

Middlesex County Retirement System

**Governmental Accounting Standards Board
Statements No. 67 and 68 (GASB 67/68) Accounting
Valuation Report as of December 31, 2022**



This report has been prepared at the request of the Retirement Board to assist the Board and the member units in preparing their financial reports for their liabilities associated with the Middlesex County Retirement System. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Retirement Board and may only be provided to other parties in its entirety. The measurements shown in this actuarial valuation may not be applicable for other purposes.

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June 30, 2023

Retirement Board
Middlesex County Retirement System
25 Linnell Circle
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Dear Board Members:

We are pleased to submit this Governmental Accounting Standards Board Statements No. 67 and 68 (GASB 67/68) Accounting Valuation as of December 31, 2022 for the Middlesex County Retirement System, a cost-sharing multiple employer defined benefit pension plan. It contains the actuarial information that will need to be disclosed in order to comply with GASB 67 and 68. This report excludes the increase in the COLA percentage from 3% to 5% effective July 1, 2022 because the Board had not approved the increase as of the measurement date. Please refer to the Middlesex County Retirement System Actuarial Valuation and Review as of January 1, 2022, dated August 8, 2022 for the data, assumptions, and plan of benefits underlying these calculations.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist the Board and the member units in preparing their financial reports for their liabilities associated with the Middlesex County Retirement System. The census and financial information on which our calculations were based were provided by the staff of the Middlesex County Retirement System. That assistance is gratefully acknowledged.

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, 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 this 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

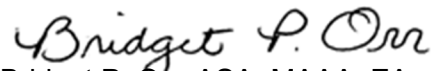
opinion, the assumptions are reasonable and take into account the experience of the Middlesex County Retirement System and reasonable expectations.

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

Sincerely,



Kathleen A. Riley, FSA, MAAA, EA
Senior Vice President and Chief Actuary



Bridget P. Orr, ASA, MAAA, EA
Consulting Actuary

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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, 2022. This report is based on financial information as of December 31, 2022 and the Middlesex County Retirement System Actuarial Valuation and Review as of January 1, 2022, 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 January 1, 2022, provided by the staff of the 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

1. The Net Pension Liability (NPL) measured as of December 31, 2022 and December 31, 2021 was determined based upon the results of an actuarial valuation as of January 1, 2022.
2. The Net Pension Liability is equal to the difference between the Total Pension Liability (TPL) and the Plan Fiduciary Net Position. The Plan 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 increased from \$1.341 billion as of December 31, 2021 to \$1.697 billion as of December 31, 2022, and the Plan Fiduciary Net Position as a percent of the TPL decreased from 61.14% to 52.61%.
3. The discount rate used to measure the TPL and NPL was 7.15% as of December 31, 2022 and December 31, 2021.

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:

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 Retirement 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 plan'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 plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

Actuarial results in this report are not rounded, but that does not imply precision.

If the Retirement 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. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Retirement Board should look to their other advisors for expertise in these areas.

As Segal has no discretionary authority with respect to the management or assets of the Retirement System, it is not a fiduciary in its capacity as actuaries and consultants with respect to the Retirement System.

Section 2: GASB Information

General information about the pension plan

Plan membership. At January 1, 2022, pension plan membership consisted of the following:

Retired participants or beneficiaries currently receiving benefits	6,284
Inactive participants with a vested right to a deferred or immediate benefit	403
Inactive participants entitled to a refund of employee contributions	3,581
Active members	<u>9,432</u>
Total	19,700

Section 2: GASB Information

Exhibit 1 – Net Pension Liability

Reporting Date for Employer under GASB 68	June 30, 2023	June 30, 2022
Measurement Date	December 31, 2022	December 31, 2021
Components of the Net Pension Liability		
Total Pension Liability	\$3,580,828,018	\$3,450,498,511
Plan Fiduciary Net Position	1,883,767,318	2,109,770,999
Net Pension Liability	1,697,060,700	1,340,727,512
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	52.61%	61.14%

Actuarial assumptions. The TPL as of December 31, 2022, which was determined based on the results of an actuarial valuation as of January 1, 2022, used the following actuarial assumptions, applied to all periods included in the measurement:

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 Return:	7.15%
Cost of Living Adjustment:	3% of first \$16,000
Mortality Rates:	Pre-Retirement: RP-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, 2022 Actuarial Valuation and Review.

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	20.50%	6.59%
International developed markets equity	12.00%	6.87%
International emerging markets equity	4.50%	8.30%
Core fixed income	15.00%	1.53%
High-yield fixed income	8.00%	3.54%
Real estate	10.00%	3.44%
Timber	4.00%	4.01%
Hedge fund, GTAA, Risk parity	10.00%	3.06%
Private equity	<u>16.00%</u>	9.49%
Total	100.00%	

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

Discount rate. The discount rate used to measure the TPL was 7.15% as of December 31, 2022 and December 31, 2021. 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 Fiduciary Net Position (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, 2022 and December 31, 2021.

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, 2022 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.

Net Pension Liability	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, 2022	\$2,100,727,873	\$1,697,060,700	\$1,357,206,313

Section 2: GASB Information

Exhibit 2 – Schedule of Changes in Net Pension Liability – Last Two Fiscal Years

Reporting Date for Employer under GASB 68 Measurement Date	June 30, 2023 December 31, 2022	June 30, 2022 December 31, 2021
Total Pension Liability		
Service cost	\$78,883,633	\$76,097,081
Interest	245,416,378	238,805,957
Change of benefit terms	0	0
Differences between expected and actual experience	0	5,225,766
Changes of assumptions	0	27,166,375
Benefit payments, including refunds of member contributions	-193,970,504	-184,028,124
Net change in Total Pension Liability	\$130,329,507	\$163,267,055
Total Pension Liability – beginning	<u>3,450,498,511</u>	<u>3,287,231,456</u>
Total Pension Liability – ending	\$3,580,828,018	\$3,450,498,511
Plan Fiduciary Net Position		
Contributions – employer	\$156,335,119	\$147,852,245
Contributions – employee	55,164,013	52,748,793
Net investment income	-240,314,305	340,463,667
Benefit payments, including refunds of member contributions	-193,970,504	-184,028,124
Administrative expense	-3,218,004	-3,403,912
Net change in Plan Fiduciary Net Position	-\$226,003,681	\$353,632,669
Plan Fiduciary Net Position – beginning	<u>2,109,770,999</u>	<u>1,756,138,330</u>
Plan Fiduciary Net Position – ending	\$1,883,767,318	\$2,109,770,999
Net Pension Liability – ending	1,697,060,700	1,340,727,512
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	52.61%	61.14%
Covered payroll ¹	\$541,233,353	\$519,239,588
Plan Net Pension Liability as percentage of covered payroll	313.55%	258.21%

¹ Covered employee payroll for 2022 and 2021 as estimated in the January 1, 2022 valuation.

Section 2: GASB Information

Notes to schedule:

Changes in Actuarial Assumptions:	Effective January 1, 2022: • The investment return assumption was lowered from 7.30% to 7.15%. • The mortality projection scale was updated from MP-2017 to MP-2021. Effective January 1, 2023: • None.
Changes in Plan Provisions:	Effective January 1, 2022: • None. Effective January 1, 2023: • None.

Section 2: GASB Information

Exhibit 3 – 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
2014	\$92,826,743	\$93,400,946	-\$574,203	\$415,752,810	22.47%
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%

See accompanying notes to this schedule on next page.

Section 2: GASB Information

Notes to Schedule:

Methods and assumptions used to establish “actuarially determined contribution”:

Valuation date:	Actuarial determined contribution for the year ended December 31, 2022 is determined with the January 1, 2020 actuarial valuation
Actuarial cost method:	Entry Age Actuarial Cost Method
Amortization method:	Prior year's total contribution increased by 6.5% for fiscal 2021 through fiscal 2028, and thereafter the remaining unfunded liability will be amortized on a 4.0% annual increasing basis; ERI liability amortized in level payments.
Remaining amortization period:	17 years from July 1, 2020 for non-ERI liability, and 2 years from July 1, 2020 for 2010 ERI.
Asset valuation method:	Market value of assets less unrecognized return in each of the last five years. Unrecognized return is equal to the difference between the actual and expected return on a market value basis, and is recognized over a five-year period, further adjusted, if necessary, to be within 20% of the market value.
Actuarial assumptions:	
• Net investment rate of return	7.30%
• Discount rate	7.30%
• 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	3% of first \$16,000 as of July 1, 2019
• Other assumptions	Same as those used in the January 1, 2020 funding actuarial valuation

Section 2: GASB Information

Exhibit 4 – Pension Expense

Reporting Date for Employer under GASB 68 Measurement Date	June 30, 2023 December 31, 2022	June 30, 2022 December 31, 2021
Components of Pension Expense		
Service cost	\$78,883,633	\$76,097,081
Interest	245,416,378	238,805,957
Current-period benefit changes	0	0
Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	0	1,045,154
Expensed portion of current-period changes of assumptions	0	5,433,275
Member contributions	-55,164,013	-52,748,793
Projected earnings on pension plan investments	-151,360,231	-128,678,767
Expensed portion of current-period differences between actual and projected earnings on pension plan investments	78,334,908	-42,356,980
Administrative expense	3,218,004	3,403,912
Recognition of beginning of year deferred outflows of resources as pension expense	55,724,047	68,684,783
Recognition of beginning of year deferred inflows of resources as pension expense	<u>-77,967,851</u>	<u>-56,982,431</u>
Pension Expense	\$177,084,875	\$112,703,191

Section 2: GASB Information

Deferred outflows of resources and deferred inflows of resources

Reporting Date for Employer under GASB 68	June 30, 2023	June 30, 2022
Measurement Date	December 31, 2022	December 31, 2021
Deferred Outflows of Resources		
Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$64,007,005	\$38,895,800
Changes of assumptions	29,302,605	47,738,660
Net difference between projected and actual earnings on pension plan investments	136,437,755	0
Difference between expected and actual experience in the Total Pension Liability	<u>12,469,834</u>	<u>22,849,362</u>
Total Deferred Outflows of Resources	\$242,217,199	\$109,483,822
Deferred Inflows of Resources		
Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$64,007,005	\$38,895,800
Changes of assumptions	0	0
Net difference between projected and actual earnings on pension plan investments	0	227,961,260
Difference between expected and actual experience in the Total Pension Liability	<u>0</u>	<u>0</u>
Total Deferred Inflows of Resources	\$64,007,005	\$266,857,060
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:		
2023	N/A	-\$22,243,804
2024	\$29,182,639	-49,152,268
2025	28,236,293	-50,098,614
2026	42,456,355	-35,878,552
2027	78,334,907	0
Thereafter	0	0

Note:

Average expected remaining service life is 5 years as of December 31, 2022 and December 31, 2021.

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

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Middlesex County Retirement System- December 31, 2022 GASB Statements No. 67 and 68 Accounting Valuation Report

Section 2: GASB Information

Exhibit 5 – Determination of Proportionate Share

Employer Name	FY 2022 Total Appropriation	Share of NPL as of January 1, 2022	Percent of Total NPL	FY 2023 Total Appropriation	Share of NPL as of January 1, 2023 ¹	Percent of Total NPL
Middlesex County Retirement Board	\$428,815	\$0	0.000000%	\$459,165	\$0	0.000000%
Middlesex County	0	0	0.000000%	0	0	0.000000%
Middlesex Hospital	0	0	0.000000%	0	0	0.000000%
Town of Acton	4,821,666	44,317,853	3.305508%	5,137,366	56,442,883	3.325920%
Town of Ashby	240,126	1,370,949	0.102254%	253,936	2,195,503	0.129371%
Town of Ashland	3,598,325	29,025,102	2.164877%	3,838,105	39,177,494	2.308550%
Town of Ayer	2,234,480	16,034,552	1.195959%	2,358,373	21,132,333	1.245231%
Town of Bedford	4,966,807	44,033,584	3.284305%	5,288,347	58,143,653	3.426139%
Town of Billerica	13,587,241	136,488,741	10.180200%	14,484,999	163,486,989	9.633538%
Town of Boxborough	1,144,434	10,220,882	0.762339%	1,218,757	12,627,142	0.744060%
Town of Burlington	11,757,449	118,806,981	8.861382%	12,543,435	143,508,193	8.456279%
Town of Carlisle	1,192,106	8,806,565	0.656850%	1,265,339	13,493,696	0.795122%
Town of Chelmsford	10,283,109	100,318,386	7.482384%	11,142,487	117,848,343	6.944262%
Town of Dracut	6,152,234	62,185,294	4.638175%	6,564,528	75,091,196	4.424780%
Town of Dunstable	367,320	2,299,674	0.171524%	389,434	3,248,740	0.191433%
Town of Groton	2,385,255	19,238,916	1.434961%	2,538,910	25,150,097	1.481980%
Town of Holliston	2,589,575	18,170,200	1.355249%	2,754,852	27,235,114	1.604840%
Town of Hopkinton	2,916,805	16,725,088	1.247464%	3,142,328	29,030,303	1.710623%
Town of Hudson	6,387,468	59,893,267	4.467221%	6,794,331	75,932,435	4.474350%

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 2022 Total Appropriation	Share of NPL as of January 1, 2022	Percent of Total NPL	FY 2023 Total Appropriation	Share of NPL as of January 1, 2023 ¹	Percent of Total NPL
Town of Lincoln	2,589,045	24,515,962	1.828557%	2,754,456	32,224,079	1.898817%
Town of Littleton	4,061,166	19,636,977	1.464651%	2,900,040	30,512,028	1.797934%
Town of North Reading	4,553,483	44,566,036	3.324019%	4,854,543	55,154,781	3.250018%
Town of Pepperell	1,672,631	15,377,884	1.146981%	1,811,897	19,372,966	1.141560%
Town of Sherborn	1,047,555	8,564,819	0.638819%	1,112,907	11,793,029	0.694909%
Town of Shirley	812,736	8,630,720	0.643734%	866,303	10,265,353	0.604890%
Town of Stow	1,077,698	11,352,166	0.846717%	1,151,354	14,182,336	0.835700%
Town of Sudbury	5,622,886	54,643,133	4.075633%	5,993,875	66,845,536	3.938901%
Town of Tewksbury	9,177,392	99,361,547	7.411017%	9,792,941	115,583,007	6.810776%
Town of Townsend	934,704	4,774,763	0.356132%	995,268	7,565,089	0.445776%
Town of Tyngsborough	2,462,187	21,175,029	1.579369%	2,617,413	27,541,050	1.622868%
Town of Wayland	5,378,336	46,247,117	3.449405%	5,728,625	60,047,515	3.538325%
Town of Westford	5,950,276	44,844,218	3.344767%	6,263,082	65,161,824	3.839687%
Town of Weston	5,898,122	59,360,735	4.427502%	6,288,908	73,861,876	4.352341%
Town of Wilmington	9,306,639	76,302,617	5.691135%	9,828,234	93,568,182	5.513544%
Acton-Boxborough RSD	3,124,290	24,866,009	1.854665%	3,320,479	32,804,832	1.933038%
Acton Water Supply	268,502	3,246,366	0.242135%	288,240	4,310,937	0.254024%
Bedford Housing Authority	28,862	255,587	0.019063%	30,802	357,375	0.021058%
Billerica Housing Authority	130,292	1,042,229	0.077736%	136,975	1,270,401	0.074859%

Section 2: GASB Information

Employer Name	FY 2022 Total Appropriation	Share of NPL as of January 1, 2022	Percent of Total NPL	FY 2023 Total Appropriation	Share of NPL as of January 1, 2023 ¹	Percent of Total NPL
Chelmsford Housing Authority	248,780	1,656,493	0.123552%	388,910	2,873,470	0.169320%
Chelmsford Water District	70,601	-1,005,744	-0.075015%	74,907	819,895	0.048313%
Dracut Housing Authority	170,394	1,703,681	0.127071%	182,577	1,967,855	0.115957%
Dracut Water Supply	252,748	3,204,541	0.239015%	270,657	3,773,011	0.222326%
E. Chelmsford Water	37,612	183,163	0.013661%	40,049	358,607	0.021131%
E. Middlesex Mosq Control	58,341	465,506	0.034720%	62,459	843,725	0.049717%
Greater Lowell RVTSD	1,453,154	17,260,795	1.287420%	1,554,944	20,251,238	1.193313%
Groton-Dunstable RSD	1,173,066	11,406,839	0.850795%	1,250,129	14,947,853	0.880808%
Hudson Housing Authority	58,322	568,228	0.042382%	62,228	807,927	0.047607%
Lincoln Sudbury	756,986	8,307,816	0.619650%	808,324	10,259,862	0.604567%
Nashoba Valley THSD	327,120	3,439,271	0.256523%	348,527	3,773,754	0.222370%
N. Chelmsford Water	78,589	628,790	0.046899%	84,480	1,229,309	0.072438%
North Middlesex RSD	1,219,851	11,254,512	0.839433%	1,299,482	14,660,062	0.863850%
Shawsheen Valley RVS	723,882	8,099,773	0.604133%	787,076	9,786,464	0.576671%
South Middlesex RVTS	580,201	6,194,749	0.462044%	619,647	7,705,068	0.454024%
Sudbury Water District	178,572	1,399,802	0.104406%	192,116	2,303,019	0.135706%
Tewksbury Housing Authority	142,280	1,475,444	0.110048%	152,028	1,805,120	0.106367%
Wayland Housing Authority	57,807	371,407	0.027702%	61,744	671,550	0.039571%

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Employer Name	FY 2022 Total Appropriation	Share of NPL as of January 1, 2022	Percent of Total NPL	FY 2023 Total Appropriation	Share of NPL as of January 1, 2023 ¹	Percent of Total NPL
Hopkinton Housing Authority	43,799	498,319	0.037168%	46,820	591,913	0.034879%
Sudbury Housing Authority	43,182	458,401	0.034190%	46,012	534,374	0.031488%
Wilmington Housing Authority	35,519	185,577	0.013842%	37,810	233,342	0.013750%
Acton Housing Authority	77,609	721,454	0.053811%	81,483	1,015,501	0.059839%
Burlington Housing Authority	35,290	4,057	0.000303%	37,587	198,080	0.011672%
Ayer Housing Authority	66,830	691,363	0.051566%	71,552	753,718	0.044413%
Holliston Housing Authority	19,951	93,451	0.006970%	21,143	159,405	0.009393%
Littleton Housing Authority	48,297	665,340	0.049625%	51,652	660,639	0.038928%
Westford Housing Authority	53,528	285,368	0.021285%	57,003	456,630	0.026907%
Shirley Water District	36,292	310,034	0.023124%	38,322	558,390	0.032903%
Tyngsboro Housing Authority	47,279	504,387	0.037620%	50,360	577,242	0.034014%
Pepperell Housing Authority	24,032	212,725	0.015866%	25,571	248,169	0.014623%
Groton Housing Authority	0	0	0.000000%	0	0	0.000000%
Tyngsboro Water District	43,481	370,151	0.027608%	46,380	597,899	0.035231%
North Reading Housing Authority	22,357	26,035	0.001942%	23,748	65,307	0.003848%
West Groton Water	2,709	-39,887	-0.002975%	2,960	76,911	0.004532%
Ayer-Shirley RSD	513,767	2,097,697	0.156460%	545,398	4,746,593	0.279695%
NMRECC	0	328,026	0.024466%	0	582,488	0.034323%
Total for All Entities:	\$147,852,245	\$1,340,727,512	100.000000%	\$156,335,119	\$1,697,060,700	100.000000%

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Exhibit 6 – Determination of Proportionate Share Amounts by Employer

Employer Name	2023 Share of Cost Allocation (1)	Net Pension Liability (2)	Covered Employee Payroll (3)	Discount Rate Sensitivity		
				1% Decrease (4)	Current Discount Rate (5)	1% Increase (6)
Middlesex County Retirement Board	0.000000%	\$0	\$1,394,225	\$0	\$0	\$0
Middlesex County	0.000000%	0	0	0	0	0
Middlesex Hospital	0.000000%	0	0	0	0	0
Town of Acton	3.325920%	56,442,883	15,565,493	69,868,531	56,442,883	45,139,598
Town of Ashby	0.129371%	2,195,503	1,040,863	2,717,731	2,195,503	1,755,830
Town of Ashland	2.308550%	39,177,494	16,112,007	48,496,352	39,177,494	31,331,786
Town of Ayer	1.245231%	21,132,333	7,630,394	26,158,924	21,132,333	16,900,359
Town of Bedford	3.426139%	58,143,653	20,395,777	71,973,850	58,143,653	46,499,770
Town of Billerica	9.633538%	163,486,989	39,914,881	202,374,417	163,486,989	130,746,987
Town of Boxborough	0.744060%	12,627,142	3,684,081	15,630,666	12,627,142	10,098,423
Town of Burlington	8.456279%	143,508,193	38,832,472	177,643,417	143,508,193	114,769,157
Town of Carlisle	0.795122%	13,493,696	6,411,108	16,703,341	13,493,696	10,791,440
Town of Chelmsford	6.944262%	117,848,343	31,275,996	145,880,050	117,848,343	94,247,964
Town of Dracut	4.424780%	75,091,196	18,032,108	92,952,579	75,091,196	60,053,388
Town of Dunstable	0.191433%	3,248,740	1,494,204	4,021,494	3,248,740	2,598,145
Town of Groton	1.481980%	25,150,097	8,598,720	31,132,363	25,150,097	20,113,524
Town of Holliston	1.604840%	27,235,114	12,158,151	33,713,327	27,235,114	21,780,994
Town of Hopkinton	1.710623%	29,030,303	19,323,845	35,935,525	29,030,303	23,216,677
Town of Hudson	4.474350%	75,932,435	23,852,808	93,993,917	75,932,435	60,726,160

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Employer Name	2023 Share of Cost Allocation (1)	Net Pension Liability (2)	Covered Employee Payroll (3)	Discount Rate Sensitivity		
				1% Decrease (4)	Current Discount Rate (5)	1% Increase (6)
Town of Lincoln	1.898817%	32,224,079	11,870,539	39,888,980	32,224,079	25,770,866
Town of Littleton	1.797934%	30,512,028	15,569,164	37,769,696	30,512,028	24,401,671
Town of North Reading	3.250018%	55,154,781	14,719,205	68,274,037	55,154,781	44,109,452
Town of Pepperell	1.141560%	19,372,966	5,718,227	23,981,069	19,372,966	15,493,324
Town of Sherborn	0.694909%	11,793,029	4,827,222	14,598,149	11,793,029	9,431,350
Town of Shirley	0.604890%	10,265,353	2,031,952	12,707,096	10,265,353	8,209,607
Town of Stow	0.835700%	14,182,336	3,984,650	17,555,782	14,182,336	11,342,173
Town of Sudbury	3.938901%	66,845,536	19,605,695	82,745,585	66,845,536	53,459,009
Town of Tewksbury	6.810776%	115,583,007	25,701,352	143,075,875	115,583,007	92,436,285
Town of Townsend	0.445776%	7,565,089	3,771,576	9,364,540	7,565,089	6,050,100
Town of Tyngsborough	1.622868%	27,541,050	9,438,696	34,092,034	27,541,050	22,025,663
Town of Wayland	3.538325%	60,047,515	22,086,979	74,330,570	60,047,515	48,022,364
Town of Westford	3.839687%	65,161,824	27,779,314	80,661,381	65,161,824	52,112,478
Town of Weston	4.352341%	73,861,876	22,665,622	91,430,850	73,861,876	59,070,253
Town of Wilmington	5.513544%	93,568,182	26,288,985	115,824,548	93,568,182	74,830,162
Acton-Boxborough RSD	1.933038%	32,804,832	15,291,181	40,607,873	32,804,832	26,235,317
Acton Water Supply	0.254024%	4,310,937	1,296,052	5,336,348	4,310,937	3,447,626
Bedford Housing Authority	0.021058%	357,375	125,795	442,381	357,375	285,807
Billerica Housing Authority	0.074859%	1,270,401	401,772	1,572,582	1,270,401	1,015,990

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Employer Name	2023 Share of Cost Allocation (1)	Net Pension Liability (2)	Covered Employee Payroll (3)	Discount Rate Sensitivity		
				1% Decrease (4)	Current Discount Rate (5)	1% Increase (6)
Chelmsford Housing Authority	0.169320%	2,873,470	3,220,111	3,556,961	2,873,470	2,298,027
Chelmsford Water District	0.048313%	819,895	1,605,725	1,014,917	819,895	655,702
Dracut Housing Authority	0.115957%	1,967,855	429,781	2,435,934	1,967,855	1,573,771
Dracut Water Supply	0.222326%	3,773,011	653,666	4,670,469	3,773,011	3,017,426
E. Chelmsford Water	0.021131%	358,607	223,976	443,906	358,607	286,792
E. Middlesex Mosq Control	0.049717%	843,725	413,420	1,044,416	843,725	674,760
Greater Lowell RVTSD	1.193313%	20,251,238	4,925,006	25,068,249	20,251,238	16,195,713
Groton-Dunstable RSD	0.880808%	14,947,853	4,398,476	18,503,387	14,947,853	11,954,387
Hudson Housing Authority	0.047607%	807,927	444,259	1,000,103	807,927	646,131
Lincoln Sudbury	0.604567%	10,259,862	3,120,449	12,700,299	10,259,862	8,205,216
Nashoba Valley THSD	0.222370%	3,773,754	1,084,851	4,671,389	3,773,754	3,018,020
N. Chelmsford Water	0.072438%	1,229,309	600,183	1,521,716	1,229,309	983,127
North Middlesex RSD	0.863850%	14,660,062	6,031,624	18,147,142	14,660,062	11,724,229
Shawsheen Valley RVS	0.576671%	9,786,464	3,092,314	12,114,297	9,786,464	7,826,621
South Middlesex RVTS	0.454024%	7,705,068	2,339,395	9,537,815	7,705,068	6,162,046
Sudbury Water District	0.135706%	2,303,019	1,039,289	2,850,821	2,303,019	1,841,815
Tewksbury Housing Authority	0.106367%	1,805,120	505,022	2,234,490	1,805,120	1,443,626
Wayland Housing Authority	0.039571%	671,550	345,987	831,287	671,550	537,065

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Employer Name	2023 Share of Cost Allocation (1)	Net Pension Liability (2)	Covered Employee Payroll (3)	Discount Rate Sensitivity		
				1% Decrease (4)	Current Discount Rate (5)	1% Increase (6)
Hopkinton Housing Authority	0.034879%	591,913	129,068	732,707	591,913	473,376
Sudbury Housing Authority	0.031488%	534,374	163,618	661,482	534,374	427,360
Wilmington Housing Authority	0.013750%	233,342	66,080	288,845	233,342	186,613
Acton Housing Authority	0.059839%	1,015,501	497,848	1,257,051	1,015,501	812,136
Burlington Housing Authority	0.011672%	198,080	227,993	245,196	198,080	158,412
Ayer Housing Authority	0.044413%	753,718	205,342	932,999	753,718	602,778
Holliston Housing Authority	0.009393%	159,405	89,653	197,322	159,405	127,483
Littleton Housing Authority	0.038928%	660,639	0	817,780	660,639	528,339
Westford Housing Authority	0.026907%	456,630	276,231	565,245	456,630	365,185
Shirley Water District	0.032903%	558,390	238,722	691,210	558,390	446,566
Tyngsboro Housing Authority	0.034014%	577,242	188,264	714,546	577,242	461,643
Pepperell Housing Authority	0.014623%	248,169	103,391	307,199	248,169	198,471
Groton Housing Authority	0.000000%	0	0	0	0	0
Tyngsboro Water District	0.035231%	597,899	242,904	740,117	597,899	478,163
North Reading Housing Authority	0.003848%	65,307	62,656	80,841	65,307	52,229

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Employer Name	2023 Share of Cost Allocation (1)	Net Pension Liability (2)	Covered Employee Payroll (3)	Discount Rate Sensitivity		
				1% Decrease (4)	Current Discount Rate (5)	1% Increase (6)
West Groton Water	0.004532%	76,911	199,771	95,205	76,911	61,509
Ayer-Shirley RSD	0.279695%	4,746,593	4,228,745	5,875,630	4,746,593	3,796,038
NMRECC	0.034323%	582,488	948,422	721,040	582,488	465,839
Total for All Entities:	100.000000%	\$1,697,060,700	\$541,233,353	\$2,100,727,873	\$1,697,060,700	\$1,357,206,313

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Employer Name	Schedule of Contributions				Pension Expense		
	Statutory Required Contribution (7)	Contributions In Relation to the Statutory Required Contribution (8)	Contribution Deficiency/ (Excess) (9)	Contributions as a Percentage of Covered Employee Payroll (10)	Proportionate Share of Plan Pension Expense (11)	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions (12)	Total Employer Pension Expense (13)
Middlesex County Retirement Board	\$459,165	\$459,165	\$0	32.93%	\$459,165	\$0	\$459,165
Middlesex County	0	0	0	0.00%	0	0	0
Middlesex Hospital	0	0	0	0.00%	0	0	0
Town of Acton	5,133,300	5,137,366	-4,066	33.00%	5,874,430	-403,636	5,470,794
Town of Ashby	253,936	253,936	0	24.40%	228,502	70,148	298,650
Town of Ashland	3,793,010	3,838,105	-45,095	23.82%	4,077,493	226,168	4,303,661
Town of Ayer	2,058,373	2,358,373	-300,000	30.91%	2,199,399	155,921	2,355,320
Town of Bedford	5,288,347	5,288,347	0	25.93%	6,051,441	-159,982	5,891,459
Town of Billerica	14,484,999	14,484,999	0	36.29%	17,015,308	-1,445,252	15,570,056
Town of Boxborough	1,218,757	1,218,757	0	33.08%	1,314,201	34,085	1,348,286
Town of Burlington	12,543,435	12,543,435	0	32.30%	14,935,964	-438,191	14,497,773
Town of Carlisle	1,265,339	1,265,339	0	19.74%	1,404,389	484,217	1,888,606
Town of Chelmsford	10,538,132	11,142,487	-604,355	35.63%	12,265,352	-1,247,255	11,018,097
Town of Dracut	6,554,393	6,564,528	-10,135	36.40%	7,815,298	231,400	8,046,698
Town of Dunstable	389,434	389,434	0	26.06%	338,120	64,039	402,159
Town of Groton	2,538,910	2,538,910	0	29.53%	2,617,557	7,889	2,625,446
Town of Holliston	2,754,852	2,754,852	0	22.66%	2,834,560	5,102	2,839,662
Town of Hopkinton	3,087,462	3,142,328	-54,866	16.26%	3,021,399	1,132,408	4,153,807
Town of Hudson	6,794,331	6,794,331	0	28.48%	7,902,852	110,029	8,012,881

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Employer Name	Schedule of Contributions				Pension Expense		
	Statutory Required Contribution (7)	Contributions In Relation to the Statutory Required Contribution (8)	Contribution Deficiency/ (Excess) (9)	Contributions as a Percentage of Covered Employee Payroll (10)	Proportionate Share of Plan Pension Expense (11)	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions (12)	Total Employer Pension Expense (13)
Town of Lincoln	2,754,456	2,754,456	0	23.20%	3,353,799	407,326	3,761,125
Town of Littleton	2,900,040	2,900,040	0	18.63%	3,175,614	1,693,128	4,868,742
Town of North Reading	4,854,543	4,854,543	0	32.98%	5,740,368	-550,297	5,190,071
Town of Pepperell	1,811,124	1,811,897	-773	31.69%	2,016,288	-49,078	1,967,210
Town of Sherborn	1,112,907	1,112,907	0	23.05%	1,227,388	-1,782	1,225,606
Town of Shirley	866,303	866,303	0	42.63%	1,068,392	30,692	1,099,084
Town of Stow	1,147,938	1,151,354	-3,416	28.89%	1,476,061	231,096	1,707,157
Town of Sudbury	5,993,875	5,993,875	0	30.57%	6,957,111	-836,453	6,120,658
Town of Tewksbury	9,788,110	9,792,941	-4,831	38.10%	12,029,582	-849,179	11,180,403
Town of Townsend	991,340	995,268	-3,928	26.39%	787,355	-152,213	635,142
Town of Tyngsborough	2,617,413	2,617,413	0	27.73%	2,866,401	503,300	3,369,701
Town of Wayland	5,728,625	5,728,625	0	25.94%	6,249,591	-583,558	5,666,033
Town of Westford	6,263,082	6,263,082	0	22.55%	6,781,875	1,006,258	7,788,133
Town of Weston	6,288,908	6,288,908	0	27.75%	7,687,354	-182,103	7,505,251
Town of Wilmington	8,322,908	9,828,234	-1,505,326	37.39%	9,738,336	-197,170	9,541,166
Acton-Boxborough RSD	3,320,479	3,320,479	0	21.71%	3,414,242	257,532	3,671,774
Acton Water Supply	288,240	288,240	0	22.24%	448,672	-26,785	421,887
Bedford Housing Authority	30,802	30,802	0	24.49%	37,194	-1,289	35,905
Billerica Housing Authority	136,975	136,975	0	34.09%	132,220	-70,296	61,924

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Employer Name	Schedule of Contributions				Pension Expense		
	Statutory Required Contribution (7)	Contributions In Relation to the Statutory Required Contribution (8)	Contribution Deficiency/ (Excess) (9)	Contributions as a Percentage of Covered Employee Payroll (10)	Proportionate Share of Plan Pension Expense (11)	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions (12)	Total Employer Pension Expense (13)
Chelmsford Housing Authority	268,910	388,910	-120,000	12.08%	299,064	158,795	457,859
Chelmsford Water District	74,907	74,907	0	4.66%	85,332	202,343	287,675
Dracut Housing Authority	182,577	182,577	0	42.48%	204,810	-113,215	91,595
Dracut Water Supply	270,657	270,657	0	41.41%	392,685	-39,195	353,490
E. Chelmsford Water	40,049	40,049	0	17.88%	37,323	880	38,203
E. Middlesex Mosq Control	62,459	62,459	0	15.11%	87,813	32,399	120,212
Greater Lowell RVTSD	1,553,947	1,554,944	-997	31.57%	2,107,697	8,640	2,116,337
Groton-Dunstable RSD	1,250,129	1,250,129	0	28.42%	1,555,734	301,037	1,856,771
Hudson Housing Authority	62,228	62,228	0	14.01%	84,087	-78,268	5,819
Lincoln Sudbury	808,324	808,324	0	25.90%	1,067,820	-50,131	1,017,689
Nashoba Valley THSD	348,527	348,527	0	32.13%	392,763	-81,663	311,100
N. Chelmsford Water	84,480	84,480	0	14.08%	127,943	22,318	150,261
North Middlesex RSD	1,299,482	1,299,482	0	21.54%	1,525,782	101,664	1,627,446
Shawsheen Valley RVS	787,076	787,076	0	25.45%	1,018,550	-19,139	999,411
South Middlesex RVTS	619,647	619,647	0	26.49%	801,923	-39,484	762,439
Sudbury Water District	192,116	192,116	0	18.49%	239,692	-1,784	237,908
Tewksbury Housing Authority	152,028	152,028	0	30.10%	187,873	-12,743	175,130
Wayland Housing Authority	61,744	61,744	0	17.85%	69,893	-11,243	58,650

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Employer Name	Schedule of Contributions				Pension Expense		
	Statutory Required Contribution (7)	Contributions In Relation to the Statutory Required Contribution (8)	Contribution Deficiency/ (Excess) (9)	Contributions as a Percentage of Covered Employee Payroll (10)	Proportionate Share of Plan Pension Expense (11)	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions (12)	Total Employer Pension Expense (13)
Hopkinton Housing Authority	46,820	46,820	0	36.28%	61,605	1,109	62,714
Sudbury Housing Authority	46,012	46,012	0	28.12%	55,616	-693	54,923
Wilmington Housing Authority	37,810	37,810	0	57.22%	24,286	-23,288	998
Acton Housing Authority	81,483	81,483	0	16.37%	105,690	15,858	121,548
Burlington Housing Authority	37,587	37,587	0	16.49%	20,615	21,174	41,789
Ayer Housing Authority	71,552	71,552	0	34.85%	78,445	-38,436	40,009
Holliston Housing Authority	21,143	21,143	0	23.58%	16,591	2,562	19,153
Littleton Housing Authority	51,652	51,652	0	0.00%	68,757	7,598	76,355
Westford Housing Authority	57,003	57,003	0	20.64%	47,524	-20,724	26,800
Shirley Water District	38,322	38,322	0	16.05%	58,116	14,846	72,962
Tyngsboro Housing Authority	50,360	50,360	0	26.75%	60,078	-5,005	55,073
Pepperell Housing Authority	25,571	25,571	0	24.73%	25,829	5,442	31,271
Groton Housing Authority	0	0	0	0.00%	0	4,832	4,832
Tyngsboro Water District	46,380	46,380	0	19.09%	62,228	22,395	84,623
North Reading Housing Authority	23,748	23,748	0	37.90%	6,797	-11,778	-4,981

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Employer Name	Schedule of Contributions				Pension Expense		
	Statutory Required Contribution (7)	Contributions In Relation to the Statutory Required Contribution (8)	Contribution Deficiency/ (Excess) (9)	Contributions as a Percentage of Covered Employee Payroll (10)	Proportionate Share of Plan Pension Expense (11)	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions (12)	Total Employer Pension Expense (13)
West Groton Water	2,960	2,960	0	1.48%	8,005	8,723	16,728
Ayer-Shirley RSD	545,398	545,398	0	12.90%	494,013	70,975	564,988
NMRECC	0	0	0	0.00%	60,623	86,980	147,603
Total for All Entities:	\$153,677,331	\$156,335,119	-\$2,657,788	28.88%	\$177,084,875	\$0	\$177,084,875

Section 2: GASB Information

Employer Name	Deferred Outflows of Resources				Deferred Inflows of Resources				
	Differences Between Expected and Actual Experience (14)	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments (15)	Changes of Assumptions (16)	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions (17)	Total Deferred Outflows of Resources (18)	Differences Between Expected and Actual Experience (19)	Changes of Assumptions (20)	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions (21)	Total Deferred Inflows of Resources (22)
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	414,737	4,537,811	974,581	207,080	6,134,209	0	0	1,314,946	1,314,946
Town of Ashby	16,132	176,511	37,909	371,518	602,070	0	0	107,000	107,000
Town of Ashland	287,872	3,149,734	676,465	2,019,412	6,133,483	0	0	1,473,803	1,473,803
Town of Ayer	155,278	1,698,966	364,885	926,380	3,145,509	0	0	292,260	292,260
Town of Bedford	427,234	4,674,547	1,003,948	1,658,100	7,763,829	0	0	1,140,018	1,140,018
Town of Billerica	1,201,287	13,143,778	2,822,878	1,947,082	19,115,025	0	0	6,976,688	6,976,688
Town of Boxborough	92,783	1,015,178	218,029	185,836	1,511,826	0	0	456,577	456,577
Town of Burlington	1,054,484	11,537,558	2,477,910	1,690,322	16,760,274	0	0	5,365,368	5,365,368
Town of Carlisle	99,150	1,084,846	232,991	1,677,908	3,094,895	0	0	139,850	139,850
Town of Chelmsford	865,938	9,474,595	2,034,850	2,148,173	14,523,556	0	0	6,194,852	6,194,852
Town of Dracut	551,763	6,037,070	1,296,576	2,635,063	10,520,472	0	0	2,823,620	2,823,620
Town of Dunstable	23,871	261,187	56,095	379,965	721,118	0	0	286,971	286,971
Town of Groton	184,800	2,021,980	434,259	1,031,430	3,672,469	0	0	1,415,151	1,415,151
Town of Holliston	200,121	2,189,608	470,260	3,193,932	6,053,921	0	0	2,569,699	2,569,699
Town of Hopkinton	213,312	2,333,935	501,257	5,987,713	9,036,217	0	0	2,566,478	2,566,478
Town of Hudson	557,944	6,104,703	1,311,101	1,236,905	9,210,653	0	0	394,803	394,803

Section 2: GASB Information

Employer Name	Deferred Outflows of Resources				Deferred Inflows of Resources				
	Differences Between Expected and Actual Experience (14)	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments (15)	Changes of Assumptions (16)	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions (17)	Total Deferred Outflows of Resources (18)	Differences Between Expected and Actual Experience (19)	Changes of Assumptions (20)	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions (21)	Total Deferred Inflows of Resources (22)
Town of Lincoln	236,779	2,590,703	556,403	1,526,663	4,910,548	0	0	128,696	128,696
Town of Littleton	224,199	2,453,061	526,841	4,795,271	7,999,372	0	0	106,404	106,404
Town of North Reading	405,272	4,434,252	952,340	292,029	6,083,893	0	0	1,331,593	1,331,593
Town of Pepperell	142,351	1,557,519	334,507	12,980	2,047,357	0	0	104,629	104,629
Town of Sherborn	86,654	948,118	203,626	751,329	1,989,727	0	0	240,975	240,975
Town of Shirley	75,429	825,299	177,249	479,297	1,557,274	0	0	526,796	526,796
Town of Stow	104,210	1,140,210	244,882	843,765	2,333,067	0	0	263,882	263,882
Town of Sudbury	491,174	5,374,148	1,154,201	220,897	7,240,420	0	0	2,033,590	2,033,590
Town of Tewksbury	849,292	9,292,470	1,995,735	4,834,589	16,972,086	0	0	7,852,508	7,852,508
Town of Townsend	55,588	608,207	130,624	1,324,158	2,118,577	0	0	1,465,660	1,465,660
Town of Tyngsborough	202,369	2,214,204	475,543	995,898	3,888,014	0	0	0	0
Town of Wayland	441,223	4,827,611	1,036,821	1,236,272	7,541,927	0	0	2,300,846	2,300,846
Town of Westford	478,803	5,238,783	1,125,128	6,153,864	12,996,578	0	0	2,660,667	2,660,667
Town of Weston	542,730	5,938,237	1,275,349	1,388,919	9,145,235	0	0	1,520,935	1,520,935
Town of Wilmington	687,530	7,522,555	1,615,612	1,005,426	10,831,123	0	0	1,151,190	1,151,190
Acton-Boxborough RSD	241,047	2,637,394	566,431	1,372,957	4,817,829	0	0	779,514	779,514
Acton Water Supply	31,676	346,584	74,436	98,843	551,539	0	0	64,378	64,378
Bedford Housing Authority	2,626	28,732	6,171	22,292	59,821	0	0	17,243	17,243
Billerica Housing Authority	9,335	102,136	21,936	26,222	159,629	0	0	262,281	262,281

Section 2: GASB Information

Employer Name	Deferred Outflows of Resources				Deferred Inflows of Resources				
	Differences Between Expected and Actual Experience (14)	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments (15)	Changes of Assumptions (16)	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions (17)	Total Deferred Outflows of Resources (18)	Differences Between Expected and Actual Experience (19)	Changes of Assumptions (20)	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions (21)	Total Deferred Inflows of Resources (22)
Chelmsford Housing Authority	21,114	231,017	49,615	648,512	950,258	0	0	74,288	74,288
Chelmsford Water District	6,025	65,917	14,157	1,477,736	1,563,835	0	0	748,490	748,490
Dracut Housing Authority	14,460	158,209	33,978	9,574	216,221	0	0	333,536	333,536
Dracut Water Supply	27,724	303,337	65,147	191,934	588,142	0	0	278,749	278,749
E. Chelmsford Water	2,635	28,831	6,192	96,220	133,878	0	0	87,606	87,606
E. Middlesex Mosq Control	6,200	67,833	14,568	171,407	260,008	0	0	81,841	81,841
Greater Lowell RVTSD	148,804	1,628,129	349,672	1,013,137	3,139,742	0	0	1,397,430	1,397,430
Groton-Dunstable RSD	109,835	1,201,755	258,100	667,171	2,236,861	0	0	55,196	55,196
Hudson Housing Authority	5,937	64,955	13,950	69,930	154,772	0	0	94,619	94,619
Lincoln Sudbury	75,388	824,857	177,154	370,017	1,447,416	0	0	373,588	373,588
Nashoba Valley THSD	27,729	303,397	65,160	165,092	561,378	0	0	407,788	407,788
N. Chelmsford Water	9,033	98,832	21,226	283,324	412,415	0	0	180,580	180,580
North Middlesex RSD	107,721	1,178,618	253,131	288,633	1,828,103	0	0	18,442	18,442
Shawsheen Valley RVS	71,910	786,798	168,980	330,749	1,358,437	0	0	422,464	422,464
South Middlesex RVTs	56,616	619,461	133,041	177,684	986,802	0	0	240,275	240,275
Sudbury Water District	16,922	185,155	39,765	430,390	672,232	0	0	532,380	532,380
Tewksbury Housing Authority	13,264	145,125	31,168	16,066	205,623	0	0	60,916	60,916
Wayland Housing Authority	4,934	53,990	11,595	142,300	212,819	0	0	131,258	131,258

Section 2: GASB Information

Employer Name	Deferred Outflows of Resources				Deferred Inflows of Resources				
	Differences Between Expected and Actual Experience (14)	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments (15)	Changes of Assumptions (16)	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions (17)	Total Deferred Outflows of Resources (18)	Differences Between Expected and Actual Experience (19)	Changes of Assumptions (20)	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions (21)	Total Deferred Inflows of Resources (22)
Hopkinton Housing Authority	4,349	47,588	10,220	25,052	87,209	0	0	34,752	34,752
Sudbury Housing Authority	3,927	42,962	9,227	30,438	86,554	0	0	37,017	37,017
Wilmington Housing Authority	1,715	18,760	4,029	15,528	40,032	0	0	86,313	86,313
Acton Housing Authority	7,462	81,643	17,534	67,574	174,213	0	0	30,654	30,654
Burlington Housing Authority	1,455	15,925	3,420	183,083	203,883	0	0	180,433	180,433
Ayer Housing Authority	5,538	60,596	13,014	7,985	87,133	0	0	130,815	130,815
Holliston Housing Authority	1,171	12,816	2,752	37,101	53,840	0	0	31,374	31,374
Littleton Housing Authority	4,854	53,113	11,407	96,126	165,500	0	0	135,424	135,424
Westford Housing Authority	3,355	36,711	7,884	79,432	127,382	0	0	116,846	116,846
Shirley Water District	4,103	44,893	9,642	115,404	174,042	0	0	69,057	69,057
Tyngsboro Housing Authority	4,242	46,408	9,967	34,151	94,768	0	0	47,588	47,588
Pepperell Housing Authority	1,824	19,952	4,285	10,814	36,875	0	0	14,941	14,941
Groton Housing Authority	0	0	0	3,412	3,412	0	0	0	0
Tyngsboro Water District	4,393	48,069	10,324	85,428	148,214	0	0	16,813	16,813
North Reading Housing Authority	480	5,250	1,128	48,320	55,178	0	0	98,346	98,346

Section 2: GASB Information

Employer Name	Deferred Outflows of Resources				Deferred Inflows of Resources				
	Differences Between Expected and Actual Experience (14)	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments (15)	Changes of Assumptions (16)	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions (17)	Total Deferred Outflows of Resources (18)	Differences Between Expected and Actual Experience (19)	Changes of Assumptions (20)	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions (21)	Total Deferred Inflows of Resources (22)
West Groton Water	565	6,183	1,328	86,684	94,760	0	0	40,870	40,870
Ayer-Shirley RSD	34,877	381,610	81,958	1,564,488	2,062,933	0	0	1,081,219	1,081,219
NMRECC	4,280	46,830	10,058	287,619	348,787	0	0	5,226	5,226
Total for All Entities:	\$12,469,834	\$136,437,755	\$29,302,605	\$64,007,005	\$242,217,199	\$0	\$0	\$64,007,005	\$64,007,005

Section 2: GASB Information

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

Employer Name	2024 (23)	2025 (24)	2026 (25)	2027 (26)	2028 (27)	Thereafter (28)
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	552,537	557,660	1,051,939	2,657,126	0	0
Town of Ashby	73,090	106,446	122,489	193,046	0	0
Town of Ashland	754,846	627,183	990,852	2,286,799	0	0
Town of Ayer	450,870	509,871	685,956	1,206,552	0	0
Town of Bedford	745,810	1,107,515	1,672,099	3,098,388	0	0
Town of Billerica	1,958,008	1,584,707	2,793,370	5,802,249	0	0
Town of Boxborough	251,180	86,155	178,035	539,879	0	0
Town of Burlington	2,363,597	1,309,424	2,439,008	5,282,877	0	0
Town of Carlisle	567,842	601,700	743,169	1,042,335	0	0
Town of Chelmsford	1,331,980	1,128,363	1,977,293	3,891,068	0	0
Town of Dracut	1,643,026	1,369,809	1,923,774	2,760,242	0	0
Town of Dunstable	97,584	45,270	63,477	227,817	0	0
Town of Groton	421,870	143,763	344,128	1,347,558	0	0
Town of Holliston	250,366	441,345	736,878	2,055,633	0	0
Town of Hopkinton	1,147,496	1,075,166	1,424,169	2,822,908	0	0
Town of Hudson	1,367,997	1,661,806	2,295,732	3,490,315	0	0

Section 2: GASB Information

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

Employer Name	2024 (23)	2025 (24)	2026 (25)	2027 (26)	2028 (27)	Thereafter (28)
Town of Lincoln	886,128	980,269	1,258,575	1,656,882	0	0
Town of Littleton	1,868,762	1,644,423	1,953,292	2,426,492	0	0
Town of North Reading	509,620	754,409	1,206,384	2,281,887	0	0
Town of Pepperell	292,199	305,096	460,937	884,495	0	0
Town of Sherborn	154,987	389,386	486,024	718,356	0	0
Town of Shirley	208,619	200,965	278,752	342,141	0	0
Town of Stow	452,542	452,474	572,794	591,376	0	0
Town of Sudbury	515,805	756,668	1,287,686	2,646,671	0	0
Town of Tewksbury	1,703,873	1,607,898	2,435,719	3,372,088	0	0
Town of Townsend	-104,111	10,250	68,906	677,871	0	0
Town of Tyngsborough	891,257	678,158	899,445	1,419,154	0	0
Town of Wayland	390,481	621,507	1,148,282	3,080,811	0	0
Town of Westford	1,625,808	1,770,040	2,393,781	4,546,281	0	0
Town of Weston	1,193,660	1,358,949	1,986,554	3,085,138	0	0
Town of Wilmington	1,653,373	1,611,137	2,381,706	4,033,717	0	0
Acton-Boxborough RSD	756,856	613,779	857,148	1,810,532	0	0
Acton Water Supply	55,158	82,832	136,104	213,067	0	0
Bedford Housing Authority	4,376	6,213	9,919	22,069	0	0
Billerica Housing Authority	-38,778	-63,829	-54,124	54,078	0	0

Section 2: GASB Information

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

Employer Name	2024 (23)	2025 (24)	2026 (25)	2027 (26)	2028 (27)	Thereafter (28)
Chelmsford Housing Authority	174,186	184,764	222,255	294,765	0	0
Chelmsford Water District	78,741	138,012	191,312	407,280	0	0
Dracut Housing Authority	-57,619	-66,626	-50,969	57,899	0	0
Dracut Water Supply	49,008	58,221	93,188	108,977	0	0
E. Chelmsford Water	1,198	-14	4,733	40,355	0	0
E. Middlesex Mosq Control	30,319	26,137	40,841	80,870	0	0
Greater Lowell RVTSD	426,190	270,959	453,376	591,786	0	0
Groton-Dunstable RSD	474,719	399,379	552,228	755,339	0	0
Hudson Housing Authority	-59,088	29,585	39,102	50,553	0	0
Lincoln Sudbury	151,452	212,777	308,014	401,585	0	0
Nashoba Valley THSD	23,653	20,021	37,669	72,246	0	0
N. Chelmsford Water	24,649	28,133	51,478	127,575	0	0
North Middlesex RSD	328,913	304,121	436,182	740,443	0	0
Shawsheen Valley RVS	175,935	164,497	248,448	347,093	0	0
South Middlesex RVTS	85,798	136,363	210,348	314,018	0	0
Sudbury Water District	16,878	-55,209	-18,019	196,202	0	0
Tewksbury Housing Authority	22,720	17,215	35,233	69,540	0	0
Wayland Housing Authority	-5,802	5,425	15,366	66,573	0	0

Section 2: GASB Information

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

Employer Name	2024 (23)	2025 (24)	2026 (25)	2027 (26)	2028 (27)	Thereafter (28)
Hopkinton Housing Authority	10,034	8,936	14,534	18,953	0	0
Sudbury Housing Authority	8,881	9,894	14,805	15,956	0	0
Wilmington Housing Authority	-19,043	-21,076	-19,933	13,771	0	0
Acton Housing Authority	26,507	21,178	33,296	62,578	0	0
Burlington Housing Authority	11,285	-20,132	-14,790	47,087	0	0
Ayer Housing Authority	-15,986	-23,759	-17,760	13,824	0	0
Holliston Housing Authority	3,472	988	2,089	15,917	0	0
Littleton Housing Authority	22,480	2,821	8,137	-3,361	0	0
Westford Housing Authority	-12,091	-11,711	-6,596	40,936	0	0
Shirley Water District	20,122	11,235	21,146	52,482	0	0
Tyngsboro Housing Authority	8,279	10,197	13,395	15,308	0	0
Pepperell Housing Authority	10,627	736	2,285	8,286	0	0
Groton Housing Authority	2,839	573	0	0	0	0
Tyngsboro Water District	25,412	24,187	33,069	48,733	0	0
North Reading Housing Authority	-12,373	-21,185	-21,886	12,277	0	0

Section 2: GASB Information

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

Employer Name	2024 (23)	2025 (24)	2026 (25)	2027 (26)	2028 (27)	Thereafter (28)
West Groton Water	7,894	8,502	12,274	25,221	0	0
Ayer-Shirley RSD	46,738	127,668	197,086	610,221	0	0
NMRECC	96,998	96,674	104,167	45,721	0	0
Total for All Entities:	\$29,182,639	\$28,236,293	\$42,456,355	\$78,334,907	\$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.

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

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.

Appendix: Definition of Terms

Defined Benefit Pension Plans:	Pension plans that are used to provide defined benefit pensions.
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: 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.

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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.

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Special Funding Situations:	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: 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:	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.
Total Pension Liability (TPL):	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.