SCHEDULES OF EMPLOYER ALLOCATIONS,
PENSION AMOUNTS BY EMPLOYER AND
AMORTIZATION OF EMPLOYERS' DEFERRED OUTFLOWS/INFLOWS

YEAR ENDED DECEMBER 31, 2022

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INDEPENDENT AUDITOR'S REPORT

To the Board of the Norfolk County Retirement System Canton, Massachusetts 02021

Opinion on Schedules

We have audited the accompanying schedule of employer allocations of the Norfolk County Retirement System (the System) as of and for the year ended December 31, 2022, and the related notes. We have also audited the totals for all entities of the columns titled ending net pension liability, total deferred outflows of resources, total deferred inflows of resources, total pension expense, total pension revenue, and total covered payroll (specified column totals) included in the accompanying schedule of pension amounts by employer of the System and the column totals included in the accompanying schedule of amortization of employers' deferred outflows/inflows as of and for the year ended December 31, 2022, and the related notes.

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, total pension revenue, total covered payroll and total amortization of deferred outflows/inflows for the total of all participating entities for the System as of and for the year ended December 31, 2022, in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Schedules section of our report. We are required to be independent of the System and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Schedules

Management is responsible for the preparation and fair presentation of the schedules in accordance with accounting principles generally accepted in the United States of America, and for 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.

In preparing the schedules, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Schedules

Our objectives are to obtain reasonable assurance about whether the schedules as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with generally accepted auditing standards will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the schedules.

In performing an audit in accordance with generally accepted auditing standards, we:

- · Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the schedules, whether due to fraud or error, and design
 and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis,
 evidence regarding the amounts and disclosures in the schedules.
- Obtain an understanding of internal control relevant to the audit 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 System's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the schedules.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Other Matter

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of the System as of and for the years ended December 31, 2022 and 2021, and our report thereon, dated September 27, 2023, expressed an unmodified opinion on those financial statements.

Restriction on Use

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

DI PESA & COMPANY

Di Pesa & Company

Certified Public Accountants Quincy, Massachusetts September 27, 2023



SCHEDULE OF EMPLOYER ALLOCATIONS

FOR THE YEAR ENDED DECEMBER 31, 2022

		Employer	Employer Allocation	
<u>Employer</u>		<u>Contributions</u>	<u>Percentage</u>	
Town of Avon	\$	1,674,267	1.8221%	0.018221
Avon Housing Authority		15,697	0.0171%	0.000171
Town of Bellingham		3,534,569	3.8467%	0.038467
Bellingham Housing Authority		53,711	0.0585%	0.000585
Town of Canton		6,929,184	7.5411%	0.075411
Canton Housing Authority		118,641	0.1291%	0.001291
Town of Cohasset		3,429,263	3.7321%	0.037321
Cohasset Housing Authority		20,967	0.0228%	0.000228
Norfolk County		4,529,169	4.9292%	0.049292
Charles River Pollution Control		180,785	0.1968%	0.001968
Town of Dover		1,585,077	1.7251%	0.017251
Dover-Sherborn Regional High School		878,624	0.9562%	0.009562
Town of Foxboro		5,871,763	6.3903%	0.063903
Foxboro Housing Authority		121,344	0.1321%	0.001321
Town of Franklin		7,183,210	7.8176%	0.078176
Franklin Housing Authority Town of Holbrook		112,992	0.1230%	0.001230
Holbrook Housing Authority		2,573,892 61,881	2.8012% 0.0673%	0.028012 0.000673
King Philip Regional School District		941,565	1.0247%	0.010247
Town of Medfield		3,332,086	3.6264%	0.036264
Medfield Housing Authority		18,241	0.0199%	0.000199
Town of Medway		3,510,400	3.8204%	0.038204
Medway Housing Authority		85,510	0.0931%	0.000931
Metacomet Emergency Communication		391,025	0.4256%	0.004256
Town of Millis		2,363,555	2.5723%	0.025723
Millis Housing Authority		61,806	0.0673%	0.000673
Town of Norfolk		2,771,584	3.0164%	0.030164
Norfolk Housing Authority		42,177	0.0459%	0.000459
Norfolk Mosquito Control		259,457	0.2824%	0.002824
Town of Plainville		2,567,956	2.7947%	0.027947
Town of Randolph		7,547,386	8.2139%	0.082139
Randolph Housing Authority		122,600	0.1334%	0.001334
Town of Sharon		5,296,528	5.7643%	0.057643
Sharon Housing Authority		44,054	0.0479%	0.000479
Town of Stoughton		7,192,286	7.8275%	0.078275
Stoughton Housing Authority		122,699	0.1335%	0.001335
Town of Walpole		6,405,620	6.9713%	0.069713
Walpole Housing Authority		72,417	0.0788%	0.000788
Town of Westwood		6,572,941	7.1534%	0.071534
Town of Wrentham		2,583,703	2.8119%	0.028119
Wrentham Housing Authority		33,995	0.0370%	0.000370
Dedham Westwood Water District	_	670,418	0.7296%	0.007296
	\$	91,885,045	<u>100.0000%</u>	

SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2022

Deferred Outflows of Resources

<u>Employer</u>	Net	er 31, 2022 Pension ability	B E an	fference etween xpected ad Actual perience	á	Difference Between Projected and Actual nvestment <u>Earnings</u>	Assumption Changes	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	0	Total Deferred utflows of Resources
Town of Avon	\$	10,537,057	\$	346,850	\$	4,032,080	\$ -	\$ 133,796	\$	4,512,726
Avon Housing Authority		98,888		3,256		37,840	-	11		41,107
Town of Bellingham		22,245,156		732,248		8,512,268	-	13,237		9,257,753
Bellingham Housing Authority		338,301		11,136		129,453	-	44,048		184,637
Town of Canton		43,608,995		1,435,487		16,687,293	-	43,944		18,166,724
Canton Housing Authority		746,575		24,575		285,682	-	18,478		328,735
Town of Cohasset		21,582,433		710,434		8,258,672	-	1,167,266		10,136,372
Cohasset Housing Authority		131,851		4,340		50,454	-	-		54,794
Norfolk County		28,506,322		938,351		10,908,146	-	10,401		11,856,898
Charles River Pollution Control		1,138,079		37,462		435,494	-	1,618		474,574
Town of Dover		9,976,114		328,385		3,817,431	-	9,551		4,155,367
Dover-Sherborn Regional High School		5,529,627		182,021		2,115,951	-	20,666		2,318,638
Town of Foxboro		36,954,589		1,216,443		14,140,938	-	65,090		15,422,471
Foxboro Housing Authority		763,924		25,146		292,321	-	71,114		388,581
Town of Franklin		45,208,550		1,488,140		17,299,375	-	363,092		19,150,607
Franklin Housing Authority		711,299		23,415		272,184	-	687		296,286
Town of Holbrook		16,199,114		533,230		6,198,707	-	6,776		6,738,713
Holbrook Housing Authority		389,190		12,811		148,927	-	29,781		191,519
King Philip Regional School District		5,925,757		195,060		2,267,533	-	56,262		2,518,855
Town of Medfield		20,971,179		690,312		8,024,771	-	39,861		8,754,944
Medfield Housing Authority		115,080		3,788		44,036	-	145		47,969
Town of Medway		22,093,065		727,243		8,454,069	-	816,808		9,998,120
Medway Housing Authority		538,390		17,723		206,019	-	574		224,316
Metacomet Emergency Communication		2,461,210		81,016		941,800	-	1,122,383		2,145,199
Town of Millis		14,875,403		489,657		5,692,179	-	377,496		6,559,332
Millis Housing Authority		389,190		12,811		148,927	-	19,907		181,645

SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2022

Deferred Outflows of Resources

<u>Employer</u>	December 31, 2022 Net Pension <u>Liability</u>	Difference Between Expected and Actual Experience	Difference Between Projected and Actual Investment Earnings	Assumption Changes	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources
Town of Norfolk	17,443,598	574,194	6,674,917	-	3,154	7,252,265
Norfolk Housing Authority	265,436	8,737	101,571	-	327	110,635
Norfolk Mosquito Control	1,633,096	53,757	624,916	-	4,958	683,631
Town of Plainville	16,161,525	531,993	6,184,323	-	423,211	7,139,527
Town of Randolph	47,500,321	1,563,579	18,176,337	-	66,553	19,806,469
Randolph Housing Authority	771,441	25,393	295,198	-	10,858	331,449
Town of Sharon	33,334,482	1,097,279	12,755,678	-	40,295	13,893,252
Sharon Housing Authority	277,002	9,118	105,997	-	78,622	193,737
Town of Stoughton	45,265,801	1,490,024	17,321,282	-	58,420	18,869,726
Stoughton Housing Authority	772,020	25,413	295,419	-	60,132	380,964
Town of Walpole	40,314,465	1,327,040	15,426,618	-	458,295	17,211,953
Walpole Housing Authority	455,694	15,000	174,375	-	3,712	193,087
Town of Westwood	41,367,535	1,361,705	15,829,583	-	16,870	17,208,158
Town of Wrentham	16,260,991	535,266	6,222,384	-	35,658	6,793,308
Wrentham Housing Authority	213,968	7,043	81,876	-	507	89,426
Dedham Westwood Water District	4,219,218	138,884	1,614,514		3,325	1,756,723
	\$ 578,291,931	\$ 19,035,765	\$ 221,287,538	\$ -	\$ 5,697,889	\$ 246,021,192

SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2022

Deferred Inflows of Resources Pension Expense (Proportionate Changes in Proportion Share of and Differences Contributions Difference Between from Difference Between Employer Proportionate Net Nonemployer Between Projected Contributions Total Share of Amortization Entities) Expected and Actual and Proportionate Deferred Plan from Total Total Total Covered and Actual Investment Assumption Share of Inflows of Pension Changes in Pension Pension Changes **Employer** Experience **Earnings** Contributions Resources **Expense Proportions Expense** Revenue <u>Payroll</u> Town of Avon Ś - Ś 2.019.987 \$ - Ś 19.441 \$ 2.039.428 Ś 1,410,501 \$ 1.374.819 Ś 78.782 \$ 6.702.519 (35,682) \$ Avon Housing Authority 18,957 4,233 23,190 13,237 (20,853)(7,616)739 63,155 Town of Bellingham 4,264,468 1,592,679 5,857,147 2,977,758 (782,776)2,194,982 166,319 15,419,732 **Bellingham Housing Authority** 64,853 227 65,080 45,285 19,781 65,066 2,529 73,092 Town of Canton 8.359.986 8.359.986 5,837,542 57.394 5.894.936 326,050 27,012,254 Canton Housing Authority 143.121 6.047 149.168 99.937 (19,624)80.313 5.582 423.491 Town of Cohasset 4.137.422 4,213,709 2,889,045 163.476 161.365 12,970,564 76,287 3,052,521 Cohasset Housing Authority 25,276 27,405 (1,585)986 2,129 17,650 16,065 Norfolk County 5,464,755 646,464 6,111,219 3,815,880 (362,855)3,453,025 213,132 9,413,809 Charles River Pollution Control 218,174 103,087 321,261 152,344 (44,203)108,141 8,509 720,269 Town of Dover 1,912,453 465,922 2,378,375 1,335,412 (213,414)1,121,998 74,588 6,377,609 Dover-Sherborn Regional High School 1,060,047 585,129 740,201 545,169 41,343 3,634,015 1,645,176 (195,032)Town of Foxboro 7.084.314 227.835 7.312.149 4.946.777 161.102 5.107.879 276.297 22.190.745 Foxboro Housing Authority 146,447 3,336 149,783 102,260 61,308 5,712 491,898 163,568 Town of Franklin 8,666,625 8,666,625 6,051,660 462,861 6,514,521 338,009 27,683,638 Franklin Housing Authority 136,359 546 136,905 95,215 (2,426)92,789 5,318 433,055 Town of Holbrook 3,105,423 186,802 3,292,225 2,168,429 (206, 435)1,961,994 121,115 10,818,336 Holbrook Housing Authority 74,609 5,204 79,813 52,097 (7,839)44,258 2,910 177,160 King Philip Regional School District 1,135,987 23,865 1,159,852 793,228 (96,797)696,431 44,305 4,137,809 Town of Medfield 4.020.242 228.368 4.248.610 2.807.222 21.747 2.828.969 156.794 12,341,003 Medfield Housing Authority 22,061 1,747 23,808 15,405 (3,416)11,989 860 Town of Medway 4,235,312 4,235,312 2,957,399 402,626 3,360,025 165,182 14,355,617 Medway Housing Authority 103,211 75,933 179,144 (47,299)24,770 72,069 4,025 413,412 Metacomet Emergency Communication 471.821 471.821 329,460 539.703 869.163 18.402 2,044,459 Town of Millis 2,851,663 10,652 2,862,315 1,991,236 129,689 2,120,925 111,218 10,672,028 Millis Housing Authority 74.609 334 74.943 52.097 15.088 67.185 2.910 220.131

SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2022

	Deferred Inflows of Resources						Pension Expense			
<u>Employer</u>	Difference Between Expected and Actual Experience	Difference Between Projected and Actual Investment <u>Earnings</u>	Assumption <u>Changes</u>	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionat Share of Plan Pension Expense	e Net Amortization from Changes in <u>Proportions</u>	Total Pension <u>Expense</u>	(Proportionate Share of Contributions from Nonemployer Entities) Total Pension Revenue	Total Covered <u>Payroll</u>
Town of Norfolk	-	3,343,994	-	15,171	3,359,165	2,335,0	.7 (23,064)	2,311,953	130,420	11,340,870
Norfolk Housing Authority	-	50,885	-	1,861	52,746	35,53	191	35,723	1,985	114,128
Norfolk Mosquito Control	-	313,070	-	605	313,675	218,60	08 (545)	218,063	12,210	908,581
Town of Plainville	-	3,098,217	-	5,274	3,103,491	2,163,39	7 178,428	2,341,825	120,834	8,199,575
Town of Randolph	-	9,105,965	-	334,737	9,440,702	6,358,43	148,976	6,507,414	355,144	27,987,951
Randolph Housing Authority	-	147,889	-	1,036	148,925	103,26	52,580	155,846	5,768	354,368
Town of Sharon	-	6,390,328	-	449,830	6,840,158	4,462,18	(130,326)	4,331,859	249,231	19,932,557
Sharon Housing Authority	-	53,102	-	4,649	57,751	37,08	30 13,595	50,675	2,071	176,643
Town of Stoughton	-	8,677,600	-	126,855	8,804,455	6,059,32	148,914	6,208,237	338,437	28,846,032
Stoughton Housing Authority	-	147,999	-	-	147,999	103,34	35,685	139,028	5,772	500,170
Town of Walpole	-	7,728,413	-	80,456	7,808,869	5,396,53	(197,061)	5,199,472	301,418	24,955,471
Walpole Housing Authority	-	87,357	-	501	87,858	61,00	00 (683)	60,317	3,407	251,305
Town of Westwood	-	7,930,290	-	201,958	8,132,248	5,537,49	98 (110,822)	5,426,676	309,291	25,377,418
Town of Wrentham	-	3,117,284	-	159,261	3,276,545	2,176,7	.2 50,049	2,226,761	121,578	11,059,571
Wrentham Housing Authority	-	41,018	-	4,235	45,253	28,64	2 (21)	28,621	1,600	115,533
Dedham Westwood Water District		808,837		45,193	854,030	564,78	(160,435)	404,354	31,546	2,546,237
	\$ -	\$ 110,860,430	\$ -	\$ 5,697,889	\$ 116,558,319	\$ 77,410,70	9 \$ -	\$ 77,410,709	\$ 4,323,693	\$351,456,210

SCHEDULE OF AMORTIZATION OF EMPLOYERS' DEFERRED OUTFLOWS/INFLOWS

FOR THE YEAR ENDED DECEMBER 31, 2022

FOR THE YEARS ENDING DECEMBER 31

<u>Employer</u>	<u>2023</u>	2024		<u>2025</u>		<u>2026</u>	<u>Thereafter</u>	<u>Total</u>
Town of Avon	\$ 308,502	\$ 601,412	\$	555,302	\$	1,008,082	\$ -	\$ 2,473,298
Avon Housing Authority	(1,609)	4,922	·	5,143	·	9,461	-	17,917
Town of Bellingham	(205,425)	377,214		1,100,641		2,128,176	_	3,400,606
Bellingham Housing Authority	29,343	38,426		19,417		32,371	_	119,557
Town of Canton	1,115,131	2,243,289		2,276,424		4,171,894	-	9,806,738
Canton Housing Authority	21,866	46,831		39,463		71,407	-	179,567
Town of Cohasset	1,024,413	1,661,967		1,171,513		2,064,770	-	5,922,663
Cohasset Housing Authority	2,207	5,856		6,721		12,605	-	27,389
Norfolk County	361,705	1,218,086		1,441,344		2,724,544	-	5,745,679
Charles River Pollution Control	(19,824)	8,774		55,485		108,878	-	153,313
Town of Dover	30,626	288,117		503,784		954,465	-	1,776,992
Dover-Sherborn Regional High School	(124,720)	2,535		266,605		529,042	-	673,462
Town of Foxboro	871,574	1,783,051		1,920,335		3,535,362	-	8,110,322
Foxboro Housing Authority	53,844	69,648		42,235		73,071	-	238,798
Town of Franklin	1,335,504	2,449,927		2,373,324		4,325,227	-	10,483,982
Franklin Housing Authority	17,581	36,640		37,113		68,047	-	159,381
Town of Holbrook	305,402	752,037		839,326		1,549,723	-	3,446,488
Holbrook Housing Authority	19,446	33,884		21,166		37,210	-	111,706
King Philip Regional School District	151,381	328,829		311,845		566,948	-	1,359,003
Town of Medfield	445,648	966,493		1,087,784		2,006,409	-	4,506,334
Medfield Housing Authority	2,012	5,478		5,687		10,984	-	24,161
Town of Medway	945,622	1,517,541		1,185,901		2,113,744	-	5,762,808
Medway Housing Authority	(23,972)	(7,710)		25,342		51,512	-	45,172
Metacomet Emergency Communication	600,772	665,245		171,882		235,479	-	1,673,378
Town of Millis	542,850	939,070		791,897		1,423,200	-	3,697,017
Millis Housing Authority	19,783	28,781		20,917		37,221	-	106,702
Town of Norfolk	428,503	887,119		908,804		1,668,674	-	3,893,100
Norfolk Housing Authority	6,024	12,699		13,772		25,394	-	57,889
Norfolk Mosquito Control	42,601	85,685		85,434		156,236	-	369,956
Town of Plainville	602,333	1,027,788		859,770		1,546,145	-	4,036,036
Town of Randolph	1,089,057	2,269,680		2,463,091		4,543,939	-	10,365,767
Randolph Housing Authority	29,263	39,502		39,981		73,778	-	182,524
Town of Sharon	643,406	1,494,626		1,725,790		3,189,272	-	7,053,094
Sharon Housing Authority	40,051	51,954		17,480		26,501	-	135,986
Town of Stoughton	1,118,315	2,257,847		2,358,591		4,330,518	-	10,065,271
Stoughton Housing Authority	48,929	67,651		42,531		73,854	-	232,965
Town of Walpole	1,148,226	2,277,270		2,120,854		3,856,734	-	9,403,084
Walpole Housing Authority	12,747	24,986		23,903		43,593	-	105,229
Town of Westwood	942,742	2,024,014		2,151,643		3,957,511	-	9,075,910
Town of Wrentham	358,807	758,011		844,178		1,555,767	-	3,516,763
Wrentham Housing Authority	3,779	8,929		10,998		20,467	-	44,173
Dedham Westwood Water District	70,071	 208,987		219,964		403,671		902,693
	\$ 14,414,516	\$ 29,563,091	\$	30,163,380	\$	55,321,886	\$ -	\$ 129,462,873

NOTES TO SCHEDULES OF EMPLOYER ALLOCATIONS, PENSION AMOUNTS BY EMPLOYER AND AMORTIZATION OF EMPLOYERS' DEFERRED OUTFLOWS/INFLOWS DECEMBER 31, 2022

NOTE 1 – DESCRIPTION OF THE ENTITY

The Norfolk County Retirement System (the System) was established to provide retirement benefits to eligible employees of its member employers. The System is governed by a five member Board who establish the policies under which the System operates. Board members also approve all of the System's financial transactions, including the approval of retirement benefits to members. The day-to-day operations of the System are managed by the Executive Director. The legislative body for the System is an Advisory Council consisting of full-time treasurers or other qualified officials of the member units. The Advisory Council meets at least twice annually and is responsible for supervising and certifying the procedures involved in the election of members to the retirement board.

The System issued a publicly available audited financial statement for the year ended December 31, 2022, which is available through the System's website at www.norfolkcountyretirement.org, or a copy may be obtained by submitting a request to the System's Executive Director at 480 Neponset Street, Building #15, Canton, MA 02021.

Plan Description

The System is a cost-sharing multiple-employer contributory defined benefit governmental pension plan established under Chapter 32 of the Massachusetts General Laws ("MGL") covering all employees of governmental member units deemed eligible by the Board. The System is a member of the Massachusetts Contributory Retirement System and is governed by Chapter 32 of MGL. The Public Employee Retirement Administration Commission (PERAC) is the state agency responsible for oversight of the Commonwealth's public retirement systems.

Membership

Membership in the Plan is mandatory immediately upon the commencement of employment for all non-teaching permanent employees regularly scheduled to work 20 hours or more per week. The pensions of school department employees who serve in a teaching capacity are administered by the Commonwealth of Massachusetts' Teachers Retirement System.

Benefits

Massachusetts Contributory Retirement System benefits are, with certain exceptions, uniform from system to system. The System provides for retirement allowance benefits up to a maximum of 80% of a member's highest three-year average annual rate of regular compensation. For persons who became members on or after April 2, 2012, average salary is the average annual rate of regular compensation received during the five consecutive years that produce the highest average, or, if greater, during the last five years (whether or not consecutive) preceding retirement. Benefit payments are based upon a member's age, length of creditable service, level of compensation, and group classification.

NOTES TO SCHEDULES OF EMPLOYER ALLOCATIONS, PENSION AMOUNTS BY EMPLOYER AND AMORTIZATION OF EMPLOYERS' DEFERRED OUTFLOWS/INFLOWS DECEMBER 31, 2022

NOTE 1 – DESCRIPTION OF THE ENTITY (Continued)

Benefits (Continued)

There are three classes of membership in the retirement system: group 1, group 2, and group 4. Group 1 consists of general employees which includes clerical, administrative, technical and not otherwise classified positions. Group 2 consists of positions that have been specified as hazardous. Lastly, group 4 consists of police officers, firefighters, and other hazardous positions.

Members become vested after ten years of creditable service. A superannuation retirement allowance may be received upon the completion of 20 years of service or upon reaching the age of 55 with 10 years of service if hired after 1978 and if classified in groups 1 or 2. A person who became a member on or after April 2, 2012 is eligible for a superannuation retirement allowance upon reaching the age of 60 with 10 years of service if in group 1, 55 years of age with 10 years of service if in group 2, and 55 years of age if hired prior to 1978 or if classified in group 4. Normal retirement for most employees occurs at age 65 (except for certain hazardous duty and public safety positions, whose normal retirement is at age 55).

A retirement allowance consists of two parts: an annuity and a pension. A member's accumulated total deductions and the interest they generate constitute the annuity. The differential between the total retirement benefit and the annuity is the pension. The average retirement benefit is approximately 80-85% pension and 15-20% annuity.

Members who become permanently and totally disabled for further duty may be eligible to receive a disability retirement allowance. The amount of benefits to be received in such cases is dependent on several factors, including whether or not the disability is work related, the member's age, years of creditable service, level of compensation, veterans' status and group classification.

Employees who resign from service and who are not eligible to receive a retirement allowance or are under the age of 55 are entitled to request a refund of their accumulated total deductions. In addition, with at least ten years of creditable service, such employees are entitled to receive one hundred (100%) percent of the regular interest which has accrued upon those deductions. Survivor benefits are extended to eligible beneficiaries of members whose death occurs prior to or following retirement.

Contributions

Active members contribute between 5 and 9% of their gross regular compensation. Members joining the System after January 1, 1979 must contribute an additional 2% on regular compensation earned at a rate in excess of \$30,000. The percentage rate is keyed to the date upon which an employee's membership commences. These deductions are deposited in the Annuity Savings Fund and earn interest at a rate determined by the Public Employee Retirement Administration Commission's (PERAC) actuary. When a member's retirement becomes effective, his/her deductions and related interest are transferred to the Annuity Reserve Fund. Any cost-of-living adjustments granted between 1981 and 1997 and any increase in other benefits imposed by

NOTES TO SCHEDULES OF EMPLOYER ALLOCATIONS, PENSION AMOUNTS BY EMPLOYER AND AMORTIZATION OF EMPLOYERS' DEFERRED OUTFLOWS/INFLOWS DECEMBER 31, 2022

NOTE 1 – DESCRIPTION OF THE ENTITY (Continued)

Contributions (Continued)

the Commonwealth of Massachusetts' state law during those years are borne by the Commonwealth and are deposited into the Pension Fund. Cost-of-living adjustments granted after 1997 must be approved by the System and all costs are borne by the System. The pension portion of any retirement benefit is paid from the Pension Fund of the System. The governmental unit employing the member must annually appropriate and contribute the amount of current-year pension assessment.

NOTE 2 – <u>ACTUARIAL ASSUMPTIONS AND METHODS</u>

The total pension liability was determined by an actuarial valuation as of January 1, 2022. The following actuarial assumptions were applied to all periods included in the measurement that was rolled forward to December 31, 2022:

Actuarial cost method: Entry Age Normal Cost Method

Asset valuation method Market value

Investment rate of return 7.75%

Projected salary increases 3.5% - 5.5%

Inflation 3.0%

Cost of living increases 3.0% of first \$18,000 of retirement income

Mortality: The RP-2014 Blue Collar Mortality Table adjusted with

Scale with MP-2014

NOTE 3 – BASIS OF PRESENTATION

The Schedule of Employer Allocations, Schedule of Pension Amounts by Employer, and Schedule of Amortization of Employers' Deferred Outflows/Inflows present amounts that are elements of the financial statements of the System or of its participating employers. Accordingly, they do not purport to be a complete presentation of the financial position or changes in financial position of either the System or its participating employers. The amounts presented in the schedules were prepared in accordance with U.S. generally accepted accounting principles. Such preparation requires management of the System to make a number of estimates and assumptions relating to the reported amounts. Due to inherent nature of these estimates, actual results may differ from those estimates.

NOTES TO SCHEDULES OF EMPLOYER ALLOCATIONS, PENSION AMOUNTS BY EMPLOYER AND AMORTIZATION OF EMPLOYERS' DEFERRED OUTFLOWS/INFLOWS DECEMBER 31. 2022

NOTE 4 – NET PENSION LIABILITY

The components of the net pension liability of the System as of December 31, 2022, is as follows:

Total Pension Liability	\$1,838,943,253
Fiduciary Net Position	1,260,651,322
System's Net Pension Liability	\$ 578,291,931

Fiduciary Net Position as a percentage of

total pension liability 68.6%

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 as of December 31, 2022 was 7.75%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at contractually required rates, actuarially determined. Under Chapter 32 of the MGL, employers are required to make the necessary contributions such that the Plan reaches full funding status by 2040. Based on those assumptions, the Plan'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 Plan investments was applied to all periods of projected benefit payments to determine total pension liability.

Long-Term Expected Rate of Return

The long term expected rate of return on Plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of 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 real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized as follows:

Asset Class	Target <u>Allocation</u>	Long-term Expected Real <u>Rate of Return</u>
Domestic Equity	30.5%	7.0%
International Equities	15.5	7.7%
Fixed Income	20.5	4.3%
Real Estate	9.5	6.9%
Private Equity	10.0	9.4%
Hedge Funds	11.5	8.6%
Real Assets	2.5	8.9%
Total	<u>100.0</u> %	
	40	

NOTES TO SCHEDULES OF EMPLOYER ALLOCATIONS, PENSION AMOUNTS BY EMPLOYER AND AMORTIZATION OF EMPLOYERS' DEFERRED OUTFLOWS/INFLOWS DECEMBER 31, 2022

NOTE 4 – <u>NET PENSION LIABILITY</u> (Continued)

The System's policy in regard to the allocation of invested Plan assets is established and may be amended by the Board. Plan assets are managed with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the Plan.

The annual money-weighted rate of return on investments, net of investment expense was -11.82% for the year ended December 31, 2022. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

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

The following presents the net pension liability of the System as of December 31, 2022, calculated using the discount rate of 7.75%, as well as what the System's net pension liability would be if it were calculated using a discount rate that is one-percentage point lower (6.75%) or one-percentage point higher (8.75%) than the current rate:

		Current Discount	
	1% Decrease (6.75%)	Rate (7.75%)	1% Increase (8.75%)
System's Net Pension Liability	\$768,213,463	\$578,291,931	\$416,834,744

NOTE 5 – PENSION EXPENSE

System pension expense for the year ended December 31, 2022 is as follows:

Service Cost	\$ 39,418,902
Interest Cost	137,049,010
Expected Return on Assets	(110,483,643)
Member Contributions	(38,149,245)
Current Year Amortization of Difference Between	
Expected and Actual Experience	18,242,007
Current Year Amortization of Difference Between	
Projected and Actual Investment Earnings	29,820,549
Administrative Expenses	<u>1,513,129</u>
Total	\$ <u>77,410,709</u>

The System pension expense is based on the January 1, 2022 valuation. The employers' allocation of the pension expense is shown in the Schedule of Pension Amounts by Employer. The difference between expected and actual experience and the effect of assumption changes are amortized over the average expected remaining service lives of active and inactive members as of January 1, 2022 (4.08 years). The difference between projected and actual investment earnings is amortized over 5 years.

NOTES TO SCHEDULES OF EMPLOYER ALLOCATIONS, PENSION AMOUNTS BY EMPLOYER AND AMORTIZATION OF EMPLOYERS' DEFERRED OUTFLOWS/INFLOWS DECEMBER 31, 2022

NOTE 6 - DEFERRED INFLOWS OF RESOURCES AND DEFERRED OUTFLOWS OF RESOURCES

Annual changes to the net pension liability resulting from differences between expected and actual experience and from changes in assumptions are deferred and amortized over a closed period equal to the average of the expected service lives of all members determined for the period during which the changes occurred. Differences between projected and actual earnings are amortized over a closed 5 year period. The following presents a summary of the changes in the collective deferred outflows of resources and deferred inflows of resources for the year ended December 31, 2022:

<u>Year</u>	Amortization Period	Original <u>Amount</u>	Accumulated Amortization	Beginning of year <u>Balance</u>	Current Year <u>Deferrals</u>	Current Year <u>Amortizations</u>	End of Year <u>Balance</u>
Deferr	ed Outflows o	f Resources					
Differe	nt Between Exp	pected and Actual	l Experience				
2019	4.19	41,916,868	30,012,077	11,904,791	-	10,004,026	\$ 1,900,765
2021	4.08	33,610,962	8,237,981	25,372,981	-	8,237,981	17,135,000
Differe	nce Between P	rojected and Actu	ıal Investment E	arnings			
2018	5	127,723,896	102,179,117	25,544,779		25,544,779	-
2022	5	276,609,422	-	-	276,609,422	55,321,884	221,287,538
Deferr	ed Inflows of F	Resources					
2019	5	(85,246,700)	(51,148,020)	(34,098,680)	-	(17,049,340)	(17,049,340)
2020	5	(40,896,153)	(16,358,463)	(24,537,690)	-	(8,179,230)	(16,358,460)
2021	5	(129,087,718)	(25,817,544)	(103,270,174)	-	(25,817,544)	(77,452,630)
Total [Deferred Outflo	ows/Inflows					\$ <u>129,462,873</u>

The following schedule reflects the amortization of the balance of deferred outflows of resources and deferred inflows of resources at December 31, 2022:

<u>Amount</u>
\$ 14,414,516
29,563,091
30,163,380
55,321,886
\$ <u>129,462,873</u>

NOTES TO SCHEDULES OF EMPLOYER ALLOCATIONS, PENSION AMOUNTS BY EMPLOYER AND AMORTIZATION OF EMPLOYERS' DEFERRED OUTFLOWS/INFLOWS DECEMBER 31, 2022

NOTE 7 – <u>PROPORTIONATE SHARE ALLOCATION METHODOLOGY AND</u> EMPLOYER ALLOCATIONS

GASB Statement No. 68 requires employers in the Plan to recognize their proportionate share of the collective net pension liability. Employers' proportionate shares were calculated on the basis of actual employer contributions for the year ended December 31, 2022. The Schedule of Employer Allocations display the proportionate allocation used to allocate the Difference Between Expected and Actual Experience; Difference Between Projected and Actual Investment Earnings; Proportionate Share of Plan Pension Expense; and Proportionate Share of Contributions from Nonemployer Entities.

NOTE 8 - ADDITIONAL FINANCIAL AND ACTUARIAL INFORMATION

Information contained in these Notes to Schedules of Employer Allocations and Pension Amounts by Employer (the Schedules) was extracted from the audited financial statements of the System for the years ended December 31, 2022 and 2021. 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 years ended December 31, 2022 and 2021. A copy may be obtained by submitting a request to the System's Executive Director at 480 Neponset Street, Building #15, Canton, MA 02021.