

City of Fort Pierce

Retirement and Benefit System

Sixty-Fifth Annual Actuarial Valuation Report
for the Year Ending September 30, 2023



Outline of Contents

Report of September 30, 2023 Actuarial Valuation

Section	Page	Items
	--	Cover Letter
A		Summary of Valuation Results and Certification
	1-5	Summary of valuation results and certification
	6-7	Other observations
	8-9	Risk measures
	10	Low-default-risk obligation measure
B		Valuation Results
	1	Contribution requirement
	2	Contribution comparative statement
	3	Experience gain/(loss)
	4	Development of funding value of assets
	5	Funding progress indicators
	6-9	Unfunded Actuarial Accrued Liability (UAAL)
	10	Actuarial balance sheet
	11	Cumulative experience gains/(losses)
C		Summary of Benefit Provisions and Valuation Data Submitted by the Retirement and Benefit System
	1-3	Benefit provisions
	4	Financial data
	5-16	Participant data
D		Actuarial Cost Method, Actuarial Estimates and Definitions of Technical Terms
	1	Actuarial cost method
	2-4	Amortization of UAAL
	5-11	Actuarial Estimates
	12	Miscellaneous and technical assumptions
	13	Definitions of technical terms
E		Additional Disclosure Information
	1	Schedule of funding progress and schedule of employer contributions
	2	Supplementary Information
F		State Required Data
	1-2	Actuarial Present Value of Accrued Benefits
	3	Reconciliation of membership data





March 11, 2024

City Commission
and Retirement Board
City of Fort Pierce Retirement and Benefit System
Fort Pierce, Florida

Dear City Commission and Retirement Board:

The results of the September 30, 2023 Annual Actuarial Valuation of the City of Fort Pierce Retirement and Benefit System are presented in this report.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the Fund only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purposes of the valuation are to measure the Fund's funding progress and to determine the employer contribution rate for the 2024-2025 fiscal years. Information required by Statement Nos. 67 and 68 of the Governmental Accounting Standards Board (GASB) are provided in separate reports. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

The contribution amount in this report is determined using the actuarial assumptions and methods disclosed in Section D of this report. This report includes risk metrics on page A-9 but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

The findings in this report are based on data and other information through September 30, 2023. The valuation was based upon information furnished by the City, concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the City.

This report was prepared using assumptions adopted by the Board. All actuarial assumptions used in this report are reasonable for the purposes of this valuation. The combined effect of the assumptions is expected to have no significant bias (i.e., not significantly optimistic or pessimistic). Additional information about the actuarial assumptions is included in Section D of this report.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

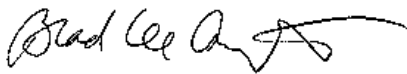
This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the City of Fort Pierce Retirement and Benefit System as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Brad Lee Armstrong and Jeffrey T. Tebeau are Members of the American Academy of Actuaries (MAAA). These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein. Our statement by the Enrolled Actuary is contained in Section A.

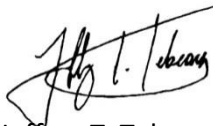
The signing actuaries are independent of the plan sponsor.

Gabriel, Roeder, Smith & Company will be pleased to review this valuation and report with the Board of Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,
Gabriel, Roeder, Smith & Company



Brad Lee Armstrong, ASA, EA, FCA, MAAA



Jeffrey T. Tebeau, FSA, EA, FCA, MAAA

BLA/JTT:dj

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SECTION A

SUMMARY OF VALUATION RESULTS AND CERTIFICATION

Summary of Valuation Results

September 30, 2023

Funding Objective

The basic funding objective of the Retirement and Benefit System is to avoid transfer of the cost of benefit obligations between generations of taxpayers. This objective is implemented by contributions sufficient to:

- Pay for costs allocated to the current year on account of service rendered by participants in the current year (Normal Cost).
- Pay for costs allocated to prior years on account of service rendered by participants in prior years (Unfunded Actuarial Accrued Liability) over a maximum 30-year period.

The annual actuarial valuation measures the relationship between Retirement and Benefit System obligations and assets and determines the contribution rates for the ensuing year. When appropriate, amortization bases were combined in order to moderate scheduled contribution rate volatility.

Funding Progress Indicators

The September 30, 2023 actuarial valuation indicates that the actuarial accrued liabilities of the Retirement and Benefit System are 82% funded by valuation assets. This is lower than last year's funded ratio of 86%. Although not historically referred to, the ratio of the market value of assets to the Actuarial Accrued Liabilities is 76% which is an increase from last year's market value funded ratio of 75%.

Trends to Monitor

The funding value of assets currently exceeds the market value of assets by approximately \$18.9 million. Absent investment returns above the 7.25% assumed or gains from other sources, this will create an upward pressure on contribution requirements and a coinciding downward pressure on the funded ratio progress in the next three valuation reports. Please also refer to pages A-7, A-8 and B-4.

Summary of Valuation Results

September 30, 2023

Assumption Changes

No assumption changes were adopted/reflected in the September 30, 2023 valuation.

Benefit Changes

No benefit changes were adopted/reflected in the September 30, 2023 valuation.

Summary of Valuation Results

September 30, 2023

Observed Experience

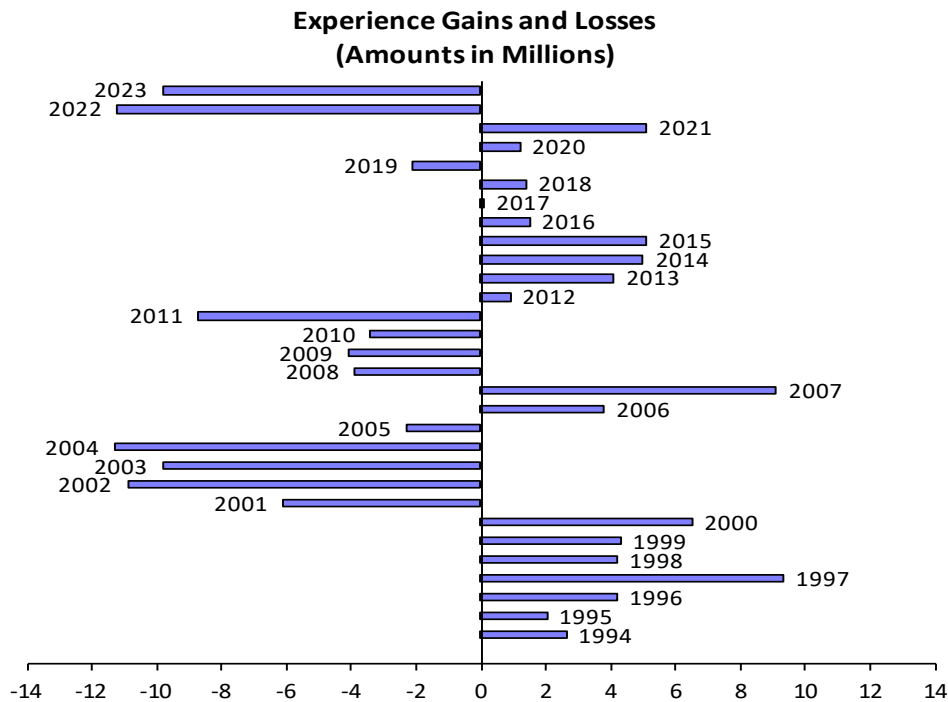
While the investment return on market value was 10.19%, the recognized rate of investment return was 4.53% due to averaging investment experience over the last four years. The recognized investment return was less than the 7.25% assumed return for fiscal year 2023. This was unfavorable and contributed to the majority of the aggregate experience loss. Note that each year's investment experience gain (loss) is spread over four years in equal dollar installments to reduce the effect of market volatility on contribution rates.

Demographic experience varied among the divisions. The principal deviations from projected demographic experience were:

- 9.9% average pay increases across all the divisions vs. 5.2% expected (unfavorable)
- More than expected retiree mortality experience for General (favorable);
- Fewer than expected retiree mortality experience for Utilities Authority and Police (unfavorable); and
- 10-year average payroll growths were less than the 4.0% assumed for Utilities Authority (unfavorable for unfunded liability contribution rates)

The net effect of the preceding experience factors was an aggregate experience loss of \$9,847,582.

Year-to-year experience variations are expected and normal in the operation of a retirement system as members vary their activities and economic conditions change. The expectation is that the favorable years and unfavorable years will tend to cancel over 5 to 10-year periods.



Derivation of the current year's gain is located on Page B-3.

Summary of Valuation Results

September 30, 2023

Valuation Results - Contribution Requirement

The percent-of-payroll contribution requirements for the 2024-2025 fiscal year are:

	General	Utilities Authority	Police
Members			
-Bargaining	5.16 %	6.16 %	5.16 %
-Non-Bargaining	5.16	6.16	5.16
Employer for			
-Bargaining	18.57 %	21.51 %	18.17 %
-Non-Bargaining	18.57	21.51	18.17
-Illustrative	\$2,572,414	\$3,597,236	\$1,720,739

For comparison, the percent-of-payroll contribution requirements for the 2023-2024 fiscal year based on last year's valuation are:

	General	Utilities Authority	Police
Members			
-Bargaining	5.16 %	6.16 %	5.16 %
-Non-Bargaining	5.16	6.16	5.16
Employer for			
-Bargaining	17.56 %	20.89 %	16.93 %
-Non-Bargaining	17.56	20.89	16.93
-Illustrative	\$2,288,174	\$3,237,792	\$1,449,161

Comparative contribution information is shown on page B-2. Composition of the current contribution rates is shown on page B-1.

Summary of Valuation Results

September 30, 2023

Cost-of-Living Adjustment (COLA)

Section 13 - 43 of the City's Code of Ordinances provides for a COLA if the investment return of the fund exceeds that required to satisfy the actuarial interest assumption, which did not happen this year. In addition, the cumulative value of any COLA's granted since 1999 may not exceed the cumulative net actuarial gains since 1999. Page B-11 shows the cumulative value of COLA's and net actuarial gains/(losses) since 1999. The present balance is (\$65,791,877). Therefore, no COLA could be provided under Section 13 - 43 until the Retirement and Benefit System's future actuarial gains exceed \$65,791,877 plus interest. Given the cumulative net actuarial loss balance, this COLA provision is not likely to operate for the indefinite future.

Certification

This actuarial valuation was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Part VII, Chapter 112, Florida Statutes. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation report. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation report.



Brad Lee Armstrong, ASA, EA, FCA, MAAA [23-5614]

3/7/2024

Date

Other Observations

General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected Contributions and Funded Status

Given the System's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the Retirement and Benefit System earning 7.25% on the Market Value of Assets), it is expected that:

1. The employer normal cost is sufficient to cover the cost of benefits accruing each year;
2. The Unfunded Actuarial Accrued Liabilities (UAAL) will continue to be amortized according to the schedules on pages B-7 through B-9, but may not be completely paid off in the definite future; and
3. The funded status of the Retirement and Benefit System will continue to increase gradually towards a 100% funded ratio.

The computed contribution shown on page B-1 may be considered as a minimum contribution rate that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

Limitations of Funded Status Measurements

Unless otherwise indicated, a funded status measurement presented in this report is based upon the Actuarial Accrued Liability (AAL) and the Funding Value of Assets (FVA). Unless otherwise indicated, with regard to any funded status measurements presented in this report:

1. The measurement is inappropriate for assessing the sufficiency of Retirement System assets to cover the estimated cost of settling the Retirement and Benefit System's benefit obligations; for example, transferring the liability to an unrelated third party in a market value type transaction.
2. The measurement is dependent upon the Actuarial Cost Method which, in combination with the Retirement System's amortization policy, affects the timing and amounts of future contributions. The amounts of future contributions will most certainly differ from those assumed in this report due to future actual experience differing from assumed experience based upon the actuarial assumptions. A funded status measurement in this report of 100% is not synonymous with no required future contributions. Even if the funded status is over 100%, the Retirement and Benefit System would still require future normal cost contributions (i.e., contributions to cover the cost of active membership accruing an additional year of service credit).
3. The measurement would produce a different result if the Market Value of Assets (MVA) were used instead of the FVA, unless the MVA is used in the measurement.

Other Observations

Limitations of Project Scope

Actuarial standards do not require the actuary to evaluate the ability of the plan sponsor or other contributing entities to make required contributions to the plan when due. Such an evaluation was not within the scope of this project and is not within the actuary's domain of expertise. Consequently, the actuary performed no such evaluation.

Risks to Future Employer Contribution Requirements

There are ongoing risks to future employer contribution requirements to which the Retirement and Benefit System is exposed, such as:

- Actual and Assumed Investment Rate of Return
- Actual and Assumed Mortality Rates
- Amortization Policy

In particular, the assumed investment rate of return, while reasonable, may produce annual losses over 50% of the time, even if average returns over a multi-year period meet the assumed rate. We believe the investment return assumption should be monitored and reviewed on an annual basis.

Risk Measures – Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; 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 additional cost or contribution requirements based on the System's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. **Investment Risk** – actual investment returns may differ from the expected returns;
2. **Asset/Liability Mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. **Contribution Risk** – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base. The continuing ability of the plan sponsor to make the contributions necessary to fund the plan is outside our scope of expertise and was not performed by GRS;
4. **Salary and Payroll Risk** – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. **Longevity Risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and
6. **Other Demographic Risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

Risk Measures

(\$ Amounts in Thousands)

Actuarial Valuation Date (9/30)	(1) Funding Value of Assets	(2) Actuarial Accrued Liability (AAL)	(3) Unfunded AAL (UAAL) (2) - (1)	(4) Payroll	(5) Funded Ratio (1) / (2)	(6) Retiree Liabilities (RetLiab)	(7) RetLiab / AAL (6)/(2)	(8) AAL / Payroll (2) / (4)	(9) Assets / Payroll (1) / (4)	(10) UAAL / Payroll (3) / (4)	(11) Non-Invest. Cash Flow (NICF)	(12) NICF / Assets (11)/(1)	(13) Market Rate of Return	(14) 5-year Trailing Average
2018	\$ 200,087	\$ 221,431	\$ 21,344	\$ 29,264	90.4%	\$ 137,926	62.3%	756.7%	683.7%	72.9%	\$ (7,435)	(3.7)%	10.3%	8.4%
2019	208,092	231,143	23,051	31,804	90.0%	145,327	62.9%	726.8%	654.3%	72.5%	(7,852)	(3.8)%	2.6%	6.9%
2020 *	216,567	239,844	23,277	32,563	90.3%	150,865	62.9%	736.6%	665.1%	71.5%	(8,208)	(3.8)%	9.6%	8.5%
2021 *	229,477	256,316	26,839	32,304	89.5%	163,876	63.9%	793.4%	710.4%	83.1%	(8,624)	(3.8)%	18.9%	10.3%
2022	227,174	265,344	38,170	34,291	85.6%	171,503	64.6%	773.8%	662.5%	111.3%	(9,168)	(4.0)%	(16.1)%	4.4%
2023	227,673	276,284	48,611	37,025	82.4%	177,891	64.4%	746.2%	614.9%	131.3%	(9,573)	(4.2)%	10.2%	10.2%

* Revised actuarial assumptions.

(5). The funded ratio is the most widely known measure of a plan's financial strength, but the trend in the funded ratio is much more important than the absolute ratio. The funded ratio should trend to 100%. As it approaches 100%, it is important to re-evaluate the level of investment risk in the portfolio and potentially to re-evaluate the assumed rate of return.

(6) and (7). The ratio of retiree liabilities to total accrued liabilities gives an indication of the maturity of the system. As the ratio increases, cash flow needs increase, and the liquidity needs of the portfolio change. A ratio on the order of 50% indicates a maturing system.

(8) and (9). The ratio of liabilities and assets to payroll gives an indication of both maturity and volatility. Many systems have ratios between 500% and 700%. Ratios significantly above that range may indicate difficulty in supporting the benefit level as a level % of payroll.

(10) The ratio of unfunded liability to payroll gives an indication of the plan sponsor's ability to actually pay off the unfunded liability. A ratio above approximately 300% or 400% may indicate difficulty in discharging the unfunded liability within a reasonable time frame.

(11) and (12). A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means benefits and expenses exceed contributions, and existing funds may be used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

(13) and (14). Investment return is probably the largest single risk that most systems face. The year-by-year return and the five-year geometric average both give an indication of the reasonableness of the system's assumed return. Of course, past performance is not a guarantee of future results. Market rate shown is based on an actuarial estimation method and will differ modestly from figures reported by the investment consultant.

Low-Default-Risk Obligation Measure

Introduction

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to Actuarial Standard of Practice (ASOP) No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the “Low-Default-Risk Obligation Measure” (LDROM). The rationale that the ASB cited for the calculation and disclosure of the LDROM was included in the Transmittal Memorandum of ASOP No. 4 and is presented below (emphasis added):

“The ASB believes that the calculation and disclosure of this measure provides **appropriate, useful information for the intended user regarding the funded status of a pension plan**. The calculation and disclosure of this additional measure is **not intended to suggest that this is the “right” liability measure** for a pension plan. However, the ASB does believe that **this additional disclosure provides a more complete assessment of a plan’s funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.**”

Comparing the Accrued Liabilities and the LDROM

One of the fundamental financial objectives of the City of Fort Pierce Retirement and Benefit System is to finance each member’s retirement benefits over the period from the member’s date of hire until the member’s projected date of retirement (entry age actuarial cost method) as a level percentage of payroll. To fulfill this objective, the discount rate that is used to value the accrued liabilities is set equal to the **expected return** on the System’s diversified portfolio of assets (referred to sometimes as the investment return assumption). The current investment return assumption is 7.25%.

The LDROM is meant to approximately represent the lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits earned (or the costs accrued) as of the measurement date. The LDROM is very dependent upon market interest rates at the time of the LDROM measurement. The lower the market interest rates, the higher the LDROM, and vice versa. The LDROM results presented in this report are based on the projected unit credit actuarial cost method and discount rates based upon the September 2023 Treasury Yield Curve Spot Rates (end of month). The 1-, 5-, 10-, and 30-year rates follow: **5.46%, 4.53%, 4.28%** and **4.42%**. This measure may not be appropriate for assessing the need for or amount of future contributions. This measure may not be appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan’s benefit obligation.

The difference between the two measures (Valuation and LDROM) is one illustration of the savings the sponsor anticipates by taking on risk in a diversified portfolio.

Valuation Accrued Liabilities	LDROM
\$276,283,904	\$364,423,197

SECTION B

VALUATION RESULTS

Contributions to Finance Benefits of the Retirement and Benefit System for the Plan Year Beginning October 1, 2024 to be Contributed during the Fiscal Year Beginning October 1, 2024

Contributions for	Contributions Expressed as Percents of Active Member Payroll		
	General Members	Utilities Authority	Police Members
Normal Cost			
Service pensions	12.57 %	11.37 %	12.86 %
Disability pensions	0.47	0.45	0.99
Death-in-service pensions	0.36	0.39	0.26
Deferred service pensions	2.81	2.80	2.27
Refunds of member contributions	0.63	0.75	0.40
Total Normal Cost	16.84	15.76	16.78
Unfunded Actuarial Accrued Liability ⁽¹⁾			
Retired members and beneficiaries	0.00	0.00	0.00
Active and vested terminated members	6.20	10.32	5.86
Total Unf'd. Actuarial Accrued Liability	6.20	10.32	5.86
Administrative Expenses	0.69	0.69	0.69
Total Unadjusted Computed Contribution	23.73	26.77	23.33
Adjustments to Computed Contribution			
FS 112.64 (5) Compliance	0.00	0.90	0.00
Full funding credit ⁽²⁾	0.00	0.00	0.00
Total Adjustments	0.00	0.90	0.00
Total Adjusted Contribution Requirement ⁽³⁾	23.73	27.67	23.33
Member portion	5.16	6.16	5.16
Employer portion	18.57	21.51	18.17

⁽¹⁾ Financing period schedules begin on page B-7.

⁽²⁾ This is a temporary credit toward the contribution requirement.

⁽³⁾ FS 112.64 (2) states that "the total contributions to the retirement system or plan shall be sufficient to meet the normal cost of the retirement system or plan and to amortize the unfunded liability." Therefore, the Total Adjusted Contribution for the System shall be no less than Total Normal Cost for the System including the Administrative Expense Load.

FS 112.64 requires employer contributions to be deposited not less frequently than quarterly. Member contributions, which are in addition to the Employer contributions, must be deposited immediately after each pay period.



Recommended and Actual Contributions Comparative Statement

Fiscal Date	Valuation Date	Percentage-of-Payroll Contributions			Dollar Contributions@	
		General Members	Utilities Authority	Police Members	Proj. Funding Requirement	Actual \$
81/82 (b)	9/80	7.67 %	8.02 %	10.56 %	\$ 823,764	\$ 1,039,755
86/87 (b)	9/85	7.42 %	8.06 %	8.96 %	1,432,339	1,611,703
91/92 (b)	9/90	6.94 %	6.92	8.61 %	2,044,895	2,301,274
96/97 (b)	9/95	4.79 %	5.34	4.98 %	1,877,033	2,270,176
01/02 (b)	9/00	0.00 %	0.26	0.00 %	906,649	2,158,784
02/03 (b)	9/01	2.91	1.10	0.00	2,048,079	2,271,079
03/04	9/02	4.67	3.23	1.38	2,893,397	3,610,663
04/05	9/03	6.15	4.93	3.76	3,948,626	5,634,357
05/06	9/04	8.01	6.23	6.76	6,283,117	8,975,380
06/07	9/05	11.05	11.94	14.14	3,624,157	4,114,963
07/08 (b)	9/06	11.59	11.01	14.88	3,939,766	4,082,846
08/09 (b)	9/07	9.71	10.06	12.26	3,517,935	3,580,089
09/10	9/08	10.36	10.67	12.79	3,964,443	3,377,350
10/11	9/09	11.06	11.86	12.97	3,999,560	3,181,447
11/12 (b)	9/10	12.59	14.08	13.51	3,937,037	3,566,751
12/13 (b)	9/11	16.50	18.51	15.83	4,860,538	4,266,803
13/14 (b)	9/12	16.20	17.41	15.33	4,676,221	4,356,127
14/15	9/13	14.61	16.81	13.76	4,242,676	4,093,268
15/16	9/14	15.03	16.30	13.76	4,196,009	4,211,311
16/17 (b)	9/15	14.89	16.23	14.61	4,296,532	4,565,884
17/18 (b)	9/16	17.35	17.92	11.98	4,878,739	4,909,654
18/19	9/17	16.99	18.11	12.00	5,029,181	5,240,707
19/20 (b)	9/18	16.77	17.58	11.86	5,074,604	5,343,484
20/21	9/19	16.82	16.46	13.31	5,456,288	5,328,802
21/22 (c)	9/20	17.14	16.92	13.39	5,716,263	5,758,891
22/23 (b)	9/21	17.13	17.96	14.62	5,934,799	6,367,089
23/24	9/22	17.56	20.89	16.93	6,975,127	
24/25	9/23	18.57	21.51	18.17	7,890,389	

* Prior to 9/30/96 the minimum employer contribution required in accordance with Sec. 21.3 of the Retirement and Benefit System Ordinance was 7.60% for General and Utilities Authority, 9.61% for Police.

@ Actual Employer contributions are determined by applying the Employer's contribution rate to the emerging payroll. Projected funding requirement is derived from the City portion of the contribution rates on page B-1. The payroll was increased by a factor of 1.0816 (1.04²) to reflect projected payroll growth to the beginning of the fiscal year during which the contribution will be made. Prior to the valuation date of 9/30/05, dollar contributions included Fire members.

(b) After changes in benefit provisions and/or actuarial assumptions and cost methods.

(c) Reflects contribution rates in accordance with an actuarial impact statement performed after the regular valuation.

Prior to the 9/98 actuarial valuation, reimbursement of investment expenses (approx. 2% of payroll) were included in the contribution requirement. The plan was amended 4/98 to allow payment of investment expenses out of investment income.



Experience Gain/(Loss) Year Ended September 30, 2023

	Divisions			Total
	General Members	Utilities Authority	Police Members	
Derivation				
(1) UAAL* at start of year	\$12,508,678	\$18,476,586	\$7,184,769	\$38,170,033
(2) Employer normal cost for year	1,594,526	1,603,395	1,070,828	4,268,749
(3) Employer contributions	2,276,505	2,806,640	1,283,944	6,367,089
(4) Interest accrued: .0725 x [(1) + ½ [(2) - (3)]]	882,157	1,295,935	513,170	2,691,262
(5) Expected UAAL before changes: [(1) + (2) - (3) + (4)]	12,708,856	18,569,276	7,484,823	38,762,955
(6) Effect of assumption changes	0	0	0	0
(7) Effect of cost method changes/ accounting and timing differences	0	0	0	0
(8) Effect of benefit changes	0	0	0	0
(9) Expected UAAL after changes	12,708,856	18,569,276	7,484,823	38,762,955
(10) Actual UAAL	15,357,163	23,292,964	9,960,410	48,610,537
(11) Gain/(loss): (9) - (10)	(2,648,307)	(4,723,688)	(2,475,587)	(9,847,582)
Gain/(loss) reconciliation				
Investment Gain/(loss)	\$(1,820,843)	\$(2,663,164)	\$(1,566,713)	\$(6,050,721)
Demographic & Other Gain/(loss)	<u>(827,464)</u>	<u>(2,060,524)</u>	<u>(908,874)</u>	<u>(3,796,861)</u>
Total	(2,648,307)	(4,723,688)	(2,475,587)	(9,847,582)

* UAAL represents Unfunded Actuarial Accrued Liability.



Development of Funding Value of Retirement System Assets

Year Ended September 30:	2020	2021	2022	2023	2024	2025	2026
A. Funding Value Beginning of Year	\$208,092,074	\$216,567,027	\$229,477,208	\$227,174,205			
B. Market Value End of Year	215,450,747	246,661,634	198,590,004	208,773,290			
C. Market Value Beginning of Year	204,393,903	215,450,747	246,661,634	198,590,004			
D. Non-Investment Net Cash Flow	(8,208,240)	(8,624,145)	(9,168,170)	(9,573,218)			
E. Investment Income							
E1. Market Total: B - C - D	19,265,084	39,835,032	(38,903,460)	19,756,504			
E2. Amount for Immediate Recognition	15,809,066	15,919,122	16,304,751	16,123,101			
E3. Amount for Phased-In Recognition: E1 - E2	3,456,018	23,915,910	(55,208,211)	3,633,403			
F. Phased-In Recognition of Investment Income							
F1. Current Year: 0.25 x E3	864,005	5,978,978	(13,802,053)	908,351			
F2. First Prior Year	(2,480,514)	864,005	5,978,978	(13,802,053)	\$ 908,351		
F3. Second Prior Year	1,252,737	(2,480,514)	864,005	5,978,978	(13,802,053)	\$ 908,351	
F4. Third Prior Year	<u>1,237,899</u>	<u>1,252,735</u>	<u>(2,480,514)</u>	<u>864,003</u>	<u>5,978,976</u>	<u>(13,802,052)</u>	<u>\$ 908,350</u>
F5. Total Recognized Investment Gain	874,127	5,615,204	(9,439,584)	(6,050,721)	(6,914,726)	(12,893,701)	908,350
G. Funding Value End of Year: A + D + E2 + F5	216,567,027	229,477,208	227,174,205	227,673,367			
H. Difference between Market & Funding Value	(1,116,280)	17,184,426	(28,584,201)	(18,900,077)			
I. Recognized Rate of Return	8.18%	10.15%	3.05%	4.53%			
J. Market Value Return	9.62%	18.87%	(16.07%)	10.19%			

The Funding Value of Assets recognizes assumed investment income (Line E2) fully each year. Differences between actual and assumed investment income (Line E3) are phased-in over a closed four-year period. During periods when investment performance exceeds the assumed rate, the Funding Value of Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, the Funding Value of Assets will tend to be greater than Market Value. If assumed rates are exactly realized for three consecutive years, it will become equal to Market Value.



Funding Indicators # – Historical Comparison

(\$ Amounts in Thousands)

Valuation Date	Indicator (1)	Indicator (2)			Indicator (3)		
	Gain/ (Loss)	Valuation Assets	Funded AAL*	Ratio	Unfunded AAL	Member Payroll	Ratio to Payroll
9/30/99 (b)	\$ 4,315	\$ 146,903	\$ 120,514	122 %	\$ (26,389)	\$31,688	(83) %
9/30/00 (b)	6,465	162,020	129,969	125	(32,051)	33,312	(96)
9/30/01 (b)	(6,086)	165,023	137,067	120	(27,955)	35,600	(79)
9/30/02 (b)	(10,908)	167,050	149,437	112	(17,610)	37,037	(48)
9/30/03	(9,845)	168,943	162,127	104	(6,816)	40,313	(17)
9/30/04	(11,328)	171,558	186,671	92	15,113	43,544	35
9/30/05	(2,296)	185,776	216,534	86	30,758	48,880	63
9/30/06 (b)	3,801	120,062	130,861	92	10,800	30,532	35
9/30/07 (b)	9,087	135,944	138,610	98	2,666	30,984	9
9/30/08	(3,888)	143,467	150,475	95	7,008	32,952	21
9/30/09	(4,060)	147,094	158,755	93	11,661	31,016	38
9/30/10 (b)	(3,429)	148,691	164,865	90	16,174	26,779	60
9/30/11 (b)	(8,690)	142,463	167,683	85	25,220	25,744	98
9/30/12 (b)	854	147,618	171,745	86	24,127	25,842	93
9/30/13	4,086	157,145	177,505	89	20,360	25,199	81
9/30/14	4,960	167,451	182,407	92	14,956	25,150	59
9/30/15 (b)	5,140	177,624	191,986	93	14,362	25,475	56
9/30/16 (b)	1,460	185,171	207,945	89	22,774	27,493	83
9/30/17	69	192,300	215,142	89	22,842	28,563	80
9/30/18 (b)	1,383	200,087	221,431	90	21,344	29,264	73
9/30/19	(2,072)	208,092	231,143	90	23,051	31,804	72
9/30/20 (b)	1,202	216,567	239,844	90	23,277	32,563	71
9/30/21 (b)	5,088	229,477	256,316	90	26,839	32,304	83
9/30/22	(11,171)	227,174	265,344	86	38,170	34,291	111
9/30/23	(9,848)	227,673	276,284	82	48,611	37,025	131

Excludes Fire after 9/05 valuation date.

* Actuarial Accrued Liabilities.

(b) After changes in benefit provisions and/or actuarial assumptions.



Unfunded Actuarial Accrued Liability

(\$ Amounts in Thousands)*

	September 30, 2023			September 30, 2022		
	General Members	Utilities Authority	Police Members	General Members	Utilities Authority	Police Members
A. Actuarial present value of future benefits	\$98,953	\$140,055	\$80,849	\$94,225	\$134,394	\$77,303
B. Actuarial present value of future normal costs	15,082	16,553	11,938	13,913	15,655	11,008
C. Actuarial accrued liability	83,871	123,502	68,911	80,312	118,738	66,295
D. Funding value of assets	68,514	100,209	58,951	67,803	100,262	59,110
E. Unfunded actuarial accrued liability	15,357	23,293	9,960	12,509	18,477	7,185
F. Funded Ratio	81.7%	81.1%	85.5%	84.4%	84.4%	89.2%

* Totals may not sum exactly due to rounding.

Sources and Financing of Unfunded Actuarial Accrued Liability General Members

Year Established	Initial Years	Years Remaining	Unf'd. Act. Accr. Liab.		Amortization Factor	Amortization Payment*	% of Payroll Contribution*
			Initial Amount	Current Amount			
Initial Unfunded							
1981	34	1	\$ 2,135,178	\$ 15,236	0.9848	\$ 15,472	0.12 %
Experience Changes							
1992	30	1	(260,310)	(8,514)	0.9848	(8,646)	(0.07)
1993	30	1	(1,200,305)	(76,760)	0.9848	(77,947)	(0.61)
1994	30	1	(298,407)	(36,975)	0.9848	(37,547)	(0.29)
1995	30	2	(571,245)	(135,933)	1.9397	(70,079)	(0.55)
1996	30	3	(328,506)	(111,907)	2.8657	(39,051)	(0.30)
1997	30	4	(1,697,188)	(732,876)	3.7636	(194,726)	(1.52)
1998	30	5	(1,095,283)	(560,814)	4.6343	(121,013)	(0.94)
1999	30	6	(888,248)	(516,798)	5.4787	(94,329)	(0.74)
2000	30	7	(1,366,921)	(877,439)	6.2974	(139,333)	(1.09)
2001	30	8	1,108,179	770,500	7.0914	108,653	0.85
2002	30	9	2,074,314	1,536,655	7.8613	195,472	1.53
2003	30	10	2,097,459	1,634,102	8.6078	189,840	1.48
2004	30	11	2,013,373	1,632,461	9.3317	174,937	1.37
2005	30	12	208,003	174,009	10.0337	17,342	0.14
2006	30	13	(1,561,550)	(1,338,091)	10.7144	(124,887)	(0.98)
2007	30	14	(3,153,776)	(2,751,166)	11.3745	(241,871)	(1.89)
2008	30	15	1,535,312	1,356,012	12.0146	112,864	0.88
2009	30	16	1,306,244	1,162,975	12.6353	92,042	0.72
2010	30	17	301,258	269,255	13.2372	20,341	0.16
2011	30	18	3,140,943	2,808,306	13.8208	203,194	1.59
2012	30	19	(171,717)	(153,088)	14.3868	(10,641)	(0.08)
2013	30	20	(1,386,129)	(1,228,676)	14.9356	(82,265)	(0.64)
2014	30	21	(1,482,476)	(1,354,504)	15.4678	(87,569)	(0.68)
2015	30	22	(2,209,363)	(2,044,855)	15.9838	(127,933)	(1.00)
2016	30	23	(358,467)	(339,777)	16.4842	(20,612)	(0.16)
2017	30	24	91,437	86,247	16.9695	5,082	0.04
2018	30	25	(494,242)	(481,512)	17.4400	(27,610)	(0.22)
2019	30	26	358,225	355,475	17.8963	19,863	0.16
2020	30	27	259,654	261,375	18.3388	14,253	0.11
2021	30	28	(1,612,209)	(1,637,635)	18.7678	(87,258)	(0.68)
2022	30	29	3,171,364	3,220,880	19.1839	167,895	1.31
2023	30	30	2,648,307	2,648,307	19.5873	135,205	1.06
Benefit Changes							
1996	30	3	(126,041)	(42,937)	2.8657	(14,983)	(0.12)
1998	30	5	(4,204)	(2,154)	4.6343	(465)	0.00
2000	30	7	416,125	267,114	6.2974	42,416	0.33
2004	30	11	603,572	489,381	9.3317	52,443	0.41
2005	30	12	2,422,727	2,026,787	10.0337	201,998	1.58
2006	30	13	1,820,155	1,559,688	10.7144	145,569	1.14
2010	30	17	421,454	376,682	13.2372	28,456	0.22
2011	30	18	(604,106)	(540,130)	13.8208	(39,081)	(0.31)
2012	30	19	(520,387)	(463,930)	14.3868	(32,247)	(0.25)
2018	30	25	54,741	53,413	17.4400	3,063	0.02
2021	30	28	818,427	831,335	18.7678	44,296	0.35
Assumption Changes							
1995	30	2	822,391	194,969	1.9397	100,515	0.78
2001	30	8	(571,357)	(396,854)	7.0914	(55,963)	(0.44)
2011	30	18	154,468	138,153	13.8208	9,996	0.08
2015	30	22	1,398,986	1,295,547	15.9838	81,054	0.63
2016	30	23	3,523,964	3,342,270	16.4842	202,755	1.58
2020	30	27	708,269	712,961	18.3388	38,877	0.30
2021	30	28	1,939,800	1,970,393	18.7678	104,988	0.82
Totals				\$15,357,163		\$792,825	6.20 %

* Actual wage growth over the past 10 years has been 5.46% versus the 4.0% assumed. FS 112 requires use of the 10-year average if less than assumed. This has been used in the above calculation as required.

Sources and Financing of Unfunded Actuarial Accrued Liability Utilities Authority Members

Year Established	Initial Years	Years Remaining	Unf'd. Act. Accr. Liab.		Amortization Factor	Amortization Payment*	% of Payroll Contribution*
			Initial Amount	Current Amount			
Initial Unfunded							
1981	34	6	\$3,349,127	\$ 181,710	5.3322	\$ 34,078	0.22 %
Experience Changes							
1989	30	6	(130,266)	(7,216)	5.3322	(1,353)	(0.01)
1990	30	6	407,412	47,942	5.3322	8,991	0.06
1991	30	6	(238,416)	(43,690)	5.3322	(8,194)	(0.05)
1992	30	6	(388,969)	(95,472)	5.3322	(17,905)	(0.12)
1993	30	6	(1,360,632)	(424,452)	5.3322	(79,602)	(0.51)
1994	30	6	(978,978)	(345,952)	5.3322	(64,880)	(0.42)
1995	30	6	(974,186)	(389,036)	5.3322	(72,960)	(0.47)
1996	30	6	(940,560)	(413,439)	5.3322	(77,537)	(0.50)
1997	30	6	(2,192,535)	(1,039,632)	5.3322	(194,973)	(1.26)
1998	30	6	(2,534,640)	(1,276,295)	5.3322	(239,357)	(1.55)
1999	30	6	(1,141,977)	(603,006)	5.3322	(113,088)	(0.73)
2000	30	6	(1,309,143)	(717,468)	5.3322	(134,554)	(0.87)
2001	30	6	1,593,737	901,631	5.3322	169,093	1.09
2002	30	6	2,859,829	1,658,015	5.3322	310,945	2.01
2003	30	6	2,692,574	1,590,031	5.3322	298,196	1.93
2004	30	6	1,574,647	942,139	5.3322	176,689	1.14
2005	30	6	225,846	136,265	5.3322	25,555	0.17
2006	30	6	(2,695,199)	(1,633,169)	5.3322	(306,286)	(1.98)
2007	30	14	(3,178,605)	(2,605,858)	10.7103	(243,303)	(1.57)
2008	30	15	1,783,264	1,484,024	11.2692	131,689	0.85
2009	30	16	2,272,126	1,910,577	11.8060	161,831	1.05
2010	30	17	2,668,679	2,257,616	12.3217	183,223	1.18
2011	30	18	4,692,517	3,979,097	12.8171	310,452	2.01
2012	30	19	(1,001,517)	(848,349)	13.2930	(63,819)	(0.41)
2013	30	20	(1,332,212)	(1,123,911)	13.7502	(81,738)	(0.53)
2014	30	21	(2,039,760)	(1,912,582)	14.1894	(134,789)	(0.87)
2015	30	22	(1,615,435)	(1,533,261)	14.6114	(104,936)	(0.68)
2016	30	23	178,810	175,368	15.0167	11,678	0.08
2017	30	24	(528,606)	(517,663)	15.4061	(33,601)	(0.22)
2018	30	25	(355,475)	(353,210)	15.7802	(22,383)	(0.14)
2019	30	26	173,150	175,630	16.1395	10,882	0.07
2020	30	27	(170,366)	(176,574)	16.4847	(10,711)	(0.07)
2021	30	28	(2,161,897)	(2,243,696)	16.8163	(133,424)	(0.86)
2022	30	29	4,594,718	4,710,103	17.1349	274,883	1.78
2023	30	30	4,723,688	4,723,688	17.4410	270,839	1.75
Benefit Changes							
1996	30	3	1,797,497	541,534	2.8264	191,598	1.24
1998	30	5	(6,868)	(3,168)	4.5302	(699)	(0.00)
2000	30	7	217,608	127,592	6.1026	20,908	0.14
2005	30	12	5,714,128	4,465,449	9.5231	468,906	3.03
2007	30	14	879,772	721,248	10.7103	67,341	0.44
2011	30	18	(859,973)	(729,229)	12.8171	(56,895)	(0.37)
2012	30	19	(837,844)	(709,707)	13.2930	(53,389)	(0.35)
2018	30	25	57,583	57,217	15.7802	3,626	0.02
2021	30	28	1,257,940	1,305,536	16.8163	77,635	0.50
Assumption Changes							
1995	30	2	1,262,801	262,809	1.9218	136,749	0.88
2001	30	8	(1,106,750)	(706,865)	6.8427	(103,302)	(0.67)
2011	30	18	695,546	589,800	12.8171	46,017	0.30
2015	30	22	2,088,919	1,982,661	14.6114	135,693	0.88
2016	30	23	4,976,532	4,880,716	15.0167	325,019	2.10
2020	30	27	865,657	897,202	16.4847	54,426	0.35
2021	30	28	2,929,424	3,040,264	16.8163	180,792	1.17
Totals				\$23,292,964		\$1,734,056	11.22 %

* Actual wage growth over the past 10 years has been 3.03%, versus the 4.0% assumed. FS 112 requires use of the 10-year average if less than assumed. This has been used in the above calculation as required.



Sources and Financing of Unfunded Actuarial Accrued Liability Police Members

Year Established	Initial Years	Years Remaining	Unf'd. Act. Accr. Liab.		Amortization Factor	Amortization Payment*	% of Payroll Contribution*
			Initial Amount	Current Amount			
Initial Unfunded							
1981	34	4	\$ (92,516)	\$ (129,211)	3.7636	\$ (34,332)	(0.39) %
Experience Changes							
1991	30	4	(203,783)	(47,136)	3.7636	(12,524)	(0.14)
1992	30	4	(212,982)	(55,434)	3.7636	(14,729)	(0.17)
1993	30	4	(924,672)	(280,340)	3.7636	(74,487)	(0.85)
1994	30	4	(461,122)	(153,010)	3.7636	(40,655)	(0.46)
1995	30	4	(631,047)	(237,144)	3.7636	(63,009)	(0.72)
1996	30	4	(985,977)	(419,055)	3.7636	(111,343)	(1.27)
1997	30	4	(2,131,299)	(1,024,348)	3.7636	(272,171)	(3.11)
1998	30	5	769,031	434,156	4.6343	93,682	1.07
1999	30	6	(1,200,250)	(764,124)	5.4787	(139,472)	(1.59)
2000	30	7	(597,465)	(417,010)	6.2974	(66,219)	(0.76)
2001	30	8	578,886	435,292	7.0914	61,383	0.70
2002	30	9	1,258,164	1,003,346	7.8613	127,632	1.46
2003	30	10	1,317,638	1,100,621	8.6078	127,863	1.46
2004	30	11	2,033,822	1,761,746	9.3317	188,791	2.16
2005	30	12	(40,822)	(36,368)	10.0337	(3,625)	(0.04)
2006	30	13	455,702	414,679	10.7144	38,703	0.44
2007	30	14	(2,754,392)	(2,545,089)	11.3745	(223,753)	(2.56)
2008	30	15	569,652	531,704	12.0146	44,255	0.51
2009	30	16	481,424	452,017	12.6353	35,774	0.41
2010	30	17	458,881	431,692	13.2372	32,612	0.37
2011	30	18	856,807	804,930	13.8208	58,240	0.67
2012	30	19	319,593	298,890	14.3868	20,775	0.24
2013	30	20	(1,367,523)	(1,269,739)	14.9356	(85,014)	(0.97)
2014	30	21	(1,437,583)	(1,335,757)	15.4678	(86,357)	(0.99)
2015	30	22	(1,315,599)	(1,226,727)	15.9838	(76,748)	(0.88)
2016	30	23	(1,280,599)	(1,217,078)	16.4842	(73,833)	(0.84)
2017	30	24	368,606	387,548	16.9695	22,838	0.26
2018	30	25	(533,546)	(576,511)	17.4400	(33,057)	(0.38)
2019	30	26	1,540,385	1,713,872	17.8963	95,767	1.09
2020	30	27	(1,291,696)	(1,402,105)	18.3388	(76,456)	(0.87)
2021	30	28	(1,306,987)	(1,436,987)	18.7678	(76,567)	(0.87)
2022	30	29	3,405,092	3,544,463	19.1839	184,763	2.11
2023	30	30	2,475,587	2,475,587	19.5873	126,387	1.44
Benefit Changes							
1996	30	3	(52,503)	(20,153)	2.8657	(7,033)	(0.08)
1998	30	5	866,643	489,263	4.6343	105,573	1.21
2000	30	7	154,856	108,084	6.2974	17,163	0.20
2002	30	9	(2,757)	(2,199)	7.8613	(280)	(0.00)
2005	30	12	3,376,647	3,008,308	10.0337	299,820	3.42
2006	30	13	21,867	19,899	10.7144	1,857	0.02
2010	30	17	144,060	135,525	13.2372	10,238	0.12
2011	30	18	(576,034)	(541,155)	13.8208	(39,155)	(0.45)
2012	30	19	(211,273)	(197,589)	14.3868	(13,734)	(0.16)
2018	30	25	(508)	(549)	17.4400	(31)	(0.00)
2021	30	28	283,739	310,260	18.7678	16,531	0.19
Assumption Changes							
1995	30	2	576,369	157,249	1.9397	81,069	0.93
2000	30	7	93,418	65,203	6.2974	10,354	0.12
2001	30	8	418,050	314,351	7.0914	44,329	0.51
2011	30	18	577,020	542,084	13.8208	39,222	0.45
2015	30	22	1,193,697	1,113,095	15.9838	69,639	0.80
2016	30	23	1,395,375	1,326,159	16.4842	80,450	0.92
2020	30	27	136,958	148,665	18.3388	8,107	0.09
2021	30	28	1,615,538	1,766,540	18.7678	94,126	1.08
Totals				\$9,960,410		\$513,359	5.86 %

* Actual wage growth over the past 10 years has been 4.35%, versus the 4.0% assumed. FS 112 requires use of the 10-year average if less than assumed. This has been used in the above calculation as required.



Actuarial Balance Sheet – September 30, 2023

(\$ Amounts in Thousands)*

Present Resources and Expected Future Resources

	General Members	Utilities Authority Members	Police Members	Total
A. Funding value of plan assets:				
1. Net assets from plan financial statements (Market)	\$62,826	\$ 91,890	\$ 54,057	\$208,773
2. Funding value adjustment	5,688	8,318	4,894	18,900
3. Funding value of assets	\$68,514	\$ 100,208	\$ 58,951	\$227,673
B. Actuarial present value of expected future employer contributions:				
1. For normal costs	\$ 10,364	\$ 9,829	\$ 8,068	\$ 28,261
2. For unfunded actuarial accrued liability	15,357	23,294	9,960	48,611
3. Total	\$25,721	\$ 33,123	\$ 18,028	\$ 76,872
C. Actuarial present value of expected future member contributions	4,718	6,724	3,870	15,312
D. Total Present and Future Resources	\$98,953	\$ 140,055	\$ 80,849	\$319,857

Actuarial Present Value of Expected Future Benefit Payments and Reserves

	General Members	Utilities Authority Members	Police Members	Total
A. To retired members and beneficiaries	\$51,428	\$ 78,965	\$47,498	\$177,891
B. To vested terminated members	1,861	2,642	561	5,064
C. To present active members:				
1. Allocated to service rendered prior to valuation date	\$30,582	\$ 41,895	\$20,852	\$ 93,329
2. Allocated to service likely to be rendered after valuation date	15,082	16,553	11,938	43,573
3. Total	\$45,664	\$ 58,448	\$32,790	\$136,902
D. Total actuarial present value of expected future benefit payments	\$98,953	\$140,055	\$80,849	\$319,857

* Totals may not sum exactly due to rounding.



Cumulative Experience Gains/(Losses)

Year Ended September 30	Balance at Beginning of Year	Interest	Gain/(Loss) During Year	Value of Cost- of-Living Adjustment During Year	Balance at End of Year
1999	\$ -	\$ -	\$ 4,314,699	\$ 709,305	\$ 3,605,394
2000	3,605,394	288,432	6,465,035	1,219,607	9,139,254
2001	9,139,254	731,140	(6,086,030)	1,186,656	2,597,708
2002	2,597,708	207,817	(10,907,939)	-	(8,102,414)
2003	(8,102,414)	(648,193)	(9,844,539)	-	(18,595,145)
2004	(18,595,145)	(1,487,612)	(11,328,205)	-	(31,410,961)
2005	(31,410,961)	(2,512,877)	(2,296,402)	-	(36,220,240)
2006 *	(18,683,996)	(1,494,720)	3,801,047	-	(16,377,668)
2007	(16,377,668)	(1,310,213)	9,086,773	-	(8,601,108)
2008	(8,601,108)	(688,089)	(3,888,228)	-	(13,177,425)
2009	(13,177,425)	(1,054,194)	(4,059,794)	-	(18,291,413)
2010	(18,291,413)	(1,463,313)	(3,428,818)	-	(23,183,544)
2011	(23,183,544)	(1,854,684)	(8,690,267)	-	(33,728,495)
2012	(33,728,495)	(2,698,280)	853,641	-	(35,573,134)
2013	(35,573,134)	(2,845,851)	4,085,864	-	(34,333,121)
2014	(34,333,121)	(2,746,650)	4,959,820	-	(32,119,951)
2015	(32,119,951)	(2,569,596)	5,140,356	-	(29,549,191)
2016	(29,549,191)	(2,290,062)	1,460,257	-	(30,378,996)
2017	(30,378,996)	(2,354,372)	68,563	-	(32,664,805)
2018	(32,664,805)	(2,531,522)	1,383,263	-	(33,813,064)
2019	(33,813,064)	(2,620,512)	(2,071,760)	-	(38,505,336)
2020	(38,505,336)	(2,984,164)	1,202,408	-	(40,287,092)
2021	(40,287,092)	(3,021,532)	5,088,261	-	(38,220,363)
2022	(38,220,363)	(2,770,976)	(11,171,174)	-	(52,162,513)
2023	(52,162,513)	(3,781,782)	(9,847,582)	-	(65,791,877)

* After removing the estimated impact of Fire members.

SECTION C

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA SUBMITTED BY THE RETIREMENT AND BENEFIT SYSTEM

Summary of Benefit Provisions (September 30, 2023)

Participation: Participation in the Retirement and Benefit System begins upon employment.

Normal Retirement (no reduction factor for age):

Eligibility - Original members: 20 or more years of service.

All members - General, Utilities Authority: 25 or more years of service regardless of age, or age 60 with 5 or more years of service.

- Police: 25 or more years of service, regardless of age, or age 55 with 5 or more years of service.

Mandatory Retirement Age - None.

Annual Amount - All members: Total service times 3.0% of final average salary.

For members hired prior to October 1, 2012:

- The maximum annual pension benefit shall not exceed 100% of final average salary.

For members hired on or after October 1, 2012:

- The maximum annual pension benefit shall not exceed 75% of final average salary.
- The maximum pension benefit is \$100,000 annually.

The normal form of benefit is a benefit payable for life. Optional forms are available on an actuarial equivalent basis.

Type of Final Average Salary - General: Highest 5 consecutive years out of last 10. Police, Utilities Authority: Highest 5 years out of last 10. Overtime hours included in compensation are limited to 300 hours per fiscal year.

For members hired prior to October 1, 2012: Payments for unused sick and vacation time included in compensation are limited to unused sick and vacation time accrued through September 20, 2012 for General and Police, and July 1, 2011 for Utilities Authority.

For members hired on or after October 1, 2012: Payments for unused sick and vacation time are not included in compensation.

Deferred Retirement Option Plan (DROP) Retirement:

Eligibility - General, Police, and Utilities Authority members: Same as Normal Retirement, election may be made on or after normal retirement eligibility, but not after reaching 30 years of service. Participation in the DROP ends after five years.



Annual Amount - Computed as a normal retirement but based upon service and final average salary at time of DROP election. Member contributions cease and monthly benefits (and post-retirement increases, if any) accumulate in a self-directed DROP account and are payable to the member upon termination of employment.

Deferred Retirement (vested benefit):

Eligibility - 5 or more years of service. Benefit begins upon attaining age 60.

Annual Amount - Computed as a normal retirement but based upon service and final average salary at time of termination.

Duty Disability Retirement:

Eligibility - No age or service requirements if the Retirement Board finds the member to be in receipt of weekly workers' compensation on account of disability in the course of duty.

Annual Amount - Computed as a normal retirement based upon service projected to the end of the duty disability period and final average salary at time of disability. Minimum benefit is 75% of final average salary during the duty disability period. The duty disability period ends on the earlier of the 25th anniversary of the member's hire date or the date the member attains age 65 but not prior to 5 years from the date of duty disability retirement.

Non-Duty Disability Retirement:

Eligibility - 5 or more years of service.

Annual Amount - Computed as a normal retirement but based upon service and final average salary at time of disability.

Duty Death Before Retirement:

Eligibility - No age or service requirements. Benefits begin upon termination of workers' compensation.

Annual Amount - A benefit equal to the same amount that was paid by workers' compensation to the spouse until death, to unmarried children under 18 and dependent parents.

Non-Duty Death Before Retirement:

Eligibility - 5 or more years of service.

Annual Amount - Computed as a normal retirement but actuarially reduced in accordance with a 100% joint and survivor election.



Post-Retirement Increases: COLA may be granted from investment returns in excess of actuarial interest assumption, not to exceed 3%.

Military Service: May be purchased by members who meet the eligibility conditions.

Member Contributions: General: 5.16% of annual salary
 Police: 5.16% of annual salary
 Utilities Authority: 6.16% of annual salary

Employer Contributions: Actuarially determined amounts which together with member contributions are sufficient to at least cover the requirements of the funding objective stated on page A-1.

Accounting Information Submitted for Valuation

Revenues and Expenditures

	Year Ended	
	9/30/2023	9/30/2022
Revenues:		
a. Member contributions:		
General	\$ 685,391	\$ 627,070
Police	450,450	412,334
Utilities Authority	972,255	943,800
b. Employer contributions:		
General	2,276,505	2,080,927
Police	1,283,944	1,076,459
Utilities Authority	2,806,640	2,601,505
c. Investment income:		
1. Interest and dividends	4,152,163	3,700,903
2. Gain or loss on sales	(1,217,521)	4,422,602
3. Unrealized gain/loss	17,674,668	(46,103,627)
d. Total revenues	\$ 29,084,495	\$ (30,238,027)
Expenditures:		
a. Refunds of member contributions:		
General	\$ 161,460	\$ 188,074
Police	97,132	36,274
Utilities Authority	306,502	143,500
b. Benefits paid:		
General	5,061,469	4,817,113
Police	4,331,292	4,133,520
Utilities Authority	7,803,703	7,312,632
c. Investment expenses	852,805	923,338
d. Administrative expenses	255,600	231,057
e. Other	31,245	48,095
f. Total expenditures	\$ 18,901,208	\$ 17,833,603
Adjustments:	\$ -	\$ -
Reserve Increase:	\$ 10,183,287	\$ (48,071,630)

Market Value of Assets

	9/30/2023	9/30/2022
Cash	\$ 0	\$ 0
Receivables & Accruals	794,639	726,520
Other short-term	1,422,666	2,006,198
Real Estate	25,391,429	29,008,920
Bonds - corporate	27,241,343	26,929,064
- government	22,376,645	21,722,728
Stocks - common	144,085,822	120,937,722
- mutual funds	0	0
Other - prepaid expenses	189,925	360
Total assets	221,502,469	201,331,512
Less accounts payable	12,729,179	2,741,508
Net assets	\$ 208,773,290	\$ 198,590,004



Retired Member and Beneficiary Data September 30, 2023 Tabulated by Valuation Divisions

Valuation Divisions	No.	Annual Benefits	Average Benefit	Actuarial Value of Benefits
General Members	219	\$ 5,148,569	\$ 23,509	\$ 51,427,997
Utilities Authority Members	259	7,765,559	29,983	78,964,965
Police Members	99	4,446,889	44,918	47,498,378
Totals	577	\$17,361,017	\$30,088	\$177,891,340

Divisions	All Retirements Averages			New Age and Service Retired Members Added During Year Ended 9/30/2023 Averages		
	Attained Age	Retirement Age	Current Annual Benefits	No.	Age	Annual Benefits
	General Members	70.6	59.6		\$ 23,509	11
Utilities Authority Members	70.6	58.3	29,983	7	60.9	36,031
Police Members	65.8	53.0	44,918	3	54.0	54,314

Retired Member and Beneficiary Data Historical Comparison

Period	Added		Removed		Net Increase		End of Period		Expected Removals	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Benefits
9/30/89	18	\$ 210,866	7	\$ 29,378	11	\$ 181,488	206	\$ 1,516,526	7	\$ 34,395
9/30/90	19	284,294	8	50,713	11	233,581	217	1,750,107	7	40,904
9/30/91	12	166,933	12	40,397	0	126,536	217	1,876,643	8	48,142
9/30/92	19	279,791	6	12,185	13	267,606	230	2,144,249	7	46,602
9/30/93	26	505,107	8	102,192	18	402,915	248	2,547,164	8	53,142
9/30/94	20	319,610	8	59,627	12	259,983	260	2,807,147	9	58,237
9/30/95	22	481,651	9	41,888	13	439,763	273	3,246,910	9	64,542
9/30/96	12	177,476	9	54,301	3	123,175	276	3,370,085	8	61,052
9/30/97	20	311,526	11	62,949	9	248,577	285	3,618,662	9	66,449
9/30/98	35	833,113	9	47,534	27	785,579	311	4,404,241	9	72,632
9/30/99	25	507,447	15	126,797	10	380,650	321	4,784,891	10	82,380
9/30/00	27	646,116	14	129,198	13	516,918	334	5,301,809	10	90,589
9/30/01	23	628,192	15	97,296	8	530,896	342	5,832,705	10	97,991
9/30/02	23	526,601	3	33,319	20	493,282	362	6,325,987	10	109,931
9/30/03	17	313,250	5	42,129	12	271,121	374	6,597,108	11	121,871
9/30/04	25	705,692	3	44,505	22	661,187	396	7,258,295	11	132,981
9/30/05	11	354,475	22	266,853	-11	87,622	385	7,345,917	12	149,279
9/30/06 *	37	1,017,845	99	2,907,201	-62	(1,889,356)	323	5,456,561	10	109,462
9/30/07	32	820,021	18	202,924	14	617,097	337	6,073,658	11	126,496
9/30/08	23	635,039	12	184,195	11	450,844	348	6,524,502	11	138,459
9/30/09	55	1,551,148	16	182,856	39	1,368,292	387	7,892,794	12	149,577
9/30/10	56	2,229,035	14	177,196	42	2,051,839	429	9,944,633	12	170,609
9/30/11	26	672,328	16	239,318	10	433,010	439	10,377,643	13	197,045
9/30/12	27	746,421	14	251,747	13	494,674	452	10,872,317	14	196,990
9/30/13	32	927,561	15	134,978	17	792,583	469	11,664,900	14	214,174
9/30/14	40	890,500	20	262,625	20	627,875	489	12,292,775	14	232,649
9/30/15	31	739,422	19	262,533	12	476,889	501	12,769,664	15	249,235
9/30/16	24	653,823	26	380,819	-2	273,004	499	13,042,668	16	270,359
9/30/17	19	382,822	13	154,607	6	228,215	505	13,270,883	14	249,276
9/30/18	32	777,459	20	342,128	12	435,331	517	13,706,214	14	267,842
9/30/19	31	1,018,350	22	345,024	9	673,326	526	14,379,540	14	285,051
9/30/20	25	861,733	17	302,652	8	559,081	534	14,938,621	14	292,501
9/30/21	39	1,245,027	19	268,488	20	976,539	554	15,915,160	15	328,322
9/30/22	33	1,144,325	21	403,988	12	740,337	566	16,655,497	15	349,804
9/30/23	25	\$1,088,744	14	383,224	11	705,520	577	17,361,017	15	355,359

* Removed 90 Fire retirees and beneficiaries, and \$2,811,761 annual benefits in the 9/30/2006 valuation.



Retired Members and Beneficiaries Historical Comparison

Valuation Date	% Increase in Annual Benefits	No. of Active Per Retired	Annual Benefits as % of Active Payroll	Average Benefits
9/30/89	13.6 %	4.0	7.5 %	\$ 7,362
9/30/90	15.4	3.9	7.8	8,065
9/30/91	7.2	3.9	7.9	8,648
9/30/92	14.3	3.6	8.6	9,323
9/30/93	18.8	3.1	10.8	10,271
9/30/94	10.2	3.0	11.6	10,797
9/30/95	15.7	3.0	12.4	11,893
9/30/96	3.8	3.0	12.2	12,210
9/30/97	7.4	3.2	12.1	12,697
9/30/98	21.7	2.8	14.5	14,162
9/30/99	8.6	2.7	15.1	14,906
9/30/00	10.8	2.7	15.9	15,874
9/30/01	10.0	2.7	16.4	17,055
9/30/02	8.5	2.5	17.1	17,475
9/30/03	4.3	2.5	16.4	17,639
9/30/04	10.0	2.4	16.7	18,329
9/30/05	1.2	2.6	15.0	19,080
9/30/06 *	20.3	2.0	17.9	16,893
9/30/07	11.3	2.0	19.6	18,023
9/30/08	7.4	2.0	19.8	18,749
9/30/09	21.0	1.7	25.4	20,395
9/30/10	26.0	1.3	37.1	23,181
9/30/11	4.4	1.3	40.3	23,639
9/30/12	4.8	1.2	42.1	24,054
9/30/13	7.3	1.1	46.3	24,872
9/30/14	5.4	1.1	48.9	25,139
9/30/15	3.9	1.0	50.1	25,488
9/30/16	2.1	1.1	47.4	26,138
9/30/17	1.7	1.1	46.5	26,279
9/30/18	3.3	1.1	46.8	26,511
9/30/19	4.9	1.1	45.2	27,338
9/30/20	3.9	1.1	45.9	27,975
9/30/21	6.5	1.0	49.3	28,728
9/30/22	4.7	1.0	48.6	29,427
9/30/23	4.2	1.0	46.9	30,088

* Removed 90 Fire retirees and beneficiaries, and \$2,811,761 annual benefits in the 9/30/2006 valuation.

Retired Member and Beneficiary Data as of September 30, 2023 by Type of Benefit Being Paid

<u>Type of Benefit Being Paid</u>	<u>No.</u>	<u>Annual Benefits</u>	<u>Average Benefits</u>
Age and Service Benefits			
Straight Life - benefit terminating at death of retirant	214	\$ 6,742,394	\$31,507
Option A - 100% joint and survivor benefit*	121	3,993,610	33,005
Option B/D/E - 50%/75%/67% joint and survivor benefit*	112	3,867,491	34,531
Option C - 10-year certain and life	24	616,377	25,682
Other Age and Service Benefits	<u>0</u>	<u>0</u>	<u>0</u>
Total Age and Service Benefits	471	15,219,872	32,314
Surviving Beneficiary Benefits	68	1,163,466	17,110
Casualty Benefits			
Duty disability	10	373,996	37,400
Non-duty disability	12	247,955	20,663
Duty death	2	47,846	23,923
Non-duty death	<u>14</u>	<u>307,882</u>	<u>21,992</u>
Total Casualty Benefits	38	977,679	25,728
Total Benefits Being Paid	577	\$17,361,017	\$30,088

* Includes Pop-Up provision.

Retired Members and Beneficiaries as of September 30, 2023 by Attained Age

Age Last Birthday	Age and Service*		Casualty		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 45	3	\$ 17,257	0	\$ -	3	\$ 17,257
45-49	5	288,668	2	81,768	7	370,436
50-54	22	1,275,376	5	143,664	27	1,419,040
55-59	37	1,813,404	10	267,006	47	2,080,410
60-64	89	3,020,566	6	147,944	95	3,168,510
65-69	131	3,858,895	4	80,541	135	3,939,436
70-74	97	2,604,403	4	100,963	101	2,705,366
75-79	73	1,973,217	3	83,457	76	2,056,674
80-84	44	908,864	4	72,336	48	981,200
85-89	20	326,827	0	-	20	326,827
90 & Over	18	295,861	0	-	18	295,861
Totals	539	\$ 16,383,338	38	\$ 977,679	577	\$ 17,361,017

* Includes Surviving Beneficiary Benefits.

Inactive Vested Members as of September 30, 2023 by Attained Age

Attained Age	General Members		Utilities Authority		Police Members		TOTAL	
	No.	Estimated Annual Benefits	No.	Estimated Annual Benefits	No.	Estimated Annual Benefits	No.	Estimated Annual Benefits
Under 30								
30-34	2	\$ 16,968	2	\$ 14,652			4	\$ 31,620
35-39			1	21,262	2	\$ 51,524	3	72,786
40-44	3	34,333	1	46,365	1	23,159	5	103,857
45-49			2	36,541	1	7,554	3	44,095
50-54	2	70,535	8	174,120	3	47,371	13	292,026
55-59	7	142,616	7	131,336	1	7,094	15	281,046
60-64			1	16,423			1	16,423
TOTALS	14	\$ 264,452	22	\$ 440,699	8	\$ 136,702	44	\$841,853

Active Members Included in Valuation General Members

Valuation September 30	Active Members	Vested		Valuation Payroll	Average		
		Term. Members			Age	Service	Pay
2004	294	7		\$ 10,546,747	46.1 yrs.	8.1 yrs.	\$ 35,873
2005	297	7		11,854,374	46.4	8.6	39,914
2006	287	6		11,206,771	46.5	8.0	39,048
2007	289	6		11,131,329	47.3	8.3	38,517
2008	281	6		11,949,389	47.9	9.0	42,525
2009	265	8		11,108,762	47.5	8.6	41,920
2010	226	13		8,874,396	46.8	8.0	39,267
2011	219	16		8,488,894	47.1	8.2	38,762
2012	216	16		8,625,945	47.8	8.9	39,935
2013	198	17		7,765,325	48.2	9.4	39,219
2014	198	14		7,912,918	48.3	9.3	39,964
2015	185	15		7,383,853	48.9	9.8	39,913
2016	203	20		8,738,017	48.5	8.8	43,044
2017	199	19		8,858,072	48.7	9.1	44,513
2018	197	21		8,802,993	48.4	8.9	44,685
2019	203	18		9,532,368	48.5	8.6	46,957
2020	213	15		10,215,838	48.4	8.6	47,962
2021	212	15		10,496,497	48.3	8.6	49,512
2022	226	14		12,047,525	47.8	7.9	53,308
2023	231	14		12,807,440	47.5	7.6	55,443

Number Added to and Removed from Active Membership General Members

Year Ended September 30	Number Added During Year		Normal Retirement		Disability Retirement		Died-in- Service		Terminations				Active Members End of Year	
	A	E	A	E	A	E	A	E	Withdrawal	Vested	Totals			Transfer
									A	A	A	E		
2014	23	23	10	8.4	0	0.5	0	0.4	13	0	13	9.5		198
2015	14	26	8	10.1	0	0.4	2	0.4	14	2	16	10.9	(1)	185
2016	41	23	7	8.3	0	0.5	0	0.4	10	6	16	9.9		203
2017	17	23	7	6.7	1	0.4	0	0.3	14	1	15	16.5	2	199
2018	32	33	8	8.4	1	0.4	1	0.3	19	4	23	14.7	(1)	197
2019	38	31	7	7.6	0	0.4	0	0.2	22	2	24	15.6	(1)	203
2020	28	18	5	8.4	1	0.3	0	0.2	12	0	12	17.3	0	213
2021	27	26	5	11.0	1	0.4	0	0.2	18	2	20	16.8	(2)	212
2022	45	31	9	9.7	1	0.4	0	0.2	20	1	21	16.2	0	226
2023	39	33	10	10.6	1	0.4	0	0.2	22	0	22	19.4	(1)	231
10-Year Totals	304	267	76	89.2	6	4.1	3	2.8	164	18	182	146.8		

A represents actual number; E represents expected number.



Active Members Included in Valuation Utilities Authority Members

Valuation September 30	Active Members	Vested Term. Members	Valuation Payroll	Average		
				Age	Service	Pay
2004	245	11	\$ 11,193,220	45.8 yrs.	10.1 yrs.	\$ 45,687
2005	256	12	12,754,845	46.5	10.1	49,824
2006	263	11	12,551,346	46.6	9.6	47,724
2007	278	10	13,494,349	46.5	9.3	48,541
2008	282	12	13,970,069	46.5	9.1	49,539
2009	266	7	13,244,000	46.0	9.3	49,789
2010	248	8	12,119,371	46.2	9.3	48,868
2011	237	10	11,893,916	47.0	9.9	50,185
2012	237	10	11,801,344	47.2	9.9	49,795
2013	232	9	11,534,243	46.7	9.6	49,717
2014	219	15	11,071,951	46.4	9.3	50,557
2015	228	18	11,841,919	46.3	9.1	51,938
2016	229	16	12,588,492	46.3	9.4	54,972
2017	230	18	12,768,134	46.5	9.8	55,514
2018	242	18	13,635,436	46.4	9.5	56,345
2019	257	15	15,141,890	46.2	9.3	58,918
2020	254	17	15,341,742	46.5	9.4	60,401
2021	244	20	14,993,204	46.0	9.4	61,448
2022	225	18	14,329,922	46.8	9.5	63,689
2023	229	22	15,461,865	46.8	9.5	67,519

Number Added to and Removed from Active Membership Utilities Authority Members

Year Ended September 30	Number Added During Year		Normal Retirement		Disability Retirement		Died-in- Service		Terminations				Active Members End of Year	
									Withdrawal		Totals			Transfer
	A	E	A	E	A	E	A	E	A	A	E	A		
2014	23	36	18	8.8	0	0.6	0	0.4	12	6	18	13.3		219
2015	27	19	10	6.1	1	0.5	0	0.4	4	4	8	13.5	1	228
2016	25	24	6	5.3	0	0.5	0	0.3	15	3	18	15.0		229
2017	19	18	2	6.8	0	0.5	0	0.3	10	6	16	16.7		230
2018	31	19	7	7.9	0	0.5	0	0.3	10	2	12	15.5		242
2019	35	21	6	7.9	0	0.4	0	0.4	12	3	15	17.4	1	257
2020	19	22	11	8.8	0	0.4	0	0.4	9	2	11	19.2	0	254
2021	23	33	14	10.2	0	0.4	1	0.3	14	4	18	17.9	0	244
2022	28	47	13	9.6	0	0.4	0	0.3	34	0	34	16.9	0	225
2023	26	23	7	9.6	0	0.4	0	0.3	12	4	16	16.1	1	229
10-Year Totals	256	262	94	81.0	1	4.6	1	3.4	132	34	166	161.5		

A represents actual number; E represents expected number.



Active Members Included in Valuation Police Members

Valuation September 30	Active Members	Vested Term. Members	Payroll	Average		
				Age	Service	Pay
2004	103	3	\$ 5,496,631	40.3 yrs.	9.9 yrs.	\$ 53,365
2005	105	3	5,943,309	40.9	10.6	56,603
2006	111	2	6,773,879	39.3	9.4	61,026
2007	106	2	6,358,225	38.9	9.4	59,983
2008	117	2	7,032,172	39.2	9.4	60,104
2009	111	3	6,663,530	38.6	9.2	60,032
2010	102	3	5,785,106	38.4	9.0	56,717
2011	101	4	5,361,391	38.9	9.7	53,083
2012	99	3	5,415,125	39.0	9.8	54,698
2013	106	3	5,899,165	39.2	9.2	55,653
2014	109	2	6,165,492	38.4	8.9	56,564
2015	107	4	6,249,587	39.0	9.1	58,407
2016	100	6	6,166,648	38.3	9.0	61,666
2017	110	8	6,937,207	37.9	8.6	63,066
2018	111	8	6,825,562	37.9	8.6	61,492
2019	107	7	7,129,571	37.6	8.2	66,632
2020	103	8	7,005,232	37.9	8.4	68,012
2021	99	9	6,814,130	37.4	7.9	68,830
2022	108	6	7,913,942	37.2	7.8	73,277
2023	116	8	8,755,752	38.2	7.4	75,481

Number Added to and Removed from Active Membership Police Members

Year Ended September 30	Number Added During Year		Normal Retirement		Disability Retirement		Died-in- Service		Terminations				Active Members End of Year
	A	E	A	E	A	E	A	E	Withdrawal		Totals	Transfer	
									A	E			
2014	19	16	4	2.0	0	0.2	0	0.1	12	0	12	5.3	109
2015	14	16	2	2.0	1	0.2	0	0.1	11	2	13	5.8	107
2016	15	22	4	3.4	0	0.2	0	0.1	15	3	18	5.8	100
2017	17	5	1	1.5	0	0.2	1	0.1	2	1	3	6.6	(2) 110
2018	10	11	4	1.9	0	0.3	0	0.1	5	1	6	7.2	1 111
2019	8	15	7	4.5	1	0.3	0	0.1	4	0	4	6.7	0 107
2020	13	17	2	0.9	0	0.3	0	0.1	13	2	15	6.4	0 103
2021	10	16	5	2.1	1	0.3	0	0.1	8	2	10	6.7	2 99
2022	13	4	2	1.3	0	0.1	0	0.1	2	0	2	6.5	0 108
2023	19	11	3	3.1	0	0.1	0	0.1	7	1	8	7.0	0 116
10-Year Totals	138	133	34	22.7	3	2.2	1	1.0	79	12	91	64.0	

A represents actual number; E represents expected number.



General Members as of September 30, 2023 by Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	1							1	\$ 29,572
20-24	6							6	228,689
25-29	10	1						11	509,885
30-34	16	6						22	1,132,757
35-39	13	4	1	3				21	1,222,460
40-44	11	10	1	3	1			26	1,435,133
45-49	18	5	2	2	4	1		32	1,808,122
50-54	19	9	3	3	6	4		44	2,680,966
55-59	13	8	2	8	3	1		35	2,011,979
60	4	1		1	2			8	491,086
61		1	1		1			3	221,749
62	2	1			1			4	219,574
63	4							4	108,991
64	3	1				1		5	371,341
65					1			1	12,089
68						1		1	84,364
69	1	1						2	148,252
72		1						1	12,169
73		1		1				2	56,011
78			1					1	10,905
79					1			1	11,346
Totals	121	50	11	21	20	8	0	231	\$12,807,440

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age:	47.5	years
Service:	7.6	years
Annual Pay:	\$55,443	

Utilities Authority Members as of September 30, 2023 by Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	1							1	\$ 33,426
20-24	5							5	240,766
25-29	6							6	237,301
30-34	10	7	2					19	1,129,944
35-39	12	11	7	4	1			35	2,529,557
40-44	11	10	5	7	3			36	2,341,099
45-49	6	7	4	3	5			25	1,767,586
50-54	13	7	2	7		3	1	33	2,338,866
55-59	12	6	4	12	7			41	2,942,368
60	1					2		3	175,308
61	3			2				5	245,157
62		1						1	72,985
63		1	1	1				3	268,866
64	1	1		1				3	147,337
65	1	1		2				4	259,330
66		1	1	3	1			6	530,849
67			1				1	2	152,136
71	1							1	48,984
Totals	83	53	27	42	17	5	2	229	\$15,461,865

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 46.8 years
Service: 9.5 years
Annual Pay: \$67,519

Police Members as of September 30, 2023 by Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	9							9	\$ 503,698
25-29	10	3						13	789,200
30-34	14	13	2					29	2,017,160
35-39	6	9	3					18	1,341,786
40-44	3	5	2	3				13	1,091,614
45-49	5	1	3	3	6	1		19	1,800,026
50-54	3	2		1	3			9	803,513
55-59		1	1		1			3	326,465
63	1							1	66,220
67	1							1	7,449
76	1							1	8,621
Totals	53	34	11	7	10	1	0	116	\$8,755,752

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 38.2 years
Service: 7.4 years
Annual Pay: \$75,481

SECTION D

ACTUARIAL COST METHOD, ACTUARIAL ESTIMATES AND DEFINITIONS OF TECHNICAL TERMS

Actuarial Cost Method Used for the Valuation

The actuarial cost method is a procedure for allocating the actuarial present value of future benefits and expenses to time periods. The method used for this valuation is the individual entry-age actuarial cost method, and has the following characteristics:

Actuarial Present Value of Future Benefits. Actuarial present values are calculated using the benefit provisions applicable to active members, vested terminated members, and retirees and beneficiaries as of the valuation date using the assumptions summarized elsewhere in this report.

Normal Costs. The actuarial present values for each year of service rendered before and after the valuation date are determined so that:

- (i) The annual normal costs for each individual active member, payable from the member's effective date of employment (or entry age) to projected date of retirement, are sufficient to accumulate the value of the member's benefit at the time of retirement; and
- (ii) Each annual normal cost is a constant percentage of the active member's year-by-year projected pensionable pay.

Actuarial Accrued Liabilities. The actuarial present value of future benefits minus the actuarial present value of normal costs rendered after the valuation date is the Actuarial Accrued Liabilities.

Funding Value of Assets. The accrued assets recognized as of the valuation date for the purpose of determining contribution requirements.

Unfunded Actuarial Accrued Liabilities. The Actuarial Accrued Liabilities minus the funding value of assets are the Unfunded Actuarial Accrued Liabilities.

Amortization of Unfunded Actuarial Accrued Liabilities. Unfunded Actuarial Accrued Liabilities were amortized by level (principal & interest combined) percent-of-payroll contributions over periods shown elsewhere in this report. Active member payroll was assumed to increase 4.0% a year for the purpose of determining the level percent contributions, unless the 10-year average annual payroll growth is lower than 4.0%.

Actuarial Assumptions. Assumptions are established by the Board after consulting with the actuary. Non-economic assumptions are generally selected on the basis of the System's historical activity, modified for expected future differences. The reasonableness of the economic assumptions is based upon capital market expectations provided by various investment consultants and other sources such as the Social Security Trustees report. All actuarial assumptions are based on future expectations, not market measures.

Level Percent of Active Member Covered Payroll Amortization of Unfunded Actuarial Accrued Liability*

General Members

(\$ Amounts in Thousands)

Year	Pay		Unfunded		Contribution	
	Inflated Dollars	Constant Dollars	Inflated Dollars	Constant Dollars	Inflated Dollars	Constant Dollars
2023	\$ 12,807	\$12,807	\$ 15,357	\$15,357	\$ 793	\$ 793
2024	13,320	12,807	15,633	15,032	938	901
2025	13,853	12,807	15,776	14,586	942	871
2026	14,407	12,807	15,925	14,157	1,041	925
2027	14,983	12,807	15,981	13,660	1,310	1,120
2032	18,229	12,807	12,695	8,920	1,686	1,184
2037	22,178	12,807	10,386	5,998	1,332	769
2042	26,983	12,807	8,187	3,886	809	384
2052	39,942	12,807	415	133	422	135
2053	41,540	12,807	0	0	0	0

*	\$ 2,648,307	over 30 years	\$ 1,356,012	over 15 years
	3,220,880	over 29 years	(2,751,166)	over 14 years
	1,164,093	over 28 years	221,597	over 13 years
	974,336	over 27 years	2,200,796	over 12 years
	355,475	over 26 years	2,121,842	over 11 years
	(428,099)	over 25 years	1,634,102	over 10 years
	86,247	over 24 years	1,536,655	over 9 years
	3,002,493	over 23 years	373,646	over 8 years
	(749,308)	over 22 years	(610,325)	over 7 years
	(1,354,504)	over 21 years	(516,798)	over 6 years
	(1,228,676)	over 20 years	(562,968)	over 5 years
	(617,018)	over 19 years	(732,876)	over 4 years
	2,406,329	over 18 years	(154,844)	over 3 years
	645,937	over 17 years	59,036	over 2 years
	1,162,975	over 16 years	(107,013)	over 1 year
			\$ 15,357,163	TOTAL

Level percent-of-payroll financing of unfunded actuarial accrued liabilities treats each generation of taxpayers equally during the financing period. The alternative, level-dollar financing, produces declining percent-of-payroll contributions and places a greater relative burden on current taxpayers.

The annual rate of increase in member payroll used to compute the level percent-of-payroll contribution is the same rate of payroll growth used to compute actuarial liabilities and costs. It reflects across-the-board salary increases not group size increases.

If future payroll growth is less than the assumed rate due to smaller than projected salary increases, the percent-of-payroll contribution rate for unfunded actuarial accrued liabilities will tend to decline.

If future payroll growth is less than the assumed rate due to decreases in the number of members, the percent-of-payroll contribution rate for unfunded actuarial accrued liabilities will tend to increase but dollar contributions will be less than indicated in the preceding schedule.



Level Percent of Active Member Covered Payroll Amortization of Unfunded Actuarial Accrued Liability*

Utility Authority Members

(\$ Amounts in Thousands)

Year	Pay		Unfunded		Contribution	
	Inflated Dollars	Constant Dollars	Inflated Dollars	Constant Dollars	Inflated Dollars	Constant Dollars
2023	\$15,462	\$15,462	\$23,293	\$23,293	\$ 1,595	\$ 1,595
2024	16,080	15,462	23,297	22,401	1,659	1,595
2025	16,724	15,462	23,233	21,481	1,579	1,460
2026	17,392	15,462	23,250	20,669	1,430	1,271
2027	18,088	15,462	23,426	20,025	1,487	1,271
2032	22,007	15,462	22,126	15,546	2,321	1,630
2037	26,775	15,462	17,726	10,237	2,340	1,351
2042	32,576	15,462	13,213	6,271	1,551	736
2052	48,220	15,462	741	237	752	241
2053	50,149	15,462	0	0	0	0

*	\$ 4,723,688	over 30 years	\$ 1,484,024	over 15 years
	4,710,103	over 29 years	(1,884,610)	over 14 years
	2,102,104	over 28 years	0	over 13 years
	720,628	over 27 years	4,465,449	over 12 years
	175,630	over 26 years	0	over 11 years
	(295,993)	over 25 years	0	over 10 years
	(517,663)	over 24 years	0	over 9 years
	5,056,084	over 23 years	(706,865)	over 8 years
	449,400	over 22 years	127,592	over 7 years
	(1,912,582)	over 21 years	(1,531,094)	over 6 years
	(1,123,911)	over 20 years	(3,168)	over 5 years
	(1,558,056)	over 19 years	0	over 4 years
	3,839,668	over 18 years	541,534	over 3 years
	2,257,616	over 17 years	262,809	over 2 years
	1,910,577	over 16 years	0	over 1 year
			\$ 23,292,964	TOTAL

Level percent-of-payroll financing of unfunded actuarial accrued liabilities treats each generation of taxpayers equally during the financing period. The alternative, level-dollar financing, produces declining percent-of-payroll contributions and places a greater relative burden on current taxpayers.

The annual rate of increase in member payroll used to compute the level percent-of-payroll contribution is the same rate of payroll growth used to compute actuarial liabilities and costs. It reflects across-the-board salary increases not group size increases.

If future payroll growth is less than the assumed rate due to smaller than projected salary increases, the percent-of-payroll contribution rate for unfunded actuarial accrued liabilities will tend to decline.

If future payroll growth is less than the assumed rate due to decreases in the number of members, the percent-of-payroll contribution rate for unfunded actuarial accrued liabilities will tend to increase but dollar contributions will be less than indicated in the preceding schedule.



Level Percent of Active Member Covered Payroll Amortization of Unfunded Actuarial Accrued Liability*

Police Members

(\$ Amounts in Thousands)

Year	Pay		Unfunded		Contribution	
	Inflated Dollars	Constant Dollars	Inflated Dollars	Constant Dollars	Inflated Dollars	Constant Dollars
2023	\$ 8,756	\$8,756	\$9,960	\$9,960	\$ 513	\$ 513
2024	9,106	8,756	10,140	9,750	534	513
2025	9,470	8,756	10,312	9,534	468	432
2026	9,849	8,756	10,565	9,393	494	439
2027	10,243	8,756	10,809	9,240	1,243	1,063
2032	12,462	8,756	7,787	5,471	1,151	808
2037	15,162	8,756	6,582	3,801	656	379
2042	18,447	8,756	5,971	2,834	401	191
2052	27,306	8,756	388	124	394	126
2053	28,398	8,756	0	0	0	0

*	\$ 2,475,587	over 30 years	\$ 531,704	over 15 years
	3,544,463	over 29 years	(2,545,089)	over 14 years
	639,813	over 28 years	434,578	over 13 years
	(1,253,440)	over 27 years	2,971,940	over 12 years
	1,713,872	over 26 years	1,761,746	over 11 years
	(577,060)	over 25 years	1,100,621	over 10 years
	387,548	over 24 years	1,001,147	over 9 years
	109,081	over 23 years	749,643	over 8 years
	(113,632)	over 22 years	(243,723)	over 7 years
	(1,335,757)	over 21 years	(764,124)	over 6 years
	(1,269,739)	over 20 years	923,419	over 5 years
	101,301	over 19 years	(2,345,678)	over 4 years
	805,859	over 18 years	(20,153)	over 3 years
	567,217	over 17 years	157,249	over 2 years
	452,017	over 16 years	0	over 1 year
			\$ 9,960,410	TOTAL

Level percent-of-payroll financing of unfunded actuarial accrued liabilities treats each generation of taxpayers equally during the financing period. The alternative, level-dollar financing, produces declining percent-of-payroll contributions and places a greater relative burden on current taxpayers.

The annual rate of increase in member payroll used to compute the level percent-of-payroll contribution is the same rate of payroll growth used to compute actuarial liabilities and costs. It reflects across-the-board salary increases not group size increases.

If future payroll growth is less than the assumed rate due to smaller than projected salary increases, the percent-of-payroll contribution rate for unfunded actuarial accrued liabilities will tend to decline.

If future payroll growth is less than the assumed rate due to decreases in the number of members, the percent-of-payroll contribution rate for unfunded actuarial accrued liabilities will tend to increase but dollar contributions will be less than indicated in the preceding schedule.



Actuarial Estimates Used for the Valuation

Funding objective contribution requirements and actuarial present values are calculated by applying estimates of future activities (actuarial estimates) to the benefit provisions and people information of the System.

The principal areas of risk which require estimates of future activities are:

- (i) Long-term rates of investment return to be generated by the assets of the System
- (ii) Patterns of pay increases to members
- (iii) Rates of mortality among members, retirees, and beneficiaries
- (iv) Rates of termination of active members
- (v) Rates of disability among active members
- (vi) The age patterns of actual retirements

In a valuation, the monetary effect of each activity is calculated for as long as a present covered person survives - - - a period of time which can be as long as a century.

Actual activities of the System will not coincide exactly with estimated activities, due to the nature of the activities. Each valuation provides a complete recalculation of estimated future activities and takes into account the effect of differences between estimated and actual activities to date. The result is a continual series of adjustments (usually small) to the computed contribution rate.

From time-to-time one or more of the estimates are modified to reflect experience trends (but not random or temporary year-to-year fluctuations).

In accordance with Chapter 112, Florida Statutes, 112.661(9), the Retirement Board adopts the assumed rate of return assumption used for actuarial valuation purposes. The actuarial assumptions are set by the Board. The rationale for certain actuarial assumptions is described in the October 1, 1995 through September 30, 2000 experience study report. All actuarial assumptions are estimates of future experience.

Actuarial estimates regarding the net investment return, inflation, real investment return, and salary increase rates are used, in combination with the other assumptions, to (i) determine the present value of amounts expected to be paid in the future and (ii) establish rates of contribution which are expected to remain relatively level as a percent of total valuation payroll.

Net Rate of Investment Return. 7.25% per annum, compounded annually, net of investment expenses.

Inflation. 2.75% per annum, compounded annually. This is the rate at which growth in the supply of money and credit is estimated to exceed growth in the supply of goods and services. It may be thought of as the rate of depreciation of the purchasing power of the dollar. There are a number of indices for measuring the inflation rate. The recent inflation rate, as measured by the Consumer Price Index, has been:

	Year Ended September 30					Average for Period
	2023	2022	2021	2020	2019	
Actual	3.70%	8.20%	5.40%	1.40%	1.70%	4.05%
Assumed	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%

Real Investment Return. 4.50% per annum, compounded annually. This is the rate of return assumed to be produced by investing a pool of assets in an inflation-free environment. Recent real investment return for the Retirement and Benefit System has been:

	Year Ended September 30					Average for Period
	2023	2022	2021	2020	2019	
Total Rate of Return	4.53%	3.05%	10.15%	8.18%	8.08%	6.80%
Less Inflation Rate	3.70%	8.20%	5.40%	1.40%	1.70%	4.05%
Actual Real Rate of Return	0.83%	(5.15)%	4.75%	6.78%	6.38%	2.75%
Assumed Real Rate of Return	4.50%	4.50%	4.75%	5.00%	5.00%	4.75%
Assumed Net Rate of Return	7.25%	7.25%	7.50%	7.75%	7.75%	7.50%

The total investment return rate was computed using the approximate formula $i = I$ divided by $1/2 (A + B - I)$, where I is actual realized investment income plus market value adjustments, A is the beginning of year asset value, and B is the end of year asset value.

The preceding investment return rates reflect the particular characteristics of this Retirement and Benefit System and should not be used to measure an investment advisor's performance or for comparison with other retirement systems. Such use will usually mislead.

Salary Increases. Employee salaries are estimated to increase between the date of hire and date of retirement. Salary increases occur in recognition of (i) individual merit and seniority, (ii) inflation related depreciation of the purchasing power of salaries, and (iii) competition from other employers for personnel.

A schedule of estimated rates of increases in individual salaries for sample ages follows:

Annual Rates of Salary Increases for Sample Ages						
Age	General and Utilities Authority			Police Officers		
	Merit & Seniority	Wage Inflation	Total	Merit & Seniority	Wage Inflation	Total
20	2.5 %	4.0 %	6.5 %	4.0 %	4.0 %	8.0 %
30	1.7 %	4.0 %	5.7 %	2.8 %	4.0 %	6.8 %
40	1.1 %	4.0 %	5.1 %	2.2 %	4.0 %	6.2 %
50	0.6 %	4.0 %	4.6 %	1.2 %	4.0 %	5.2 %
55	0.5 %	4.0 %	4.5 %	0.7 %	4.0 %	4.7 %
60	0.5 %	4.0 %	4.5 %	0.2 %	4.0 %	4.2 %

The merit and seniority rates for General and Utilities Authority were first used in the September 30, 2016 valuation.

The merit and seniority rates for Police Officers were first used in the September 30, 2001 valuation.

It is estimated that the group size will remain constant and that total payroll for the group will increase at the rate of the general increase in wage levels due to inflation, which in this case is 4.0%.

A schedule of recent salary change experience follows:

	% Change in Salaries					
	Year Ended September 30					Average
	2023	2022	2021	2020	2019	5-Year
Rate of Change in Salaries						
- Total	9.9 %	9.7 %	5.0 %	4.7 %	9.2 %	7.7 %
- General	12.9	11.8	4.9	5.1	7.4	8.4
- U.A.	7.3	7.2	4.2	4.6	7.3	6.1
- Police	10.1	11.4	6.4	4.0	15.2	9.4
Expected - Total						
- Total	5.2	5.2	5.1	5.1	5.1	5.1 %
- General	4.7	4.7	4.7	4.7	4.7	4.7
- U.A.	4.8	4.8	4.8	4.8	4.8	4.8
- Police	6.3	6.4	6.4	6.3	6.3	6.3

	% Change in Total Payroll						
	Year Ended September 30					Average*	
	2023	2022	2021	2020	2019	5-Year	10-Year
- Total	8.0 %	6.2 %	(0.8) %	2.4 %	8.7 %	3.0 %	4.1 %
- General	6.3	14.8	2.7	7.2	8.3	4.5	5.5
- U.A.	7.9	(4.4)	(2.3)	1.3	11.0	1.8	3.0
- Police	10.6	16.1	(2.7)	(1.7)	4.5	3.1	4.4

* 5-year and 10-year averages include DROP payroll.

In order to achieve the funding objective of a contribution rate which remains level as a percent-of-payroll, the total rate of investment return must exceed the rate of average increase in salaries by an amount equal to the estimated real investment return rate.

Mortality Tables. The mortality tables used to measure retired life mortality were the Florida Retirement System (FRS) Mortality Tables, as described below:

General & Utilities Authority

- Male non-disabled pre-retirement mortality: fully generational mortality. PUB-2010 Headcount Weighted General Below Median Employee Male Table, set back 1 year, projected with scale MP-2018.
- Female non-disabled pre-retirement mortality: fully generational mortality. PUB-2010 Headcount Weighted General Below Median Employee Female Table, projected with scale MP-2018.
- Male non-disabled post-retirement mortality: fully generational mortality. PUB-2010 Headcount Weighted General Below Median Healthy Retiree Male Table, set back 1 year, projected with scale MP-2018.
- Female non-disabled post-retirement mortality: fully generational mortality. PUB-2010 Headcount Weighted General Below Median Healthy Retiree Female Table, projected with scale MP-2018.
- Male disabled mortality: PUB-2010 Headcount Weighted General Disabled Retiree Male Table, set forward 3 years.
- Female disabled mortality: PUB-2010 Headcount Weighted General Disabled Retiree Female Table, set forward 3 years.

Police

- Male non-disabled pre-retirement mortality: fully generational mortality. PUB-2010 Headcount Weighted Public Safety Below Median Employee Male Table, set forward 1 year, projected with scale MP-2018.
- Female non-disabled pre-retirement mortality: fully generational mortality. PUB-2010 Headcount Weighted Public Safety Employee Female Table, set forward 1 year, projected with scale MP-2018.
- Male non-disabled post-retirement mortality: fully generational mortality. PUB-2010 Headcount Weighted Public Safety Below Median Healthy Retiree Male Table, set forward 1 year, projected with scale MP-2018.
- Female non-disabled post-retirement mortality: fully generational mortality. PUB-2010 Headcount Weighted Public Safety Healthy Retiree Female Table, set forward 1 year, projected with scale MP-2018.
- Male disabled mortality: PUB-2010 Headcount Weighted 80% General Disabled Retiree/20% Public Safety Disabled Retiree Male Table.
- Female disabled mortality: PUB-2010 Headcount Weighted 80% General Disabled Retiree/20% Public Safety Disabled Retiree Female Table.

Single Life Retirement Values

Sample Ages in 2023	Single Life Retirement Values							
	Present Value of \$1 Monthly for Life				Future Life Expectancy (Years)			
	General & UA		Police		General & UA		Police	
	Males	Females	Males	Females	Males	Females	Males	Females
45	\$151.85	\$156.59	\$151.59	\$156.88	38.54	42.38	37.48	41.66
50	144.20	150.53	145.82	151.52	33.30	37.09	32.65	36.48
55	137.78	146.07	138.03	144.56	28.93	32.64	27.87	31.44
60	130.60	139.45	128.11	135.97	24.82	28.08	23.27	26.64
65	121.09	130.01	116.33	125.54	20.74	23.49	18.98	22.10
70	108.41	117.49	101.94	112.82	16.71	19.00	14.95	17.84
75	93.46	102.27	85.69	97.82	12.99	14.81	11.34	13.91
80	77.01	84.85	68.50	81.21	9.69	11.04	8.24	10.42

The margin for future mortality improvements is included in projection scales. 100% of deaths were assumed to be non-duty related.



Rates of termination from active membership. The rates do not apply to members eligible to retire and do not include termination on account of death or disability. This estimate measures the probabilities of members remaining in employment.

Samples	Years of Service	Percent Terminating Within Next Year	
		General and Utilities Authority	Police
ALL	0	22.00 %	15.00 %
	1	16.50	12.00
	2	12.00	10.00
	3	10.00	8.00
	4	8.00	6.00
20	5 & Over	8.00	6.00
25		8.00	6.00
30		8.00	6.00
35		8.00	6.00
40		8.00	6.00
45		5.00	3.50
50		2.25	1.00
55		2.25	1.00
60		2.25	1.00
65		2.25	1.00

The rates for all divisions were first used in the September 30, 2016 valuation.

Rates of Disability. These estimates represent the probabilities of active members becoming disabled.

Sample	Percent Becoming Disabled Within Next Year	
	General and Utilities Authority	Police
20	0.04 %	0.07 %
25	0.04	0.09
30	0.04	0.10
35	0.05	0.14
40	0.10	0.21
45	0.17	0.32
50	0.36	0.52
55	0.59	0.92
60	0.90	1.53
65	1.00	1.65

The mortality table was set forward ten years for projecting disability costs. 100% of the disability retirements were assumed to be non-duty related for General and Utilities Authority members. 75% of the disability retirements were assumed to be non-duty for Police members.

Rates of Retirement. These rates are used to measure the probabilities of an eligible member retiring during the next year.

Service Years	Service Based		Age Based		
	General and Utilities Authority	Police	Retirement Ages	General and Utilities Authority	Police
25	40 %	75 %	55		35 %
26	40	75	56		30
27	40	75	57		30
28	40	75	58		30
29	40	75	59		30
30	40	100	60	10 %	30
31	40	100	61	5	30
32	40	100	62	12	30
33	40	100	63	6	30
34	40	100	64	14	40
35	100	100	65	65	100
			66	25	
			67	30	
			68	40	
			69	50	
			70	100	

These rates were first used for the September 30, 1995 valuation with the exception of the Police service-based rates, which were first used for the September 30, 2000 valuation, Police age-based rates which were first used for the September 30, 2001 valuation, and Utilities Authority service-based rates which were first used for the September 30, 2007 valuation.

Miscellaneous and Technical Assumptions

Marriage Assumption. It is estimated that 80% of active members who meet the age and service requirements for pre-retirement survivor benefits are married. Female spouses are estimated to be 3 years younger than the male participant. Male spouses are estimated to be 3 years older than the female participant.

Pay Increase Timing. Middle of (Fiscal) year.

Decrement Timing. Retirement decrements are assumed to occur at the beginning of the year. Decrements of all other types are assumed to occur at the end of the year.

Eligibility Testing. Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

Benefit Service. The nearest whole year of service on the date the decrement is assumed to occur is used to determine the amount of benefit payable.

Decrement Relativity. Decrement rates are used without adjustment for multiple decrement table effects.

Decrement Operation. Disability and mortality decrements do not operate during the first 5 years of service. Disability and withdrawal do not operate during retirement eligibility.

Normal Form of Benefit. The assumed normal form of benefit is the straight life form. Optional benefit forms are available on an actuarial equivalent basis.

Incidence of Contributions. Contributions are assumed to be received continuously throughout the year based upon the computed percent-of-payroll shown in this report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.

Vested members who terminate with a benefit worth less than 100% of their own accumulated contributions were presumed to elect a refund of accumulated contributions and forfeit the vested benefit.

Lump sum payments included in the calculation of the average pay upon which benefits are computed were estimated to increase benefits by the following percents.

General members	3.5 %
Utilities Authority members	3.0
Police members	4.0

Administrative Expenses. Administrative expenses for the next year are assumed to be equal to the previous year's amount.

Investment Expenses. Investment expenses are paid out of investment income.

Active Member Group Size. The valuation was based on a constant active member group size.

Valuation Pay. Active members whose current pay is at least 10% less than their pay in the prior valuation were assumed to have their prior year pay for this valuation.



Definitions of Technical Terms

Accrued Service. Service credited under the system which was rendered before the date of the actuarial valuation.

Actuarial Accrued Liability. The difference between the actuarial present value of future benefit payments and the actuarial present value of future normal costs. Also referred to as "accrued liability" or "past service liability."

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future benefit payments" between future normal costs and actuarial accrued liability. Sometimes referred to as the "actuarial valuation cost method."

Actuarial Equivalent. A single amount or series of amounts of equal actuarial present value to another single amount or series of amounts, computed on the basis of appropriate actuarial activities.

Actuarial Present Value. The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payment. Also referred to as "present value."

Amortization. Paying off an interest-discounted amount with periodic payments of interest and principal -- as opposed to paying off with lump sum payment.

Experience Estimates (Assumptions). Estimates of expected future experience with respect to rates of mortality, disability, termination, retirement, rate or rates of investment income and salary increases. Decrement estimates (rates of mortality, disability, termination and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic estimates (salary increases and investment income) consist of the underlying rates in an inflation-free environment plus a provision for a long-term average rate of inflation.

Experience Gain (Loss). The difference between actual actuarial costs and estimated actuarial costs -- during the period between two valuation dates.

Funding Value of Assets. The actuarial value of assets used to determine contribution amounts.

Normal Cost. The actuarial cost allocated to the current year by the actuarial cost method. Sometimes referred to as "current service cost."

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and the actuarial value of system assets. Sometimes referred to as "unfunded past service liability," "unfunded accrued liability" or "unfunded supplemental present value."

Most retirement systems have an unfunded actuarial accrued liability. They arise each time new benefits are added and each time an experience loss is realized.

Unfunded actuarial accrued liability does not represent a debt that is payable today. What is important is the ability to control the amount of unfunded actuarial accrued liability and the trend in its amount (after due allowance for devaluation of the dollar).

SECTION E

ADDITIONAL DISCLOSURE INFORMATION

GASB Statements No. 67 and No. 68 are the accounting standards which replaced GASB Statements No. 25 and No. 27. GASB Statement No. 67 is first effective for fiscal year 2014 and GASB Statement No. 68 is first effective for fiscal year 2015. A separate GASB Statements No. 67 and No. 68 report has been issued outside of this report. This section contains historical GASB Statements No. 25 and No. 27 reporting information for prior fiscal years and illustrative information for fiscal year 2015 and after.

Additional Disclosure Information

Schedule of Funding Progress

(\$ Amounts in Thousands)

Valuation Date	Valuation Assets	AAL*	Funded Ratio	Unfunded AAL*	Member Payroll	Ratio to Payroll
9/30/12 (b)	\$ 147,618	\$ 171,745	86 %	\$ 24,127	\$25,842	93 %
9/30/13	157,145	177,505	89	20,360	25,199	81
9/30/14	167,451	182,407	92	14,956	25,150	59
9/30/15 (b)	177,624	191,986	93	14,362	25,475	56
9/30/16 (b)	185,171	207,945	89	22,774	27,493	83
9/30/17	192,300	215,142	89	22,842	28,563	80
9/30/18	200,087	221,431	90	21,344	29,264	73
9/30/19	208,092	231,143	90	23,051	31,804	72
9/30/20 (b)	216,567	239,844	90	23,277	32,563	71
9/30/21 (b)	229,477	256,316	90	26,839	32,304	83
9/30/22	227,174	265,344	86	38,170	34,291	111
9/30/23	227,673	276,284	82	48,611	37,025	131

* Actuarial Accrued Liabilities.

(b) After changes in benefit provisions and/or actuarial assumptions.

Schedule of Employer Contributions

Fiscal Year	Aggregate Contribution Rates as Percents of Valuation Payroll	Projected Dollar Contribution Based on Valuation Payroll	Actual Contribution Based on Actual Payroll@
14/15	15.42 %	\$ 4,242,676	\$ 4,093,268
15/16	15.28	4,196,009	4,211,311
16/17	15.44	4,296,532	4,565,884
17/18	16.41	4,878,739	4,909,654
18/19	16.28	5,029,181	5,240,707
19/20	16.03	5,074,604	5,343,484
20/21	15.86	5,456,288	5,328,802
21/22	15.55	5,475,742	5,758,891
22/23	16.99	5,934,799	6,367,089
23/24	18.81	6,975,127	
24/25	19.70	7,890,389	

@ Actual Employer contributions are determined by applying the Employer's contribution rate to the emerging payroll. Projected funding requirement is based on a stable work force and projected salary increases.



Additional Disclosure Information

Supplementary Information

The information presented in the additional disclosure schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation Date	September 30, 2023
Actuarial Cost Method	Individual Entry Age
Amortization Method	Level Percent-of-Payroll, Closed
Remaining Amortization Periods#	1-30 years
Asset Valuation Method	4-year smoothed market
Actuarial Assumptions:	
Investment Rate of Return*	7.25%
Projected Salary Increases**	General & U.A.: 4.0% - 6.5%
	Police: 4.0% - 8.0%
* Includes Price Inflation at	2.75%
**Includes Wage Inflation and other general increases at	4.00%
Cost-of-living adjustments	None
Retirees and beneficiaries receiving benefits	577
Terminated plan members entitled to but not yet receiving benefits	44
Active plan members	
- Vested	319
- Non-vested	257
Total	1,197

The periods are in compliance with Florida Statutes and Actuarial Standards of Practice, but do not necessarily produce an Annual Required Contribution with an aggregate amortization of the unfunded actuarial accrued liability under 30 years.



SECTION F

STATE REQUIRED DATA

Actuarial Present Value of Accrued Benefits

(\$ Amounts in Thousands)*

	September 30, 2023				September 30, 2022			
	General Members	Utilities Authority	Police Members	Total	General Members	Utilities Authority	Police Members	Total
(i) Actuarial present value of active member benefits:								
Service retirement	\$39,591	\$50,270	\$28,237	\$ 118,098	\$39,002	\$47,307	\$26,485	\$ 112,794
Vested termination benefits	4,219	5,733	2,690	12,642	3,850	5,508	2,476	11,834
Disability retirement	869	1,113	1,384	3,366	805	1,085	1,271	3,161
Survivor benefits (pre-retirement)	768	1,115	394	2,277	721	1,076	367	2,164
Termination benefits - refunds	217	217	86	520	305	176	96	577
Total	45,664	58,448	32,791	136,903	44,683	55,152	30,695	130,530
(ii) Actuarial present value of terminated vested members	1,861	2,642	561	5,064	1,723	1,778	389	3,890
(iii) Actuarial present value of retired members & beneficiaries:								
Present value of benefits	51,428	78,965	47,498	177,891	47,819	77,464	46,220	171,503
Reserve	0	0	0	0	0	0	0	0
Total	51,428	78,965	47,498	177,891	47,819	77,464	46,220	171,503
(iv) Total actuarial present value of future benefit payments	98,953	140,055	80,850	319,858	94,225	134,394	77,304	305,923
(v) Present value of active member future payroll	91,429	109,156	74,995	275,580	83,499	101,642	68,540	253,681
(vi) Present value of future active member contributions	4,718	6,724	3,870	15,312	4,309	6,261	3,537	14,106
(vii) Active member accumulated contributions	4,918	8,984	3,341	17,242	5,051	8,679	3,187	16,917
(viii) Plan costs for fiscal year beginning October 1, 2024								
Normal costs								
Service pensions	12.57%	11.37%	12.86%		12.67%	11.42%	12.75%	
Disability pensions	0.47%	0.45%	0.99%		0.47%	0.45%	1.01%	
Death-in-service pensions	0.36%	0.39%	0.26%		0.36%	0.40%	0.27%	
Deferred service pensions	2.81%	2.80%	2.27%		2.81%	2.85%	2.30%	
Refunds of member contributions	0.63%	0.75%	0.40%		0.63%	0.74%	0.39%	
Total normal cost	16.84%	15.76%	16.78%		16.94%	15.86%	16.72%	
Payment to amortize unf'd act. accr. liab.	6.20%	10.32%	5.86%		4.70%	9.03%	4.60%	
Administrative expenses	0.69%	0.69%	0.69%		0.67%	0.67%	0.67%	
FS112.64(5) Requirement/Temporary Funding Credits	0.00%	0.90%	0.00%		0.41%	1.49%	0.10%	
Amount to be paid by participants	5.16%	6.16%	5.16%		5.16%	6.16%	5.16%	
Expected plan sponsor contribution								
% of payroll	18.57%	21.51%	18.17%	19.70%	17.56%	20.89%	16.93%	18.81%
dollars	2,572	3,597	1,721	7,890	2,288	3,238	1,449	6,975

* Totals may not sum exactly due to rounding.



Actuarial Present Value of Accrued Benefits

(\$ Amounts in Thousands)*

	September 30, 2023				September 30, 2022			
	General Members	Utilities Authority	Police Members	Total	General Members	Utilities Authority	Police Members	Total
Actuarial Present Value of Accrued Benefits (calculated in accordance with FASB Statement No. 35)								
(i) Vested accrued benefits								
Retired members and beneficiaries	\$ 51,428	\$ 78,965	\$ 47,498	\$ 177,891	\$ 47,819	\$ 77,464	\$ 46,220	\$ 171,503
Terminated members	1,861	2,642	561	5,064	1,723	1,778	389	3,890
Active members (includes non-forfeitable accum. member contributions)	19,148	27,618	13,414	60,180	19,385	25,211	12,675	57,271
Total	\$ 72,437	\$ 109,225	\$ 61,473	\$ 243,135	\$ 68,927	\$ 104,453	\$ 59,284	\$ 232,664
(ii) Non-vested accrued benefits	2,507	2,172	1,363	6,042	2,675	2,310	1,321	6,306
(iii) Total actuarial p.v. of accrued benefits	\$ 74,944	\$ 111,397	\$ 62,836	\$ 249,177	\$ 71,602	\$ 106,763	\$ 60,605	\$ 238,970
(iv) Actuarial p.v. of accrued benefits at begin. of year	\$ 71,602	\$ 106,763	\$ 60,605	\$ 238,970	\$ 69,372	\$ 104,426	\$ 58,641	\$ 232,439
(v) Changes attributable to:								
Amendments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Assumption change	-	-	-	-	-	-	-	-
Operation of decrements	8,565	12,744	6,659	27,968	7,235	9,793	6,134	23,162
Benefit payments	(5,223)	(8,110)	(4,428)	(17,761)	(5,005)	(7,456)	(4,170)	(16,631)
Other	-	-	-	-	-	-	-	-
(vi) Net change	3,342	4,634	2,231	10,207	2,230	2,337	1,964	6,531
(vii) Actuarial p.v. of Accr. benefits at end of year	\$ 74,944	\$ 111,397	\$ 62,836	\$ 249,177	\$ 71,602	\$ 106,763	\$ 60,605	\$ 238,970

* Totals may not sum exactly due to rounding.



Reconciliation of Membership Data

	<u>From 10/1/22 To 9/30/23</u>	<u>From 10/1/21 To 9/30/22</u>
A. Active Members		
1. Number Included in Last Valuation	559	555
2. New Members Included in Current Valuation	84	86
3. Non-Vested Employment Terminations	(41)	(56)
4. Vested Employment Terminations	(5)	(1)
5. Service Retirements	(20)	(24)
6. Disability Retirements	(1)	(1)
7. Deaths	0	0
8. Other	0	0
9. Number Included in this Valuation	576	559
B. Terminated Vested Members		
1. Number Included in Last Valuation	38	44
2. Additions from Active Members	5	1
3. Lump Sum Payments	0	(2)
4. Payments Commenced	0	(5)
5. Deaths	0	0
6. Other	1	0
7. Number Included in this Valuation	44	38
C. Service Retirees, Disability Retirees and Beneficiaries		
1. Number Included in Last Valuation	566	554
2. Additions from Active Members	21	25
3. Additions from Terminated Vested Members	0	5
4. Removals Resulting in No Further Payments	(14)	(21)
5. Deaths Resulting in New Survivor Benefits	4	3
6. Other	0	0
7. Number Included in this Valuation	577	566



March 11, 2024

Ms. Johnna Morris, MBA, CGFO, CPPT
Director of Finance
City of Fort Pierce Retirement and Benefit System
100 North U.S. 1
Fort Pierce, Florida 34950

Dear Ms. Morris:

Enclosed are 11 copies of the September 30, 2023 Annual Actuarial Valuation of the City of Fort Pierce Retirement and Benefit System.

As directed by the Board, we have sent a copy directly to the following:

DiBartolomeo, McBee, Hartley & Barnes, P.A.

One copy should be sent, within 60 days to:

Bureau of Local Retirement Systems
Division of Retirement
P.O. Box 9000
Tallahassee, Florida 32315-9000

Office of Municipal Police Officers'
& Firefighters' Retirement Funds
P.O. Box 3010
Tallahassee, Florida 32315-3010

We welcome your questions and comments.

Sincerely yours,
Gabriel, Roeder, Smith & Company

A handwritten signature in black ink that reads "Brad Lee Armstrong". The signature is fluid and cursive, with a long horizontal stroke at the end.

Brad Lee Armstrong, ASA, EA, FCA, MAAA

BLA:dj
Enclosures