WORCESTER REGIONAL RETIREMENT SYSTEM

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

YEAR ENDED DECEMBER 31, 2020



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WORCESTER REGIONAL RETIREMENT SYSTEM TABLE OF CONTENTS YEAR ENDED DECEMBER 31, 2020

INDEPENDENT AUDITORS' REPORT	1
SCHEDULE OF EMPLOYER ALLOCATIONS	3
SCHEDULE OF PENSION AMOUNTS BY EMPLOYER	6
NOTES TO SCHEDULES	32



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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, 2020, 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, 2020 and the beginning net pension liability, as of and for the year ended December 31, 2020 and the beginning net pension liability, as of and for the year ended December 31, 2019 (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 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.



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, 2020 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, 2020 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, 2019, 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, 2020, and our report thereon, dated October 13, 2021, 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.

Clifton Larson Allen LLP

CliftonLarsonAllen LLP

Boston, Massachusetts October 13, 2021

WORCESTER REGIONAL RETIREMENT SYSTEM SCHEDULE OF EMPLOYER ALLOCATIONS YEAR ENDED DECEMBER 31, 2020

Employer	Employer Contributions	Employer Allocation Percentage		
Ashburnham	\$ 880,527	1.308963%		
Ashburnham-Westminster Regional	725,901	1.079101%		
Athol	1,633,931	2.428950%		
Athol Housing Authority	38,518	0.057260%		
Athol-Royalston Regional	621,513	0.923921%		
Auburn	3,559,783	5.291860%		
Auburn Housing Authority	70,867	0.105349%		
Auburn Water District	101,938	0.151538%		
Barre	357,853	0.531973%		
Barre Housing Authority	20,935	0.031121%		
Berlin	533,288	0.792769%		
Berlin-Boylston Regional	178,269	0.265009%		
Blackstone	928,294	1.379972%		
Blackstone Housing Authority	19,306	0.028700%		
Blackstone-Millville Regional	581,897	0.865030%		
Bolton	520,648	0.773979%		
Boylston	723,109	1.074951%		
Boylston Water District	13,583	0.020192%		
Brookfield	314,618	0.467701%		
Charlton	1,491,343	2.216983%		
Cherry Valley-Rochdale Water	60,980	0.090651%		
Douglas	1,192,372	1.772542%		
Dudley	955,135	1.419873%		
Dudley Housing Authority	17,758	0.026398%		
Dudley-Charlton Regional	1,129,966	1.679772%		
East Brookfield	169,117	0.251404%		
Grafton	2,074,425	3.083774%		
Grafton Housing Authority	56,940	0.084645%		
Hardwick	210,913	0.313537%		
Harvard	1,001,439	1.488707%		
Hillcrest Water District	3,994	0.005937%		
Holden	2,391,040	3.554444%		
Holden Housing Authority	36,390	0.054096%		
Hopedale	1,067,572	1.587019%		
Hopedale Housing Authority	5,723	0.008508%		
Hubbardston	273,567	0.406676%		
Lancaster	728,019	1.082250%		
Lancaster Housing Authority	17,401	0.025868%		
Lancaster Sewer	2,172	0.003229%		
Leicester	1,456,243	2.164805%		
Leicester Housing Authority	52,455	0.077978%		
Leicester Water District	53,115	0.078959%		
Lunenburg	1,502,144	2.233040%		
Lunenburg Housing Authority	1,816	0.002700%		
Lunenburg Water District	66,460	0.098797%		
Mendon	717,711	1.066926%		
Mendon-Upton Regional	855,158	1.271251%		
Millbury	2,027,136	3.013476%		
Nillion y	2,027,130	0.01047070		

WORCESTER REGIONAL RETIREMENT SYSTEM SCHEDULE OF EMPLOYER ALLOCATIONS YEAR ENDED DECEMBER 31, 2020

Employer	Employer Contributions	Employer Allocation Percentage
Millbury Housing Authority	107,298	0.159506%
Millville	189,731	0.282048%
Narragansett Regional	440,722	0.655163%
Nashoba Regional	1,146,017	1.703632%
Nashoba Valley Dispatchers	42,695	0.063469%
New Braintree	64,267	0.095537%
Northboro	2,356,175	3.502615%
Northboro Housing Authority	75,236	0.111843%
Northboro-Southboro Regional	434,691	0.646198%
North Brookfield	568,015	0.844393%
North Brookfield Housing Authority	18,365	0.027301%
Oakham	78,584	0.116820%
Oxford	2,188,260	3.252998%
Oxford Housing Authority	83,797	0.124570%
Oxford-Rochdale Sewer District	37,828	0.056234%
Paxton	837,612	1.245167%
Petersham	174,811	0.259868%
Phillipston	149,318	0.221971%
Princeton	408,817	0.607734%
Quabbin Regional	1,147,408	1.705700%
Quaboag Regional	401,099	0.596261%
Royalston	63,203	0.093956%
Rutland	684,053	1.016891%
Southboro	2,170,625	3.226782%
Southboro Housing Authority	16,500	0.024528%
Spencer	978,163	1.454106%
Spencer-East Brookfield Regional	667,641	0.992494%
Spencer Housing Authority	51,695	0.076848%
Sterling	1,196,875	1.779236%
Sterling Housing Authority	6,246	0.009285%
Sturbridge	1,501,694	2.232371%
Sutton	1,314,568	1.954195%
Tantasqua Regional	794,242	1.180695%
Templeton	887,221	1.318915%
Templeton Housing Authority	46,383	0.068951%
Upton	696,704	1.035698%
Uxbridge	2,051,032	3.048999%
Uxbridge Housing Authority	59,854	0.088977%
Wachusett Regional	2,081,419	3.094171%
Warren	402,654	0.598573%
Warren Water District	19,509	0.029001%
Westboro	4,500,066	6.689655%
Westboro Housing Authority	51,300	0.076261%
West Boylston	1,432,352	2.129289%
West Boylston West Boylston Housing Authority	6,244	0.009282%
West Boylston Water District	73,490	0.109248%
West Brookfield	322,339	0.479179%
Westminster	963,834	1.432805%
	903,034	1.432003%

WORCESTER REGIONAL RETIREMENT SYSTEM SCHEDULE OF EMPLOYER ALLOCATIONS YEAR ENDED DECEMBER 31, 2020

Employer	Employer Contributions	Employer Allocation Percentage
Winchendon Winchendon Housing Authority	1,706,683 128,412	2.537101% 0.190893%
Total	\$ 67,269,029	100.000000%

	Ashburnham		Ashburnham- Westminster Regional		Athol			Athol lousing uthority
Net Pension Liability								
Beginning Net Pension Liability	\$ ⁻	1,695,052	\$ 9,626,487		\$ 21,404,005		\$	509,740
Ending Net Pension Liability	\$ [^]	1,628,833	\$	9,586,738	\$ 2	21,578,794	\$	508,695
Deferred Outflows of Resources								
Net Difference Between Expected and Actual Experience	\$	15,820	\$	13,042	\$	29,356	\$	692
Assumption Changes	\$	719,901	\$	593,482	\$	1,335,869	\$	31,492
Change in Allocated Proportion	\$	193,619	\$	151,123	\$	266,080	\$	3,093
Total Deferred Outflows of Resources	\$	929,340	\$	757,647	\$	1,631,305	\$	35,277
Deferred Inflows of Resources								
Net Difference Between Expected and Actual Experience	\$	301,813	\$	248,813	\$	560,053	\$	13,203
Net Difference Between Projected and Actual Investment Earnings	\$	600,816	\$	495,309	\$	1,114,892	\$	26,282
Change in Allocated Proportion	\$	120,150	\$	34,533	\$	2,582,532	\$	194,507
Total Deferred Inflows of Resources	\$	1,022,779	\$	778,655	\$	4,257,477	\$	233,992
Pension Expense								
Proportionate Share of Pension Expense	\$	1,320,398	\$	1,088,528	\$	2,450,168	\$	57,760
Net Amortization of Deferred Amounts from Changes in Proportion	\$	(68,029)	\$	17,537	\$	2,069,583	\$	35,567
Total Pension Expense	\$	1,252,369	\$	1,106,065	\$	4,519,751	\$	93,327
Covered Payroll	\$	4,018,167	\$	4,274,862	\$	6,023,644	\$	306,452
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	Athol- Royalston Regional	Auburn	Auburn Housing Authority	Auburn Water District	
Net Pension Liability					
Beginning Net Pension Liability	\$ 8,156,985	\$ 47,250,738	\$ 935,698	\$ 1,346,072	
Ending Net Pension Liability	\$ 8,208,120	\$ 47,012,894	\$ 935,917	\$ 1,346,262	
Deferred Outflows of Resources					
Net Difference Between Expected and Actual Experience	\$ 11,166	\$ 63,956	\$ 1,273	\$ 1,831	
Assumption Changes	\$ 508,137	\$ 2,910,407	\$ 57,939	\$ 83,342	
Change in Allocated Proportion	\$ 69,569	\$ 1,522,149	\$ 13,625	\$ 8,117	
Total Deferred Outflows of Resources	\$ 588,872	\$ 4,496,512	\$ 72,837	\$ 93,290	
Deferred Inflows of Resources					
Net Difference Between Expected and Actual Experience	\$ 213,032	\$ 1,220,166	\$ 24,291	\$ 34,941	
Net Difference Between Projected and Actual Investment Earnings	\$ 424,082	\$ 2,428,973	\$ 48,355	\$ 69,556	
Change in Allocated Proportion	\$ 1,433,095	\$ 211,090	\$ 24,773	\$ 116,156	
Total Deferred Inflows of Resources	\$ 2,070,209	\$ 3,860,229	\$ 97,419	\$ 220,653	
Pension Expense					
Proportionate Share of Pension Expense	\$ 931,992	\$ 5,338,088	\$ 106,269	\$ 152,862	
Net Amortization of Deferred Amounts from Changes in Proportion	\$ 739,069	\$ 513,983	\$ (40,837)	\$ (21,503)	
Total Pension Expense	\$ 1,671,061	\$ 5,852,071	\$ 65,432	\$ 131,359	
Covered Payroll	\$ 2,842,721	\$ 16,835,974	\$ 278,976	\$ 483,483	
				(Continued)	

	Barre		Barre Housing Authority		Berlin		E	Berlin- 3oylston Regional
Net Pension Liability								
Beginning Net Pension Liability	\$ 4	4,767,083	\$ 272,749		\$ 7,062,815		\$ 2	2,367,453
Ending Net Pension Liability	\$ 4	4,726,048	\$	276,482	\$ 7	7,042,961	\$ 2,354,341	
Deferred Outflows of Resources								
Net Difference Between Expected and Actual Experience	\$	6,429	\$	376	\$	9,581	\$	3,203
Assumption Changes	\$	292,573	\$	17,116	\$	436,006	\$	145,749
Change in Allocated Proportion	\$	101,808	\$	26,352	\$	142,765	\$	269,824
Total Deferred Outflows of Resources	\$	400,810	\$	43,844	\$	588,352	\$	418,776
Deferred Inflows of Resources								
Net Difference Between Expected and Actual Experience	\$	122,659	\$	7,176	\$	182,792	\$	61,104
Net Difference Between Projected and Actual Investment Earnings	\$	244,176	\$	14,285	\$	363,882	\$	121,640
Change in Allocated Proportion	\$	67,008	\$		\$	197,081	\$	7,708
Total Deferred Inflows of Resources	\$	433,843	\$	21,461	\$	743,755	\$	190,452
Pension Expense								
Proportionate Share of Pension Expense	\$	536,620	\$	31,393	\$	799,694	\$	267,324
Net Amortization of Deferred Amounts from Changes in Proportion	\$	(147,996)	\$	10,064	\$	80,335	\$	45,107
Total Pension Expense	\$	388,624	\$	41,457	\$	880,029	\$	312,431
Covered Payroll	\$ 2	2,487,212	\$	106,336	\$ 2	2,206,435	\$ [^]	1,889,207
							(0	Continued)

	Blackstone		Blackstone Housing Authority		Blackstone- Millville Regional			Bolton
Net Pension Liability								
Beginning Net Pension Liability	\$	12,282,171	\$ 257,092		\$ 7,697,213		\$ 6,900,864	
Ending Net Pension Liability	\$	12,259,676	\$	254,968	\$	7,684,924	\$ 6,876,028	
Deferred Outflows of Resources								
Net Difference Between Expected and Actual Experience	\$	16,678	\$	347	\$	10,455	\$	9,354
Assumption Changes	\$	758,955	\$	15,784	\$	475,747	\$	425,671
Change in Allocated Proportion	\$	594,518	\$	10,176	\$	2,151	\$	292,922
Total Deferred Outflows of Resources	\$	1,370,151	\$	26,307	\$	488,353	\$	727,947
Deferred Inflows of Resources								
Net Difference Between Expected and Actual Experience	\$	318,186	\$	6,617	\$	199,453	\$	178,459
Net Difference Between Projected and Actual Investment Earnings	\$	633,410	\$	13,173	\$	397,050	\$	355,258
Change in Allocated Proportion	\$	-	\$	26,833	\$	179,145	\$	23,241
Total Deferred Inflows of Resources	\$	951,596	\$	46,623	\$	775,648	\$	556,958
Pension Expense								
Proportionate Share of Pension Expense	\$	1,392,027	\$	28,950	\$	872,586	\$	780,740
Net Amortization of Deferred Amounts from Changes in Proportion	\$	(210,339)	\$	(491)	\$	(61,056)	\$	165,978
Total Pension Expense	\$	1,181,688	\$	28,459	\$	811,530	\$	946,718
Covered Payroll	\$	4,097,711	\$	-	\$ 2	2,583,447	\$2	2,731,812
							(0	Continued)

	Boylston		District		Brookfield			Charlton
Net Pension Liability								
Beginning Net Pension Liability	\$ 9	9,657,479	\$ 178,558		\$ 4,169,424		\$	19,804,393
Ending Net Pension Liability	\$ 9	9,549,865	\$	179,386	\$4	4,155,057	\$	19,695,681
Deferred Outflows of Resources								
Net Difference Between Expected and Actual Experience	\$	12,992	\$	244	\$	5,653	\$	26,794
Assumption Changes	\$	591,199	\$	11,105	\$	257,225	\$	1,219,292
Change in Allocated Proportion	\$	302,483	\$	14,121	\$	95,993	\$	834,510
Total Deferred Outflows of Resources	\$	906,674	\$	25,470	\$	358,871	\$	2,080,596
Deferred Inflows of Resources								
Net Difference Between Expected and Actual Experience	\$	247,856	\$	4,656	\$	107,840	\$	511,179
Net Difference Between Projected and Actual Investment Earnings	\$	493,404	\$	9,268	\$	214,676	\$	1,017,599
Change in Allocated Proportion	\$	127,342	\$		\$	108,829	\$	87,331
Total Deferred Inflows of Resources	\$	868,602	\$	13,924	\$	431,345	\$	1,616,109
Pension Expense								
Proportionate Share of Pension Expense	\$ [·]	1,084,341	\$	20,368	\$	471,787	\$	2,236,350
Net Amortization of Deferred Amounts from Changes in Proportion	\$	49,522	\$	(21,418)	\$	(35,448)	\$	388,964
Total Pension Expense	\$ `	1,133,863	\$	(1,050)	\$	436,339	\$	2,625,314
Covered Payroll	\$ 2	2,902,779	\$	70,547	\$	1,477,818	\$	6,525,375
								(Continued)

	Cherry Valley- Rochdale Water		Cherry Valley Sewer District		Douglas		Dudley	
Net Pension Liability								
Beginning Net Pension Liability	\$	787,022	\$	-	\$	15,910,774	\$	12,706,857
Ending Net Pension Liability	\$	805,343	\$	-	\$	15,747,268	\$	12,614,157
Deferred Outflows of Resources								
Net Difference Between Expected and Actual Experience	\$	1,096	\$	-	\$	21,423	\$	17,160
Assumption Changes	\$	49,856	\$	-	\$	974,859	\$	780,899
Change in Allocated Proportion	\$	56,443	\$	7,195	\$	315,854	\$	-
Total Deferred Outflows of Resources	\$	107,395	\$	7,195	\$	1,312,136	\$	798,059
Deferred Inflows of Resources								
Net Difference Between Expected and Actual Experience	\$	20,902	\$	-	\$	408,702	\$	327,386
Net Difference Between Projected and Actual Investment Earnings	\$	41,609	\$	-	\$	813,600	\$	651,724
Change in Allocated Proportion	\$	5,130	\$	16,898	\$	196,390	\$	291,815
Total Deferred Inflows of Resources	\$	67,641	\$	16,898	\$	1,418,692	\$	1,270,925
Pension Expense								
Proportionate Share of Pension Expense	\$	91,443	\$	-	\$	1,788,026	\$	1,432,277
Net Amortization of Deferred Amounts from Changes in Proportion	\$	561	\$	(1,214)	\$	69,830	\$	(332,281)
Total Pension Expense	\$	92,004	\$	(1,214)	\$	1,857,856	\$	1,099,996
Covered Payroll	\$	284,492	\$	-	\$	6,204,246	\$	3,531,925
								(Continued)

(Continued)

	Dudley Housing Authority		Dudley- Charlton Regional		East Brookfield		Grafton	
Net Pension Liability								
Beginning Net Pension Liability	\$	230,281	\$ 14,965,953		\$ 2,259,228		\$ 27,467,908	
Ending Net Pension Liability	\$	234,524	\$	14,923,093	\$ 2	2,233,473	\$ 27,396,255	
Deferred Outflows of Resources								
Net Difference Between Expected and Actual Experience	\$	319	\$	20,301	\$	3,038	\$	37,270
Assumption Changes	\$	14,519	\$	923,837	\$	138,267	\$	1,696,008
Change in Allocated Proportion	\$	13,286	\$	114,988	\$	147,857	\$	477,296
Total Deferred Outflows of Resources	\$	28,124	\$	1,059,126	\$	289,162	\$	2,210,574
Deferred Inflows of Resources								
Net Difference Between Expected and Actual Experience	\$	6,087	\$	387,312	\$	57,967	\$	711,038
Net Difference Between Projected and Actual Investment Earnings	\$	12,117	\$	771,018	\$	115,395	\$	1,415,458
Change in Allocated Proportion	\$	48,260	\$	27,197	\$	30,988	\$	30,826
Total Deferred Inflows of Resources	\$	66,464	\$	1,185,527	\$	204,350	\$	2,157,322
Pension Expense								
Proportionate Share of Pension Expense	\$	26,629	\$	1,694,445	\$	253,600	\$	3,110,713
Net Amortization of Deferred Amounts from Changes in Proportion	\$	(33,871)	\$	70,158	\$	96,792	\$	104,578
Total Pension Expense	\$	(7,242)	\$	1,764,603	\$	350,392	\$	3,215,291
Covered Payroll	\$	124,316	\$	5,506,965	\$	790,633	\$	12,006,398
								(Continued)

	Grafton Housing Authority Hardwick		lardwick	 Harvard	,	lillcrest Water District	
Net Pension Liability							
Beginning Net Pension Liability	\$	744,670	\$ 2	2,782,432	\$ 13,168,457	\$	117,246
Ending Net Pension Liability	\$	751,988	\$ 2	2,785,459	\$ 13,225,679	\$	52,747
Deferred Outflows of Resources							
Net Difference Between Expected and Actual Experience	\$	1,023	\$	3,789	\$ 17,992	\$	72
Assumption Changes	\$	46,553	\$	172,438	\$ 818,756	\$	3,265
Change in Allocated Proportion	\$	7,060	\$	10,925	\$ 91,651	\$	13,520
Total Deferred Outflows of Resources	\$	54,636	\$	187,152	\$ 928,399	\$	16,857
Deferred Inflows of Resources							
Net Difference Between Expected and Actual Experience	\$	19,517	\$	72,293	\$ 343,257	\$	1,369
Net Difference Between Projected and Actual Investment Earnings	\$	38,852	\$	143,914	\$ 683,319	\$	2,725
Change in Allocated Proportion	\$	47,895	\$	291,020	\$ 174,855	\$	61,807
Total Deferred Inflows of Resources	\$	106,264	\$	507,227	\$ 1,201,431	\$	65,901
Pension Expense							
Proportionate Share of Pension Expense	\$	85,385	\$	316,275	\$ 1,501,712	\$	5,989
Net Amortization of Deferred Amounts from Changes in Proportion	\$	(9,303)	\$	(155,224)	\$ (195,009)	\$	(284)
Total Pension Expense	\$	76,082	\$	161,051	\$ 1,306,703	\$	5,705
Covered Payroll	\$	173,534	\$	917,584	\$ 5,028,600	\$	51,795
						(Co	ontinued)

	Holden	Holden Housing Authority	Hopedale	Hopedale Housing Authority
Net Pension Liability				
Beginning Net Pension Liability	\$ 31,423,132	\$ 486,949	\$ 14,439,576	\$ 71,634
Ending Net Pension Liability	\$ 31,577,686	\$ 480,591	\$ 14,099,076	\$ 75,582
Deferred Outflows of Resources				
Net Difference Between Expected and Actual Experience	\$ 42,958	\$ 654	\$ 19,180	\$ 103
Assumption Changes	\$ 1,954,866	\$ 29,752	\$ 872,825	\$ 4,679
Change in Allocated Proportion	\$ 248,804	\$ 15,177	\$ 240,046	\$ 5,030
Total Deferred Outflows of Resources	\$ 2,246,628	\$ 45,583	\$ 1,132,051	\$ 9,812
Deferred Inflows of Resources				
Net Difference Between Expected and Actual Experience	\$ 819,562	\$ 12,473	\$ 365,925	\$ 1,962
Net Difference Between Projected and Actual Investment Earnings	\$ 1,631,496	\$ 24,830	\$ 728,444	\$ 3,905
Change in Allocated Proportion	\$ 1,404,136	\$ 12,200	\$ 369,725	\$ 16,858
Total Deferred Inflows of Resources	\$ 3,855,194	\$ 49,503	\$ 1,464,094	\$ 22,725
Pension Expense				
Proportionate Share of Pension Expense	\$ 3,585,494	\$ 54,569	\$ 1,600,882	\$ 8,582
Net Amortization of Deferred Amounts from Changes in Proportion	\$ (574,520)	\$ 3,623	\$ (166,635)	\$ (7,308)
Total Pension Expense	\$ 3,010,974	\$ 58,192	\$ 1,434,247	\$ 1,274
Covered Payroll	\$ 10,400,639	\$ -	\$ 5,570,747	\$ -
				(Continued)

(Continued)

	Hu	bbardston	La	ancaster	F	ancaster lousing uthority		incaster Sewer
Net Pension Liability								
Beginning Net Pension Liability	\$ 3	3,669,873	\$ 9	9,613,519	\$	230,003	\$	31,300
Ending Net Pension Liability	\$:	3,612,910	\$ 9	9,614,710	\$	229,809	\$	28,685
Deferred Outflows of Resources								
Net Difference Between Expected and Actual Experience	\$	4,915	\$	13,080	\$	313	\$	39
Assumption Changes	\$	223,663	\$	595,214	\$	14,227	\$	1,776
Change in Allocated Proportion	\$	70,163	\$	421,759	\$	20,743	\$	14,092
Total Deferred Outflows of Resources	\$	298,741	\$ 1	1,030,053	\$	35,283	\$	15,907
Deferred Inflows of Resources								
Net Difference Between Expected and Actual Experience	\$	93,769	\$	249,539	\$	5,964	\$	744
Net Difference Between Projected and Actual Investment Earnings	\$	186,665	\$	496,755	\$	11,873	\$	1,482
Change in Allocated Proportion	\$	344,437	\$		\$	3,677	\$	2,057
Total Deferred Inflows of Resources	\$	624,871	\$	746,294	\$	21,514	\$	4,283
Pension Expense								
Proportionate Share of Pension Expense	\$	410,229	\$ 1	1,091,704	\$	26,094	\$	3,257
Net Amortization of Deferred Amounts from Changes in Proportion	\$	1,210	\$	88,890	\$	(3,340)	\$	4,195
Total Pension Expense	\$	411,439	\$ 1	1,180,594	\$	22,754	\$	7,452
Covered Payroll	\$	1,452,270	\$ 3	3,034,175	\$	57,629	\$	47,700
							(Co	ontinued)

	Leicester	Leicester Housing Authority	Leicester Water District	Lunenburg
Net Pension Liability				
Beginning Net Pension Liability	\$ 19,221,250	\$ 693,971	\$ 616,826	\$ 19,799,481
Ending Net Pension Liability	\$ 19,232,127	\$ 692,756	\$ 701,472	\$ 19,838,326
Deferred Outflows of Resources				
Net Difference Between Expected and Actual Experience	\$ 26,163	\$ 942	\$ 954	\$ 26,988
Assumption Changes	\$ 1,190,595	\$ 42,886	\$ 43,426	\$ 1,228,123
Change in Allocated Proportion	\$ 438,013	\$ 53,555	\$ 74,822	\$ 311,390
Total Deferred Outflows of Resources	\$ 1,654,771	\$ 97,383	\$ 119,202	\$ 1,566,501
Deferred Inflows of Resources				
Net Difference Between Expected and Actual Experience	\$ 499,148	\$ 17,980	\$ 18,206	\$ 514,881
Net Difference Between Projected and Actual Investment Earnings	\$ 993,649	\$ 35,792	\$ 36,242	\$ 1,024,969
Change in Allocated Proportion	\$ 50,891	\$ 12,141	\$ 107,504	\$-
Total Deferred Inflows of Resources	\$ 1,543,688	\$ 65,913	\$ 161,952	\$ 1,539,850
Pension Expense				
Proportionate Share of Pension Expense	\$ 2,183,715	\$ 78,659	\$ 79,649	\$ 2,252,546
Net Amortization of Deferred Amounts from Changes in Proportion	\$ (269,689)	\$ 5,373	\$ (42,593)	\$ 150,984
Total Pension Expense	\$ 1,914,026	\$ 84,032	\$ 37,056	\$ 2,403,530
Covered Payroll	\$ 5,809,792	\$ 221,256	\$ 305,538	\$ 6,969,393
				(Continued)

	F	nenburg lousing uthority	inenburg Water District		Mendon		Mendon- Upton Regional
Net Pension Liability							
Beginning Net Pension Liability	\$	24,838	\$ 847,486	\$ 9	\$ 9,537,500		11,375,272
Ending Net Pension Liability	\$	23,983	\$ 877,716	\$ 9	9,478,575	\$	11,293,793
Deferred Outflows of Resources							
Net Difference Between Expected and Actual Experience	\$	33	\$ 1,194	\$	12,895	\$	15,364
Assumption Changes	\$	1,485	\$ 54,336	\$	586,786	\$	699,160
Change in Allocated Proportion	\$	2,007	\$ 68,058	\$	424,458	\$	84,656
Total Deferred Outflows of Resources	\$	3,525	\$ 123,588	\$ ⁻	1,024,139	\$	799,180
Deferred Inflows of Resources							
Net Difference Between Expected and Actual Experience	\$	622	\$ 22,780	\$	246,006	\$	293,117
Net Difference Between Projected and Actual Investment Earnings	\$	1,239	\$ 45,348	\$	489,721	\$	583,506
Change in Allocated Proportion	\$	12,841	\$ 21,966	\$	50,576	\$	90,217
Total Deferred Inflows of Resources	\$	14,702	\$ 90,094	\$	786,303	\$	966,840
Pension Expense							
Proportionate Share of Pension Expense	\$	2,723	\$ 99,660	\$ [^]	1,076,247	\$	1,282,356
Net Amortization of Deferred Amounts from Changes in Proportion	\$	(9,838)	\$ (15,620)	\$	200,166	\$	81,761
Total Pension Expense	\$	(7,115)	\$ 84,040	\$ `	1,276,413	\$	1,364,117
Covered Payroll	\$	59,608	\$ 333,199	\$3	3,056,702	\$	4,699,024
							(Continued)

		Millbury	ŀ	Millbury Housing Authority		Millville		rragansett Regional
Net Pension Liability								
Beginning Net Pension Liability	\$ 2	26,716,835	\$ 1	1,413,671	\$ 2	2,655,377	\$ {	5,840,976
Ending Net Pension Liability	\$ 2	26,771,725	\$ 1	1,417,050	\$ 2	2,505,715	\$ {	5,820,472
Deferred Outflows of Resources								
Net Difference Between Expected and Actual Experience	\$	36,420	\$	1,928	\$	3,409	\$	7,918
Assumption Changes	\$	1,657,346	\$	87,725	\$	155,120	\$	360,325
Change in Allocated Proportion	\$	155,691	\$	5,295	\$	214,794	\$	-
Total Deferred Outflows of Resources	\$	1,849,457	\$	94,948	\$	373,323	\$	368,243
Deferred Inflows of Resources								
Net Difference Between Expected and Actual Experience	\$	694,829	\$	36,778	\$	65,033	\$	151,064
Net Difference Between Projected and Actual Investment Earnings	\$	1,383,191	\$	73,213	\$	129,461	\$	300,721
Change in Allocated Proportion	\$	763,976	\$	23,322	\$	181,605	\$	125,719
Total Deferred Inflows of Resources	\$	2,841,996	\$	133,313	\$	376,099	\$	577,504
Pension Expense								
Proportionate Share of Pension Expense	\$	3,039,800	\$	160,899	\$	284,512	\$	660,887
Net Amortization of Deferred Amounts from Changes in Proportion	\$	(435,945)	\$	3,018	\$	124,797	\$	(92,299)
Total Pension Expense	\$	2,603,855	\$	163,917	\$	409,309	\$	568,588
Covered Payroll	\$	7,909,444	\$	463,056	\$	831,943	\$ 2	2,768,991
							(0	Continued)

		Nashoba Regional	lashoba Valley spatchers	Nev	v Braintree	1	Northboro
Net Pension Liability							
Beginning Net Pension Liability	\$ [^]	15,201,248	\$ 569,971	\$	843,101	\$ 3	30,976,459
Ending Net Pension Liability	\$ ⁻	15,135,073	\$ 563,859	\$	848,753	\$ 3	31,117,235
Deferred Outflows of Resources							
Net Difference Between Expected and Actual Experience	\$	20,590	\$ 767	\$	1,155	\$	42,332
Assumption Changes	\$	936,960	\$ 34,907	\$	52,543	\$	1,926,361
Change in Allocated Proportion	\$	419,547	\$ 292,715	\$	32,206	\$	865,066
Total Deferred Outflows of Resources	\$	1,377,097	\$ 328,389	\$	85,904	\$	2,833,759
Deferred Inflows of Resources							
Net Difference Between Expected and Actual Experience	\$	392,813	\$ 14,634	\$	22,028	\$	807,612
Net Difference Between Projected and Actual Investment Earnings	\$	781,970	\$ 29,132	\$	43,852	\$	1,607,706
Change in Allocated Proportion	\$	361,272	\$ 4,031	\$	88,774	\$	
Total Deferred Inflows of Resources	\$	1,536,055	\$ 47,797	\$	154,654	\$	2,415,318
Pension Expense							
Proportionate Share of Pension Expense	\$	1,718,515	\$ 64,023	\$	96,372	\$	3,533,212
Net Amortization of Deferred Amounts from Changes in Proportion	\$	(121,674)	\$ 85,728	\$	(24,495)	\$	106,388
Total Pension Expense	\$	1,596,841	\$ 149,751	\$	71,877	\$	3,639,600
Covered Payroll	\$	6,894,047	\$ 871,438	\$	237,017	\$	11,319,620
							(Continued)

	ł	orthboro Housing Authority	S	orthboro- outhboro Regional	North Brookfield		Br H	North ookfield lousing uthority
Net Pension Liability								
Beginning Net Pension Liability	\$	991,865	\$ 5	5,783,903	\$ 7	7,545,320	\$	236,991
Ending Net Pension Liability	\$	993,617	\$ 5	5,740,822	\$ 7	7,501,589	\$	242,541
Deferred Outflows of Resources								
Net Difference Between Expected and Actual Experience	\$	1,352	\$	7,810	\$	10,205	\$	330
Assumption Changes	\$	61,511	\$	355,395	\$	464,398	\$	15,015
Change in Allocated Proportion	\$	17,521	\$	237,330	\$	469,418	\$	9,904
Total Deferred Outflows of Resources	\$	80,384	\$	600,535	\$	944,021	\$	25,249
Deferred Inflows of Resources								
Net Difference Between Expected and Actual Experience	\$	25,788	\$	148,996	\$	194,695	\$	6,295
Net Difference Between Projected and Actual Investment Earnings	\$	51,336	\$	296,606	\$	387,578	\$	12,531
Change in Allocated Proportion	\$	3,416	\$	49,805	\$	101,282	\$	33,091
Total Deferred Inflows of Resources	\$	80,540	\$	495,407	\$	683,555	\$	51,917
Pension Expense								
Proportionate Share of Pension Expense	\$	112,820	\$	651,843	\$	851,769	\$	27,539
Net Amortization of Deferred Amounts from Changes in Proportion	\$	27,590	\$	3,220	\$	18,222	\$	(2,644)
Total Pension Expense	\$	140,410	\$	655,063	\$	869,991	\$	24,895
Covered Payroll	\$	395,203	\$ 2	2,816,152	\$ 2	2,767,703	\$	55,944
							(Co	ontinued)

	(Dakham		Oxford	ŀ	Oxford Housing Authority	R	Dxford- ochdale Sewer District
Net Pension Liability								
Beginning Net Pension Liability	\$ [^]	1,037,009	\$ 2	28,976,151	\$ [^]	1,107,371	\$	496,715
Ending Net Pension Liability	\$ 1	1,037,833	\$ 2	28,899,637	\$ [^]	1,106,680	\$	499,582
Deferred Outflows of Resources								
Net Difference Between Expected and Actual Experience	\$	1,412	\$	39,315	\$	1,506	\$	680
Assumption Changes	\$	64,249	\$	1,789,077	\$	68,511	\$	30,927
Change in Allocated Proportion	\$	9,283	\$	215,445	\$	115,451	\$	56,586
Total Deferred Outflows of Resources	\$	74,944	\$	2,043,837	\$	185,468	\$	88,193
Deferred Inflows of Resources								
Net Difference Between Expected and Actual Experience	\$	26,936	\$	750,057	\$	28,723	\$	12,966
Net Difference Between Projected and Actual Investment Earnings	\$	53,621	\$	1,493,132	\$	57,178	\$	25,811
Change in Allocated Proportion	\$	46,872	\$	1,634,527	\$	6,715	\$	-
Total Deferred Inflows of Resources	\$	127,429	\$	3,877,716	\$	92,616	\$	38,777
Pension Expense								
Proportionate Share of Pension Expense	\$	117,841	\$	3,281,415	\$	125,658	\$	56,725
Net Amortization of Deferred Amounts from Changes in Proportion	\$	(62,273)	\$	(770,472)	\$	32,807	\$	33,312
Total Pension Expense	\$	55,568	\$	2,510,943	\$	158,465	\$	90,037
Covered Payroll	\$	307,375	\$	8,627,144	\$	428,603	\$	165,076
							(Co	ontinued)

	 Paxton	P	etersham	P	hillipston	P	rinceton
Net Pension Liability							
Beginning Net Pension Liability	\$ 11,199,960	\$	2,316,549	\$	1,994,665	\$ 5	5,323,503
Ending Net Pension Liability	\$ 11,062,069	\$	2,308,672	\$ ⁻	1,971,994	\$ 5	5,399,113
Deferred Outflows of Resources							
Net Difference Between Expected and Actual Experience	\$ 15,049	\$	3,141	\$	2,683	\$	7,345
Assumption Changes	\$ 684,815	\$	142,922	\$	122,079	\$	334,241
Change in Allocated Proportion	\$ 877,202	\$		\$	16,697	\$	119,343
Total Deferred Outflows of Resources	\$ 1,577,066	\$	146,063	\$	141,459	\$	460,929
Deferred Inflows of Resources							
Net Difference Between Expected and Actual Experience	\$ 287,103	\$	59,919	\$	51,181	\$	140,128
Net Difference Between Projected and Actual Investment Earnings	\$ 571,534	\$	119,280	\$	101,885	\$	278,951
Change in Allocated Proportion	\$ 122,900	\$	84,812	\$	29,422	\$	332,365
Total Deferred Inflows of Resources	\$ 981,537	\$	264,011	\$	182,488	\$	751,444
Pension Expense							
Proportionate Share of Pension Expense	\$ 1,256,045	\$	262,139	\$	223,910	\$	613,043
Net Amortization of Deferred Amounts from Changes in Proportion	\$ 258,763	\$	(226,554)	\$	43,614	\$	(269,241)
Total Pension Expense	\$ 1,514,808	\$	35,585	\$	267,524	\$	343,802
Covered Payroll	\$ 3,760,544	\$	591,648	\$	616,702	\$ ^	1,986,298
						(0	Continued)

	Quabbin Regional	Quaboag Regional		Royalston		Rutland	
Net Pension Liability							
Beginning Net Pension Liability	\$ 15,141,734	\$!	5,331,865	\$	813,044	\$ 9	9,059,571
Ending Net Pension Liability	\$ 15,153,444	\$!	5,297,184	\$	834,701	\$ 9	9,034,065
Deferred Outflows of Resources							
Net Difference Between Expected and Actual Experience	\$ 20,615	\$	7,206	\$	1,136	\$	12,290
Assumption Changes	\$ 938,098	\$	327,930	\$	51,674	\$	559,268
Change in Allocated Proportion	\$ 141,530	\$	29,438	\$	22,185	\$	341,794
Total Deferred Outflows of Resources	\$ 1,100,243	\$	364,574	\$	74,995	\$	913,352
Deferred Inflows of Resources							
Net Difference Between Expected and Actual Experience	\$ 393,290	\$	137,482	\$	21,664	\$	234,469
Net Difference Between Projected and Actual Investment Earnings	\$ 782,919	\$	273,685	\$	43,126	\$	466,755
Change in Allocated Proportion	\$ 350,012	\$	47,327	\$	34,905	\$	29,956
Total Deferred Inflows of Resources	\$ 1,526,221	\$	458,494	\$	99,695	\$	731,180
Pension Expense							
Proportionate Share of Pension Expense	\$ 1,720,601	\$	601,470	\$	94,776	\$ [^]	1,025,775
Net Amortization of Deferred Amounts from Changes in Proportion	\$ (221,004)	\$	(60,160)	\$	27,039	\$	9,322
Total Pension Expense	\$ 1,499,597	\$	541,310	\$	121,815	\$ ^	,035,097
Covered Payroll	\$ 5,191,722	\$ 2	2,454,490	\$	272,117	\$ 3	3,998,722
						(0	Continued)

	Southboro			outhboro Housing Authority	 Spencer	Ea	Spencer- st Brookfield Regional
Net Pension Liability							
Beginning Net Pension Liability	\$	28,636,460	\$	231,509	\$ 12,891,307	\$	8,854,727
Ending Net Pension Liability	\$	28,666,737	\$	217,910	\$ 12,918,280	\$	8,817,317
Deferred Outflows of Resources							
Net Difference Between Expected and Actual Experience	\$	38,998	\$	296	\$ 17,574	\$	11,995
Assumption Changes	\$	1,774,659	\$	13,490	\$ 799,726	\$	545,850
Change in Allocated Proportion	\$	310,947	\$	-	\$ 228,776	\$	13,451
Total Deferred Outflows of Resources	\$	2,124,604	\$	13,786	\$ 1,046,076	\$	571,296
Deferred Inflows of Resources							
Net Difference Between Expected and Actual Experience	\$	744,012	\$	5,656	\$ 335,279	\$	228,843
Net Difference Between Projected and Actual Investment Earnings	\$	1,481,099	\$	11,259	\$ 667,437	\$	455,556
Change in Allocated Proportion	\$	-	\$	19,684	\$ 332,192	\$	235,465
Total Deferred Inflows of Resources	\$	2,225,111	\$	36,599	\$ 1,334,908	\$	919,864
Pension Expense							
Proportionate Share of Pension Expense	\$	3,254,970	\$	24,743	\$ 1,466,808	\$	1,001,164
Net Amortization of Deferred Amounts from Changes in Proportion	\$	24,862	\$	(13,406)	\$ (79,946)	\$	(85,763)
Total Pension Expense	\$	3,279,832	\$	11,337	\$ 1,386,862	\$	915,401
Covered Payroll	\$	10,365,406	\$	101,400	\$ 4,259,235	\$	3,133,709
							(Continued)

(Continued)

	F	Spencer Housing Authority	 Sterling	F	Sterling lousing uthority	 Sturbridge
Net Pension Liability						
Beginning Net Pension Liability	\$	674,103	\$ 15,871,755	\$	79,630	\$ 20,043,825
Ending Net Pension Liability	\$	682,719	\$ 15,806,738	\$	82,489	\$ 19,832,383
Deferred Outflows of Resources						
Net Difference Between Expected and Actual Experience	\$	929	\$ 21,503	\$	112	\$ 26,980
Assumption Changes	\$	42,265	\$ 978,541	\$	5,107	\$ 1,227,755
Change in Allocated Proportion	\$	36,681	\$ 714,754	\$	3,958	\$ 297,637
Total Deferred Outflows of Resources	\$	79,875	\$ 1,714,798	\$	9,177	\$ 1,552,372
Deferred Inflows of Resources						
Net Difference Between Expected and Actual Experience	\$	17,719	\$ 410,246	\$	2,141	\$ 514,727
Net Difference Between Projected and Actual Investment Earnings	\$	35,273	\$ 816,673	\$	4,262	\$ 1,024,662
Change in Allocated Proportion	\$	12,398	\$ 46,228	\$	38,473	\$ 446,469
Total Deferred Inflows of Resources	\$	65,390	\$ 1,273,147	\$	44,876	\$ 1,985,858
Pension Expense						
Proportionate Share of Pension Expense	\$	77,519	\$ 1,794,779	\$	9,366	\$ 2,251,872
Net Amortization of Deferred Amounts from Changes in Proportion	\$	15,274	\$ 112,546	\$	(5,964)	\$ 15,850
Total Pension Expense	\$	92,793	\$ 1,907,325	\$	3,402	\$ 2,267,722
Covered Payroll	\$	332,236	\$ 5,198,361	\$	53,242	\$ 8,091,792
						(Continued)

	Sutton	Tantasqua Regional	Templeton	Templeton Housing Authority
Net Pension Liability				
Beginning Net Pension Liability	\$ 17,316,712	\$ 10,353,847	\$ 11,664,176	\$ 628,886
Ending Net Pension Liability	\$ 17,361,071	\$ 10,489,295	\$ 11,717,239	\$ 612,565
Deferred Outflows of Resources				
Net Difference Between Expected and Actual Experience	\$ 23,618	\$ 14,270	\$ 15,940	\$ 833
Assumption Changes	\$ 1,074,764	\$ 649,356	\$ 725,374	\$ 37,922
Change in Allocated Proportion	\$ 295,482	\$ 359,750	\$ 85,142	<u> </u>
Total Deferred Outflows of Resources	\$ 1,393,864	\$ 1,023,376	\$ 826,456	\$ 38,755
Deferred Inflows of Resources				
Net Difference Between Expected and Actual Experience	\$ 450,587	\$ 272,238	\$ 304,107	\$ 15,898
Net Difference Between Projected and Actual Investment Earnings	\$ 896,979	\$ 541,941	\$ 605,384	\$ 31,649
Change in Allocated Proportion	\$ -	\$ 28,704	\$ 181,561	\$ 29,627
Total Deferred Inflows of Resources	\$ 1,347,566	\$ 842,883	\$ 1,091,052	\$ 77,174
Pension Expense				
Proportionate Share of Pension Expense	\$ 1,971,266	\$ 1,191,009	\$ 1,330,436	\$ 69,554
Net Amortization of Deferred Amounts from Changes in Proportion	\$ (173,308)	\$ 64,534	\$ (400,449)	\$ (31,918)
Total Pension Expense	\$ 1,797,958	\$ 1,255,543	\$ 929,987	\$ 37,636
Covered Payroll	\$ 7,204,520	\$ 4,212,660	\$ 3,922,523	\$ 102,891
				(Continued)

	Upton	Uxbridge	Uxbridge Housing Authority	Wachusett Regional
Net Pension Liability				
Beginning Net Pension Liability	\$ 9,190,164	\$ 27,013,078	\$ 781,905	\$ 27,581,353
Ending Net Pension Liability	\$ 9,201,143	\$ 27,087,311	\$ 790,472	\$ 27,488,623
Deferred Outflows of Resources				
Net Difference Between Expected and Actual Experience	\$ 12,517	\$ 36,850	\$ 1,075	\$ 37,395
Assumption Changes	\$ 569,611	\$ 1,676,883	\$ 48,935	\$ 1,701,726
Change in Allocated Proportion	\$ 327,779	\$ 212,075	\$ 26,103	\$ 851,654
Total Deferred Outflows of Resources	\$ 909,907	\$ 1,925,808	\$ 76,113	\$ 2,590,775
Deferred Inflows of Resources				
Net Difference Between Expected and Actual Experience	\$ 238,805	\$ 703,020	\$ 20,516	\$ 713,436
Net Difference Between Projected and Actual Investment Earnings	\$ 475,387	\$ 1,399,496	\$ 40,841	\$ 1,420,230
Change in Allocated Proportion	\$ -	\$ 612,985	\$ 52,063	\$ 1,227,443
Total Deferred Inflows of Resources	\$ 714,192	\$ 2,715,501	\$ 113,420	\$ 3,361,109
Pension Expense				
Proportionate Share of Pension Expense	\$ 1,044,745	\$ 3,075,634	\$ 89,754	\$ 3,121,201
Net Amortization of Deferred Amounts from Changes in Proportion	\$ (36,998)	\$ (206,636)	\$ (7,469)	\$ (200,657)
Total Pension Expense	\$ 1,007,747	\$ 2,868,998	\$ 82,285	\$ 2,920,544
Covered Payroll	\$ 3,957,228	\$ 8,980,346	\$ 200,841	\$ 12,322,363
				(Continued)

		Warren	Warren Water District	 Westboro	ŀ	/estboro Housing Authority
Net Pension Liability						
Beginning Net Pension Liability	\$ {	5,370,445	\$ 259,841	\$ 59,225,365	\$	682,568
Ending Net Pension Liability	\$ 5	5,317,720	\$ 257,649	\$ 59,430,911	\$	677,502
Deferred Outflows of Resources						
Net Difference Between Expected and Actual Experience	\$	7,234	\$ 351	\$ 80,848	\$	922
Assumption Changes	\$	329,202	\$ 15,950	\$ 3,679,167	\$	41,942
Change in Allocated Proportion	\$	147,222	\$ 17,574	\$ 386,351	\$	67,684
Total Deferred Outflows of Resources	\$	483,658	\$ 33,875	\$ 4,146,366	\$	110,548
Deferred Inflows of Resources						
Net Difference Between Expected and Actual Experience	\$	138,015	\$ 6,687	\$ 1,542,459	\$	17,584
Net Difference Between Projected and Actual Investment Earnings	\$	274,746	\$ 13,312	\$ 3,070,565	\$	35,004
Change in Allocated Proportion	\$	294,434	\$ 2,681	\$ 451,934	\$	4,802
Total Deferred Inflows of Resources	\$	707,195	\$ 22,680	\$ 5,064,958	\$	57,390
Pension Expense						
Proportionate Share of Pension Expense	\$	603,802	\$ 29,255	\$ 6,748,093	\$	76,927
Net Amortization of Deferred Amounts from Changes in Proportion	\$	14,821	\$ 11,692	\$ 233,445	\$	20,278
Total Pension Expense	\$	618,623	\$ 40,947	\$ 6,981,538	\$	97,205
Covered Payroll	\$ ´	1,457,293	\$ 92,491	\$ 22,860,590	\$	227,366
					(0	Continued)

	West Boylston	West Boylston Housing Authority	West Boylston Water District	West Brookfield
Net Pension Liability				
Beginning Net Pension Liability	\$ 19,082,339	\$ 79,601	\$ 956,472	\$ 4,206,103
Ending Net Pension Liability	\$ 18,916,606	\$ 82,462	\$ 970,558	\$ 4,257,026
Deferred Outflows of Resources				
Net Difference Between Expected and Actual Experience	\$ 25,734	\$ 112	\$ 1,320	\$ 5,791
Assumption Changes	\$ 1,171,062	\$ 5,105	\$ 60,084	\$ 263,538
Change in Allocated Proportion	\$ 416,107	\$ 4,431	\$ 104,517	\$ 104,457
Total Deferred Outflows of Resources	\$ 1,612,903	\$ 9,648	\$ 165,921	\$ 373,786
Deferred Inflows of Resources				
Net Difference Between Expected and Actual Experience	\$ 490,959	\$ 2,140	\$ 25,190	\$ 110,486
Net Difference Between Projected and Actual Investment Earnings	\$ 977,347	\$ 4,261	\$ 50,145	\$ 219,944
Change in Allocated Proportion	\$ 148,450	\$ 59,081	\$ 2,416	\$ 20,721
Total Deferred Inflows of Resources	\$ 1,616,756	\$ 65,482	\$ 77,751	\$ 351,151
Pension Expense				
Proportionate Share of Pension Expense	\$ 2,147,889	\$ 9,363	\$ 110,202	\$ 483,365
Net Amortization of Deferred Amounts from Changes in Proportion	\$ (88,405)	\$ (15,170)	\$ (1,848)	\$ (98,073)
Total Pension Expense	\$ 2,059,484	\$ (5,807)	\$ 108,354	\$ 385,292
Covered Payroll	\$ 5,477,605	\$ 60,312	\$ 394,905	\$ 1,323,721
				(Continued)

	Westminster	Winchendon	Winchendon Housing Authority	Worcester Regional Retirement System
Net Pension Liability				
Beginning Net Pension Liability	\$ 12,673,847	\$ 22,941,749	\$ 1,698,861	\$-
Ending Net Pension Liability	\$ 12,729,042	\$ 22,539,606	\$ 1,695,895	\$-
Deferred Outflows of Resources				
Net Difference Between Expected and Actual Experience	\$ 17,317	\$ 30,663	\$ 2,307	\$-
Assumption Changes	\$ 788,011	\$ 1,395,350	\$ 104,987	\$-
Change in Allocated Proportion	\$ 90,109	\$ 308,420	\$ 160,420	\$ -
Total Deferred Outflows of Resources	\$ 895,437	\$ 1,734,433	\$ 267,714	\$-
Deferred Inflows of Resources				
Net Difference Between Expected and Actual Experience	\$ 330,368	\$ 584,990	\$ 44,015	\$-
Net Difference Between Projected and Actual Investment Earnings	\$ 657,660	\$ 1,164,534	\$ 87,620	\$-
Change in Allocated Proportion	\$ 191,390	\$ 740,798	\$2	\$ -
Total Deferred Inflows of Resources	\$ 1,179,418	\$ 2,490,322	\$ 131,637	\$-
Pension Expense				
Proportionate Share of Pension Expense	\$ 1,445,321	\$ 2,559,264	\$ 192,561	\$-
Net Amortization of Deferred Amounts from Changes in Proportion	\$ 108,615	\$ (303,121)	\$ 70,171	\$-
Total Pension Expense	\$ 1,553,936	\$ 2,256,143	\$ 262,732	\$
Covered Payroll	\$ 4,186,629	\$ 6,774,852	\$ 609,171	\$ 634,340
				(Continued)

	Totals
Net Pension Liability	
Beginning Net Pension Liability	\$ 890,129,991
Ending Net Pension Liability	\$ 888,400,147
Deferred Outflows of Resources	
Net Difference Between Expected and Actual Experience	\$ 1,208,578
Assumption Changes	\$ 54,997,806
Change in Allocated Proportion	\$ 18,899,768
Total Deferred Outflows of Resources	\$ 75,106,152
Deferred Inflows of Resources	
Net Difference Between Expected and Actual Experience	\$ 23,057,403
Net Difference Between Projected and Actual Investment Earnings	\$ 45,900,173
Change in Allocated Proportion	\$ 18,899,768
Total Deferred Inflows of Resources	\$ 87,857,344
Pension Expense	
Proportionate Share of Pension Expense	\$ 100,873,556
Net Amortization of Deferred Amounts from Changes in Proportion	\$ -
Total Pension Expense	\$ 100,873,556
Covered Payroll	\$ 321,050,145
	(Concluded)

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 fivemember 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, 2020. 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.

<u>Benefits</u>

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.

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)(a) and (b), 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 and 22F 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 (COLAs) 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.

NOTE 1 DESCRIPTION OF THE ENTITY (CONTINUED)

Contributions (Continued)

COLAs granted through June 30, 1998 are reimbursed by the Commonwealth of Massachusetts (the Commonwealth). COLAs granted subsequent to June 30, 1998 must be granted by the Board and are the responsibility of the System. COLAs 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, 2020, using the following actuarial assumptions, applied to all periods included in the measurement that was updated to December 31, 2020:

Asset valuation method:	Market value
Inflation:	2.2% 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:	7.5%, net of pension plan investment expense, including inflation
Mortality rates:	Based on the RP-2014 Blue Collar Mortality Table with full generational mortality improvement using Scale MP-2018.
	For disabled lives, the mortality rates were based on the RP-2014 Blue Collar Mortality Table set forward one year with full generational mortality improvement using Scale MP-2018.

NOTE 3 NET PENSION LIABILITY

The components of the net pension liability of the System at December 31, 2020, were as follows:

Total Pension Liability	\$ 1,787,058,913
Plan Fiduciary Net Position	(898,658,766)
Net Pension Liability	\$ 888,400,147

Plan Fiduciary Net Position as a Percentage of the Total Pension Liability 50.3%

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 7.5%. 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, 2020 are summarized in the following table:

Asset Class	Target _ Allocation (%)_	Long-Term Expected Rate of Return (%)
Global Equity	39.00 %	4.38 %
Fixed Income	23.00	1.40
Private Equity	13.00	8.00
Real Estate	10.00	3.80
Timber/Natural Resources	4.00	4.40
Portfolio Completion Strategies	11.00	3.00

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 7.5%, 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 (6.5%) or 1-percentage-point higher (8.5%) than the current rate:

		Current	
	1% Decrease	Discount Rate	1% Increase
	(6.5%)	(7.5%)	(8.5%)
Net Pension Liability	\$1,094,446,931	\$ 888,400,147	\$ 714,426,847

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, 2020:

Measurement Period	
Ending December 31,	Amount
2021	\$ 3,325,857
2022	(455,159)
2023	(14,676,416)
2024	(2,504,078)
2025	1,558,604
Thereafter	-

NOTE 5 EMPLOYER CONTRIBUTIONS

Employers' proportionate shares were calculated on the basis of actual employer contributions for the year ended December 31, 2020. 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, 2020. 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, 2020. A copy may be obtained by submitting a request to the System's Chief Executive Officer at 23 Midstate Drive, Suite 106, Auburn, Massachusetts 01501.

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