

WORCESTER REGIONAL RETIREMENT SYSTEM

**INDEPENDENT AUDITORS' REPORT ON
SCHEDULES OF EMPLOYER ALLOCATIONS AND
SCHEDULES OF PENSION AMOUNTS BY EMPLOYER**

YEAR ENDED DECEMBER 31, 2019



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**WORCESTER REGIONAL RETIREMENT SYSTEM
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INDEPENDENT AUDITORS' REPORT

Honorable Retirement Board
Worcester Regional Retirement System
Auburn, Massachusetts

Report on Schedules

We have audited the accompanying schedule of employer allocations of the Worcester Regional Retirement System as of and for the year ended December 31, 2019, and the related notes. We have also audited the total for all entities of the rows titled ending net pension liability, total deferred outflows of resources, total deferred inflows of resources, pension expense, and covered payroll as of and for the year ended December 31, 2019 and the beginning net pension liability, as of and for the year ended December 31, 2018 (specified row totals) included in the accompanying schedule of pension amounts by employer of the Worcester Regional Retirement System, and the related notes.

Management's Responsibility for the Schedules

Management is responsible for the preparation and fair presentation of these schedules in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the schedules that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express opinions on the schedule of employer allocations and the specified row totals included in the schedule of pension amounts by employer based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the schedule of employer allocations and specified row totals included in the schedule of pension amounts by employer are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the schedule of employer allocations and specified row totals included in the schedule of pension amounts by employer. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the schedule of employer allocations and specified row totals included in the schedule of pension amounts by employer, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the schedule of employer allocations and specified row totals included in the schedule of pension amounts by employer in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the schedule of employer allocations and specified row totals included in the schedule of pension amounts by employer.

Honorable Retirement Board
Worcester Regional Retirement System

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions


In our opinion, the schedules referred to above present fairly, in all material respects, the employer allocations and ending net pension liability, total deferred outflows of resources, total deferred inflows of resources, total pension expense and total covered payroll for the total of all participating entities for the Worcester Regional Retirement System as of and for the year ended December 31, 2019 and the beginning net pension liability for the total of all participating entities of the Worcester Regional Retirement System as of and for the year ended December 31, 2018, in accordance with accounting principles generally accepted in the United States of America.

Other Matter

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of the Worcester Regional Retirement System as of and for the year ended December 31, 2019, and our report thereon, dated October 9, 2020, expressed an unmodified opinion on those financial statements.

Restriction on Use

Our report is intended solely for the information and use of the management, board of retirement, employers, and their auditors and is not intended to be, and should not be, used by anyone other than these specified parties.



CliftonLarsonAllen LLP

Boston, Massachusetts
October 9, 2020

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF EMPLOYER ALLOCATIONS
YEAR ENDED DECEMBER 31, 2019**

Employer	Employer Contributions	Employer Allocation Percentage
Ashburnham	\$ 799,982	1.313859%
Ashburnham-Westminster Regional	658,485	1.081470%
Athol	1,464,108	2.404593%
Athol Housing Authority	34,868	0.057266%
Athol-Royalston Regional	557,966	0.916381%
Auburn	3,232,114	5.308296%
Auburn Housing Authority	64,005	0.105119%
Auburn Water District	92,076	0.151222%
Barre	326,085	0.535549%
Barre Housing Authority	18,657	0.030642%
Berlin	483,121	0.793459%
Berlin-Boylston Regional	161,942	0.265967%
Blackstone	840,143	1.379818%
Blackstone Housing Authority	17,586	0.028883%
Blackstone-Millville Regional	526,516	0.864729%
Bolton	472,043	0.775265%
Boylston	660,605	1.084952%
Boylston Water District	12,214	0.020060%
Brookfield	285,203	0.468406%
Charlton	1,354,689	2.224888%
Cherry Valley-Rochdale Water	53,835	0.088416%
Douglas	1,088,352	1.787466%
Dudley	869,193	1.427528%
Dudley Housing Authority	15,752	0.025870%
Dudley-Charlton Regional	1,023,723	1.681322%
East Brookfield	154,539	0.253809%
Grafton	1,878,900	3.085831%
Grafton Housing Authority	50,938	0.083659%
Hardwick	190,328	0.312587%
Harvard	900,768	1.479386%
Hillcrest Water District	8,020	0.013172%
Holden	2,149,451	3.530173%
Holden Housing Authority	33,309	0.054705%
Hopedale	987,717	1.622187%
Hopedale Housing Authority	4,900	0.008048%
Hubbardston	251,032	0.412285%
Lancaster	657,598	1.080013%
Lancaster Housing Authority	15,733	0.025839%
Lancaster Sewer	2,141	0.003516%
Leicester	1,314,800	2.159376%
Leicester Housing Authority	47,470	0.077963%
Leicester Water District	42,193	0.069296%
Lunenburg	1,354,353	2.224336%
Lunenburg Housing Authority	1,699	0.002790%
Lunenburg Water District	57,971	0.095209%
Mendon	652,398	1.071473%
Mendon-Upton Regional	778,108	1.277934%
Millbury	1,827,524	3.001453%

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF EMPLOYER ALLOCATIONS
YEAR ENDED DECEMBER 31, 2019**

Employer	Employer Contributions	Employer Allocation Percentage
Millbury Housing Authority	96,700	0.158816%
Millville	181,637	0.298313%
Narragansett Regional	399,543	0.656194%
Nashoba Regional	1,039,818	1.707756%
Nashoba Valley Dispatchers	38,988	0.064032%
New Braintree	57,671	0.094717%
Northboro	2,118,897	3.479993%
Northboro Housing Authority	67,847	0.111429%
Northboro-Southboro Regional	395,639	0.649782%
North Brookfield	516,126	0.847665%
North Brookfield Housing Authority	16,211	0.026624%
Oakham	70,935	0.116501%
Oxford	1,982,069	3.255272%
Oxford Housing Authority	75,748	0.124406%
Oxford-Rochdale Sewer District	33,977	0.055802%
Paxton	766,116	1.258239%
Petersham	158,460	0.260248%
Phillipston	136,442	0.224087%
Princeton	364,146	0.598059%
Quabbin Regional	1,035,747	1.701070%
Quaboag Regional	364,718	0.598998%
Royalston	55,615	0.091340%
Rutland	619,706	1.017781%
Southboro	1,958,833	3.217110%
Southboro Housing Authority	15,836	0.026008%
Spencer	881,810	1.448250%
Spencer-East Brookfield Regional	605,694	0.994768%
Spencer Housing Authority	46,111	0.075731%
Sterling	1,085,683	1.783083%
Sterling Housing Authority	5,447	0.008946%
Sturbridge	1,371,067	2.251786%
Sutton	1,184,523	1.945414%
Tantasqua Regional	708,239	1.163184%
Templeton	797,870	1.310390%
Templeton Housing Authority	43,018	0.070651%
Upton	628,639	1.032452%
Uxbridge	1,847,788	3.034734%
Uxbridge Housing Authority	53,485	0.087842%
Wachusett Regional	1,886,660	3.098576%
Warren	367,357	0.603333%
Warren Water District	17,774	0.029191%
Westboro	4,051,220	6.653564%
Westboro Housing Authority	46,690	0.076682%
West Boylston	1,305,298	2.143770%
West Boylston Housing Authority	5,445	0.008943%
West Boylston Water District	65,426	0.107453%
West Brookfield	287,712	0.472527%
Westminster	866,935	1.423820%

**WORCESTER REGIONAL RETIREMENT SYSTEM
 SCHEDULE OF EMPLOYER ALLOCATIONS
 YEAR ENDED DECEMBER 31, 2019**

Employer	Employer Contributions	Employer Allocation Percentage
Winchendon	1,569,295	2.577348%
Winchendon Housing Authority	116,208	0.190855%
Total	\$ 60,887,972	100.000000%

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	<u>Ashburnham</u>	<u>Ashburnham- Westminster Regional</u>	<u>Athol</u>	<u>Athol Housing Authority</u>
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 12,030,916	\$ 9,812,435	\$ 21,650,107	\$ 621,620
Ending Net Pension Liability	\$ 11,695,052	\$ 9,626,487	\$ 21,404,005	\$ 509,740
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 34,343	\$ 28,269	\$ 62,854	\$ 1,497
Assumption Changes	\$ 653,661	\$ 538,045	\$ 1,196,315	\$ 28,490
Change in Allocated Proportion	<u>\$ 297,715</u>	<u>\$ 232,372</u>	<u>\$ 3,504,113</u>	<u>\$ 127,621</u>
Total Deferred Outflows of Resources	<u>\$ 985,719</u>	<u>\$ 798,686</u>	<u>\$ 4,763,282</u>	<u>\$ 157,608</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 70,069	\$ 57,676	\$ 128,239	\$ 3,054
Net Difference Between Projected and Actual Investment Earnings	\$ 321,224	\$ 264,407	\$ 587,896	\$ 14,001
Change in Allocated Proportion	<u>\$ 249,805</u>	<u>\$ 77,696</u>	<u>\$ 3,962,287</u>	<u>\$ 283,414</u>
Total Deferred Inflows of Resources	<u>\$ 641,098</u>	<u>\$ 399,779</u>	<u>\$ 4,678,422</u>	<u>\$ 300,469</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 1,437,725	\$ 1,183,427	\$ 2,631,289	\$ 62,665
Net Amortization of Deferred Amounts from Changes in Proportion	<u>\$ (66,432)</u>	<u>\$ 18,926</u>	<u>\$ 2,173,746</u>	<u>\$ 40,719</u>
Total Pension Expense	<u>\$ 1,371,293</u>	<u>\$ 1,202,353</u>	<u>\$ 4,805,035</u>	<u>\$ 103,384</u>
Covered Payroll	\$ 3,633,332	\$ 3,978,616	\$ 5,609,600	\$ 258,051

(Continued)

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	Athol- Royalston Regional	Auburn	Auburn Housing Authority	Auburn Water District
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 8,605,156	\$ 46,977,102	\$ 994,280	\$ 1,550,508
Ending Net Pension Liability	\$ 8,156,985	\$ 47,250,738	\$ 935,698	\$ 1,346,072
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 23,953	\$ 138,754	\$ 2,748	\$ 3,953
Assumption Changes	\$ 455,911	\$ 2,640,943	\$ 52,298	\$ 75,235
Change in Allocated Proportion	<u>\$ 1,480,725</u>	<u>\$ 2,150,100</u>	<u>\$ 18,933</u>	<u>\$ 16,806</u>
Total Deferred Outflows of Resources	<u>\$ 1,960,589</u>	<u>\$ 4,929,797</u>	<u>\$ 73,979</u>	<u>\$ 95,994</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 48,871	\$ 283,096	\$ 5,606	\$ 8,065
Net Difference Between Projected and Actual Investment Earnings	\$ 224,045	\$ 1,297,818	\$ 25,700	\$ 36,972
Change in Allocated Proportion	<u>\$ 2,170,597</u>	<u>\$ 182,465</u>	<u>\$ 72,907</u>	<u>\$ 149,090</u>
Total Deferred Inflows of Resources	<u>\$ 2,443,513</u>	<u>\$ 1,763,379</u>	<u>\$ 104,213</u>	<u>\$ 194,127</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 1,002,774	\$ 5,808,743	\$ 115,030	\$ 165,479
Net Amortization of Deferred Amounts from Changes in Proportion	<u>\$ 788,431</u>	<u>\$ 536,778</u>	<u>\$ (42,921)</u>	<u>\$ (21,636)</u>
Total Pension Expense	<u>\$ 1,791,205</u>	<u>\$ 6,345,521</u>	<u>\$ 72,109</u>	<u>\$ 143,843</u>
Covered Payroll	\$ 2,362,099	\$ 15,448,580	\$ 275,103	\$ 490,158

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**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	<u>Barre</u>	<u>Barre Housing Authority</u>	<u>Berlin</u>	<u>Berlin- Boylston Regional</u>
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 4,774,164	\$ 248,716	\$ 7,512,781	\$ 1,999,634
Ending Net Pension Liability	\$ 4,767,083	\$ 272,749	\$ 7,062,815	\$ 2,367,453
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 13,999	\$ 801	\$ 20,740	\$ 6,952
Assumption Changes	\$ 266,442	\$ 15,245	\$ 394,756	\$ 132,322
Change in Allocated Proportion	<u>\$ 144,119</u>	<u>\$ 32,254</u>	<u>\$ 274,488</u>	<u>\$ 347,050</u>
Total Deferred Outflows of Resources	<u><u>\$ 424,560</u></u>	<u><u>\$ 48,300</u></u>	<u><u>\$ 689,984</u></u>	<u><u>\$ 486,324</u></u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 28,561	\$ 1,634	\$ 42,316	\$ 14,184
Net Difference Between Projected and Actual Investment Earnings	\$ 130,936	\$ 7,492	\$ 193,992	\$ 65,026
Change in Allocated Proportion	<u>\$ 226,291</u>	<u>\$ -</u>	<u>\$ 242,483</u>	<u>\$ 31,516</u>
Total Deferred Inflows of Resources	<u><u>\$ 385,788</u></u>	<u><u>\$ 9,126</u></u>	<u><u>\$ 478,791</u></u>	<u><u>\$ 110,726</u></u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 586,039	\$ 33,530	\$ 868,263	\$ 291,042
Net Amortization of Deferred Amounts from Changes in Proportion	<u>\$ (149,659)</u>	<u>\$ 9,418</u>	<u>\$ 83,627</u>	<u>\$ 45,298</u>
Total Pension Expense	<u><u>\$ 436,380</u></u>	<u><u>\$ 42,948</u></u>	<u><u>\$ 951,890</u></u>	<u><u>\$ 336,340</u></u>
Covered Payroll	\$ 2,105,671	\$ 92,821	\$ 2,278,623	\$ 1,264,674

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**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	<u>Blackstone</u>	<u>Blackstone Housing Authority</u>	<u>Blackstone- Millville Regional</u>	<u>Bolton</u>
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 11,947,755	\$ 301,404	\$ 7,977,054	\$ 6,693,520
Ending Net Pension Liability	\$ 12,282,171	\$ 257,092	\$ 7,697,213	\$ 6,900,864
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 36,067	\$ 755	\$ 22,603	\$ 20,265
Assumption Changes	\$ 686,476	\$ 14,369	\$ 430,213	\$ 385,704
Change in Allocated Proportion	<u>\$ 820,861</u>	<u>\$ 16,799</u>	<u>\$ 23,722</u>	<u>\$ 468,917</u>
Total Deferred Outflows of Resources	<u>\$ 1,543,404</u>	<u>\$ 31,923</u>	<u>\$ 476,538</u>	<u>\$ 874,886</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 73,587	\$ 1,540	\$ 46,117	\$ 41,346
Net Difference Between Projected and Actual Investment Earnings	\$ 337,350	\$ 7,061	\$ 211,416	\$ 189,543
Change in Allocated Proportion	<u>\$ 438,024</u>	<u>\$ 32,361</u>	<u>\$ 264,379</u>	<u>\$ 22,102</u>
Total Deferred Inflows of Resources	<u>\$ 848,961</u>	<u>\$ 40,962</u>	<u>\$ 521,912</u>	<u>\$ 252,991</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 1,509,902	\$ 31,605	\$ 946,252	\$ 848,354
Net Amortization of Deferred Amounts from Changes in Proportion	<u>\$ (228,824)</u>	<u>\$ (178)</u>	<u>\$ (60,524)</u>	<u>\$ 171,011</u>
Total Pension Expense	<u>\$ 1,281,078</u>	<u>\$ 31,427</u>	<u>\$ 885,728</u>	<u>\$ 1,019,365</u>
Covered Payroll	\$ 3,805,657	\$ -	\$ 2,489,983	\$ 2,766,634

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**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	<u>Boylston</u>	<u>Boylston Water District</u>	<u>Brookfield</u>	<u>Charlton</u>
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 9,855,709	\$ 169,823	\$ 4,401,048	\$ 18,977,826
Ending Net Pension Liability	\$ 9,657,479	\$ 178,558	\$ 4,169,424	\$ 19,804,393
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 28,360	\$ 524	\$ 12,244	\$ 58,156
Assumption Changes	\$ 539,777	\$ 9,980	\$ 233,038	\$ 1,106,909
Change in Allocated Proportion	<u>\$ 465,109</u>	<u>\$ 18,150</u>	<u>\$ 147,601</u>	<u>\$ 1,247,165</u>
Total Deferred Outflows of Resources	<u>\$ 1,033,246</u>	<u>\$ 28,654</u>	<u>\$ 392,883</u>	<u>\$ 2,412,230</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 57,861	\$ 1,070	\$ 24,981	\$ 118,655
Net Difference Between Projected and Actual Investment Earnings	\$ 265,258	\$ 4,904	\$ 114,520	\$ 543,960
Change in Allocated Proportion	<u>\$ 153,683</u>	<u>\$ 26,595</u>	<u>\$ 189,769</u>	<u>\$ 42,445</u>
Total Deferred Inflows of Resources	<u>\$ 476,802</u>	<u>\$ 32,569</u>	<u>\$ 329,270</u>	<u>\$ 705,060</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 1,187,237	\$ 21,951	\$ 512,566	\$ 2,434,642
Net Amortization of Deferred Amounts from Changes in Proportion	<u>\$ 61,519</u>	<u>\$ (22,728)</u>	<u>\$ (36,722)</u>	<u>\$ 407,682</u>
Total Pension Expense	<u>\$ 1,248,756</u>	<u>\$ (777)</u>	<u>\$ 475,844</u>	<u>\$ 2,842,324</u>
Covered Payroll	\$ 3,096,661	\$ 63,887	\$ 1,509,835	\$ 5,987,940

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**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	Cherry Valley- Rochdale Water	Cherry Valley Sewer District	Douglas	Dudley
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 750,726	\$ 28,453	\$ 16,256,457	\$ 13,077,264
Ending Net Pension Liability	\$ 787,022	\$ -	\$ 15,910,774	\$ 12,706,857
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 2,311	\$ -	\$ 46,723	\$ 37,314
Assumption Changes	\$ 43,988	\$ -	\$ 889,287	\$ 710,213
Change in Allocated Proportion	\$ 52,975	\$ 10,972	\$ 485,668	\$ -
Total Deferred Outflows of Resources	<u>\$ 99,274</u>	<u>\$ 10,972</u>	<u>\$ 1,421,678</u>	<u>\$ 747,527</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 4,715	\$ -	\$ 95,327	\$ 76,131
Net Difference Between Projected and Actual Investment Earnings	\$ 21,617	\$ -	\$ 437,015	\$ 349,014
Change in Allocated Proportion	\$ 20,485	\$ 21,887	\$ 166,902	\$ 557,684
Total Deferred Inflows of Resources	<u>\$ 46,817</u>	<u>\$ 21,887</u>	<u>\$ 699,244</u>	<u>\$ 982,829</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 96,752	\$ -	\$ 1,955,982	\$ 1,562,110
Net Amortization of Deferred Amounts from Changes in Proportion	\$ (3,359)	\$ (1,239)	\$ 90,733	\$ (329,724)
Total Pension Expense	<u>\$ 93,393</u>	<u>\$ (1,239)</u>	<u>\$ 2,046,715</u>	<u>\$ 1,232,386</u>
Covered Payroll	\$ 332,372	\$ -	\$ 6,208,415	\$ 3,208,904

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**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	<u>Dudley Housing Authority</u>	<u>Dudley- Charlton Regional</u>	<u>East Brookfield</u>	<u>Grafton</u>
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 228,048	\$ 15,122,534	\$ 2,244,051	\$ 27,331,432
Ending Net Pension Liability	\$ 230,281	\$ 14,965,953	\$ 2,259,228	\$ 27,467,908
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 676	\$ 43,948	\$ 6,634	\$ 80,661
Assumption Changes	\$ 12,871	\$ 836,479	\$ 126,273	\$ 1,535,239
Change in Allocated Proportion	<u>\$ 12,500</u>	<u>\$ 195,045</u>	<u>\$ 253,614</u>	<u>\$ 626,939</u>
Total Deferred Outflows of Resources	<u>\$ 26,047</u>	<u>\$ 1,075,472</u>	<u>\$ 386,521</u>	<u>\$ 2,242,839</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 1,380	\$ 89,666	\$ 13,536	\$ 164,570
Net Difference Between Projected and Actual Investment Earnings	\$ 6,325	\$ 411,064	\$ 62,053	\$ 754,451
Change in Allocated Proportion	<u>\$ 85,925</u>	<u>\$ 23,644</u>	<u>\$ 19,091</u>	<u>\$ 58,047</u>
Total Deferred Inflows of Resources	<u>\$ 93,630</u>	<u>\$ 524,374</u>	<u>\$ 94,680</u>	<u>\$ 977,068</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 28,309	\$ 1,839,831	\$ 277,737	\$ 3,376,752
Net Amortization of Deferred Amounts from Changes in Proportion	<u>\$ (35,146)</u>	<u>\$ 74,118</u>	<u>\$ 101,934</u>	<u>\$ 106,275</u>
Total Pension Expense	<u>\$ (6,837)</u>	<u>\$ 1,913,949</u>	<u>\$ 379,671</u>	<u>\$ 3,483,027</u>
Covered Payroll	\$ 121,400	\$ 5,221,272	\$ 670,136	\$ 11,433,973

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**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	Grafton Housing Authority	Hardwick	Harvard	Hillcrest Water District
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 820,043	\$ 3,122,938	\$ 13,621,603	\$ 119,659
Ending Net Pension Liability	\$ 744,670	\$ 2,782,432	\$ 13,168,457	\$ 117,246
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 2,187	\$ 8,171	\$ 38,670	\$ 344
Assumption Changes	\$ 41,621	\$ 155,516	\$ 736,013	\$ 6,553
Change in Allocated Proportion	\$ 4,618	\$ 7,266	\$ 34,309	\$ 29,587
Total Deferred Outflows of Resources	<u>\$ 48,426</u>	<u>\$ 170,953</u>	<u>\$ 808,992</u>	<u>\$ 36,484</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 4,462	\$ 16,671	\$ 78,897	\$ 702
Net Difference Between Projected and Actual Investment Earnings	\$ 20,454	\$ 76,424	\$ 361,693	\$ 3,220
Change in Allocated Proportion	\$ 63,317	\$ 450,821	\$ 393,389	\$ 15,395
Total Deferred Inflows of Resources	<u>\$ 88,233</u>	<u>\$ 543,916</u>	<u>\$ 833,979</u>	<u>\$ 19,317</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 91,546	\$ 342,057	\$ 1,618,857	\$ 14,414
Net Amortization of Deferred Amounts from Changes in Proportion	\$ (10,609)	\$ (158,785)	\$ (215,781)	\$ 10,778
Total Pension Expense	<u>\$ 80,937</u>	<u>\$ 183,272</u>	<u>\$ 1,403,076</u>	<u>\$ 25,192</u>
Covered Payroll	\$ 249,030	\$ 993,792	\$ 4,972,953	\$ 49,437

(Continued)

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	<u>Holden</u>	<u>Holden Housing Authority</u>	<u>Hopedale</u>	<u>Hopedale Housing Authority</u>
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 33,802,409	\$ 470,494	\$ 14,845,804	\$ 81,434
Ending Net Pension Liability	\$ 31,423,132	\$ 486,949	\$ 14,439,576	\$ 71,634
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 92,275	\$ 1,430	\$ 42,402	\$ 210
Assumption Changes	\$ 1,756,305	\$ 27,217	\$ 807,058	\$ 4,004
Change in Allocated Proportion	<u>\$ 115,016</u>	<u>\$ 23,710</u>	<u>\$ 369,103</u>	<u>\$ 2,601</u>
Total Deferred Outflows of Resources	<u>\$ 1,963,596</u>	<u>\$ 52,357</u>	<u>\$ 1,218,563</u>	<u>\$ 6,815</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 188,267	\$ 2,917	\$ 86,513	\$ 429
Net Difference Between Projected and Actual Investment Earnings	\$ 863,087	\$ 13,375	\$ 396,606	\$ 1,968
Change in Allocated Proportion	<u>\$ 2,055,428</u>	<u>\$ 11,826</u>	<u>\$ 360,312</u>	<u>\$ 25,727</u>
Total Deferred Inflows of Resources	<u>\$ 3,106,782</u>	<u>\$ 28,118</u>	<u>\$ 843,431</u>	<u>\$ 28,124</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 3,862,985	\$ 59,863	\$ 1,775,121	\$ 8,806
Net Amortization of Deferred Amounts from Changes in Proportion	<u>\$ (619,373)</u>	<u>\$ 4,739</u>	<u>\$ (121,789)</u>	<u>\$ (8,057)</u>
Total Pension Expense	<u>\$ 3,243,612</u>	<u>\$ 64,602</u>	<u>\$ 1,653,332</u>	<u>\$ 749</u>
Covered Payroll	\$ 10,532,682	\$ 38,418	\$ 5,234,698	\$ -

(Continued)

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	<u>Hubbardston</u>	<u>Lancaster</u>	<u>Lancaster Housing Authority</u>	<u>Lancaster Sewer</u>
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 4,164,808	\$ 9,125,651	\$ 240,492	\$ 25,831
Ending Net Pension Liability	\$ 3,669,873	\$ 9,613,519	\$ 230,003	\$ 31,300
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 10,777	\$ 28,230	\$ 675	\$ 92
Assumption Changes	\$ 205,117	\$ 537,320	\$ 12,855	\$ 1,749
Change in Allocated Proportion	<u>\$ 167,832</u>	<u>\$ 516,121</u>	<u>\$ 31,687</u>	<u>\$ 18,724</u>
Total Deferred Outflows of Resources	<u>\$ 383,726</u>	<u>\$ 1,081,671</u>	<u>\$ 45,217</u>	<u>\$ 20,565</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 21,988	\$ 57,598	\$ 1,378	\$ 188
Net Difference Between Projected and Actual Investment Earnings	\$ 100,799	\$ 264,051	\$ 6,317	\$ 860
Change in Allocated Proportion	<u>\$ 392,235</u>	<u>\$ 24,878</u>	<u>\$ 18,208</u>	<u>\$ -</u>
Total Deferred Inflows of Resources	<u>\$ 515,022</u>	<u>\$ 346,527</u>	<u>\$ 25,903</u>	<u>\$ 1,048</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 451,154	\$ 1,181,833	\$ 28,275	\$ 3,848
Net Amortization of Deferred Amounts from Changes in Proportion	<u>\$ 12,230</u>	<u>\$ 84,454</u>	<u>\$ (3,948)</u>	<u>\$ 4,632</u>
Total Pension Expense	<u>\$ 463,384</u>	<u>\$ 1,266,287</u>	<u>\$ 24,327</u>	<u>\$ 8,480</u>
Covered Payroll	\$ 1,350,338	\$ 2,894,469	\$ 42,050	\$ 35,750

(Continued)

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	<u>Leicester</u>	<u>Leicester Housing Authority</u>	<u>Leicester Water District</u>	<u>Lunenburg</u>
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 18,924,389	\$ 622,711	\$ 731,279	\$ 19,899,499
Ending Net Pension Liability	\$ 19,221,250	\$ 693,971	\$ 616,826	\$ 19,799,481
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 56,444	\$ 2,038	\$ 1,811	\$ 58,142
Assumption Changes	\$ 1,074,316	\$ 38,787	\$ 34,476	\$ 1,106,635
Change in Allocated Proportion	<u>\$ 508,132</u>	<u>\$ 67,962</u>	<u>\$ 7,671</u>	<u>\$ 386,869</u>
Total Deferred Outflows of Resources	<u>\$ 1,638,892</u>	<u>\$ 108,787</u>	<u>\$ 43,958</u>	<u>\$ 1,551,646</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 115,161	\$ 4,158	\$ 3,696	\$ 118,626
Net Difference Between Projected and Actual Investment Earnings	\$ 527,943	\$ 19,061	\$ 16,942	\$ 543,825
Change in Allocated Proportion	<u>\$ 437,799</u>	<u>\$ 21,307</u>	<u>\$ 166,776</u>	<u>\$ -</u>
Total Deferred Inflows of Resources	<u>\$ 1,080,903</u>	<u>\$ 44,526</u>	<u>\$ 187,414</u>	<u>\$ 662,451</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 2,362,953	\$ 85,313	\$ 75,829	\$ 2,434,038
Net Amortization of Deferred Amounts from Changes in Proportion	<u>\$ (292,919)</u>	<u>\$ 5,240</u>	<u>\$ (57,772)</u>	<u>\$ 139,611</u>
Total Pension Expense	<u>\$ 2,070,034</u>	<u>\$ 90,553</u>	<u>\$ 18,057</u>	<u>\$ 2,573,649</u>
Covered Payroll	\$ 5,198,182	\$ 217,840	\$ 302,831	\$ 6,631,003

(Continued)

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	Lunenburg Housing Authority	Lunenburg Water District	Mendon	Mendon- Upton Regional
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 21,922	\$ 813,691	\$ 9,263,226	\$ 11,556,024
Ending Net Pension Liability	\$ 24,838	\$ 847,486	\$ 9,537,500	\$ 11,375,272
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 73	\$ 2,489	\$ 28,007	\$ 33,404
Assumption Changes	\$ 1,388	\$ 47,368	\$ 533,071	\$ 635,788
Change in Allocated Proportion	\$ 2,530	\$ 56,750	\$ 637,884	\$ 198,765
Total Deferred Outflows of Resources	<u>\$ 3,991</u>	<u>\$ 106,607</u>	<u>\$ 1,198,962</u>	<u>\$ 867,957</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 149	\$ 5,078	\$ 57,143	\$ 68,153
Net Difference Between Projected and Actual Investment Earnings	\$ 682	\$ 23,278	\$ 261,963	\$ 312,440
Change in Allocated Proportion	\$ 22,415	\$ 57,409	\$ 24,395	\$ 64,586
Total Deferred Inflows of Resources	<u>\$ 23,246</u>	<u>\$ 85,765</u>	<u>\$ 343,501</u>	<u>\$ 445,179</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 3,053	\$ 104,185	\$ 1,172,487	\$ 1,398,413
Net Amortization of Deferred Amounts from Changes in Proportion	\$ (9,845)	\$ (22,057)	\$ 209,182	\$ 94,991
Total Pension Expense	<u>\$ (6,792)</u>	<u>\$ 82,128</u>	<u>\$ 1,381,669</u>	<u>\$ 1,493,404</u>
Covered Payroll	\$ 50,813	\$ 331,155	\$ 2,955,933	\$ 4,535,477

(Continued)

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	<u>Millbury</u>	<u>Millbury Housing Authority</u>	<u>Millville</u>	<u>Narragansett Regional</u>
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 28,487,717	\$ 1,473,667	\$ 2,510,162	\$ 6,033,789
Ending Net Pension Liability	\$ 26,716,835	\$ 1,413,671	\$ 2,655,377	\$ 5,840,976
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 78,455	\$ 4,151	\$ 7,798	\$ 17,152
Assumption Changes	\$ 1,493,260	\$ 79,013	\$ 148,415	\$ 326,464
Change in Allocated Proportion	\$ 112,309	\$ 8,974	\$ 391,661	\$ -
Total Deferred Outflows of Resources	<u>\$ 1,684,024</u>	<u>\$ 92,138</u>	<u>\$ 547,874</u>	<u>\$ 343,616</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 160,070	\$ 8,470	\$ 15,909	\$ 34,995
Net Difference Between Projected and Actual Investment Earnings	\$ 733,821	\$ 38,829	\$ 72,934	\$ 160,432
Change in Allocated Proportion	\$ 1,260,841	\$ 29,964	\$ 92,564	\$ 209,079
Total Deferred Inflows of Resources	<u>\$ 2,154,732</u>	<u>\$ 77,263</u>	<u>\$ 181,407</u>	<u>\$ 404,506</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 3,284,419	\$ 173,789	\$ 326,437	\$ 718,057
Net Amortization of Deferred Amounts from Changes in Proportion	\$ (466,592)	\$ 2,312	\$ 153,405	\$ (92,410)
Total Pension Expense	<u>\$ 2,817,827</u>	<u>\$ 176,101</u>	<u>\$ 479,842</u>	<u>\$ 625,647</u>
Covered Payroll	\$ 7,513,228	\$ 442,544	\$ 716,932	\$ 2,546,348

(Continued)

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	Nashoba Regional	Nashoba Valley Dispatchers	New Braintree	Northboro
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 15,947,398	\$ 277,902	\$ 821,688	\$ 30,730,253
Ending Net Pension Liability	\$ 15,201,248	\$ 569,971	\$ 843,101	\$ 30,976,459
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 44,639	\$ 1,674	\$ 2,476	\$ 90,963
Assumption Changes	\$ 849,630	\$ 31,857	\$ 47,123	\$ 1,731,339
Change in Allocated Proportion	\$ 645,110	\$ 379,299	\$ 49,299	\$ 936,604
Total Deferred Outflows of Resources	<u>\$ 1,539,379</u>	<u>\$ 412,830</u>	<u>\$ 98,898</u>	<u>\$ 2,758,906</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 91,076	\$ 3,415	\$ 5,051	\$ 185,591
Net Difference Between Projected and Actual Investment Earnings	\$ 417,527	\$ 15,655	\$ 23,157	\$ 850,819
Change in Allocated Proportion	\$ 672,737	\$ -	\$ 137,480	\$ 161,407
Total Deferred Inflows of Resources	<u>\$ 1,181,340</u>	<u>\$ 19,070</u>	<u>\$ 165,688</u>	<u>\$ 1,197,817</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 1,868,757	\$ 70,069	\$ 103,646	\$ 3,808,073
Net Amortization of Deferred Amounts from Changes in Proportion	\$ (125,396)	\$ 86,584	\$ (25,088)	\$ 65,292
Total Pension Expense	<u>\$ 1,743,361</u>	<u>\$ 156,653</u>	<u>\$ 78,558</u>	<u>\$ 3,873,365</u>
Covered Payroll	\$ 6,423,956	\$ 700,123	\$ 227,593	\$ 11,378,045

(Continued)

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	Northboro Housing Authority	Northboro- Southboro Regional	North Brookfield	North Brookfield Housing Authority
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 1,014,964	\$ 5,759,925	\$ 6,908,832	\$ 297,137
Ending Net Pension Liability	\$ 991,865	\$ 5,783,903	\$ 7,545,320	\$ 236,991
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 2,913	\$ 16,985	\$ 22,157	\$ 696
Assumption Changes	\$ 55,437	\$ 323,274	\$ 421,724	\$ 13,246
Change in Allocated Proportion	\$ 42,701	\$ 343,186	\$ 593,589	\$ 10,006
Total Deferred Outflows of Resources	<u>\$ 101,051</u>	<u>\$ 683,445</u>	<u>\$ 1,037,470</u>	<u>\$ 23,948</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 5,943	\$ 34,653	\$ 45,207	\$ 1,420
Net Difference Between Projected and Actual Investment Earnings	\$ 27,243	\$ 158,864	\$ 207,244	\$ 6,509
Change in Allocated Proportion	\$ 4,599	\$ 121,347	\$ 178,845	\$ 41,709
Total Deferred Inflows of Resources	<u>\$ 37,785</u>	<u>\$ 314,864</u>	<u>\$ 431,296</u>	<u>\$ 49,638</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 121,934	\$ 711,041	\$ 927,580	\$ 29,134
Net Amortization of Deferred Amounts from Changes in Proportion	\$ 27,807	\$ 5,040	\$ 20,730	\$ (3,565)
Total Pension Expense	<u>\$ 149,741</u>	<u>\$ 716,081</u>	<u>\$ 948,310</u>	<u>\$ 25,569</u>
Covered Payroll	\$ 400,712	\$ 2,738,955	\$ 2,620,007	\$ 60,389

(Continued)

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	<u>Oakham</u>	<u>Oxford</u>	<u>Oxford Housing Authority</u>	<u>Oxford- Rochdale Sewer District</u>
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 1,044,606	\$ 31,084,736	\$ 939,686	\$ 479,925
Ending Net Pension Liability	\$ 1,037,009	\$ 28,976,151	\$ 1,107,371	\$ 496,715
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 3,045	\$ 85,090	\$ 3,252	\$ 1,459
Assumption Changes	\$ 57,961	\$ 1,619,538	\$ 61,893	\$ 27,762
Change in Allocated Proportion	<u>\$ 8,818</u>	<u>\$ 291,306</u>	<u>\$ 150,441</u>	<u>\$ 86,155</u>
Total Deferred Outflows of Resources	<u>\$ 69,824</u>	<u>\$ 1,995,934</u>	<u>\$ 215,586</u>	<u>\$ 115,376</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 6,213	\$ 173,606	\$ 6,635	\$ 2,976
Net Difference Between Projected and Actual Investment Earnings	\$ 28,483	\$ 795,877	\$ 30,416	\$ 13,643
Change in Allocated Proportion	<u>\$ 111,453</u>	<u>\$ 2,461,130</u>	<u>\$ 10,325</u>	<u>\$ -</u>
Total Deferred Inflows of Resources	<u>\$ 146,149</u>	<u>\$ 3,430,613</u>	<u>\$ 47,376</u>	<u>\$ 16,619</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 127,484	\$ 3,562,167	\$ 136,134	\$ 61,063
Net Amortization of Deferred Amounts from Changes in Proportion	<u>\$ (64,396)</u>	<u>\$ (776,538)</u>	<u>\$ 32,804</u>	<u>\$ 32,990</u>
Total Pension Expense	<u>\$ 63,088</u>	<u>\$ 2,785,629</u>	<u>\$ 168,938</u>	<u>\$ 94,053</u>
Covered Payroll	\$ 262,901	\$ 8,279,284	\$ 347,433	\$ 162,681

(Continued)

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	<u>Paxton</u>	<u>Petersham</u>	<u>Phillipston</u>	<u>Princeton</u>
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 10,656,827	\$ 2,465,308	\$ 2,003,820	\$ 5,765,349
Ending Net Pension Liability	\$ 11,199,960	\$ 2,316,549	\$ 1,994,665	\$ 5,323,503
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 32,889	\$ 6,803	\$ 5,857	\$ 15,633
Assumption Changes	\$ 625,989	\$ 129,477	\$ 111,486	\$ 297,542
Change in Allocated Proportion	<u>\$ 1,225,847</u>	<u>\$ -</u>	<u>\$ 70,867</u>	<u>\$ 82,111</u>
Total Deferred Outflows of Resources	<u>\$ 1,884,725</u>	<u>\$ 136,280</u>	<u>\$ 188,210</u>	<u>\$ 395,286</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 67,103	\$ 13,879	\$ 11,951	\$ 31,895
Net Difference Between Projected and Actual Investment Earnings	\$ 307,625	\$ 63,628	\$ 54,787	\$ 146,219
Change in Allocated Proportion	<u>\$ 99,382</u>	<u>\$ 308,071</u>	<u>\$ 21,623</u>	<u>\$ 648,309</u>
Total Deferred Inflows of Resources	<u>\$ 474,110</u>	<u>\$ 385,578</u>	<u>\$ 88,361</u>	<u>\$ 826,423</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 1,376,861	\$ 284,784	\$ 245,213	\$ 654,442
Net Amortization of Deferred Amounts from Changes in Proportion	<u>\$ 276,136</u>	<u>\$ (234,304)</u>	<u>\$ 48,904</u>	<u>\$ (292,008)</u>
Total Pension Expense	<u>\$ 1,652,997</u>	<u>\$ 50,480</u>	<u>\$ 294,117</u>	<u>\$ 362,434</u>
Covered Payroll	\$ 3,474,575	\$ 596,575	\$ 535,100	\$ 1,816,387

(Continued)

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	<u>Quabbin Regional</u>	<u>Quaboag Regional</u>	<u>Royalston</u>	<u>Rutland</u>
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 15,666,971	\$ 5,381,924	\$ 854,229	\$ 9,111,498
Ending Net Pension Liability	\$ 15,141,734	\$ 5,331,865	\$ 813,044	\$ 9,059,571
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 44,464	\$ 15,657	\$ 2,388	\$ 26,604
Assumption Changes	\$ 846,303	\$ 298,009	\$ 45,443	\$ 506,358
Change in Allocated Proportion	<u>\$ 146,560</u>	<u>\$ 37,104</u>	<u>\$ 41,018</u>	<u>\$ 506,233</u>
Total Deferred Outflows of Resources	<u>\$ 1,037,327</u>	<u>\$ 350,770</u>	<u>\$ 88,849</u>	<u>\$ 1,039,195</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 90,720	\$ 31,945	\$ 4,871	\$ 54,279
Net Difference Between Projected and Actual Investment Earnings	\$ 415,892	\$ 146,448	\$ 22,332	\$ 248,836
Change in Allocated Proportion	<u>\$ 616,220</u>	<u>\$ 91,403</u>	<u>\$ 49,391</u>	<u>\$ 177,359</u>
Total Deferred Inflows of Resources	<u>\$ 1,122,832</u>	<u>\$ 269,796</u>	<u>\$ 76,594</u>	<u>\$ 480,474</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 1,861,440	\$ 655,470	\$ 99,951	\$ 1,113,733
Net Amortization of Deferred Amounts from Changes in Proportion	<u>\$ (232,859)</u>	<u>\$ (58,016)</u>	<u>\$ 24,561</u>	<u>\$ 4,647</u>
Total Pension Expense	<u>\$ 1,628,581</u>	<u>\$ 597,454</u>	<u>\$ 124,512</u>	<u>\$ 1,118,380</u>
Covered Payroll	\$ 4,827,495	\$ 2,365,005	\$ 254,511	\$ 3,586,382

(Continued)

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	<u>Southboro</u>	<u>Southboro Housing Authority</u>	<u>Spencer</u>	<u>Spencer- East Brookfield Regional</u>
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 28,943,244	\$ 239,384	\$ 13,691,523	\$ 9,389,254
Ending Net Pension Liability	\$ 28,636,460	\$ 231,509	\$ 12,891,307	\$ 8,854,727
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 84,092	\$ 680	\$ 37,856	\$ 26,002
Assumption Changes	\$ 1,600,552	\$ 12,940	\$ 720,522	\$ 494,909
Change in Allocated Proportion	\$ 336,228	\$ -	\$ 286,632	\$ 20,828
Total Deferred Outflows of Resources	<u>\$ 2,020,872</u>	<u>\$ 13,620</u>	<u>\$ 1,045,010</u>	<u>\$ 541,739</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 171,571	\$ 1,387	\$ 77,236	\$ 53,052
Net Difference Between Projected and Actual Investment Earnings	\$ 786,547	\$ 6,359	\$ 354,081	\$ 243,209
Change in Allocated Proportion	\$ 84,331	\$ 20,249	\$ 520,800	\$ 308,877
Total Deferred Inflows of Resources	<u>\$ 1,042,449</u>	<u>\$ 27,995</u>	<u>\$ 952,117</u>	<u>\$ 605,138</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 3,520,407	\$ 28,460	\$ 1,584,785	\$ 1,088,551
Net Amortization of Deferred Amounts from Changes in Proportion	<u>\$ 6,653</u>	<u>\$ (11,459)</u>	<u>\$ (93,097)</u>	<u>\$ (83,667)</u>
Total Pension Expense	<u>\$ 3,527,060</u>	<u>\$ 17,001</u>	<u>\$ 1,491,688</u>	<u>\$ 1,004,884</u>
Covered Payroll	\$ 9,585,231	\$ 96,425	\$ 4,085,106	\$ 2,990,038

(Continued)

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	<u>Spencer Housing Authority</u>	<u>Sterling</u>	<u>Sterling Housing Authority</u>	<u>Sturbridge</u>
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 645,513	\$ 15,141,492	\$ 144,122	\$ 20,776,741
Ending Net Pension Liability	\$ 674,103	\$ 15,871,755	\$ 79,630	\$ 20,043,825
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 1,980	\$ 46,608	\$ 234	\$ 58,859
Assumption Changes	\$ 37,677	\$ 887,106	\$ 4,451	\$ 1,120,291
Change in Allocated Proportion	<u>\$ 48,928</u>	<u>\$ 929,972</u>	<u>\$ 5,284</u>	<u>\$ 457,656</u>
Total Deferred Outflows of Resources	<u>\$ 88,585</u>	<u>\$ 1,863,686</u>	<u>\$ 9,969</u>	<u>\$ 1,636,806</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 4,039	\$ 95,093	\$ 477	\$ 120,090
Net Difference Between Projected and Actual Investment Earnings	\$ 18,515	\$ 435,944	\$ 2,187	\$ 550,536
Change in Allocated Proportion	<u>\$ 19,064</u>	<u>\$ 115,532</u>	<u>\$ 48,710</u>	<u>\$ 422,199</u>
Total Deferred Inflows of Resources	<u>\$ 41,618</u>	<u>\$ 646,569</u>	<u>\$ 51,374</u>	<u>\$ 1,092,825</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 82,871	\$ 1,951,185	\$ 9,789	\$ 2,464,076
Net Amortization of Deferred Amounts from Changes in Proportion	<u>\$ 14,078</u>	<u>\$ 114,648</u>	<u>\$ (6,358)</u>	<u>\$ 44,547</u>
Total Pension Expense	<u>\$ 96,949</u>	<u>\$ 2,065,833</u>	<u>\$ 3,431</u>	<u>\$ 2,508,623</u>
Covered Payroll	\$ 299,535	\$ 4,900,421	\$ 54,408	\$ 7,398,242

(Continued)

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	Sutton	Tantasqua Regional	Templeton	Templeton Housing Authority
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 17,374,370	\$ 10,228,466	\$ 12,012,202	\$ 654,568
Ending Net Pension Liability	\$ 17,316,712	\$ 10,353,847	\$ 11,664,176	\$ 628,886
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 50,851	\$ 30,404	\$ 34,252	\$ 1,847
Assumption Changes	\$ 967,867	\$ 578,698	\$ 651,935	\$ 35,150
Change in Allocated Proportion	\$ 311,611	\$ 307,985	\$ 36,067	\$ -
Total Deferred Outflows of Resources	<u>\$ 1,330,329</u>	<u>\$ 917,087</u>	<u>\$ 722,254</u>	<u>\$ 36,997</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 103,751	\$ 62,034	\$ 69,884	\$ 3,768
Net Difference Between Projected and Actual Investment Earnings	\$ 475,632	\$ 284,385	\$ 320,376	\$ 17,273
Change in Allocated Proportion	\$ 265,618	\$ 64,322	\$ 606,890	\$ 46,799
Total Deferred Inflows of Resources	<u>\$ 845,001</u>	<u>\$ 410,741</u>	<u>\$ 997,150</u>	<u>\$ 67,840</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 2,128,820	\$ 1,272,844	\$ 1,433,929	\$ 77,312
Net Amortization of Deferred Amounts from Changes in Proportion	\$ (197,718)	\$ 37,038	\$ (427,948)	\$ (30,282)
Total Pension Expense	<u>\$ 1,931,102</u>	<u>\$ 1,309,882</u>	<u>\$ 1,005,981</u>	<u>\$ 47,030</u>
Covered Payroll	\$ 6,599,368	\$ 3,832,614	\$ 3,579,056	\$ 90,498

(Continued)

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	<u>Upton</u>	<u>Uxbridge</u>	<u>Uxbridge Housing Authority</u>	<u>Wachusett Regional</u>
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 9,188,095	\$ 28,171,996	\$ 775,645	\$ 29,739,068
Ending Net Pension Liability	\$ 9,190,164	\$ 27,013,078	\$ 781,905	\$ 27,581,353
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 26,987	\$ 79,325	\$ 2,296	\$ 80,994
Assumption Changes	\$ 513,658	\$ 1,509,818	\$ 43,702	\$ 1,541,580
Change in Allocated Proportion	<u>\$ 440,131</u>	<u>\$ 204,067</u>	<u>\$ 36,777</u>	<u>\$ 1,309,533</u>
Total Deferred Outflows of Resources	<u>\$ 980,776</u>	<u>\$ 1,793,210</u>	<u>\$ 82,775</u>	<u>\$ 2,932,107</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 55,062	\$ 161,845	\$ 4,685	\$ 165,250
Net Difference Between Projected and Actual Investment Earnings	\$ 252,423	\$ 741,958	\$ 21,476	\$ 757,567
Change in Allocated Proportion	<u>\$ 177,510</u>	<u>\$ 935,367</u>	<u>\$ 80,054</u>	<u>\$ 1,847,768</u>
Total Deferred Inflows of Resources	<u>\$ 484,995</u>	<u>\$ 1,839,170</u>	<u>\$ 106,215</u>	<u>\$ 2,770,585</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 1,129,788	\$ 3,320,837	\$ 96,123	\$ 3,390,698
Net Amortization of Deferred Amounts from Changes in Proportion	<u>\$ (49,327)</u>	<u>\$ (232,498)</u>	<u>\$ (8,644)</u>	<u>\$ (204,501)</u>
Total Pension Expense	<u>\$ 1,080,461</u>	<u>\$ 3,088,339</u>	<u>\$ 87,479</u>	<u>\$ 3,186,197</u>
Covered Payroll	\$ 3,654,382	\$ 8,380,293	\$ 183,302	\$ 12,057,098

(Continued)

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	Warren	Warren Water District	Westboro	Westboro Housing Authority
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 5,844,829	\$ 249,873	\$ 61,081,055	\$ 600,838
Ending Net Pension Liability	\$ 5,370,445	\$ 259,841	\$ 59,225,365	\$ 682,568
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 15,771	\$ 763	\$ 173,914	\$ 2,004
Assumption Changes	\$ 300,165	\$ 14,523	\$ 3,310,230	\$ 38,150
Change in Allocated Proportion	\$ 244,076	\$ 30,189	\$ 426,348	\$ 89,233
Total Deferred Outflows of Resources	<u>\$ 560,012</u>	<u>\$ 45,475</u>	<u>\$ 3,910,492</u>	<u>\$ 129,387</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 32,176	\$ 1,557	\$ 354,839	\$ 4,090
Net Difference Between Projected and Actual Investment Earnings	\$ 147,508	\$ 7,137	\$ 1,626,725	\$ 18,748
Change in Allocated Proportion	\$ 335,173	\$ 1,958	\$ 571,598	\$ 2,422
Total Deferred Inflows of Resources	<u>\$ 514,857</u>	<u>\$ 10,652</u>	<u>\$ 2,553,162</u>	<u>\$ 25,260</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 660,213	\$ 31,943	\$ 7,280,834	\$ 83,911
Net Amortization of Deferred Amounts from Changes in Proportion	\$ 22,791	\$ 12,214	\$ 188,384	\$ 20,946
Total Pension Expense	<u>\$ 683,004</u>	<u>\$ 44,157</u>	<u>\$ 7,469,218</u>	<u>\$ 104,857</u>
Covered Payroll	\$ 1,369,050	\$ 90,283	\$ 20,874,707	\$ 205,236

(Continued)

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	<u>West Boylston</u>	<u>West Boylston Housing Authority</u>	<u>West Boylston Water District</u>	<u>West Brookfield</u>
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 18,863,118	\$ 169,139	\$ 829,001	\$ 4,215,036
Ending Net Pension Liability	\$ 19,082,339	\$ 79,601	\$ 956,472	\$ 4,206,103
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 56,036	\$ 234	\$ 2,809	\$ 12,351
Assumption Changes	\$ 1,066,552	\$ 4,449	\$ 53,459	\$ 235,088
Change in Allocated Proportion	<u>\$ 545,025</u>	<u>\$ 3,583</u>	<u>\$ 116,749</u>	<u>\$ 73,081</u>
Total Deferred Outflows of Resources	<u>\$ 1,667,613</u>	<u>\$ 8,266</u>	<u>\$ 173,017</u>	<u>\$ 320,520</u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 114,329	\$ 477	\$ 5,731	\$ 25,200
Net Difference Between Projected and Actual Investment Earnings	\$ 524,127	\$ 2,186	\$ 26,271	\$ 115,527
Change in Allocated Proportion	<u>\$ 240,144</u>	<u>\$ 76,348</u>	<u>\$ 32,065</u>	<u>\$ 145,127</u>
Total Deferred Inflows of Resources	<u>\$ 878,600</u>	<u>\$ 79,011</u>	<u>\$ 64,067</u>	<u>\$ 285,854</u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 2,345,876	\$ 9,786	\$ 117,583	\$ 517,075
Net Amortization of Deferred Amounts from Changes in Proportion	<u>\$ (73,703)</u>	<u>\$ (15,661)</u>	<u>\$ (5,756)</u>	<u>\$ (112,581)</u>
Total Pension Expense	<u>\$ 2,272,173</u>	<u>\$ (5,875)</u>	<u>\$ 111,827</u>	<u>\$ 404,494</u>
Covered Payroll	\$ 5,166,400	\$ 23,622	\$ 382,367	\$ 1,157,128

(Continued)

**WORCESTER REGIONAL RETIREMENT SYSTEM
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER
YEAR ENDED DECEMBER 31, 2019**

	<u>Westminster</u>	<u>Winchendon</u>	<u>Winchendon Housing Authority</u>	<u>Totals</u>
<u>Net Pension Liability</u>				
Beginning Net Pension Liability	\$ 13,225,312	\$ 22,925,807	\$ 1,509,758	\$ 906,762,192
Ending Net Pension Liability	\$ 12,673,847	\$ 22,941,749	\$ 1,698,861	\$ 890,129,991
<u>Deferred Outflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 37,217	\$ 67,369	\$ 4,989	\$ 2,613,899
Assumption Changes	\$ 708,368	\$ 1,282,262	\$ 94,953	\$ 49,751,234
Change in Allocated Proportion	<u>\$ 171,866</u>	<u>\$ 398,290</u>	<u>\$ 230,262</u>	<u>\$ 29,879,069</u>
Total Deferred Outflows of Resources	<u><u>\$ 917,451</u></u>	<u><u>\$ 1,747,921</u></u>	<u><u>\$ 330,204</u></u>	<u><u>\$ 82,244,202</u></u>
<u>Deferred Inflows of Resources</u>				
Net Difference Between Expected and Actual Experience	\$ 75,934	\$ 137,452	\$ 10,178	\$ 5,333,087
Net Difference Between Projected and Actual Investment Earnings	\$ 348,108	\$ 630,132	\$ 46,662	\$ 24,448,867
Change in Allocated Proportion	<u>\$ 242,483</u>	<u>\$ 784,623</u>	<u>\$ 3</u>	<u>\$ 29,879,069</u>
Total Deferred Inflows of Resources	<u><u>\$ 666,525</u></u>	<u><u>\$ 1,552,207</u></u>	<u><u>\$ 56,843</u></u>	<u><u>\$ 59,661,023</u></u>
<u>Pension Expense</u>				
Proportionate Share of Pension Expense	\$ 1,558,052	\$ 2,820,331	\$ 208,849	\$ 109,427,624
Net Amortization of Deferred Amounts from Changes in Proportion	<u>\$ 100,497</u>	<u>\$ (245,654)</u>	<u>\$ 70,973</u>	<u>\$ -</u>
Total Pension Expense	<u><u>\$ 1,658,549</u></u>	<u><u>\$ 2,574,677</u></u>	<u><u>\$ 279,822</u></u>	<u><u>\$ 109,427,624</u></u>
Covered Payroll	\$ 3,904,499	\$ 6,534,548	\$ 584,661	\$ 301,686,927

(Concluded)

**WORCESTER REGIONAL RETIREMENT SYSTEM
NOTES TO SCHEDULES
DECEMBER 31, 2019**

NOTE 1 DESCRIPTION OF THE ENTITY

The Worcester Regional Retirement System (System) was established to provide retirement benefits to eligible employees of its member employers. The System is governed by a five-member board comprised of the Chairman/Chief Executive Officer, who serves ex-officio and is appointed by the other members of the board; two members who are elected by the participants in or retired from the services of the System; a fourth member appointed by the member employers; and a fifth member appointed by the other members of the board.

The System issued a publicly available audited financial statement for the year ended December 31, 2019. A copy may be obtained by submitting a request to the System's Chairman/Chief Executive Officer at 23 Midstate Drive, Suite 106, Auburn, Massachusetts 01501.

Plan Description

The System is a cost-sharing multiple-employer public employee retirement system established in 1937, under Massachusetts General Laws (MGL), Chapter 32, and is regulated by the Massachusetts Public Employee Retirement Administration Commission (PERAC). The System is a defined benefit pension plan that covers eligible employees of its member employers.

Membership

Membership in the System is mandatory immediately upon the commencement of employment for all permanent full-time employees working at least 20 hours weekly, except for school teachers and school administrators who participate in the Massachusetts Teachers' Retirement System.

Benefits

Benefit provisions and state law establishes contribution requirements of the System. Members of the System become vested after 10 years of creditable service. Normal retirement occurs at age 65 (age 67 if hired on or after April 2, 2012), except for certain public safety employees and other special situations.

For employees hired prior to April 2, 2012, the annual amount of the retirement allowance is based on the member's final three-year average salary multiplied by (1) the number of years and full months of creditable service at the time of retirement and (2) a percentage based on age at retirement in accordance with a schedule provided by state law. Assuming normal retirement at age 65, this percentage is 2.5%, which is reduced for individuals who retire prior to age 65 to reflect the longer pay out period. A member's final three-year average salary is defined as the greater of the highest consecutive three-year average annual rate of regular compensation and the average annual rate of regular compensation received during the last three years of creditable service prior to retirement.

**WORCESTER REGIONAL RETIREMENT SYSTEM
NOTES TO SCHEDULES
DECEMBER 31, 2019**

NOTE 1 DESCRIPTION OF THE ENTITY (CONTINUED)

Benefits (Continued)

For employees hired on or after April 2, 2012, the annual amount of the retirement allowance is based on the member's final five-year average salary multiplied by (1) the number of years and full months of creditable service at the time of retirement and (2) a percentage based on age at retirement in accordance with a schedule provided by state law. Assuming normal retirement at age 67, this percentage is 2.5%. A member's final five-year average salary is defined as the greater of the highest consecutive five-year average annual rate of regular compensation and the average annual rate of regular compensation received during the last five years of creditable service prior to retirement.

Employees hired before April 2, 2012 may elect early retirement after 20 years of service or at any time after attaining age 55 with 10 years of eligible service. Plan members who become permanently and totally disabled may be eligible to receive a disability retirement allowance. The amount of benefits to be received depends on several factors, including the member's age, compensation, veteran status, years of service, and whether or not the disability is work-related. In addition, certain death benefits exist for beneficiaries of employees who die in active service.

Under MGL, c.32 Section 3(8)(c), members leaving a member employer to work for other Massachusetts governmental units requires the System transfer their accumulated account balances and creditable service to the retirement system of their new employer. Other such retirement systems are in turn required to make comparable transfers to the System for employees coming to work at a member employer of the System. Per statute, the PERAC actuary shall consider length of service as well as acceptance of military service credit and salary cap provisions if applicable in calculating the liability.

Contributions

Chapter 32 of MGL governs the contributions of plan members and member employers. Depending on their employment date, active System members must contribute anywhere between 5%-9% of their gross regular compensation. Members hired after December 31, 1978 must contribute an additional 2% of regular compensation in excess of \$30,000. Employees in Group 1 hired on or after April 2, 2012 with 30 years of creditable service or greater will pay a base contribution rate of 6%. These deductions earn interest at a rate determined by PERAC that vests based upon years of service. Employers are required to pay into the System its share of the system-wide actuarial determined contribution, in accordance with Chapter 32, Section 22D of MGL, apportioned among the employers based on annual employer normal cost and amortization payments to pay the unfunded actuarial accrued liability.

Except for a portion of benefits owed due to cost-of-living adjustments (COLA's) granted through June 30, 1998, member employers are required to contribute the remaining amounts necessary to finance benefits. Member employer contributions are determined by actuarial valuations.

**WORCESTER REGIONAL RETIREMENT SYSTEM
NOTES TO SCHEDULES
DECEMBER 31, 2019**

NOTE 1 DESCRIPTION OF THE ENTITY (CONTINUED)

Contributions (Continued)

COLA's granted through June 30, 1998 are reimbursed by the Commonwealth of Massachusetts (the Commonwealth). COLA's granted subsequent to June 30, 1998 must be granted by the Board and are the responsibility of the System. COLA's may be approved in excess of the Consumer Price Index but not to exceed 3% of the base retirement allowance.

NOTE 2 ACTUARIAL ASSUMPTIONS AND METHODS

The total pension liability was determined by an actuarial valuation as of January 1, 2018, using the following actuarial assumptions, applied to all periods included in the measurement that was updated to December 31, 2019:

Amortization method:	Payment increases 4.0% per year
Remaining amortization period:	17 years, except for ERI for 2002 and 2003 (10 years) and 2010 (4 years)
Asset valuation method:	Market value
Inflation:	2.4% per year
Salary increases:	Group 1: 4.25-6.00%, based on service Group 4: 4.75-7.00%, based on service
Investment rate of return:	7.65%, net of pension plan investment expense, including inflation
Mortality rates:	Based on the RP-2000 Mortality Table (base year 2009) with full generational mortality improvement using Scale BB. For disabled lives, the mortality rates were based on the RP-2000 Mortality Table (base year 2012) with full generational mortality improvement using Scale BB.

**WORCESTER REGIONAL RETIREMENT SYSTEM
NOTES TO SCHEDULES
DECEMBER 31, 2019**

NOTE 3 NET PENSION LIABILITY

The components of the net pension liability of the System at December 31, 2019, were as follows:

Total Pension Liability	\$ 1,690,869,266
Plan Fiduciary Net Position	<u>(800,739,275)</u>
Net Pension Liability	<u>\$ 890,129,991</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	47.36%

The total pension liability is calculated by the System's actuary and plan fiduciary net position is reported in the System's financial statements. The net pension liability is disclosed in accordance with the requirements of Governmental Accounting Standards Board (GASB) Statement No. 67 in the System's notes to financial statements and required supplementary information.

Discount Rate

The discount rate used to measure the total pension liability was 7.65%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rates and that member employer contributions will be made in accordance with Sections 22D and 22F of Chapter 32 of the Massachusetts General Laws. Based on those assumptions, the System's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Long-Term Expected Rate of Return

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of December 31, 2019 are summarized in the following table:

Asset Class	Target Allocation (%)	Long-Term Expected Rate of Return (%)
Global Equity	39.00	4.68
Fixed Income	23.00	1.90
Private Equity	13.00	8.50
Real Estate	10.00	3.70
Timber/Natural Resources	4.00	4.30
Portfolio Completion Strategies	11.00	3.40

**WORCESTER REGIONAL RETIREMENT SYSTEM
NOTES TO SCHEDULES
DECEMBER 31, 2019**

NOTE 3 NET PENSION LIABILITY (CONTINUED)

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability of the System calculated using the discount rate of 7.65%, as well as what the System's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.65%) or 1-percentage-point higher (8.65%) than the current rate:

	1% Decrease (6.75%)	Current Discount Rate (7.75%)	1% Increase (8.75%)
Net Pension Liability	\$1,086,190,376	\$ 890,129,991	\$ 724,562,579

NOTE 4 DEFERRED INFLOWS OF RESOURCES AND DEFERRED OUTFLOWS OF RESOURCES

The following schedule reflects the amortization of the balance of deferred inflows of resources and deferred outflows of resources at December 31, 2019:

<u>Measurement Period Ending December 31,</u>	<u>Amount</u>
2020	\$ 16,620,438
2021	8,393,991
2022	4,612,975
2023	(9,608,282)
2024	2,564,057
Thereafter	-

NOTE 5 EMPLOYER CONTRIBUTIONS

Employers' proportionate shares were calculated on the basis of actual employer contributions for the year ended December 31, 2019. Although GASB Statement No. 68 encourages the use of the employer's projected long-term contribution effort to the System, allocating on the basis of historical employer contributions is considered acceptable.

NOTE 6 ADDITIONAL FINANCIAL AND ACTUARIAL INFORMATION

Information contained in these Notes to Schedules was extracted from the audited financial statements of the System for the year ended December 31, 2019. Additional financial information supporting the preparation of the Schedules (including the unqualified audit opinion on the financial statements and required supplementary information) is located in the audited financial statements of the System for the year ended December 31, 2019. A copy may be obtained by submitting a request to the System's Chairman/Chief Executive Officer at 23 Midstate Drive, Suite 106, Auburn, Massachusetts 01501.

