



City of East Providence, Rhode Island Police and Fire Fighters Retirement System

10/31/2022 Cost Projections

November 7, 2023



Important Comments About Cost Information Included in this Report

Results and information prior to October 31, 2016 were provided by Fallon Pension Actuaries, Inc.

The cost projections contained in this report are based on data as of October 31, 2022. Assumptions used in measuring the liabilities are consistent with the October 31, 2022 actuarial report unless stated otherwise. Reasonable actuarial techniques and assumptions were used to produce the cost projections. Data was provided by the City of East Providence.

The following pages show cost projections under specific projected scenarios and are intended to be illustrative. Actual results will vary from projections shown in this report due to such factors as deviation in actual participant experience, variance of realized asset returns, future adjustments to actuarial assumptions or methodologies, and changes in the plan's provisions or governing laws. These projections are made in part to satisfy the municipality's obligation to provide a funding improvement plan to emerge from critical status, as described in §45-65-6 of state statutes.

These projections reflect numerous assumptions, and one should focus on the general trend of the results rather than the absolute dollar amounts.



Introduction

- As a result of requirements under the Rhode Island Retirement Security Act of 2011 (RIRSA), the Retirement System's funded percentage had fallen below 60.0% as of 10/31/2011 and thus was considered to be in "critical status" as of 10/31/2011. A Funding Improvement Plan (FIP) was completed November 12, 2012 to demonstrate alternative plans to emerge from critical status within 20 years by 10/31/2031.
- As detailed in the 12/12/2012 report prepared by Fallon Pension Actuaries, Inc., the Budget Commission decided to adopt Options 2 and 3 detailed in the report. As a basic summary, Option 2 detailed the intention to pay the annual recommended contribution determined by the actuary each year and Option 3 detailed changes in plan design to lower the ongoing liability of the Plan.
- The City of East Providence has been consistent with their decision to pay the recommended contribution each year and make plan design changes.

Plan Year Ending 10/31	Payment against the Actuarial Recommended Funding Contribution
2013	97.9%
2014	103.1%
2015	114.6%
2016	98.2%
2017*	86.8%
2018	108.4%
2019	103.9%
2020	100.0%
2021	100.0%
2022	103.8%

*Note that due to timing, the contribution made during the plan year ending 10/31/2017 was not yet known when budgeting and contributing for the Plan Year. The intent of the plan sponsor is to continue to contribute the recommended contribution. The recommended contribution methodology had been revised beginning on 10/31/2017 such that the plan year contribution will be determined based on results at least a year in advance.



Funding Progress

- In addition to the changes made in conjunction with the FIP, the City also made a significant contribution of \$49.2 million in the plan year ending October 31, 2013. These funds were provided to the City as a result of the City's Police participation in an investigation of Google, Inc. for allowing online Canadian pharmacies to place advertisements targeting consumers in the United States, resulting in the unlawful importation of prescription drugs. This significant contribution caused the plan to immediately emerge from critical status.
- The Retirement System's funded percentage was greater than 60.0% from 2013-2015, but the Retirement System's funded percentage dipped below the 60% threshold at 10/31/2016, and is still below the 60% threshold as of 10/31/2022.

Plan Year Ending 10/31	Funded Percentage
2013	62.3%
2014	61.4%
2015	60.0%
2016	54.8%
2017	58.5%
2018	57.2%
2019	56.8%
2020	54.3%
2021	54.4%
2022	54.5%



Funding Improvement Plan (FIP)

- It is still the intention of the City of East Providence to make the annual actuarial recommended contribution each year.
- Based on the most recent valuation and cost projections on the following page, it is expected the Retirement System will emerge from critical status starting with the plan year beginning 10/31/2030. Therefore, the Retirement System is still making requisite progress under the Funding Improvement Plan.
- In the previous year, the Retirement System had been projected to emerge from critical status by 10/31/2024. Worse than expected asset performance during the plan year ending 10/31/2022 delayed the projected emergence from critical status by 6 years.



10/31/2022 Cost Projection

Valuation Date (10/31)	Plan Year Ending (10/31)	Payment against the ARFC	Employer Normal Cost	Amortization	Projected Payroll	Employer Contribution as a % of payroll	Employer ARFC	Employer Contribution	Increase	Benefit Payments	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability	Unfunded Liability	Funded Ratio
2011	2012	21.1%	1,894,000	5,631,388	12,326,000	12.9%	7,525,388	1,590,445		8,964,308	53,521,413	159,321,987	105,800,574	33.6%
2012	2013	97.9%	1,950,978	6,000,482	12,542,000	62.1%	7,951,460	7,784,310*	389.4%	9,314,049	52,075,375	164,802,828	112,727,453	31.6%
2013	2014	103.1%	1,967,342	3,469,538	12,666,939	44.3%	5,436,880	5,606,148	-28.0%	9,746,290	107,769,539	172,949,660	65,180,121	62.3%
2014	2015	114.6%	1,896,610	3,720,901	13,861,789	46.4%	5,617,511	6,435,589	14.8%	10,237,038	111,060,482	180,962,809	69,902,327	61.4%
2015	2016	98.2%	1,886,773	4,034,879	14,628,273	39.8%	5,921,652	5,816,231	-9.6%	10,784,177	113,803,022	189,603,866	75,800,844	60.0%
2016	2017	86.8%	2,134,412	5,155,427	15,021,061	42.1%	7,289,839	6,327,364	8.8%	11,311,227	115,793,717	211,150,930	95,357,213	54.8%
2017	2018	108.4%	1,988,497	5,031,375	14,517,769	52.4%	7,019,872	7,610,501	20.3%	12,246,488	128,310,000	219,314,469	91,004,469	58.5%
2017	2019	103.9%	1,988,497	5,205,611	15,062,185	51.6%	7,470,844	7,764,971	2.0%	12,770,136	128,310,000	219,314,469	91,004,469	58.5%
2018	2020	100.0%	2,039,793	5,853,706	15,842,646	51.7%	8,190,648	8,190,648	5.5%	13,571,437	132,323,097	231,157,560	98,834,463	57.2%
2019	2021	100.0%	2,016,234	6,322,943	15,790,230	54.8%	8,653,046	8,653,046	5.6%	14,231,858	136,158,048	239,751,998	103,593,950	56.8%
2020	2022	103.8%	2,191,246	7,465,129	15,728,613	66.1%	10,019,126	10,404,477	20.2%	15,237,719	140,045,905	257,803,498	117,757,593	54.3%
2021	2023	100.0%	2,361,635	8,026,540	16,280,755	66.2%	10,777,860	10,777,860	3.6%	16,572,510	149,525,489	274,656,092	125,130,603	54.4%
2022	2024	100.0%	2,250,245	8,541,607	15,561,500	72.0%	11,204,280	11,204,280	4.0%	17,212,766	154,357,737	283,133,254	128,775,517	54.5%
2023	2025	100.0%	2,246,134	9,029,469	15,807,943	74.0%	11,697,878	11,697,878	4.4%	18,078,308	159,071,611	290,512,552	131,440,941	54.8%
2024	2026	100.0%	2,189,156	9,566,782	16,045,983	76.0%	12,194,947	12,194,947	4.2%	18,747,471	163,549,794	297,789,183	134,239,389	54.9%
2025	2027	100.0%	2,207,067	10,010,803	16,199,169	78.3%	12,683,949	12,683,949	4.0%	19,420,544	169,653,382	304,631,942	134,978,560	55.7%
2026	2028	100.0%	2,219,510	10,797,737	16,551,983	81.6%	13,506,418	13,506,418	6.5%	20,112,774	171,196,681	311,340,533	140,143,852	55.0%
2027	2029	100.0%	2,234,521	11,233,028	16,963,430	82.4%	13,977,866	13,977,866	3.5%	20,814,274	178,712,304	317,887,440	139,175,136	56.2%
2028	2030	100.0%	2,236,734	11,657,983	17,326,603	83.2%	14,415,734	14,415,734	3.1%	21,493,081	186,977,029	324,250,169	137,273,140	57.7%
2029	2031	100.0%	2,235,478	12,095,806	17,692,229	84.0%	14,861,472	14,861,472	3.1%	22,054,482	195,653,525	330,385,428	134,731,903	59.2%
2030	2032	100.0%	2,263,986	12,550,067	18,095,387	84.9%	15,362,984	15,362,984	3.4%	22,609,228	204,757,376	336,294,505	131,537,129	60.9%
2031	2033	100.0%	2,288,562	13,024,189	18,601,073	85.4%	15,885,316	15,885,316	3.4%	23,175,404	214,466,968	342,132,521	127,665,553	62.7%
2032	2034	100.0%	2,304,198	13,516,069	19,097,312	85.9%	16,404,591	16,404,591	3.3%	23,731,625	224,888,996	347,893,482	123,004,486	64.6%
2033	2035	100.0%	2,321,844	14,025,468	19,607,176	86.5%	16,960,207	16,960,207	3.4%	24,257,080	236,082,455	353,546,631	117,464,176	66.8%
2034	2036	100.0%	2,340,785	14,554,683	20,120,633	87.1%	17,525,071	17,525,071	3.3%	24,722,069	248,113,083	359,099,539	110,986,456	69.1%
2035	2037	100.0%	2,388,256	15,103,360	20,673,981	87.8%	18,151,755	18,151,755	3.6%	25,107,475	261,114,082	364,579,905	103,465,823	71.6%
2036	2038	100.0%	2,459,104	15,675,062	21,303,432	88.3%	18,810,930	18,810,930	3.6%	25,508,435	275,243,477	370,091,365	94,847,888	74.4%
2037	2039	100.0%	2,519,158	14,496,791	21,996,943	80.3%	17,663,545	17,663,545	-6.1%	25,901,893	290,743,688	375,755,679	85,011,991	77.4%
2038	2040	100.0%	2,569,365	13,988,992	22,706,897	75.7%	17,189,121	17,189,121	-2.7%	26,327,989	307,725,012	381,548,176	73,823,164	80.7%
2039	2041	100.0%	2,621,126	13,929,789	23,414,649	73.3%	17,162,938	17,162,938	-0.2%	26,749,958	324,361,018	387,471,211	63,110,193	83.7%
2040	2042	100.0%	2,700,701	12,559,423	24,105,777	65.7%	15,837,495	15,837,495	-7.7%	27,237,388	341,315,386	393,502,976	52,187,590	86.7%
2041	2043	100.0%	2,757,067	11,979,186	24,819,927	61.6%	15,289,075	15,289,075	-3.5%	27,771,262	359,113,572	399,703,410	40,589,838	89.8%
2042	2044	100.0%	2,808,107	11,910,811	25,485,532	59.9%	15,265,834	15,265,834	-0.2%	28,260,151	376,337,274	405,973,246	29,635,972	92.7%
2043	2045	100.0%	2,880,999	11,975,517	26,105,721	59.0%	15,402,375	15,402,375	0.9%	28,881,733	393,726,232	412,259,784	18,533,552	95.5%
2044	2046	100.0%	2,931,291	11,989,402	26,778,416	57.8%	15,477,924	15,477,924	0.5%	29,512,380	411,915,811	418,648,138	6,732,327	98.4%
2045	2047	100.0%	3,001,422	0	27,359,560	11.4%	3,118,990	3,118,990	-79.8%	30,155,224	430,980,905	424,966,585	-6,014,320	101.4%
2046	2048	100.0%	3,067,326	0	27,936,190	11.4%	3,184,726	3,184,726	2.1%	30,869,399	450,920,662	431,232,756	-19,687,906	104.6%
2047	2049	100.0%	3,119,338	0	28,533,396	11.3%	3,224,274	3,224,274	1.2%	31,532,275	458,444,629	437,420,189	-21,024,440	104.8%

Unless otherwise noted on the following pages, projections above are based on data, assumptions, methods, and plan provisions as detailed in the 10/31/2022 valuation report dated August 24, 2023.

"ARFC" refers to the "Actuarial Recommended Funding Contribution".

These numbers are estimates only and are not guarantees of future plan costs.

*Note an additional \$49.2 million was contributed during the plan year ending 10/31/2013 as a result of City of East Providence Police's participation in the investigation of Google, Inc.



Assumptions for Cost Projection

Category	Assumption
Asset Return, Interest Rate	Plan assets earn 7.25% annually, except as specified otherwise
Active Population	The number of active employees stays constant at 200 throughout the 30-year projection period.
City Contributions	The City contributes the full Actuarial Recommended Contribution (ARC) each year or as otherwise noted
Contributions Shown	Include only Employer Defined Benefit money, unless otherwise noted
Actuarial Recommended Funding Contribution Calculation	Consists of 2 pieces – benefits being earned during the current year and the amount to cover the amortization of the unfunded liability
Future New Entrants	Modeled after actual new entrant data from 2017-2020. New entrants were modeled for Police and Fire employees separately. Fire employees are assumed to be hired as Privates with the City.
Salary Growth	4.0% compounded annually, plus longevity increases according to bargaining agreements. This include merit, inflation, and any other type of wage increase. The City provides all pension wages including longevity as part of the reported earnings.



Assumptions for Cost Projection

Category	Assumption
Mortality	<p>Healthy Lives - Pub-2010 Safety amount-weighted tables, with generational improvements from 2010 based on assumptions from the 2021 Social Security Administration (SSA) Trustees' Report. Survivors and beneficiaries utilize the Pub-2010 Continuing Survivor mortality tables with the same projected generational improvement.</p> <p>Disabled Lives - Pub-2010 Safety Disabled Retiree Mortality table with generational improvements from 2010 based on assumptions from the 2021 SSA Trustees' Report</p>
Inflation	Inflation is assumed at 2.5% per year unless explicitly stated otherwise
Retirement Rates, Withdrawal Rates, Disability Rates, COLA, Married Percentage	All other assumptions match those used in the October 31, 2022 valuation
Results and Information Prior to 10/31/2016	All results and information prior to October 31, 2016 were prepared and provided by Fallon Pension Actuaries, Inc.



Certification

This report was prepared for the Pension Board of the City of East Providence to show the projected ongoing funded status and cost of the City of East Providence, Rhode Island Police and Fire Fighters Retirement System. Please contact Nyhart prior to disclosing this report to any other party or relying on its content for any purpose other than the intended use.

Except where indicated otherwise, the results included in this report are based on the same data, assumptions, methods, and plan provisions as the 10/31/2022 funding valuation including the determination of contribution for FYE 10/31/2023. As a result, these sections of the 2022 funding report dated August 24, 2023, should be considered part of this report.

In preparing these results, Nyhart used ProVal valuation software developed by Winklevoss Technologies, LLC. This software is widely used for the purpose of performing pension valuations. We coded the plan provisions, assumptions, methods, and participant data summarized in this report, and reviewed the liability and cost outputs for reasonableness. We are not aware of any weaknesses or limitations in the software and have determined it is appropriate for performing this valuation.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such facts as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or other additional cost or contribution requirement based on the plan's funded status); and changes in plan provisions of applicable law. The scope of our assignment did not include an analysis of the potential range of future measurements.

This report has been prepared in accordance with generally accepted actuarial principles and practice.

The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States.

Jennifer Turk, FSA, EA, MAAA

Jennifer Street, ASA, EA, MAAA