

# Essex Regional Retirement System

**Governmental Accounting Standards Board  
Statements No. 67 and 68 (GASB 67/68) Accounting  
Valuation 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 Essex Regional 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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July 25, 2023

Retirement Board  
Essex Regional Retirement System  
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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 Essex Regional Retirement System. It contains various information that will need to be disclosed in order to comply with GASB 67 and 68. Please refer to the Essex Regional Retirement System Actuarial Valuation and Review as of January 1, 2022, dated July 22, 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 Retirement System. The census and financial information on which our calculations were based were provided by the staff of the 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 A. Donald Morgan, FSA, MAAA, EA. He 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 his 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 his opinion, the assumptions are reasonable and take into account the experience of the Retirement System and reasonable expectations.

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

Sincerely,

Segal



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Lisa VanDermark, FSA, MAAA, EA  
Vice President and Consulting Actuary



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A. Donald Morgan, FSA, MAAA, EA  
Senior Vice President and 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 Actuarial Valuation and Review as of January 1, 2022, which reflects:

- The benefit provisions of the Massachusetts General Law Chapter 32;
- The characteristics of covered active participants, inactive participants, and retired participants and beneficiaries as of December 31, 2021, 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 NPL is equal to the difference between the Total Pension Liability (TPL) and the Plan Fiduciary Net Position (FNP). 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 \$347,248,109 as of December 31, 2021 to \$464,018,998 as of December 31, 2022 and the Plan Fiduciary Net Position as a percent of the TPL decreased from 67.01% to 57.57%. This increase in the NPL is primarily due to the decrease in the FNP from \$705,486,056 as of December 31, 2021 to \$629,564,724 as of December 31, 2022.
3. The discount rate used to measure the TPL and NPL was 7.00% 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:

<b>Plan of benefits</b>	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.
<b>Participant data</b>	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.
<b>Assets</b>	The valuation is based on the market value of assets as of the valuation date, as provided by the Retirement System.
<b>Actuarial assumptions</b>	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.
<b>Actuarial models</b>	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 December 31, 2021, pension plan membership consisted of the following:

Retired participants or beneficiaries currently receiving benefits	2,000
Inactive participants with a vested right to a deferred or immediate benefit	161
Inactive participants entitled to a refund of employee contributions	1,197
Active members	<u>2,933</u>
Total	6,291



## 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
<b>Components of the Net Pension Liability</b>		
Total Pension Liability	\$1,093,583,722	\$1,052,734,165
Plan Fiduciary Net Position	629,564,724	705,486,056
Net Pension Liability	464,018,998	347,248,109
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	57.57%	67.01%

*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:

<b>Wage inflation</b>	2.75%
<b>Salary increases</b>	Based on years of service, ranging from 7.50% At 0 years of service decreasing to 3.75% after 5 years of service
<b>Net investment rate of return</b>	7.00%
<b>Mortality</b>	<i>Pre-Retirement:</i> RP-2014 Employee Mortality Table projected generationally using Scale MP-2021 <i>Healthy Retiree:</i> RP-2014 Healthy Annuitant Mortality Table projected generationally using Scale MP-2021 <i>Disabled Retiree:</i> RP-2014 Healthy Annuitant Mortality Table set forward one year projected generationally using 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	20.5%	6.59%
International developed markets equity	12%	6.87%
International emerging markets equity	4.5%	8.30%
Core fixed income	15%	1.53%
High-yield fixed income	8%	3.54%
Real estate	10%	3.44%
Timber	4%	4.01%
Hedge fund, GTAA, Risk parity	10%	3.06%
Private equity	<u>16%</u>	9.49%
Total	100%	

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 7.00% as of December 31, 2022 and 7.30% as of 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 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 Retirement System as of December 31, 2022 calculated using the discount rate of 7.00%, as well as what the Retirement System's NPL would be if it were calculated using a discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%) than the current rate.

Net Pension Liability	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Net Pension Liability as of December 31, 2022	\$589,439,612	\$464,018,998	\$358,708,080

## Section 2: GASB Information

### Exhibit 2 – Schedule of changes in Net Pension Liability – Last two fiscal years

Reporting date for employer under GASB 68	June 30, 2023	June 30, 2022
Measurement date	December 31, 2022	December 31, 2021
<b>Total Pension Liability</b>		
Service cost	\$24,390,301	\$22,181,469
Interest	73,405,591	71,591,950
Change of benefit terms	0	10,455,851
Differences between expected and actual experience	0	-13,281,669
Changes of assumptions	0	30,447,273
Benefit payments, including refunds of member contributions	<u>-56,946,335</u>	<u>-54,381,763</u>
Net change in Total Pension Liability	\$40,849,557	\$67,013,111
Total Pension Liability – beginning	<u>1,052,734,165</u>	<u>985,721,054</u>
Total Pension Liability – ending	\$1,093,583,722	\$1,052,734,165
<b>Plan Fiduciary Net Position</b>		
Contributions – employer	\$44,562,837	\$41,435,342
Contributions – employee	16,541,145	15,871,634
Net investment income	-78,950,502	114,780,464
Benefit payments, including refunds of member contributions	-56,946,335	-54,381,763
Administrative expense	-1,128,477	-1,020,786
Other	0	0
Net change in Plan Fiduciary Net Position	-\$75,921,332	\$116,684,891
Plan Fiduciary Net Position – beginning	<u>705,486,056</u>	<u>588,801,165</u>
Plan Fiduciary Net Position – ending	\$629,564,724	\$705,486,056
<b>Net Pension Liability – ending</b>	\$464,018,998	\$347,248,109
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	57.57%	67.01%
Covered payroll	\$160,021,473	\$153,979,506
Plan Net Pension Liability as percentage of covered payroll	289.97%	225.52%

## Section 2: GASB Information

### Notes to Schedule:

<b>Changes in actuarial assumptions</b>	<p>Effective January 1, 2022</p> <ul style="list-style-type: none"><li>• The net investment return assumption was lowered from 7.30% to 7.00%.</li><li>• Mortality table projection scales were updated to MP-2021 (previously MP-2019) and the age set forward for disabled participants was changed from two years to one year.</li><li>• The administrative expense assumption was increased to \$1,150,000 (previously \$1,000,000) increasing 2.75%, based on information on expenses provided by the staff of the System.</li></ul> <p>Effective January 1, 2023</p> <ul style="list-style-type: none"><li>• None</li></ul>
<b>Changes in plan provisions</b>	<p>Effective January 1, 2022</p> <ul style="list-style-type: none"><li>• The COLA base was increased from \$14,000 to \$16,000.</li></ul> <p>Effective January 1, 2023</p> <ul style="list-style-type: none"><li>• None</li></ul>

## 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	\$26,066,000	\$26,141,000	-\$75,000	\$125,729,000	20.79%
2015	32,050,000	32,124,000	-74,000	130,825,000	24.55%
2016	29,420,000	29,463,000	-43,000	135,886,000	21.68%
2017	31,614,412	31,663,092	-48,680	130,781,725	24.21%
2018	33,969,088	33,993,920	-24,832	136,111,184	24.98%
2019	36,150,577	36,174,754	-24,177	144,695,269	25.00%
2020	38,624,587	38,646,497	-21,910	150,467,625	25.68%
2021	41,415,403	41,435,342	-19,939	153,979,506	26.91%
2022	44,519,430	44,562,837	-43,407	160,021,473	27.85%

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”:

<b>Valuation date</b>	Actuarially determined contribution for year ended December 31, 2022 was determined with the January 1, 2020 actuarial valuation.
<b>Actuarial cost method</b>	Entry Age Actuarial Cost Method
<b>Amortization method</b>	2002 Nahant Housing ERI and 2003 Groveland ERI payments increasing 4.5% per year; total appropriation increases 7.41% including ERI payments through fiscal 2023, 6.5% through fiscal 2029, 6.01% in fiscal 2030, and approximately 3.87% thereafter.
<b>Remaining amortization period</b>	15 years from July 1, 2020 for non-ERI liability, 8 years for Nahant Housing ERI, and 8 years for Groveland ERI.
<b>Asset valuation method</b>	The market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between actual and expected returns on a market value basis and is recognized over a five-year period, further adjusted, if necessary, to be within 10% of the market value.
<b>Actuarial assumptions:</b>	
<b>Net investment rate of return</b>	7.30%
<b>Wage inflation</b>	2.75%
<b>Salary increases</b>	Based on years of service, ranging from 7.50% at 0 years of service decreasing 3.75% after 5 years of service
<b>Cost of living adjustments</b>	3% of first \$14,000
<b>Other assumptions</b>	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	June 30, 2023	June 30, 2022
Measurement date	December 31, 2022	December 31, 2021
<b>Components of pension expense</b>		
Service cost	\$24,390,301	\$22,181,469
Interest	73,405,591	71,591,950
Current-period benefit changes	0	10,455,851
Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	0	-2,656,333
Expensed portion of current-period changes of assumptions	0	6,089,453
Member contributions	-16,541,145	-15,871,634
Projected earnings on pension plan investments	-49,490,045	-43,051,997
Expensed portion of current-period differences between actual and projected earnings on pension plan investments	25,688,111	-14,345,695
Administrative expense	1,128,477	1,020,786
Recognition of beginning of year deferred outflows of resources as pension expense	22,302,566	21,605,384
Recognition of beginning of year deferred inflows of resources as pension expense	<u>-29,051,789</u>	<u>-19,423,476</u>
<b>Pension expense</b>	<b>\$51,832,067</b>	<b>\$37,595,758</b>



## 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
<b>Deferred outflows of resources</b>		
Changes in proportion and differences between employer's contributions and proportionate share of contributions <sup>1</sup>	\$9,992,636	\$10,132,185
Changes of assumptions	25,322,031	38,465,152
Net difference between projected and actual earnings on pension plan investments	43,027,241	0
Difference between expected and actual experience in the Total Pension Liability	<u>14,455</u>	<u>28,910</u>
Total deferred outflows of resources	\$78,356,363	\$48,626,247
<b>Deferred inflows of resources</b>		
Changes in proportion and differences between employer's contributions and proportionate share of contributions <sup>1</sup>	\$9,992,636	\$10,132,185
Changes of assumptions	0	0
Net difference between projected and actual earnings on pension plan investments	0	76,975,660
Difference between expected and actual experience in the Total Pension Liability	<u>7,969,002</u>	<u>10,625,336</u>
Total deferred inflows of resources	\$17,961,638	\$97,733,181
<b>Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:</b>		
Reporting date for employer under GASB 68 year ended June 30:		
2023	N/A	-\$6,749,223
2024	\$9,793,896	-15,894,213
2025	10,137,183	-15,550,926
2026	14,775,537	-10,912,572
2027	25,688,109	0
2028	0	0
Thereafter	0	0

Note: Average expected remaining service is 5 years as of January 1, 2022 (the beginning of the measurement period ending December 31, 2022).

<sup>1</sup> Calculated in accordance with Paragraphs 54 and 55 of GASB 68

## Section 2: GASB Information

### Exhibit 5 – Determination of proportionate share

Employer Name	FY 2022 Total Appropriation	Percentage of NPL as of January 1, 2022	Share of NPL as of January 1, 2022	FY 2023 Total Appropriation	Percentage of NPL as of January 1, 2023	Share of NPL as of January 1, 2023
Essex Regional Retirement System	\$115,887	0.28%	\$971,083	\$155,604	0.35%	\$1,622,650
Town of Boxford	1,523,087	3.68%	12,762,823	1,551,592	3.49%	16,180,136
Town of Essex	691,183	1.67%	5,791,824	760,236	1.71%	7,927,803
Town of Georgetown	2,127,355	5.13%	17,826,332	2,294,045	5.16%	23,922,493
Town of Groveland	940,229	2.26%	7,856,179	1,036,384	2.32%	10,756,025
Town of Hamilton	1,163,009	2.81%	9,745,525	1,231,493	2.77%	12,842,113
Town of Ipswich	4,453,373	10.75%	37,317,383	4,668,114	10.49%	48,679,491
Town of Lynnfield	3,149,644	7.60%	26,392,683	3,445,513	7.74%	35,930,101
Town of Manchester	1,461,004	3.53%	12,242,597	1,564,930	3.52%	16,319,220
Town of Merrimac	1,018,150	2.46%	8,531,667	1,062,552	2.39%	11,080,379
Town of Middleton	2,280,491	5.50%	19,109,553	2,338,503	5.26%	24,386,107
Town of Nahant	885,708	2.14%	7,421,859	969,189	2.18%	10,106,790
Town of Newbery	885,708	2.14%	7,421,859	960,298	2.16%	10,014,067
Town of North Andover	6,286,872	15.17%	52,681,320	6,953,268	15.63%	72,509,260
Town of Rockport	2,032,162	4.90%	17,028,658	2,187,345	4.92%	22,809,819
Town of Rowley	1,191,981	2.88%	9,988,297	1,320,409	2.97%	13,769,342
Town of Salisbury	1,845,915	4.45%	15,467,986	2,018,404	4.54%	21,048,085
Town of Topsfield	1,432,033	3.46%	11,999,829	1,547,146	3.48%	16,133,774
Town of Wenham	881,569	2.13%	7,387,176	933,623	2.10%	9,735,898
Town of West Newbury	778,764	1.96%	6,797,590	866,935	1.95%	9,040,477
Eastern Essex Veteran's District	37,250	0.09%	312,134	35,567	0.08%	370,891
Byfield Water District	28,972	0.07%	242,772	31,121	0.07%	324,530

## Section 2: GASB Information

Employer Name	FY 2022 Total Appropriation	Percentage of NPL as of January 1, 2022	Share of NPL as of January 1, 2022	FY 2023 Total Appropriation	Percentage of NPL as of January 1, 2023	Share of NPL as of January 1, 2023
Lynnfield Center Water District	173,831	0.42%	1,456,626	213,400	0.48%	2,225,348
Lynnfield Water District	99,332	0.24%	832,357	106,700	0.24%	1,112,674
Northeast Mosquito Control Project	206,941	0.50%	1,734,081	200,062	0.45%	2,086,264
Hamilton-Wenham Regional School District	1,076,094	2.60%	9,017,210	1,049,214	2.36%	10,941,295
Manchester-Essex Regional School District	598,339	1.45%	5,029,674	667,994	1.49%	6,935,223
Masconomet Regional School District	831,903	2.01%	6,970,999	862,490	1.94%	8,994,116
Pentucket Regional School District	1,142,315	2.76%	9,572,116	1,204,818	2.71%	12,563,945
Triton Regional School District	1,332,701	3.22%	11,167,468	1,493,797	3.36%	15,577,437
Essex Housing Authority	20,694	0.05%	173,409	17,783	0.04%	185,446
Georgetown Housing Authority	71,610	0.17%	589,586	72,397	0.16%	741,783
Groveland Housing Authority	20,694	0.05%	173,409	22,229	0.05%	231,807
Hamilton Housing Authority	16,849	0.04%	138,726	18,099	0.04%	185,446
Ipswich Housing Authority	185,344	0.44%	1,525,989	203,617	0.45%	2,086,264
Lynnfield Housing Authority	16,555	0.04%	138,726	18,099	0.04%	185,446
Manchester Housing Authority	33,111	0.08%	277,455	35,567	0.08%	370,891
Merrimac Housing Authority	12,417	0.03%	104,046	13,337	0.03%	139,084
Middleton Housing Authority	20,694	0.05%	173,409	22,229	0.05%	231,807
Nahant Housing Authority	22,101	0.05%	160,925	23,457	0.04%	189,194
North Andover Housing Authority	157,275	0.38%	1,317,900	164,495	0.37%	1,715,373
Rockport Housing Authority	66,221	0.16%	554,906	71,133	0.16%	741,783
Rowley Housing Authority	33,227	0.08%	287,056	34,477	0.07%	327,138
Salisbury Housing Authority	16,849	0.04%	138,726	18,099	0.04%	185,446

## Section 2: GASB Information

Employer Name	FY 2022 Total Appropriation	Percentage of NPL as of January 1, 2022	Share of NPL as of January 1, 2022	FY 2023 Total Appropriation	Percentage of NPL as of January 1, 2023	Share of NPL as of January 1, 2023
Topsfield Housing Authority	16,849	0.04%	138,726	18,099	0.04%	185,446
Wenham Housing Authority	<u>33,111</u>	<u>0.08%</u>	<u>277,455</u>	<u>35,567</u>	<u>0.08%</u>	<u>370,891</u>
<b>Grand Totals:</b>	<b>\$41,415,403</b>	<b>100.00%</b>	<b>\$347,248,109</b>	<b>\$44,519,430</b>	<b>100.00%</b>	<b>\$464,018,998</b>

## Section 2: GASB Information

### 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 (6.00%) (4)	Current Discount Rate (7.00%) (5)	1% Increase (8.00%) (6)
Essex Regional Retirement System	0.35%	\$1,622,650	\$560,075	\$2,061,239	\$1,622,650	\$1,254,383
Town of Boxford	3.49%	16,180,136	5,584,749	20,553,497	16,180,136	12,507,991
Town of Essex	1.71%	7,927,803	2,736,367	10,070,625	7,927,803	6,128,557
Town of Georgetown	5.16%	23,922,493	8,257,108	30,388,551	23,922,493	18,493,190
Town of Groveland	2.32%	10,756,025	3,696,496	13,663,292	10,756,025	8,314,903
Town of Hamilton	2.77%	12,842,113	4,432,595	16,313,233	12,842,113	9,927,545
Town of Ipswich	10.49%	48,679,491	16,802,255	61,837,167	48,679,491	37,631,491
Town of Lynnfield	7.74%	35,930,101	12,401,664	45,641,719	35,930,101	27,775,625
Town of Manchester	3.52%	16,319,220	5,632,756	20,730,174	16,319,220	12,615,509
Town of Merrimac	2.39%	11,080,379	3,824,513	14,075,317	11,080,379	8,565,644
Town of Middleton	5.26%	24,386,107	8,417,129	30,977,476	24,386,107	18,851,585
Town of Nahant	2.18%	10,106,790	3,488,468	12,838,574	10,106,790	7,813,015
Town of Newbery	2.16%	10,014,067	3,456,464	12,720,789	10,014,067	7,741,336
Town of North Andover	15.63%	72,509,260	25,027,357	92,107,929	72,509,260	56,053,005
Town of Rockport	4.92%	22,809,819	7,873,056	28,975,130	22,809,819	17,633,042
Town of Rowley	2.97%	13,769,342	4,752,638	17,491,085	13,769,342	10,644,336
Town of Salisbury	4.54%	21,048,085	7,264,975	26,737,214	21,048,085	16,271,140
Town of Topsfield	3.48%	16,133,774	5,568,747	20,494,604	16,133,774	12,472,151
Town of Wenham	2.10%	9,735,898	3,360,451	12,367,433	9,735,898	7,526,298
Town of West Newbury	1.95%	9,040,477	3,120,419	11,484,045	9,040,477	6,988,706

## Section 2: GASB Information

Employer Name	2023 Share of Cost Allocation (1)	Net Pension Liability (2)	Covered Employee Payroll (3)	Discount Rate Sensitivity		
				1% Decrease (6.00%) (4)	Current Discount Rate (7.00%) (5)	1% Increase (8.00%) (6)
Eastern Essex Veteran's District	0.08%	370,891	128,017	471,140	370,891	286,716
Byfield Water District	0.07%	324,530	112,015	412,248	324,530	250,877
Lynnfield Center Water District	0.48%	2,225,348	768,103	2,826,842	2,225,348	1,720,297
Lynnfield Water District	0.24%	1,112,674	384,052	1,413,421	1,112,674	860,148
Northeast Mosquito Control Project	0.45%	2,086,264	720,097	2,650,164	2,086,264	1,612,778
Hamilton-Wenham Regional School District	2.36%	10,941,295	3,776,507	13,898,639	10,941,295	8,458,126
Manchester-Essex Regional School District	1.49%	6,935,223	2,336,314	8,809,758	6,935,223	5,361,247
Masconomet Regional School District	1.94%	8,994,116	3,104,417	11,425,153	8,994,116	6,952,866
Pentucket Regional School District	2.71%	12,563,945	4,336,582	15,959,879	12,563,945	9,712,509
Triton Regional School District	3.36%	15,577,437	5,376,721	19,787,893	15,577,437	12,042,077
Essex Housing Authority	0.04%	185,446	64,009	235,571	185,446	143,358
Georgetown Housing Authority	0.16%	741,783	256,034	942,281	741,783	573,432
Groveland Housing Authority	0.05%	231,807	80,011	294,463	231,807	179,197
Hamilton Housing Authority	0.04%	185,446	64,009	235,571	185,446	143,358
Ipswich Housing Authority	0.45%	2,086,264	720,097	2,650,164	2,086,264	1,612,778
Lynnfield Housing Authority	0.04%	185,446	64,009	235,571	185,446	143,358
Manchester Housing Authority	0.08%	370,891	128,017	471,140	370,891	286,716
Merrimac Housing Authority	0.03%	139,084	48,006	176,677	139,084	107,518
Middleton Housing Authority	0.05%	231,807	80,011	294,463	231,807	179,197

## Section 2: GASB Information

Employer Name	2023 Share of Cost Allocation	Net Pension Liability	Covered Employee Payroll	Discount Rate Sensitivity		
				1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
	(1)	(2)	(3)	(4)	(5)	(6)
Nahant Housing Authority	0.04%	189,194	48,006	240,332	189,194	146,256
North Andover Housing Authority	0.37%	1,715,373	592,079	2,179,025	1,715,373	1,326,062
Rockport Housing Authority	0.16%	741,783	256,034	942,281	741,783	573,432
Rowley Housing Authority	0.07%	327,138	64,009	415,561	327,138	252,893
Salisbury Housing Authority	0.04%	185,446	64,009	235,571	185,446	143,358
Topsfield Housing Authority	0.04%	185,446	64,009	235,571	185,446	143,358
Wenham Housing Authority	<u>0.08%</u>	<u>370,891</u>	<u>128,017</u>	<u>471,140</u>	<u>370,891</u>	<u>286,716</u>
<b>Grand Totals:</b>	<b>100.00%</b>	<b>\$464,018,998</b>	<b>\$160,021,473</b>	<b>\$589,439,612</b>	<b>\$464,018,998</b>	<b>\$358,708,080</b>

## Section 2: GASB Information

### Exhibit 6 – Determination of proportionate share by employer

Employer Name	Schedule of Contributions				Pension Expense		
	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
	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Essex Regional Retirement System	\$155,604	\$155,604	\$0	27.78%	\$181,254	-\$16,006	\$165,248
Town of Boxford	1,551,592	1,556,153	-4,561	27.86%	1,807,361	-171,729	1,635,632
Town of Essex	760,236	760,236	0	27.78%	885,555	-46,850	838,705
Town of Georgetown	2,294,045	2,294,045	0	27.78%	2,672,201	35,330	2,707,531
Town of Groveland	1,036,384	1,036,384	0	28.04%	1,201,475	73,287	1,274,762
Town of Hamilton	1,231,493	1,231,493	0	27.78%	1,434,496	167,484	1,601,980
Town of Ipswich	4,668,114	4,683,959	-15,845	27.88%	5,437,619	149,781	5,587,400
Town of Lynnfield	3,445,513	3,445,513	0	27.78%	4,013,481	-159,940	3,853,541
Town of Manchester	1,564,930	1,564,930	0	27.78%	1,822,897	108,708	1,931,605
Town of Merrimac	1,062,552	1,062,552	0	27.78%	1,237,706	-48,867	1,188,839
Town of Middleton	2,338,503	2,343,081	-4,578	27.84%	2,723,988	20,604	2,744,592
Town of Nahant	969,189	969,189	0	27.78%	1,128,953	-277,362	851,591
Town of Newbery	960,298	960,298	0	27.78%	1,118,596	192,702	1,311,298
Town of North Andover	6,953,268	6,963,588	-10,320	27.82%	8,099,465	219,914	8,319,379
Town of Rockport	2,187,345	2,190,649	-3,304	27.82%	2,547,913	-483,265	2,064,648
Town of Rowley	1,320,409	1,320,409	0	27.78%	1,538,069	171,702	1,709,771



## Section 2: GASB Information

Employer Name	Schedule of Contributions				Pension Expense		
	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
						(12)	
(7)	(8)	(9)	(10)	(11)	(12)	(13)	
Town of Salisbury	2,018,404	2,018,404	0	27.78%	2,351,123	592,129	2,943,252
Town of Topsfield	1,547,146	1,551,945	-4,799	27.87%	1,802,182	63,823	1,866,005
Town of Wenham	933,623	933,623	0	27.78%	1,087,524	-40,434	1,047,090
Town of West Newbury	866,935	866,935	0	27.78%	1,009,844	86,439	1,096,283
Eastern Essex Veteran's District	35,567	35,567	0	27.78%	41,429	-15,402	26,027
Byfield Water District	31,121	31,121	0	27.78%	36,251	-66	36,185
Lynnfield Center Water District	213,400	213,400	0	27.78%	248,577	165,882	414,459
Lynnfield Water District	106,700	106,700	0	27.78%	124,288	23,054	147,342
Northeast Mosquito Control Project	200,062	200,062	0	27.78%	233,041	-62,010	171,031
Hamilton-Wenham Regional School District	1,049,214	1,049,214	0	27.78%	1,222,170	-339,890	882,280
Manchester-Essex Regional School District	667,994	667,994	0	28.59%	774,682	-146,957	627,725
Masconomet Regional School District	862,490	862,490	0	27.78%	1,004,665	168,545	1,173,210
Pentucket Regional School District	1,204,818	1,204,818	0	27.78%	1,403,424	-412,268	991,156

## Section 2: GASB Information

Employer Name	Schedule of Contributions				Pension Expense		
	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
	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Triton Regional School District	1,493,797	1,493,797	0	27.78%	1,740,038	-56,358	1,683,680
Essex Housing Authority	17,783	17,783	0	27.78%	20,715	86	20,801
Georgetown Housing Authority	72,397	72,397	0	28.28%	82,859	-51	82,808
Groveland Housing Authority	22,229	22,229	0	27.78%	25,893	-15,987	9,906
Hamilton Housing Authority	18,099	18,099	0	28.28%	20,715	-7,719	12,996
Ipswich Housing Authority	203,617	203,617	0	28.28%	233,041	75,122	308,163
Lynnfield Housing Authority	18,099	18,099	0	28.28%	20,715	-16,724	3,991
Manchester Housing Authority	35,567	35,567	0	27.78%	41,429	7,253	48,682
Merrimac Housing Authority	13,337	13,337	0	27.78%	15,536	22,271	37,807
Middleton Housing Authority	22,229	22,229	0	27.78%	25,893	22	25,915
Nahant Housing Authority	23,457	23,457	0	48.86%	21,133	11,535	32,668
North Andover Housing Authority	164,495	164,495	0	27.78%	191,611	-47,236	144,375
Rockport Housing Authority	71,133	71,133	0	27.78%	82,859	31,374	114,233
Rowley Housing Authority	34,477	34,477	0	53.86%	36,542	31,577	68,119
Salisbury Housing Authority	18,099	18,099	0	28.28%	20,715	-38,443	-17,728
Topsfield Housing Authority	18,099	18,099	0	28.28%	20,715	-7,719	12,996

## Section 2: GASB Information

Employer Name	Schedule of Contributions				Pension Expense		
	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
	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Wenham Housing Authority	35,567	<u>35,567</u>	0	<u>27.78%</u>	<u>41,429</u>	<u>-7,341</u>	<u>34,088</u>
<b>Grand Totals:</b>	<b>\$44,519,430</b>	<b>\$44,562,837</b>	<b>-\$43,407</b>	<b>27.85%</b>	<b>\$51,832,067</b>	<b>\$0</b>	<b>\$51,832,067</b>

## Section 2: GASB Information

### Exhibit 6 – Determination of proportionate share by employer

Employer Name	Deferred Outflows of Resources					Deferred Inflows of Resources			
	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
	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
Essex Regional Retirement System	\$51	\$150,464	\$88,550	\$221,912	\$460,977	\$27,867	\$0	\$166,935	\$194,802
Town of Boxford	504	1,500,341	882,968	0	2,383,813	277,876	0	741,766	1,019,642
Town of Essex	247	735,124	432,629	142,745	1,310,745	136,151	0	113,893	250,044
Town of Georgetown	745	2,218,269	1,305,477	478,945	4,003,436	410,842	0	1,029	411,871
Town of Groveland	335	997,377	586,968	231,025	1,815,705	184,723	0	21,525	206,248
Town of Hamilton	400	1,190,815	700,808	191,307	2,083,330	220,549	0	168,782	389,331
Town of Ipswich	1,516	4,513,919	2,656,494	828,295	8,000,224	836,015	0	803,832	1,639,847
Town of Lynnfield	1,119	3,331,702	1,960,745	448,444	5,742,010	617,059	0	709,578	1,326,637
Town of Manchester	508	1,513,238	890,558	191,166	2,595,470	280,264	0	106,223	386,487
Town of Merrimac	345	1,027,454	604,669	229,730	1,862,198	190,293	0	508,419	698,712
Town of Middleton	760	2,261,258	1,330,777	885,602	4,478,397	418,804	0	899,772	1,318,576
Town of Nahant	315	937,176	551,539	128,104	1,617,134	173,573	0	656,009	829,582
Town of Newbery	312	928,578	546,479	158,791	1,634,160	171,980	0	3,128	175,108
Town of North Andover	2,258	6,723,585	3,956,908	1,549,031	12,231,782	1,245,262	0	805,861	2,051,123
Town of Rockport	711	2,115,094	1,244,757	60,540	3,421,102	391,733	0	370,859	762,592
Town of Rowley	429	1,276,794	751,408	609,975	2,638,606	236,473	0	38,673	275,146
Town of Salisbury	656	1,951,733	1,148,617	542,217	3,643,223	361,477	0	0	361,477

## Section 2: GASB Information

Employer Name	Deferred Outflows of Resources					Deferred Inflows of Resources			
	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
	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
Town of Topsfield	503	1,496,042	880,438	317,179	2,694,162	277,079	0	191,061	468,140
Town of Wenham	303	902,784	531,299	12,714	1,447,100	167,203	0	109,714	276,917
Town of West Newbury	282	838,299	493,349	100,059	1,431,989	155,260	0	128,796	284,056
Eastern Essex Veteran's District	12	34,392	20,240	15,722	70,366	6,370	0	55,636	62,006
Byfield Water District	10	30,093	17,710	48	47,861	5,573	0	128	5,701
Lynnfield Center Water District	69	206,351	121,440	476,673	804,533	38,218	0	0	38,218
Lynnfield Water District	35	103,175	60,720	39,317	203,247	19,109	0	340	19,449
Northeast Mosquito Control Project	65	193,454	113,850	129,677	437,046	35,829	0	318,366	354,195
Hamilton-Wenham Regional School District	341	1,014,557	597,079	0	1,611,977	187,904	0	1,051,368	1,239,272
Manchester-Essex Regional School District	216	643,085	378,463	345,840	1,367,604	119,105	0	206,192	325,297
Masconomet Regional School District	280	834,000	490,819	197,670	1,522,769	154,464	0	223,288	377,752
Pentucket Regional School District	391	1,165,021	685,628	122,374	1,973,414	215,772	0	979,532	1,195,304
Triton Regional School District	485	1,444,454	850,078	839,223	3,134,240	267,525	0	23,545	291,070
Essex Housing Authority	6	17,196	10,120	23,973	51,295	3,185	0	31,711	34,896

## Section 2: GASB Information

Employer Name	Deferred Outflows of Resources					Deferred Inflows of Resources			
	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
	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
Georgetown Housing Authority	23	68,784	40,480	79,640	188,927	12,739	0	149,788	162,527
Groveland Housing Authority	7	21,495	12,650	32	34,184	3,981	0	39,962	43,943
Hamilton Housing Authority	6	17,196	10,120	405	27,727	3,185	0	23,817	27,002
Ipswich Housing Authority	65	193,454	113,850	228,344	535,713	35,829	0	14,885	50,714
Lynnfield Housing Authority	6	17,196	10,120	8,004	35,326	3,185	0	71,676	74,861
Manchester Housing Authority	12	34,392	20,240	52	54,696	6,370	0	147	6,517
Merrimac Housing Authority	4	12,897	7,590	7,645	28,136	2,389	0	52	2,441
Middleton Housing Authority	7	21,495	12,650	100	34,252	3,981	0	21	4,002
Nahant Housing Authority	6	17,543	10,325	4,268	32,142	3,249	0	13,436	16,685
North Andover Housing Authority	53	159,062	93,610	265	252,990	29,460	0	103,676	133,136
Rockport Housing Authority	23	68,784	40,480	70,338	179,625	12,739	0	24,018	36,757
Rowley Housing Authority	10	30,335	17,852	74,340	122,537	5,618	0	36,124	41,742

## Section 2: GASB Information

Employer Name	Deferred Outflows of Resources					Deferred Inflows of Resources			
	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual 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
	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
Salisbury Housing Authority	6	17,196	10,120	448	27,770	3,185	0	55,109	58,294
Topsfield Housing Authority	6	17,196	10,120	405	27,727	3,185	0	23,817	27,002
Wenham Housing Authority	<u>12</u>	<u>34,392</u>	<u>20,240</u>	<u>52</u>	<u>54,696</u>	<u>6,370</u>	<u>0</u>	<u>147</u>	<u>6,517</u>
<b>Grand Totals:</b>	<b>\$14,455</b>	<b>\$43,027,241</b>	<b>\$25,322,031</b>	<b>\$9,992,636</b>	<b>\$78,356,363</b>	<b>\$7,969,002</b>	<b>\$0</b>	<b>\$9,992,636</b>	<b>\$17,961,638</b>

## Section 2: GASB Information

### Exhibit 6 – Determination of proportionate share by employer

Employer Name	Deferred Inflows/(Outflows) Recognized In Future Pension Expense (Year Ended June 30)					
	2024 (23)	2025 (24)	2026 (25)	2027 (26)	2028 (27)	Thereafter (28)
Essex Regional Retirement System	\$10,956	\$42,755	\$67,155	\$145,308	\$0	\$0
Town of Boxford	96,617	162,421	358,344	746,789	0	0
Town of Essex	157,337	148,253	284,279	470,832	0	0
Town of Georgetown	730,993	741,452	778,090	1,341,030	0	0
Town of Groveland	302,014	287,148	380,083	640,213	0	0
Town of Hamilton	277,578	295,217	441,479	679,725	0	0
Town of Ipswich	1,220,195	1,080,778	1,565,464	2,493,940	0	0
Town of Lynnfield	447,051	723,338	1,143,782	2,101,203	0	0
Town of Manchester	358,258	378,605	576,027	896,093	0	0
Town of Merrimac	250,904	152,503	201,697	558,381	0	0
Town of Middleton	550,293	683,490	772,177	1,153,862	0	0
Town of Nahant	-41,755	11,975	225,794	591,538	0	0
Town of Newbery	272,345	257,237	358,902	570,567	0	0
Town of North Andover	1,597,489	1,545,723	2,662,435	4,375,022	0	0
Town of Rockport	225,150	417,848	743,374	1,272,136	0	0
Town of Rowley	433,329	482,189	613,931	834,012	0	0
Town of Salisbury	742,460	567,980	742,002	1,229,304	0	0
Town of Topsfield	440,907	407,166	467,417	910,530	0	0
Town of Wenham	172,642	195,502	286,466	515,573	0	0
Town of West Newbury	167,186	174,235	313,628	492,884	0	0
Eastern Essex Veteran's District	-233	59	-4,095	12,629	0	0



## Section 2: GASB Information

Employer Name	Deferred Inflows/(Outflows) Recognized In Future Pension Expense (Year Ended June 30)					
	2024 (23)	2025 (24)	2026 (25)	2027 (26)	2028 (27)	Thereafter (28)
Byfield Water District	6,794	7,046	10,342	17,978	0	0
Lynnfield Center Water District	205,553	199,617	190,368	170,777	0	0
Lynnfield Water District	46,559	32,155	43,447	61,637	0	0
Northeast Mosquito Control Project	70,047	-58,086	-5,093	75,983	0	0
Hamilton-Wenham Regional School District	-57,317	-48,724	62,661	416,083	0	0
Manchester-Essex Regional School District	149,803	250,606	220,979	420,918	0	0
Masconomet Regional School District	219,307	195,778	287,121	442,812	0	0
Pentucket Regional School District	-7,720	32,515	96,918	656,398	0	0
Triton Regional School District	565,602	600,671	703,138	973,759	0	0
Essex Housing Authority	3,957	4,101	5,985	2,355	0	0
Georgetown Housing Authority	8,073	8,652	-23,753	33,427	0	0
Groveland Housing Authority	-11,087	-10,904	-609	12,841	0	0
Hamilton Housing Authority	-3,864	-3,784	-1,964	10,336	0	0
Ipswich Housing Authority	118,321	134,750	107,730	124,198	0	0
Lynnfield Housing Authority	-20,131	-27,718	-2,023	10,336	0	0
Manchester Housing Authority	7,763	8,052	11,818	20,546	0	0
Merrimac Housing Authority	10,544	3,017	4,431	7,704	0	0
Middleton Housing Authority	4,922	5,102	7,385	12,841	0	0
Nahant Housing Authority	2,421	2,212	3,708	7,115	0	0
North Andover Housing Authority	-3,500	-2,496	38,745	87,106	0	0

## Section 2: GASB Information

Employer Name	Deferred Inflows/(Outflows) Recognized In Future Pension Expense (Year Ended June 30)					
	2024 (23)	2025 (24)	2026 (25)	2027 (26)	2028 (27)	Thereafter (28)
Rockport Housing Authority	54,232	31,904	15,640	41,091	0	0
Rowley Housing Authority	35,294	32,175	4,247	9,079	0	0
Salisbury Housing Authority	-27,292	-19,600	6,031	10,336	0	0
Topsfield Housing Authority	-3,864	-3,784	-1,964	10,336	0	0
Wenham Housing Authority	<u>7,763</u>	<u>8,052</u>	<u>11,818</u>	<u>20,546</u>	<u>0</u>	<u>0</u>
<b>Grand Totals:</b>	<b>\$9,793,896</b>	<b>\$10,137,183</b>	<b>\$14,775,537</b>	<b>\$25,688,109</b>	<b>\$0</b>	<b>\$0</b>

# 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.

<b>Active employees</b>	Individuals employed at the end of the reporting or measurement period, as applicable.
<b>Actual contributions</b>	Cash contributions recognized as additions to a pension Plan Fiduciary Net Position.
<b>Actuarial present value of projected benefit payments</b>	Projected benefit payments discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment.
<b>Actuarial valuation</b>	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.
<b>Actuarial valuation date</b>	The date as of which an actuarial valuation is performed.
<b>Actuarially determined contribution</b>	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.
<b>Ad hoc cost-of-living adjustments (Ad Hoc COLAs)</b>	Cost-of-living adjustments that require a decision to grant by the authority responsible for making such decisions.
<b>Ad hoc postemployment benefit changes</b>	Postemployment benefit changes that require a decision to grant by the authority responsible for making such decisions.
<b>Agent employer</b>	An employer whose employees are provided with pensions through an agent multiple-employer defined benefit pension plan.
<b>Agent multiple-employer defined benefit pension plan (agent pension plan)</b>	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.
<b>Allocated insurance contract</b>	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.
<b>Automatic cost-of-living adjustments (Automatic COLAs)</b>	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

<b>Automatic postemployment benefit changes</b>	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).
<b>Closed period</b>	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.
<b>Collective deferred outflows of resources and deferred inflows of resources related to pensions</b>	Deferred outflows of resources and deferred inflows of resources related to pensions arising from certain changes in the collective Net Pension Liability.
<b>Collective Net Pension Liability</b>	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.
<b>Collective pension expense</b>	Pension expense arising from certain changes in the collective Net Pension Liability.
<b>Contributions</b>	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.
<b>Cost-of-living adjustments</b>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<b>Cost-sharing employer</b>	An employer whose employees are provided with pensions through a cost-sharing multiple-employer defined benefit pension plan.
<b>Cost-sharing multiple employer defined benefit pension plan (Cost-sharing pension plan)</b>	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.
<b>Covered payroll</b>	The payroll of employees that are provided with pensions through the pension plan.
<b>Deferred retirement option program (DROP)</b>	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.
<b>Defined benefit pension plans</b>	Pension plans that are used to provide defined benefit pensions.

## Appendix: Definition of terms

<b>Defined benefit pensions</b>	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.)
<b>Defined contribution pension plans</b>	Pension plans that are used to provide defined contribution pensions.
<b>Defined contribution pensions</b>	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.
<b>Discount rate</b>	<p>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:</p> <ol style="list-style-type: none"> <li>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.</li> <li>2. The actuarial present value of projected benefit payments not included in (1), calculated using the municipal bond rate.</li> </ol>
<b>Entry age actuarial cost method</b>	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.
<b>Inactive employees</b>	Terminated individuals that have accumulated benefits but are not yet receiving them, and retirees or their beneficiaries currently receiving benefits.
<b>Measurement period</b>	The period between the prior and the current measurement dates.
<b>Multiple-employer defined benefit pension plan</b>	A defined benefit pension plan that is used to provide pensions to the employees of more than one employer.

## Appendix: Definition of terms

<b>Net Pension Liability (NPL)</b>	The liability of employers and non-employer contributing entities to employees for benefits provided through a defined benefit pension plan.
<b>Non-employer contributing entities</b>	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.
<b>Other postemployment benefits</b>	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.
<b>Pension plans</b>	Arrangements through which pensions are determined, assets dedicated for pensions are accumulated and managed and benefits are paid as they come due.
<b>Pensions</b>	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.
<b>Plan members</b>	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).
<b>Postemployment</b>	The period after employment.
<b>Postemployment benefit changes</b>	Adjustments to the pension of an inactive employee.
<b>Postemployment healthcare benefits</b>	Medical, dental, vision, and other health-related benefits paid subsequent to the termination of employment.
<b>Projected benefit payments</b>	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.
<b>Public employee retirement system</b>	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.
<b>Real rate of return</b>	The rate of return on an investment after adjustment to eliminate inflation.
<b>Service costs</b>	The portions of the actuarial present value of projected benefit payments that are attributed to valuation years.
<b>Single employer</b>	An employer whose employees are provided with pensions through a single-employer defined benefit pension plan.

## Appendix: Definition of terms

<b>Single-employer defined benefit pension plan (Single-employer pension plan)</b>	A defined benefit pension plan that is used to provide pensions to employees of only one employer.
<b>Special funding situations</b>	<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"><li>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.</li><li>2. The non-employer entity is the only entity with a legal obligation to make contributions directly to a pension plan.</li></ol>
<b>Termination benefits</b>	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.
<b>Total Pension Liability (TPL)</b>	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.