CHEIRON *Classic Values, Innovative Advice*

The Maryland-National Capital Park and Planning Commission Employees' Retirement System

Actuarial Valuation as of June 30, 2025

Produced by Cheiron

November 2025

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Letter Of Transmittal

November 20, 2025

Board of Trustees
Employees' Retirement System
6611 Kenilworth Avenue, Suite 100
Riverdale, Maryland 20737

Dear Board Members:

At your request, we have conducted an actuarial valuation of the Maryland-National Capital Park and Planning Commission (the Commission) Employees' Retirement System as of June 30, 2025. The valuation is organized as follows:

- In Section I **Board Summary,** we describe the purpose of an actuarial valuation and summarize the key results found in this valuation.

- The **Main Body** of the report presents details on the System's:

  - Section II - Identification and Assessment of Risk
  - Section III - Assets
  - Section IV - Liabilities
  - Section V - Contributions
  - Section VI - Accounting Statement Information

- In the **Appendices,** we conclude our report with detailed information describing the System's membership (Appendix A), actuarial assumptions and methods employed (Appendix B), a summary of pertinent plan provisions (Appendix C) and a glossary of terms (Appendix D).

The results of this report rely on future System experience conforming to the underlying assumptions. To the extent that actual System experience deviates from the underlying assumptions, the results will vary accordingly. The actuarial assumptions were adopted by the Board based on the proposed demographic assumptions shown in the Actuarial Experience Study covering the period July 1, 2015 through June 30, 2020. The results of this study were presented to and adopted by the Board of Trustees on May 4, 2021.

The purpose of this report is to present the annual actuarial valuation of the Maryland-National Capital Park and Planning Commission Employees' Retirement System. This report is for the use of the Board and its auditors in preparing financial reports in accordance with applicable law and accounting requirements. The report does not include calculations related to GASB Statements No. 67 and 68, which are provided in a separate report.

In preparing our report, we relied on information supplied by the Maryland-National Capital Park and Planning Commission Employees' Retirement System staff. This information includes, but is not limited to, plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standards of Practice No. 23, *Data Quality*.

The report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice as set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This actuarial report was prepared exclusively for the Maryland-National Capital Park and Planning Commission Employees' Retirement System for the purpose described herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

Sincerely,
Cheiron

Janet Cranna, FSA, FCA, EA, MAAA
Principal Consulting Actuary

Patrick Nelson, FSA, CERA, EA, MAAA
Consulting Actuary

cc: Jana Bowers, Cheiron

SECTION I – BOARD SUMMARY

This June 30, 2025 valuation was completed for The Maryland-National Capital Park and Planning Commission (the Commission) Employees' Retirement System (ERS or the System). The primary purpose of the actuarial valuation and this report is to measure, describe and identify as of the valuation date:

- The financial condition of the System,
- Past and expected trends in the financial progress of the System,
- The employers' contributions for Fiscal Year ending 2027,
- The risks of the System, and
- Information required for accounting statements.

In the balance of this Board Summary, we present the basis upon which this year's valuation was completed, the key findings of this valuation including a summary of all key financial results, an examination of the historical trends, and the projected financial outlook for the System.

Results shown for years prior to July 1, 2019 were based on the prior actuary's valuation results. The actuarial valuation date was changed from July 1 to June 30 effective with the June 30, 2021 actuarial valuation due to the census data now being collected as of June 30.

Key Findings of this Valuation

The key results of the June 30, 2025 actuarial valuation are as follows:

- The actuarially determined employer contribution for the System increased from $39.6 million for fiscal year ending June 30, 2026 to $41.1 million for fiscal year ending June 30, 2027.
- There was an actuarial experience loss during the year of $0.6 million composed of losses on liabilities offset by gains on assets.
    - During the year ended June 30, 2025, the System's assets experienced a 9.41% return on a market value basis. However, due to smoothing of prior investment gains and losses, the return on the actuarial asset value was 7.93% over the same period (as compared to the 6.70% investment return assumption for that period). This resulted in an actuarial gain on investments of $14.0 million.
    - On the liability side, the System experienced a loss of $14.6 million. The primary contributors to this loss were the retiree COLA benefit increases and active members' salary increases, both being more than expected. The large increase in active membership counts also contributed to the increased costs of the System.
- As a result of the asset gain, the unfunded actuarial liability for the System decreased from $173.1 million as of June 30, 2024 to $166.3 million as of June 30, 2025.
- The System's funded ratio, the ratio of the actuarial asset value over liabilities, increased slightly from 87.2% as of June 30, 2024 to 88.2% as of June 30, 2025.

SECTION I – BOARD SUMMARY

Table I-1 summarizes all the key results of the valuation with respect to the System's membership, assets and liabilities, and contributions. The results are presented and compared for both the current and prior plan year.

Table I-1
Summary of Principal Results as of

	June 30, 2024	June 30, 2025	% Change
Total System			
Number of Members			
Active	2,349	2,472	5.24%
Terminated Vested	223	220	-1.35%
Terminated Non-Vested	656	695	5.95%
Retired, Beneficiaries, and Disabled	1,935	1,963	1.45%
Total	5,163	5,350	3.62%
Annual Compensation of Active Members	$ 213,283,772	$ 236,754,693	11.00%
Annual Retirement Allowances for Retired Members and Beneficiaries	$ 73,920,934	$ 76,150,151	3.02%
Discount Rate	6.70%	6.70%	
Assets and Liabilities			
Actuarial Liability (AL)	$ 1,349,938,109	$ 1,405,789,832	4.14%
Actuarial Value of Assets (AVA)	$ 1,176,830,678	$ 1,239,510,702	5.33%
Unfunded Actuarial Liability (UAL)	$ 173,107,431	$ 166,279,130	-3.94%
Funded Ratio (AVA/AL)	87.18%	88.17%	0.99%
Market Value of Assets (MVA)	$ 1,168,470,689	$ 1,247,257,798	6.74%
Funded Ratio (MVA/AL)	86.56%	88.72%	2.16%
Recommended Contribution	**FYE 2026**	**FYE 2027**	
Total Contribution at the Beginning of the Year	$ 37,067,917	$ 38,548,114	3.99%
Contribution as a % of Payroll	17.38%	16.28%	-1.10%
Total Contribution at the End of the Year	$ 39,551,467	$ 41,130,838	3.99%
Contribution as a % of Payroll	18.54%	17.37%	-1.17%

SECTION I – BOARD SUMMARY

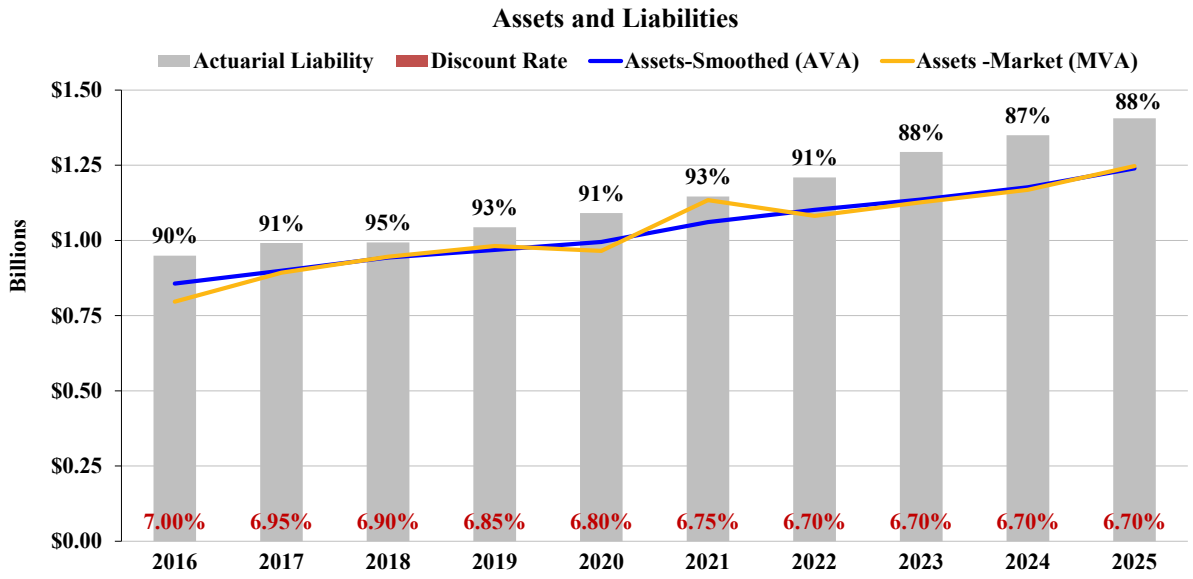
Historical Trends

Despite the fact that for most retirement systems the greatest attention is given to the current valuation results and, in particular, the size of the current unfunded actuarial liability and employer's contribution, it is important to remember that each valuation is merely a snapshot in the long-term progress of a pension fund. It is more important to judge a current year's valuation result relative to historical trends, as well as trends expected into the future.

Assets and Liabilities

There was an increase in the market value of assets (MVA) from $1.17 billion to $1.25 billion, due to investment earnings and contributions for the year exceeding benefit payments and administrative expenses. The market value of assets experienced a 9.41% return during the year, which was greater than the investment return assumption of 6.70%. The actuarial value of assets (AVA) increased from $1.18 billion to $1.24 billion, returning 7.93% for the year. With the asset smoothing method in place, the actuarial value of assets has tracked a smoother path through the volatility of the market over recent years. In addition to the investment gain for the year ending June 30, 2025, the AVA return includes a small gain from 2023, partially offset by a large investment loss from 2022 and a small investment loss from 2024.

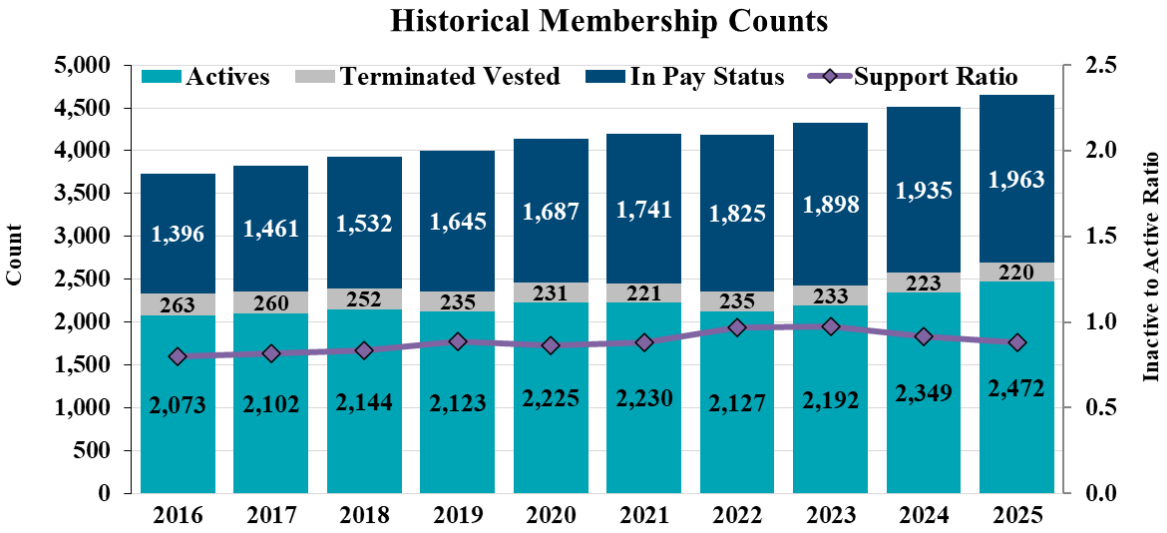
The chart below shows the actuarial value of assets (blue line), the market value of assets (gold line) and the actuarial liabilities (gray bars). The funded ratio (ratio of the actuarial value of assets to the actuarial liability) is shown above the gray bars. This chart shows that the funded ratio has remained between 87% and 95% over the past ten years. The funded ratio declined from 2021 to 2024 because of higher-than-expected inflation, which led to higher benefit COLAs and salary increases, which caused the liabilities to grow faster than otherwise expected. In 2025, the growth in assets exceeded the increase in liabilities and the funded ratio increased.



SECTION I – BOARD SUMMARY

Participant Trends

The chart below provides a measure of the maturity of the System, by comparing the ratio of inactive members (in-pay and terminated vesteds) to active members. This maturity measure is referred to as the support ratio and is shown by the purple line based on the axis on the right side of the chart. The inactive-to-active ratio had generally increased since 2016, from 0.80 inactive members per active member to a high of 0.97 inactive members per active member in 2023. This increase is expected over time as the plan matures. As more of the liability moves from actives to inactives, the System experiences more volatility in contribution rates when actuarial gains and losses are recognized. The support ratio declined the last two years due to a large increase in new active members. While we will monitor the support ratio over time, it is not a significant risk factor at this time.



SECTION I – BOARD SUMMARY

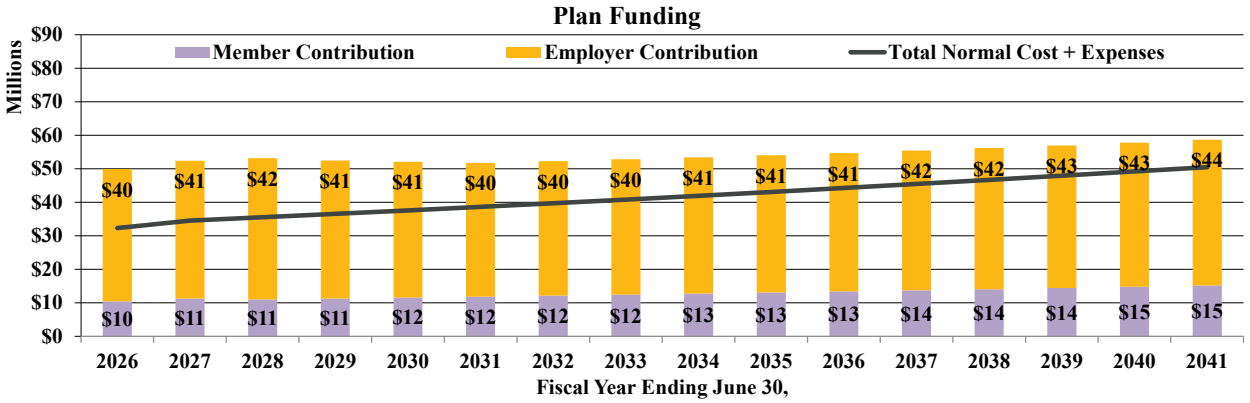
Future Expected Financial Trends

The analysis of projected financial trends is perhaps the most important component of the valuation. The charts presented in this section show the expected progress of the System's funded status over the next 15 years, measured in terms of the expected contributions and funded ratio, assuming that the System is ongoing.

The baseline projections assume all assumptions are realized, including the 6.70% investment return assumption and total payroll growth of 2.5% per year. While the assumptions individually are reasonable for this valuation, they are also considered reasonable in the aggregate and appropriate. The projections and values shown below are estimates of the implications of future funding and funded status of the System over time. The future outcomes become increasingly uncertain over time, therefore the general trends, and not the absolute values, should be considered when reviewing these projections. It is important to note that the experience will not conform exactly to the assumptions every year. As a result, in addition to the baseline projection of 6.70% investment returns, we provided additional stress testing based on varying investment returns in the future which are shown in section II.

Baseline returns of 6.70%

The first chart shows the total projected actuarially determined employer contribution (gold bars) and the member contributions (gray bars). The total normal cost, including administrative expenses, is represented by the black line. The years shown in the charts are fiscal years ending June 30.

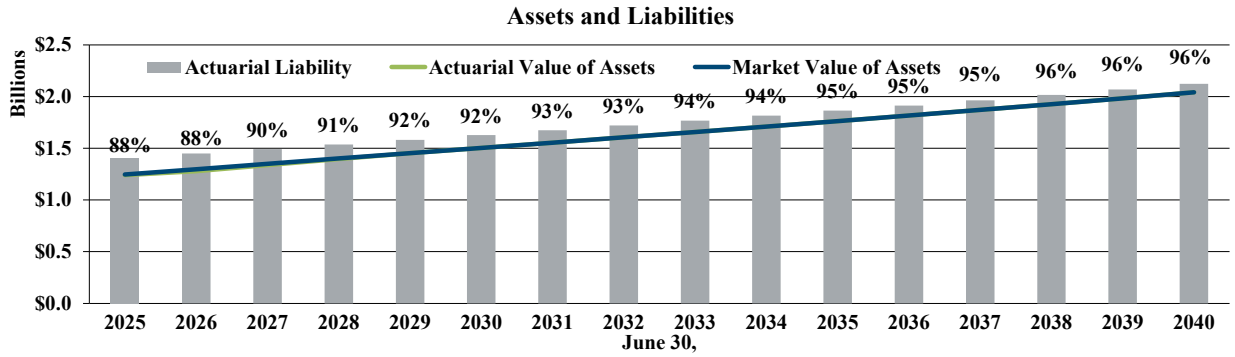


The chart above shows that the actuarially determined contribution will increase from $40 million in 2026 to $41 million in 2027 as a result of the higher normal cost of benefits accruing during the year, due to both an increase in the active membership and higher future salaries than expected. The contribution will then remain relatively level for the next 14 years assuming level active membership. The short-term fluctuations in the contribution rate are due to the five-year phase-in of the recent asset gains and losses. The asset gain for the current year will be recognized in each of the next 5 years. These projections assume that the System earns the assumed investment rate of 6.70% on market value.

SECTION I – BOARD SUMMARY

This next chart compares the market value of assets (blue line) and the actuarial, or smoothed value of assets (green line, which is generally behind the blue line), to the System's actuarial liabilities (gray bars). In addition, above the bars, we show the System's funded ratio (ratio of actuarial value of assets to actuarial liabilities). The projections assume that the actuarially determined contributions, as shown in the previous chart, are made each year. The years shown in the chart signify the valuation date as of June 30.

If the System earns the assumed investment rate of 6.70% each and every year, the funded ratio will increase from 88% to 96% during the 15-year projection period. Due to the nature of a 15-year rolling amortization method, the process of fully amortizing the unfunded actuarial liability is slow and heavily dependent on investment returns exceeding the assumed rate of return.



SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

Actuarial valuations are based on a set of assumptions about future economic and demographic experience. These assumptions represent a reasonable estimate of future experience, but actual future experience will undoubtedly be different and may be significantly different. This section of the report is intended to identify the primary risks to the System, provide some background information about those risks, and provide an assessment of those risks.

Identification of Risks

The fundamental risk to a pension plan is that the contributions needed to pay the benefits become unaffordable. While there are a number of factors that could lead to contribution amounts deviating from expectations, we believe the primary sources are:

- Investment risk,
- Longevity and other demographic risks,
- Inflation risk
- Plan change risk,
- Contribution risk, and
- Assumption change risk.

Other risks that we have not identified may also turn out to be important.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

Investment Risk is the potential for investment returns to be different than expected. Lower investment returns than anticipated will increase the Unfunded Actuarial Liability necessitating higher contributions in the future unless there are other gains that offset these investment losses. The potential volatility of future investment returns is determined by the System's asset allocation and the affordability of the investment risk is determined by the amount of assets invested relative to the size of the plan sponsor or other contribution base.

Longevity and Other Demographic Risks are the potential for mortality or other demographic experience to be different than expected. Generally, longevity and other demographic risks emerge slowly over time and are often dwarfed by other changes, particularly those due to investment returns.

Inflation Risk is the potential for inflation to be higher than the current assumption. High inflation leads to both higher salaries for active members which will then amount to higher benefit amounts when these members retire. Additionally, high inflation will provide higher cost-of-living adjustments (COLAs) for members receiving their benefits. Cost-of-living adjustments are capped on an annual basis, however, continued increases above the assumption may lead to significant increases in the liability and negative net cash flow of the System.

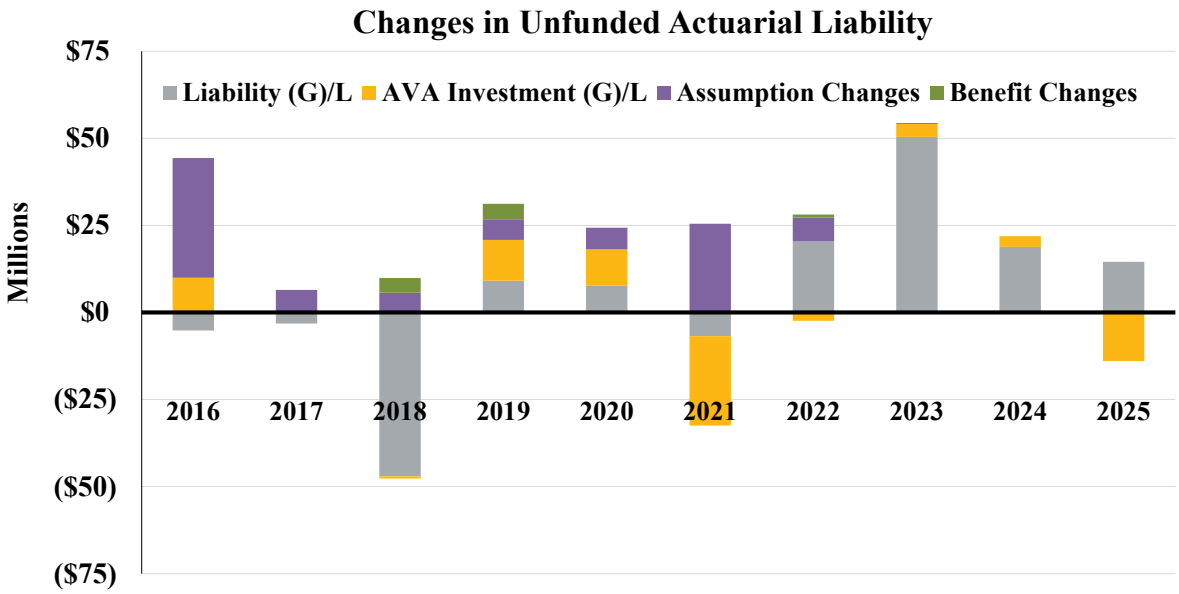
Plan Change Risk is the potential for the provisions of the System to be changed such that the funding or benefits are changed materially. In addition to the actual payments to and from the System being changed, future valuation measurements can also be impacted, with System changes leading to deviations between actual future measurements and those expected by the current valuation.

Contribution Risk is the potential for actual future contributions to deviate from expected future contributions. There are different sources of contribution risk ranging from the sponsor choosing to not make contributions in accordance with the funding policy to material changes in the contribution base (e.g., covered employees, covered payroll, sponsor revenue) that affect the amount of contributions the plan can collect. Historically, the employer has made contributions in accordance with the System's funding policy.

Assumption Change Risk is the potential for the environment to change such that future valuation assumptions are different than the current assumptions. The positive assumption changes were related to experience studies in which demographic and economic assumptions were adjusted. Assumption change risk is an extension of the other risks identified, but rather than capturing the risk as it is experienced, it captures the cost of recognizing a change in environment when the current assumption is no longer reasonable.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

The chart below shows the components of changes in the Unfunded Actuarial Liability (UAL) for the System over the last ten years, including investment (gains) and losses on the Actuarial Value of Assets, liability (gains) and losses, and assumption and plan changes. Values greater than zero reflect losses, which are increases to the UAL, while values less than zero reflect gains or decreases in the UAL. Recent liability losses are primarily attributable to high inflation leading to salary increases and cost-of-living adjustments above the assumed rates.



*Assumption Changes and Benefit Changes combined for years prior to 2018
The 2018 Liability (G)/L includes a programming change resulting in a $49 million gain
The 2020 Liability (G)/L includes a programming change resulting in a $4.8 million loss
The 2024 Liability (G)/L includes a programming change resulting in a $4.5 million loss

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

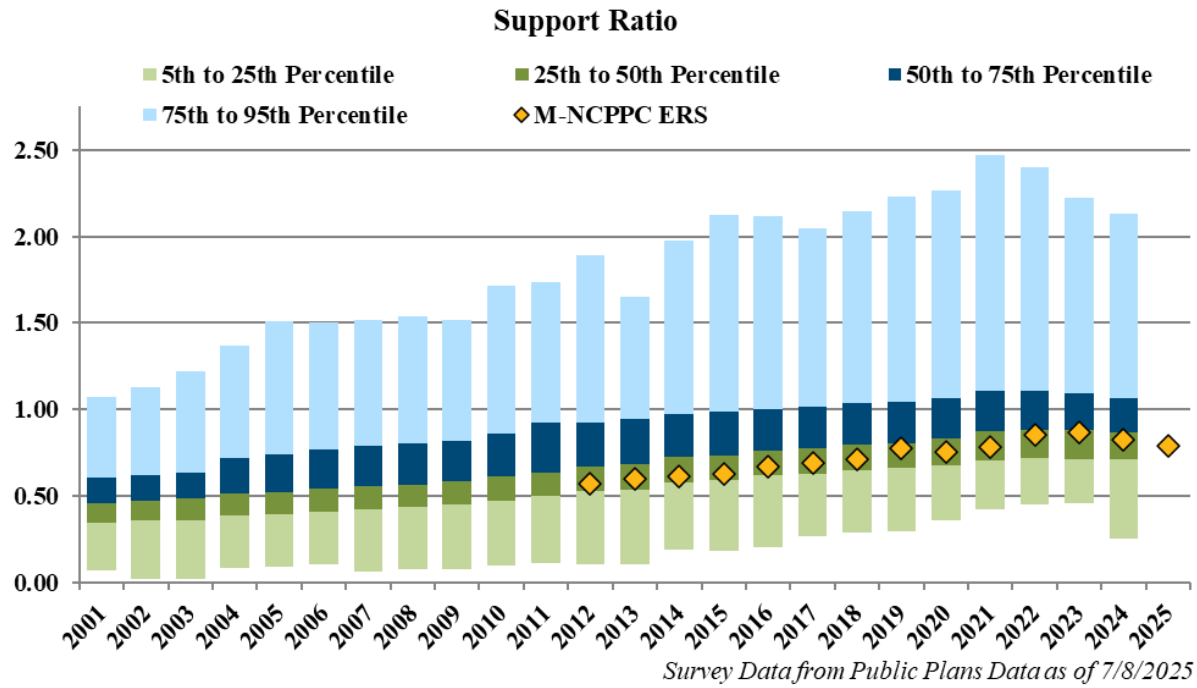
Plan Maturity Measures

The future financial condition of a mature pension plan is more sensitive to each of the risks identified above than a less mature plan. Before assessing each of these risks, it is important to understand the maturity of this System compared to other plans and how the maturity has changed over time.

Plan maturity can be measured in a variety of ways, but they all get at one basic dynamic – the larger the plan is compared to the contribution or revenue base that supports it; the more sensitive the plan will be to risk. The measures below have been selected as the most important in understanding the primary risks identified for this System.

Inactives per Active (Support Ratio)

One simple measure of plan maturity is the ratio of the number of inactive members (those receiving benefits or entitled to a deferred benefit) to the number of active members. The revenue base supporting the plan is usually proportional to the number of active members, so a relatively high number of inactives compared to actives indicates a larger plan relative to its revenue base as well.



The chart above shows the distribution from the 5th to 95th percentile of support ratios for the plans in the Public Plans Database. The yellow diamond shows how the System compares to the other plans for years in which data is readily available.

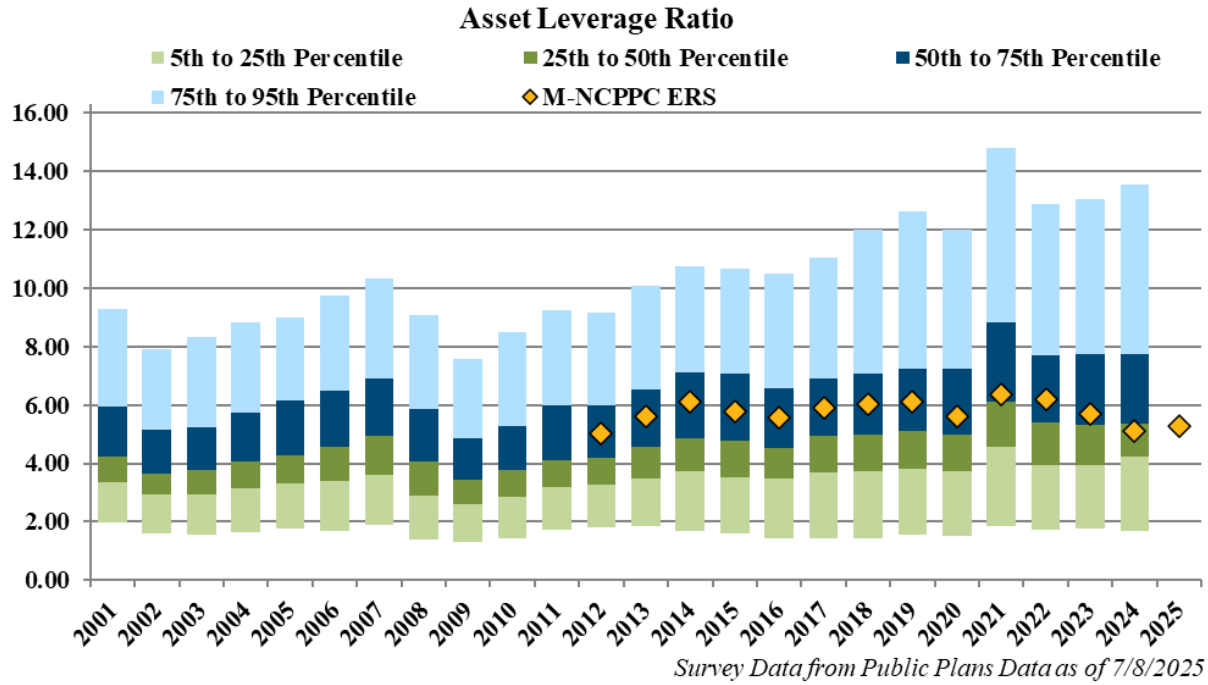
SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

The support ratios for plans as a whole and the System have generally increased over the period as they mature. The System is around the 25th percentile relative to other public retirement systems.

Leverage Ratios

Leverage or volatility ratios measure the size of the plan compared to its revenue base more directly.

An asset leverage ratio (the market value of assets divided by the plan's payroll) of 5.0, for example, means that if the system experiences a 10% loss on assets compared to the expected return, the loss would be equivalent to 50% of payroll. The same investment loss for a system with an asset leverage ratio of 10.0 would be equivalent to 100% of payroll. If the System was 100% funded, the asset leverage ratio would equal the Actuarial Liability leverage ratio. The greater a system's assets are relative to payroll, the more vulnerable the system is to investment volatility.

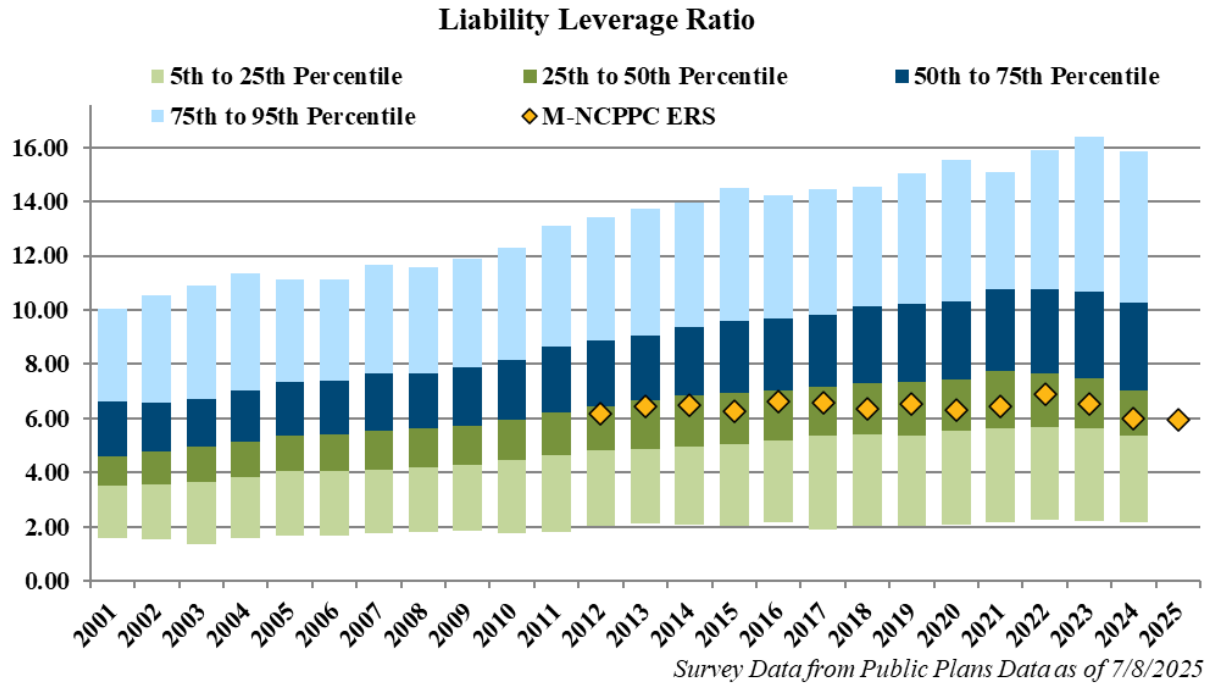


The chart above shows the distribution from the 5th to 95th percentile of asset leverage ratios for the plans in the Public Plans Database. The yellow diamond shows how the System compares.

With the exception of 2024, the System's asset leverage ratio has generally been in the 50th to 75th percentile relative to other public retirement systems.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

An actuarial liability leverage ratio (the ratio of actuarial liabilities to payroll) of 5.0 means that if a system experiences a 10% loss on liabilities compared to the expected liabilities, the liability loss would be equivalent to 50% of payroll.



The chart above shows the distribution from the 5th to 95th percentile of Actuarial Liability leverage ratios for the plans in the Public Plans Database. The yellow diamond shows how the System compares.

The System's Actuarial Liability leverage ratio (the ratio of actuarial liabilities to payroll) has historically been in the 25th to 50th percentile compared to other plans. As the System matures and more of the liability is due to inactive members, this leverage ratio will continue to increase. The ratio has been between 6.0 and 7.0 during the period, decreasing to 5.9 in 2025 due to the growth in payroll from additional active members and increasing salaries.

Deterministic Scenarios/Stress Testing

We also developed two hypothetical scenarios to illustrate the impact actual investment returns may have on future funded status and contribution rates. The two scenarios show periods of prolonged investment gains and investment losses, respectively, and the impacts of such results on employer contributions and the System's funded ratio.

The graphs on the following pages show the projections under each of these theoretical scenarios: optimistic returns of 8.20% per year and pessimistic returns of 5.20% per year. The top chart shows the System's projected actuarially determined employer contributions over the next 15 years.

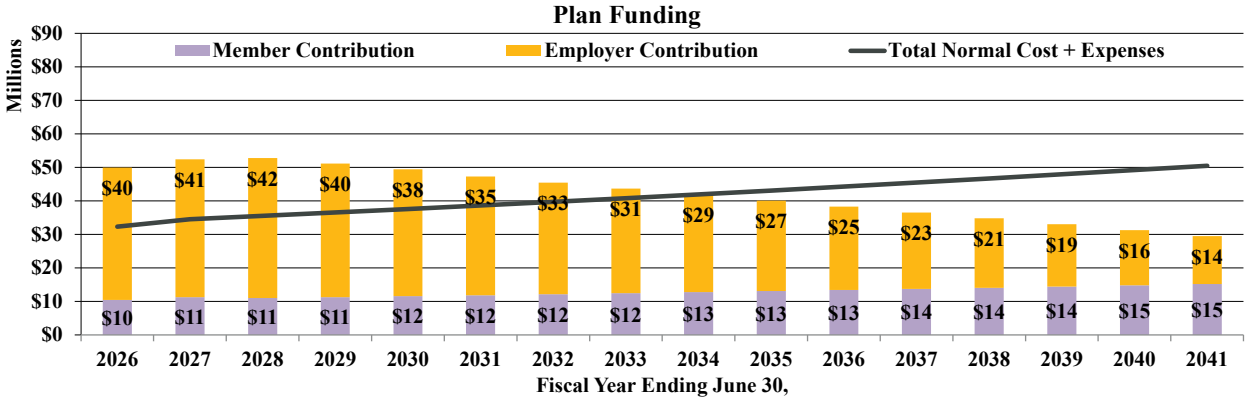
SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

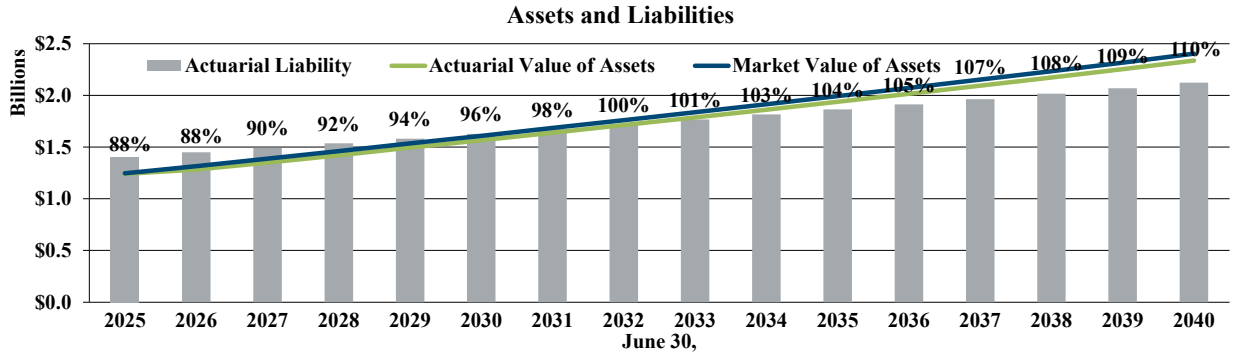
This bottom projection chart compares the market value of assets and the actuarial or smoothed value of assets to the System's actuarial liabilities. In addition, above the gray bars, we show the System's funded ratio on an actuarial value of assets basis (ratio of actuarial value of assets to actuarial liabilities).

Under the baseline results, we assumed a 6.70% investment return assumption per year. The baseline projections are shown in the Board Summary.

Optimistic returns of 8.20%

If the System earns 1.50% greater than the assumed rate in each year of the projection, the actuarially determined employer contribution will steadily decrease to $14 million for fiscal year 2041 after fully phasing in the large investment loss from 2022. Additionally, the funded ratio is projected to increase to 100% by 2032 and 110% by the end of the 15-year projection period.

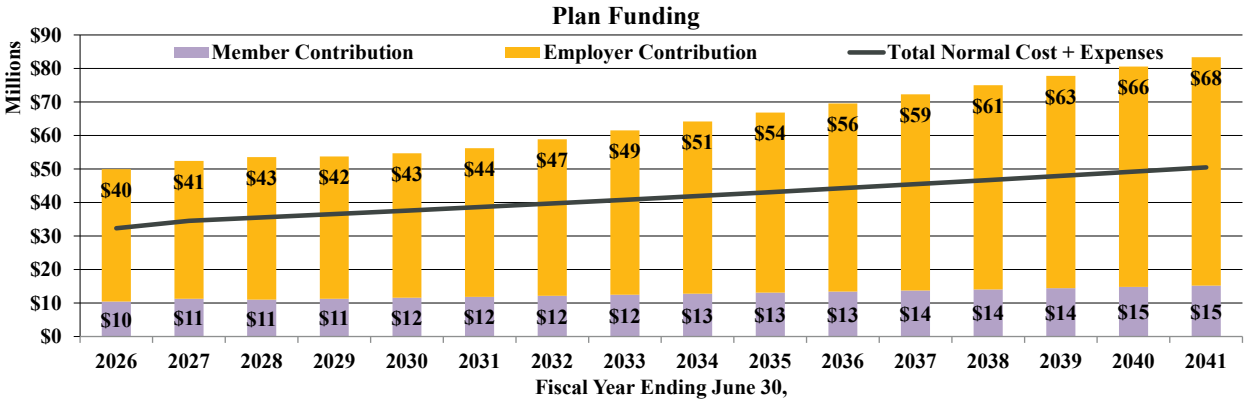


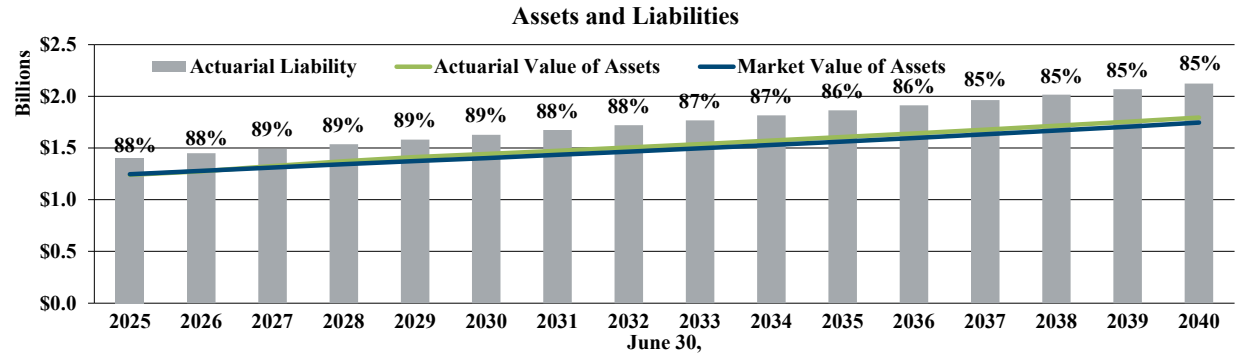


SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

Pessimistic returns 5.20%

If the System earns 1.50% less than the assumed rate in each year of the projection, the actuarially determined employer contribution will steadily increase to $68 million for fiscal year 2041 as the unfunded liability continues to grow. Additionally, the funded ratio will slowly decrease to 85% by 2040.

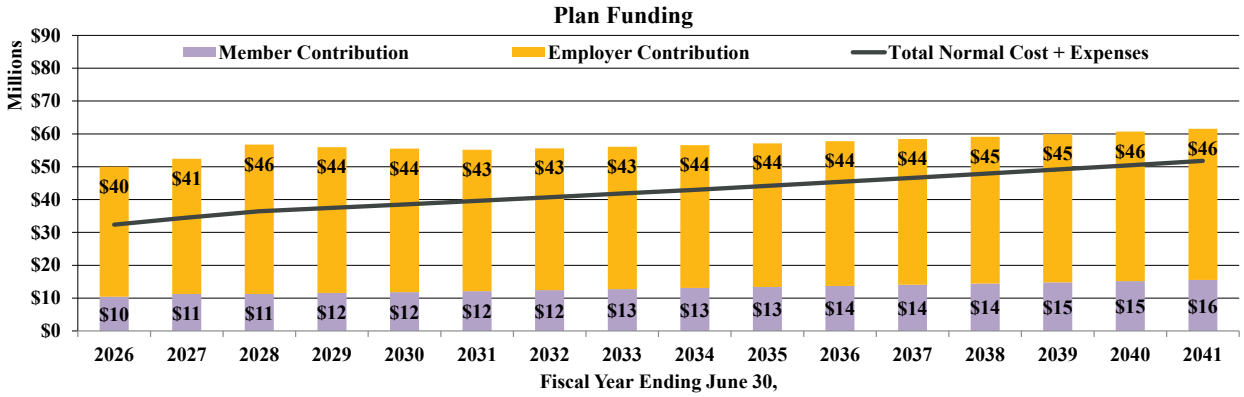


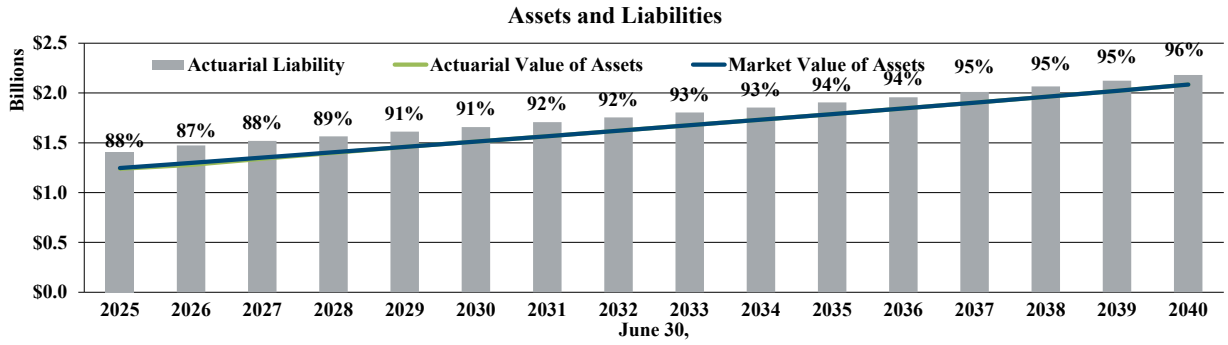


One-Year Inflation Spike of 5.0%

Currently, inflation is assumed to be 2.5% which impacts both cost-of-living-adjustments for members receiving benefits and salary increases awarded to active members. If inflation during fiscal year 2025 is 5.0% instead of 2.5%, Tier 1 benefits will receive a COLA of 4.0% and Tier 2 benefits will receive the maximum allowable COLA of 2.5%. Additionally, salary increases would be 2.5% higher than expected. These increases would have an immediate impact on the employer contribution, increasing to $45.5 million for fiscal year 2028 ($42.2 million in baseline) and ultimately reaching $46.0 million as of fiscal year 2041 ($43.6 million in baseline). For this analysis, we have only measured the impact of inflation on the liabilities and assumed the assets continue to earn 6.70% per year as in the baseline scenario.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK





SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

Low-Default-Risk Obligation Measure (LDROM)

The System invests in a diversified portfolio to achieve the best possible return at an acceptable level of risk. The lowest investment risk portfolio for a pension plan would be composed entirely of low-default-risk fixed income securities whose cash flows match the cash flows needs of the System. However, such a portfolio would have a lower expected rate of return (5.56% as of June 30, 2025) than the diversified portfolio (6.70%). Low-Default-Risk Obligation Measure (LDROM) represents what the Actuarial Liability would be if the System's assets were invested in such a portfolio. As of June 30, 2025 the LDROM is $1.61 billion[1] compared to the Actuarial Liability of $1.41 billion for the System in total. The $0.20 billion difference can be viewed as the expected savings from taking on the investment risk of the diversified portfolio. Alternatively, it can be viewed as the potential cost of eliminating the investment risk of the non-fixed income allocations of the diversified portfolio.

If the System were to invest in the LDROM portfolio, the funded ratios would decrease, and contribution requirements would increase. The security of the System's pension benefits relies on the current assets, future investment earnings, and the ability and willingness of the Plan Sponsor to make future contributions. If the System were to invest in the LDROM portfolio, it would not change the current assets, but it would likely reduce future investment earnings. However, the volatility of future investment earnings and future contributions would be significantly reduced.

[1] Based on a discount rate equal to the June 30, 2025 FTSE Pension Liability Yield Curve and all other assumptions and methods as used to calculate the Actuarial Liability.

SECTION III – ASSETS

Pension plan assets play a key role in the financial operation of the System and in the decisions the Trustees may make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact benefit levels, employer contributions, and the ultimate security of participants' benefits.

In this section, we present detailed information on the System assets including:

- Disclosure of the System assets as of June 30, 2024 and June 30, 2025;
- Statement of the changes in market values during the year;
- Development of the Actuarial Value of Assets;
- Allocation of the Actuarial Value of Assets by Plan; and
- An assessment of investment performance.

Disclosure

There are two types of asset values disclosed in this valuation, the market value of assets (MVA) and the actuarial value of assets (AVA). The market value represents a "snap-shot" or "cash-out" value which provides the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with corresponding swings in the marketplace. As a result, market values are usually not as suitable for long-range planning as are the actuarial value of assets which reflect smoothing of annual investment returns.

SECTION III – ASSETS

Table III-1 discloses and compares each asset value as of June 30, 2024 and June 30, 2025.

Table III-1
Statement of Assets at Market Value as of

	June 30, 2024	June 30, 2025	% change
Assets			
Fixed Income Securities	$ 226,563,564	$ 306,173,943	35.14%
International Fixed Income Securities	8,679,895	6,854,397	(21.03%)
Venture Capital/Alternative Investments	360,024,622	300,418,760	(16.56%)
Corporate Stock	394,873,517	444,448,823	12.55%
International Corporate Stock	49,597,216	64,876,593	30.81%
Real Estate	62,528,699	44,803,540	(28.35%)
Short Term Investments	36,482,596	41,109,871	12.68%
Securities Lending Short-term Collateral Investment Pool	28,584,757	39,780,655	39.17%
Subtotal	**$ 1,167,334,866**	**$ 1,248,466,582**	6.95%
Cash Accounts	69,023	72,074	4.42%
Receivable-Member Contributions	62,698	36,249	(42.18%)
Accrued Income on Investments	1,435,039	1,499,544	4.49%
Prepaid Expenses	2,242	46,326	1,966.28%
Equipment at Cost	825,041	631,318	(23.48%)
Total Assets	**$ 1,169,728,909**	**$ 1,250,752,093**	6.93%
Liablilities			
Investments Payable	$ 5,199,822	$ 187,027	(96.40%)
Accrued Expenses	548,783	554,294	1.00%
Refunds Payable	1,659,962	1,848,963	11.39%
Payable for Securities Lending Collateral	29,404,572	40,455,478	37.58%
Total Liabilities	**$ 36,813,139**	**$ 43,045,762**	16.93%
Net Assets Held in Trust as of June 30	**$ 1,132,915,770**	**$ 1,207,706,331**	6.60%
Receivable Contributions	35,554,919	39,551,467	11.24%
Net Assets Held in Trust as of June 30	**$ 1,168,470,689**	**$ 1,247,257,798**	6.74%

SECTION III – ASSETS

Changes in Market Value

Table III-2 shows the components of change between the market value of assets as of June 30, 2024 and June 30, 2025.

Table III-2
Changes in Market Values

Market Value of Assets as of June 30, 2024	**$**	**1,168,470,689**
Contributions		
Employer Contributions	$	35,554,919
Member Contributions		10,421,402
Less Receivable for prior plan year		(35,554,919)
Subtotal	*$*	*10,421,402*
Investment Income		
Interest	$	16,635,003
Dividends		5,350,257
Net Appreciation/(Depreciation)		87,997,079
Other		7,458
Less: Investment Advisory and Management Fees		(3,328,956)
Subtotal	*$*	*106,660,841*
Securities Lending Activity		
Securities Lending Income	$	1,733,379
Securities Lending Expense		0
Borrower Rebate		(1,639,403)
Management Fees		(28,150)
Subtotal	*$*	*65,826*
Deductions		
Benefit Payments (Includes Refunds of Contributions)	$	(74,894,770)
Administrative Expenses		(3,017,657)
Subtotal	*$*	*(77,912,427)*
Market Value of Assets as of June 30, 2025 (excluding receivable contribution)	**$**	**1,207,706,331**
Receivable Contribution	$	39,551,467
Market Value of Assets as of June 30, 2025 (including receivable contribution)	**$**	**1,247,257,798**

SECTION III – ASSETS

Actuarial Value of Assets

The actuarial value of assets represents a "smoothed" value used to reduce or eliminate erratic results which could develop from short-term fluctuations in the market value of assets. For this System, the actuarial value has been calculated by taking the market value of assets less 80% of the investment gain (loss) during the preceding year, less 60% of the investment gain (loss) during the second preceding year, less 40% of the investment gain (loss) during the third preceding year, and less 20% of the investment gain (loss) in the fourth preceding year. The investment gain (loss) is calculated by taking the difference between the expected value of assets, based on an expected return of 6.70% for the year ended June 30, 2025, and the actual value of assets. If the actuarial value of assets is less than 80% or more than 120% of the market value, an adjustment is made to the actuarial value to bring the value within this corridor.

Table III-3 shows how the actuarial value of assets is developed.

Table III-3
Development of Actuarial Value of Assets

Market value of assets at June 30, 2024 including receivables				$ 1,168,470,689
Employee Contributions				10,421,402
Benefit Payments				(74,894,770)
Administrative Expenses				(3,017,657)
Expected return at 6.70%				76,063,240
Expected value at June 30, 2025				$ 1,177,042,904
Market value of assets at June 30, 2025 before receivables				$ 1,207,706,331
Investment gain/(loss)				30,663,427
		Total Gain/(Loss)	% Excluded	
Investment gain/(loss) for 2025	$	30,663,427	80%	$ 24,530,742
Investment gain/(loss) for 2024		(1,871,174)	60%	(1,122,704)
Investment gain/(loss) for 2023		8,587,085	40%	3,434,834
Investment gain/(loss) for 2022		(95,478,878)	20%	(19,095,776)
Total excluded gain/(loss) for AVA calculation				$ 7,747,096
AVA as of valuation date (before Contributions receivable)				$ 1,199,959,235
Contribution Receivable				39,551,467
AVA as of June 30, 2025 (after Contributions receivable)				1,239,510,702
MVA as of June 30, 2025 (after Contributions receivable)				1,247,257,798
AVA as a Percentage of MVA				99.38%

SECTION III – ASSETS

The method of allocating assets to each of the Plans is such that assets are first allocated to the full inactive actuarial liability and the remaining assets are then allocated proportionally to each Plan based on its share of the active actuarial liability. Table III-4 shows how the actuarial value of assets is allocated to each of the five Plans within the System.

Table III-4
Allocation of Actuarial Value of Assets and Unfunded Actuarial Liability

	Non-Police Plan A	Police Plan A	Plan B	Plan C	Plan D	Plan E	Total
Actuarial Value of Assets as of June 30, 2025							**$ 1,239,510,702**
Less: Inactive Member Liability	$ 113,190,412	$ 1,783,762	$ 617,426,476	$ 119,892,393	$ 74,253,650	$ 9,045,307	$ 935,592,000
AVA Net of Inactive Member Liability							303,918,702
Active Member Liability	0	0	275,052,298	95,551,752	0	99,593,782	470,197,832
AVA Allocated by Active Member Liability	0	0	177,783,758	61,761,162	0	64,373,782	303,918,702
Allocation of Actuarial Value of Assets	**$ 113,190,412**	**$ 1,783,762**	**$ 795,210,234**	**$ 181,653,555**	**$ 74,253,650**	**$ 73,419,089**	**$ 1,239,510,702**
Actuarial Liability as of June 30, 2025	$ 113,190,412	$ 1,783,762	$ 892,478,774	$ 215,444,145	$ 74,253,650	$ 108,639,089	$ 1,405,789,832
Unfunded Actuarial Liability	**$ 0**	**$ 0**	**$ 97,268,540**	**$ 33,790,590**	**$ 0**	**$ 35,220,000**	**$ 166,279,130**

SECTION III – ASSETS

Investment Performance

The market value of assets returned 9.41% during the fiscal year ending June 30, 2025, which is greater than the assumed 6.70% assumption for the period. A return of 7.93% was experienced on the actuarial value of assets, resulting in an actuarial gain for the year. Table III-5 shows a comparison of the assumed rate of return, the actual rate of return on both the market value and actuarial value of assets, as well as additional historical returns.

Table III-5
Investment Performance Comparison

FYE June 30,	Assumed Rate of Return	Market Value of Assets	Actuarial Value of Assets	S&P 500 Index	Barclays Aggregate Bond Index	90-Day U.S. Treasuries	Consumer Price Index
2025	6.70%	9.41%	7.93%	15.13%	6.09%	4.24%	2.67%
2024	6.70%	6.53%	6.42%	24.56%	2.61%	5.22%	2.97%
2023	6.70%	7.52%	6.36%	19.56%	-0.93%	5.17%	2.97%
2022	6.75%	-1.88%	6.99%	-10.65%	-10.27%	1.66%	9.06%
2021	6.80%	20.74%	9.45%	40.79%	-0.33%	0.05%	5.39%
5-Year Average	6.73%	8.22%	7.42%	16.62%	-0.72%	3.25%	4.58%

SECTION IV – LIABILITIES

In this section, we present detailed information on the System liabilities including:

- **Disclosure** of the System liabilities as of June 30, 2024 and June 30, 2025, and
- Statement of **changes** in these liabilities during the year.

Disclosure

Two types of liabilities are calculated and presented in this report. Each type is distinguished by the people ultimately using the figures and the purpose for which they are using them.

- **Present Value of All Future Benefits:** Used for measuring all future System obligations, represents the amount of money needed today to fully fund all benefits of the System both earned as of the valuation date and those expected to be earned in the future by current plan participants, under the current plan provisions.
- **Actuarial Liability:** Calculated as of the valuation date as the present value of benefits allocated to service prior to that date. The actuarial liability is determined using the Entry Age Normal method.

These liabilities are for funding purposes and are not appropriate for measuring the cost of settling plan liabilities by purchasing annuities or paying lump sums.

Table IV-1, which follows, discloses each of these liabilities for the current valuation. With respect to the Actuarial Liability, a subtraction of the appropriate value of plan assets yields, for each Plan, a **net surplus** or an **unfunded liability**.

SECTION IV – LIABILITIES

Table IV-1
Liabilities by Plan as of June 30, 2025

	Non-Police Plan A	Police Plan A	Plan B	Plan C	Plan D	Plan E	Total
Present Value of Future Benefits							
Active	$ 0	$ 0	$ 325,596,722	$ 149,233,330	$ 0	$ 274,497,273	$ 749,327,325
Terminated Vested	0	0	27,252,338	4,130,997	86,847	2,687,708	34,157,890
Terminated Non Vested	0	0	1,289,709	232,579	5,688	2,985,227	4,513,203
Retired, Disabled and Survivor	113,190,412	1,783,762	588,884,429	115,528,817	74,161,115	3,372,372	896,920,907
Total	**$ 113,190,412**	**$ 1,783,762**	**$ 943,023,198**	**$ 269,125,723**	**$ 74,253,650**	**$ 283,542,580**	**$ 1,684,919,325**
Actuarial Liability							
Active	$ 0	$ 0	$ 275,052,298	$ 95,551,752	$ 0	$ 99,593,782	$ 470,197,832
Terminated Vested	0	0	27,252,338	4,130,997	86,847	2,687,708	34,157,890
Terminated Non Vested	0	0	1,289,709	232,579	5,688	2,985,227	4,513,203
Retired, Disabled and Survivor	113,190,412	1,783,762	588,884,429	115,528,817	74,161,115	3,372,372	896,920,907
Total	**$ 113,190,412**	**$ 1,783,762**	**$ 892,478,774**	**$ 215,444,145**	**$ 74,253,650**	**$ 108,639,089**	**$ 1,405,789,832**
Actuarial Value of Assets	**$ 113,190,412**	**$ 1,783,762**	**$ 795,210,234**	**$ 181,653,555**	**$ 74,253,650**	**$ 73,419,089**	**$ 1,239,510,702**
Unfunded Actuarial Liability	**$ 0**	**$ 0**	**$ 97,268,540**	**$ 33,790,590**	**$ 0**	**$ 35,220,000**	**$ 166,279,130**

SECTION IV – LIABILITIES

Changes in Liabilities

Each of the liabilities disclosed in the prior table are expected to change at each valuation. The components of that change, depending upon which liability is analyzed, can include:

- New hires since the last valuation
- Benefits accrued since the last valuation
- System amendments changing benefits
- Passage of time which adds interest to the prior liability
- Benefits paid to retirees since the last valuation
- Participants retiring, terminating, or dying at rates different than expected
- A change in actuarial or investment assumptions
- A change in the actuarial funding method

Unfunded liabilities will change because of all of the above, and also due to changes in plan assets resulting from:

- Employer contributions different than expected
- Investment earnings different than expected
- A change in the method used to measure plan assets

In each valuation, we report on those elements of change which are of particular significance, potentially affecting the long-term financial outlook of the System. Below, we present key changes in liabilities since the last valuation.

SECTION IV – LIABILITIES

Table IV-2 shows the components of change in the actuarial liability between June 30, 2024 and June 30, 2025.

Table IV-2
Change in Liabilities

		Actuarial Liability
Liabilities as of June 30, 2024	$	1,349,938,109
Liabilities as of June 30, 2025	$	1,405,789,832
Liability Increase / (Decrease)		55,851,723
Change Due to:		
Plan Amendments	$	0
Assumption Changes		0
Actuarial (Gain) / Loss		14,564,979
Benefits Accumulated and Other Sources		41,286,744
Total	$	55,851,723

Table IV-3 shows the change in the actuarial (gain)/loss by source for the current and prior years.

Table IV-3
Sources of (Gain) / Loss

	June 30, 2024	% of Liability	June 30, 2025	% of Liability
New members entering System	$ 1,327,588	0.1%	$ 757,529	0.1%
Salary increases for prior year different than expected	(5,450,520)	-0.4%	1,911,701	0.1%
Known salary adjustments for upcoming year	8,201,905	0.6%	6,439,582	0.5%
Status changes	65,691	0.0%	1,875,193	0.1%
Active member decrements	(393,790)	0.0%	351,056	0.0%
Service Transfers/Purchase	59,634	0.0%	77,954	0.0%
Inactive mortality	(3,069,380)	-0.2%	(2,940,623)	-0.2%
Retiree COLA more than expected	11,663,865	0.9%	5,172,149	0.4%
Benefit payments different than expected	(912,910)	-0.1%	(897,133)	-0.1%
Updates due to external audit	4,493,273	0.3%	N/A	
Other	2,833,010	0.2%	1,817,571	0.1%
Total	**$ 18,818,366**	**1.4%**	**$ 14,564,979**	**1.0%**

SECTION V – CONTRIBUTIONS

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions is needed to properly maintain the funding status of the System. Typically, the actuarial process will use a funding technique that will result in a pattern of contributions that are both stable and predictable.

For this System, the funding method employed is the **Entry Age Normal Actuarial Cost Method**. Under this funding method, a normal cost rate is determined as a level percentage of pay for each active member. The normal cost rate multiplied by payroll equals the total normal cost for each active member. The total anticipated member contributions for the year are then subtracted from the sum of the total normal cost to arrive at the employer normal cost. The normal cost contributions (employer and active member) will pay for projected benefits at retirement for each active member. An administrative expense rate of 0.20% of actuarial liabilities is added to the normal cost.

The EAN actuarial liability is the difference between the plan's total present value of future benefits and the present value of future normal costs. The difference between the Entry Age Normal actuarial liability and the actuarial value of assets is the unfunded actuarial liability. The unfunded actuarial liability is amortized as a level dollar over an open 15-year period.

SECTION V – CONTRIBUTIONS

Table V-1 below develops the employer contribution rates for the System for the fiscal year ending June 30, 2027.

Table V-1
Determination of Employer Contribution

	Non-Police Plan A	Police Plan A	Plan B	Plan C	Plan D	Plan E	Total
Active Member Payroll	$ 0	$ 0	$ 71,993,579	$ 22,799,000	$ 0	$ 141,962,114	$ 236,754,693
Normal Costs							
Gross Normal Cost	$ 0	$ 0	$ 7,177,357	$ 5,636,095	$ 0	$ 16,712,428	$ 29,525,880
Estimated Expenses	226,381	3,568	1,784,958	430,888	148,507	217,278	2,811,580
Reduction due to Expected Employee Contributions	0	0	2,744,542	2,138,383	0	5,693,812	10,576,737
Net Employer Normal Cost	$ 226,381	$ 3,568	$ 6,217,773	$ 3,928,600	$ 148,507	$ 11,235,894	$ 21,760,723
Amortization Payment	$ 0	$ 0	$ 9,820,144	$ 3,411,468	$ 0	$ 3,555,779	$ 16,787,391
--As a % of Payroll	0.00%	0.00%	13.64%	14.96%	0.00%	2.50%	7.09%
Actuarially Determined Employer Contribution payable at Beginning of Year	**$ 226,381**	**$ 3,568**	**$ 16,037,917**	**$ 7,340,068**	**$ 148,507**	**$ 14,791,673**	**$ 38,548,114**
--As a % of Payroll	0.00%	0.00%	22.28%	32.19%	0.00%	10.42%	16.28%
Actuarially Determined Employer Contribution payable at End of Year	**$ 241,549**	**$ 3,807**	**$ 17,112,457**	**$ 7,831,853**	**$ 158,457**	**$ 15,782,715**	**$ 41,130,838**
--As a % of Payroll	0.00%	0.00%	23.77%	34.35%	0.00%	11.12%	17.37%

SECTION V – CONTRIBUTIONS

Table V-2 shows a breakdown of the employer contributions for the fiscal year ending 2027 between Park Police and Non-Police members:

Table V-2
Police and Non-Police Contribution

	Contribution for FYE June 30, 2027	2025 Payroll	Contribution as % of Payroll
Non-Police	$ 33,136,721	$ 213,955,693	15.49%
Park Police	7,994,117	22,799,000	35.06%
Total	$ 41,130,838	$ 236,754,693	17.37%

The contributions shown above in Tables V-1 and V-2 are reasonable actuarially determined contributions in accordance with Actuarial Standard of Practice No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*. The actuarial methods have been selected to balance benefit security, intergenerational equity, and stability of actuarially determined contributions. The selection of the actuarial methods has taken into account the demographics of plan members, the funding goals and objectives of the Board, and the need to accumulate assets to make benefit payments when due. The actuarial methods and assumptions are shown in Appendix B of this report.

SECTION V – CONTRIBUTIONS

Table V-3 shows a 10-year projection of employer costs as a total dollar amount and as a percentage of the prior year payroll. The total cost is split by each of the components included in the total employer contribution.

Table V-3
10-Year Projection of Employer Costs

Fiscal Year Ending June 30,	Normal Cost	Amortization of UAL	Estimated Expenses	Interest to End of Year	Total Employer Contribution	Prior Year Payroll	Employer Contribution as % of Payroll
2027	$ 18,949,143	$ 16,787,391	$ 2,811,580	$ 2,582,724	$ 41,130,838	$ 236,754,693	17.37%
2028	19,399,267	17,224,484	2,897,762	2,647,941	42,169,454	242,673,560	17.38%
2029	19,985,343	15,637,285	2,985,130	2,586,720	41,194,478	248,740,399	16.56%
2030	20,586,117	14,338,680	3,074,128	2,545,928	40,544,853	254,958,909	15.90%
2031	21,200,414	13,094,127	3,163,949	2,509,719	39,968,209	261,332,882	15.29%
2032	21,826,924	12,560,890	3,254,797	2,522,055	40,164,666	267,866,204	14.99%
2033	22,462,857	12,049,368	3,347,036	2,536,570	40,395,831	274,562,859	14.71%
2034	23,111,891	11,558,678	3,440,121	2,553,416	40,664,106	281,426,931	14.45%
2035	23,775,932	11,087,970	3,534,658	2,572,704	40,971,264	288,462,604	14.20%
2036	24,459,489	10,636,430	3,630,473	2,594,668	41,321,060	295,674,169	13.98%
2037	25,152,082	10,203,279	3,727,907	2,618,579	41,701,847	303,066,023	13.76%

SECTION VI – ACCOUNTING STATEMENT INFORMATION

GFOA Recommended Information

The Government Finance Officers Association (GFOA) maintains a checklist of items to be included in a public retirement system's Annual Comprehensive Financial Report in order to receive recognition for excellence in financial reporting. Because the Employees' Retirement System issues an Annual Comprehensive Financial Report under GFOA guidelines, we have included certain schedules in this section for possible inclusion within the System's audited financial statements. These schedules are based on the funding actuarial liabilities.

- Table VI-1: Schedule of Funded Liabilities by Type
- Table VI-2: Schedule of Funding Progress

Table VI-1
Schedule of Funded Liabilities by Type
Aggregate Actuarial Liabilities for

Actuarial Valuation Date	Active Member Contributions (1)	Inactive Members (2)	Active Members (Employer Financed Portion) (3)	Actuarial Value of Assets	Portion of Actuarial Liabilities Covered by Reported Assets (1)	(2)	(3)
June 30, 2025	$ 103,252,002	$ 935,592,000	$ 366,945,830	$ 1,239,510,702	100%	100%	55%
June 30, 2024	93,929,403	919,922,912	336,085,794	1,176,830,678	100%	100%	48%
June 30, 2023	89,295,464	879,671,191	324,786,793	1,136,158,437	100%	100%	51%
June 30, 2022	89,430,254	809,016,373	311,079,653	1,101,798,189	100%	100%	65%
July 1, 2021	91,347,180	737,273,146	317,201,185	1,060,873,621	100%	100%	73%
July 1, 2020	86,481,783	697,496,428	307,260,656	995,043,914	100%	100%	69%
July 1, 2019	81,289,107	669,986,483	292,544,621	968,142,434	100%	100%	74%
July 1, 2018	79,764,769	619,013,482	294,544,089	943,070,635	100%	100%	83%
July 1, 2017	77,964,472	576,223,626	337,436,639	899,336,519	100%	100%	73%
July 1, 2016	74,857,685	541,562,389	332,878,152	856,279,531	100%	100%	72%

SECTION VI – ACCOUNTING STATEMENT INFORMATION

Table VI-2
Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Liability (b)	Unfunded Actuarial Liability (b) - (a)	Funded Ratio (a) / (b)
June 30, 2025	$ 1,239,510,702	$ 1,405,789,832	$ 166,279,130	88.17%
June 30, 2024	1,176,830,678	1,349,938,109	173,107,431	87.18%
June 30, 2023	1,136,158,437	1,293,753,448	157,595,011	87.82%
June 30, 2022	1,101,798,189	1,209,526,280	107,728,091	91.09%
July 1, 2021	1,060,873,621	1,145,821,511	84,947,890	92.59%
July 1, 2020	995,043,914	1,091,238,867	96,194,953	91.18%
July 1, 2019	968,142,434	1,043,820,211	75,677,777	92.75%
July 1, 2018	943,070,635	993,322,340	50,251,705	94.94%
July 1, 2017	899,336,519	991,624,737	92,288,218	90.69%
July 1, 2016	856,279,531	949,298,226	93,018,695	90.20%

APPENDIX A – MEMBERSHIP INFORMATION

Membership Data as of June 30, 2025 Active Members	Plan A Non-Police	Plan A Police	Plan B	Plan C	Plan D	Plan E	Total
Count	0	0	660	215	0	1,597	2,472
Average Age	N/A	N/A	55.58	41.03	N/A	43.79	46.70
Average Service	N/A	N/A	21.67	11.88	N/A	4.79	9.92
Total Salary	N/A	N/A	$ 71,993,579	$ 22,799,000	N/A	$ 141,962,114	$ 236,754,693
Average Salary	N/A	N/A	109,081	106,042	N/A	88,893	95,775

Inactive Members	Plan A	Plan B	Plan C	Plan D	Plan E	Total
Retired						
Count	157	1,305	108	77	6	1,654
Average Age	79.64	87.89	70.58	62.31	68.89	67.31	70.82
Total Annual Benefits	$ 10,238,238	$ 37,908	$ 45,331,274	$ 7,259,219	$ 4,625,727	$ 154,481	$ 67,646,847
Average Annual Benefit	65,212	37,908	34,737	67,215	60,074	25,747	40,899
Beneficiaries							
Count	53	5	163	5	20	4	250
Average Age	82.99	83.95	72.27	56.45	73.77	54.32	74.29
Total Annual Benefits	$ 1,908,612	$ 173,966	$ 3,664,518	$ 208,776	$ 1,106,355	$ 66,590	$ 7,128,817
Average Annual Benefit	36,012	34,793	22,482	41,755	55,318	16,648	28,515
Disabled							
Count	3	2	39	5	3	7	59
Average Age	76.37	79.63	66.39	55.17	71.10	51.50	64.87
Total Annual Benefits	$ 79,232	$ 49,505	$ 787,110	$ 200,101	$ 133,171	$ 125,369	$ 1,374,488
Average Annual Benefit	26,411	24,753	20,182	40,020	44,390	17,910	23,296
Terminated Vested							
Count	0	0	177	19	1	23	220
Average Age	N/A	N/A	51.23	43.28	65.93	53.68	50.87
Total Annual Benefits	N/A	N/A	$ 2,713,900	$ 357,069	$ 6,123	$ 375,968	$ 3,453,060
Average Annual Benefit	N/A	N/A	15,333	18,793	6,123	16,346	15,696
Terminated Non-Vested							
Count	0	0	256	39	2	398	695
Average Age	N/A	N/A	55.68	41.46	63.85	42.15	47.16
Total Account Balance	N/A	N/A	$ 1,289,709	$ 232,579	$ 5,688	$ 2,985,227	$ 4,513,203
Average Account Balance	N/A	N/A	5,038	5,964	2,844	7,501	6,494

	Plan A Non-Police	Plan A Police	Plan B	Plan C	Plan D	Plan E	Total
Grand Total							
Count	213	8	2,600	391	103	2,035	5,350

APPENDIX A – MEMBERSHIP INFORMATION

Member Status Reconciliation						
	Active	Retired	Beneficiary	Disabled[1]	Term Vested	Total[2]
June 30, 2024	**2,349**	**1,624**	**247**	**64**	**223**	**4,507**
New hires	263					**263**
Re-hires	10			(2)		**8**
Term vested	(14)				14	**0**
Retired	(46)	61		(1)	(14)	**0**
Disabled	(4)			4		**0**
Deceased (with beneficiary)	(4)	(11)	16	(1)		**0**
Deceased (without beneficiary)	(2)	(20)	(17)	(5)		**(44)**
Term Non-Vested	(64)					**(64)**
Return of Contributions	(16)				(4)	**(20)**
Status correction			4		1	**5**
Net Change	123	30	3	(5)	(3)	**148**
June 30, 2025	**2,472**	**1,654**	**250**	**59**	**220**	**4,655**

[1] Includes members on Long-Term Disability valued with a deferred disability benefit: 25 as of both June 30, 2024 and June 30, 2025

[2] In addition, there were 656 terminated non-vested participants due a refund of member contributions as of June 30, 2024 and 695 terminated non-vested participants due a refund of member contributions as of June 30, 2025.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

1. Mortality Rates

Actives

Non-Police: Pub-2010 General Employee Mortality Table [*PubG-2010 Employee*], projected with generational mortality improvement from 2010 using Scale MP-2020

33% of deaths are assumed to be service related

Park Police: Pub-2010 Public Safety Employee Mortality Table [*PubS-2010 Employee*], projected with generational mortality improvement from 2010 using Scale MP-2020

90% of deaths are assumed to be service related

Healthy Retirees

Non-Police: Pub-2010 General Healthy Retiree Mortality Table [*PubG-2010 Healthy Retiree*], projected with generational mortality improvement from 2010 using Scale MP-2020

Park Police: Pub-2010 Public Safety Healthy Retiree Mortality Table [*PubS-2010 Healthy Retiree*], projected with generational mortality improvement from 2010 using Scale MP-2020

Disabled Retirees

Non-Police: Pub-2010 Non-Safety Disabled Retiree Mortality Table [*PubNS – 2010 Disabled Retiree*], projected with generational mortality improvement from 2010 using Scale MP-2020

Park Police: Pub-2010 Safety Disabled Retiree Mortality Table [*PubS-2010 Disabled Retiree*], projected with generational mortality improvement from 2010 using Scale MP-2020

Beneficiaries

All Plans: Pub-2010 General Healthy Retiree Mortality Table [*PubG-2010 Healthy Retiree*], projected with generational mortality improvement from 2010 using Scale MP-2020

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

2. Disability Rates are as follows:

Age	Park Police	Non-Police
20-29	0.25%	0.05%
30-34	0.50%	0.05%
35-39	0.75%	0.10%
40-44	0.75%	0.25%
45+	1.00%	0.50%

3. Withdrawal:

Sample rates are as follows:

Years of Service	Park Police	Years of Service	Non-Police
0	9.00%	0	12.00%
2	5.70	5	6.00
4	3.60	10	3.35
6	2.50	15	1.50
8	1.80	20	1.00
10	1.20	25+	0.00
12	0.60		
14+	0.00		

4. Retirement :

Sample rates for active members are as follows:

Years of Service[1]	Park Police	Age	Non-Police Plan B	Non-Police Plan E
5-20	5.0%	45	2.5%	2.5%
21 – 24	10.0	50	5.0	5.0
25-29	15.0	55	7.0	7.0
30+	100.0	60	11.0	9.0
		65	15.0	15.0
		70+	100.0	100.0

[1] 100% retirement at age 65

Terminated vested members are assumed to retire as of the date provided by the System.

5. Marriage

75% of male active members and 40% of female members are assumed to be married. The male spouse is assumed to be three years older than the female.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

6. Investment Return

6.70% compounded annually, net of investment expenses.

An effective interest rate of 5.56% compounded annually was used when calculating the Low-Default Risk Obligation Measure (LDROM) under Actuarial Standard of Practice No. 4. This was based on the FTSE Pension Liability Yield Curve published as of June 30, 2025.

7. Salary Increases

Wage inflation is assumed to be 2.50%. Sample individual salaries are expected to increase according to the following table which includes wage inflation and merit.

Years of Service	Park Police	Non-Police
0	6.30%	5.40%
5	5.50	5.00
10	5.30	4.50
15	4.50	4.10
20	3.50	3.60
25	3.50	2.85
30+	3.50	2.60

Wage adjustments are as follows for FYE 2026 based on information provided by the System:

- Plan B and E active members – COLA 2.5% plus merit of 3.5%
- Plan C active members
  - All members – 2.75% COLA plus:
  - Pay Grade EX, HR, PC and P2 – 3.50% merit
  - Pay Grade P3 – 3.50% merit plus 6.25% promotional increase
  - Pay Grade P4 – 3.50% merit plus 1.25% promotional increment increase
  - Pay Grade P5 – 1.25% promotional increment increase

Promotional increment increase is the difference between the new 6.25% promotional increase and the prior 5.00% promotional increase from Pay Grade P3 to P4.

8. Cost-of-Living Adjustments

2.25% compounded annually for benefits based on credited service accrued up to July 1, 2012 and sick leave accrued until January 1, 2013; 1.90% compounded thereafter.

Benefits in pay as of July 1, 2025 received cost-of-living adjustments of 2.9% for Tier 1 benefits and 2.5% for Tier 2 benefits.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

9. Unused Sick Leave Service Credit

Accrued at a rate of 0.36 additional months per year of service.

10. Non-Service-Connected Death Benefit Election

All Plan B participants are assumed to elect the annuity payable for life (default) if eligible for the non-service-connected death benefit.

11. Expenses

Administrative expenses are added to the Normal Cost and are assumed to be 0.2% of the Actuarial Liability.

The assumed investment rate of return is deemed to be net of investment expenses.

12. Social Security Wage Base Increase

3.0% compounded annually.

13. Rationale for actuarial assumptions

The actuarial assumptions are based upon the actuarial experience study covering the period July 1, 2015 through June 30, 2020. These assumptions were adopted by the Board of Trustees on May 4, 2021.

Prior to each valuation, the Board of Trustees reviews the investment return assumption based on the future market outlook, the current asset allocation, and the Board's risk tolerance.

The combined effect of the assumptions in aggregate is expected to have no significant bias.

14. Changes in Actuarial Assumptions

The effective discount rate for determining the LDROM was updated from 5.34% to 5.56% in accordance with the updated FTSE Pension Liability Yield Curve as of June 30, 2025.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

B. Actuarial Methods

1. Actuarial Value of Assets

The actuarial value of assets has been calculated by taking the market value of assets less 80% of the investment gain (loss) during the preceding year, less 60% of the investment gain (loss) during the second preceding year, less 40% of the investment gain (loss) during the third preceding year, and less 20% of the investment gain (loss) in the fourth preceding year.

The investment gain (loss) is calculated by taking the difference between the expected market value of assets and the actual market value of assets.

If the actuarial value of assets is less than 80% or more than 120% of the market value, an adjustment is made to the actuarial value to bring the value within this corridor.

2. Actuarial Cost Method

The funding method for the valuation of liabilities used for this valuation is the Entry Age Normal (EAN) method. Under this funding method, a normal cost rate is determined as a level percentage of pay for each active member. The normal cost rate multiplied by payroll equals the total normal cost for each active member. The normal cost contributions (employer and active member) will pay for projected benefits at retirement for each active member.

The actuarial liability is the difference between the present value of future benefits and the present value of future normal costs. The difference between this actuarial liability and the actuarial value of assets is the unfunded actuarial liability (UAL).

The portion of the actuarial liability in excess of System assets, the UAL, is amortized to develop an additional cost that is added to each year's employer normal cost. Under this funding method, actuarial gains and losses are directly reflected in the size of the unfunded actuarial liability. The amortization method is described below.

3. Amortization Method

The Unfunded Actuarial Liability is amortized as a level dollar over an open 15-year period. Due to the nature of a 15-year open amortization method, the process of fully amortizing the unfunded actuarial liability is slow and heavily contingent on investment returns exceeding the assumed rate of return.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

4. Valuation Software

Cheiron utilizes ProVal, an actuarial valuation software program leased from Winklevoss Technologies (WinTech), to calculate liabilities, normal costs, and projected benefit payments. We have relied on WinTech as the developer of ProVal. We have reviewed ProVal as it relates to the System and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in the output of ProVal that would affect the contents of this actuarial valuation report.

Projections in this valuation report were developed using P-Scan, our proprietary tool for developing projections. The projections shown in this report cover multiple scenarios and the variables are not necessarily correlated. We are not aware of any material inconsistencies, unreasonable output resulting from the aggregation of assumptions, material limitations, or known weaknesses that would affect the projections shown in this report.

5. Changes in Actuarial Methods

None.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

	Plan A	Plan B	Plan C	Plan D	Plan E
Effective Date	7/1/1972. Closed 1/1/1979.	1/1/1979 for full time employees. 3/1/1994 for ERS employees. 1/1/2009 for part-time career and certain other individuals	1/1/1979. Closed: 7/1/1990 Reopened: 7/1/1993	7/1/1990. Closed 7/1/1993.	1/1/2013 for employees hired or appointed after 1/1/2013.
Employee	Any individual employed by the Commission as a career Merit System employee, Executive Director, Secretary – Treasurer, General Counsel, or Commissioner of the M-NCPPC.	Any individual employed by the Commission as a career Merit System employee, Executive Director, Secretary – Treasurer, General Counsel, or Commissioner of the M-NCPPC or any individual employed by the M-NCPPC Employees' Retirement System.	Career Park Police officer exempted from the Merit System and appointed by the respective County Planning Board.	Same as Plan C.	Same as Plan B.
Member	Any employee who elected to become a member of the Plan prior to 1/1/1979 and has not terminated or transferred to Plan B, C, or D.	Any full time employee or ERS employee hired on or after the applicable effective date, or any employee transferred from Plan A to Plan B or certain employees who exercised their option to participate voluntarily in Plan B.	Every full-time Park Police officer appointed by the Commission after 7/1/1993. Beginning 2/1/2002 and ending 10/25/2002, any Plan D active member could elect to transfer to Plan C.	Beginning 3/1/1992, a Park Police officer who is in Plan A could elect to become a member in Plan D. All Plan C active members as of 6/30/1990 were transferred to Plan D.	Any full time or part time employee (hired on a year round basis) on or after the applicable effective date.
Annual Compensation	The base pay i.e.; the rate of gross earnable compensation excluding overtime pay or additional compensation.	Same as Plan A.	Same as Plan A.	Same as Plan A.	Same as Plan B.
Average Annual Earnings	The average for the three consecutive years of compensation that produce the highest earnings prior to reaching the service cap.	Same as Plan A.	Same as Plan A.	Same as Plan A.	The average for the five consecutive years of compensation that produce the largest earnings prior to reaching the service cap.
Required Employee Contributions	6.0% of base pay. Beginning July 1, 2012, 6.5% of base pay (7.0% for Park Police). Beginning July 1, 2014, 7% of base pay. Interest is credited at 4.5%.	3.0% of base pay up to the Social Security Wage Base (SSWB) plus 6.0% of base pay in excess of the SSWB. Beginning July 1, 2012, 3.5% of base pay up to SSWB plus 6.5% of base pay in excess of the SSWB. Beginning July 1, 2014, 4% of base pay up to the SSWB plus 7% of base pay in excess of the SSWB. Interest is credited at 4.5%.	8.0% of base pay. Beginning March 1, 2015, 8.5% of base pay. Beginning January 1, 2016, 9.0% of base pay. Beginning April 1, 2023, 9.5% of base pay. Interest is credited at 4.5%.	7.0% of base pay. Beginning March 1, 2015, 7.5% of base pay. Beginning January 1, 2016, 8.0% of base pay. Interest is credited at 4.5%.	4% of base pay up to wage base plus 8% of base pay in excess of the wage base. Interest is credited at 4.5%.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

	Plan A	Plan B	Plan C	Plan D	Plan E
Credited Service	Total period of years and months of completed service up to 40 years as credited under the terms and conditions of the System. Maximum Credited Service excludes sick leave credit. Effective 1/1/1994 part-time employees electing to participate in the ERS shall begin to accrue credited service based on actual hours worked divided by normal full-time hours for the class of work of the position the part-time employee occupies.	Generally, the same as Plan A, except no more than 35 years of service are counted. Maximum Credited Service excludes sick leave credit.	Generally, the same as Plan A, except no more than 30 years of service are counted. Maximum Credited Service excludes sick leave credit.	Generally, the same as Plan A, except no more than 32 years of service are counted. Maximum Credited Service excludes sick leave credit.	Same as Plan B.
Normal Retirement Benefit (a) Eligibility	*Non-Police* A member may retire and receive service retirement benefits after the earlier of: (1) Any age after completion of 30 years of Credited Service, or (2) Attainment of age 60 and completion of 5 years of Credited Service. *Police* A member may retire and receive service retirement benefits after the earlier of: (1) Any age after completion of 25 years of Credited Service, or (2) Attainment of age 55 and completion of 5 years of Credited Service.	A member may retire and receive service retirement benefits after the earlier of: (1) Completion of 30 years of Credited Service, or (2) Attainment of age 60 and completion of 5 years of Credited Service.	A member may retire and receive service retirement benefits after the earlier of: (1) Completion of 25 years of Credited Service, or (2) Attainment of age 55 and completion of 5 years of Credited Service.	A member may retire and receive service retirement benefits after the earlier of: (1) Completion of 22 years of Credited Service, or (2) Attainment of age 55 and completion of 5 years of Credited Service.	A member may retire and receive service retirement benefits after the earlier of: (1) Completion of 30 years of Credited Service, or (2) Attainment of age 62 and completion of 10 years of Credited Service.
(b) Benefit	The annual retirement benefit is equal to 2% of Average Annual Earnings multiplied by years and months of Credited Service up to 40 years.	The annual retirement benefit is equal to 2.0% of Average Annual Earnings multiplied by years and months of Credited Service up to 35 years payable to Social Security Retirement Age. Upon attainment of Social Security Retirement Age, the annual retirement benefit changes to the sum of 1.5% of Average Annual Earnings up to Covered Compensation and 2.0% of Average Annual Earnings in excess of Covered Compensation multiplied by years and months of Credited Service up to 35 years.	The annual retirement benefit is equal to 2.4% of Average Annual Earnings multiplied by years and months of Credited Service up to 25 years, plus 2.0% of Average Annual Earnings multiplied by Credited Service in excess of 25 years, but not greater than 5 additional years.	The annual retirement benefit is equal to 2.27% of Average Annual Earnings multiplied by years and months of Credited Service not greater than 22 years (rounded to 50% upon reaching 22 years of service) plus 2.0% of Average Annual Earnings multiplied by years and months of Credited Service in excess of 22 years, but not greater than 10 additional years.	Same as Plan B.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

	Plan A		Plan B	Plan C	Plan D	Plan E
Normal Retirement Benefit (continued)						
(c) Maximum	100% of Average Annual Earnings.		100% of Average Annual Earnings.	70% of Average Annual Earnings.	100% of Average Annual Earnings.	100% of Average Annual Earnings.
Early Retirement Benefit-						
(a) Eligibility	*Non-Police* A member may retire and receive service retirement benefits after the earlier of: (1) Any age after completion of 25 years of Credited Service, or (2) Attainment of age 55 and completion of 15 years of Credited Service.	*Police* A member may retire and receive service retirement benefits after completion of 20 years of Credited Service.	A member may retire and receive service retirement benefits after the earlier of: (1) Completion of 25 years of Credited Service, or (2) Attainment of age 55 and completion of 15 years of Credited Service.	Completion of 20 years of Credited Service.	Completion of 20 years of Credited Service.	A member may retire and receive service retirement benefits after the earlier of: (1) Completion of 25 years of Credited Service, or (2) Attainment of age 57 and completion of 15 years of Credited Service.
(b) Benefit	The annual early retirement benefit is equal to the Normal Retirement Benefit reduced by 1/180th for each month that early retirement age precedes Normal Retirement Age.	Same as Non-Police.	Same as Plan A.	The annual early retirement benefit is equal to the Normal Retirement Benefit reduced by 1.0% per year for the first two years prior to Normal Retirement Date, 7.0% for the third year, 5.0% for the fourth year, and 6.0% for the fifth year. The reductions are prorated for partial years prior to Normal Retirement Date.	Same as Plan A.	Same as Plan A.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

	Plan A	Plan B	Plan C	Plan D	Plan E
Disability Retirement Benefit	None. (Members continue to accrue service until their Normal Retirement Date if qualified for Long Term Disability.)	Same as Plan A.	Same as Plan A.	Same as Plan C.	Same as Plan A.
Service Related Death Benefit					
(a) Eligibility	Upon the death of an active member as a result of a service-related accident or illness. If the member is not married at time of death, the survivor's benefit will be paid to the member's surviving children.	Same as Plan A.	Upon the death of an active member with 10 years of Credited Service as a career Park Officer or as a result of a service-related accident or illness. If the member is not married at time of death, the survivor's benefit will be paid to the member's surviving children.	Same as Plan C.	Same as Plan A.
(b) Benefit	Upon the death of an active member the eligible survivor(s) shall receive a benefit equal to the Normal Retirement Benefit calculated on the basis that the deceased had continued as a member to his Normal Retirement Date at the rate of pay as of his last complete year of employment. This benefit shall not be lower than 25% of the member's final annual base pay. For part-time members, the final average base pay shall be the average base salary of the member or the 36 calendar month period, or for the 12 calendar month period, if greater.	Same as Plan A.	Same as Plan A.	Same as Plan A.	Upon the death of an active member the eligible survivor(s) shall receive a benefit equal to the Normal Retirement Benefit calculated on the basis that the deceased had continued as a member to his Normal Retirement Date at the rate of pay as of his last complete year of employment. This benefit shall not be lower than 25% of the member's final annual base pay. For part-time members, the final average base pay shall be the average base salary of the member or the 60 calendar month period, or for the 12 calendar month period, if greater.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

	Plan A	Plan B	Plan C	Plan D	Plan E
Non-Service Related Death Benefit–					
(a) Eligibility	Upon the death of an active member with 10 years of Credited Service as a result of a non-service related accident or illness. If the member is not married at time of death, the survivor's benefit will be paid to the member's surviving children.	Upon the death of an active member as a result of a nonservice-related accident or illness. If the member is not married at time of death, the survivor's benefit will be paid to the member's surviving children.	Upon the death of an active member with less than 10 years of Credited Service and as a result of a non-service-related accident or illness. If the member is not married at time of death the survivor's benefit will be paid to the member's surviving children.	Same as Plan C.	Same as Plan B.
(b) Benefit	Upon the death of an active member, the eligible survivor(s) shall receive a benefit equal to the Normal Retirement Benefit calculated on the basis that the deceased had continued as an active member to his Normal Retirement Date at a rate of pay as of his last complete year of employment. This benefit shall not be lower than 25% of the member's final annual base pay. For part-time members, the final average base pay shall be the average base salary of the member for the 36 calendar month period, or for the 12 calendar month period, if greater.	Effective July 1, 2018, upon the death of an active member: Non-vested - 25% of the member's final annual base pay or a lump sum of 50% of Average Annual Earnings plus contributions and interest. Vested (Prior to and Eligible for Early or Normal Retirement) - 25% of the member's final annual base pay or benefit paid had the deceased retired and selected a 100% Joint and Survivor option. For part-time member's, the final annual base pay shall be the average base salary of the member for the 36-calendar month period, or for the 12- month period, if greater.	Upon the death of an active member, the eligible survivor(s) shall receive a benefit equal to 25% of the member's final annual base pay. For part-time members, the final average base pay shall be the average base salary of the member for the 36-calendar month period, or for the 12 month period, if greater.	Same as Plan C.	Effective July 1, 2018, upon the death of an active member: Non-vested – For member's hired prior to October 1, 2018, 25% of the member's final annual base pay or a lump sum of 50% of Average Annual Earnings plus contributions and interest. For member's hired on or after October 1, 2018, a lump sum of 50% of Average Annual Earnings plus contributions and interest. Vested (Prior to and Eligible for Early or Normal Retirement) - For member's hired prior to October 1, 2018, 25% of the member's final annual base pay or benefit paid had the deceased retired and selected a 100% Joint and Survivor option. For member's hired on or after October 1, 2018, benefit paid had the deceased retired and selected a 100% Joint and Survivor option. For part-time member's, the final annual base pay shall be the average base salary of the member for the 60-calendar month period, or for the 12- month period, if greater.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

	Plan A	Plan B	Plan C	Plan D	Plan E
Ordinary Death Benefit					
(a) Eligibility	Upon the death of an active member (with no survivors eligible for a benefit) or a vested employee prior to commencement of benefits, the beneficiary shall be entitled to receive a death benefit.	Same as Plan A.	Same as Plan A.	Same as Plan A.	Same as Plan A.
(b) Benefit	The death benefit is equal to the sum of: (1) The member's contribution with interest to the date of death, and (2) 50% of the member's Average Annual Earnings.	Same as Plan A.	Same as Plan A.	Same as Plan A.	Same as Plan A.
Post-Retirement Death Benefit					
(a) Eligibility	Upon the death of a retired or disabled member, the beneficiary shall receive a death benefit.	Same as Plan A.	Same as Plan A.	Same as Plan A.	Same as Plan A.
(b) Benefit	The death benefit shall equal $10,000.	Same as Plan A.	Same as Plan A.	Same as Plan A.	Same as Plan A.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

	Plan A	Plan B	Plan C	Plan D	Plan E
Deferred Vested Benefit					
(a) Eligibility	If a member terminates employment with 5 years of Credited Service, he shall be eligible for a vested benefit.	Same as Plan A.	Same as Plan A.	Same as Plan A.	If a member terminates employment with 10 years of Credited Service, he shall be eligible for a vested benefit.
(b) Benefit	The vested benefit payable beginning at Normal Retirement Age (as if continued participation beyond termination) is the Normal Retirement Benefit multiplied by the appropriate vesting percentage.	Same as Plan A.	Same as Plan A.	Same as Plan A.	Same as Plan A.
(c) Vesting Schedule	**Credited Service** / **Vesting %** <5 / 0% 5 or more / 100%	Same as Plan A.	Same as Plan A.	Same as Plan A.	**Credited Service** / **Vesting %** <10 / 0% 10 or more / 100%
	Members who terminated prior to September 1, 2001, are vested as follows: **Credited Service** / **Vesting %** 5 / 50% 6 / 60% 7 / 70% 8 / 80% 9 / 90% 10 / 100%	Same as Plan A.	Same as Plan A.	Same as Plan A.	N/A
Withdrawal Benefit	A member who terminates prior to becoming eligible for a Deferred Vested Benefit is entitled to the refund of his contributions with interest. By accepting a Withdrawal Benefit, a member forfeits any Early or Deferred Vested Benefit to which he may otherwise be entitled.	Same as Plan A.	Same as Plan A.	Same as Plan A.	Same as Plan A.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

	Plan A	Plan B	Plan C	Plan D	Plan E
Post Retirement Benefit	Retirement Benefits are increased annually by the percentage change in the Consumer Price Index – All Items Annual Average, Urban Index for Major US Cities. If the percentage change is greater than 3.0%, retirement benefits shall be adjusted by 3.0% plus one-half the percentage increase above 3.0%. The maximum adjustment for any one year is 5.0%. Effective July 1, 2012, the portion of an individual's retirement benefit attributed to Credited Service for periods on or after July 1, 2012, will have a maximum adjustment of 2.5% for any one year. Effective July 1, 2012, benefits can no longer be decreased due to change in CPI.	Same as Plan A.	Same as Plan A.	Same as Plan A.	Retirement Benefits are increased annually by the percentage change in the Consumer Price Index – All Items Annual Average, Urban Index for Major US Cities. If the percentage increase in the Consumer Price Index for any year is 2.5% or less, the retirement benefits payable shall be adjusted by 100% of the increase. The maximum adjustment for any year is 2.5%.
Form of Payment					
(a) Normal Form	10 Year Certain and Life.	Life Annuity (with guaranteed return of contributions with interest)	Same as Plan A.	Same as Plan A.	Same as Plan B.
(b) Optional Forms	➢ Life Annuity ➢ Social Security Equalizer ➢ Joint and 50%, 75%, or 100% Survivor ➢ Joint and 50%, 75%, or 100% Survivor Popup ➢ Others, upon Board approval	➢ 10 Year Certain and Life ➢ Joint and 50%, 75%, or 100% Survivor ➢ Joint and 50%, 75%, 100% Survivor Popup ➢ Others, upon Board approval			

Changes in Plan Provisions

None.

APPENDIX D – GLOSSARY OF TERMS

1. Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disability, and retirement; changes in compensation; inflation; rates of investment earnings, and asset appreciation or depreciation; and other relevant items.

2. Actuarial Cost Method

A procedure for determining the Actuarial Present Value of pension plan benefits and expenses and for developing an allocation of such value to each year of service, usually in the form of a Normal Cost and an Actuarial Liability.

3. Actuarial Gain/(Loss)

A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

4. Actuarial Liability

The portion of the Actuarial Present Value of Projected Benefits which will not be paid by future Normal Costs. It represents the value of the past Normal Costs with interest to the valuation date.

5. Actuarial Present Value (Present Value)

The value as of a given date of a future amount or series of payments. The Actuarial Present Value discounts the payments to the given date at the assumed investment return and includes the probability of the payment being made. As a simple example: assume you owe $100 to a friend one year from now. Also, assume there is a 1% probability of your friend dying over the next year, in which case you won't be obligated to pay him. If the assumed investment return is 10%, the actuarial present value is:

Amount		Probability of Payment		1/(1+Investment Return)		
$100	x	(1 - .01)	x	1/(1+.1)	=	$90

6. Actuarial Valuation

The determination, as of a specified date, of the Normal Cost, Actuarial Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

7. Actuarial Value of Assets

The value of cash, investments and other property belonging to a pension plan as used by the actuary for the purpose of an Actuarial Valuation. The purpose of an Actuarial Value of Assets is to smooth out fluctuations in market values. This way long-term costs are not distorted by short-term fluctuations in the market.

APPENDIX D – GLOSSARY OF TERMS

8. Actuarially Equivalent

Of equal Actuarial Present Value, determined as of a given date with each value based on the same set of Actuarial Assumptions.

9. Amortization Payment

The portion of the pension plan contribution which is designed to pay interest and principal on the Unfunded Actuarial Liability in order to pay for that liability in a given number of years.

10. Entry Age Normal Actuarial Cost Method

A method under which the Actuarial Present Value of the Projected Benefits of each individual included in an Actuarial Valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages.

11. Funded Percentage

The ratio of the Actuarial Value of Assets to the Actuarial Liabilities.

12. Investment Return Assumption

The assumed interest rate used for projecting dollar related values in the future.

13. Mortality Table

A set of percentages which estimate the probability of death at a particular point in time. Typically, the rates are annual and based on age and sex.

14. Normal Cost

That portion of the Actuarial Present Value of pension plan benefits and expenses, which is allocated to a valuation year by the Actuarial Cost Method.

15. Projected Benefits

Those pension plan benefit amounts which are expected to be paid in the future under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and increases in future compensation and service credits.

16. Unfunded Actuarial Liability

The excess of the Actuarial Liability over the Actuarial Value of Assets.