

Middlesex County Retirement System

**Governmental Accounting Standards Board
Statements No. 67 and 68 (GASB 67/68) Actuarial
Valuation as of December 31, 2024
Revised**



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July 21, 2025

Retirement Board
Middlesex County Retirement System
25 Linnell Circle
Billerica, MA 01865

Dear Board Members:

We are pleased to submit this revised Governmental Accounting Standards Board Statements No. 67 and 68 (GASB 67/68) Accounting Valuation as of December 31, 2024 for the Middlesex County Retirement System. This report revises the proportionate share calculations to reflect updated employer asset information received from the staff of the Retirement System and replaces the report dated June 23, 2025. It contains various information that will need to be disclosed in order to comply with GASB 67 and 68. Please refer to the Middlesex County Retirement System Actuarial Valuation and Review as of January 1, 2024, dated August 14, 2024, for the data, assumptions, and plan of benefits underlying these calculations.

This report has been prepared in accordance with generally accepted actuarial principles and practices for the exclusive use and benefit of the Board, based upon information provided by the staff of the Middlesex County Retirement System and the Middlesex County Retirement System's other service providers.

The measurements shown in this actuarial valuation may not be applicable for other purposes. 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; and changes in plan provisions or applicable law.

The actuarial calculations were completed under the supervision of Bridget P. Orr, ASA, FCA, MAAA, EA. She is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of her knowledge, the information supplied in the actuarial valuation is complete and accurate. The assumptions used in this actuarial valuation were selected by the Board based upon our analysis and recommendations. In her opinion, the assumptions are reasonable and take into account the experience of the Middlesex County Retirement System and reasonable expectations. In addition, in her opinion, the combined effect of these assumptions is expected to have no significant bias.

Retirement Board
July 21, 2025

Segal makes no representation or warranty as to the future status of the Middlesex County Retirement System and does not guarantee any particular result. This document does not constitute legal, tax, accounting or investment advice or create or imply a fiduciary relationship. The Board is encouraged to discuss any issues raised in this report with the Middlesex County Retirement System's legal, tax and other advisors before taking, or refraining from taking, any action.

We look forward to reviewing this report with you and to answering any questions.

Sincerely,

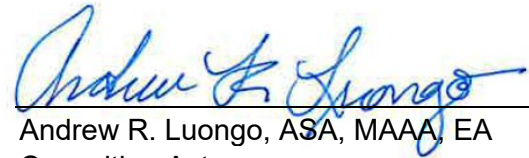
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Section 1: Actuarial Valuation Summary

Purpose and basis

This report has been prepared by Segal to present certain disclosure information required by Governmental Accounting Standards Board Statements No. 67 and 68 (GASB 67/68) as of December 31, 2024. This report is based on financial information as of December 31, 2024 and the Actuarial Valuation and Review as of January 1, 2024, which reflects:

- The benefit provisions of Massachusetts General Law Chapter 32;
- The characteristics of covered active participants, inactive participants, and retired participants and beneficiaries as of December 31, 2023, provided by the staff of the Middlesex County Retirement System;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

Highlights of the valuation

- The Net Pension Liability (NPL) measured as of December 31, 2024 and December 31, 2023 was determined based upon the results of an actuarial valuation as of January 1, 2024.
- The NPL is equal to the difference between the Total Pension Liability (TPL) and the System Fiduciary Net Position (FNP). The System Fiduciary Net Position is equal to the market value of assets, and, therefore, the NPL measure is very similar to an Unfunded Actuarial Accrued Liability (UAL) on a market value basis. The NPL decreased from \$1,691,057,798 as of December 31, 2023 to \$1,627,283,168 as of December 31, 2024 and the System Fiduciary Net Position as a percent of the TPL increased from 55.21% to 58.24%.
- The discount rate used to measure the TPL and NPL was 7.15% as of December 31, 2024 and December 31, 2023.

Section 1: Actuarial Valuation Summary

Important information about actuarial valuations

In order to prepare a valuation, Segal relies on a number of input items. These include:

Input Item	Description
Plan of benefits	Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
Participant data	An actuarial valuation for a plan is based on data provided to the actuary by the Retirement System. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
Assets	The valuation is based on the market value of assets as of the valuation date, as provided by the Retirement System.
Actuarial assumptions	In preparing an actuarial valuation, Segal starts by developing a forecast of the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of participants in each year, as well as forecasts of the plan's benefits for each of those events. In addition, the benefits forecasted for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The forecasted benefits are then discounted to a present value, typically based on an estimate of the rate of return that will be achieved on the plan's assets. All of these factors are uncertain and unknowable. Thus, there will be a range of reasonable assumptions, and the results may vary materially based on which assumptions are selected within that range. That is, there is no right answer (except with hindsight). It is important for any user of an actuarial valuation to understand and accept this constraint. The actuarial model may use approximations and estimates that will have an immaterial impact on our results. In addition, the actuarial assumptions may change over time, and while this can have a significant impact on the reported results, it does not mean that the previous assumptions or results were unreasonable or wrong.
Actuarial models	Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative and client requirements. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the supervision of the responsible actuary.

Section 1: Actuarial Valuation Summary

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The actuarial valuation is prepared at the request of the Board. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement of the System's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the System will be determined by the actual benefits and expenses paid and the actual investment experience of the System.
- Actuarial results in this report are not rounded, but that does not imply precision.
- If the Board is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice and is not acting as a fiduciary to the System. This valuation is based on Segal's understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Board should look to their other advisors for expertise in these areas.

Section 2: GASB Information

General information about the pension plan

Plan membership. At December 31, 2023, pension plan membership consisted of the following:

Membership	Number
Retired participants or beneficiaries currently receiving benefits	6,607
Inactive participants with a vested right to a deferred or immediate benefit	470
Inactive participants entitled to a refund of employee contributions	4,227
Active members	9,603
Total	20,907

Section 2: GASB Information

Exhibit A: Net Pension Liability

Components of the Net Pension Liability	Current	Prior
Reporting date for employer under GASB 68	June 30, 2025	June 30, 2024
Measurement date	December 31, 2024	December 31, 2023
Total Pension Liability	\$3,896,658,062	\$3,775,150,350
Plan Fiduciary Net Position	2,269,374,894	2,084,092,552
Net Pension Liability	1,627,283,168	1,691,057,798
Plan Fiduciary Net Position as a percentage of the Total Pension Liability ¹	58.24%	55.21%

Actuarial assumptions. The TPL as of December 31, 2024, which was determined based on the results of an actuarial valuation as of January 1, 2024, used the following actuarial assumptions, applied to all periods included in the measurement:

Assumption Type	Assumption
Wage inflation	3.25%
Salary increases	Varies by length of service with ultimate rates of 4.00% for Group 1, 4.25% for Group 2 and 4.50% for Group 4
Net investment rate of return	7.15%
Cost-of-living adjustment	3% of first \$16,000
Mortality	Pre-Retirement: PR-2014 Blue Collar Employee Mortality Table projected generationally with Scale MP-2021 Healthy Retiree: RP-2014 Blue Collar Healthy Annuitant Mortality Table projected generationally with Scale MP-2021 Disabled Retiree: RP-2014 Blue Collar Healthy Annuitant Mortality Table set forward one year projected generationally with Scale MP-2021

Detailed information regarding all actuarial assumptions can be found in the January 1, 2024 Actuarial Valuation and Review.

¹ These funded percentages are not necessarily appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the System's benefit obligation or the need for or the amount of future contributions.

Section 2: GASB Information

Determination of discount rate and investment rates of return

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and adding expected inflation. The target allocation (approved by the Board) and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equity	23.50%	5.82%
International developed markets equity	9.00%	5.91%
International emerging markets equity	3.50%	7.06%
Core fixed income	15.00%	1.81%
High-yield fixed income	9.00%	3.34%
Real estate	10.00%	3.34%
Timber	4.00%	3.82%
Hedge fund, GTAA, Risk parity	10.00%	2.77%
Private equity	16.00%	9.20%
Total	100.00%	

Note: Some asset classes included in the System's target asset allocation have been combined.

Discount rate. The discount rate used to measure the TPL was 7.15% as of December 31, 2024 and December 31, 2023. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the Plan FNP was projected to be available to make all projected future benefit payments for 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 TPL as of both December 31, 2024 and December 31, 2023.

Section 2: GASB Information

Discount rate sensitivity

Sensitivity of the Net Pension Liability to changes in the discount rate. The following presents the Net Pension Liability of the Middlesex County Retirement System as of December 31, 2024 calculated using the discount rate of 7.15%, as well as what the Middlesex County Retirement System's NPL would be if it were calculated using a discount rate that is 1-percentage-point lower (6.15%) or 1-percentage-point higher (8.15%) than the current rate.

Item	1% Decrease (6.15%)	Current Discount Rate (7.15%)	1% Increase (8.15%)
Middlesex County Retirement System's Net Pension Liability as of December 31, 2024	\$2,063,871,162	\$1,627,283,168	\$1,260,060,391

Section 2: GASB Information

Exhibit B: Schedule of changes in Net Pension Liability

Components of the Net Pension Liability	Current	Prior
Reporting and Measurement dates		
Reporting date for employer under GASB 68	June 30, 2025	June 30, 2024
Measurement date and reporting date for the plan under GASB 67	December 31, 2024	December 31, 2023
Total Pension Liability		
Service cost	\$85,447,261	\$81,569,522
Interest	267,749,834	254,059,307
Change of benefit terms	0	18,729,653
Differences between expected and actual experience	0	58,204,892
Changes of assumptions	0	0
Benefit payments, including refunds of member contributions	-231,689,383	-218,241,042
Net change in Total Pension Liability	\$121,507,712	\$194,322,332
Total Pension Liability — beginning	3,775,150,350	3,580,828,018
Total Pension Liability — ending	\$3,896,658,062	\$3,775,150,350
Plan Fiduciary Net Position		
Contributions — employer	\$176,414,830	\$167,184,938
Contributions — employee	61,742,919	58,250,668
Net investment income	182,319,847	196,544,723
Benefit payments, including refunds of member contributions	-231,689,383	-218,241,042
Administrative expense	-3,505,871	-3,414,053
Net change in Plan Fiduciary Net Position	\$185,282,342	\$200,325,234
Plan Fiduciary Net Position — beginning	2,084,092,552	1,883,767,318
Plan Fiduciary Net Position — ending	\$2,269,374,894	\$2,084,092,552

Section 2: GASB Information

Components of the Net Pension Liability	Current	Prior
Net Pension Liability		
Net Pension Liability – ending	\$1,627,283,168	\$1,691,057,798
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	58.24%	55.21%
Covered payroll ¹	\$591,548,334	\$567,243,261
Plan Net Pension Liability as percentage of covered payroll	275.09%	298.12%

Notes to Schedule:

- **Benefit changes:**
 - Effective December 31, 2023: Pursuant to Chapter 269 of the Acts of 2022, the Board approved a one-time increase in the COLA from 3% to 5% effective July 1, 2022.
 - Effective December 31, 2024: None
- **Change of assumptions:**
 - Effective December 31, 2023 and December 31, 2024: None

¹ Covered payroll for 2024 and 2023 are estimated in the January 1, 2024 valuation.

Section 2: GASB Information

Exhibit C: Schedule of employer contributions

Year Ended December 31	Actuarially Determined Contributions	Contributions in Relation to the Actuarially Determined Contributions	Contribution Deficiency / (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
2015	\$98,792,642	\$99,820,481	-\$1,027,839	\$432,382,921	23.09%
2016	105,246,797	107,067,707	-1,820,910	439,644,322	24.35%
2017	112,017,087	115,426,815	-3,409,728	451,777,105	25.55%
2018	119,298,291	120,614,676	-1,316,385	471,115,185	25.60%
2019	127,151,838	129,685,754	-2,533,916	492,109,775	26.35%
2020	135,472,822	138,290,237	-2,817,415	513,201,283	26.95%
2021	144,255,207	147,852,245	-3,597,038	519,239,588	28.47%
2022	153,677,331	156,335,119	-2,657,788	541,233,353	28.88%
2023	163,724,213	167,184,938	-3,460,725	567,243,261	29.47%
2024	174,367,693	176,414,830	-2,047,137	591,548,334	29.82%

Notes to Schedule:

Methods and assumptions used to determine contribution rates for the year ended December 31, 2024:

- **Valuation date:** Actuarially determined contribution for the year ended December 31, 2024 is determined with the January 1, 2022 actuarial valuation.
- **Actuarial cost method:** Entry Age Normal Cost Method
- **Amortization method:** Prior year's total contribution increased by 6.5% per year for fiscal 2023 through fiscal 2028, and thereafter the remaining unfunded liability will be amortized on a 4.0% annual increasing basis.
- **Remaining amortization period:** 14 years from July 1, 2022

Section 2: GASB Information

- **Asset valuation method:** Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a five-year period, further adjusted, if necessary, to be within 20% of the market value.
- **Investment rate of return:** 7.15%
- **Wage inflation rate:** 3.25%
- **Projected salary increases:** Varies by length of service with ultimate rates of 4.00% for Group 1, 4.25% for Group 2 and 4.50% for Group 4
- **Cost of living adjustments:** 5% of first \$16,000 for fiscal 2023 and 3% of the first \$16,000 thereafter
- **Mortality:**
 - **Pre-retirement:** RP-2014 Blue Collar Employee Mortality Table projected generationally with Scale MP-2021
 - **Healthy annuitant:** RP-2014 Blue Collar Healthy Annuitant Mortality Table projected generationally with Scale MP-2021
 - **Disabled:** RP-2014 Blue Collar Healthy Annuitant Mortality Table set forward one year projected generationally with Scale MP-2021
- **Other information:** Same as those used in the January 1, 2022 funding actuarial valuation

Section 2: GASB Information

Exhibit D: Pension expense

Components of pension expense	Current	Prior
Reporting date for employer under GASB 68	June 30, 2025	June 30, 2024
Measurement date	December 31, 2024	December 31, 2023
Service cost	\$85,447,261	\$81,569,522
Interest	267,749,834	254,059,307
Current-period benefit changes	—	18,729,653
Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	—	11,640,980
Expensed portion of current-period changes of assumptions	—	—
Member contributions	-61,742,919	-58,250,668
Projected earnings on pension plan investments	-149,118,527	-134,824,517
Expensed portion of current-period differences between actual and projected earnings on pension plan investments	-6,640,264	-12,344,042
Administrative expense	3,505,871	3,414,053
Recognition of beginning of year deferred outflows of resources as pension expense	96,454,313	107,150,490
Recognition of beginning of year deferred inflows of resources as pension expense	-68,921,083	-77,967,851
Pension expense	\$166,734,486	\$193,176,927

Section 2: GASB Information

Deferred outflows of resources and deferred inflows of resources

Deferred Outflows and Inflows	Current	Prior
Reporting and measurement dates		
Reporting date for employer under GASB 68	June 30, 2025	June 30, 2024
Measurement date	December 31, 2024	December 31, 2023
Deferred outflows of resources		
Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$39,041,193	\$57,413,811
Changes of assumptions	5,433,275	10,866,550
Net difference between projected and actual earnings on pension plan investments	50,719,655	86,694,535
Difference between expected and actual experience in the Total Pension Liability	35,968,087	48,654,218
Total deferred outflows of resources	\$131,162,210	\$203,629,114
Deferred inflows of resources		
Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$39,041,193	\$57,413,811
Changes of assumptions	0	0
Net difference between projected and actual earnings on pension plan investments	0	0
Difference between expected and actual experience in the Total Pension Liability	0	0
Total deferred inflows of resources	\$39,041,193	\$57,413,811
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting date for employer under GASB 68 year ended June 30:		
2025	N/A	\$27,533,230
2026	\$35,113,028	41,753,292
2027	70,991,580	77,631,844
2028	-7,343,327	-703,063
2029	-6,640,264	0
2030	0	0
Thereafter	0	0

Note: Average expected remaining service is 5.00 years as of December 31, 2024 and December 31, 2023.

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68

Section 2: GASB Information

Exhibit E: Determination of proportionate share

Employer Name	FY 2024 Total Appropriation	Percent of Total NPL as of December 31, 2023	Share of NPL as of December 31, 2023 ¹	FY 2025 Total Appropriation	Percent of Total NPL as of December 31, 2024	Share of NPL as of December 31, 2024
Middlesex County Retirement Board	\$453,368	0.000000%	\$0	\$485,002	0.000000%	\$0
Middlesex County	0	0.000000%	0	0	0.000000%	0
Middlesex Hospital	0	0.000000%	0	0	0.000000%	0
Town of Acton	5,309,325	3.350878%	56,665,288	5,657,229	3.366334%	54,779,793
Town of Ashby	254,095	0.089032%	1,505,590	268,891	0.083795%	1,363,583
Town of Ashland	3,905,242	2.293381%	38,782,403	4,152,712	2.287469%	37,223,604
Town of Ayer	2,096,798	1.335686%	22,587,224	2,230,909	1.320558%	21,489,212
Town of Bedford	5,458,202	3.489180%	59,004,049	5,814,992	3.487992%	56,759,513
Town of Billerica	15,421,709	9.686530%	163,804,814	16,438,951	9.716682%	158,117,928
Town of Boxborough	1,245,470	0.799515%	13,520,255	1,325,502	0.806057%	13,116,826
Town of Burlington	13,403,482	8.569434%	144,914,077	14,291,966	8.599906%	139,944,825
Town of Carlisle	1,402,244	0.958589%	16,210,292	1,488,276	0.972532%	15,825,856
Town of Chelmsford	11,333,552	7.149273%	120,898,338	12,078,152	7.192578%	117,043,610
Town of Dracut	7,203,532	4.440457%	75,090,691	7,674,843	4.464485%	72,649,809
Town of Dunstable	365,094	0.238203%	4,028,150	386,855	0.243689%	3,965,509
Town of Groton	2,494,280	1.401294%	23,696,683	2,653,019	1.389254%	22,607,096
Town of Holliston	2,720,260	1.659494%	28,063,006	2,890,492	1.665235%	27,098,088
Town of Hopkinton	3,104,074	1.602643%	27,101,615	3,290,227	1.573369%	25,603,170
Town of Hudson	7,441,621	4.230286%	71,536,588	7,920,764	4.209876%	68,506,610
Town of Lincoln	3,050,494	1.900000%	32,130,102	3,249,360	1.902133%	30,953,095
Town of Littleton	3,110,711	1.531191%	25,893,317	3,303,090	1.482980%	24,132,282

¹ Net Pension Liability for each employer was determined on an individual basis.

The NPL for the Middlesex County Retirement Board, Middlesex County and the Middlesex Hospital has been allocated amongst the other units in the System in proportion to the remaining units' NPL because the obligation to fund these units is a shared responsibility of these other units.

Section 2: GASB Information

Employer Name	FY 2024 Total Appropriation	Percent of Total NPL as of December 31, 2023	Share of NPL as of December 31, 2023 ¹	FY 2025 Total Appropriation	Percent of Total NPL as of December 31, 2024	Share of NPL as of December 31, 2024
Town of North Reading	5,210,793	3.220779%	54,465,235	5,552,840	3.225618%	52,489,946
Town of Pepperell	1,941,379	1.004996%	16,995,063	2,066,248	0.979678%	15,942,139
Town of Sherborn	1,236,905	0.752365%	12,722,930	1,313,434	0.756559%	12,311,363
Town of Shirley	1,016,240	0.622370%	10,524,633	1,081,972	0.626156%	10,189,334
Town of Stow	1,334,265	0.860993%	14,559,897	1,422,069	0.866907%	14,107,038
Town of Sudbury	6,370,873	3.884890%	65,695,729	6,788,143	3.899939%	63,463,043
Town of Tewksbury	10,932,548	6.916741%	116,966,080	11,656,742	6.962503%	113,299,641
Town of Townsend	891,023	0.407010%	6,882,768	942,446	0.400960%	6,524,756
Town of Tyngsborough	2,802,097	1.570370%	26,555,868	2,978,809	1.565747%	25,479,144
Town of Wayland	5,907,067	3.673859%	62,127,083	6,285,643	3.684271%	59,953,515
Town of Westford	6,522,668	3.705382%	62,660,156	6,931,644	3.690422%	60,053,614
Town of Weston	6,912,365	4.343046%	73,443,424	7,368,490	4.431827%	72,118,376
Town of Wilmington	8,908,246	5.511542%	93,203,360	9,494,725	5.348424%	87,034,008
Acton-Boxborough RSD	3,367,439	1.910930%	32,314,927	3,578,963	1.906191%	31,019,130
Acton Water Supply	330,838	0.266981%	4,514,809	354,740	0.268398%	4,367,590
Bedford Housing Authority	32,681	0.022255%	376,352	34,824	0.022382%	364,212
Billerica Housing Authority	113,735	0.112034%	1,894,567	121,392	0.116209%	1,891,044
Chelmsford Housing Authority	297,353	0.165098%	2,791,904	316,034	0.156444%	2,545,784
Chelmsford Water District	52,448	0.043328%	732,694	54,958	0.039157%	637,203
Dracut Housing Authority	164,851	0.110884%	1,875,107	176,406	0.111044%	1,807,002
Dracut Water Supply	316,875	0.225840%	3,819,086	339,094	0.227576%	3,703,298
E. Chelmsford Water	34,525	0.020120%	340,247	37,289	0.019840%	322,847
E. Middlesex Mosq Control	65,087	0.046854%	792,329	69,602	0.045532%	740,940
Greater Lowell RVTSD	1,780,273	1.187184%	20,075,975	1,902,443	1.196166%	19,465,005
Groton-Dunstable RSD	1,373,329	0.908794%	15,368,239	1,464,100	0.910988%	14,824,349

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Employer Name	FY 2024 Total Appropriation	Percent of Total NPL as of December 31, 2023	Share of NPL as of December 31, 2023 ¹	FY 2025 Total Appropriation	Percent of Total NPL as of December 31, 2024	Share of NPL as of December 31, 2024
Hudson Housing Authority	72,524	0.053613%	906,627	77,357	0.054449%	886,037
Lincoln Sudbury	913,596	0.614201%	10,386,487	975,437	0.614712%	10,003,104
Nashoba Valley THSD	377,582	0.217795%	3,683,043	402,171	0.217375%	3,537,305
N. Chelmsford Water	95,159	0.103059%	1,742,783	101,700	0.106326%	1,730,231
North Middlesex RSD	1,410,189	0.863025%	14,594,252	1,501,550	0.864116%	14,061,622
Shawsheen Valley RVS	904,644	0.567396%	9,594,986	965,562	0.566670%	9,221,330
South Middlesex RVTS	704,878	0.437605%	7,400,154	752,050	0.438719%	7,139,197
Sudbury Water District	156,230	0.073972%	1,250,917	167,851	0.067075%	1,091,508
Tewksbury Housing Authority	160,199	0.127218%	2,151,337	171,167	0.129713%	2,110,796
Wayland Housing Authority	56,113	0.024602%	416,032	59,844	0.022983%	374,003
Hopkinton Housing Authority	55,738	0.036735%	621,215	59,470	0.036913%	600,672
Sudbury Housing Authority	52,795	0.032782%	554,364	56,227	0.032900%	535,384
Wilmington Housing Authority	24,139	0.008104%	137,041	25,667	0.008368%	136,164
Acton Housing Authority	87,654	0.060022%	1,015,010	93,590	0.059864%	974,160
Burlington Housing Authority	18,072	0.003139%	53,090	19,101	0.002542%	41,359
Ayer Housing Authority	73,004	0.040721%	688,618	77,872	0.040568%	660,150
Holliston Housing Authority	19,430	0.001988%	33,626	20,184	0.001164%	18,947
Littleton Housing Authority	57,173	0.040584%	686,302	61,262	0.041159%	669,777
Westford Housing Authority	46,868	0.046697%	789,669	49,753	0.049175%	800,216
Shirley Water District	38,447	0.023380%	395,361	41,259	0.022523%	366,517
Tyngsboro Housing Authority	57,544	0.033921%	573,626	62,343	0.033522%	545,494
Pepperell Housing Authority	28,680	0.014411%	243,694	30,417	0.014616%	237,848
Groton Housing Authority	0	0.000000%	0	0	0.000000%	0
Tyngsboro Water District	53,128	0.041987%	710,027	56,624	0.042784%	696,211

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Employer Name	FY 2024 Total Appropriation	Percent of Total NPL as of December 31, 2023	Share of NPL as of December 31, 2023 ¹	FY 2025 Total Appropriation	Percent of Total NPL as of December 31, 2024	Share of NPL as of December 31, 2024
North Reading Housing Authority	8,671	0.002322%	39,272	9,124	0.001948%	31,705
West Groton Water	2,315	0.005089%	86,060	2,573	0.004825%	78,523
Ayer-Shirley RSD	497,092	0.301243%	5,094,198	526,471	0.300881%	4,896,180
NMRECC	62,893	0.004675%	79,063	66,785	0.000246%	3,997
Grand totals:	\$163,724,213	100.000000%	\$1,691,057,798	\$174,367,693	100.000000%	\$1,627,283,168

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Exhibit F: Determination of proportionate share amounts by employer

Net Pension Liability by Employer With Discount Rate Sensitivity

Employer Name	2025 Share of Cost Allocation	Net Pension Liability	Covered Employee Payroll	1% Decrease in Discount Rate (6.15%)	Current Discount Rate (7.15%)	1% Increase in Discount Rate (8.15%)
Middlesex County Retirement Board	0.000000%	\$0	\$1,306,465	\$0	\$0	\$0
Middlesex County	0.000000%	0	0	0	0	0
Middlesex Hospital	0.000000%	0	0	0	0	0
Town of Acton	3.366334%	54,779,793	16,755,168	69,476,805	54,779,793	42,417,846
Town of Ashby	0.083795%	1,363,583	1,107,656	1,729,422	1,363,583	1,055,868
Town of Ashland	2.287469%	37,223,604	17,364,829	47,210,421	37,223,604	28,823,495
Town of Ayer	1.320558%	21,489,212	8,736,882	27,254,608	21,489,212	16,639,824
Town of Bedford	3.487992%	56,759,513	23,145,430	71,987,669	56,759,513	43,950,811
Town of Billerica	9.716682%	158,117,928	43,789,945	200,539,795	158,117,928	122,436,056
Town of Boxborough	0.806057%	13,116,826	3,570,527	16,635,973	13,116,826	10,156,802
Town of Burlington	8.599906%	139,944,825	42,574,940	177,490,983	139,944,825	108,364,011
Town of Carlisle	0.972532%	15,825,856	6,872,512	20,071,816	15,825,856	12,254,496
Town of Chelmsford	7.192578%	117,043,610	34,604,806	148,445,542	117,043,610	90,630,826
Town of Dracut	4.464485%	72,649,809	20,258,214	92,141,213	72,649,809	56,255,204
Town of Dunstable	0.243689%	3,965,509	1,511,827	5,029,426	3,965,509	3,070,628
Town of Groton	1.389254%	22,607,096	9,462,612	28,672,412	22,607,096	17,505,439
Town of Holliston	1.665235%	27,098,088	13,929,020	34,368,304	27,098,088	20,982,966
Town of Hopkinton	1.573369%	25,603,170	21,613,923	32,472,311	25,603,170	19,825,400
Town of Hudson	4.209876%	68,506,610	24,392,416	86,886,425	68,506,610	53,046,985
Town of Lincoln	1.902133%	30,953,095	12,727,353	39,257,581	30,953,095	23,968,028
Town of Littleton	1.482980%	24,132,282	17,481,386	30,606,794	24,132,282	18,686,442

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Employer Name	2025 Share of Cost Allocation	Net Pension Liability	Covered Employee Payroll	1% Decrease in Discount Rate (6.15%)	Current Discount Rate (7.15%)	1% Increase in Discount Rate (8.15%)
Town of North Reading	3.225618%	52,489,946	16,106,191	66,572,609	52,489,946	40,644,740
Town of Pepperell	0.979678%	15,942,139	6,653,906	20,219,296	15,942,139	12,344,537
Town of Sherborn	0.756559%	12,311,363	5,195,257	15,614,410	12,311,363	9,533,105
Town of Shirley	0.626156%	10,189,334	2,481,107	12,923,057	10,189,334	7,889,946
Town of Stow	0.866907%	14,107,038	4,729,851	17,891,852	14,107,038	10,923,557
Town of Sudbury	3.899939%	63,463,043	21,068,326	80,489,706	63,463,043	49,141,581
Town of Tewksbury	6.962503%	113,299,641	27,644,071	143,697,094	113,299,641	87,731,744
Town of Townsend	0.400960%	6,524,756	4,629,359	8,275,300	6,524,756	5,052,339
Town of Tyngsborough	1.565747%	25,479,144	10,838,556	32,315,009	25,479,144	19,729,363
Town of Wayland	3.684271%	59,953,515	23,305,774	76,038,598	59,953,515	46,424,034
Town of Westford	3.690422%	60,053,614	30,542,782	76,165,553	60,053,614	46,501,544
Town of Weston	4.431827%	72,118,376	24,213,806	91,467,201	72,118,376	55,843,698
Town of Wilmington	5.348424%	87,034,008	28,113,580	110,384,586	87,034,008	67,393,376
Acton-Boxborough RSD	1.906191%	31,019,130	17,481,711	39,341,332	31,019,130	24,019,161
Acton Water Supply	0.268398%	4,367,590	1,203,105	5,539,382	4,367,590	3,381,973
Bedford Housing Authority	0.022382%	364,212	136,994	461,927	364,212	282,022
Billerica Housing Authority	0.116209%	1,891,044	413,909	2,398,397	1,891,044	1,464,299
Chelmsford Housing Authority	0.156444%	2,545,784	3,724,506	3,228,799	2,545,784	1,971,287
Chelmsford Water District	0.039157%	637,203	1,387,960	808,160	637,203	493,408
Dracut Housing Authority	0.111044%	1,807,002	463,007	2,291,807	1,807,002	1,399,223
Dracut Water Supply	0.227576%	3,703,298	784,727	4,696,865	3,703,298	2,867,589
E. Chelmsford Water	0.019840%	322,847	243,825	409,464	322,847	249,991
E. Middlesex Mosq Control	0.045532%	740,940	360,004	939,729	740,940	573,735
Greater Lowell RVTSD	1.196166%	19,465,005	5,473,694	24,687,321	19,465,005	15,072,412
Groton-Dunstable RSD	0.910988%	14,824,349	4,679,641	18,801,612	14,824,349	11,478,995

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Employer Name	2025 Share of Cost Allocation	Net Pension Liability	Covered Employee Payroll	1% Decrease in Discount Rate (6.15%)	Current Discount Rate (7.15%)	1% Increase in Discount Rate (8.15%)
Hudson Housing Authority	0.054449%	886,037	511,974	1,123,754	886,037	686,088
Lincoln Sudbury	0.614712%	10,003,104	3,259,994	12,686,862	10,003,104	7,745,742
Nashoba Valley THSD	0.217375%	3,537,305	1,082,918	4,486,338	3,537,305	2,739,055
N. Chelmsford Water	0.106326%	1,730,231	702,322	2,194,439	1,730,231	1,339,776
North Middlesex RSD	0.864116%	14,061,622	6,115,493	17,834,251	14,061,622	10,888,389
Shawsheen Valley RVS	0.566670%	9,221,330	3,484,565	11,695,344	9,221,330	7,140,388
South Middlesex RVTS	0.438719%	7,139,197	2,726,690	9,054,591	7,139,197	5,528,122
Sudbury Water District	0.067075%	1,091,508	1,089,659	1,384,351	1,091,508	845,192
Tewksbury Housing Authority	0.129713%	2,110,796	561,086	2,677,107	2,110,796	1,634,461
Wayland Housing Authority	0.022983%	374,003	339,769	474,345	374,003	289,603
Hopkinton Housing Authority	0.036913%	600,672	106,674	761,828	600,672	465,121
Sudbury Housing Authority	0.032900%	535,384	101,180	679,024	535,384	414,566
Wilmington Housing Authority	0.008368%	136,164	195,724	172,696	136,164	105,436
Acton Housing Authority	0.059864%	974,160	541,138	1,235,520	974,160	754,325
Burlington Housing Authority	0.002542%	41,359	233,489	52,455	41,359	32,026
Ayer Housing Authority	0.040568%	660,150	196,504	837,263	660,150	511,177
Holliston Housing Authority	0.001164%	18,947	107,978	24,030	18,947	14,671
Littleton Housing Authority	0.041159%	669,777	0	849,473	669,777	518,631
Westford Housing Authority	0.049175%	800,216	460,096	1,014,908	800,216	619,634
Shirley Water District	0.022523%	366,517	265,519	464,851	366,517	283,807
Tyngsboro Housing Authority	0.033522%	545,494	144,373	691,846	545,494	422,394
Pepperell Housing Authority	0.014616%	237,848	112,383	301,661	237,848	184,174
Groton Housing Authority	0.000000%	0	0	0	0	0
Tyngsboro Water District	0.042784%	696,211	200,763	882,999	696,211	539,100

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Employer Name	2025 Share of Cost Allocation	Net Pension Liability	Covered Employee Payroll	1% Decrease in Discount Rate (6.15%)	Current Discount Rate (7.15%)	1% Increase in Discount Rate (8.15%)
North Reading Housing Authority	0.001948%	31,705	33,190	40,211	31,705	24,550
West Groton Water	0.004825%	78,523	238,976	99,590	78,523	60,803
Ayer-Shirley RSD	0.300881%	4,896,180	4,525,595	6,209,789	4,896,180	3,791,278
NMRECC	0.000246%	3,997	1,128,722	5,069	3,997	3,095
Grand Totals:	100.000000%	\$1,627,283,168	\$591,548,334	\$2,063,871,162	\$1,627,283,168	\$1,260,060,391

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Exhibit F: Determination of proportionate share amounts by employer

Schedule of Contributions and Pension Expense by Employer

Employer Name	Statutory Required Contribution	Contributions in Relation to the Statutory Required Contribution	Contribution Deficiency / (Excess)	Contributions as a Percentage of Covered Employee Payroll	Proportionate Share of Plan Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense
Middlesex County Retirement Board	\$485,002	\$485,002	\$0	37.12%	\$485,002	\$0	\$485,002
Middlesex County	0	0	0	0.00%	0	0	0
Middlesex Hospital	0	0	0	0.00%	0	0	0
Town of Acton	5,657,229	5,657,229	0	33.76%	5,596,513	-359,291	5,237,222
Town of Ashby	268,891	268,891	0	24.28%	139,309	-23,377	115,932
Town of Ashland	4,152,712	4,152,712	0	23.91%	3,802,906	-47,045	3,755,861
Town of Ayer	2,230,909	2,530,909	-300,000	28.97%	2,195,420	461,782	2,657,202
Town of Bedford	5,814,992	5,814,992	0	25.12%	5,798,769	191,772	5,990,541
Town of Billerica	16,438,951	16,438,951	0	37.54%	16,153,932	-1,158,186	14,995,746
Town of Boxborough	1,325,502	1,325,502	0	37.12%	1,340,066	28,693	1,368,759
Town of Burlington	14,291,966	14,291,966	0	33.57%	14,297,299	-984,897	13,312,402
Town of Carlisle	1,488,276	1,488,276	0	21.66%	1,616,830	833,098	2,449,928
Town of Chelmsford	12,078,152	12,253,152	-175,000	35.41%	11,957,624	-272,950	11,684,674
Town of Dracut	7,674,843	7,674,843	0	37.89%	7,422,183	166,416	7,588,599
Town of Dunstable	386,855	386,855	0	25.59%	405,131	135,450	540,581
Town of Groton	2,653,019	2,653,019	0	28.04%	2,309,627	-483,634	1,825,993
Town of Holliston	2,890,492	2,890,492	0	20.75%	2,768,445	154,800	2,923,245
Town of Hopkinton	3,290,227	3,294,249	-4,022	15.24%	2,615,718	365,329	2,981,047
Town of Hudson	7,920,764	7,920,764	0	32.47%	6,998,898	-225,491	6,773,407
Town of Lincoln	3,249,360	3,250,460	-1,100	25.54%	3,162,287	411,626	3,573,913
Town of Littleton	3,303,090	3,303,090	0	18.89%	2,465,447	839,140	3,304,587

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Employer Name	Statutory Required Contribution	Contributions in Relation to the Statutory Required Contribution	Contribution Deficiency / (Excess)	Contributions as a Percentage of Covered Employee Payroll	Proportionate Share of Plan Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense
Town of North Reading	5,552,840	5,552,840	0	34.48%	5,362,574	-293,392	5,069,182
Town of Pepperell	2,066,248	2,066,248	0	31.05%	1,628,710	-388,613	1,240,097
Town of Sherborn	1,313,434	1,313,434	0	25.28%	1,257,776	373,640	1,631,416
Town of Shirley	1,081,972	1,081,972	0	43.61%	1,040,981	86,749	1,127,730
Town of Stow	1,422,069	1,422,069	0	30.07%	1,441,229	270,737	1,711,966
Town of Sudbury	6,788,143	6,793,660	-5,517	32.25%	6,483,627	-507,896	5,975,731
Town of Tewksbury	11,656,742	11,656,742	0	42.17%	11,575,126	-90,375	11,484,751
Town of Townsend	942,446	942,446	0	20.36%	666,594	-162,186	504,408
Town of Tyngsborough	2,978,809	2,979,191	-382	27.49%	2,603,047	128,469	2,731,516
Town of Wayland	6,285,643	6,286,759	-1,116	26.98%	6,125,081	-16,382	6,108,699
Town of Westford	6,931,644	6,931,644	0	22.69%	6,135,307	388,398	6,523,705
Town of Weston	7,368,490	7,368,490	0	30.43%	7,367,890	424,622	7,792,512
Town of Wilmington	9,494,725	10,994,725	-1,500,000	39.11%	8,891,728	-194,866	8,696,862
Acton-Boxborough RSD	3,578,963	3,578,963	0	20.47%	3,169,033	67,503	3,236,536
Acton Water Supply	354,740	354,740	0	29.49%	446,209	8,488	454,697
Bedford Housing Authority	34,824	34,824	0	25.42%	37,209	2,495	39,704
Billerica Housing Authority	121,392	121,392	0	29.33%	193,196	9,638	202,834
Chelmsford Housing Authority	316,034	376,034	-60,000	10.10%	260,087	133,964	394,051
Chelmsford Water District	54,958	54,958	0	3.96%	65,099	89,596	154,695
Dracut Housing Authority	176,406	176,406	0	38.10%	184,610	-121,504	63,106
Dracut Water Supply	339,094	339,094	0	43.21%	378,343	-12,709	365,634
E. Chelmsford Water	37,289	37,289	0	15.29%	32,984	-9,247	23,737
E. Middlesex Mosq Control	69,602	69,602	0	19.33%	75,697	-5,385	70,312
Greater Lowell RVTSD	1,902,443	1,902,443	0	34.76%	1,988,620	-137,075	1,851,545
Groton-Dunstable RSD	1,464,100	1,464,100	0	31.29%	1,514,513	186,359	1,700,872

Section 2: GASB Information

Employer Name	Statutory Required Contribution	Contributions in Relation to the Statutory Required Contribution	Contribution Deficiency / (Excess)	Contributions as a Percentage of Covered Employee Payroll	Proportionate Share of Plan Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense
Hudson Housing Authority	77,357	77,357	0	15.11%	90,521	29,909	120,430
Lincoln Sudbury	975,437	975,437	0	29.92%	1,021,956	29,615	1,051,571
Nashoba Valley THSD	402,171	402,171	0	37.14%	361,385	-51,124	310,261
N. Chelmsford Water	101,700	101,700	0	14.48%	176,767	78,386	255,153
North Middlesex RSD	1,501,550	1,501,550	0	24.55%	1,436,589	51,583	1,488,172
Shawsheen Valley RVS	965,562	965,562	0	27.71%	942,087	-43,304	898,783
South Middlesex RVTS	752,050	752,050	0	27.58%	729,368	-47,182	682,186
Sudbury Water District	167,851	167,851	0	15.40%	111,513	-285,819	-174,306
Tewksbury Housing Authority	171,167	171,167	0	30.51%	215,647	36,435	252,082
Wayland Housing Authority	59,844	59,844	0	17.61%	38,210	-49,320	-11,110
Hopkinton Housing Authority	59,470	59,470	0	55.75%	61,367	3,079	64,446
Sudbury Housing Authority	56,227	56,227	0	55.57%	54,696	4,595	59,291
Wilmington Housing Authority	25,667	25,667	0	13.11%	13,911	-36,981	-23,070
Acton Housing Authority	93,590	93,590	0	17.30%	99,524	-478	99,046
Burlington Housing Authority	19,101	19,101	0	8.18%	4,226	-45,701	-41,475
Ayer Housing Authority	77,872	77,872	0	39.63%	67,443	-45,669	21,774
Holliston Housing Authority	20,184	20,184	0	18.69%	1,935	-19,853	-17,918
Littleton Housing Authority	61,262	61,262	0	0.00%	68,427	-5,693	62,734
Westford Housing Authority	49,753	49,753	0	10.81%	81,753	34,912	116,665
Shirley Water District	41,259	41,259	0	15.54%	37,445	-29,412	8,033
Tyngsboro Housing Authority	62,343	62,343	0	43.18%	55,729	-56	55,673
Pepperell Housing Authority	30,417	30,417	0	27.07%	24,299	-1,536	22,763
Groton Housing Authority	0	0	0	0.00%	0	573	573
Tyngsboro Water District	56,624	56,624	0	28.20%	71,127	30,116	101,243

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Employer Name	Statutory Required Contribution	Contributions in Relation to the Statutory Required Contribution	Contribution Deficiency / (Excess)	Contributions as a Percentage of Covered Employee Payroll	Proportionate Share of Plan Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense
North Reading Housing Authority	9,124	9,124	0	27.49%	3,240	-25,963	-22,723
West Groton Water	2,573	2,573	0	1.08%	8,023	5,682	13,705
Ayer-Shirley RSD	526,471	526,471	0	11.63%	500,213	111,422	611,635
NMRECC	66,785	66,785	0	5.92%	409	7,521	7,930
Grand Totals:	\$174,367,693	\$176,414,830	-\$2,047,137	29.82%	\$166,734,486	\$0	\$166,734,486

Section 2: GASB Information

Exhibit F: Determination of proportionate share amounts by employer

Deferred Outflows and Inflows of Resources

Employer Name	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources
Middlesex County Retirement Board	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Middlesex County	0	0	0	0	0	0	0	0	0
Middlesex Hospital	0	0	0	0	0	0	0	0	0
Town of Acton	1,210,806	1,707,393	182,902	185,878	3,286,979	0	0	432,999	432,999
Town of Ashby	30,139	42,501	4,553	215,854	293,047	0	0	328,358	328,358
Town of Ashland	822,759	1,160,197	124,285	986,430	3,093,671	0	0	557,037	557,037
Town of Ayer	474,979	669,782	71,750	1,388,398	2,604,909	0	0	94,669	94,669
Town of Bedford	1,254,564	1,769,098	189,512	1,187,937	4,401,111	0	0	468,856	468,856
Town of Billerica	3,494,906	4,928,266	527,931	493,128	9,444,231	0	0	3,640,176	3,640,176
Town of Boxborough	289,923	408,829	43,795	459,603	1,202,150	0	0	180,845	180,845
Town of Burlington	3,093,222	4,361,843	467,257	690,627	8,612,949	0	0	2,976,352	2,976,352
Town of Carlisle	349,801	493,265	52,840	2,211,042	3,106,948	0	0	19,732	19,732
Town of Chelmsford	2,587,033	3,648,051	390,793	2,309,802	8,935,679	0	0	3,097,428	3,097,428
Town of Dracut	1,605,790	2,264,371	242,568	927,427	5,040,156	0	0	1,411,810	1,411,810
Town of Dunstable	87,650	123,598	13,240	597,001	821,489	0	0	95,657	95,657
Town of Groton	499,688	704,625	75,482	391,632	1,671,427	0	0	1,112,292	1,112,292
Town of Holliston	598,953	844,601	90,477	2,106,672	3,640,703	0	0	742,962	742,962
Town of Hopkinton	565,911	798,007	85,485	3,024,982	4,474,385	0	0	1,509,843	1,509,843
Town of Hudson	1,514,212	2,135,235	228,734	569,977	4,448,158	0	0	2,020,462	2,020,462
Town of Lincoln	684,161	964,755	103,348	621,851	2,374,115	0	0	110,069	110,069
Town of Littleton	533,399	752,162	80,574	2,208,037	3,574,172	0	0	902,981	902,981

Section 2: GASB Information

Employer Name	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources
Town of North Reading	1,160,193	1,636,023	175,257	90,557	3,062,030	0	0	927,820	927,820
Town of Pepperell	352,372	496,889	53,229	0	902,490	0	0	1,157,291	1,157,291
Town of Sherborn	272,120	383,724	41,106	915,850	1,612,800	0	0	0	0
Town of Shirley	225,216	317,584	34,021	331,160	907,981	0	0	263,398	263,398
Town of Stow	311,810	439,692	47,101	450,986	1,249,589	0	0	135,914	135,914
Town of Sudbury	1,402,733	1,978,035	211,894	186,223	3,778,885	0	0	1,433,812	1,433,812
Town of Tewksbury	2,504,279	3,531,358	378,292	2,204,663	8,618,592	0	0	3,926,254	3,926,254
Town of Townsend	144,218	203,366	21,785	772,214	1,141,583	0	0	674,864	674,864
Town of Tyngsborough	563,169	794,142	85,071	480,845	1,923,227	0	0	366,249	366,249
Town of Wayland	1,325,162	1,868,649	200,177	1,722,229	5,116,217	0	0	690,334	690,334
Town of Westford	1,327,374	1,871,769	200,511	3,243,312	6,642,966	0	0	1,792,038	1,792,038
Town of Weston	1,594,043	2,247,807	240,793	1,535,430	5,618,073	0	0	648,530	648,530
Town of Wilmington	1,923,726	2,712,702	290,595	326,168	5,253,191	0	0	1,505,105	1,505,105
Acton-Boxborough RSD	685,621	966,814	103,569	714,340	2,470,344	0	0	352,526	352,526
Acton Water Supply	96,538	136,130	14,583	91,833	339,084	0	0	76,456	76,456
Bedford Housing Authority	8,050	11,352	1,216	19,399	40,017	0	0	6,675	6,675
Billerica Housing Authority	41,798	58,941	6,314	294,948	402,001	0	0	105,325	105,325
Chelmsford Housing Authority	56,270	79,348	8,500	335,026	479,144	0	0	38,072	38,072
Chelmsford Water District	14,084	19,861	2,128	738,868	774,941	0	0	318,620	318,620
Dracut Housing Authority	39,940	56,321	6,033	0	102,294	0	0	202,839	202,839
Dracut Water Supply	81,855	115,426	12,365	63,978	273,624	0	0	161,720	161,720
E. Chelmsford Water	7,136	10,063	1,078	47,604	65,881	0	0	38,222	38,222
E. Middlesex Mosq Control	16,377	23,094	2,474	83,848	125,793	0	0	80,840	80,840
Greater Lowell RVTSD	430,238	606,691	64,991	289,733	1,391,653	0	0	911,893	911,893
Groton-Dunstable RSD	327,665	462,050	49,496	413,515	1,252,726	0	0	83,776	83,776

Section 2: GASB Information

Employer Name	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources
Hudson Housing Authority	19,584	27,616	2,958	76,760	126,918	0	0	4,420	4,420
Lincoln Sudbury	221,100	311,780	33,399	144,852	711,131	0	0	222,504	222,504
Nashoba Valley THSD	78,186	110,252	11,811	55,806	256,055	0	0	236,915	236,915
N. Chelmsford Water	38,244	53,928	5,777	374,714	472,663	0	0	78,011	78,011
North Middlesex RSD	310,806	438,277	46,950	133,170	929,203	0	0	26,232	26,232
Shawsheen Valley RVS	203,820	287,413	30,789	108,256	630,278	0	0	352,717	352,717
South Middlesex RVTS	157,799	222,517	23,837	59,228	463,381	0	0	249,829	249,829
Sudbury Water District	24,126	34,020	3,644	179,794	241,584	0	0	753,742	753,742
Tewksbury Housing Authority	46,655	65,790	7,048	162,724	282,217	0	0	42,366	42,366
Wayland Housing Authority	8,267	11,657	1,249	71,150	92,323	0	0	168,848	168,848
Hopkinton Housing Authority	13,277	18,722	2,006	21,709	55,714	0	0	18,922	18,922
Sudbury Housing Authority	11,834	16,687	1,788	20,957	51,266	0	0	17,420	17,420
Wilmington Housing Authority	3,010	4,244	455	18,016	25,725	0	0	73,849	73,849
Acton Housing Authority	21,532	30,363	3,253	31,406	86,554	0	0	24,929	24,929
Burlington Housing Authority	914	1,289	138	80,204	82,545	0	0	127,742	127,742
Ayer Housing Authority	14,591	20,576	2,204	3,304	40,675	0	0	88,165	88,165
Holliston Housing Authority	419	591	63	21,442	22,515	0	0	68,268	68,268
Littleton Housing Authority	14,804	20,876	2,236	34,258	72,174	0	0	69,524	69,524
Westford Housing Authority	17,687	24,941	2,672	202,687	247,987	0	0	37,878	37,878
Shirley Water District	8,101	11,424	1,224	53,414	74,163	0	0	115,921	115,921
Tyngsboro Housing Authority	12,057	17,002	1,821	10,291	41,171	0	0	25,172	25,172
Pepperell Housing Authority	5,257	7,413	794	7,159	20,623	0	0	7,093	7,093
Groton Housing Authority	0	0	0	0	0	0	0	0	0
Tyngsboro Water District	15,388	21,700	2,325	93,706	133,119	0	0	8,095	8,095

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Employer Name	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources
North Reading Housing Authority	701	988	106	18,524	20,319	0	0	43,871	43,871
West Groton Water	1,736	2,447	262	44,716	49,161	0	0	19,313	19,313
Ayer-Shirley RSD	108,221	152,606	16,348	975,510	1,252,685	0	0	319,560	319,560
NMRECC	88	125	13	108,429	108,655	0	0	238,786	238,786
Grand Totals:	\$35,968,087	\$50,719,655	\$5,433,275	\$39,041,193	\$131,162,210	\$0	\$0	\$39,041,193	\$39,041,193

Section 2: GASB Information

Exhibit F: Determination of proportionate share amounts by employer

Deferred Inflows/(Outflows) Recognized In Future Pension Expense (Year Ended June 30)

Employer Name	2026	2027	2028	2029	2030	Thereafter
Middlesex County Retirement Board	\$0	\$0	\$0	\$0	\$0	\$0
Middlesex County	0	0	0	0	0	0
Middlesex Hospital	0	0	0	0	0	0
Town of Acton	844,067	2,463,754	-225,031	-228,809	0	0
Town of Ashby	3,692	57,896	-99,447	2,548	0	0
Town of Ashland	791,546	2,079,930	-190,356	-144,486	0	0
Town of Ayer	924,485	1,472,107	206,548	-92,900	0	0
Town of Bedford	1,493,900	2,942,381	-204,460	-299,566	0	0
Town of Billerica	2,092,399	5,131,105	-736,272	-683,172	0	0
Town of Boxborough	297,801	681,889	93,445	-51,829	0	0
Town of Burlington	1,961,885	4,857,285	-538,101	-644,473	0	0
Town of Carlisle	1,202,976	1,565,794	384,485	-66,040	0	0
Town of Chelmsford	2,114,020	4,116,888	31,301	-423,957	0	0
Town of Dracut	1,658,794	2,509,507	-281,838	-258,118	0	0
Town of Dunstable	212,004	395,093	126,341	-7,605	0	0
Town of Groton	-6,200	963,961	-310,959	-87,667	0	0
Town of Holliston	806,835	2,147,260	44,316	-100,670	0	0
Town of Hopkinton	1,023,541	2,373,035	-342,356	-89,677	0	0
Town of Hudson	1,250,396	2,350,090	-933,050	-239,740	0	0
Town of Lincoln	1,087,814	1,487,310	-172,169	-138,909	0	0
Town of Littleton	1,413,060	1,773,259	-406,514	-108,613	0	0

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Employer Name	2026	2027	2028	2029	2030	Thereafter
Town of North Reading	829,040	1,895,789	-366,985	-223,635	0	0
Town of Pepperell	-51,111	314,366	-443,319	-74,737	0	0
Town of Sherborn	637,114	891,565	124,915	-40,795	0	0
Town of Shirley	298,383	369,402	10,602	-33,804	0	0
Town of Stow	576,616	606,395	-9,427	-59,909	0	0
Town of Sudbury	832,394	2,177,400	-438,750	-225,969	0	0
Town of Tewksbury	2,213,694	3,204,500	-286,443	-439,413	0	0
Town of Townsend	-26,127	566,759	-76,006	2,092	0	0
Town of Tyngsborough	668,765	1,167,980	-206,429	-73,338	0	0
Town of Wayland	1,300,902	3,285,795	90,657	-251,471	0	0
Town of Westford	1,761,950	3,860,896	-568,459	-203,459	0	0
Town of Weston	1,989,469	3,116,571	-30,832	-105,664	0	0
Town of Wilmington	1,669,667	3,262,436	-641,935	-542,081	0	0
Acton-Boxborough RSD	705,316	1,649,068	-140,433	-96,135	0	0
Acton Water Supply	119,884	202,004	-22,323	-36,936	0	0
Bedford Housing Authority	11,068	23,693	587	-2,006	0	0
Billerica Housing Authority	49,500	172,537	86,068	-11,431	0	0
Chelmsford Housing Authority	202,312	270,202	-14,476	-16,966	0	0
Chelmsford Water District	149,777	362,461	-37,647	-18,270	0	0
Dracut Housing Authority	-83,345	23,760	-30,290	-10,669	0	0
Dracut Water Supply	70,551	88,223	-24,866	-22,006	0	0
E. Chelmsford Water	-536	34,622	-4,721	-1,707	0	0
E. Middlesex Mosq Control	18,233	56,760	-20,832	-9,208	0	0
Greater Lowell RVTSD	295,662	435,096	-158,925	-92,073	0	0
Groton-Dunstable RSD	533,829	747,769	-31,212	-81,436	0	0

Section 2: GASB Information

Employer Name	2026	2027	2028	2029	2030	Thereafter
Hudson Housing Authority	51,774	65,679	9,767	-4,721	0	0
Lincoln Sudbury	254,727	351,938	-57,594	-60,443	0	0
Nashoba Valley THSD	11,229	44,014	-24,320	-11,784	0	0
N. Chelmsford Water	128,766	217,022	62,900	-14,036	0	0
North Middlesex RSD	364,218	668,575	-72,077	-57,746	0	0
Shawsheen Valley RVS	157,617	252,674	-86,584	-46,145	0	0
South Middlesex RVTS	116,290	214,468	-87,560	-29,648	0	0
Sudbury Water District	-244,373	-54,775	-197,216	-15,794	0	0
Tewksbury Housing Authority	84,875	127,558	39,731	-12,313	0	0
Wayland Housing Authority	-36,938	8,318	-45,261	-2,645	0	0
Hopkinton Housing Authority	16,679	21,828	1,281	-2,997	0	0
Sudbury Housing Authority	16,580	18,239	1,176	-2,150	0	0
Wilmington Housing Authority	-34,855	-3,082	-12,636	2,448	0	0
Acton Housing Authority	24,150	53,441	-9,157	-6,809	0	0
Burlington Housing Authority	-41,125	17,476	-22,459	910	0	0
Ayer Housing Authority	-31,739	-1,535	-12,347	-1,868	0	0
Holliston Housing Authority	-19,679	-8,803	-18,275	1,004	0	0
Littleton Housing Authority	8,539	-2,158	-544	-3,186	0	0
Westford Housing Authority	53,469	108,990	50,611	-2,960	0	0
Shirley Water District	-16,272	11,340	-33,011	-3,815	0	0
Tyngsboro Housing Authority	10,079	11,815	-3,108	-2,786	0	0
Pepperell Housing Authority	3,069	9,068	788	605	0	0
Groton Housing Authority	0	0	0	0	0	0
Tyngsboro Water District	49,012	67,385	12,736	-4,109	0	0

Section 2: GASB Information

Employer Name	2026	2027	2028	2029	2030	Thereafter
North Reading Housing Authority	-26,527	6,954	-3,834	-145	0	0
West Groton Water	10,504	23,557	-1,894	-2,318	0	0
Ayer-Shirley RSD	246,714	667,450	40,633	-21,673	0	0
NMRECC	10,224	-60,449	-79,475	-431	0	0
Grand Totals:	\$35,113,028	\$70,991,580	-\$7,343,327	-\$6,640,264	\$0	\$0

Appendix: Definition of Terms

Definitions of certain terms as they are used in Statement No. 68. The terms may have different meanings in other contexts.

Term	Definition
Active employees	Individuals employed at the end of the reporting or measurement period, as applicable.
Actual contributions	Cash contributions recognized as additions to a pension Plan Fiduciary Net Position.
Actuarial present value of projected benefit payments	Projected benefit payments discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment.
Actuarial valuation	The determination, as of a point in time (the actuarial valuation date), of the service cost, Total Pension Liability, and related actuarial present value of projected benefit payments for pensions performed in conformity with Actuarial Standards of Practice unless otherwise specified by the GASB.
Actuarial valuation date	The date as of which an actuarial valuation is performed.
Actuarially determined contribution	A target or recommended contribution to a defined benefit pension plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.
Ad hoc cost-of-living adjustments (Ad Hoc COLAs)	Cost-of-living adjustments that require a decision to grant by the authority responsible for making such decisions.
Ad hoc postemployment benefit changes	Postemployment benefit changes that require a decision to grant by the authority responsible for making such decisions.
Agent employer	An employer whose employees are provided with pensions through an agent multiple-employer defined benefit pension plan.
Agent multiple-employer defined benefit pension plan (agent pension plan)	A multiple-employer defined benefit pension plan in which pension plan assets are pooled for investment purposes but separate accounts are maintained for each individual employer so that each employer's share of the pooled assets is legally available to pay the benefits of only its employees.
Allocated insurance contract	A contract with an insurance company under which related payments to the insurance company are currently used to purchase immediate or deferred annuities for individual employees. Also may be referred to as an annuity contract.
Automatic cost-of-living adjustments (Automatic COLAs)	Cost-of-living adjustments that occur without a requirement for a decision to grant by a responsible authority, including those for which the amounts are determined by reference to a specified experience factor (such as the earnings experience of the pension plan) or to another variable (such as an increase in the consumer price index).

Appendix: Definition of Terms

Term	Definition
Automatic postemployment benefit changes	Postemployment benefit changes that occur without a requirement for a decision to grant by a responsible authority, including those for which the amounts are determined by reference to a specified experience factor (such as the earnings experience of the pension plan) or to another variable (such as an increase in the consumer price index).
Closed period	A specific number of years that is counted from one date and declines to zero with the passage of time. For example, if the recognition period initially is five years on a closed basis, four years remain after the first year, three years after the second year, and so forth.
Collective deferred outflows of resources and deferred inflows of resources related to pensions	Deferred outflows of resources and deferred inflows of resources related to pensions arising from certain changes in the collective Net Pension Liability.
Collective Net Pension Liability	The Net Pension Liability for benefits provided through (1) a cost-sharing pension plan or (2) a single-employer or agent pension plan in circumstances in which there is a special funding situation.
Collective pension expense	Pension expense arising from certain changes in the collective Net Pension Liability.
Contributions	Additions to a pension Plan Fiduciary Net Position for amounts from employers, non-employer contributing entities (for example, state government contributions to a local government pension plan), or employees. Contributions can result from cash receipts by the pension plan or from recognition by the pension plan of a receivable from one of these sources.
Cost-of-living adjustments	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
Cost-sharing employer	An employer whose employees are provided with pensions through a cost-sharing multiple-employer defined benefit pension plan.
Cost-sharing multiple employer defined benefit pension plan (Cost-sharing pension plan)	A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.
Covered payroll	The payroll of employees that are provided with pensions through the pension plan.
Deferred retirement option program (DROP)	A program that permits an employee to elect a calculation of benefit payments based on service credits and salary, as applicable, as of the DROP entry date. The employee continues to provide service to the employer and is paid for that service by the employer after the DROP entry date; however, the pensions that would have been paid to the employee (if the employee had retired and not entered the DROP) are credited to an individual employee account within the defined benefit pension plan until the end of the DROP period.
Defined benefit pension plans	Pension plans that are used to provide defined benefit pensions.

Appendix: Definition of Terms

Term	Definition
Defined benefit pensions	Pensions for which the income or other benefits that the employee will receive at or after separation from employment are defined by the benefit terms. The pensions may be stated as a specified dollar amount or as an amount that is calculated based on one or more factors such as age, years of service, and compensation. (A pension that does not meet the criteria of a defined contribution pension is classified as a defined benefit pension for purposes of Statement No. 68.)
Defined contribution pension plans	Pension plans that are used to provide defined contribution pensions.
Defined contribution pensions	Pensions having terms that (1) provide an individual account for each employee; (2) define the contributions that an employer is required to make (or the credits that it is required to provide) to an active employee's account for periods in which that employee renders service; and (3) provide that the pensions an employee will receive will depend only on the contributions (or credits) to the employee's account, actual earnings on investments of those contributions (or credits), and the effects of forfeitures of contributions (or credits) made for other employees, as well as pension plan administrative costs, that are allocated to the employee's account.
Discount rate	The single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the total of the following: <ol style="list-style-type: none"> 1. The actuarial present value of benefit payments projected to be made in future periods in which (a) the amount of the pension Plan Fiduciary Net Position is projected (under the requirements of Statement No. 68) to be greater than the benefit payments that are projected to be made in that period and (b) pension plan assets up to that point are expected to be invested using a strategy to achieve the long-term expected rate of return, calculated using the long-term expected rate of return on pension plan investments. 2. The actuarial present value of projected benefit payments not included in (1), calculated using the municipal bond rate.
Entry age actuarial cost method	A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age(s). The portion of this actuarial present value allocated to a valuation year is called the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is called the actuarial accrued liability.
Inactive employees	Terminated individuals that have accumulated benefits but are not yet receiving them, and retirees or their beneficiaries currently receiving benefits.
Measurement period	The period between the prior and the current measurement dates.
Multiple-employer defined benefit pension plan	A defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
Net Pension Liability (NPL)	The liability of employers and non-employer contributing entities to employees for benefits provided through a defined benefit pension plan.

Appendix: Definition of Terms

Term	Definition
Non-employer contributing entities	Entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of Statement No. 68, employees are not considered non-employer contributing entities.
Other postemployment benefits	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits, regardless of the manner in which they are provided. Other postemployment benefits do not include termination benefits.
Pension plans	Arrangements through which pensions are determined, assets dedicated for pensions are accumulated and managed and benefits are paid as they come due.
Pensions	Retirement income and, if provided through a pension plan, postemployment benefits other than retirement income (such as death benefits, life insurance, and disability benefits). Pensions do not include postemployment healthcare benefits and termination benefits.
Plan members	Individuals that are covered under the terms of a pension plan. Plan members generally include (1) employees in active service (active plan members) and (2) terminated employees who have accumulated benefits but are not yet receiving them and retirees or their beneficiaries currently receiving benefits (inactive plan members).
Postemployment	The period after employment.
Postemployment benefit changes	Adjustments to the pension of an inactive employee.
Postemployment healthcare benefits	Medical, dental, vision, and other health-related benefits paid subsequent to the termination of employment.
Projected benefit payments	All benefits estimated to be payable through the pension plan to current active and inactive employees as a result of their past service and their expected future service.
Public employee retirement system	A special-purpose government that administers one or more pension plans; also may administer other types of employee benefit plans, including postemployment healthcare plans and deferred compensation plans.
Real rate of return	The rate of return on an investment after adjustment to eliminate inflation.
Service costs	The portions of the actuarial present value of projected benefit payments that are attributed to valuation years.
Single employer	An employer whose employees are provided with pensions through a single-employer defined benefit pension plan.
Single-employer defined benefit pension plan (Single-employer pension plan)	A defined benefit pension plan that is used to provide pensions to employees of only one employer.

Appendix: Definition of Terms

Term	Definition
Special funding situations	<p>Circumstances in which a non-employer entity is legally responsible for making contributions directly to a pension plan that is used to provide pensions to the employees of another entity or entities and either of the following conditions exists:</p> <ol style="list-style-type: none">1. The amount of contributions for which the non-employer entity legally is responsible is not dependent upon one or more events or circumstances unrelated to the pensions.2. The non-employer entity is the only entity with a legal obligation to make contributions directly to a pension plan.
Termination benefits	<p>Inducements offered by employers to active employees to hasten the termination of services, or payments made in consequence of the early termination of services. Termination benefits include early-retirement incentives, severance benefits, and other termination-related benefits.</p>
Total Pension Liability (TPL)	<p>The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of Statement No. 68.</p>