1, 2022.
- Employee data provided by the Retirement Board
- Asset information reported to the Public Employee Retirement Administration Commission by the Norfolk County Contributory Retirement System
- Actuarial assumptions approved by the Retirement Board
- Assets as of December 31, 2022

The valuation and appropriation forecast are prepared in accordance with Chapter 32 of the M.G.L. as of January 1, 2022.

The valuation and forecast do not account for:

- Any subsequent changes in the law
- Chapter 32 of the M.G.L., Section 3(8)(c) transfers between systems
- State-mandated benefits
- Cost-of-living increases granted to retired members between 1982 and 1997. The cost of these benefits has been assumed by the State under Proposition Two and One-Half.

GASB Statements No. 67 and No. 68

Effective for periods beginning after June 15, 2013, the Governmental Accounting Standards Board (GASB) requires the disclosure of pension related liabilities for public employer financial statements in accordance with Statements 67 and 68. These statements, which amend GASB Statements No. 25 and No. 27, must be adhered to by any public employee retirement system that follows Generally Accepted Accounting Principles (GAAP).

These disclosures are intended to establish a reporting framework that distinguishes between:

- current financial information about plan assets and financial activities,
- actuarially determined information from a long-term perspective,
- the funded status of the plan, and
- progress being made in accumulating sufficient assets to pay benefits when due.

The statement requires the system to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position. The statement of fiduciary net position presents the following items as of the end of the plan’s reporting period, as applicable:

- Assets
- Deferred outflows of resources (consumption of net assets by the employers that is applicable to a future reporting period)
- Liabilities
- Deferred inflows of resources (acquisition of net assets by the employers that is applicable to a future reporting period)
- Fiduciary net position (Assets + Deferred outflows – Liabilities – Deferred inflows)

The system is considered a cost-sharing multiple-employer pension plan since pension obligations exist for employees of more than one employer and plan assets can be used to pay the benefits of the employees of any employer.

This report does not include all items required under GASB Statements No. 67 and No. 68. Rather, it provides all items required that are not readily available from other sources such as the Annual Statement of the Financial Condition prepared by the Board, Chapter 32 of the Massachusetts General Laws and investment reports prepared by the plan’s investment consultant.

Discount Rate

The discount rate, and all other actuarial assumptions, are the as those described in Exhibit 5. The discount rate was selected based on a projection of employer and employee contributions, benefit payments, expenses and the long term expected rate of return on trust assets. Under Chapter 32 of the Massachusetts Laws, employers are required to make the necessary contributions to the trust such that the plan reaches a full funding status by 2040. In addition, Chapter 32 also gives the Retirement Board the right to go directly to the Assessors of the community and add an additional property tax to bills for amounts not paid by employer.

Based on these laws and assumptions, the pensions plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

The Board selected 7.75% as the long term expectation of investment returns. The average return for the 37 years ending as of December 31, 2021 was 8.94%. The average return for the past 10 years ending December 31, 2021 was 10.14%.

Net Position Restricted for Pensions

The Net Position Restricted for Pensions as of December 31, 2022 is \$1,260,651,322. The 2022 Annual Statement of the Financial Condition contains the values for previous years and the changes in Net Position Restricted for Pensions. Investments are reported at fair value.

December 31, 2021 Net Position	1,424,456,980
Employer Contributions	91,885,045
Employee Contributions	38,149,245
Other Payments	4,323,693
Benefit Payments	(130,524,733)
Expenses	(1,513,129)
Investment Income	<u>(166,125,779)</u>
December 31, 2022 Net Position	1,260,651,322

Pension Liability as of December 31, 2022

The following presents the changes in the pension liability during 2022.

December 31, 2021 Liability	1,793,000,074
Service Cost	39,418,902
Interest on Liability and Service Cost	137,049,010
Change in Plan Provisions	0
Experience (Gain) and Loss	0
Change in Assumptions	0
Benefit Payments	(130,524,733)
Other	<u>0</u>
December 31, 2022 Liability	1,838,943,253

Net Pension Liability as of December 31, 2022

The following presents the net pension liability of the system calculated using the discount rate of 7.75%, as well as what the system's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.75%) or 1-percentage-point higher (8.75%) than the current rate:

	1% Decrease (6.75%)	Current Discount Rate (7.75%)	1% Increase (8.75%)
Total Pension Liability	2,028,864,785	1,838,943,253	1,677,486,066
Plan Fiduciary Net Position	<u>1,260,651,322</u>	<u>1,260,651,322</u>	<u>1,260,651,322</u>
Net Pension Liability	768,213,463	578,291,931	416,834,744

The Plan Fiduciary Net Position as a percentage of the Total Pension Liability is 68.6%.

		1% Decrease (6.75%)	Current Discount Rate (7.75%)	1% Increase (8.75%)
Avon Housing Auth.	AHA	131,365	98,888	71,279
Town of Avon	AVO	13,997,618	10,537,057	7,595,146
Town of Bellingham	BEL	29,550,867	22,245,156	16,034,382
Bellingham Hous. Auth.	BHA	449,405	338,301	243,848
Town of Canton	CAN	57,930,977	43,608,995	31,433,508
Canton Housing Auth.	CHA	991,764	746,575	538,134
Cohasset Housing Auth.	CHH	175,153	131,851	95,038
Town of Cohasset	COH	28,670,495	21,582,433	15,556,689
Charles Riv. Poll. Cont.	CRP	1,511,844	1,138,079	820,331
County of Norfolk	CTY	37,868,314	28,506,322	20,547,452
Town of Dover	DOV	13,252,450	9,976,114	7,190,816
Dover/Shearborne Schl.	DSR	7,345,657	5,529,627	3,985,774
Foxboro Housing Auth.	FHA	1,014,810	763,924	550,639
Franklin Housing Auth.	FHH	944,903	711,299	512,707
Town of Foxboro	FOX	49,091,145	36,954,589	26,636,991
Town of Franklin	FRA	60,055,856	45,208,550	32,586,473
Holbrook Housing Auth	HHA	517,008	389,190	280,530
Town of Holbrook	HOL	21,519,196	16,199,114	11,676,375
Massachusetts Respiratory	HOS	-	-	-
King Phillip Reg School	KPR	7,871,883	5,925,757	4,271,306
Town of Medway	MDW	29,348,827	22,093,065	15,924,755
Town of Medfield	MED	27,858,493	20,971,179	15,116,095
Medfield Housing Auth.	MHA	152,874	115,080	82,950
Medway Housing Auth.	MHH	715,207	538,390	388,073
Town of Millis	MIL	19,760,755	14,875,403	10,722,240
Millis Housing Auth.	MLH	517,008	389,190	280,530
Norfolk Housing Auth.	NHA	352,610	265,436	191,327
Norfolk Cnty Mos. Con.	NMC	2,169,435	1,633,096	1,177,141
Town of Norfolk	NOR	23,172,391	17,443,598	12,573,403
Town of Plainville	PLA	21,469,262	16,161,525	11,649,281
Town of Randolph	RAN	63,100,286	47,500,321	34,238,389
Norfolk County Ret BD	RET	-	-	-
Randolph Housing Auth	RHA	1,024,797	771,441	556,058
Town of Sharon	SHA	44,282,129	33,334,482	24,027,605
Sharon Housing Auth.	SHH	367,974	277,002	199,664
Stoughton Hous. Auth.	STH	1,025,565	772,020	556,474
Town of Stoughton	STO	60,131,909	45,265,801	32,627,740
Town of Walpole	WAL	53,554,465	40,314,465	29,058,801
Town of Westwood	WES	54,953,382	41,367,535	29,817,857
Walpole Housing Auth.	WHA	605,352	455,694	328,466
Town of Wrentham	WRE	21,601,394	16,260,991	11,720,976
Wrentham Hous. Auth.	WRH	284,239	213,968	154,229
Dedham-Westwood Water Dist	DWW	5,604,885	4,219,218	3,041,226
Metacomet Emergency Comm	MEC	3,269,516	2,461,210	1,774,049

Employer Contributions during 2022

	<u>Unit</u>	<u>Contribution</u>	<u>Portion</u>
Avon Housing Auth.	AHA	15,697	0.000171
Town of Avon	AVO	1,674,267	0.018221
Town of Bellingham	BEL	3,534,569	0.038467
Bellingham Hous. Auth.	BHA	53,711	0.000585
Town of Canton	CAN	6,929,184	0.075410
Canton Housing Auth.	CHA	118,641	0.001291
Cohasset Housing Auth.	CHH	20,967	0.000228
Town of Cohasset	COH	3,429,263	0.037321
Charles Riv. Poll. Cont.	CRP	180,785	0.001968
County of Norfolk	CTY	4,529,169	0.049294
Town of Dover	DOV	1,585,077	0.017251
Dover/Shearborne Schl.	DSR	878,624	0.009562
Foxboro Housing Auth.	FHA	121,344	0.001321
Franklin Housing Auth.	FHH	112,992	0.001230
Town of Foxboro	FOX	5,871,763	0.063903
Town of Franklin	FRA	7,183,210	0.078176
Holbrook Housing Auth	HHA	61,881	0.000673
Town of Holbrook	HOL	2,573,892	0.028012
Massachusetts Respiratory	HOS	-	-
King Phillip Reg School	KPR	941,565	0.010247
Town of Medway	MDW	3,510,400	0.038204
Town of Medfield	MED	3,332,086	0.036264
Medfield Housing Auth.	MHA	18,241	0.000199
Medway Housing Auth.	MHH	85,510	0.000931
Town of Millis	MIL	2,363,555	0.025723
Millis Housing Auth.	MLH	61,806	0.000673
Norfolk Housing Auth.	NHA	42,177	0.000459
Norfolk Cnty Mos. Con.	NMC	259,457	0.002824
Town of Norfolk	NOR	2,771,584	0.030164
Town of Plainville	PLA	2,567,956	0.027947
Town of Randolph	RAN	7,547,386	0.082139
Norfolk County Ret BD	RET	-	-
Randolph Housing Auth	RHA	122,600	0.001334
Town of Sharon	SHA	5,296,528	0.057643
Sharon Housing Auth.	SHH	44,054	0.000479
Stoughton Hous. Auth.	STH	122,699	0.001335
Town of Stoughton	STO	7,192,286	0.078275
Town of Walpole	WAL	6,405,620	0.069713
Town of Westwood	WES	6,572,941	0.071534
Walpole Housing Auth.	WHA	72,417	0.000788
Town of Wrentham	WRE	2,583,703	0.028119
Wrentham Hous. Auth.	WRH	33,995	0.000370
Dedham-Westwood Water Dist	DWW	670,418	0.007296
Metacomet Emergency Comm	MEC	391,025	0.004256

Pension Expense for 2022

Service Cost	39,418,902
Interest	137,049,010
Difference in Experience - Amortization	18,242,007
Change in Assumptions - Amortization	0
Changes in Plan Provisions	0
Employee Contributions	(38,149,245)
Projected Earnings	(110,483,643)
Administration Expense	1,513,129
Other Changes in Fiduciary Net Position	0
Asset (Gain) / Loss Amortization	<u>29,820,549</u>
Total Expense	77,410,709

Reconciliation of Net Pension Liability for 2022

NPL Beginning	368,543,094
Expense*	77,410,709
Contribution	(91,885,045)
Deferred Outflow changes	177,500,751
Deferred Inflow changes	51,046,115
Revenue	<u>(4,323,693)</u>
NPL Ending	578,291,931

Schedules of Required Supplementary Information

	<u>2022</u>
Total Pension Liability – Beginning	1,793,000,074
Total Pension Liability – Ending (a)	1,838,943,253
Plan Fiduciary Net Position – Beginning	1,424,456,980
Plan Fiduciary Net Position – Ending (b)	1,260,651,322
Net Pension Liability – Ending (a) – (b)	578,291,931
Plan Fiduciary Net Positions as a percentage of the Total Pension Liability	68.6%
Covered-employee payroll	351,456,210
Net Pension Liability as a percentage of Covered-employee Payroll	164.5%

Schedule of Net Position Restricted for Pensions Amortization Recognition

Below is the schedule of amortization adjustments to the Pension Expense for the coming years. A positive number indicates that the actual return was less than the expected return and will be added to the Pension Expense.

Investment Return

<u>Year</u>	<u>(Gain) / Loss</u>	<u>Period</u>	<u>Increase (Decrease) arising from (Gains) or Losses</u>				
			<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
2022	276,609,422	5	55,321,884	55,321,884	55,321,884	55,321,884	55,321,886
2021	(129,087,718)	5	(25,817,544)	(25,817,544)	(25,817,544)	(25,817,542)	
2020	(40,896,153)	5	(8,183,748)	(8,179,231)	(8,179,229)		
2019	(85,246,700)	5	(17,049,340)	(17,049,340)			
2018	127,723,896	5	25,544,780				

Experience

<u>Year</u>	<u>(Gain) / Loss</u>	<u>Period</u>	<u>Increase (Decrease) arising from (Gains) or Losses</u>				
			<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
2021	33,610,962	4.08	8,237,981	8,237,981	8,237,981	659,038	
2019	41,916,868	4.19	10,004,026	1,900,764			

Assumptions

<u>Year</u>	<u>(Gain) / Loss</u>	<u>Period</u>	<u>Increase (Decrease) arising from (Gains) or Losses</u>				
			<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>

	<u>Avon</u> <u>Housing</u> <u>Auth.</u>	<u>Town of</u> <u>Avon</u>	<u>Town of</u> <u>Bellingham</u>	<u>Bellingham</u> <u>Hous. Auth.</u>	<u>Town of</u> <u>Canton</u>	<u>Canton</u> <u>Housing Auth.</u>
Net Pension Liability	98,888	10,537,057	22,245,156	338,301	43,608,995	746,575
Deferred Outflows of Resources						
Differences between Expected and Actual Experience	3,256	346,850	732,248	11,136	1,435,487	24,575
Net Asset Loss	37,840	4,032,080	8,512,268	129,453	16,687,293	285,682
Changes in Assumptions	0	0	0	0	0	0
Changes in Proportion and Differences between Employer Contributions and proportionate share of contributions	11	133,796	13,237	44,048	43,944	18,478
Total Deferred Outflows	41,107	4,512,726	9,257,753	184,637	18,166,724	328,735
Deferred Inflows of Resources						
Differences between Expected and Actual Experience	0	0	0	0	0	0
Net Asset Gain	18,957	2,019,987	4,264,468	64,853	8,359,986	143,121
Changes in Assumptions	0	0	0	0	0	0
Changes in Proportion and Differences between Employer Contributions and proportionate share of contributions	4,233	19,441	1,592,679	227	0	6,047
Total Deferred Inflows	23,190	2,039,428	5,857,147	65,080	8,359,986	149,168
Pension Expense						
Proportionate share of plan Pension Expense	13,237	1,410,501	2,977,758	45,285	5,837,542	99,937
Net Amortization from changes in Share Proportions	(20,853)	(35,682)	(782,776)	19,781	57,394	(19,624)
Total Employer Pension Expense	(7,616)	1,374,819	2,194,982	65,066	5,894,936	80,313
Revenue	739	78,782	166,319	2,529	326,050	5,582

	<u>Cohasset Housing Auth.</u>	<u>Town of Cohasset</u>	<u>Charles Riv. Poll. Cont.</u>	<u>County of Norfolk</u>	<u>Town of Dover</u>	<u>Dover/Shearb orne Schl.</u>
Net Pension Liability	131,851	21,582,433	1,138,079	28,506,322	9,976,114	5,529,627
Deferred Outflows of Resources						
Differences between Expected and Actual Experience	4,340	710,434	37,462	938,349	328,385	182,021
Net Asset Loss	50,454	8,258,672	435,494	10,908,148	3,817,431	2,115,951
Changes in Assumptions	0	0	0	0	0	0
Changes in Proportion and Differences between Employer Contributions and proportionate share of contributions	0	1,167,266	1,618	10,401	9,551	20,666
Total Deferred Outflows	54,794	10,136,372	474,574	11,856,898	4,155,367	2,318,638
Deferred Inflows of Resources						
Differences between Expected and Actual Experience	0	0	0	0	0	0
Net Asset Gain	25,276	4,137,422	218,174	5,464,754	1,912,453	1,060,047
Changes in Assumptions	0	0	0	0	0	0
Changes in Proportion and Differences between Employer Contributions and proportionate share of contributions	2,129	76,287	103,087	646,451	465,922	585,129
Total Deferred Inflows	27,405	4,213,709	321,261	6,111,205	2,378,375	1,645,176
Pension Expense						
Proportionate share of plan Pension Expense	17,650	2,889,045	152,344	3,815,883	1,335,412	740,201
Net Amortization from changes in Share Proportions	(1,585)	163,476	(44,203)	(362,863)	(213,414)	(195,032)
Total Employer Pension Expense	16,065	3,052,521	108,141	3,453,020	1,121,998	545,169
Revenue	986	161,365	8,509	213,132	74,588	41,343

	<u>Foxboro Housing Auth.</u>	<u>Franklin Housing Auth.</u>	<u>Town of Foxboro</u>	<u>Town of Franklin</u>	<u>Holbrook Housing Auth</u>	<u>Town of Holbrook</u>
Net Pension Liability	763,924	711,299	36,954,589	45,208,550	389,190	16,199,114
Deferred Outflows of Resources						
Differences between Expected and Actual Experience	25,146	23,415	1,216,443	1,488,140	12,811	533,230
Net Asset Loss	292,321	272,184	14,140,938	17,299,375	148,927	6,198,707
Changes in Assumptions	0	0	0	0	0	0
Changes in Proportion and Differences between Employer Contributions and proportionate share of contributions	71,114	687	65,090	363,092	29,781	6,776
Total Deferred Outflows	388,581	296,286	15,422,471	19,150,607	191,519	6,738,713
Deferred Inflows of Resources						
Differences between Expected and Actual Experience	0	0	0	0	0	0
Net Asset Gain	146,447	136,359	7,084,314	8,666,625	74,609	3,105,423
Changes in Assumptions	0	0	0	0	0	0
Changes in Proportion and Differences between Employer Contributions and proportionate share of contributions	3,336	546	227,835	0	5,204	186,802
Total Deferred Inflows	149,783	136,905	7,312,149	8,666,625	79,813	3,292,225
Pension Expense						
Proportionate share of plan Pension Expense	102,260	95,215	4,946,777	6,051,660	52,097	2,168,429
Net Amortization from changes in Share Proportions	61,308	(2,426)	161,102	462,861	(7,839)	(206,435)
Total Employer Pension Expense	163,568	92,789	5,107,879	6,514,521	44,258	1,961,994
Revenue	5,712	5,318	276,297	338,009	2,910	121,115

	<u>Massachusetts</u> <u>Respiratory</u>	<u>King Phillip</u> <u>Reg School</u>	<u>Town of</u> <u>Medway</u>	<u>Town of</u> <u>Medfield</u>	<u>Medfield</u> <u>Housing Auth.</u>	<u>Medway</u> <u>Housing Auth.</u>
Net Pension Liability	0	5,925,757	22,093,065	20,971,179	115,080	538,390
Deferred Outflows of Resources						
Differences between Expected and Actual Experience	0	195,060	727,243	690,312	3,788	17,723
Net Asset Loss	0	2,267,533	8,454,069	8,024,771	44,036	206,019
Changes in Assumptions	0	0	0	0	0	0
Changes in Proportion and Differences between Employer						
Contributions and proportionate share of contributions	0	56,262	816,808	39,861	145	574
Total Deferred Outflows	0	2,518,855	9,998,120	8,754,944	47,969	224,316
Deferred Inflows of Resources						
Differences between Expected and Actual Experience	0	0	0	0	0	0
Net Asset Gain	0	1,135,987	4,235,312	4,020,242	22,061	103,211
Changes in Assumptions	0	0	0	0	0	0
Changes in Proportion and Differences between Employer						
Contributions and proportionate share of contributions	0	23,865	0	228,368	1,747	75,933
Total Deferred Inflows	0	1,159,852	4,235,312	4,248,610	23,808	179,144
Pension Expense						
Proportionate share of plan Pension Expense	0	793,228	2,957,399	2,807,222	15,405	72,069
Net Amortization from changes in Share Proportions	0	(96,797)	402,626	21,747	(3,416)	(47,299)
Total Employer Pension Expense	0	696,431	3,360,025	2,828,969	11,989	24,770
Revenue	0	44,305	165,182	156,794	860	4,025

	<u>Town of Millis</u>	<u>Millis Housing Auth.</u>	<u>Norfolk Housing Auth.</u>	<u>Norfolk Cnty Mos. Con.</u>	<u>Town of Norfolk</u>	<u>Town of Plainville</u>
Net Pension Liability	14,875,403	389,190	265,436	1,633,096	17,443,598	16,161,525
Deferred Outflows of Resources						
Differences between Expected and Actual Experience	489,657	12,811	8,737	53,757	574,194	531,993
Net Asset Loss	5,692,179	148,927	101,571	624,916	6,674,917	6,184,323
Changes in Assumptions	0	0	0	0	0	0
Changes in Proportion and Differences between Employer Contributions and proportionate share of contributions	377,496	19,907	327	4,958	3,154	423,211
Total Deferred Outflows	6,559,332	181,645	110,635	683,631	7,252,265	7,139,527
Deferred Inflows of Resources						
Differences between Expected and Actual Experience	0	0	0	0	0	0
Net Asset Gain	2,851,663	74,609	50,885	313,070	3,343,994	3,098,217
Changes in Assumptions	0	0	0	0	0	0
Changes in Proportion and Differences between Employer Contributions and proportionate share of contributions	10,652	334	1,861	605	15,171	5,274
Total Deferred Inflows	2,862,315	74,943	52,746	313,675	3,359,165	3,103,491
Pension Expense						
Proportionate share of plan Pension Expense	1,991,236	52,097	35,532	218,608	2,335,017	2,163,397
Net Amortization from changes in Share Proportions	129,689	15,088	191	(545)	(23,064)	178,428
Total Employer Pension Expense	2,120,925	67,185	35,723	218,063	2,311,953	2,341,825
Revenue	111,218	2,910	1,985	12,210	130,420	120,834

	<u>Town of</u>	<u>Norfolk</u>	<u>Randolph</u>	<u>Town of</u>	<u>Sharon</u>	<u>Stoughton</u>
	<u>Randolph</u>	<u>County Ret</u>	<u>Housing Auth</u>	<u>Sharon</u>	<u>Housing Auth.</u>	<u>Hous. Auth.</u>
		<u>BD</u>				
Net Pension Liability	47,500,321	0	771,441	33,334,482	277,002	772,020
Deferred Outflows of Resources						
Differences between Expected and Actual Experience	1,563,579	0	25,393	1,097,279	9,118	25,413
Net Asset Loss	18,176,337	0	295,198	12,755,678	105,997	295,419
Changes in Assumptions	0	0	0	0	0	0
Changes in Proportion and Differences between Employer						
Contributions and proportionate share of contributions	66,553	0	10,858	40,295	78,622	60,132
Total Deferred Outflows	19,806,469	0	331,449	13,893,252	193,737	380,964
Deferred Inflows of Resources						
Differences between Expected and Actual Experience	0	0	0	0	0	0
Net Asset Gain	9,105,965	0	147,889	6,390,328	53,102	147,999
Changes in Assumptions	0	0	0	0	0	0
Changes in Proportion and Differences between Employer						
Contributions and proportionate share of contributions	334,737	0	1,036	449,830	4,649	0
Total Deferred Inflows	9,440,702	0	148,925	6,840,158	57,751	147,999
Pension Expense						
Proportionate share of plan Pension Expense	6,358,438	0	103,266	4,462,185	37,080	103,343
Net Amortization from changes in Share Proportions	148,976	0	52,580	(130,326)	13,595	35,685
Total Employer Pension Expense	6,507,414	0	155,846	4,331,859	50,675	139,028
Revenue	355,144	0	5,768	249,231	2,071	5,772

	<u>Town of Stoughton</u>	<u>Town of Walpole</u>	<u>Town of Westwood</u>	<u>Walpole Housing Auth.</u>	<u>Town of Wrentham</u>	<u>Wrentham Hous. Auth.</u>
Net Pension Liability	45,265,801	40,314,465	41,367,535	455,694	16,260,991	213,968
Deferred Outflows of Resources						
Differences between Expected and Actual Experience	1,490,024	1,327,040	1,361,705	15,000	535,266	7,043
Net Asset Loss	17,321,282	15,426,618	15,829,583	174,375	6,222,384	81,876
Changes in Assumptions	0	0	0	0	0	0
Changes in Proportion and Differences between Employer Contributions and proportionate share of contributions	58,420	458,295	16,870	3,712	35,658	507
Total Deferred Outflows	18,869,726	17,211,953	17,208,158	193,087	6,793,308	89,426
Deferred Inflows of Resources						
Differences between Expected and Actual Experience	0	0	0	0	0	0
Net Asset Gain	8,677,600	7,728,413	7,930,290	87,357	3,117,284	41,018
Changes in Assumptions	0	0	0	0	0	0
Changes in Proportion and Differences between Employer Contributions and proportionate share of contributions	126,855	80,456	201,958	501	159,261	4,235
Total Deferred Inflows	8,804,455	7,808,869	8,132,248	87,858	3,276,545	45,253
Pension Expense						
Proportionate share of plan Pension Expense	6,059,323	5,396,533	5,537,498	61,000	2,176,712	28,642
Net Amortization from changes in Share Proportions	148,914	(197,061)	(110,822)	(683)	50,049	(21)
Total Employer Pension Expense	6,208,237	5,199,472	5,426,676	60,317	2,226,761	28,621
Revenue	338,437	301,418	309,291	3,407	121,578	1,600

	<u>Dedham- Westwood Water Dist</u>	<u>Metacomet Emergency Comm</u>	<u>Total</u>
Net Pension Liability	4,219,218	2,461,210	578,291,931
Deferred Outflows of Resources			
Differences between Expected and Actual Experience	138,884	81,016	19,035,763
Net Asset Loss	1,614,514	941,800	221,287,538
Changes in Assumptions	0	0	0
Changes in Proportion and Differences between Employer Contributions and proportionate share of contributions	3,325	1,122,383	5,697,889
Total Deferred Outflows	1,756,723	2,145,199	246,021,190
Deferred Inflows of Resources			
Differences between Expected and Actual Experience	0	0	0
Net Asset Gain	808,837	471,821	110,860,429
Changes in Assumptions	0	0	0
Changes in Proportion and Differences between Employer Contributions and proportionate share of contributions	45,193	0	5,697,876
Total Deferred Inflows	854,030	471,821	116,558,305
Pension Expense			
Proportionate share of plan Pension Expense	564,789	329,460	77,410,712
Net Amortization from changes in Share Proportions	(160,435)	539,703	(9)
Total Employer Pension Expense	404,354	869,163	77,410,703
Revenue	31,546	18,402	4,323,693

EXHIBITS

Exhibit 1 - Age/Service Distribution with Salary as of January 1, 2022

Attained Age	Average Salary	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
< 20	8	0	0	0	0	0	0	0	0	8
	28,689	0	0	0	0	0	0	0	0	28,689
20-24	234	0	0	0	0	0	0	0	0	234
	36,395	0	0	0	0	0	0	0	0	36,395
25-29	458	46	0	0	0	0	0	0	0	506
	45,998	59,049	0	0	0	0	0	0	0	47,240
30-34	346	158	38	0	1	0	0	0	0	545
	48,623	66,731	71,971	0	32,222	0	0	0	0	55,528
35-39	211	172	93	44	2	0	0	0	0	525
	47,715	65,179	83,342	80,368	66,002	0	0	0	0	62,408
40-44	197	106	81	87	24	1	0	0	0	497
	42,445	55,440	73,677	92,365	91,425	183,557	0	0	0	61,761
45-49	234	93	51	72	80	22	1	0	0	555
	39,072	52,480	76,175	83,495	95,545	97,646	78,307	0	0	60,976
50-54	243	172	111	91	115	102	32	2	0	870
	39,327	46,989	51,730	71,360	84,779	104,739	100,892	104,224	0	61,827
55-59	212	184	127	134	114	79	46	18	0	915
	38,033	46,107	50,036	54,923	69,019	92,624	97,768	91,262	0	56,418
60-64	194	80	94	132	137	67	41	18	4	768
	35,654	42,549	49,493	51,547	61,458	68,272	97,884	105,641	143,487	53,756
65-69	31	34	25	53	71	25	13	2	5	259
	45,931	48,966	48,862	46,540	54,346	65,508	55,398	77,431	83,117	52,370
70+	12	25	12	20	24	8	10	6	2	119
	29,317	37,402	53,801	45,059	52,471	33,574	67,225	49,596	60,420	45,817
Total Employees	2,380	1,070	632	633	568	304	143	46	11	5,801
Average Salary	42,236	54,016	61,637	65,733	72,460	88,200	92,377	91,416	100,943	56,184

Exhibit 2 - Retiree Distribution as of January 1, 2022

Attained Age	Number of Employees			Total Payments		
	Female	Male	Total	Female	Male	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	1	0	1	32,741.88	0	32,742
35-39	3	1	4	13,353	6,467	19,820
40-44	5	0	5	71,024	0	71,024
45-49	5	5	10	55,122	117,300	172,422
50-54	12	18	30	287,865	684,439	972,305
55-59	58	86	144	837,737	4,343,047	5,180,783
60-64	201	164	365	3,647,261	7,743,615	11,390,876
65-69	399	292	691	8,685,288	13,053,534	21,738,822
70-74	436	303	739	9,759,375	12,319,472	22,078,847
75-79	342	227	569	7,991,473	8,871,393	16,862,866
80-84	228	128	356	4,805,267	4,136,220	8,941,487
85-89	186	69	255	3,581,794	2,143,011	5,724,805
90-94	89	30	119	1,450,528	770,541	2,221,068
95+	37	7	44	419,282	206,880	626,163
Total	2002	1330	3332	41,638,110	54,395,920	96,034,030
Average (Age/Payment)	74.38	72.01	73.43	20,798	40,899	28,822
Frequency Percent	60.1	39.9	100	43.4	56.6	100

Exhibit 3 - Disabled Retiree Distribution as of January 1, 2022

Attained Age	Number of Employees			Total Payments		
	Female	Male	Total	Female	Male	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	1	0	1	6,287	0	6,287
35-39	0	1	1	0	53,513	53,513
40-44	2	2	4	13,742	88,630	102,373
45-49	5	3	8	145,706	151,963	297,669
50-54	5	38	43	188,807	1,699,792	1,888,599
55-59	11	42	53	421,060	2,062,565	2,483,625
60-64	15	41	56	329,370	1,920,271	2,249,642
65-69	12	45	57	286,578	2,106,692	2,393,270
70-74	8	56	64	199,396	2,289,342	2,488,738
75-79	9	37	46	262,689	1,355,845	1,618,534
80-84	4	29	33	151,849	922,204	1,074,053
85-89	3	7	10	58,460	261,621	320,081
90-94	1	3	4	15,231	55,142	70,374
95-99	1	0	1	18,871	0	18,871
Total	77	304	381	2,098,047	12,967,580	15,065,627
Average (Age/Payment)	65.75	67.39	67.05	27,247	42,657	39,542
Frequency Percent	20.2	79.8	100	13.9	86.1	100

EXHIBIT 4 – SUMMARY OF PLAN PROVISIONS:

This summary is prepared in accordance with Chapter 32 as of January 1, 2022, and does not take into account any subsequent changes.

1. Administration

Each of the 104 contributory retirement systems for public employees of the Commonwealth of Massachusetts are guided by the applicable provisions of Chapter 32 of the Massachusetts General Laws and other applicable statutes. Although these boards operate semi-independently, there is a uniform set of rules governing benefits, eligibility, contributions, financing, and accounting.

2. Participation

Participation is mandatory for all full-time employees whose employment commences prior to age 65. Eligibility with respect to part-time, professional, temporary, or intermittent employment is governed by the local board. Membership is optional for certain elected officials, State officials appointed by the Governor, and certain hospital interns.

There are four classes of membership as follows:

- (i) Group 1: Most general employees in State and local government
- (ii) Group 2: Certain specified hazardous duty positions
- (iii) Group 3: State police officers and inspectors
- (iv) Group 4: Local police officers, firefighters, and designated employees of the municipal light department.

For members in more than one group, participation will be proportional.

Chapter 176 of the Acts of 2011 created different plan provisions within these groups for those hired on or after April 2, 2012.

3. **Salary**

Salary is defined as gross regular compensation. Salary does not include bonuses, overtime, severance pay, unused sick leave credit, or other similar compensation.

4. **Member Contributions**

Member contributions vary depending upon date hired as follows:

<u>Date of Hire</u>	<u>Member Contribution Rate</u>
Prior to 1975	5.0% of Salary
1975 to 1983	7.0% of Salary
1984 to 1996	8.0% of Salary
1996 and Later	9.0% of Salary
1979 and Later	Plus 2.0% of Salary in excess of \$30,000

For Group 1 employees who become members on or after April 2, 2012, the Contribution Rate shall be 6% after the completion of 30 years of service.

5. **Average Salary**

Average salary is used to determine a participant's benefit. It is defined as the average salary during the three consecutive-year period that produces the highest average. (Alternatively, if a greater amount results, it is the average rate of salary earned during the period or periods, whether or not consecutive, that constitutes the last three years preceding retirement.). For employees who become members on or after April 2, 2012, the averaging period shall be five years.

6. **Creditable Service**

In general, creditable service is awarded during the period in which a member contributes to the retirement system.

7. Service Retirement

a. Eligibility:

For an employee to be eligible for service retirement (also referred to as superannuation), one of the following conditions must be met:

- (i) completion of 20 years of service
- (ii) for an employee hired prior to January 1, 1978, attainment of age 55 as an active member
- (iii) for an employee hired on or after January 1, 1978, attainment of age 55 as an active member and completion of ten years of service
- (iv) for a Group 1 employee hired on or after April 2, 2012, attainment of age 60 and completion of ten years of service

b. Benefit Amount:

The retirement allowance is determined as a product of the participant's Benefit Rate times Average Salary times Creditable Service, where Benefit Rate is determined from the following table for those hired prior to April 2, 2012:

<u>Age at Retirement</u>	<u>Percentage of Average Salary</u>		
	<u>Group 1</u>	<u>Group 2</u>	<u>Group 4</u>
65 or Over	.025	.025	.025
64	.024	.025	.025
63	.023	.025	.025
62	.022	.025	.025
61	.021	.025	.025
60	.020	.025	.025
59	.019	.024	.025
58	.018	.023	.025
57	.017	.022	.025
56	.016	.021	.025
55	.015	.020	.025
54	.014	.014	.024
53	.013	.013	.023
52	.012	.012	.022
51	.011	.011	.021
50	.010	.010	.020
49	.009	.009	.019
48	.008	.008	.018
47	.007	.007	.017
46	.006	.006	.016
45	.005	.005	.015
44	.004	.004	.004
43	.003	.003	.003
42	.002	.002	.002
41	.001	.001	.001

For those hired after April 1, 2012 who retire with less than 30 years of service, the following rates are applied:

<u>Age at Retirement</u>	<u>Percentage of Average Salary</u>		
	<u>Group 1</u>	<u>Group 2</u>	<u>Group 4</u>
67 or Over	.0250	.0250	.0250
66	.0235	.0250	.0250
65	.0220	.0250	.0250
64	.0205	.0250	.0250
63	.0190	.0250	.0250
62	.0175	.0250	.0250
61	.0160	.0235	.0250
60	.0145	.0220	.0250
59		.0205	.0250
58		.0190	.0250
57		.0175	.0250
56		.0160	.0235
55		.0145	.0220
54			.0205
53			.0190
52			.0175
51			.0160
50			.0145

For those hired after April 1, 2012 who retire with at least 30 years of service, the following rates are applied:

Age at Retirement	Percentage of Average Salary		
	<u>Group 1</u>	<u>Group 2</u>	<u>Group 4</u>
67 or Over	.02500	.02500	.02500
66	.02375	.02500	.02500
65	.02250	.02500	.02500
64	.02125	.02500	.02500
63	.02000	.02500	.02500
62	.01875	.02500	.02500
61	.01750	.02375	.02500
60	.01625	.02250	.02500
59		.02125	.02500
58		.02000	.02500
57		.01875	.02500
56		.01750	.02375
55		.01625	.02250
54			.02125
53			.02000
52			.01875
51			.01750
50			.01625

8. Deferred Vested Retirement

a. Eligibility:

A participant who has completed ten or more years of creditable service is eligible for a deferred vested retirement benefit. If termination is involuntary, the participant is vested after six years.

b. Benefit Amount:

The participant's accrued benefit is payable commencing at age 55, or may be deferred until later at the employee's option.

c. Refund of Contributions:

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

9. Accidental Disability

a. Eligibility:

Participants are eligible for an accidental disability benefit, regardless of service or age, if they become permanently and totally incapacitated for further duty as a result of personal injury sustained while in the performance of duties.

b. Benefit Amount:

The accidental disability amount is 72% of annual salary plus \$871.56 per year for each child plus an additional annuity based upon accumulated Member Contributions with credited interest.

10. Ordinary Disability

a. Eligibility:

An ordinary disability occurs when a member becomes permanently and totally disabled due to sickness or injury that is not job related. In order to be eligible for an ordinary disability benefit, a member must have ten years of service (and be less than age 55 or age 60 if hired on or after April 2, 2012).

b. Benefit Amount:

The ordinary disability amount is equal to the accrued retirement benefit as if the member were age 55 (age 60 if hired on or after April 2, 2012). If the member was a veteran, the benefit is 50% of the member's final rate of Salary during the preceding 12 months, plus an annuity based upon accumulated Member Contributions plus credited interest. If the participant is over age 55 (age 60 if hired on or after April 2, 2012), he will receive not less than the superannuation allowance to which he is entitled.

11. Survivor Benefits**a. Occupational Death:**

The survivors of a member who dies due to an occupational injury will be entitled to a lump sum return of contributions plus a pension benefit equal to 72% of the participant's annual Salary.

b. Non-Occupational Death:

Upon the death of a member other than due to an occupational injury, the designated beneficiary will be entitled to a retirement benefit as if Option C had been elected with a minimum of \$250 per month to the surviving spouse, plus \$120 for the first child, plus \$90 for each additional child. If no beneficiary is designated and if the employee worked two years, and is married at least one year, the spouse may elect benefits. 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 \$250 per month plus \$120 for the first child and \$90 for each additional child.

c. Refund of Contributions:

Upon the death of a member not entitled to survivor benefits, the beneficiary is entitled to a refund of all member contributions with interest.

12. Cost-of-Living Increases

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.

13. Postretirement Death Benefits

Any benefits following the death of a member after retirement are based upon the form of

benefit the participant elected at the time of retirement. There are three available forms as follows:

- (i) Option A – Life annuity
- (ii) Option B – Life annuity with death benefit equal to excess of member contributions plus credited interest to retirement over annuity benefit paid to member
- (iii) Option C – Life annuity with 66-2/3% of benefit continued after death of member to designated joint annuitant

EXHIBIT 5 – ACTUARIAL METHODS AND ASSUMPTIONS:

The actuarial cost method, factors, and assumptions used in determining cost estimates are presented below. They are based on the 2015 Experience Study conducted by Sherman Actuarial Services, LLC.

1. 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.

2. Valuation Date

January 1, 2022.

3. Actuarial Cost Method

The costs of the Plan have been determined in accordance with the individual entry age normal actuarial cost method.

4. Rate of Investment Return

It is assumed that the assets of the fund will accumulate at a compound annual rate of 7.75% per annum. This includes a 3% inflation assumption.

5. Salary Scale

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

<u>Service</u>	<u>Rate</u>
0 - 1	5.50%
2	5.00%
3 - 4	4.50%
5	4.00%
6 +	3.50%

6. Cost-of-Living Increases

Cost-of-living increases have been assumed to be 3.0% of the lesser of the pension amount and \$18,000 per year.

7. Value of Investments

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

8. Annual Rate of Withdrawal Prior to Retirement

Based on an analysis of experience, the assumed annual rates of withdrawal may best be illustrated by the following rates at the following ages:

<u>Service</u>	<u>General Employees</u>	<u>Police and Fire Employees</u>
0	0.2080	0.0150
5	0.1020	0.0150
10	0.0650	0.0150
15	0.0417	0.0150
20	0.0400	0.0000
30	0.0000	0.0000

9. Annual Rate of Mortality

It is assumed that both pre-retirement mortality and beneficiary mortality is represented by the RP-2014 Blue Collar Mortality with Scale MP-2014, fully generational. Mortality for retired members for Group 1 and 2 is represented by the RP-2014 Blue Collar Mortality Table set forward five years for males and 3 years for females, fully generational. Mortality for retired members for Group 4 is represented by the RP-2014 Blue Collar Mortality Table set forward three years for males, and six years for females, fully generational. Mortality for disabled members for Group 1 and 2 is represented by the RP-2000 Mortality Table set forward six years. Mortality for disabled members for Group 4 is represented by the RP-2000 Mortality Table set forward two years. Generational adjusting is based on Scale MP-2014

Service Retirement

Based on an analysis of experience, the assumed annual retirement rates are illustrated at the following ages for those hired prior to April 2, 2012:

<u>Age</u>	<u>Male General Employees</u>	<u>Female General Employees</u>	<u>Male and Female Police and Fire Employees</u>
50	0.0360	0.1019	0.0144
51	0.0405	0.0714	0.0144
52	0.0437	0.0562	0.0123
53	0.0366	0.0448	0.0210
54	0.0451	0.0488	0.0569
55	0.0477	0.0469	0.0879
56	0.0574	0.0518	0.0931
57	0.0632	0.0509	0.0897
58	0.0765	0.0552	0.0846
59	0.0917	0.0645	0.1022
60	0.1057	0.0774	0.1455
61	0.1224	0.1038	0.1844
62	0.1473	0.1168	0.2741
63	0.1777	0.1440	0.1984
64	0.2136	0.1708	0.4139
65	0.2615	0.1939	1.00000
66	0.2682	0.1959	1.00000
67	0.2500	0.2000	1.00000
68	0.2500	0.2000	1.00000
69	0.2500	0.2000	1.00000
70 to 76	0.2500	0.2500	1.00000
77 to 79	0.3500	0.2500	1.00000
80	1.0000	1.0000	1.00000

10. Based on an analysis of experience, the assumed annual retirement rates are illustrated at the following ages for those hired on or after April 2, 2012:

<u>Age</u>	<u>Male General Employees</u>	<u>Female General Employees</u>	<u>Male and Female Police and Fire Employees</u>
50	0.0000	0.0000	0.0072
51	0.0000	0.0000	0.0072
52	0.0000	0.0000	0.0062
53	0.0000	0.0000	0.0105
54	0.0000	0.0000	0.0105
55	0.0000	0.0000	0.0389
56	0.0000	0.0000	0.0631
57	0.0000	0.0000	0.0897
58	0.0000	0.0000	0.0846
59	0.0000	0.0000	0.1022
60	0.0477	0.0469	0.1455
61	0.0574	0.0518	0.1844
62	0.0632	0.0509	0.2741
63	0.0765	0.0552	0.1984
64	0.0917	0.0645	0.4139
65	0.1057	0.0774	1.0000
66	0.1224	0.1038	1.0000
67	0.1473	0.1168	1.0000
68	0.1777	0.1440	1.0000
69	0.2136	0.1708	1.0000
70	0.2615	0.1939	1.0000
70 to 76	0.2682	0.1959	1.0000
77 to 79	0.2500	0.2000	1.0000
80	1.0000	1.0000	1.0000

12. Annual Rate of Disability Prior to Retirement

Based on an analysis of experience, the assumed annual rates of disability may best be illustrated by the following probabilities at the following ages:

<u>Attained Age</u>	<u>General Employees</u>	<u>Police and Fire Employees</u>
20	0.000100	0.000500
30	0.000152	0.000967
40	0.000663	0.002500
50	0.001271	0.007634

In addition, 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).

13. Family Composition

It is assumed that 80% of all members will be survived by a spouse and that females (males) are three years younger (older) than members.

14. Administrative Expenses

The normal cost is increased by an amount equal to the anticipated administrative expenses for the upcoming fiscal year. The amount for fiscal year 2023 is \$1,775,000 and is anticipated to increase at 4.0% per year.

CERTIFICATION:

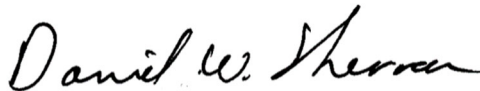
This report fairly represents the actuarial position of the Norfolk County Retirement System as of December 31, 2022, in accordance with generally accepted actuarial principles applied consistently with the preceding valuation. In our opinion, the actuarial assumptions used to compute actuarial accrued liability and normal cost are reasonably related to plan experience and to reasonable expectations, and represents our best estimate of anticipated plan experience.

The funded status measure is appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations. The funded status measure is appropriate for assessing the need for or the amount of future contributions. The funded status measure would be different if the measure reflected the market value of assets rather than the actuarial value of assets.

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. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of such future measurements.

The report was prepared under the supervision of Daniel Sherman, an Associate of the Society of Actuaries and a Member of the American Academy of Actuaries, who takes responsibility for the overall appropriateness of the analysis, assumptions and results. Daniel Sherman is deemed to meet the General Qualification Standard and the basic education and experience requirement in the pension area. Based on over thirty years of performing valuations of similar complexity, Mr. Sherman is qualified by experience. Daniel Sherman has met the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sherman Actuarial Services, LLC



Daniel W. Sherman, ASA, MAAA

June, 2023