

Maryland State Retirement and Pension System

Actuarial Valuation Report
as of June 30, 2024



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November 22, 2024

Board of Trustees
Maryland State Retirement and Pension System
120 East Baltimore Street, 16th Floor
Baltimore, MD 21202

Dear Members of the Board:

The results of the **June 30, 2024 annual actuarial valuation** of the Maryland State Retirement and Pension System (“MSRPS”) are presented in this report.

This report was prepared at your request and is intended for use by the Maryland State Retirement Agency (“SRA”) and the Board of Trustees of the MSRPS and those designated or approved by the SRA or the Board. This report may be provided to other parties only in its entirety and only with the permission of the SRA or the Board. GRS is not responsible for unauthorized use of this report.

The purposes of the valuation are as follows:

- Measure the financial position of MSRPS with regard to funding;
- Provide the Board with State and Participating Governmental Unit (“PGU”) contribution rates for certification;
- Determine actuarial and statutory contribution rates;
- Discuss some of the risks associated with achieving the funding objectives of MSRPS; and
- Analyze the aggregate experience of the State Systems over the past year.

Information required by Statements No. 67 and No. 68 of the Governmental Accounting Standards Board (“GASB”) for fiscal year 2024 is provided in a separate report.

The individual member data required for the valuations was furnished by the SRA, together with pertinent data on financial operations (unaudited). The cooperation and collaboration of SRA staff in furnishing these materials is acknowledged with appreciation. We checked for internal 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 SRA.

Actuarial valuations are based upon assumptions regarding future activity in specific risk areas including the rates of investment return and payroll growth, eligibility for the various classes of benefits, and longevity among retired lives. The Board adopts these assumptions after considering the advice of the actuary and other professionals.

Each actuarial valuation considers all prior differences between actual and assumed experience in each risk area and adjusts the contribution rates as needed. GRS performed an experience study of MSRPS for the period 2018-2023 after completion of the June 30, 2023 valuations. Assumptions from the experience study including investment return, inflation, COLA increases, mortality rates, retirement rates, withdrawal rates, disability rates, and rates of salary increase were adopted by the Board for first use in the June 30, 2024 valuation. 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). All actuarial assumptions and methods used in the valuation follow the guidance in the applicable Actuarial Standards of Practice. Additional information about the actuarial assumptions is included in the section of this report entitled Actuarial Assumptions and Methods.

The computed contribution rates shown on page I-2 may be considered as minimum contribution rates that comply with the funding policy stated in the Statutes. Users of this report should be aware that contributions made at these rates do not guarantee benefit security. Given the importance of benefit security to any retirement system, we suggest that contributions to the System in excess of those presented in this report be considered. This report includes risk metrics on pages II-17 and II-20 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.

The benefit provisions valued in the actuarial valuation as of June 30, 2024 are the same as the provisions from the last actuarial valuation as of June 30, 2023, except for the special death (in-service) benefit for Judges. Please see the top of page I-4 for more detail on the 2024 benefit provision changes. Portions of the savings from the 2011 pension reforms passed by the General Assembly are to be reinvested as additional contributions into the Systems. Legislation enacted in 2015 reduced the amount of reinvested savings to \$75 million per year beginning in fiscal year 2016 until the combined funded ratio of the Systems reaches 85% at which point the additional contributions cease. For fiscal year 2024, the legislature reduced the amount of reinvested savings by \$39.7 million. Due to the uncertain nature of future reinvested savings contributions, these additional contributions are no longer factored into the calculation of the contribution requirements of the State Systems.

We have assessed that the contribution rates calculated under the current funding policy are reasonable Actuarially Determined Employer Contributions (ADEC) and are consistent with the plan accumulating adequate assets to make benefit payments when due.

This valuation assumes the continuing ability of the employer to make the contributions necessary to fund this system. A determination regarding whether or not the employer is actually able to do so is outside our scope of expertise. Consequently, we did not perform such an analysis.

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.



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; 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 plan's funded status); and changes in plan provisions or applicable law. The actuary did not perform an analysis of the potential range of such future measurements in this actuarial valuation report.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. We certify that, to the best of our knowledge, this report is complete and accurate and has been prepared in accordance with Maryland's Annotated Code and generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice as promulgated by the Actuarial Standards Board.

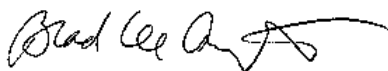
This report should not be relied on for any purpose other than the purposes previously described. Determinations of the financial values associated with benefits described in this report for a purpose other than the intended purpose may produce results that differ significantly from those presented in this report.

The signing actuaries are independent of the plan sponsor.

This is one of multiple documents comprising the actuarial report. Other documents comprising the actuarial report include the PowerPoint presentation presented to the Board in October 2024 and separately to the Joint Committee on Pensions in November 2024. Not all of these documents have been issued as of this date.

Brad L. Armstrong and Jeffrey T. Tebeau are Members of the American Academy of Actuaries (MAAA), and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,
Gabriel, Roeder, Smith & Company



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SECTION I

BOARD SUMMARY

Introduction

The funding valuation report presents the results of the June 30, 2024 annual actuarial valuation of the Maryland State Retirement and Pension System (MSRPS). The purposes of the annual funding valuation is as follows:

- Measure the financial position of MSRPS with regard to funding;
- Provide the Board with State and Participating Governmental Unit (“PGU”) contribution rates for certification;
- Determine actuarial and statutory contribution rates;
- Discuss some of the risks associated with achieving the funding objectives of MSRPS; and
- Analyze the aggregate experience of the State Systems over the past year.

A summary of the primary funding valuation results as of June 30, 2024 is presented on the following page.

The Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68 valuation report presents the results of the June 30, 2024 annual accounting valuation of the Maryland State Retirement and Pension System (MSRPS). The purpose of the annual accounting valuation is as follows:

- Provide actuarial reporting and disclosure information for the MSRPS and State’s financial report.

The accounting valuation results for the year ended June 30, 2024 are presented in a separate report.

Summary of Valuation Results

June 30, 2024

(\$ in Millions)
(State and Municipal)

	2024						2023		% Change	
	TCS	ECS ¹	State			LEOPS ²	CORS ³	Total		Total
			Police	Judges	Total					
A. Demographic Information										
1. Active Number Counts	115,316	84,948	1,312	322	2,993	153	205,044	198,647	3.2%	
2. Active Payroll	\$ 9,102	\$ 6,064	\$ 145	\$ 61	\$ 267	\$ 11	\$ 15,650	\$ 14,385	8.8%	
3. Retired Number Counts	84,975	85,408	2,638	471	2,608	71	176,171	174,609	0.9%	
4. Annual Benefits for Retired Members ⁴	\$ 2,847	\$ 1,855	\$ 167	\$ 49	\$ 106	\$ 2	\$ 5,027	\$ 4,802	4.7%	
5. Deferred / Inactive Number Counts	23,494	22,202	85	8	309	1	46,099	47,087	-2.1%	
6. Total Number Counts	223,785	192,558	4,035	801	5,910	225	427,314	420,343	1.7%	
B. Assets										
1. Market Value (MV)	\$ 41,120	\$ 22,656	\$ 1,949	\$ 609	\$ 1,531	\$ 43	\$ 67,910	\$ 64,893	4.6%	
2. Rate of Return on MV ⁵							6.88 %	3.11 %		
3. Actuarial Value (AV)	\$ 42,593	\$ 23,456	\$ 2,018	\$ 631	\$ 1,584	\$ 45	\$ 70,326	\$ 67,985	3.4%	
4. Rate of Return on AV							5.56 %	5.51 %		
5. Ratio of AV to MV							103.6%	104.8%		
C. Actuarial Results										
1. Normal Cost as a % of Payroll	12.09%	11.06%	38.93%	39.85%	25.81%	14.89%	12.28%	12.02%		
2. Actuarial Accrued Liability (AAL)										
a. Active	\$ 24,129	\$ 11,983	\$ 749	\$ 226	\$ 840	\$ 27	\$ 37,952	\$ 34,635	9.6%	
b. Retired	29,942	20,531	2,325	530	1,461	33	54,821	52,720	4.0%	
c. Deferred/Inactive	1,614	1,314	17	8	48	1	3,001	2,964	1.2%	
d. Total	\$ 55,684	\$ 33,827	\$ 3,091	\$ 763	\$ 2,349	\$ 60	\$ 95,775	\$ 90,319	6.0%	
3. Unfunded AAL (UAAL)	\$ 13,091	\$ 10,372	\$ 1,073	\$ 133	\$ 764	\$ 15	\$ 25,449	\$ 22,334	13.9%	
4. Funded Ratio	76.49 %	69.34 %	65.28 %	82.60 %	67.46 %	74.64 %	73.43 %	75.27 %		
D. Contribution Rates⁶										
	STATE PORTION ONLY									
	FY 2026						FY 2025	FY 2024		
	TCS	ECS	State			Total	Total	Total		
			Police	Judges	LEOPS					
1. Pension Contributions										
a. Employer Normal Cost	5.09%	4.74%	31.07%	32.92%	19.02%	5.52%	5.27%	5.34%		
b. Member Contribution Rate	7.00%	6.75%	7.86%	6.93%	6.92%	6.93%	6.93%	6.93%		
c. UAAL Contribution Rate	<u>12.47%</u>	<u>17.13%</u>	<u>63.74%</u>	<u>18.71%</u>	<u>28.01%</u>	<u>14.71%</u>	<u>13.88%</u>	<u>12.54%</u>		
d. Total	24.56%	28.62%	102.67%	58.56%	53.95%	27.16%	26.08%	24.81%		
2. Total Actuarial Employer Rate (1.a + 1.c)	17.56%	21.87%	94.81%	51.63%	47.03%	20.23%	19.15%	17.88%		
3. Total Employer Budgeted Rate										
a. Employer Budgeted Rate	17.56%	21.87%	94.81%	51.63%	47.03%	20.23%	19.15%	17.88%		
b. Reinvested Savings Rate	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.59%</u>	<u>0.64%</u>		
c. Total Employer Budgeted Rate	17.56%	21.87%	94.81%	51.63%	47.03%	20.23%	19.74%	18.52%		

¹ Includes ECS State, ECS Municipal, and CORS State.

² Includes LEOPS State and LEOPS Municipal.

³ Includes CORS Municipal only.

⁴ Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2024 and July 1, 2023, respectively.

⁵ Actuarial estimation method used is expected to produce rates of return that differ modestly from figures reported by the System.

⁶ Contribution rates shown in the "Total" column are for informational purposes only and are not used for funding purposes.

Totals may not add due to rounding.



Actuary's Comments

For the year ended June 30, 2024, the System's assets earned **6.88%** based on our estimate and **6.93%** as reported by the System (using a slightly different computation method) on a market value basis and **5.56%** on a smoothed or actuarial value basis. The smoothed rate of return was less than the 6.80% assumed rate of investment return for fiscal year 2024. There were recognized asset losses from fiscal years 2020, 2022, and 2023 which were partially offset by recognized asset gains from fiscal years 2021 and 2024 in the actuarial value of assets as of June 30, 2024. This resulted in a loss under the asset smoothing method.

UAAL and Actuarial Gain/(Loss) (\$ in Millions)

	Municipal	State	Total SRPS
Unfunded Actuarial Accrued Liability (UAAL) as of June 30, 2023	\$ 1,333	\$ 21,001	\$ 22,334
Expected UAAL as of June 30, 2024 before changes	1,313	20,682	21,995
Changes in benefit provisions*	-	0	0
Changes in methods and assumptions	106	914	1,021
Expected UAAL as of June 30, 2024 after changes	1,419	21,596	23,016
Actual UAAL as of June 30, 2024	1,633	23,816	25,449
Net actuarial gain/(loss)	(214)	(2,220)	(2,433)
Actuarial gain/(loss) by source			
Actuarial investment experience	(73)	(763)	(836)
Actuarial accrued liability experience	(141)	(1,457)	(1,597)

** Changes in benefit provisions were approximately \$70 thousand.
Totals may not add due to rounding.*

In relative terms, the overall System funded ratio of actuarial value of assets to liabilities decreased from 75.27% in 2023 to **73.43%** this year. If market value of assets were the basis for the measurements, the funded ratio would have decreased from 71.85% to 70.91%.

The market value of assets exceeds the retiree liabilities by about 24% in total (or 3% if accumulated member contributions of about \$11.5 billion are netted out), which increased slightly from 23% last year. This is referred to as a short condition test and is demonstrated in the chart at the bottom of this page. It is looking at the current retiree liabilities as the benefits that will be paid the soonest since these benefits are already in pay status. Active liabilities and deferred vested liabilities do not have associated immediate cash flow requirements. Although the market value of assets exceeds the current retiree liabilities in total, this is not true for all of the systems individually. For State Police, the market value of assets is less than the retiree liabilities.

Short Condition Test	(\$ in Millions)						Total
	TCS	ECS	State Police	Judges	LEOPS	CORS	
Market Value of Assets (MVA)	\$ 41,120	\$ 22,656	\$ 1,949	\$ 609	\$ 1,531	\$ 43	\$ 67,910
Retiree Liability	29,942	20,531	2,325	530	1,461	33	54,821
MVA as % of Retiree Liability	137%	110%	84%	115%	105%	132%	124%
Excluding Member Contributions	112%	92%	79%	107%	93%	115%	103%



Actuary's Comments

In 2024, the General Assembly passed legislation creating a special death benefit for members of the Judges' Retirement System. The legislation increased the actuarial accrued liability by \$70 thousand and the Employer Contribution Rate increased by 0.18% of pay.

The General Assembly passed legislation in 2023 that amends how the unfunded liabilities of the System are amortized. The existing unfunded liability as of June 30, 2023 for each State System will continue to be amortized over a single closed 25-year period beginning July 1, 2014 and ending June 30, 2039 (14 years remaining as of the June 30, 2024 valuation, which determines the fiscal year 2026 contribution). Beginning July 1, 2023 (first affecting the 2024 valuation), any new unfunded liabilities or surpluses that accrued during the preceding fiscal year are amortized over closed periods according to the following guidelines:

- Over 15 years for experience gains and losses;
- Over 25 years for gains or losses attributable to changes to actuarial assumptions or methods;
- Over a period ranging from no less than 10 and no more than 15 years for gains or losses stemming from new legislation (except early retirement incentives); and
- Over 5 years for any accrued liability stemming from legislation providing incentives for the early retirement of State employees.

The actuarially determined rates are equal to the employer normal cost plus the Unfunded Actuarial Accrued Liability (UAAL) contribution rate. The unfunded actuarial contribution rate is equal to the payment resulting from amortizing the unfunded liability as a level percentage of pay over various time periods depending on the source of the UAAL.

The fiscal year 2026 budgeted rates for the State Systems are equal to the actuarially determined rate. Due to the uncertain nature of future reinvested savings contributions, these additional contributions are no longer factored into the calculation of the contribution requirements of the State Systems. It is our understanding that the Retirement Agency will monitor contributions to ensure that the System receives the proper amount of reinvested dollar savings during fiscal year 2026 (if any).

The schedules required under Government Accounting Standards Board (GASB) Statements No. 67 (beginning with fiscal year 2014) and No. 68 (beginning with fiscal year 2015) are provided in a separate report.

Actuary's Comments

History of Recent Changes

In 2011, the General Assembly enacted pension reforms which were effective July 1, 2011, and affected both current actives and new hires. The member contribution rate was increased for members of the Teachers' Pension System and Employees' Pension System from 5% to 7%. The member contribution rate was increased from 4% to 7% for LEOPS. In addition, the benefit attributable to service on or after July 1, 2011 is subject to cost-of-living adjustments (COLAs) that are based on the increase in the Consumer Price Index and capped at 2.5% or 1.0%. The cap is 2.5% if the market value investment return from the preceding calendar year was higher than the investment return assumption used in the previous valuation (6.80%) and in effect as of December 31 of the preceding fiscal year, and 1.0% otherwise. There were also reforms that affected only those members hired on or after July 1, 2011.

In addition to the benefit provision changes in 2011, a portion of the savings from the pension reforms is to be reinvested in certain State Systems (TCS, ECS, State Police, and LEOPS). The allocation of reinvested savings by System is in proportion to the savings from the pension reforms as measured in the actuarial valuation as of June 30, 2011. Reinvested savings of \$191 million was contributed in fiscal year 2013. Legislation enacted in 2014 changed the amount of reinvested savings from \$300 million each year beginning in fiscal year 2014 to \$100 million each year for fiscal years 2014 and 2015, \$150 million for fiscal year 2016, \$200 million for fiscal year 2017, \$250 million for fiscal year 2018, \$300 million each year beginning in fiscal year 2019 and thereafter. The \$300 million would then continue until the later of the combined funded ratio of the Systems reaching 85%, and the corridor funding method being fully phased-out. Legislation enacted in 2015 further reduced the amount of reinvested savings to \$75 million per year beginning in fiscal year 2016 until the combined funded ratio of the Systems reaches 85% at which point the reinvestment ceases. For fiscal year 2024, the legislature reduced the amount of reinvested savings by \$39.7 million.

Beginning in fiscal year 2012, employers pay a per-member fee to cover the Retirement Agency's operating expenses (i.e., administrative expenses). The State pays the fee for libraries.

Beginning in fiscal year 2013, local employers contributed toward the normal cost for the Teachers Combined System. The required portion of normal cost contribution amounts for local employers for fiscal years 2013 through 2016 was defined by the Maryland statutes. Beginning in fiscal year 2017, local employers contribute the full normal cost contribution on behalf of their employees.

In the 2013 legislative session, the Legislature changed the method used to fund the State Systems of the MSRPS. The unfunded liability for each State System was being amortized over a single closed 25-year period ending June 30, 2039. In addition, the corridor method used by the Teachers' Combined System and the State portion of the Employees' Combined System, which was established in 2001, was being phased-out over a 10-year period. In 2015, the Legislature removed the corridor funding method effective with the June 30, 2015 valuation.

The Teachers' Combined System (TCS) remained out of the corridor since the June 30, 2005 valuation and the State portion of the Employees Combined System (ECS) remained out of the corridor since the June 30, 2004 valuation resulting in contribution rates for TCS and ECS that were less than actuarial rates. With the elimination of the corridor effective with the June 30, 2015 valuation report, TCS and ECS began to contribute based on the actuarially determined rate beginning in fiscal year 2017.



Other Observations

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

Given the System's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the System earning 6.80% on the actuarial value of assets), it is expected that:

- (1) The employer normal cost as a percentage of pay will decrease to the level of the Reformed Benefit Plan's (i.e., plans for members hired after July 1, 2011) normal cost as time passes and the active population is comprised entirely of Reformed Plan members;
- (2) The unfunded actuarial accrued liabilities will be fully amortized according to the current amortization schedule (June 30, 2051, after the unfunded liability from assumption changes is fully amortized); and
- (3) The funded status of the plan will increase gradually towards a 100% funded ratio.

Limitations of Funded Status Measurements

Unless otherwise indicated, a funded status measurement presented in this report is based upon the Actuarial Accrued Liability and the actuarial value of assets. Unless otherwise indicated, with regard to any funded status measurements presented in this report:

- (1) The measurement is inappropriate for assessing the sufficiency of System assets to cover the estimated cost of settling the System's benefit obligations; for example, transferring the liability to an unrelated third party in a free market type transaction.
- (2) The measurement is dependent upon the actuarial cost method which, in combination with the 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. If the funded status were 100%, the System would still require future normal cost contributions (i.e., contributions to cover the cost of the active membership accruing an additional year of service credit).
- (3) The measurement would produce a different result if the market value of assets were used instead of the actuarial value of assets, unless the market value of assets is used in the measurement.

Prior Year Asset Experience

ASSETS (STATE AND MUNICIPAL)

Plan assets for this System are measured on both a market value and an actuarial or smoothed value basis. The actuarial smoothing method, described again on page Appendix A-16, annually recognizes 20% of the difference between (a) the expected investment return if the market value of assets had earned the assumed rate of 6.80% during FY 2024, and (b) the actual investment return. Bear in mind that the expected return for this purpose is based on the assumed return from the prior year's actuarial valuation. In addition, there is a market value collar that constrains the actuarial value to be within 20% of the market value of assets. In periods of high returns, this method defers the amount of asset gains above the assumed return. Conversely, in periods of returns below the assumed rate, recognition of the losses is deferred. This method limits the effect of temporary asset value fluctuations on contribution rates. The System does not immediately feel the full impact of lower (or higher) costs when asset values fluctuate dramatically.

For the year ended June 30, 2024, the System's assets earned **6.88%** based on our estimate and **6.93%** as reported by the System (using a slightly different computation method) on a market value basis and **5.56%** on an actuarial value basis. The System experienced an investment gain of **\$0.1** billion on a market value basis and a loss of **\$0.8** billion on an actuarial basis. More detail can be found in Section III. Reconciliations of market value and actuarial value of assets are presented below:

(STATE AND MUNICIPAL)
(\$ in Millions)

	Market Value	Actuarial Value
June 30, 2023 Value	\$ 64,893	\$ 67,985
Employer Contributions	2,618	2,618
Member Contributions	1,056	1,056
Benefit Payments and Other Disbursements	(5,075)	(5,075)
Expected Investment Earnings (6.80% in FY2024)	4,366	4,576
Expected Value June 30, 2024	\$ 67,859	\$ 71,162
Investment Gain/(Loss)	51	(836)
June 30, 2024 Value	\$ 67,910	\$ 70,326

Figures may not add exactly due to rounding.

The 2021 valuation recognized 40% of the investment gain from FY 2021 in the determination of the actuarial value of assets rather than the 20% normally recognized. The remaining 60% will be recognized equally over the next four valuations (15% was recognized in 2022, 2023, and 2024).



Trends (State and Municipal)

One of the best ways to measure or evaluate the financial condition of a pension plan is to examine the historical trends that are evolving. Below are three charts which illustrate trend information from 2000 through the end of 2024, on the System’s assets and liabilities, annual cash flows in and out of the fund, and the State contribution rate. Our comments on each follow.

Chart A: Assets/Liabilities

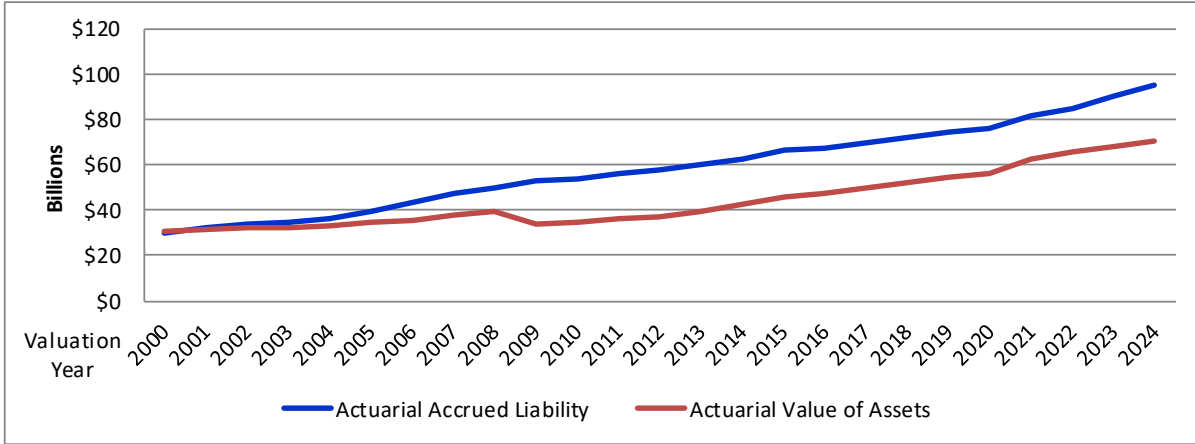


Chart B: Benefits vs. Contributions

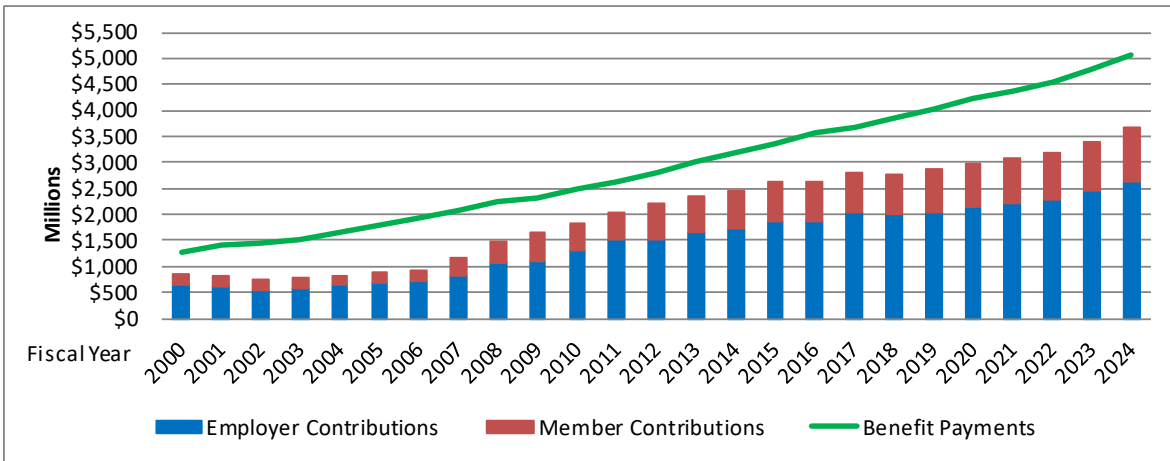
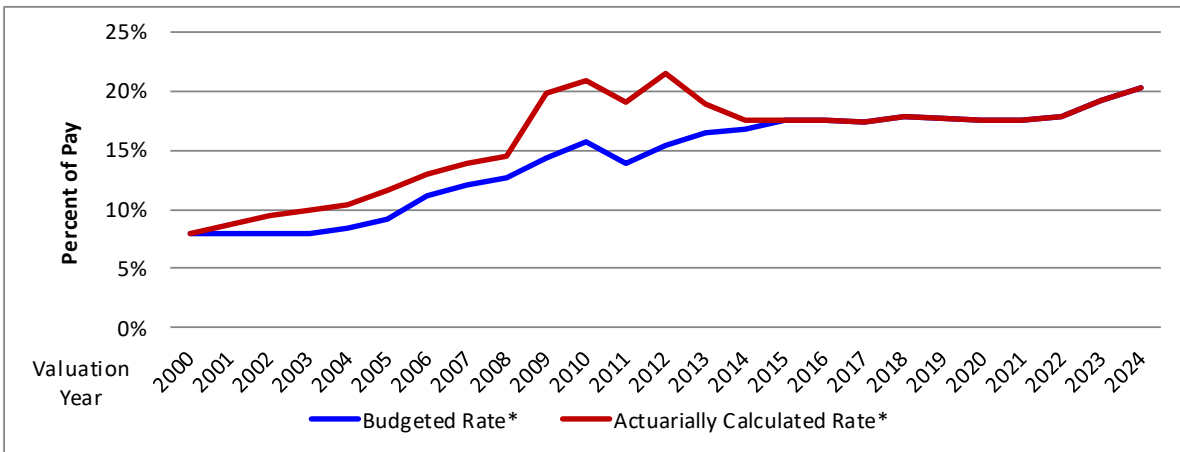


Chart C: State Contribution Rate



* Excludes reinvested savings in valuation years after 2010. 2010 rates are prior to the 2011 General Assembly Reforms.



Trends (State and Municipal)

Chart A displays a comparison of the actuarial value of assets and the Actuarial Accrued Liability (AAL). The difference between the actuarial value of assets and the AAL is the Unfunded Actuarial Accrued Liability. The Unfunded Actuarial Accrued Liability is about \$25 billion as of June 30, 2024, and increased by about \$3.1 billion since the last valuation as of June 30, 2023. As of June 30, 2024, the actuarial value of assets under the five-year asset smoothing method is 104% of the market value of assets, compared with 105% as of June 30, 2023.

Chart B presents non-investment cash flow trend information that can have investment implications. With the aging and retirements of the baby boom generation, MSRPS has seen increases in payments to retirees. This is expected for mature retirement systems such as MSRPS. Benefit payments, which are the total amount below the green line, exceeds the total contributions, which is the total amount below the top of the red bar. The amount needed to pay the excess of benefit payments over total contributions comes from either investment return or liquidation of current assets. If the difference between the total benefit payments and total contributions increases, a larger portion of investment return will be needed to pay benefits and may require a change in asset allocation. The corridor method increased the extent of negative cash flows. The corridor funding method was eliminated first effective with the June 30, 2015 valuation. The budgeted rates have been equal to the actuarial rates since fiscal year 2017.

Finally, Chart C looks at the composite actuarially determined and budgeted State contribution rates. The budgeted contribution rates by System determine the fiscal year State appropriation. It shows how the rate has increased since the year 2000, after years of sustained investment gains in the 1990s. Effective with the 2001 valuation, the State appropriations were performed under a corridor funding method for the two largest plans, TCS and ECS. The appropriation remained essentially level for a few years before increasing with the 2004 valuation. Legislation enacted in 2015 removed the corridor funding method for TCS and ECS beginning with the valuation as of June 30, 2015. The budgeted rate is now equal to the actuarial rate for TCS and ECS.

Chart C further illustrates that the corridor method consistently acted to reduce the State's contributions calculated in valuations between 2001 and 2015.

SECTION II

VALUATION RESULTS

State Systems (Excludes Municipalities)

Valuation Results

The combined State System's (excluding PGU's) Unfunded Actuarial Accrued Liability (UAAL) increased by \$2,815 million, from \$21,001 million as of June 30, 2023, to \$23,816 million as of June 30, 2024. There was an expected decrease in the Unfunded Actuarial Accrued Liability of \$319 million, if all actuarial assumptions had been realized. The unfunded liability is expected to decline under the current amortization policy.

There was an increase in the Unfunded Actuarial Accrued Liability of \$2,220 million due to unfavorable plan experience. The net loss due to plan experience of \$2,220 million is comprised of demographic losses on the liabilities of \$1,457 million and an asset loss (on the actuarial value of assets) of \$763 million.

Assumption changes adopted by the Board that were implemented in the 2024 valuation pursuant to the 2018-2023 Experience Study increased the UAAL by \$914 million.

The combined State System's market value of assets earned 6.88%¹ for the year ended June 30, 2024, which exceeded the 6.80% assumed rate of investment return. The actuarial, or smoothed, rate of return measured from this past year was 5.56%, which was less than the assumed rate of return on the actuarial value of assets, producing an asset loss. Partial recognition of asset gains from FYs 2021 and 2024 combined with losses from FYs 2020, 2022, and 2023 were recognized in the actuarial value of assets as of June 30, 2024, under the asset smoothing method, resulting in a recognized asset loss of \$763 million. Reconciliations of market value and actuarial value of assets are presented below:

(STATE Only)
(\$ in Millions)

	Market Value	Actuarial Value
June 30, 2023 Value	\$ 59,218	\$ 62,039
Employer Contributions	2,427	2,427
Member Contributions	963	963
Benefit Payments and Other Disbursements	(4,654)	(4,654)
Expected Investment Earnings (6.80% in FY2024)	3,985	4,176
Expected Value June 30, 2024	\$ 61,938	\$ 64,952
Investment Gain/(Loss)	46	(763)
June 30, 2024 Value	\$ 61,984	\$ 64,189

Figures may not add exactly due to rounding.

Liability experience was unfavorable overall primarily due to higher than assumed retiree COLA increases. COLA increases of 4.116% were granted to eligible retirees who have no COLA cap or the 5.00% cap compared to the actuarial assumptions of 2.25% and 2.24%, respectively. A COLA increase of 3.00% was granted to retirees who have a COLA cap of 3.00% compared to the assumption of 1.96%. A COLA increase of 2.50% was granted to benefits with the reformed cap compared to the actuarial assumption of 1.30% since the System's investment return for calendar year 2023 exceeded the actuarial assumption.

Actual increases in individual salaries that were greater than assumed contributed to substantial losses on active liabilities for each System. On average the actual increases were 7.9% versus 4.5% assumed. The actual increases were higher than assumed across all service periods as well as all age groups.

¹ The actuarially computed rate of return, excluding municipalities.



State Systems (Excludes Municipalities)

Valuation Results

The combined State System funded ratio decreased from 74.7% at June 30, 2023 to 72.9% at June 30, 2024.

The actuarially determined contribution rate calculated in the June 30, 2024 valuation (which determines the FY 2026 contribution) increased for all Systems from those calculated in the June 30, 2023 valuation (which determines the FY 2025 contribution).

A reconciliation of the actuarial contribution rate (excluding reinvested savings) is shown below:

	(STATE ONLY)					
	Teachers' Combined System	Employees' Combined System	State Police	Judges	LEOPS	Total
FY 2025 Actuarial Contribution Rate	16.25%	21.54%	85.51%	47.22%	46.00%	19.15%
Change due to Investment Return	0.51%	0.43%	1.51%	1.13%	0.74%	0.50%
Change due to Demographic and Non-Inv. Exp.	0.92%	0.92%	3.68%	2.63%	1.21%	0.96%
Change due to Benefit Provisions	0.00%	0.00%	0.00%	0.17%	0.00%	0.00%
Change due to Assumption Changes	0.66%	0.86%	6.28%	0.76%	0.74%	0.78%
Change due to Method Changes	-0.28%	-0.23%	-1.09%	-0.47%	-0.20%	-0.27%
Change due to Total Payroll Experience	-0.57%	-1.42%	-0.77%	-0.27%	-1.30%	-0.84%
Change due to Other	<u>0.07%</u>	<u>-0.23%</u>	<u>-0.31%</u>	<u>0.46%</u>	<u>-0.17%</u>	<u>-0.05%</u>
FY 2026 Actuarial Contribution Rate	17.56%	21.87%	94.81%	51.63%	47.03%	20.23%

Totals may not add due to rounding.

Each System saw increases in the contribution rates due to unfavorable non-investment experience (i.e., higher COLA and salary increases than expected). Investment experience on an actuarial basis was unfavorable overall for the System.

The "Method Changes" line item shows the effect of the implementation of the new layered amortization policy when compared to the former single amortization base policy (amortizing the impact from assumption changes over a 25-year period and experience gains/losses over a 15-year period compared to the remaining 14-year period for the single closed amortization base).

The employer normal cost rate decreased for each System as a result of more active members being covered under the benefit provisions of the reformed benefit plans (prior to assumption changes).

In addition, the increase in total payroll differed from the actuarial assumptions (2.75% in FY 2024) for all the State Systems. Total payroll increased by 7.5% for TCS, 11.3% for ECS, 4.0% for State Police, 4.2% for Judges and 7.5% for LEOPS. Total payroll growth that was greater than assumed puts downward pressure on the contribution rates because the unfunded liability contribution is spread over a larger payroll base. The opposite is true when payroll grows less than assumed.

Funded ratios are expected to progress toward 100% at a slightly slower rate than expected based on the current unfunded liabilities since deferred investment losses are recognized in the actuarial value of assets over the next three years.



Summary of Valuation Results by System as of June 30, 2024 (State and Municipal)

State Sponsored Plans	Employees				LEOPS	Total State*
	Teachers	(State)	State Police	Judges	(State)	
Actuarial Liability - Active Members	\$ 24,128,605,490	\$ 9,257,187,011	\$ 749,055,152	\$ 225,533,730	\$ 513,309,310	\$ 34,873,690,693
Actuarial Liability - Retirees, Term. Vested, & Inactives	<u>31,555,382,517</u>	<u>17,647,158,502</u>	<u>2,342,302,046</u>	<u>537,937,021</u>	<u>1,048,452,897</u>	<u>53,131,232,983</u>
Total Actuarial Liability	\$ 55,683,988,007	\$ 26,904,345,513	\$ 3,091,357,198	\$ 763,470,751	\$ 1,561,762,207	\$ 88,004,923,676
Actuarial Value of Assets	42,592,549,276	17,899,722,640	2,017,984,559	630,597,234	1,047,861,577	64,188,715,285
Unfunded Actuarial Accrued Liability (UAAL)	13,091,438,731	9,004,622,873	1,073,372,639	132,873,517	513,900,630	23,816,208,391
Funded Ratio	76.49%	66.53%	65.28%	82.60%	67.09%	72.94%
Active Member Payroll	\$ 9,102,349,400	\$ 4,493,811,865	\$ 145,026,245	\$ 61,180,934	\$ 158,000,369	\$ 13,960,368,813
UAAL as a Percent-of-Payroll	143.8%	200.4%	740.1%	217.2%	325.3%	170.6%
Employer Normal Cost Contribution	5.09%	4.74%	31.07%	32.92%	19.02%	5.52%
UAAL Contribution	<u>12.47%</u>	<u>17.13%</u>	<u>63.74%</u>	<u>18.71%</u>	<u>28.01%</u>	<u>14.71%</u>
Total Employer Contribution	17.56%	21.87%	94.81%	51.63%	47.03%	20.23%

Municipal Plans	Employees	LEOPS	CORS	Total Municipal
	(Municipal)	(Municipal)	(Municipal)	
Actuarial Liability - Active Members	\$ 2,725,421,939	\$ 326,374,797	\$ 26,624,742	\$ 3,078,421,478
Actuarial Liability - Retirees, Term. Vested, & Inactives	<u>4,197,694,291</u>	<u>460,537,581</u>	<u>33,339,222</u>	<u>4,691,571,094</u>
Total Actuarial Liability	\$ 6,923,116,230	\$ 786,912,378	\$ 59,963,964	\$ 7,769,992,572
Actuarial Value of Assets	<u>5,555,841,674</u>	<u>536,448,861</u>	<u>44,758,619</u>	<u>6,137,049,154</u>
Unfunded Actuarial Accrued Liability (UAAL)	1,367,274,556	250,463,517	15,205,345	1,632,943,418
Funded Ratio	80.25%	68.17%	74.64%	78.98%
Active Member Payroll	\$ 1,570,028,647	\$ 109,415,027	\$ 10,540,976	\$ 1,689,984,650
UAAL as a Percent-of-Payroll	87.1%	228.9%	144.2%	96.6%

State and Municipal Sponsored Plans	Teachers	Employees	State Police	Judges	LEOPS	CORS	Total SRPS
Actuarial Liability - Active Members	\$ 24,128,605,490	\$ 11,982,608,950	\$ 749,055,152	\$ 225,533,730	\$ 839,684,107	\$ 26,624,742	\$ 37,952,112,171
Actuarial Liability - Retirees, Term. Vested, & Inactives	<u>31,555,382,517</u>	<u>21,844,852,793</u>	<u>2,342,302,046</u>	<u>537,937,021</u>	<u>1,508,990,478</u>	<u>33,339,222</u>	<u>57,822,804,077</u>
Total Actuarial Liability	\$ 55,683,988,007	\$ 33,827,461,743	\$ 3,091,357,198	\$ 763,470,751	\$ 2,348,674,585	\$ 59,963,964	\$ 95,774,916,248
Actuarial Value of Assets	42,592,549,276	23,455,564,314	2,017,984,559	630,597,234	1,584,310,438	44,758,619	70,325,764,439
Unfunded Actuarial Accrued Liability (UAAL)	13,091,438,731	10,371,897,429	1,073,372,639	132,873,517	764,364,147	15,205,345	25,449,151,809
Funded Ratio	76.49%	69.34%	65.28%	82.60%	67.46%	74.64%	73.43%
Active Member Payroll	\$ 9,102,349,400	\$ 6,063,840,512	\$ 145,026,245	\$ 61,180,934	\$ 267,415,396	\$ 10,540,976	\$ 15,650,353,463
UAAL as a Percent-of-Payroll	143.8%	171.0%	740.1%	217.2%	285.8%	144.2%	162.6%

* Contribution rates shown in the "Total" column are for informational purposes only and are not used for funding purposes.



Calculation of Illustrated State Contributions

	Teachers	Employees (State)	State Police	Judges	LEOPS (State)	Total State
Percentage of Total Pension Reform Savings*	67.7%	29.4%	1.4%	0.0%	1.5%	100.0%
FY 2026 Contributions						
Employer Normal Cost Contribution	5.09%	4.74%	31.07%	32.92%	19.02%	5.52%
UAAL Contribution	<u>12.47%</u>	<u>17.13%</u>	<u>63.74%</u>	<u>18.71%</u>	<u>28.01%</u>	<u>14.71%</u>
Total Actuarial Employer Contribution	17.56%	21.87%	94.81%	51.63%	47.03%	20.23%
Projected Payroll	\$ 9,375,419,882	\$ 4,697,542,561	\$ 151,601,130	\$ 63,954,622	\$ 165,163,447	\$ 14,453,681,642
Illustrated Contribution Dollars						
Local Employers' Portion	\$ 438,670,453					\$ 438,670,453
State Portion	1,207,653,278	\$ 1,027,352,558	\$ 143,733,031	\$ 33,019,771	\$ 77,676,369	2,489,435,007
Dollar Reinvested Savings	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Total Illustrated Contribution Dollars	\$ 1,646,323,731	\$ 1,027,352,558	\$ 143,733,031	\$ 33,019,771	\$ 77,676,369	\$ 2,928,105,460

**Reinvested savings allocated among the State systems based on their proportionate share of the total savings measured as of June 30, 2011. The allocation percentages do not change. Due to the uncertain nature of future reinvested savings contributions, these additional contributions are no longer factored into the calculation of the contribution requirements of the State Systems.*



Summary of State Contributions (State Portion Only)

		Teachers' Combined	Employees' Combined	State Police	Judges	LEOPS	Total State#
7/1/2024 Valuation Results (FY 2026)	Unfunded Actuarial Liability	\$ 13,091,438,731	\$ 9,004,622,873	\$ 1,073,372,639	\$ 132,873,517	\$ 513,900,630	\$ 23,816,208,391
	Illustrated Contribution Dollars	\$ 1,646,323,731	\$ 1,027,352,558	\$ 143,733,031	\$ 33,019,771	\$ 77,676,369	\$ 2,928,105,460
	Local Employers' Portion	438,670,453	NA	NA	NA	NA	\$ 438,670,453
	State Portion	\$ 1,207,653,278	\$ 1,027,352,558	\$ 143,733,031	\$ 33,019,771	\$ 77,676,369	\$ 2,489,435,007
	Projected Payroll	\$ 9,375,419,882	\$ 4,697,542,561	\$ 151,601,130	\$ 63,954,622	\$ 165,163,447	\$ 14,453,681,642
	Total Contributions as Percentage of Payroll	17.56%	21.87%	94.81%	51.63%	47.03%	20.23%
7/1/2023 Valuation Results (FY 2025)	Unfunded Actuarial Liability	\$ 11,145,091,466	\$ 8,302,628,104	\$ 965,034,317	\$ 101,840,075	\$ 486,258,403	\$ 21,000,852,366
	Illustrated Contribution Dollars	\$ 1,413,993,485	\$ 906,196,875	\$ 124,203,283	\$ 28,867,293	\$ 70,403,469	\$ 2,543,663,685
	Local Employers' Portion	397,123,646	NA	NA	NA	NA	397,123,646
	State Portion	\$ 1,067,642,407	\$ 928,215,958	\$ 125,253,490	\$ 28,867,293	\$ 71,560,892	\$ 2,221,540,039
	Projected Payroll	\$ 8,701,498,367	\$ 4,207,038,790	\$ 145,250,009	\$ 61,133,614	\$ 153,051,019	\$ 13,267,971,799
	Total Contributions as Percentage of Payroll	16.25%	21.54%	85.51%	47.22%	46.00%	19.15%

Contribution rates shown in the "Total" column are for informational purposes only and are not used for funding purposes.
FY 2025 illustrative contribution exclude reinvested savings.



State Budgeted Contribution Rates by System for the Fiscal Years 2016 to 2026 (State Portion Only)

Valuation Date June 30,	Fiscal Year	Teachers' Combined	Employees' Combined	State Police	Judges	LEOPS	Total State*
2024	2026 #	17.56%	21.87%	94.81%	51.63%	47.03%	20.23%
2023	2025 #	16.25%	21.54%	85.51%	47.22%	46.00%	19.15%
2022	2024 #	14.86%	21.13%	78.68%	43.00%	45.89%	17.88%
2021	2023 #	14.65%	20.68%	76.45%	40.02%	44.73%	17.55%
2020	2022 #	14.67%	20.50%	75.30%	41.92%	42.28%	17.50%
2019	2021 #	14.96%	20.71%	78.09%	40.27%	42.96%	17.75%
2018	2020 #	15.59%	19.56%	79.58%	44.44%	41.37%	17.82%
2017	2019 #	15.43%	18.58%	78.41%	44.53%	39.78%	17.42%
2016	2018 #	15.71%	18.56%	80.29%	46.45%	39.69%	17.60%
2015	2017 #	15.79%	18.28%	81.40%	46.56%	39.60%	17.58%
2014	2016 #	15.71%	16.38%	78.91%	40.70%	39.77%	16.83%

* Contribution rates shown in the "Total" column are for informational purposes only and are not used for funding purposes.

Excludes reinvested savings.



Detailed Actuarial Information

Teachers' Combined System

	Actuarial Valuation Performed		% Change
	June 30, 2024 (for FY 2026)	June 30, 2023 (for FY 2025)	
A. Demographic Information			
1. Active Number Count	115,316	112,773	2.3%
2. Retired Member and Beneficiary Count	84,975	84,177	0.9%
3. Vested Former Member Count	23,494	23,702	-0.9%
4. Total Number Count	223,785	220,652	1.4%
5. Active Payroll	\$ 9,102,349,400	\$ 8,468,611,549	7.5%
6. Annual Benefits for Retired Members [#]	\$ 2,847,358,849	\$ 2,727,122,841	4.4%
B. Actuarial Results			
1. Present Value of Projected Benefits Attributable to:			
a. Retired and Disabled Members, and Beneficiaries	\$ 29,941,704,405	\$ 28,933,140,677	3.5%
b. Terminated Vested Members and Former Members Due Refunds of Employee Contributions	1,613,678,112	1,558,509,242	3.5%
c. Active Members	34,734,199,000	31,799,789,971	9.2%
d. Total Present Value	\$ 66,289,581,517	\$ 62,291,439,890	6.4%
2. Less Present Value Total Future Normal Costs	10,605,593,510	9,843,286,174	7.7%
3. Actuarial Accrued Liability (1d – 2)	\$ 55,683,988,007	\$ 52,448,153,716	6.2%
4. Less Actuarial Value of Assets	42,592,549,276	41,303,062,250	3.1%
5. Unfunded Actuarial Accrued Liability (UAAL) (3 - 4)	\$ 13,091,438,731	\$ 11,145,091,466	17.5%
6. Funded Ratio	76.49%	78.75%	
7. Employer Normal Cost	\$ 477,208,872	\$ 431,594,319	10.6%
8. Total Projected Payroll	\$ 9,375,419,882	\$ 8,701,498,367	7.7%
9. Total Normal Cost Rate	12.09%	11.96%	
10. Employee Contribution Rate	7.00%	7.00%	
11. Employers' [@] Normal Cost Rate	5.09%	4.96%	
12. UAAL Projected to Contribution Period	\$ 12,931,864,409	\$ 11,033,534,748	
13. Amortization Payment	\$ 1,169,219,297	\$ 982,639,062	
14. UAAL Amortization Rate [*]	12.47%	11.29%	
15. Total Actuarial Employer Contribution Rate (11 + 14)	17.56%	16.25%	

[#] Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2024 and July 1, 2023, respectively.

[@] Employers include the State and local Boards of Education.

^{*} Includes the effects of the one-year lag between the valuation date and the beginning of the contribution period.



Amortization of Unfunded Actuarial Accrued Liability Teachers' Combined System

Base Year	Description	Initial Balance	Current Balance	Projected to Contribution Period	Initial Financing Period	Remaining Financing Period	Amortization Factor	Dollar Payment	% of Payroll Contribution
2023	Initial UAAL	\$ 11,145,091,466	\$ 10,877,609,271	\$ 10,745,019,786	15 yrs.	14 yrs.	10.82109	\$ 992,970,041	10.59%
2024	Assumption Change	-	604,526,273	597,157,574	25	25	16.20485	36,850,557	0.39%
2024	Experience (Gain)/Loss	-	1,609,303,187	1,589,687,049	15	15	11.40389	139,398,699	1.49%
Totals		\$ 11,145,091,466	\$ 13,091,438,731	\$ 12,931,864,409		14.5 yrs.	11.06026	\$ 1,169,219,297	12.47%

Detailed Actuarial Information

Employees' Combined System (State)

	Actuarial Valuation Performed		% Change
	June 30, 2024 (for FY 2026)	June 30, 2023 (for FY 2025)	
A. Demographic Information			
1. Active Number Count	59,144	56,274	5.1%
2. Retired Member and Beneficiary Count	65,283	64,850	0.7%
3. Vested Former Member Count	16,415	17,023	-3.6%
4. Total Number Count	140,842	138,147	2.0%
5. Active Payroll	\$ 4,493,811,865	\$ 4,039,278,245	11.3%
6. Annual Benefits for Retired Members [#]	\$ 1,493,707,522	\$ 1,425,926,592	4.8%
B. Actuarial Results			
1. Present Value of Projected Benefits Attributable to:			
a. Retired and Disabled Members, and Beneficiaries	\$ 16,622,276,485	\$ 15,979,970,690	4.0%
b. Terminated Vested Members and Former Members Due Refunds of Employee Contributions	1,024,882,017	1,040,955,547	-1.5%
c. Active Members	13,380,809,151	11,838,509,694	13.0%
d. Total Present Value	\$ 31,027,967,653	\$ 28,859,435,931	7.5%
2. Less Present Value Total Future Normal Costs	4,123,622,140	3,360,950,839	22.7%
3. Actuarial Accrued Liability (1d – 2)	\$ 26,904,345,513	\$ 25,498,485,092	5.5%
4. Less Actuarial Value of Assets	17,899,722,640	17,195,856,988	4.1%
5. Unfunded Actuarial Accrued Liability (UAAL) (3 - 4)	\$ 9,004,622,873	\$ 8,302,628,104	8.5%
6. Funded Ratio	66.53%	67.44%	
7. Employer Normal Cost	\$ 216,178,172	\$ 176,060,991	22.8%
8. Total Projected Payroll	\$ 4,560,720,933	\$ 4,094,441,645	11.4%
9. Total Normal Cost Rate	11.49%	11.04%	
10. Employee Contribution Rate	6.75%	6.74%	
11. Employers' Normal Cost Rate	4.74%	4.30%	
12. UAAL Projected to Contribution Period	\$ 8,825,113,692	\$ 8,144,357,808	
13. Amortization Payment	\$ 804,797,761	\$ 725,330,939	
14. UAAL Amortization Rate*	17.13%	17.24%	
15. Total Actuarial Employer Contribution Rate (11 + 14)	21.87%	21.54%	

* Includes the effects of the one-year lag between the valuation date and the beginning of the contribution period.

Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2024 and July 1, 2023, respectively.



Amortization of Unfunded Actuarial Accrued Liability Employees' Combined System (State)

Base Year	Description	Initial Balance	Current Balance	Projected to Contribution Period	Initial Financing Period	Remaining Financing Period	Amortization Factor	Dollar Payment	% of Payroll Contribution
2023	Initial UAAL	\$ 8,302,628,104	\$ 8,103,365,030	\$ 7,941,822,626	15 yrs.	14 yrs.	10.82109	\$ 733,920,653	15.62%
2024	Assumption Change	-	258,356,304	253,205,913	25	25	16.20485	15,625,321	0.33%
2024	Experience (Gain)/Loss	-	642,901,539	630,085,153	15	15	11.40389	55,251,787	1.18%
Totals		\$ 8,302,628,104	\$ 9,004,622,873	\$ 8,825,113,692		14.3 yrs.	10.96563	\$ 804,797,761	17.13%

Detailed Actuarial Information

State Police

	Actuarial Valuation Performed		
	June 30, 2024 (for FY 2026)	June 30, 2023 (for FY 2025)	% Change
A. Demographic Information			
1. Active Number Count	1,312	1,335	-1.7%
2. Retired Member and Beneficiary Count	2,638	2,606	1.2%
3. Vested Former Member Count	85	88	-3.4%
4. Total Number Count	4,035	4,029	0.1%
5. Active Payroll	\$ 145,026,245	\$ 139,457,997	4.0%
6. Annual Benefits for Retired Members [#]	\$ 167,342,110	\$ 157,847,047	6.0%
B. Actuarial Results			
1. Present Value of Projected Benefits Attributable to:			
a. Retired and Disabled Members, and Beneficiaries	\$ 2,325,239,435	\$ 2,174,770,124	6.9%
b. Terminated Vested Members and Former Members Due Refunds of Employee Contributions	17,062,611	20,343,743	-16.1%
c. Active Members	1,327,756,425	1,122,659,323	18.3%
d. Total Present Value	\$ 3,670,058,471	\$ 3,317,773,190	10.6%
2. Less Present Value Total Future Normal Costs	578,701,273	413,941,376	39.8%
3. Actuarial Accrued Liability (1d – 2)	\$ 3,091,357,198	\$ 2,903,831,814	6.5%
4. Less Actuarial Value of Assets	2,017,984,559	1,938,797,497	4.1%
5. Unfunded Actuarial Accrued Liability (UAAL) (3 - 4)	\$ 1,073,372,639	\$ 965,034,317	11.2%
6. Funded Ratio	65.28%	66.77%	
7. Employer Normal Cost	\$ 45,730,555	\$ 38,139,613	19.9%
8. Total Projected Payroll	\$ 147,185,563	\$ 141,362,540	4.1%
9. Total Normal Cost Rate	38.93%	34.86%	
10. Employee Contribution Rate	7.86%	7.88%	
11. Employers' Normal Cost Rate	31.07%	26.98%	
12. UAAL Projected to Contribution Period	\$ 1,063,554,615	\$ 954,617,385	
13. Amortization Payment	\$ 96,635,107	\$ 85,017,572	
14. UAAL Amortization Rate*	63.74%	58.53%	
15. Total Actuarial Employer Contribution Rate (11 + 14)	94.81%	85.51%	

* Includes the effects of the one-year lag between the valuation date and the beginning of the contribution period.

Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2024 and July 1, 2023, respectively.



Amortization of Unfunded Actuarial Accrued Liability State Police

Base Year	Description	Initial Balance	Current Balance	Projected to Contribution Period	Initial Financing Period	Remaining Financing Period	Amortization Factor	Dollar Payment	% of Payroll Contribution
2023	Initial UAAL	\$ 965,034,317	\$ 941,873,494	\$ 933,258,279	15 yrs.	14 yrs.	10.82109	\$ 86,244,375	56.89%
2024	Assumption Change	-	40,202,071	39,834,347	25	25	16.20485	2,458,175	1.62%
2024	Experience (Gain)/Loss	-	91,297,074	90,461,990	15	15	11.40389	7,932,557	5.23%
Totals		\$ 965,034,317	\$ 1,073,372,639	\$ 1,063,554,616		14.4 yrs.	11.00588	\$ 96,635,107	63.74%

Detailed Actuarial Information

Judges

	Actuarial Valuation Performed		% Change
	June 30, 2024 (for FY 2026)	June 30, 2023 (for FY 2025)	
A. Demographic Information			
1. Active Number Count	322	326	-1.2%
2. Retired Member and Beneficiary Count	471	468	0.6%
3. Vested Former Member Count	8	8	0.0%
4. Total Number Count	801	802	-0.1%
5. Active Payroll	\$ 61,180,934	\$ 58,695,840	4.2%
6. Annual Benefits for Retired Members [#]	\$ 48,619,393	\$ 45,729,800	6.3%
B. Actuarial Results			
1. Present Value of Projected Benefits Attributable to:			
a. Retired and Disabled Members, and Beneficiaries	\$ 530,076,756	\$ 498,315,910	6.4%
b. Terminated Vested Members and Former Members Due Refunds of Employee Contributions	7,860,265	6,604,620	19.0%
c. Active Members	394,004,534	365,228,619	7.9%
d. Total Present Value	\$ 931,941,555	\$ 870,149,149	7.1%
2. Less Present Value Total Future Normal Costs	168,470,804	155,495,067	8.3%
3. Actuarial Accrued Liability (1d – 2)	\$ 763,470,751	\$ 714,654,082	6.8%
4. Less Actuarial Value of Assets	630,597,234	612,814,007	2.9%
5. Unfunded Actuarial Accrued Liability (UAAL) (3 - 4)	\$ 132,873,517	\$ 101,840,075	30.5%
6. Funded Ratio	82.60%	85.75%	
7. Employer Normal Cost	\$ 20,440,642	\$ 19,235,520	6.3%
8. Total Projected Payroll	\$ 62,091,867	\$ 59,497,434	4.4%
9. Total Normal Cost Rate	39.85%	39.39%	
10. Employee Contribution Rate	6.93%	7.06%	
11. Employers' Normal Cost Rate	32.92%	32.33%	
12. UAAL Projected to Contribution Period	\$ 132,732,854	\$ 102,204,529	
13. Amortization Payment	\$ 11,966,316	\$ 9,102,265	
14. UAAL Amortization Rate*	18.71%	14.89%	
15. Total Actuarial Employer Contribution Rate (11 + 14)	51.63%	47.22%	

* Includes the effects of the one-year lag between the valuation date and the beginning of the contribution period.

Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2024 and July 1, 2023, respectively.



Amortization of Unfunded Actuarial Accrued Liability Judges

Base Year	Description	Initial Balance	Current Balance	Contribution Period	Financing Period	Financing Period	Amortization Factor	Dollar Payment	% of Payroll Contribution
2023	Initial UAAL	\$ 101,840,075	\$ 99,395,913	\$ 99,290,690	15 yrs.	14 yrs.	10.82109	\$ 9,175,663	14.35%
2024	Assumption Change	-	5,555,939	5,550,057	25	25	16.20485	342,494	0.54%
2024	Benefit Change	-	69,686	69,612	10	10	8.26682	8,421	0.01%
2024	Experience (Gain)/Loss	-	27,851,979	27,822,494	15	15	11.40389	2,439,738	3.81%
Totals		\$ 101,840,075	\$ 132,873,517	\$ 132,732,853		14.5 yrs.	11.09221	\$ 11,966,316	18.71%

Detailed Actuarial Information

LEOPS (State)

	Actuarial Valuation Performed		% Change
	June 30, 2024 (for FY 2026)	June 30, 2023 (for FY 2025)	
A. Demographic Information			
1. Active Number Count	1,589	1,569	1.3%
2. Retired Member and Beneficiary Count	1,899	1,850	2.6%
3. Vested Former Member Count	174	174	0.0%
4. Total Number Count	3,662	3,593	1.9%
5. Active Payroll	\$ 158,000,369	\$ 146,947,932	7.5%
6. Annual Benefits for Retired Members [#]	\$ 76,421,166	\$ 72,150,485	5.9%
B. Actuarial Results			
1. Present Value of Projected Benefits Attributable to:			
a. Retired and Disabled Members, and Beneficiaries	\$ 1,020,792,701	\$ 975,942,721	4.6%
b. Terminated Vested Members and Former Members Due Refunds of Employee Contributions	27,660,196	25,913,978	6.7%
c. Active Members	868,661,294	769,601,165	12.9%
d. Total Present Value	\$ 1,917,114,191	\$ 1,771,457,864	8.2%
2. Less Present Value Total Future Normal Costs	355,351,984	296,753,694	19.7%
3. Actuarial Accrued Liability (1d – 2)	\$ 1,561,762,207	\$ 1,474,704,170	5.9%
4. Less Actuarial Value of Assets	1,047,861,577	988,445,767	6.0%
5. Unfunded Actuarial Accrued Liability (UAAL) (3 - 4)	\$ 513,900,630	\$ 486,258,403	5.7%
6. Funded Ratio	67.09%	67.03%	
7. Employer Normal Cost	\$ 30,499,114	\$ 27,243,826	11.9%
8. Total Projected Payroll	\$ 160,352,861	\$ 148,954,763	7.7%
9. Total Normal Cost Rate	25.94%	25.21%	
10. Employee Contribution Rate	6.92%	6.92%	
11. Employers' Normal Cost Rate	19.02%	18.29%	
12. UAAL Projected to Contribution Period	\$ 504,135,912	\$ 476,274,677	
13. Amortization Payment	\$ 46,266,155	\$ 42,416,697	
14. UAAL Amortization Rate*	28.01%	27.71%	
15. Total Actuarial Employer Contribution Rate (11 + 14)	47.03%	46.00%	

* Includes the effects of the one-year lag between the valuation date and the beginning of the contribution period.

[#] Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2024 and July 1, 2023, respectively.



Amortization of Unfunded Actuarial Accrued Liability LEOPS (State)

Base Year	Description	Initial Balance	Current Balance	Projected to Contribution Period	Initial Financing Period	Remaining Financing Period	Amortization Factor	Dollar Payment	% of Payroll Contribution
2023	Initial UAAL	\$ 486,258,403	\$ 474,588,201	\$ 465,570,466	15 yrs.	14 yrs.	10.82109	\$ 43,024,353	26.05%
2024	Benefit Change	-	5,492,411	5,388,049	25	25	16.20485	332,496	0.20%
2024	Experience (Gain)/Loss	-	33,820,018	33,177,397	15	15	11.40389	2,909,306	1.76%
Totals		\$ 486,258,403	\$ 513,900,630	\$ 504,135,912		14.1 yrs.	10.89643	\$ 46,266,155	28.01%

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 System'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;
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.

The assessment of the financial impact on the System first requires the identification of the key risks that impact the System. Actuarial Standard of Practice (ASOP) 51 Section 3.2 states, "The actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition."



Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The areas of risk that may reasonably be anticipated to significantly affect the future financial condition of MSRPS include:

- Investment risk;
- Inflation risk including influence on pay increases and retiree cost-of-living adjustments (COLAs);
- Assumption change risk including a change in interest rate assumption;
- Contribution risk; and
- Demographic risks.

Historical Analysis

One method of identifying significant risks to MSRPS is to analyze historical data related to changes in the Unfunded Actuarial Accrued Liability (UAAL) over time by source. The following table shows changes in the UAAL by source over the past several years, in terms of dollars and percent of the beginning of year AAL for the State systems.

Historical Actuarial Valuation Results - State Only (\$ Millions)												
Valuation Year	Demographic (Gain)/Loss and Other Sources		(Gain)/Loss due to Pay Increases		(Gain)/Loss due to Retiree COLAs		Investment (Gain)/Loss		Impact of Benefit Changes		Impact of Assumption Changes	
	% of BOY		% of BOY		% of BOY		% of BOY		% of BOY		% of BOY	
	\$	AAL	\$	AAL	\$	AAL	\$	AAL	\$	AAL	\$	AAL
2017	\$ (92)	-0.1%	\$ (186)	-0.3%	\$ (301)	-0.5%	\$ 254	0.4%	\$ -	0.0%	\$ 117	0.2%
2018	(45)	-0.1%	(341)	-0.5%	163	0.3%	305	0.5%	1	0.0%	140	0.2%
2019	89	0.1%	(116)	-0.2%	13	0.0%	847	1.3%	-	0.0%	(754)	-1.1%
2020	(627)	-0.9%	204	0.3%	(182)	-0.3%	794	1.2%	-	0.0%	-	0.0%
2021	(121)	-0.2%	(222)	-0.3%	(404)	-0.6%	(1,540)	-2.2%	-	0.0%	1,262	1.8%
2022	(36)	0.0%	223	0.3%	668	0.9%	(98)	-0.1%	-	0.0%	-	0.0%
2023	(32)	0.0%	1,301	1.7%	1,014	1.3%	769	1.0%	(4)	0.0%	-	0.0%
2024	(95)	-0.1%	925	1.1%	627	0.8%	763	0.9%	0	0.0%	914	1.1%
Total	\$ (959)		\$ 1,789		\$ 1,598		\$ 2,095		\$ (3)		\$ 1,679	

As shown in the above table, investment experience has been the most significant experience factor contributing to the change in the UAAL of MSRPS. Assumption changes, gains and losses related to pay increases and retiree COLAs were the next significant. Demographic gains and losses and other sources were the next impactful, although the experience was favorable for the System. Benefit changes have had little effect on the UAAL. MSRPS will be increasingly impacted by investment risk as the assets and funded ratio grow over time. In addition, the use of asset smoothing helps dampen the annual volatility due to this risk.

Risk Analysis and Stress Testing

Additional analysis of some of the risks identified was performed as part of the valuation process. While some of the commentary from that analysis are contained in the following pages, we refer the reader to the presentation made to the Board at the October meeting for additional quantitative analysis.



Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

Risk Definitions and Commentary

Investment Risk

Investment risk is the potential that investment returns will be different than expected. In general, the chief concern is that investment returns will be lower than expected, leading to increases in the Unfunded Actuarial Accrued Liability (UAAL), which leads to additional contributions to make up the investment return shortfall.

Inflation Risk

Inflation risk is an additional economic risk that inflation returns will be different than expected. In general, the chief concern is that higher inflation than expected will lead to greater than assumed pay increases and retiree COLAs, leading to increases in the UAAL and require additional contributions. Experience related to inflation was favorable in the not too distant past but recently historically high inflation has led to sizable losses to the System stemming from pay increases and retiree COLAs.

Assumption Change Risk

Assumption change risk is the potential that assumptions will need to change to reflect the circumstances surrounding future actuarial valuations. One example of this risk is that a significant shift in capital market expectations could require a reduction in the investment return assumption.

Contribution Risk

Contribution risk is the potential that actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the System's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant factors that determine the amount of contributions the System will receive.

To the extent that certain assumptions differ from actual experience, significant changes in contributions could occur. The analysis of risks related to changes in the actuarial assumptions are dealt with in the Assumption Change Risk and Demographic Risk sections.

Demographic Risk

Demographic risk is the potential for demographic experience, or experience related to the activity of the covered members, to differ from what the actuarial valuation assumes. For example, members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and 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.

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

Although there are other areas of demographic risk (including mortality, retirement, termination, and disability) differing from the assumptions used in the actuarial valuation, the table on the previous page indicates that demographic gains and losses have been mostly favorable to the System. However, the favorable experience is not expected to persist and may negatively impact the change in unfunded liability for MSRPS in the future.

Other Risks and Factors Considered

An additional risk area that was not analyzed using stress testing was *asset/liability mismatch risk*. This is the risk that potential changes in the assets are not matched by changes in the liabilities. This risk is closely related to many of the risks that were previously discussed. For example, asset/liability mismatch occurs in MSPRS because the discount return is linked to the expected return on assets. If the investment return assumption decreases, there is an immediate increase in the liabilities and a decrease in future expected returns on the assets. Therefore, asset/liability mismatch risk is also related to assumption change risk. Asset/liability mismatch risk can also be related to demographic risk since future changes in demographics will influence the liabilities to a greater extent than the assets. Asset/liability mismatch risk is common in public sector plans for the reasons stated above. Relatively well funded plans that utilize Liability Driven Investing or other significant hedging strategies are generally less exposed to asset/liability mismatch risk.

PLAN MATURITY MEASURES

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures for MSRPS include the following. Additional maturity measures are shown on the following pages.

	2024	2023	2022	2021
Ratio of market value of assets to total payroll	4.34	4.51	4.87	5.30
Ratio of actuarial accrued liability to total payroll	6.12	6.28	6.46	6.41
Ratio of actives to retirees and beneficiaries	1.16	1.14	1.13	1.15
Ratio of net cash flow to market value of assets	-2.1%	-2.2%	-2.1%	-1.9%
Approximate duration of the actuarial accrued liability	12.39	12.36	12.39	12.48
Approximate duration of the present value of benefits	15.73	15.51	15.53	15.67

RATIO OF MARKET VALUE OF ASSETS TO PAYROLL

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

RATIO OF ACTIVES TO RETIREES AND BENEFICIARIES

A young plan with many active members and few retirees will have a high ratio of actives to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.



RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being 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.

DURATION OF ACTUARIAL ACCRUED LIABILITY

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, a duration of 10 indicates that the liability would increase approximately 10% if the assumed rate of return were lowered 1%.

ADDITIONAL RISK ASSESSMENT

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

Risk Measures Summary

State and Municipal

(\$ in Millions)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
			Market		Market				
	Accrued	Market	Value	Valuation	Funded	Retiree	RetLiab /	AAL /	Assets /
Valuation	Liabilities	Value of	Unfunded	Payroll	Ratio	Liabilities	AAL	Payroll	Payroll
Date (6/30)	(AAL)	Assets	AAL		(2)/(1)	(RetLiab)	(6)/(1)	(1)/(4)	(2)/(4)
2015	\$ 66,282	\$ 45,790	\$ 20,492	\$ 11,064	69.1%	\$ 38,588	58.2%	599.1%	413.9%
2016	67,782	45,366	22,416	11,156	66.9%	39,785	58.7%	607.6%	406.7%
2017	69,987	48,987	20,999	11,419	70.0%	41,112	58.7%	612.9%	429.0%
2018	72,575	51,827	20,747	11,566	71.4%	43,237	59.6%	627.5%	448.1%
2019	74,526	53,943	20,583	11,905	72.4%	44,420	59.6%	626.0%	453.1%
2020	76,471	54,586	21,885	12,501	71.4%	45,382	59.3%	611.7%	436.6%
2021	81,739	67,604	14,134	12,749	82.7%	47,695	58.4%	641.1%	530.3%
2022	85,248	64,311	20,937	13,202	75.4%	50,091	58.8%	645.7%	487.1%
2023	90,319	64,893	25,426	14,385	71.8%	52,720	58.4%	627.9%	451.1%
2024	95,775	67,910	27,865	15,650	70.9%	54,821	57.2%	612.0%	433.9%

(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 ratios 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.

Risk Measures Summary

State and Municipal

(\$ in Millions)

	(10)	(11)	(12)	(13)	(14)	(15)	(16)
				Non- Investment		Market	5-Year
Valuation Date (6/30)	Portfolio StdDev	Std Dev % of Pay	Unfunded / Payroll	Cash Flow (NICF)	NICF / Assets	Rate of Return	Trailing Average
2015			185.2%	\$ (748)	-1.6%	2.7%	9.3%
2016			200.9%	(921)	-2.0%	1.1%	5.6%
2017	13.3%	57.1%	183.9%	(852)	-1.7%	10.0%	7.6%
2018	13.3%	59.6%	179.4%	(1,059)	-2.0%	8.1%	7.1%
2019	12.6%	57.1%	172.9%	(1,172)	-2.2%	6.4%	5.6%
2020	12.6%	55.0%	175.1%	(1,224)	-2.2%	3.5%	5.8%
2021	12.9%	68.4%	110.9%	(1,297)	-1.9%	26.5%	10.6%
2022	12.9%	62.8%	158.6%	(1,351)	-2.1%	-2.9%	7.9%
2023	13.0%	58.6%	176.8%	(1,398)	-2.2%	3.1%	6.9%
2024	12.9%	56.0%	178.0%	(1,400)	-2.1%	6.9%	7.0%

- (10) and (11). The portfolio standard deviation measures the volatility of investment return. When multiplied by the ratio of assets to payroll it gives the effect of a one standard deviation asset move as a percent of payroll. This figure helps users understand the difficulty of dealing with investment volatility and the challenges volatility brings to sustainability. This ratio is likely to increase as the plan approaches full funding.
- (12). 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.
- (13) and (14). 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.
- (15) and (16). Investment return is probably the largest single risk that most systems face. The year-by-year return and the 5-year geometric average both give an indication of the past relationship between actual return and the system's assumed return. Of course, past performance is not a guarantee of future results. Market rate shown is based on actuarial estimation method and differs modestly from figures reported by the System.

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).

What is the LDROM?

The LDROM is a particular measure of the benefits earned (or costs accrued if appropriate under the actuarial cost method used for this purpose) as of the measurement date.

How is the LDROM Calculated?

The LDROM is calculated using an immediate gain actuarial cost method, one in which gains and losses become part of the unfunded actuarial accrued liabilities. Examples would be Entry Age Normal Cost, Projected Unit Credit, and Traditional Unit Credit. It is based upon a discount rate or discount rates derived from low-default-risk fixed income securities whose cash flows are reasonably consistent with the pattern of benefits expected to be paid in the future.

What Does the LDROM Tell Me?

The LDROM gives an approximate measure of the cost as of the measurement date of securing benefits by constructing a Low-Default-Risk Bond portfolio whose cash flows match the pattern of benefits expected to be paid in the future. 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.

Is the LDROM the “right” liability that should be reported?

No single number, including the LDROM can provide all of the information necessary to understand the financial condition of a pension plan. 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:

“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.”

Low-Default-Risk Obligation Measure

COMPARING THE ACCRUED LIABILITIES AND THE LDROM

The LDROM results presented in this report are based on the Entry Age Normal (EAN) actuarial cost method and discount rates based upon the June 2024 (end of month) Treasury Yield Curve Spot Rates.

The 1-, 5-, 10-, 20- and 30-year rates follow: 5.12%, 4.34%, 4.22%, 4.64%, and 4.45%.

The funding actuarial accrued liability is based on the EAN actuarial cost method and discount rate (the expected long-term rate of return on assets) of 6.80%.

Presented below is a comparison of the funding actuarial accrued liability and the LDROM as of June 30, 2024 for the Maryland State Retirement and Pension System:

(\$ in Millions)

	Funding Actuarial Accrued Liabilities	LDROM
TCS	\$55,684	\$75,692
ECS	\$33,827	\$44,863
State Police	\$3,091	\$4,254
Judges	\$763	\$981
LEOPS	\$2,349	\$3,258
CORS	\$60	\$83
MSRPS	\$95,775	\$129,130

The difference between the funding actuarial accrued liability and the LDROM is one illustration of the potential savings in contributions (on a present value basis) due to the additional investment earnings that the System anticipates from taking on the risk in its well-diversified portfolio (which would not be earned by investing in low-default-risk fixed income securities).

Since plan assets are not invested in a portfolio of low-default-risk fixed income securities, LDROM does not provide relevant information on the funded status or statutory contribution requirements. Benefit security for members of the plan relies on a combination of the current assets in the plan, the future investment returns generated on those assets, and the promise of future contributions from the plan sponsor.

The LDROM liability contained in this report was provided solely to comply with the requirements of ASOP 4 section 3.11 and should not be used for any other purpose. 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 if the portfolio market interest rates used to settle the benefit obligations are significantly different than those used in the LDROM liability measurement.



SECTION III

ASSETS

Assets

Pension plan assets play a key role in the financial operation of the plan 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, negotiated contributions, and the ultimate security of participants' benefits.

In this section we present detailed information on plan assets including:

- **Disclosure** of plan assets at June 30, 2024 and June 30, 2023;
- Statement of the **changes** in market values during the year;
- Development of the Actuarial Value of Assets; and
- An assessment of **investment performance**.

Disclosure

Market values represent "snapshot" or "cash-out" values which provide the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate. As a result, actuaries have traditionally smoothed market fluctuations when developing long range contribution rates.

Current methods employed by this Fund set the actuarial value equal to the expected adjusted market value plus one-fifth of the difference between the actual market value and the expected adjusted market value. In addition, there is a 20% collar limitation which keeps the actuarial value of assets within the range of 80% to 120% of the market value of assets.

Disclosure of Plan Market Value of Assets (State and Municipal) (\$ in Thousands)

	June 30,	
	2024	2023
Assets:		
Cash & Cash Equivalents	\$ 2,265,618	\$ 1,373,369
<i>Receivables</i>		
Contributions		
Employers	116,002	77,513
Employers - Long Term	-	-
Members	14,634	10,694
Accrued Investment Income	260,758	195,671
Investment Sales Proceeds	295,384	432,934
Total Receivables	686,778	716,812
<i>Investments</i>		
U.S. Government Obligations	5,900,878	6,238,670
Domestic Corporate Obligations	2,803,689	3,663,113
International Obligations	1,703,310	1,585,721
Domestic Stocks	10,820,039	10,370,101
International Stocks	9,955,515	9,558,092
Mortgages & Mortgage Related Securities	1,952,783	1,656,754
Alternative Investments	32,626,455	30,753,252
Collateral for Loaned Securities	4,848,015	5,686,982
Total Investments	70,610,684	69,512,685
Total Assets	73,563,080	71,602,866
Liabilities:		
Accounts Payable & Accrued Expenses	71,376	57,797
Investment Commitments Payable	733,981	965,114
Obligation for Collateral for Loaned Securities	4,848,015	5,686,982
Other Liabilities	-	-
Total Liabilities	5,653,372	6,709,893
Net Assets Held in Trust for Pension Benefits	\$ 67,909,708	\$ 64,892,973

Totals may not add due to rounding.



Changes in Market Values (State and Municipal)

	Teachers	Employees (State)	State Police	Judges	LEOPS (State)	Total State
State Sponsored Plans						
Market Value of Assets as of 6/30/2023	\$ 39,421,231,555	\$ 16,417,159,937	\$ 1,851,047,392	\$ 584,908,738	\$ 943,175,672	\$ 59,217,523,294
Employer Contributions	1,272,404,848	944,564,418	115,332,724	26,084,916	68,873,227	2,427,260,132
Member Contributions	636,102,668	298,550,315	11,392,565	4,255,001	12,291,189	962,591,738
Investment Returns	2,675,561,665	1,123,965,115	126,485,166	39,811,375	64,503,389	4,030,326,710
Disbursements from the Trust	(2,878,851,109)	(1,495,687,885)	(154,879,264)	(46,163,271)	(78,012,247)	(4,653,593,776)
Net Transfers	(5,963,218)	4,318,708	77,819	(32,103)	1,598,794	-
Market Value of Assets as of 6/30/2024	\$ 41,120,486,408	\$ 17,292,870,608	\$ 1,949,456,402	\$ 608,864,657	\$ 1,012,430,024	\$ 61,984,108,098

	Employees (Municipal)	LEOPS (Municipal)	CORS (Municipal)	Total Municipal
Municipal Plans				
Market Value of Assets as of 6/30/2023	\$ 5,164,243,668	\$ 470,254,613	\$ 40,951,066	\$ 5,675,449,347
Employer Contributions	153,921,416	35,980,336	1,154,357	191,056,109
Member Contributions	86,774,253	6,289,636	517,784	93,581,673
Investment Returns	351,015,395	32,626,793	2,807,381	386,449,569
Disbursements from the Trust	(392,523,173)	(26,230,969)	(2,182,509)	(420,936,651)
Net Transfers	-	-	-	-
Market Value of Assets as of 6/30/2024	\$ 5,363,431,559	\$ 518,920,409	\$ 43,248,079	\$ 5,925,600,047

	Teachers	Employees (State & Municipal)	State Police	Judges	LEOPS (State & Municipal)	CORS (Municipal)	Total State & Municipal
State and Municipal Sponsored Plans							
Market Value of Assets as of 6/30/2023	\$ 39,421,231,555	\$ 21,581,403,605	\$ 1,851,047,392	\$ 584,908,738	\$ 1,413,430,285	\$ 40,951,066	\$ 64,892,972,641
Employer Contributions	1,272,404,848	1,098,485,834	115,332,724	26,084,916	104,853,563	1,154,357	2,618,316,241
Member Contributions	636,102,668	385,324,568	11,392,565	4,255,001	18,580,825	517,784	1,056,173,411
Investment Returns	2,675,561,665	1,474,980,511	126,485,166	39,811,375	97,130,182	2,807,381	4,416,776,280
Disbursements from the Trust	(2,878,851,109)	(1,888,211,058)	(154,879,264)	(46,163,271)	(104,243,216)	(2,182,509)	(5,074,530,427)
Net Transfers	(5,963,218)	4,318,708	77,819	(32,103)	1,598,794	-	-
Market Value of Assets as of 6/30/2024	\$ 41,120,486,408	\$ 22,656,302,168	\$ 1,949,456,402	\$ 608,864,657	\$ 1,531,350,433	\$ 43,248,079	\$ 67,909,708,146

Totals may not add due to rounding.



Summary of the Development of the Actuarial Value of Assets

June 30, 2024

	Total State	Total Municipal	Total MSRPS
Beginning of Year:			
(1) Market Value of Assets	\$59,217,523,294	\$5,675,449,347	\$64,892,972,641
(2) Actuarial Value of Assets	62,038,976,508	5,946,389,857	67,985,366,365
End of Year:			
(3) Market Value of Assets	61,984,108,099	5,925,600,047	67,909,708,146
(4) Net of Contributions and Disbursements	(1,263,741,907)	(136,298,869)	(1,400,040,776)
(5) Total Investment Income			
=(3)-(1)-(4)	4,030,326,712	386,449,569	4,416,776,281
(6) Projected Rate of Return	6.80%	6.80%	6.80%
(7) Projected Investment Income			
=(1)x(6)+[1+(6)] ^{.5-1} x(4)	\$ 3,984,530,975	\$ 381,372,605	\$ 4,365,903,580
(8) Beginning of Year Asset Adjustment	0	0	0
(9) Investment Income in			
Excess of Projected Income	45,795,737	5,076,964	50,872,701
(10) Excess Investment Income Recognized			
This Year (5-year recognition)			
(10a) From This Year	9,159,148	1,015,392	10,174,540
(10b) From One Year Ago	(428,060,066)	(41,161,939)	(469,222,005)
(10c) From Two Years Ago	(1,184,607,460)	(114,202,167)	(1,298,809,627)
(10d) From Three Years Ago	1,412,151,346	136,379,473	1,548,530,819
(10e) From Four Years Ago	(379,693,259)	(36,445,198)	(416,138,457)
(10f) Total Phase-ins	(571,050,291)	(54,414,439)	(625,464,730)
(11) Change in Actuarial Value of Assets			
=(4)+(7)+(8)+(10f)	2,149,738,777	190,659,297	2,340,398,074
End of Year:			
(3) Market Value of Assets as of 6/30	61,984,108,099	5,925,600,047	67,909,708,146
(12) Preliminary Actuarial Value of Assets = (2)+(11)	64,188,715,285	6,137,049,154	70,325,764,439
(12a) Upper Collar Limit 120% x (3)	74,380,929,719	7,110,720,057	81,491,649,776
(12b) Lower Collar Limit 80% x (3)	49,587,286,479	4,740,480,037	54,327,766,516
(13) Adjustment to Remain within 20% Collar	0	0	0
(14) Final Actuarial Value of Assets as of 6/30	64,188,715,285	6,137,049,154	70,325,764,439
(15) Difference Between Market & Actuarial Values	(2,204,607,186)	(211,449,107)	(2,416,056,293)
(16) Actuarial Value Rate of Return	5.56%	5.56%	5.56%
(17) Market Value Rate of Return	6.88%	6.89%	6.88%
(18) Ratio of Actuarial Value to Market Value	104%	104%	104%



Summary of the Development of the Actuarial Value of Assets (State Portion Only)

June 30, 2024

	TCS	ECS	State Police	Judges	LEOPS	Total State
Beginning of Year:						
(1) Market Value of Assets	\$39,421,231,555	\$16,417,159,937	\$ 1,851,047,392	\$584,908,738	\$943,175,672	\$59,217,523,294
(2) Actuarial Value of Assets	41,303,062,250	17,195,856,988	1,938,797,497	612,814,007	988,445,767	62,038,976,508
End of Year:						
(3) Market Value of Assets	41,120,486,408	17,292,870,608	1,949,456,402	608,864,657	1,012,430,024	61,984,108,099
(4) Net of Contributions and Disbursements	(976,306,812)	(248,254,444)	(28,076,156)	(15,855,457)	4,750,962	(1,263,741,907)
(5) Total Investment Income						
= (3)-(1)-(4)	\$ 2,675,561,665	\$1,123,965,115	\$ 126,485,166	\$ 39,811,376	\$ 64,503,390	\$ 4,030,326,712
(6) Projected Rate of Return	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%
(7) Projected Investment Income						
= (1)x(6)+[(1+(6))^5-1]x(4)	\$ 2,647,995,212	\$ 1,108,065,035	\$ 124,932,332	\$ 39,243,574	\$ 64,294,822	\$ 3,984,530,975
(8) Beginning of Year Asset Adjustment	0	0	0	0	0	0
(9) Investment Income in Excess of Projected Income	\$ 27,566,453	\$ 15,900,080	\$ 1,552,834	\$ 567,802	\$ 208,568	\$ 45,795,737
(10) Excess Investment Income Recognized This Year (5-year recognition)						
(10a) From This Year	5,513,291	3,180,016	310,567	113,560	41,714	9,159,148
(10b) From One Year Ago	(285,099,744)	(118,772,612)	(13,317,388)	(4,238,505)	(6,631,817)	(428,060,066)
(10c) From Two Years Ago	(789,704,886)	(327,994,549)	(36,752,634)	(11,755,055)	(18,400,336)	(1,184,607,460)
(10d) From Three Years Ago	940,592,975	392,734,838	43,687,011	14,038,805	21,097,717	1,412,151,346
(10e) From Four Years Ago	(253,503,010)	(105,092,632)	(11,596,670)	(3,763,695)	(5,737,252)	(379,693,259)
(10f) Total Phase-ins	(382,201,374)	(155,944,939)	(17,669,114)	(5,604,890)	(9,629,974)	(571,050,291)
(11) Change in Actuarial Value of Assets = (4)+(7)+(8)+(10f)	1,289,487,026	703,865,652	79,187,062	17,783,227	59,415,810	2,149,738,777
End of Year:						
(3) Market Value of Assets as of 6/30	41,120,486,408	17,292,870,608	1,949,456,402	608,864,657	1,012,430,024	61,984,108,099
(12) Preliminary Actuarial Value of Assets = (2)+(11)	42,592,549,276	17,899,722,640	2,017,984,559	630,597,234	1,047,861,577	64,188,715,285
(12a) Upper Collar Limit 120% x (3)	49,344,583,690	20,751,444,730	2,339,347,682	730,637,588	1,214,916,029	74,380,929,719
(12b) Lower Collar Limit 80% x (3)	32,896,389,126	13,834,296,486	1,559,565,122	487,091,726	809,944,019	49,587,286,479
(13) Adjustment to Remain within 20% Collar	0	0	0	0	0	0
(14) Final Actuarial Value of Assets as of 6/30	42,592,549,276	17,899,722,640	2,017,984,559	630,597,234	1,047,861,577	64,188,715,285
(15) Difference Between Market & Actuarial Values	(1,472,062,868)	(606,852,032)	(68,528,157)	(21,732,577)	(35,431,553)	(2,204,607,186)
(16) Actuarial Value Rate of Return	5.55%	5.58%	5.57%	5.56%	5.52%	5.56%
(17) Market Value Rate of Return	6.87%	6.90%	6.89%	6.90%	6.82%	6.88%
(18) Ratio of Actuarial Value to Market Value	104%	104%	104%	104%	103%	104%



Development of the Actuarial Value of Assets Teachers' Combined System

	2023	2024	2025	2026	2027	2028
Beginning of Year:						
(1) Market Value of Assets	\$39,126,177,674	\$39,421,231,555				
(2) Actuarial Value of Assets	40,034,479,746	41,303,062,250				
End of Year:						
(3) Market Value of Assets	39,421,231,555	41,120,486,408				
(4) Net of Contributions and Disbursements	(909,609,366)	(976,306,812)				
(5) Total Investment Income						
=(3)-(1)-(4)	1,204,663,247	2,675,561,665				
(6) Projected Rate of Return	6.80%	6.80%	6.80%			
(7) Projected Investment Income						
=(1)x(6)+([1+(6)] ⁵ -1)x(4)	2,630,161,967	2,647,995,212				
(8) Beginning of Year Asset Adjustment	0	0				
(9) Investment Income in Excess of Projected Income	(1,425,498,720)	27,566,453				
(10) Excess Investment Income Recognized This Year (5-year recognition)						
(10a) From This Year	(285,099,744)	5,513,291				
(10b) From One Year Ago	(789,704,886)	(285,099,744)	\$ 5,513,291			
(10c) From Two Years Ago	940,592,975	(789,704,886)	(285,099,744)	\$ 5,513,291		
(10d) From Three Years Ago	(253,503,010)	940,592,975	(789,704,886)	(285,099,744)	\$ 5,513,291	
(10e) From Four Years Ago	(64,255,432)	(253,503,010)	940,592,974	(789,704,885)	(285,099,744)	\$ 5,513,289
(10f) Total Phase-ins	(451,970,097)	(382,201,374)	(128,698,365)	(1,069,291,338)	(279,586,453)	5,513,289
(11) Change in Actuarial Value of Assets						
=(4)+(7)+(8)+(10f)	1,268,582,504	1,289,487,026				
End of Year:						
(3) Market Value of Assets	39,421,231,555	41,120,486,408				
(12) Preliminary Actuarial Value of Assets = (2)+(11)	41,303,062,250	42,592,549,276				
(12a) Upper Collar Limit 120% x (3)	47,305,477,866	49,344,583,690				
(12b) Lower Collar Limit 80% x (3)	31,536,985,244	32,896,389,126				
(13) Adjustment to Remain within 20% Collar	0	0				
(14) Final Actuarial Value of Assets as of 6/30	41,303,062,250	42,592,549,276				
(15) Difference Between Market & Actuarial Values	(1,881,830,695)	(1,472,062,868)				
(16) Actuarial Value Rate of Return	5.50%	5.55%				
(17) Market Value Rate of Return	3.12%	6.87%				
(18) Ratio of Actuarial Value to Market Value	105%	104%				



Development of the Actuarial Value of Assets Employees' Combined System (State)

	2023	2024	2025	2026	2027	2028
Beginning of Year:						
(1) Market Value of Assets	\$16,222,171,369	\$16,417,159,937				
(2) Actuarial Value of Assets	16,593,300,324	17,195,856,988				
End of Year:						
(3) Market Value of Assets	16,417,159,937	17,292,870,608				
(4) Net of Contributions and Disbursements	(304,087,093)	(248,254,444)				
(5) Total Investment Income						
=(3)-(1)-(4)	499,075,661	1,123,965,115				
(6) Projected Rate of Return	6.80%	6.80%	6.80%			
(7) Projected Investment Income						
=(1)x(6)+([1+(6)] ⁵ -1)x(4)	1,092,938,721	1,108,065,035				
(8) Beginning of Year Asset Adjustment	0	0				
(9) Investment Income in Excess of Projected Income	(593,863,060)	15,900,080				
(10) Excess Investment Income Recognized						
This Year (5-year recognition)						
(10a) From This Year	(118,772,612)	3,180,016				
(10b) From One Year Ago	(327,994,549)	(118,772,612)	\$ 3,180,016			
(10c) From Two Years Ago	392,734,838	(327,994,549)	(118,772,612)	\$ 3,180,016		
(10d) From Three Years Ago	(105,092,630)	392,734,838	(327,994,549)	(118,772,612)	\$ 3,180,016	
(10e) From Four Years Ago	(27,170,011)	(105,092,632)	392,734,836	(327,994,547)	(118,772,612)	\$ 3,180,016
(10f) Total Phase-ins	(186,294,964)	(155,944,939)	(50,852,309)	(443,587,143)	(115,592,596)	3,180,016
(11) Change in Actuarial Value of Assets						
=(4)+(7)+(8)+(10f)	602,556,664	703,865,652				
End of Year:						
(3) Market Value of Assets	16,417,159,937	17,292,870,608				
(12) Preliminary Actuarial Value of Assets = (2)+(11)	17,195,856,988	17,899,722,640				
(12a) Upper Collar Limit 120% x (3)	19,700,591,924	20,751,444,730				
(12b) Lower Collar Limit 80% x (3)	13,133,727,950	13,834,296,486				
(13) Adjustment to Remain within 20% Collar	0	0				
(14) Final Actuarial Value of Assets as of 6/30	17,195,856,988	17,899,722,640				
(15) Difference Between Market & Actuarial Values	(778,697,051)	(606,852,032)				
(16) Actuarial Value Rate of Return	5.51%	5.58%				
(17) Market Value Rate of Return	3.11%	6.90%				
(18) Ratio of Actuarial Value to Market Value	105%	104%				



Development of the Actuarial Value of Assets State Police

	2023	2024	2025	2026	2027	2028
Beginning of Year:						
(1) Market Value of Assets	\$ 1,820,762,838	\$ 1,851,047,392				
(2) Actuarial Value of Assets	1,862,898,695	1,938,797,497				
End of Year:						
(3) Market Value of Assets	1,851,047,392	1,949,456,402				
(4) Net of Contributions and Disbursements	(26,068,622)	(28,076,156)				
(5) Total Investment Income						
= (3)-(1)-(4)	56,353,176	126,485,166				
(6) Projected Rate of Return	6.80%	6.80%	6.80%			
(7) Projected Investment Income						
= (1)x(6)+([1+(6)] ⁵ -1)x(4)	122,940,116	124,932,332				
(8) Beginning of Year Asset Adjustment	0	0				
(9) Investment Income in Excess of Projected Income	(66,586,940)	1,552,834				
(10) Excess Investment Income Recognized						
This Year (5-year recognition)						
(10a) From This Year	(13,317,388)	310,567				
(10b) From One Year Ago	(36,752,634)	(13,317,388)	\$ 310,567			
(10c) From Two Years Ago	43,687,011	(36,752,634)	(13,317,388)	\$ 310,567		
(10d) From Three Years Ago	(11,596,672)	43,687,011	(36,752,634)	(13,317,388)	\$ 310,567	
(10e) From Four Years Ago	(2,993,009)	(11,596,670)	43,687,010	(36,752,636)	(13,317,388)	\$ 310,566
(10f) Total Phase-ins	(20,972,692)	(17,669,114)	(6,072,445)	(49,759,457)	(13,006,821)	310,566
(11) Change in Actuarial Value of Assets						
= (4)+(7)+(8)+(10f)	75,898,802	79,187,062				
End of Year:						
(3) Market Value of Assets	1,851,047,392	1,949,456,402				
(12) Preliminary Actuarial Value of Assets = (2)+(11)	1,938,797,497	2,017,984,559				
(12a) Upper Collar Limit 120% x (3)	2,221,256,870	2,339,347,682				
(12b) Lower Collar Limit 80% x (3)	1,480,837,914	1,559,565,122				
(13) Adjustment to Remain within 20% Collar	0	0				
(14) Final Actuarial Value of Assets as of 6/30	1,938,797,497	2,017,984,559				
(15) Difference Between Market & Actuarial Values	(87,750,105)	(68,528,157)				
(16) Actuarial Value Rate of Return	5.51%	5.57%				
(17) Market Value Rate of Return	3.12%	6.89%				
(18) Ratio of Actuarial Value to Market Value	105%	104%				



Development of the Actuarial Value of Assets Judges

	2023	2024	2025	2026	2027	2028
Beginning of Year:						
(1) Market Value of Assets	\$582,542,806	\$584,908,738				
(2) Actuarial Value of Assets	595,968,442	612,814,007				
End of Year:						
(3) Market Value of Assets	584,908,738	608,864,657				
(4) Net of Contributions and Disbursements	(15,534,952)	(15,855,457)				
(5) Total Investment Income						
=(3)-(1)-(4)	17,900,884	39,811,376				
(6) Projected Rate of Return	6.80%	6.80%	6.80%			
(7) Projected Investment Income						
=(1)x(6)+([1+(6)] ^{.5} -1)x(4)	39,093,409	39,243,574				
(8) Beginning of Year Asset Adjustment	0	0				
(9) Investment Income in Excess of Projected Income	(21,192,525)	567,802				
(10) Excess Investment Income Recognized						
This Year (5-year recognition)						
(10a) From This Year	(4,238,505)	113,560				
(10b) From One Year Ago	(11,755,055)	(4,238,505)	\$ 113,560			
(10c) From Two Years Ago	14,038,805	(11,755,055)	(4,238,505)	\$ 113,560		
(10d) From Three Years Ago	(3,763,697)	14,038,805	(11,755,055)	(4,238,505)	\$ 113,560	
(10e) From Four Years Ago	(994,440)	(3,763,695)	14,038,804	(11,755,053)	(4,238,505)	\$ 113,562
(10f) Total Phase-ins	(6,712,892)	(5,604,890)	(1,841,196)	(15,879,998)	(4,124,945)	113,562
(11) Change in Actuarial Value of Assets						
=(4)+(7)+(8)+(10f)	16,845,565	17,783,227				
End of Year:						
(3) Market Value of Assets	584,908,738	608,864,657				
(12) Preliminary Actuarial Value of Assets = (2)+(11)	612,814,007	630,597,234				
(12a) Upper Collar Limit 120% x (3)	701,890,486	730,637,588				
(12b) Lower Collar Limit 80% x (3)	467,926,990	487,091,726				
(13) Adjustment to Remain within 20% Collar	0	0				
(14) Final Actuarial Value of Assets as of 6/30	612,814,007	630,597,234				
(15) Difference Between Market & Actuarial Values	(27,905,269)	(21,732,577)				
(16) Actuarial Value Rate of Return	5.51%	5.56%				
(17) Market Value Rate of Return	3.11%	6.90%				
(18) Ratio of Actuarial Value to Market Value	105%	104%				



Development of the Actuarial Value of Assets LEOPS (State)

	2023	2024	2025	2026	2027	2028
Beginning of Year:						
(1) Market Value of Assets	\$909,833,568	\$943,175,672				
(2) Actuarial Value of Assets	932,928,512	988,445,767				
End of Year:						
(3) Market Value of Assets	943,175,672	1,012,430,024				
(4) Net of Contributions and Disbursements	4,482,605	4,750,962				
(5) Total Investment Income						
=(3)-(1)-(4)	28,859,499	64,503,390				
(6) Projected Rate of Return	6.80%	6.80%	6.80%			
(7) Projected Investment Income						
=(1)x(6)+([1+(6)] ⁵ -1)x(4)	62,018,585	64,294,822				
(8) Beginning of Year Asset Adjustment	0	0				
(9) Investment Income in Excess of Projected Income	(33,159,086)	208,568				
(10) Excess Investment Income Recognized						
This Year (5-year recognition)						
(10a) From This Year	(6,631,817)	41,714				
(10b) From One Year Ago	(18,400,336)	(6,631,817)	\$ 41,714			
(10c) From Two Years Ago	21,097,717	(18,400,336)	(6,631,817)	\$ 41,714		
(10d) From Three Years Ago	(5,737,253)	21,097,717	(18,400,336)	(6,631,817)	\$ 41,714	
(10e) From Four Years Ago	(1,312,246)	(5,737,252)	21,097,718	(18,400,336)	(6,631,818)	\$ 41,712
(10f) Total Phase-ins	(10,983,935)	(9,629,974)	(3,892,721)	(24,990,439)	(6,590,104)	41,712
(11) Change in Actuarial Value of Assets						
=(4)+(7)+(8)+(10f)	55,517,255	59,415,810				
End of Year:						
(3) Market Value of Assets	943,175,672	1,012,430,024				
(12) Preliminary Actuarial Value of Assets = (2)+(11)	988,445,767	1,047,861,577				
(12a) Upper Collar Limit 120% x (3)	1,131,810,806	1,214,916,029				
(12b) Lower Collar Limit 80% x (3)	754,540,538	809,944,019				
(13) Adjustment to Remain within 20% Collar	0	0				
(14) Final Actuarial Value of Assets as of 6/30	988,445,767	1,047,861,577				
(15) Difference Between Market & Actuarial Values	(45,270,095)	(35,431,553)				
(16) Actuarial Value Rate of Return	5.46%	5.52%				
(17) Market Value Rate of Return	3.16%	6.82%				
(18) Ratio of Actuarial Value to Market Value	105%	103%				



History of the Investment Return Assumption and Annual Returns

<u>Year Ended June 30,</u>	<u>Assumed Rate of Investment Return¹</u>	<u>Market Value Rate of Return²</u>	<u>Actuarial Rate of Return³</u>
2000	8.00%	11.9%	
2001	8.00%	-9.4%	
2002	8.00%	-7.6%	
2003	7.75%	3.2%	3.3%
2004	7.75%	16.2%	5.2%
2005	7.75%	9.5%	5.9%
2006	7.75%	10.4%	6.7%
2007	7.75%	17.6%	8.5%
2008	7.75%	-5.4%	6.5%
2009	7.75%	-20.0%	-11.6%
2010	7.75%	14.0%	3.1%
2011	7.75%	20.0%	6.1%
2012	7.75%	0.4%	4.4%
2013	7.70%	10.6%	7.5%
2014	7.65%	14.4%	11.2%
2015	7.55%	2.7%	9.2%
2016	7.55%	1.2%	5.6%
2017	7.50%	10.0%	7.0%
2018	7.45%	8.1%	6.8%
2019	7.40%	6.5%	5.7%
2020	7.40%	3.6%	5.8%
2021	6.80%	26.7%	14.2%
2022	6.80%	-3.0%	7.0%
2023	6.80%	3.1%	5.5%
2024	6.80%	6.9%	5.6%

¹ For the actuarial valuation performed as of the indicated year.

² Time-weighted returns from the MSRPS annual financial reports, except for the current year, which is the return reported by the System.

³ As reported in the annual actuarial valuation report.

SECTION IV

**GAIN/LOSS EXPERIENCE ANALYSIS
STATE ONLY**

Gain/(Loss) Experience Analysis

State Only

Comments

Purpose of Gain/Loss Analysis

Regular actuarial valuations provide valuable information about the composite change in unfunded actuarial accrued liabilities – whether or not the liabilities are increasing or decreasing, and by how much. However, valuations do not show the portion of the change attributable to each risk area within the retirement system financial mechanism: the rate of investment income on plan assets; the rates of withdrawal of active members who leave covered employment; the rates of mortality; the rates of disability; the rates of salary increase; and the assumed ages at actual retirement. In an actuarial valuation, assumptions are made as to what these rates will be for the next year and for decades in the future.

The objective of a gain and loss analysis is to determine the portion of the change in unfunded actuarial accrued liabilities attributable to each risk area.

The fact that actual experience differs from assumed experience is to be expected – the future cannot be predicted with precision. Changes in the valuation assumed experience for a risk area should be made when the differences between assumed and actual experience have been observed to be sizeable and persistent. One year's gain/loss analysis may or may not be indicative of long-term trends, which are the basis of financial assumptions.

The expected and actual numbers of retirements, disabilities, deaths, and terminations found on pages IV-5 through IV-11 reflect experience over the 12-month period from June 30, 2023 and June 30, 2024.

Derivation of Experience Gain/(Loss) Year Ended June 30, 2024 State Only (\$ in Millions)

Actual experience will never (except by coincidence) coincide exactly with assumed experience. Gains and losses often offset one another over a period of years, but sizable year-to-year fluctuations are common.

	Fiscal Year Ended June 30,	
	2024	2023
(1) UAAL* at start of year	\$21,001	\$18,333
(2) Normal cost from last valuation	1,699	1,577
(3) Actual contributions	3,390	3,151
(4) Interest accrual: $[(1) \times 0.0680 + \{(2)-(3)\} \times \{1.0680^{.5}-1\}]$	1,372	1,194
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	20,682	17,953
(6) Change in benefit provisions	0	(4)
(7) Changes in methods and assumptions	914	0
(8) Expected UAAL after changes: (5) + (6) + (7)	21,596	17,949
(9) Actual UAAL at end of year	23,816	21,001
(10) Gain/(loss): (8) - (9)	(2,220)	(3,052)
(10a) Portion of gain/(loss) due to Assets	(763)	(769)
(10b) Portion of gain/(loss) due to Liabilities	(1,457)	(2,283)
(10c) Actuarial accrued liabilities at beginning of year	83,040	78,353
(11) Gain/(loss) as a percent of beginning accrued liabilities	(2.7%)	(3.9%)

* *Unfunded Actuarial Accrued Liability.*
Numbers may not add due to rounding.



Summary of System Experience

Year Ended June 30, 2024

State Only

(\$ in Millions)

	2024	
	Total State	% of AAL
Beginning of Year		
1. Total Actuarial Accrued Liabilities (AAL)	\$83,039.83	100.0 %
2. Actuarial Value of Assets	62,038.98	74.7 %
3. Unfunded Actuarial Accrued Liabilities	\$21,000.85	25.3 %
2024 Experience Gains (Losses)		
4. Gains (losses) in economic risk areas		
a. Pay increases	\$ (925.46)	(1.1)%
b. Investment return	(762.91)	(0.9)%
c. Total	\$ (1,688.37)	(2.0)%
5. Gains (losses) from active member decrement experience		
a. Service retirement	\$ 25.49	0.0 %
b. Disability retirement	70.37	0.1 %
c. Death-in-service	(8.50)	0.0 %
d. Other separations	100.92	0.1 %
e. Total	\$ 188.28	0.2 %
6. Gains (losses) from retiree experience		
a. Mortality	\$ 71.88	0.1 %
b. Benefit related/COLAs	(627.08)	(0.8)%
c. Other/unexpected retirees & beneficiaries	(80.69)	(0.1)%
d. Total	\$ (635.89)	(0.8)%
7. Gains (losses) from other sources		
a. Actual vs. expected liability for members commencing receipt of benefits	\$ 96.93	0.1 %
b. Deferred members returning to work	(57.66)	(0.1)%
c. Deferred mortality/actual vs. expected liability	27.11	0.0 %
d. Data related	(49.34)	(0.1)%
e. All other sources	(101.30)	(0.1)%
f. Total	\$ (84.26)	(0.1)%
8. Total experience gains (losses) (4c) + (5e) + (6d) + (7f)	\$ (2,220.24)	(2.7)%
End of Year		
9. Total Actuarial Accrued Liabilities*	\$87,090.72	100.0 %
10. Valuation Assets	64,188.72	73.7 %
11. Unfunded Actuarial Accrued Liabilities	\$22,902.01	26.3 %

* Prior to reflecting changes in assumptions and/or benefit provisions.
Totals may not add due to rounding.



Historical Summary of System Experience State Only (\$ in Millions)

Year	Gain (Loss) During the Year Due To								
	Service Retirement	Disability Retirement	Survivor Benefits	Other Turnover	Pay Increases	Investment Return	Retiree Experience	Other Sources	Total Experience
2017	\$ 8.2	\$ 19.3	\$ (7.0)	\$ 115.6	\$ 185.8	\$ (254.0)	\$ 408.9	\$ (151.6)	\$ 325.1
2018	(44.1)	32.1	(12.3)	167.7	341.0	(305.4)	56.8	(318.1)	(82.3)
2019	(9.5)	30.6	(9.1)	118.5	115.6	(847.2)	(33.3)	(199.0)	(833.6)
2020	(4.4)	44.3	(7.6)	84.4	(204.5)	(793.9)	202.4	489.8	(189.4)
2021	26.0	50.9	(9.1)	19.1	221.7	1,539.5	461.4	(23.2)	2,286.3
2022	(19.2)	53.3	(19.8)	142.3	(222.7)	98.2	(662.7)	(125.5)	(756.2)
2023	(11.7)	57.7	(10.7)	192.3	(1,300.5)	(769.3)	(1,038.0)	(172.0)	(3,052.1)
2024	25.5	70.4	(8.5)	100.9	(925.5)	(762.9)	(635.9)	(84.3)	(2,220.2)

Active Members Population Development Year Ended June 30, 2024 State Only

	Total State	
	Actual	Expected
Beginning Census	172,277	
- Service Retirement	3,904	4,943
- Death	117	184
- Disability Retirement	129	460
- Other Separations	10,540	8,271
- Transfers Out	82	
+ Transfers In	89	
+ New Entrants	20,089	
Ending Census	177,683	

This page reconciles the active member populations reported in connection with the 2023 and 2024 valuations on an actual and expected basis. Assumptions related to population development are a primary focus of the gain/loss analysis. They generally tend to be more stable than economic assumptions, and therefore, measurements have more meaning.

Assumptions used for the pension valuation were established on a population-weighted basis with the exception of the withdrawal assumptions. Therefore, the expected "Other Separations" presented above for these divisions are based upon liability-weighted assumptions. If population-weighted assumptions were used, the expected numbers would be different and probably closer to the actual count than the figure shown.

Salary Increases
for Member Actives Both at Beginning and End of Year
During the Year Ended June 30, 2024
State Only

Service Beginning of Year	Number	Salary Increases	
		Actual	Expected
0	1,362	9.16%	7.21%
1	14,266	9.80%	6.54%
2	10,867	9.31%	5.67%
3	6,215	9.27%	5.38%
4	8,720	9.21%	5.18%
5	7,562	8.71%	5.11%
6	6,785	9.18%	5.17%
7	6,421	8.66%	5.05%
8	6,075	8.57%	5.05%
9	6,175	8.43%	4.95%
Total	74,448		

Age Group	Number	Salary Increases for More than 10 Years of Service	
		Actual	Expected
25-29	27	9.91%	5.33%
30-34	2,399	8.97%	5.12%
35-39	8,854	8.11%	4.67%
40-44	12,680	7.47%	4.18%
45-49	13,421	6.97%	3.80%
50-54	15,357	6.60%	3.59%
55-59	13,928	6.49%	3.52%
60-64	10,222	6.32%	3.51%
65 & Over	6,169	6.16%	3.41%
Total	83,057		

	Total Payroll Growth		
	2024	2023	2022
Actual	8.62%	8.91%	3.42%
Assumed	2.75%	2.75%	3.10%

**Active Members Who Retired with
Retirement Benefits (Unreduced or Reduced)
During the Year Ended June 30, 2024
State Only**

Ages	Male		Female		Total	
	Actual	Expected	Actual	Expected	Actual	Expected
Under 50	52	72	17	38	69	110
50	8	14	4	7	12	21
51	8	12	12	9	20	21
52	23	17	29	19	52	36
53	28	20	49	36	77	56
54	22	24	66	44	88	68
55	28	39	100	86	128	125
56	32	36	73	87	105	123
57	24	33	97	84	121	117
58	25	31	105	92	130	123
59	46	36	98	105	144	141
60	43	43	126	132	169	175
61	49	46	154	150	203	196
62	80	108	360	369	440	477
63	71	81	238	274	309	355
64	48	66	163	211	211	277
65	90	100	216	278	306	378
66	82	89	220	264	302	353
67	68	73	187	185	255	258
68	49	49	117	125	166	174
69	29	40	86	95	115	135
70	39	49	81	91	120	140
71	20	34	63	61	83	95
72	16	35	37	49	53	84
73	18	27	32	35	50	62
74	12	21	24	31	36	52
75 & Over	48	323	92	466	140	789
Totals	1,058	1,518	2,846	3,423	3,904	4,941

Beginning of Year Average for Those Who Retired						
	Male		Female		Total	
Age	62.4	years	63.1	years	62.9	years
Service	25.8	years	25.6	years	25.7	years



**Active Members Who Retired with
Disability Benefits
During the Year Ended June 30, 2024
State Only**

Ages	Male		Female		Total	
	Actual	Expected	Actual	Expected	Actual	Expected
Under 25	0	1	0	0	0	1
25-29	1	2	0	2	1	4
30-34	1	6	1	6	2	12
35-39	0	10	0	12	0	22
40-44	5	14	2	21	7	35
45-49	9	18	13	36	22	54
50-54	5	26	20	65	25	91
55-59	7	30	18	87	25	117
60-64	13	24	20	62	33	86
65-69	1	10	9	21	10	31
70-74	2	3	1	5	3	8
75 and over	0	0	1	1	1	1
Totals	44	144	85	318	129	462

Beginning of Year Average for Those Who Became Disabled						
	Male		Female		Total	
Age	53.5	years	55.6	years	54.9	years
Service	17.4	years	18.9	years	18.4	years

**Active Members Who Left Active Status with a
Deferred Benefit (Payments Beginning at a Later Age)
During the Year Ended June 30, 2024
State Only**

Ages	Male		Female		Total	
	Actual	Expected	Actual	Expected	Actual	Expected
Under 25	0	0	0	0	0	0
25-29	0	1	1	0	1	1
30-34	17	18	142	51	159	69
35-39	76	55	263	153	339	208
40-44	75	68	220	160	295	228
45-49	64	67	256	172	320	239
50-54	79	68	382	185	461	253
55-59	52	22	287	66	339	88
60-64	52	17	157	42	209	59
65-69	24	1	54	1	78	2
70-74	8	1	13	1	21	2
75 and over	0	0	5	0	5	0
Totals	447	318	1,780	831	2,227	1,149

Beginning of Year Average for Those Who Terminated With a Deferred Benefit						
	Male		Female		Total	
Age	49.0	years	48.5	years	48.6	years
Service	13.7	years	13.0	years	13.1	years

**Active Members Who Left Active Status with
No Benefit Payable (Contributions Refunded)
During the Year Ended June 30, 2024
State Only**

Ages	Male		Female		Total	
	Actual	Expected	Actual	Expected	Actual	Expected
Under 25	128	97	287	219	415	316
25-29	395	316	1,210	816	1,605	1,132
30-34	427	345	1,553	1,083	1,980	1,428
35-39	288	266	1,016	906	1,304	1,172
40-44	198	219	550	579	748	798
45-49	163	178	450	499	613	677
50-54	135	169	406	456	541	625
55-59	136	130	312	357	448	487
60-64	93	95	246	221	339	316
65-69	52	46	150	84	202	130
70-74	32	17	51	24	83	41
75 and over	16	0	19	0	35	0
Totals	2,063	1,878	6,250	5,244	8,313	7,122

Beginning of Year Average for Those Who Terminated and Refunded						
	Male		Female		Total	
Age	39.2	years	38.3	years	38.5	years
Service	3.7	years	3.7	years	3.7	years

Does not include members that died while in active status.

**Comparison of Actual to Expected Deaths
Among Retired Lives
During the Year Ended June 30, 2024
State Only**

Ages	Male			Female			Total		
	Actual	Expected	Exposure	Actual	Expected	Exposure	Actual	Expected	Exposure
Under 50	6	2	554	2	4	548	8	6	1,102
50-54	8	6	995	18	9	974	26	14	1,969
55-59	20	15	2,065	21	23	3,021	41	38	5,086
60-64	47	39	3,746	76	61	8,292	123	100	12,038
65-69	102	93	7,084	150	151	18,782	252	244	25,866
70-74	206	186	9,870	336	310	25,676	542	495	35,546
75-79	327	283	9,462	437	436	20,878	764	719	30,340
80-84	326	279	5,358	490	465	11,917	816	744	17,275
85-89	282	257	2,687	464	449	6,062	746	706	8,749
90-94	176	166	1,028	407	362	2,741	583	528	3,769
95-99	69	59	240	187	180	848	256	239	1,088
100 & Over	10	9	24	62	52	160	72	61	184
Totals	1,579	1,394	43,113	2,650	2,501	99,899	4,229	3,895	143,012

SECTION V

HISTORICAL GASB STATEMENTS No. 25 AND No. 27 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.

Schedule of Funding Progress (\$ in Thousands)

Total System (State and Municipal)

Actuarial Valuation Date June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Payroll (c)	UAAL as a Percentage of Payroll [(b - a) / c]
2014	\$ 42,996,957	\$ 62,610,194	\$ 19,613,237	68.67%	\$ 10,803,632	182%
2015	46,170,624	66,281,781	20,111,157	69.66%	11,063,962	182%
2016	47,803,679	67,781,924	19,978,245	70.53%	11,155,924	179%
2017	50,250,465	69,986,576	19,736,111	71.80%	11,418,973	173%
2018	52,586,536	72,574,689	19,988,153	72.46%	11,566,220	173%
2019	54,361,969	74,526,000	20,164,031	72.94%	11,905,463	169%
2020	56,246,894	76,471,035	20,224,141	73.55%	12,501,422	162%
2021	62,817,938	81,738,557	18,920,619	76.85%	12,749,247	148%
2022	65,798,923	85,248,064	19,449,141	77.19%	13,201,815	147%
2023	67,985,366	90,319,369	22,334,003	75.27%	14,384,589	155%
2024	70,325,764	95,774,916	25,449,152	73.43%	15,650,353	163%

The figures for fiscal years prior to 2015 were applicable for both funding and accounting purposes under GASB Statements No. 25 and No. 27. The figures shown for fiscal year 2015 and after are applicable for funding purposes only. Accounting figures under GASB Statements No. 67 and No. 68 for fiscal year 2015 and after are shown in a separate report.



Schedule of Funding Progress (\$ in Thousands)

Teachers' Combined System

Actuarial Valuation Date June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Payroll (c)	UAAL as a Percentage of Payroll [(b - a) / c]
2008	\$ 23,784,404	\$ 29,868,705	\$ 6,084,301	79.63%	\$ 6,117,590	99%
2009	20,605,618	31,172,917	10,567,299	66.10%	6,194,734	171%
2010	20,908,149	31,963,421	11,055,272	65.41%	6,254,648	177%
2011	21,868,875	32,985,145	11,116,270	66.30%	6,196,976	179%
2012	22,523,978	34,252,715	11,728,737	65.76%	6,080,603	193%
2013	23,845,618	35,530,441	11,684,823	67.11%	6,185,176	189%
2014	26,067,577	36,882,587	10,815,010	70.68%	6,310,253	171%
2015	27,995,476	38,934,459	10,938,983	71.90%	6,470,706	169%
2016	29,020,809	39,934,125	10,913,316	72.67%	6,611,038	165%
2017	30,500,873	41,198,985	10,698,113	74.03%	6,780,838	158%
2018	31,945,910	42,739,562	10,793,652	74.75%	6,941,097	156%
2019	33,060,346	43,372,437	10,312,091	76.22%	7,153,063	144%
2020	34,228,754	44,456,529	10,227,775	76.99%	7,492,465	137%
2021	38,215,959	47,635,355	9,419,395	80.23%	7,688,846	123%
2022	40,034,480	49,668,582	9,634,103	80.60%	7,957,775	121%
2023	41,303,062	52,448,154	11,145,091	78.75%	8,468,612	132%
2024	42,592,549	55,683,988	13,091,439	76.49%	9,102,349	144%

The figures for fiscal years prior to 2015 were applicable for both funding and accounting purposes under GASB Statements No. 25 and No. 27. The figures shown for fiscal year 2015 and after are applicable for funding purposes only. Accounting figures under GASB Statements No. 67 and No. 68 for fiscal year 2015 and after are shown in a separate report.



Schedule of Funding Progress (\$ in Thousands)

Employees' Combined System (State and Municipal)

Actuarial Valuation Date June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Payroll (c)	UAAL as a Percentage of Payroll [(b - a) / c]
2008	13,599,717	17,609,769	4,010,052	77.23%	4,165,013	96%
2009	11,839,115	18,517,486	6,678,371	63.93%	4,249,536	157%
2010	11,937,944	19,009,788	7,071,844	62.80%	4,137,474	171%
2011	12,387,810	19,722,264	7,334,453	62.81%	4,027,810	182%
2012	12,667,592	20,283,028	7,615,436	62.45%	3,998,475	190%
2013	13,326,586	21,046,733	7,720,147	63.32%	4,030,261	192%
2014	14,547,390	22,059,765	7,512,375	65.95%	4,214,981	178%
2015	15,615,327	23,402,850	7,787,524	66.72%	4,300,748	181%
2016	16,130,438	23,817,251	7,686,814	67.73%	4,245,333	181%
2017	16,939,887	24,579,830	7,639,943	68.92%	4,319,053	177%
2018	17,679,888	25,462,497	7,782,609	69.44%	4,301,247	181%
2019	18,207,410	26,641,367	8,433,957	68.34%	4,409,941	191%
2020	18,769,843	27,323,459	8,553,616	68.69%	4,638,197	184%
2021	20,932,359	29,033,676	8,101,317	72.10%	4,681,866	173%
2022	21,877,387	30,195,040	8,317,652	72.45%	4,844,758	172%
2023	22,606,668	32,015,511	9,408,842	70.61%	5,465,773	172%
2024	23,455,564	33,827,462	10,371,897	69.34%	6,063,841	171%

The figures for fiscal years prior to 2015 were applicable for both funding and accounting purposes under GASB Statements No. 25 and No. 27. The figures shown for fiscal year 2015 and after are applicable for funding purposes only. Accounting figures under GASB Statements No. 67 and No. 68 for fiscal year 2015 and after are shown in a separate report.



Schedule of Funding Progress (\$ in Thousands)

State Police

Actuarial Valuation Date June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Payroll (c)	UAAL as a Percentage of Payroll [(b - a) / c]
2008	\$ 1,343,208	\$ 1,601,576	\$ 258,367	83.87%	\$ 86,464	299%
2009	1,119,766	1,710,356	590,591	65.47%	85,586	690%
2010	1,085,281	1,722,564	637,283	63.00%	81,705	780%
2011	1,090,383	1,759,676	669,293	61.96%	75,551	886%
2012	1,134,511	1,826,546	692,035	62.11%	77,690	891%
2013	1,164,217	1,882,501	718,284	61.84%	79,848	900%
2014	1,241,758	1,966,572	724,814	63.14%	85,660	846%
2015	1,314,315	2,103,134	788,819	62.49%	91,050	866%
2016	1,344,163	2,124,786	780,623	63.26%	93,491	835%
2017	1,408,754	2,198,337	789,583	64.08%	100,384	787%
2018	1,468,641	2,250,699	782,058	65.25%	100,325	780%
2019	1,522,239	2,300,933	778,694	66.16%	106,978	728%
2020	1,582,378	2,362,744	780,365	66.97%	116,274	671%
2021	1,771,695	2,527,230	755,535	70.10%	119,048	635%
2022	1,862,899	2,659,197	796,299	70.05%	124,367	640%
2023	1,938,797	2,903,832	965,034	66.77%	139,458	692%
2024	2,017,985	3,091,357	1,073,373	65.28%	145,026	740%

The figures for fiscal years prior to 2015 were applicable for both funding and accounting purposes under GASB Statements No. 25 and No. 27. The figures shown for fiscal year 2015 and after are applicable for funding purposes only. Accounting figures under GASB Statements No. 67 and No. 68 for fiscal year 2015 and after are shown in a separate report.



Schedule of Funding Progress (\$ in Thousands)

Judges

Actuarial Valuation Date June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Payroll (c)	UAAL as a Percentage of Payroll [(b - a) / c]
2008	\$ 306,716	\$ 406,782	\$ 100,066	75.40%	\$ 37,943	264%
2009	270,870	421,039	150,169	64.33%	40,266	373%
2010	276,643	426,215	149,572	64.91%	39,961	374%
2011	293,801	433,240	139,439	67.81%	38,810	359%
2012	330,154	421,286	91,132	78.37%	39,955	228%
2013	354,900	438,836	83,937	80.87%	40,001	210%
2014	389,072	459,447	70,375	84.68%	42,313	166%
2015	416,547	511,390	94,844	81.45%	44,613	213%
2016	430,563	523,929	93,365	82.18%	44,711	209%
2017	453,134	535,902	82,768	84.56%	46,876	177%
2018	477,006	556,746	79,740	85.68%	47,498	168%
2019	494,038	560,310	66,272	88.17%	48,935	135%
2020	512,036	589,299	77,263	86.89%	51,882	149%
2021	570,319	622,633	52,314	91.60%	52,073	100%
2022	595,968	665,815	69,847	89.51%	53,934	130%
2023	612,814	714,654	101,840	85.75%	58,696	174%
2024	630,597	763,471	132,874	82.60%	61,181	217%

The figures for fiscal years prior to 2015 were applicable for both funding and accounting purposes under GASB Statements No. 25 and No. 27. The figures shown for fiscal year 2015 and after are applicable for funding purposes only. Accounting figures under GASB Statements No. 67 and No. 68 for fiscal year 2015 and after are shown in a separate report.



Schedule of Funding Progress (\$ in Thousands)

LEOPS (State and Municipal)

Actuarial Valuation Date June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Payroll (c)	UAAL as a Percentage of Payroll [(b - a) / c]
2008	\$ 465,386	\$ 748,005	\$ 282,619	62.22%	\$ 133,445	212%
2009	441,827	895,099	453,273	49.36%	140,071	324%
2010	471,728	950,236	478,508	49.64%	140,199	341%
2011	526,807	1,002,708	475,900	52.54%	135,177	352%
2012	580,826	1,070,087	489,261	54.28%	135,185	362%
2013	642,678	1,143,154	500,476	56.22%	137,613	364%
2014	732,333	1,222,137	489,804	59.92%	145,673	336%
2015	808,436	1,308,633	500,197	61.78%	151,955	329%
2016	855,997	1,359,432	503,434	62.97%	156,396	322%
2017	924,705	1,449,365	524,660	63.80%	166,561	315%
2018	990,564	1,539,168	548,604	64.36%	170,555	322%
2019	1,052,205	1,623,133	570,928	64.83%	180,963	315%
2020	1,120,507	1,700,101	579,594	65.91%	194,667	298%
2021	1,289,508	1,875,983	586,475	68.74%	199,460	294%
2022	1,387,387	2,013,402	626,015	68.91%	213,003	294%
2023	1,481,154	2,182,667	701,513	67.86%	241,937	290%
2024	1,584,310	2,348,675	764,364	67.46%	267,415	286%

The figures for fiscal years prior to 2015 were applicable for both funding and accounting purposes under GASB Statements No. 25 and No. 27. The figures shown for fiscal year 2015 and after are applicable for funding purposes only. Accounting figures under GASB Statements No. 67 and No. 68 for fiscal year 2015 and after are shown in a separate report.



Schedule of Funding Progress (\$ in Thousands)

CORS

Actuarial Valuation Date June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Payroll (c)	UAAL as a Percentage of Payroll [(b - a) / c]
2009	\$ 7,373	\$ 12,273	\$ 4,900	60.08%	\$ 4,048	121%
2010	8,601	12,858	4,257	66.89%	3,956	108%
2011	9,980	14,511	4,531	68.78%	4,475	101%
2012	11,341	15,483	4,143	73.24%	4,628	90%
2013	16,971	18,426	1,456	92.10%	4,646	31%
2014	18,827	19,685	859	95.64%	4,752	18%
2015	20,523	21,313	790	96.29%	4,890	16%
2016	21,709	22,401	692	96.91%	4,954	14%
2017	23,112	24,157	1,044	95.68%	5,262	20%
2018	24,527	26,017	1,490	94.27%	5,498	27%
2019	25,732	27,820	2,088	92.49%	5,583	37%
2020	33,376	38,904	5,528	85.79%	7,937	70%
2021	38,097	43,680	5,584	87.22%	7,953	70%
2022	40,802	46,027	5,225	88.65%	7,979	65%
2023	42,870	54,552	11,681	78.59%	10,113	116%
2024	44,759	59,964	15,205	74.64%	10,541	144%

The figures for fiscal years prior to 2015 were applicable for both funding and accounting purposes under GASB Statements No. 25 and No. 27. The figures shown for fiscal year 2015 and after are applicable for funding purposes only. Accounting figures under GASB Statements No. 67 and No. 68 for fiscal year 2015 and after are shown in a separate report.



Schedule of Employer Contributions (\$ in Thousands)

Total System (State and Municipal)

Fiscal Year Ended June 30,	Annual Required Contributions	Actual Contributions	Percentage Contributed
2014	\$ 2,320,991	\$ 1,733,652	75%
2015	2,107,731	1,858,613	88%
2016	1,948,082	1,870,655	96%
2017	2,033,311	2,033,311	100%
2018	1,995,018	1,995,018	100%
2019	2,054,092	2,054,092	100%
2020	2,144,269	2,144,269	100%
2021	2,203,524	2,203,524	100%
2022	2,282,303	2,282,303	100%
2023	2,438,917	2,438,917	100%
2024	2,618,316	2,618,316	100%

The Annual Required Contribution "ARC" was an accounting term defined in GASB Statements No. 25 and No. 27 and is no longer applicable for fiscal year 2015 and after. The amounts for fiscal year 2015 and 2016 were calculated in the same manner as the previous years, but are not used under the current accounting standards GASB Statements No. 67 and No. 68. For Fiscal Years 2017 and after the employer contribution is based on the actuarially determined contribution as a percent of payroll, therefore, the required and actual contributions are equal.

Schedule of Employer Contributions by System (\$ in Thousands)

Total System (State and Municipal)

	Fiscal Year Ended June 30,	Annual Required Contributions	Actual Contributions	Percentage Contributed
Teachers' Combined System	2020	\$ 1,170,248	\$ 1,170,248	100%
	2021	1,153,208	1,153,208	100%
	2022	1,202,102	1,202,102	100%
	2023	1,228,568	1,228,568	100%
	2024	1,272,405	1,272,405	100%
Employees' Combined System	2020	788,280	788,280	100%
	2021	855,306	855,306	100%
	2022	879,652	879,652	100%
	2023	984,007	984,007	100%
	2024	1,098,486	1,098,486	100%
State Police	2020	91,390	91,390	100%
	2021	93,651	93,651	100%
	2022	95,453	95,453	100%
	2023	106,966	106,966	100%
	2024	115,333	115,333	100%
Judges	2020	22,708	22,708	100%
	2021	21,277	21,277	100%
	2022	22,816	22,816	100%
	2023	23,675	23,675	100%
	2024	26,085	26,085	100%
LEOPS	2020	71,070	71,070	100%
	2021	79,168	79,168	100%
	2022	81,260	81,260	100%
	2023	94,582	94,582	100%
	2024	104,854	104,854	100%
CORS (Muni)	2020	573	573	100%
	2021	913	913	100%
	2022	1,020	1,020	100%
	2023	1,119	1,119	100%
	2024	1,154	1,154	100%
Total State	2020	2,008,467	2,008,467	100%
	2021	2,048,136	2,048,136	100%
	2022	2,128,770	2,128,770	100%
	2023	2,270,374	2,270,374	100%
	2024	2,427,260	2,427,260	100%
Total Municipal	2020	135,802	135,802	100%
	2021	155,388	155,388	100%
	2022	153,533	153,533	100%
	2023	168,543	168,543	100%
	2024	191,056	191,056	100%

The Annual Required Contribution "ARC" was an accounting term defined in GASB Statements No. 25 and No. 27 and is no longer applicable for fiscal year 2015 and after. The amount for fiscal year 2015 and after was calculated in the same manner as the previous years, but is not used under the current accounting standards GASB Statements No. 67 and No. 68. For Fiscal Years 2017 and after the employer contribution is based on the actuarially determined contribution as a percent of payroll, therefore, the required and actual contributions are equal.



APPENDIX A

ACTUARIAL ASSUMPTIONS AND METHODS

Brief Summary of Actuarial Assumptions and Methods

Valuation date	June 30, 2024
Contribution fiscal year ended	June 30, 2026
Actuarial cost method	Individual entry age
Amortization method for Unfunded Actuarial Accrued Liabilities (UAAL)	Level percent closed
Amortization period	25-year closed schedule ending June 30, 2039 for UAAL prior to July 1, 2023 (15 years remaining); 10-25 year layers for UAAL after July 1, 2023
Asset valuation method	5-year smoothed market (max. 120% and min. 80% of market value)
Actuarial assumptions:	
Investment rate of return	6.80%
Inflation	2.50% price; 3.00% wage
Projected salary increases	3.00% - 22.50%
Cost-of-living adjustments	2.13% - 3.00% for service prior to July 1, 2011.* 1.40% - 3.00% for service after June 30, 2011.* <i>* Based on System and provisions. See page A-2 and Appendix C for details.</i>
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2024 valuation pursuant to the 2024 Experience Study for the period July 1, 2018 to June 30, 2023.
Mortality	Various versions of the Pub-2010 Mortality Tables with projected generational mortality improvements based on the MP-2021 fully generational mortality improvement scale. Please see pages A-6 and A-7 for details.



Actuarial Assumptions and Methods

Actuarial assumptions were developed as a result of the Experience Study covering the period from July 1, 2018 to June 30, 2023, which includes the rationale for the assumptions. The assumptions were adopted by the Board on July 16, 2024. Actuarial assumptions are based on a combination of future expectations and historical data. Specific assumptions are shown below.

A. ACTUARIAL ASSUMPTIONS

	1. Valuation Interest Rate	2. Annual Rate of Increase in Cost of Living			3. Aggregate Payroll Growth
		Service Before 7/1/11	Service After 7/1/11		
Teachers' Retirement		2.50%	2.50%	#	
Teachers' Pension	6.80%	2.13%	1.40%	***	3.00%
Employees' Retirement					
Regular	6.80%	2.50%	2.50%	#	3.00%
Correctional	6.80%	2.50%	1.40%	***	3.00%
Legislative	6.80%	3.00%	3.00%		3.00%
Employees' Pension	6.80%	2.13%	1.40%	*,***	3.00%
State Police Retirement	6.80%	2.50%	1.40%	***	3.00%
Judges Pension	6.80%	3.00%	3.00%		3.00%
LEOPS	6.80%	2.13%	1.40%	**,***,#	3.00%
CORS Municipal	6.80%	2.50%	1.40%	***	3.00%

* A 2.50% simple rate is applicable for municipal members of these Systems, who do not elect to be covered under the Contributory plan.

** A 2.50% simple rate is applicable for former EPS members.

*** The increase is capped at the lesser of 2.5% and increase in CPI if the most recent calendar year market value rate of return was greater than or equal to the assumed rate (currently 6.80% as approved by the Board of Trustees). The increase is capped at the lesser of 1% and increase in CPI if the market value return was less than the assumed rate of 6.80%.

For groups whose COLA is capped at 5%, a 2.48% COLA was assumed. A 2.50% COLA was assumed for groups with an unlimited COLA, 2.13% is assumed for groups that are capped at 3%.

The valuation interest rate is net of investment expenses. Administrative expenses are assumed to be paid directly by employers external to the plan assets. Price inflation is assumed to be 2.50% and wage inflation (i.e., aggregate payroll growth) is assumed to be 3.00%.



Actuarial Assumptions and Methods

A. ACTUARIAL ASSUMPTIONS

Rates of Salary Increases

Years of Service	Annual Rates of Salary Increases							
	Teachers' Retirement & Pension	Employees' Retirement			Employees' Pension	State Police	Judges	LEOPS
		Regular	Correctional	Legislative				
0	10.50%	7.50%	10.00%	3.00%	7.50%	22.50%	3.00%	8.50%
1	6.75%	7.00%	9.25%	3.00%	7.00%	14.50%	3.00%	8.50%
2	5.75%	6.00%	5.50%	3.00%	6.00%	12.50%	3.00%	8.50%
3	5.75%	6.00%	5.00%	3.00%	6.00%	12.50%	3.00%	7.00%
4	5.75%	5.50%	4.75%	3.00%	5.50%	8.50%	3.00%	6.75%
5	5.75%	5.25%	4.00%	3.00%	5.25%	8.00%	3.00%	6.75%
6	5.75%	5.25%	4.00%	3.00%	5.25%	7.50%	3.00%	6.50%
7	5.50%	5.25%	4.00%	3.00%	5.25%	7.50%	3.00%	6.50%
8	5.50%	5.00%	4.00%	3.00%	5.00%	7.50%	3.00%	6.50%
9	5.50%	5.00%	4.00%	3.00%	5.00%	7.50%	3.00%	6.50%
10	5.50%	4.75%	4.00%	3.00%	4.75%	7.50%	3.00%	6.50%
11	5.25%	4.75%	4.00%	3.00%	4.75%	7.50%	3.00%	6.50%
12	5.25%	4.75%	4.00%	3.00%	4.75%	7.50%	3.00%	6.25%
13	4.75%	4.50%	4.00%	3.00%	4.50%	7.50%	3.00%	6.25%
14	4.75%	4.50%	4.00%	3.00%	4.50%	7.50%	3.00%	6.25%
15	4.75%	4.50%	4.00%	3.00%	4.50%	7.50%	3.00%	6.25%
16	4.75%	4.25%	4.00%	3.00%	4.25%	7.50%	3.00%	6.25%
17	4.25%	4.25%	3.75%	3.00%	4.25%	7.50%	3.00%	6.00%
18	4.25%	4.25%	3.75%	3.00%	4.25%	7.50%	3.00%	6.00%
19	3.75%	4.00%	3.75%	3.00%	4.00%	6.50%	3.00%	5.75%
20	3.75%	4.00%	3.75%	3.00%	4.00%	6.50%	3.00%	5.75%
21	3.75%	4.00%	3.75%	3.00%	4.00%	6.50%	3.00%	5.75%
22	3.75%	4.00%	3.75%	3.00%	4.00%	6.50%	3.00%	5.50%
23	3.25%	4.00%	3.75%	3.00%	4.00%	6.00%	3.00%	5.50%
24	3.25%	4.00%	3.75%	3.00%	4.00%	6.00%	3.00%	5.50%
25	3.00%	4.00%	3.75%	3.00%	4.00%	6.00%	3.00%	5.50%
26	3.00%	3.75%	3.75%	3.00%	3.75%	6.00%	3.00%	5.50%
27	3.00%	3.75%	3.50%	3.00%	3.75%	6.00%	3.00%	5.25%
28	3.00%	3.75%	3.50%	3.00%	3.75%	5.50%	3.00%	5.25%
29	3.00%	3.75%	3.50%	3.00%	3.75%	5.50%	3.00%	5.25%
30	3.00%	3.25%	3.50%	3.00%	3.25%	4.00%	3.00%	4.50%
31	3.00%	3.25%	3.50%	3.00%	3.25%	4.00%	3.00%	4.50%
32	3.00%	3.25%	3.50%	3.00%	3.25%	4.00%	3.00%	4.50%
33	3.00%	3.25%	3.50%	3.00%	3.25%	4.00%	3.00%	4.50%
34	3.00%	3.25%	3.50%	3.00%	3.25%	4.00%	3.00%	3.50%
35	3.00%	3.25%	3.50%	3.00%	3.25%	4.00%	3.00%	3.50%
36	3.00%	3.25%	3.50%	3.00%	3.25%	3.50%	3.00%	3.50%
37	3.00%	3.25%	3.50%	3.00%	3.25%	3.50%	3.00%	3.50%
38	3.00%	3.25%	3.50%	3.00%	3.25%	3.50%	3.00%	3.50%
39	3.00%	3.25%	3.50%	3.00%	3.25%	3.50%	3.00%	3.50%
40+	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%

CORS Municipal assumptions were the same as shown for Employees' Retirement Correctional.



Actuarial Assumptions and Methods

A. ACTUARIAL ASSUMPTIONS

Rates of Withdrawal

Sample Ages	Years of Service	Annual Rates of Withdrawal from Active Service													
		Teachers' Retirement & Pension		Employees' Retirement					Employees' Pension		State Police		Judges	LEOPS	
		Male	Female	Regular		Correctional		Legislative	Male	Female	Male	Female		Male	Female
				Male	Female	Male	Female						Male		
All	0	21.00%	18.00%	21.00%	21.00%	18.00%	17.00%	0.00%	21.00%	21.00%	11.00%	11.00%	0.00%	15.00%	15.00%
	1	14.50%	12.00%	16.00%	17.00%	12.00%	15.00%	0.00%	16.00%	17.00%	7.50%	7.50%	0.00%	10.50%	10.50%
	2	13.00%	12.00%	13.00%	14.00%	9.00%	13.00%	0.00%	13.00%	14.00%	5.00%	5.00%	0.00%	9.00%	9.00%
	3	10.50%	10.00%	12.00%	12.00%	9.00%	12.00%	0.00%	12.00%	12.00%	4.00%	4.00%	0.00%	8.00%	8.00%
	4	8.50%	8.50%	10.00%	11.00%	8.00%	11.00%	23.00%	10.00%	11.00%	3.50%	3.50%	0.00%	7.50%	7.50%
	5	6.50%	6.00%	7.25%	7.00%	7.00%	9.00%	0.00%	7.25%	7.00%	3.00%	3.00%	0.00%	5.00%	5.00%
	6	6.00%	5.00%	6.50%	6.75%	5.00%	8.50%	0.00%	6.50%	6.75%	2.00%	2.00%	0.00%	4.50%	4.50%
	7	5.00%	4.50%	6.00%	5.75%	5.00%	6.00%	0.00%	6.00%	5.75%	2.00%	2.00%	0.00%	3.50%	3.50%
	8	4.00%	4.00%	5.50%	5.50%	4.00%	6.00%	22.00%	5.50%	5.50%	1.75%	1.75%	0.00%	3.25%	3.25%
	9	3.50%	3.50%	4.50%	4.50%	4.00%	5.00%	0.00%	4.50%	4.50%	1.50%	1.50%	0.00%	3.25%	3.25%
25	10 & Over	3.50%	3.50%	4.50%	4.50%	5.00%	3.50%	*	4.50%	4.50%	0.75%	0.75%	0.00%	3.50%	3.50%
30		2.50%	3.00%	4.00%	4.50%	4.00%	2.25%	*	4.00%	4.50%	0.75%	0.75%	0.00%	2.25%	2.25%
35		2.00%	2.00%	3.75%	4.00%	3.75%	1.75%	*	3.75%	4.00%	0.75%	0.75%	0.00%	1.75%	1.75%
40		1.50%	1.25%	3.00%	3.00%	3.75%	1.75%	*	3.00%	3.00%	0.75%	0.75%	0.00%	1.75%	1.75%
45		1.25%	1.25%	3.00%	2.75%	3.75%	1.25%	*	3.00%	2.75%	0.75%	0.75%	0.00%	1.25%	1.25%
50		1.25%	1.25%	2.50%	2.50%	3.75%	1.25%	*	2.50%	2.50%	0.75%	0.75%	0.00%	1.25%	1.25%
55		3.00%	3.00%	6.00%	6.00%	3.75%	1.25%	*	6.00%	6.00%	0.75%	0.75%	0.00%	1.25%	1.25%
60		3.00%	3.00%	6.00%	6.00%	3.75%	1.25%	*	6.00%	6.00%	0.75%	0.75%	0.00%	1.25%	1.25%
65	3.00%	3.00%	6.00%	6.00%	3.75%	1.25%	*	6.00%	6.00%	0.75%	0.75%	0.00%	1.25%	1.25%	

* 19%, 27%, 28%, and 25% of legislative members are assumed to withdraw after 12, 16, 20, and 24 years of service, respectively, and 20% every four years starting at 28 years of service.

CORS Municipal assumptions were the same as shown for Employees' Retirement Correctional.

For active members of the Teachers Retirement and Pension Systems and Employees' Retirement (Regular) and Pension Systems, the probability of electing a refund upon withdrawal (if eligible for a vested benefit) is 15% upon first becoming vested, grading down to 0% upon reaching first eligibility for retirement. Active members that terminate from the other Systems that are eligible for a deferred vested benefit are assumed to leave their contributions in the plan and 100% are assumed to elect a deferred benefit.



Actuarial Assumptions and Methods

A. ACTUARIAL ASSUMPTIONS

Summary of Mortality Assumptions

Group	Status and Gender	Base Mortality Table	Scale / Multiplier	Set Forward	Projection Base Year	Projection Scale
TCS	Healthy Male Retirees	PubT-2010 Male Healthy Retiree	112%	0	2010	MP-2021
	Healthy Female Retirees	PubT-2010 Female Healthy Retiree	110%	0	2010	MP-2021
	Disabled Male Retirees	PubT-2010 Male Disabled Retiree	106%	0	2010	MP-2021
	Disabled Female Retirees	PubT-2010 Female Disabled Retiree	104%	0	2010	MP-2021
	Active Males	PubT-2010 Male Employee	100%	0	2010	MP-2021
	Active Females	PubT-2010 Female Employee	100%	0	2010	MP-2021
ECS (excluding CORS)	Healthy Male Retirees	PubG-2010 Male Healthy Retiree	112%	0	2010	MP-2021
	Healthy Female Retirees	PubG-2010 Female Healthy Retiree	110%	0	2010	MP-2021
	Disabled Male Retirees	PubG-2010 Male Disabled Retiree	111%	0	2010	MP-2021
	Disabled Female Retirees	PubG-2010 Female Disabled Retiree	104%	0	2010	MP-2021
	Active Males	PubG-2010 Male Employee	100%	0	2010	MP-2021
	Active Females	PubG-2010 Female Employee	100%	0	2010	MP-2021
Judges	Healthy Male Retirees	PubG-2010 Male Above Median Healthy Retiree	96%	0	2010	MP-2021
	Healthy Female Retirees	PubG-2010 Female Above Median Healthy Retiree	100%	0	2010	MP-2021
	Disabled Male Retirees	PubG-2010 Male Above Median Healthy Retiree	96%	0	2010	MP-2021
	Disabled Female Retirees	PubG-2010 Female Above Median Healthy Retiree	100%	0	2010	MP-2021
	Active Males	PubG-2010 Male Above Median Employee	100%	0	2010	MP-2021
	Active Females	PubG-2010 Female Above Median Employee	100%	0	2010	MP-2021
State Police, LEOPS, and CORS	Healthy Male Retirees	PubS-2010 Male Healthy Retiree	120%	0	2010	MP-2021
	Healthy Female Retirees	PubS-2010 Female Healthy Retiree	108%	0	2010	MP-2021
	Disabled Male Retirees	PubS-2010 Male Disabled Retiree	112%	0	2010	MP-2021
	Disabled Female Retirees	PubS-2010 Female Disabled Retiree	113%	0	2010	MP-2021
	Active Males	PubS-2010 Male Employee	100%	0	2010	MP-2021
	Active Females	PubS-2010 Female Employee	100%	0	2010	MP-2021



Actuarial Assumptions and Methods

A. ACTUARIAL ASSUMPTIONS

Healthy Retired Mortality

Sample Ages in 2024	Actuarial Present Value of \$1 Monthly for Life (Without COLA)											
	Teachers' Retirement & Pension		Employees' Retirement & Pension		Employees' Retirement Correctional		State Police		Judges		LEOPS	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
50	\$161.36	\$164.30	\$156.28	\$161.24	\$156.56	\$160.45	\$156.56	\$160.45	\$159.66	\$162.67	\$156.56	\$160.45
55	153.87	157.74	148.40	154.60	147.88	152.80	147.88	152.80	152.53	156.35	147.88	152.80
60	144.36	149.51	138.53	145.82	136.87	143.14	136.87	143.14	143.47	147.98	136.87	143.14
65	132.44	138.97	126.45	134.68	123.67	131.54	123.67	131.54	132.19	137.30	123.67	131.54
70	117.74	125.55	111.79	121.02	108.20	117.81	108.20	117.81	118.27	124.12	108.20	117.81
75	100.31	109.11	94.72	104.75	90.58	101.83	90.58	101.83	101.78	108.29	90.58	101.83
80	81.02	90.27	76.11	86.28	71.78	84.15	71.78	84.15	83.40	90.13	71.78	84.15

Sample Ages in 2024	Future Life Expectancy (Years)											
	Teachers' Retirement & Pension		Employees' Retirement & Pension		Employees' Retirement Correctional		State Police		Judges		LEOPS	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
50	36.98	39.38	34.55	37.68	34.03	36.96	34.03	36.96	36.73	38.77	34.03	36.96
55	31.87	34.26	29.71	32.74	29.02	31.87	29.02	31.87	31.80	33.79	29.02	31.87
60	26.94	29.30	25.03	27.88	24.19	26.97	24.19	26.97	27.01	28.90	24.19	26.97
65	22.21	24.50	20.58	23.19	19.66	22.35	19.66	22.35	22.42	24.15	19.66	22.35
70	17.72	19.86	16.39	18.74	15.49	18.04	15.49	18.04	18.06	19.64	15.49	18.04
75	13.57	15.50	12.53	14.60	11.71	14.08	11.71	14.08	14.01	15.42	11.71	14.08
80	9.91	11.55	9.15	10.87	8.43	10.56	8.43	10.56	10.40	11.59	8.43	10.56

CORS Municipal assumptions were the same as shown for Employees' Retirement Correctional.



Actuarial Assumptions and Methods

A. ACTUARIAL ASSUMPTIONS

Disabled Retired Mortality

Sample Ages in 2024	Actuarial Present Value of \$1 Monthly for Life (Without COLA)											
	Teachers' Retirement & Pension		Employees' Retirement & Pension		Employees' Retirement Correctional		State Police		Judges		LEOPS	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
50	\$131.70	\$138.45	\$130.27	\$138.45	\$153.75	\$156.16	\$153.75	\$156.16	\$159.66	\$162.67	\$153.75	\$156.16
55	123.78	132.15	122.24	132.15	145.18	148.33	145.18	148.33	152.53	156.35	145.18	148.33
60	115.54	124.85	113.93	124.85	134.40	138.85	134.40	138.85	143.47	147.98	134.40	138.85
65	106.68	116.24	105.04	116.24	121.87	127.96	121.87	127.96	132.19	137.30	121.87	127.96
70	96.38	105.21	94.74	105.21	107.37	115.26	107.37	115.26	118.27	124.12	107.37	115.26
75	83.84	91.54	82.20	91.54	90.62	100.19	90.62	100.19	101.78	108.29	90.62	100.19
80	69.61	76.28	68.01	76.28	73.05	82.68	73.05	82.68	83.40	90.13	73.05	82.68

Sample Ages in 2024	Future Life Expectancy (Years)											
	Teachers' Retirement & Pension		Employees' Retirement & Pension		Employees' Retirement Correctional		State Police		Judges		LEOPS	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
50	25.67	28.71	25.08	28.71	33.17	35.17	33.17	35.17	36.73	38.77	33.17	35.17
55	22.24	25.22	21.71	25.22	28.35	30.34	28.35	30.34	31.80	33.79	28.35	30.34
60	19.12	21.87	18.65	21.87	23.71	25.74	23.71	25.74	27.01	28.90	23.71	25.74
65	16.24	18.63	15.82	18.63	19.41	21.46	19.41	21.46	22.42	24.15	19.41	21.46
70	13.48	15.39	13.12	15.39	15.44	17.48	15.44	17.48	18.06	19.64	15.44	17.48
75	10.77	12.24	10.46	12.24	11.81	13.74	11.81	13.74	14.01	15.42	11.81	13.74
80	8.24	9.36	7.98	9.36	8.68	10.29	8.68	10.29	10.40	11.59	8.68	10.29

CORS Municipal assumptions were the same as shown for Employees' Retirement Correctional.



Actuarial Assumptions and Methods

ACTUARIAL ASSUMPTIONS

Accidental Death Mortality Rates				
Sample Ages in 2024	State Police and LEOPS		Judges	
	Male	Female	Male	Female
20	0.0127%	0.0052%	0.0037%	0.0013%
25	0.0129%	0.0074%	0.0028%	0.0010%
30	0.0174%	0.0113%	0.0044%	0.0018%
35	0.0217%	0.0153%	0.0063%	0.0030%
40	0.0244%	0.0177%	0.0079%	0.0040%
45	0.0271%	0.0196%	0.0094%	0.0050%
50	0.0340%	0.0247%	0.0122%	0.0069%
55	0.0496%	0.0359%	0.0180%	0.0109%
60	0.0803%	0.0516%	0.0280%	0.0173%
65	0.1229%	0.0647%	0.0405%	0.0255%
70	0.2110%	0.1181%	0.0559%	0.0386%
75	0.3769%	0.2342%	0.0833%	0.0636%
80	0.7080%	0.4848%	0.1322%	0.1089%

Additional margin for future mortality improvements are included in the projection scale.

Actuarial Assumptions and Methods

A. ACTUARIAL ASSUMPTIONS

Rates of Disability

Sample Ages	Annual Rates of Disability															
	Teachers' Retirement				Teachers' Pension				Employees' Retirement							
	Ordinary		Accidental		Ordinary		Accidental		Ordinary				Accidental			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
25	0.0196%	0.0259%	0.0011%	0.0013%	0.0196%	0.0259%	0.0011%	0.0013%	0.0880%	0.0547%	0.0691%	0.0809%	0.0288%	0.0131%	0.0595%	0.0780%
30	0.0196%	0.0259%	0.0011%	0.0013%	0.0196%	0.0259%	0.0011%	0.0013%	0.1128%	0.0540%	0.0886%	0.0841%	0.0302%	0.0138%	0.0714%	0.0780%
35	0.0196%	0.0329%	0.0011%	0.0016%	0.0196%	0.0329%	0.0011%	0.0016%	0.1409%	0.0935%	0.1107%	0.1453%	0.0422%	0.0193%	0.0901%	0.0780%
40	0.0644%	0.0574%	0.0036%	0.0029%	0.0644%	0.0574%	0.0036%	0.0029%	0.1867%	0.1726%	0.1467%	0.2685%	0.0554%	0.0247%	0.1139%	0.0867%
45	0.1288%	0.1092%	0.0071%	0.0055%	0.1288%	0.1092%	0.0071%	0.0055%	0.2504%	0.2555%	0.1967%	0.3975%	0.0492%	0.0256%	0.1428%	0.0997%
50	0.1925%	0.1841%	0.0107%	0.0092%	0.1925%	0.1841%	0.0107%	0.0092%	0.3617%	0.4396%	0.2813%	0.5699%	0.0438%	0.0270%	0.2023%	0.1301%
55	0.2569%	0.3094%	0.0143%	0.0155%	0.2569%	0.3094%	0.0143%	0.0155%	0.5111%	0.5632%	0.3617%	0.7893%	0.0413%	0.0264%	0.2499%	0.1821%
60	0.2772%	0.2646%	0.0178%	0.0132%	0.2772%	0.2646%	0.0178%	0.0132%	0.5181%	0.6318%	0.4438%	1.0907%	0.0422%	0.0286%	0.2499%	0.1821%

Sample Ages	Annual Rates of Disability													
	Employees' Pension				State Police				Judges		LEOPS			
	Ordinary		Accidental		Ordinary		Accidental		Male	Female	Ordinary		Accidental	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
25	0.0880%	0.0547%	0.0288%	0.0131%	0.0783%	0.0783%	0.2871%	0.3393%	0.0077%	0.0111%	0.1000%	0.3754%	0.2475%	0.3441%
30	0.1128%	0.0540%	0.0302%	0.0138%	0.0998%	0.0998%	0.3049%	0.3604%	0.0077%	0.0111%	0.1281%	0.4022%	0.2644%	0.3072%
35	0.1409%	0.0935%	0.0422%	0.0193%	0.1255%	0.1255%	0.3738%	0.4418%	0.0077%	0.0260%	0.1602%	0.4058%	0.3223%	0.3022%
40	0.1867%	0.1726%	0.0554%	0.0247%	0.1666%	0.1666%	0.4326%	0.5113%	0.0245%	0.0520%	0.2122%	0.4758%	0.3722%	0.3089%
45	0.2504%	0.2555%	0.0492%	0.0256%	0.2233%	0.2233%	0.4797%	0.5669%	0.0491%	0.0891%	0.2846%	0.5770%	0.4129%	0.3100%
50	0.3617%	0.4396%	0.0438%	0.0270%	0.3191%	0.3191%	0.6702%	0.7921%	0.0736%	0.1300%	0.3837%	0.7145%	0.5771%	0.3979%
55	0.5111%	0.5632%	0.0413%	0.0264%	0.4103%	0.4103%	0.8744%	1.0334%	0.0980%	0.2228%	0.3837%	0.7145%	0.7530%	0.6162%
60	0.5181%	0.6318%	0.0422%	0.0286%	0.5032%	0.5032%	1.0809%	1.2774%	0.1225%	0.2228%	0.3837%	0.7145%	0.9309%	1.0897%

CORS Municipal assumptions were the same as shown for Employees' Retirement Correctional.



Actuarial Assumptions and Methods

A. ACTUARIAL ASSUMPTIONS

Rates of Normal Retirement

Ages	Annual Rates of Normal Retirement													
	Teachers' Retirement		Teachers' Pension				Employees' Retirement		Legislators*		Employees' Pension			
	All Years of Service		At Least 30 Years		Less Than 30 Years		All Years of Service		All Years of Service		At Least 30 Years		Less Than 30 Years	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
45	15.0%	15.0%	15.0%	10.0%			17.0%	16.0%			12.0%	13.0%		
46	15.0%	15.0%	15.0%	10.0%			17.0%	16.0%			12.0%	13.0%		
47	15.0%	15.0%	15.0%	10.0%			17.0%	16.0%			12.0%	13.0%		
48	15.0%	15.0%	15.0%	10.0%			17.0%	16.0%			17.0%	13.0%		
49	15.0%	15.0%	15.0%	10.0%			17.0%	16.0%			14.0%	11.0%		
50	15.0%	15.0%	15.0%	10.0%			10.0%	11.0%			11.0%	12.0%		
51	15.0%	15.0%	15.0%	10.0%			10.0%	11.0%			11.0%	9.0%		
52	15.0%	15.0%	15.0%	14.0%			10.0%	11.0%			11.0%	11.0%		
53	15.0%	15.0%	15.0%	13.0%			10.0%	10.0%			11.0%	11.0%		
54	15.0%	20.0%	15.0%	12.0%			8.0%	10.0%			10.0%	11.0%		
55	15.0%	20.0%	15.0%	13.0%			13.0%	10.0%			10.0%	11.0%		
56	15.0%	20.0%	15.0%	13.0%			8.0%	10.0%			10.0%	11.0%		
57	15.0%	15.0%	15.0%	13.0%			8.0%	10.0%			10.0%	11.0%		
58	15.0%	15.0%	12.0%	13.0%			8.0%	11.0%			10.0%	11.0%		
59	10.0%	18.0%	14.0%	15.0%			9.0%	11.0%			10.0%	11.0%		
60	10.0%	20.0%	14.0%	17.0%			13.0%	11.0%	25.0%	25.0%	10.0%	14.0%		
61	15.0%	22.0%	18.0%	21.0%			11.0%	11.0%	25.0%	25.0%	13.0%	14.0%		
62	25.0%	22.0%	27.0%	27.0%	16.0%	20.0%	27.0%	23.0%	25.0%	25.0%	21.0%	23.0%	16.0%	18.0%
63	20.0%	22.0%	21.0%	23.0%	14.0%	17.0%	23.0%	20.0%	25.0%	25.0%	22.0%	21.0%	12.0%	16.0%
64	20.0%	22.0%	19.0%	21.0%	12.0%	15.0%	15.0%	20.0%	25.0%	25.0%	18.0%	19.0%	11.0%	13.0%
65	25.0%	22.0%	25.0%	25.0%	16.0%	20.0%	20.0%	20.0%	25.0%	25.0%	17.0%	19.0%	13.0%	16.0%
66	30.0%	30.0%	25.0%	32.0%	21.0%	26.0%	20.0%	30.0%	25.0%	25.0%	25.0%	24.0%	20.0%	20.0%
67	30.0%	25.0%	25.0%	28.0%	20.0%	23.0%	30.0%	18.0%	25.0%	25.0%	24.0%	25.0%	17.0%	21.0%
68	17.0%	25.0%	21.0%	26.0%	17.0%	20.0%	20.0%	18.0%	25.0%	25.0%	21.0%	22.0%	17.0%	18.0%
69	20.0%	25.0%	22.0%	26.0%	15.0%	20.0%	15.0%	25.0%	25.0%	25.0%	19.0%	22.0%	17.0%	18.0%
70	30.0%	25.0%	21.0%	29.0%	22.0%	22.0%	20.0%	18.0%	25.0%	25.0%	24.0%	22.0%	18.0%	20.0%
71	15.0%	20.0%	23.0%	27.0%	17.0%	20.0%	20.0%	18.0%	25.0%	25.0%	20.0%	22.0%	19.0%	19.0%
72	15.0%	25.0%	30.0%	22.0%	20.0%	19.0%	20.0%	18.0%	25.0%	25.0%	20.0%	22.0%	17.0%	17.0%
73	19.0%	25.0%	22.0%	27.0%	17.0%	19.0%	20.0%	18.0%	50.0%	50.0%	20.0%	22.0%	17.0%	17.0%
74	19.0%	20.0%	22.0%	27.0%	17.0%	19.0%	20.0%	18.0%	50.0%	50.0%	20.0%	22.0%	17.0%	17.0%
75	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	15.0%	17.0%
76													15.0%	17.0%
77 & Over													100.0%	100.0%

* Retirement rates for Legislative members are assumed to apply every four years to members eligible for retirement (beginning with the year ending June 30, 2023, and each fourth year thereafter).



Actuarial Assumptions and Methods

A. ACTUARIAL ASSUMPTIONS

Rates of Normal Retirement

Ages	Annual Rates of Normal Retirement													
	Correctional Officers				State Police *				Judges		LEOPS			
	At Least 20 Years		Less Than 20 Years		At Least 22 Years		Less Than 22 Years		All Years of Service		At Least 25 Years		Less Than 25 Years	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
40	30.0%	30.0%			7.5%	7.5%					40.0%	40.0%		
41	17.0%	17.0%			15.0%	15.0%					40.0%	40.0%		
42	20.0%	20.0%			17.0%	17.0%					40.0%	40.0%		
43	15.0%	15.0%			17.0%	17.0%					40.0%	40.0%		
44	15.0%	15.0%			20.0%	20.0%					40.0%	40.0%		
45	15.0%	15.0%			25.0%	25.0%					40.0%	40.0%		
46	11.0%	11.0%			20.0%	20.0%					40.0%	40.0%		
47	11.0%	11.0%			20.0%	20.0%					40.0%	40.0%		
48	11.0%	11.0%			20.0%	20.0%					40.0%	40.0%		
49	11.0%	11.0%			25.0%	25.0%					30.0%	30.0%		
50	11.0%	11.0%			30.0%	30.0%	5.0%	5.0%			30.0%	30.0%	6.0%	6.0%
51	11.0%	11.0%			25.0%	25.0%	5.0%	5.0%			23.0%	23.0%	5.0%	5.0%
52	10.0%	10.0%			25.0%	25.0%	5.0%	5.0%			23.0%	23.0%	5.0%	5.0%
53	10.0%	10.0%			25.0%	25.0%	5.0%	5.0%			23.0%	23.0%	4.0%	4.0%
54	10.0%	10.0%			25.0%	25.0%	5.0%	5.0%			23.0%	23.0%	5.0%	5.0%
55	10.0%	10.0%	3.0%	3.0%	40.0%	40.0%	5.0%	5.0%			25.0%	25.0%	5.0%	5.0%
56	10.0%	10.0%	3.0%	3.0%	30.0%	30.0%	10.0%	10.0%			30.0%	30.0%	6.0%	6.0%
57	10.0%	10.0%	3.0%	3.0%	30.0%	30.0%	10.0%	10.0%			20.0%	20.0%	6.0%	6.0%
58	10.0%	10.0%	3.0%	3.0%	30.0%	30.0%	10.0%	10.0%			20.0%	20.0%	8.0%	8.0%
59	10.0%	10.0%	3.0%	3.0%	40.0%	40.0%	10.0%	10.0%			20.0%	20.0%	8.0%	8.0%
60	12.0%	12.0%	3.0%	3.0%	100.0%	100.0%	100.0%	100.0%	5.0%	9.0%	30.0%	30.0%	8.0%	8.0%
61	12.0%	12.0%	3.0%	3.0%					5.0%	9.0%	25.0%	25.0%	8.0%	8.0%
62	30.0%	30.0%	8.0%	8.0%					5.0%	12.0%	25.0%	25.0%	15.0%	15.0%
63	20.0%	20.0%	7.0%	7.0%					5.0%	7.0%	25.0%	25.0%	15.0%	15.0%
64	25.0%	25.0%	9.0%	9.0%					5.0%	7.0%	30.0%	30.0%	20.0%	20.0%
65	25.0%	25.0%	10.0%	10.0%					5.0%	7.0%	30.0%	30.0%	20.0%	20.0%
66	27.0%	27.0%	17.0%	17.0%					10.0%	9.0%	50.0%	50.0%	25.0%	25.0%
67	27.0%	27.0%	15.0%	15.0%					5.0%	12.0%	50.0%	50.0%	25.0%	25.0%
68	27.0%	27.0%	10.0%	10.0%					7.0%	12.0%	50.0%	50.0%	25.0%	25.0%
69	30.0%	30.0%	17.0%	17.0%					12.0%	20.0%	50.0%	50.0%	25.0%	25.0%
70 & Over	100.0%	100.0%	100.0%	100.0%					100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* 50% of participants are expected to elect DROP participation.



Actuarial Assumptions and Methods

A. ACTUARIAL ASSUMPTIONS

Rates of Normal Retirement

Ages	Additional Rates to Add to Annual Rates of Normal Retirement at Age of First Eligibility							
	Teachers' Pension Reformed				Employees' Pension Reformed			
	At Least 30 Years		Less Than 30 Years		At Least 30 Years		Less Than 30 Years	
	Male	Female	Male	Female	Male	Female	Male	Female
55 and Under	46.0%	39.0%			36.0%	36.0%		
56	38.0%	31.0%			29.0%	29.0%		
57	29.0%	22.0%			22.0%	21.0%		
58	18.0%	11.0%			13.0%	12.0%		
59	5.0%	2.0%			3.0%	4.0%		
60	0.0%	0.0%			0.0%	0.0%		
61	0.0%	0.0%			0.0%	0.0%		
62	0.0%	0.0%			0.0%	0.0%		
63	0.0%	0.0%			0.0%	0.0%		
64	0.0%	0.0%			0.0%	0.0%		
65+	0.0%	0.0%	18.0%	15.0%	0.0%	0.0%	25.0%	22.0%

State Police Reformed: Add additional 20% to annual rate at age of first eligibility if under age 50.

Actuarial Assumptions and Methods

A. ACTUARIAL ASSUMPTIONS

Rates of Early Retirement

Ages	Annual Rates of Early Retirement *											
	Teachers' Retirement		Teachers' Pension				Employees' Retirement		Employees' Pension			
			Non-Reformed		Reformed				Non-Reformed		Reformed	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
40	5.0%	5.0%					5.0%	5.0%				
41	5.0%	5.0%					5.0%	5.0%				
42	5.0%	5.0%					5.0%	5.0%				
43	5.0%	5.0%					5.0%	5.0%				
44	5.0%	5.0%					5.0%	5.0%				
45	5.0%	5.0%					5.0%	5.0%				
46	5.0%	5.0%					5.0%	5.0%				
47	5.0%	5.0%					5.0%	5.0%				
48	5.0%	5.0%					5.0%	5.0%				
49	5.0%	5.0%					5.0%	5.0%				
50	5.0%	5.0%					5.0%	5.0%				
51	5.0%	5.0%					5.0%	5.0%				
52	5.0%	5.0%					5.0%	5.0%				
53	5.0%	5.0%					5.0%	5.0%				
54	5.0%	5.0%					5.0%	5.0%				
55	10.0%	10.0%	1.8%	2.5%			5.0%	5.0%	1.5%	2.0%		
56	5.0%	5.0%	2.0%	2.8%			5.0%	5.0%	1.5%	2.3%		
57	5.0%	5.0%	2.5%	2.8%			5.0%	5.0%	1.5%	2.3%		
58	5.0%	5.0%	2.5%	3.3%			5.0%	5.0%	1.5%	2.8%		
59	5.0%	5.0%	3.8%	4.0%			5.0%	5.0%	2.5%	2.8%		
60			3.8%	6.0%	10.0%	14.0%			3.5%	4.5%	8.0%	11.0%
61			7.0%	7.0%	7.0%	7.0%			4.0%	4.8%	4.0%	4.8%
62					7.5%	7.5%					4.5%	5.3%
63					8.0%	8.0%					5.0%	5.8%
64					8.5%	8.5%					5.5%	6.3%

* Divisions without early retirement eligibility are not shown.



Actuarial Assumptions and Methods

A. ACTUARIAL ASSUMPTIONS

Social Security Covered Compensation

Teachers' Retirement	Not applicable
Teachers' Pension	Future covered compensation levels, used to estimate member contributions and retirement allowances, were calculated using a 3.00% per annum compounded increase in the 2024 Social Security Maximum Taxable Wage Base.
Employees' Retirement	Not applicable
Employees' Pension	Future covered compensation levels, used to estimate member contributions and retirement allowances, were calculated using a 3.00% per annum compounded increase in the 2024 Social Security Maximum Taxable Wage Base.
State Police Retirement	Not applicable
Judges' Pension	Not applicable
LEOPS	Future covered compensation levels, used to estimate member contributions and retirement allowances, were calculated using a 3.00% per annum compounded increase in the 2024 Social Security Maximum Taxable Wage Base.
Correctional Officers' Retirement System	Not applicable

Actuarial Assumptions and Methods

B. ACTUARIAL PROCEDURES

1. Asset Valuation Method

All six Systems use a method based on the principle that the difference between actual and expected investment returns should be subject to partial recognition to smooth out fluctuations in the total return achieved by the fund from year to year. Under this method, the actuarial value of assets reflects annually one-fifth of the market value gains or losses for the five prior years. The resulting value is restricted to be not less than 80% of market value nor greater than 120% of market value. The 2021 valuation recognized 40% of the investment gain from FY 2021 in the determination of the actuarial value of assets rather than the 20% normally recognized. The remaining 60% will be recognized equally over the next four valuations (15% was recognized in 2022, 2023, and 2024).

For the Employees' Retirement and Pension System and for LEOPS, assets must be allocated between State and Municipal Corporation members. Beginning July 1, 1984, this allocation is based upon actual cash flows and shared investment results.

Actuarial Assumptions and Methods

B. ACTUARIAL PROCEDURES

2. Funding Method

All six Systems use the individual entry age normal method to determine costs. Under this funding method, a total contribution rate is determined which consists of two elements, the normal cost rate and the Unfunded Actuarial Accrued Liability (UAAL) rate.

The individual Entry Age Normal cost rate is determined as the value, as of age at entry into the plan, of the member's projected future benefits, and divided by the value, also as of the member's entry age, of the member's expected future salary. For purposes of calculating the normal cost rate, the same benefit accrual rates used to calculate the present value of future benefits are used to calculate the normal cost. The benefit provisions applicable to each member are used in developing his/her individual normal cost rate.

In addition to contributions required to meet the System's normal cost, contributions will be required to fund the System's unfunded actuarial liability. Actuarial liability is defined as the present value of future benefits less the present value of future normal costs. The unfunded actuarial liability for all members is the actuarial liability less the actuarial value of the System's assets.

The General Assembly passed legislation in 2023 that amends how the unfunded liabilities of the System are amortized. The System's unfunded actuarial liability as of June 30, 2023 is funded over a 25-year closed amortization period ending June 30, 2039 (14 years remaining as of the June 30, 2024 valuation date) as a level percentage of payroll. UAAL added subsequent to June 30, 2023 will be amortized under a layered schedule:

- Over 15 years for experience gains and losses;
- Over 25 years for gains or losses attributable to changes to actuarial assumptions or methods;
- Over a period ranging from no less than 10 and no more than 15 years for gains or losses stemming from new legislation (except early retirement incentives); and
- Over 5 years for any accrued liability stemming from legislation providing incentives for the early retirement of State employees.

There is an additional component in the Unfunded Actuarial Accrued Liability amortization contribution rate that accounts for the effects of the lag between the valuation date and when the contribution is made. This calculation assumes the contributions that would be received in fiscal year 2025 are equal to the budgeted contributions developed in the valuation as of June 30, 2023.



Summary of Assumptions Used

June 30, 2024

Miscellaneous and Technical Assumptions

Marriage Assumption:	100% of males and females are assumed to be married for purposes of death-in-service benefits; 80% of healthy males and females, and 65% of disabled males and females, are assumed to be married for purposes of post-retirement death benefits.
Pay Increase Timing:	Teachers' Systems assume beginning of (Fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date. All other Systems assume middle of (Fiscal) year. This is equivalent to assuming that reported pays represent the annualized rate of pay at the beginning of the (Fiscal) year.
Decrement Timing:	Decrements of all types are assumed to occur mid-year, except for Teachers' Systems which assumed beginning of year (i.e., July 1) for retirement and termination.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and rounded integer service on the date the decrement is assumed to occur.
Benefit Service:	Exact fractional service is used to determine the amount of benefit payable.
Decrement Operation:	Mortality and disability operate during retirement eligibility.
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.
Unused Sick Leave:	Each member is assumed to have the following months of service at retirement attributable to sick leave. Correctional Officers: 2 months Employees' and Teachers' Retirement: 12 months Judges and Legislators: 0 months Employees' and Teachers' Pension: 4 and 5 months, respectively LEOPS and State Police: 5 months and 6 months, respectively
Unknown Data for Participants:	Average characteristics of the group as a whole are used to fill in the unknown data.
Age of Spouse:	In the absence of complete data, female retirees are assumed to be 2 years younger than male spouses, and male retirees are assumed to be 3 years older than female spouses.



Summary of Assumptions Used

June 30, 2024

Miscellaneous and Technical Assumptions

Option Elections:	It was assumed optional forms of payment were actuarially equivalent to the normal form of payment.
Actuarial Equivalence:	
TCS	5.85% interest, PubT-2010 Mortality, 25% Unisex, 2.19% COLA pre-reform, 1.42% COLA post-reform.
ECS	5.85% interest, PubG-2010 Mortality, 50% Unisex, 2.19% COLA pre-reform, 1.42% COLA post-reform.
Judges	5.85% interest, PubG-2010 Above Median Income Mortality, 75% Unisex, 3.10% COLA.
Legislators	5.85% interest, PubG-2010 Mortality, 75% Unisex, 3.10% COLA.
State Police, LEOPS, & CORS	5.85% interest, PubS-2010 Mortality, 85% Unisex, 2.60% COLA pre-reform, 1.42% COLA post-reform.
Reinvested Savings Allocation:	Total savings from the 2011 pension reforms that are to be reinvested in each of the Systems as additional contributions are allocated between the Systems in proportion to the savings as measured in the actuarial valuation as of June 30, 2011.
Vested Deferred Benefit Commencement:	Active members assumed to terminate with a vested benefit, current vested deferred, and inactive members are assumed to commence receiving benefits at the following ages: <i>Correctional Officers: Age 55</i> <i>Employees' and Teachers' Retirement, Judges, and Legislators: Age 60</i> <i>Employees' and Teachers' Pension: Earliest age the member could retire with a reduced benefit (or unreduced, if eligible)</i> <i>LEOPS and State Police: Age 50</i>
IRC 401(a)(17) Compensation Limits:	None are applied.
IRC 415(b) Dollar Limits:	None are applied.



Summary of Assumptions Used

June 30, 2024

Miscellaneous and Technical Assumptions

Liability Adjustments: For State Police and LEOPS, the value of the 4% DROP interest credits compared to the valuation interest rate of 6.80% was accounted for through the use of certain load factors as shown in the table below. The assumed length of time members would stay in the DROP was 6.3 years for State Police and 6.6 years for LEOPS, based on the average projected DROP period of DROP members in the valuation data provided by the SRA.

<u>Load Applied to</u>	<u>Load Factor</u>	
	<u>State Police</u>	<u>LEOPS</u>
Active Normal Retirement Decrement	0.9864	0.9849
Liabilities for Members in the DROP	0.9881	0.9854
DROP Account Balances	0.9093	0.9025



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 system benefits and the actuarial present value of future normal costs. Also referred to as "past service liability."

Actuarial Assumptions

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

Actuarial Cost Method

A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future benefits" between future normal costs and Actuarial Accrued Liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent

One series of payments is said to be actuarially equivalent to another series of payments if the two series have the same actuarial present value.

Actuarial Gain (Loss)

The difference between actual unfunded actuarial accrued liabilities and anticipated unfunded actuarial accrued liabilities -- during the period between two valuation dates. It is a measurement of the difference between actual and expected experience.

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 payments.

Amortization

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



Definitions of Technical Terms

Normal Cost

The portion of the actuarial present value of future benefits that is assigned to the current year by the actuarial cost method. Sometimes referred to as "current service cost."

Projected Benefit Obligation

The portion of a member's projected benefit attributable to service before the valuation date - allocated based on the ratio of accrued service to projected total service and based on anticipated future compensation.

Unfunded Actuarial Accrued Liabilities

The difference between actuarial accrued liabilities and valuation assets. Sometimes referred to as "unfunded actuarial liability", "unfunded past service liability", or "unfunded supplemental present value."

Most retirement systems have unfunded actuarial accrued liabilities. They arise each time new benefits are added and each time an actuarial loss occurs.

The existence of unfunded actuarial accrued liabilities is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial accrued liabilities do not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial accrued liabilities and the trend in their amount (after due allowance for devaluation of the dollar).

APPENDIX B

MEMBERSHIP INFORMATION

State Retirement and Pension System Summary of Membership Data as of June 30, 2024 (State and Municipal)

		Active Members		Retirees and Beneficiaries					Vested Former Members (Includes Inactives)	Total
		Number	Salary	Number	Benefits#	Avg. Monthly Benefit	Avg. Age	Avg. Age at Ret.*		
Teachers' Retirement - STATE	Total	37	\$ 6,498,637	2,694	\$ 130,982,643	\$ 4,052	83.0	62.3	20	2,751
	Vested	37	\$ 6,498,637							
	Non-vested	0	\$ -							
Teachers' Pension - STATE	Total	9,501	\$ 728,588,602	7,164	\$ 155,213,108	\$ 1,805	75.1	63.7	2,811	19,476
	Vested	4,439	\$ 387,192,331							
	Non-vested	5,062	\$ 341,396,271							
Teachers' Retirement - LOCAL	Total	54	\$ 5,676,932	17,313	\$ 887,237,111	\$ 4,271	80.6	58.1	41	17,408
	Vested	54	\$ 5,676,932							
	Non-vested	0	\$ -							
Teachers' Pension - LOCAL	Total	105,724	\$ 8,361,585,229	57,804	\$ 1,673,925,988	\$ 2,413	72.9	62.1	20,622	184,150
	Vested	56,662	\$ 5,381,028,136							
	Non-vested	49,062	\$ 2,980,557,093							
Employees' Retirement^	Total	8,201	\$ 550,821,349	17,624	\$ 546,456,321	\$ 2,584	73.8	56.4	743	26,568
	Vested	4,783	\$ 346,449,645							
	Non-vested	3,418	\$ 204,371,704							
Employees' Pension	Total	76,747	\$ 5,513,019,163	67,784	\$ 1,308,369,394	\$ 1,609	72.6	62.4	21,459	165,990
	Vested	33,304	\$ 2,709,284,975							
	Non-vested	43,443	\$ 2,803,734,188							
State Police	Total	1,312	\$ 145,026,245	2,638	\$ 167,342,110	\$ 5,286	66.5	47.9	85	4,035
	Vested	817	\$ 104,087,108							
	Non-vested	495	\$ 40,939,137							
Judges	Total	322	\$ 61,180,934	471	\$ 48,619,393	\$ 8,602	78.4	65.6	8	801
	Vested	223	\$ 42,389,467							
	Non-vested	99	\$ 18,791,467							
LEOPS	Total	2,993	\$ 267,415,396	2,608	\$ 106,271,092	\$ 3,396	63.6	53.3	309	5,910
	Vested	1,469	\$ 154,902,529							
	Non-vested	1,524	\$ 112,512,867							
CORS Municipal	Total	153	\$ 10,540,976	71	\$ 2,308,653	\$ 2,710	62.0	56.5	1	225
	Vested	68	\$ 5,476,325							
	Non-vested	85	\$ 5,064,651							
Total Systems	Total	205,044	\$ 15,650,353,463	176,171	\$ 5,026,725,812	\$ 2,378	73.6	61.1	46,099	427,314
	Vested	101,856	\$ 9,142,986,085							
	Non-vested	103,188	\$ 6,507,367,378							

^ Includes CORS (State) and Legislators. See page B-3 for the summary for each subgroup.

* Includes normal and early service retirees only.

Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2024.



State Retirement and Pension System Summary of Membership Data as of June 30, 2024 (State Only)

		Active Members		Retirees and Beneficiaries				Vested Former Members (Includes Inactives)		Total
		Number	Salary	Number	Benefits#	Avg. Monthly Benefit	Avg. Age	Avg. Age at Ret.*	Number	Number
Teachers' Retirement - STATE	Total	37	\$ 6,498,637	2,694	\$ 130,982,643	\$ 4,052	83.0	62.3	20	2,751
	Vested	37	\$ 6,498,637							
	Non-vested	0	\$ -							
Teachers' Pension - STATE	Total	9,501	\$ 728,588,602	7,164	\$ 155,213,108	\$ 1,805	75.1	63.7	2,811	19,476
	Vested	4,439	\$ 387,192,331							
	Non-vested	5,062	\$ 341,396,271							
Teachers' Retirement - LOCAL	Total	54	\$ 5,676,932	17,313	\$ 887,237,111	\$ 4,271	80.6	58.1	41	17,408
	Vested	54	\$ 5,676,932							
	Non-vested	0	\$ -							
Teachers' Pension - LOCAL	Total	105,724	\$ 8,361,585,229	57,804	\$ 1,673,925,988	\$ 2,413	72.9	62.1	20,622	184,150
	Vested	56,662	\$ 5,381,028,136							
	Non-vested	49,062	\$ 2,980,557,093							
Employees' Retirement^	Total	8,189	\$ 549,824,761	15,747	\$ 489,357,776	\$ 2,590	72.9	56.1	733	24,669
	Vested	4,771	\$ 345,453,057							
	Non-vested	3,418	\$ 204,371,704							
Employees' Pension	Total	50,955	\$ 3,943,987,104	49,536	\$ 1,004,349,746	\$ 1,690	72.7	62.1	15,682	116,173
	Vested	22,583	\$ 1,938,580,481							
	Non-vested	28,372	\$ 2,005,406,623							
State Police	Total	1,312	\$ 145,026,245	2,638	\$ 167,342,110	\$ 5,286	66.5	47.9	85	4,035
	Vested	817	\$ 104,087,108							
	Non-vested	495	\$ 40,939,137							
Judges	Total	322	\$ 61,180,934	471	\$ 48,619,393	\$ 8,602	78.4	65.6	8	801
	Vested	223	\$ 42,389,467							
	Non-vested	99	\$ 18,791,467							
LEOPS	Total	1,589	\$ 158,000,369	1,899	\$ 76,421,166	\$ 3,354	65.1	53.4	174	3,662
	Vested	855	\$ 97,187,140							
	Non-vested	734	\$ 60,813,229							
Total Systems	Total	177,683	\$ 13,960,368,813	155,266	\$ 4,633,449,040	\$ 2,487	73.8	60.9	40,176	373,125
	Vested	90,441	\$ 8,308,093,289							
	Non-vested	87,242	\$ 5,652,275,524							

^ Includes CORS (State) and Legislators. See page B-3 for the summary for each subgroup.

* Includes normal and early service retirees only.

#Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2024.



State Retirement and Pension System Summary of Membership Data as of June 30, 2024 (State Only - Employees' Retirement Subgroups)

		Active Members		Retirees and Beneficiaries					Vested Former Members (Includes Inactives)	Total
		Number	Salary	Number	Benefits#	Avg. Monthly Benefit	Avg. Age	Avg. Age at Ret.*	Number	Number
Employees' Retirement	Total	89	\$ 9,459,253	8,277	\$ 289,962,881	\$ 2,919	79.9	58.3	52	8,418
	Vested	89	\$ 9,459,253							
	Non-vested	0	\$ -							
Legislators	Total	187	\$ 10,198,707	325	\$ 6,405,574	\$ 1,642	77.2	63.2	47	559
	Vested	80	\$ 4,373,948							
	Non-vested	107	\$ 5,824,759							
CORS State	Total	7,913	\$ 530,166,801	7,145	\$ 192,989,321	\$ 2,251	64.6	53.1	634	15,692
	Vested	4,602	\$ 331,619,856							
	Non-vested	3,311	\$ 198,546,945							
Total Employees' Retirement State	Total	8,189	\$ 549,824,761	15,747	\$ 489,357,776	\$ 2,590	72.9	56.1	733	24,669
	Vested	4,771	\$ 345,453,057							
	Non-vested	3,418	\$ 204,371,704							

* Includes normal and early service retirees only.

Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2024.



State Retirement and Pension System Summary of Membership Data as of June 30, 2024 (Municipal Only)

		Active Members		Retirees and Beneficiaries				Vested Former Members (Includes Inactives)		Total
		Number	Salary	Number	Benefits#	Avg. Monthly Benefit	Avg. Age	Avg. Age at Ret.*	Number	Number
Employees' Retirement	Total	12	\$ 996,588	1,877	\$ 57,098,545	\$ 2,535	81.0	59.3	10	1,899
	Vested	12	\$ 996,588							
	Non-vested	0	\$ -							
Employees' Pension	Total	25,792	\$ 1,569,032,059	18,248	\$ 304,019,648	\$ 1,388	72.4	63.3	5,777	49,817
	Vested	10,721	\$ 770,704,494							
	Non-vested	15,071	\$ 798,327,565							
LEOPS	Total	1,404	\$ 109,415,027	709	\$ 29,849,926	\$ 3,508	59.6	53.0	135	2,248
	Vested	614	\$ 57,715,389							
	Non-vested	790	\$ 51,699,638							
CORS Municipal	Total	153	\$ 10,540,976	71	\$ 2,308,653	\$ 2,710	62.0	56.5	1	225
	Vested	68	\$ 5,476,325							
	Non-vested	85	\$ 5,064,651							
Total Systems	Total	27,361	\$ 1,689,984,650	20,905	\$ 393,276,773	\$ 1,568	72.7	62.6	5,923	54,189
	Vested	11,415	\$ 834,892,796							
	Non-vested	15,946	\$ 855,091,854							

* Includes normal and early service retirees only.

#Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2024.



Active Membership Information

Maryland State Retirement and Pension System				
Active Membership Statistics				
June 30, 2024				
System	Number	Average Age	Average Credited Service	Average Salary
Teachers' Retirement	91	74.4	48.2	\$ 133,797
Teachers' Pension	115,225	45.4	11.9	78,891
Employees' Retirement – State	89	71.7	48.3	106,284
Employees' Retirement – Municipal	12	66.7	47.2	83,049
Employees' Retirement – Legislators	187	53.8	7.9	54,539
Employees' Retirement – Correctional Officers	7,913	45.6	12.4	66,999
Employees' Retirement – Total	8,201	46.1	12.7	67,165
Employees' Pension – State	50,955	48.0	10.8	77,401
Employees' Pension – Municipal	25,792	48.9	9.8	60,834
Employees' Pension – Total	76,747	48.3	10.4	71,834
State Police	1,312	36.9	12.7	110,538
Judges	322	57.7	8.2	190,003
LEOPS – State	1,589	42.9	11.1	99,434
LEOPS – Municipal	1,404	38.4	9.7	77,931
LEOPS – Total	2,993	40.8	10.4	89,347
CORS – Municipal	153	42.1	10.7	68,895
TOTAL SYSTEMS	205,044	46.4	11.4	76,327
	Teachers' Retirement		Employees' Retirement	
	Number	Earnings	Number	Earnings
Unlimited COLA	60	\$ 8,554,572	58	\$ 5,958,280
5% COLA Cap	15	2,044,974	28	3,179,807
Bifurcate	16	1,576,023	15	1,317,754
	<u>91</u>	<u>\$ 12,175,569</u>	<u>101</u>	<u>\$ 10,455,841</u>



Active Membership – Age & Service Distribution

June 30, 2024

Teachers’ Combined System

Age Nearest Birthday	Nearest Whole Years of Service on the Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	31							31	\$ 726,882
20-24	2,460	12						2,472	114,147,701
25-29	6,990	2,262	4					9,256	522,915,077
30-34	5,304	5,747	1,879	3				12,933	831,136,579
35-39	4,822	3,441	4,650	1,675	8			14,596	1,058,661,485
40-44	3,392	2,752	2,334	5,519	1,786	9		15,792	1,320,811,212
45-49	2,902	2,609	1,829	2,681	4,390	1,290	2	15,703	1,401,771,010
50-54	2,372	2,444	1,867	2,231	2,515	3,813	721	15,963	1,471,352,475
55-59	1,757	1,961	1,722	2,135	1,887	2,085	1,917	13,464	1,180,699,120
60	282	311	299	394	351	291	328	2,256	187,160,845
61	247	257	303	376	349	267	267	2,066	170,268,744
62	219	230	250	358	290	274	235	1,856	148,429,413
63	185	234	210	314	255	203	200	1,601	128,361,533
64	161	190	170	300	229	180	188	1,418	110,681,331
65	122	136	122	206	228	184	187	1,185	92,854,865
66	110	129	129	165	183	136	164	1,016	78,883,498
67	107	115	99	127	141	108	153	850	65,107,428
68	59	91	82	85	91	72	108	588	45,946,473
69	60	70	65	78	63	53	91	480	35,887,497
70	36	42	42	56	53	44	72	345	27,204,477
71	37	46	35	62	42	42	60	324	24,391,488
72	35	42	31	34	28	25	61	256	20,237,905
73	20	19	29	32	21	25	48	194	15,296,027
74	23	18	30	20	23	16	26	156	11,133,214
75	29	16	24	23	10	10	35	147	9,888,216
76	17	8	12	10	8	12	26	93	7,513,318
77	13	18	11	11	10	5	24	92	6,248,852
78	4	7	5	9	7	3	14	49	3,032,396
79+	1	18	11	15	26	9	54	134	11,600,339
Totals	31,797	23,225	16,244	16,919	12,994	9,156	4,981	115,316	\$9,102,349,400



Active Membership – Age & Service Distribution

June 30, 2024

Employees' Combined System

Age Nearest Birthday	Nearest Whole Years of Service on the Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	55							55	\$ 2,026,152
20-24	1,516	25						1,541	71,864,880
25-29	4,024	706	15					4,745	266,837,455
30-34	4,598	2,463	547	10				7,618	480,682,105
35-39	5,687	2,708	1,701	751	31			10,878	734,852,822
40-44	3,553	2,346	1,666	1,674	480	16		9,735	711,109,512
45-49	2,974	2,041	1,394	1,631	1,214	466	10	9,730	735,609,670
50-54	2,683	1,988	1,428	1,578	1,357	1,218	334	10,586	812,650,590
55-59	2,488	2,038	1,498	1,769	1,454	1,366	1,241	11,854	894,932,220
60	423	379	298	398	280	297	305	2,380	177,609,209
61	406	370	333	356	286	249	366	2,366	175,726,414
62	367	344	262	290	281	249	356	2,149	164,296,225
63	322	366	264	286	224	185	309	1,956	144,285,135
64	254	261	253	261	182	178	290	1,679	125,761,913
65	187	282	242	219	151	136	282	1,499	113,792,077
66	187	234	191	173	143	118	253	1,299	98,592,225
67	119	173	163	158	119	94	178	1,004	74,728,093
68	123	137	138	127	71	67	153	816	61,233,439
69	88	104	85	88	72	52	123	612	45,446,530
70	71	92	77	81	60	41	105	527	39,390,292
71	71	67	58	52	31	23	81	383	26,220,193
72	49	52	47	51	25	23	76	323	23,775,776
73	32	46	42	43	25	21	59	268	19,956,146
74	30	33	32	29	20	16	47	207	14,381,117
75	51	29	33	29	16	13	42	213	12,792,595
76	24	27	27	17	19	9	27	150	9,730,053
77	9	15	10	15	13	9	24	95	6,733,358
78	2	18	11	12	10	6	19	78	5,249,293
79+	5	37	25	31	29	14	61	202	13,575,023
Totals	30,398	17,381	10,840	10,129	6,593	4,866	4,741	84,948	\$6,063,840,512



Active Membership – Age & Service Distribution

June 30, 2024

State Police

Age Nearest Birthday	Nearest Whole Years of Service on the Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	4							4	\$ 140,164
20-24	80	10						90	5,790,164
25-29	82	100	4					186	15,493,066
30-34	32	118	109	6				265	26,313,817
35-39	18	33	117	96	11			275	30,977,702
40-44	3	11	43	92	89	3		241	31,347,676
45-49		5	17	28	63	22		135	18,838,713
50-54		1	5	21	26	20	1	74	10,223,209
55-59			4	12	12	8	5	41	5,757,110
60+							1	1	144,624
Totals	219	278	299	255	201	53	7	1,312	\$145,026,245



Active Membership – Age & Service Distribution

June 30, 2024

Judges

Age Nearest Birthday	Nearest Whole Years of Service on the Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
35-39	3							3	\$ 543,999
40-44	11	1						12	2,263,796
45-49	24	12	2					38	7,100,254
50-54	22	30	8	2				62	11,803,446
55-59	19	20	20	5				64	12,231,012
60-64	14	21	21	20				76	14,422,908
65-69	6	17	12	24				59	11,286,447
70+		1	3	4				8	1,529,072
Totals	99	102	66	55	0	0	0	322	\$61,180,934



Active Membership – Age & Service Distribution

June 30, 2024

LEOPS

Age Nearest Birthday	Nearest Whole Years of Service on the Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	100	3						103	\$ 6,100,932
25-29	240	133	10					383	26,071,678
30-34	200	220	114	6				540	41,742,611
35-39	86	131	167	101	8			493	43,724,969
40-44	44	59	76	145	73	1		398	38,539,054
45-49	48	43	33	73	124	19		340	34,330,190
50-54	53	39	40	45	76	56	7	316	32,919,680
55-59	53	50	41	34	35	25	21	259	27,316,340
60-64	15	23	26	22	17	8	10	121	12,835,632
65-69	3	4	7	8	3	1	1	27	2,548,849
70+	1	2	3	4	1	1	1	13	1,285,461
Totals	843	707	517	438	337	111	40	2,993	\$267,415,396



Active Membership – Age & Service Distribution

June 30, 2024

CORS

Age Nearest Birthday	Nearest Whole Years of Service on the Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	3							3	\$ 158,354
25-29	19	5						24	1,365,116
30-34	7	8	4					19	1,197,778
35-39	6	7	3	6				22	1,454,078
40-44	3	5	6	5	2			21	1,448,845
45-49	5	2	5	5	2	1		20	1,364,337
50-54	6	4	3	1	5	1		20	1,368,449
55-59	2	3	1	4	3	1	2	16	1,254,427
60-64				2			4	6	584,175
65-69							1	1	153,199
70+							1	1	192,218
Totals	51	34	22	23	12	3	8	153	\$10,540,976



Retired Membership Statistics June 30, 2024 (State and Municipal)

System	Number	Average Age	Average Credited Service*	Average Final Average Salary*	Average Benefit
Teachers' Retirement	20,007	80.9	30.0	\$ 58,209	\$ 50,893
Teachers' Pension	64,968	73.1	22.3	64,602	28,154
Employees' Retirement – State	15,747	72.9	24.7	45,915	31,076
Employees' Retirement – Municipal	1,877	81.0	26.5	37,653	30,420
Employees' Retirement – Total	17,624	73.8	24.9	45,035	31,006
Employees' Pension – State	49,536	72.7	21.5	50,704	20,275
Employees' Pension – Municipal	18,248	72.4	18.6	45,211	16,660
Employees' Pension – Total	67,784	72.6	20.7	49,225	19,302
State Police	2,638	66.5	23.3	61,887	63,435
Judges	471	78.4	13.8	199,820	103,226
LEOPS – State	1,899	65.1	21.9	65,782	40,243
LEOPS – Municipal	709	59.6	22.0	70,800	42,101
LEOPS – Total	2,608	63.6	21.9	67,146	40,748
CORS – Municipal	71	62.0	21.7	67,947	32,516
Total - State	155,266	73.8	23.3	57,828	29,842
Total - Municipal	20,905	72.7	19.4	45,478	18,813
TOTAL SYSTEMS	176,171	73.6	22.8	56,362	28,533

* Only non-zero values included in averages.



Retired Membership Statistics –by Type

June 30, 2024

(State and Municipal)

System	Service Retirees		Disabilities		Beneficiaries	
	Number	Average Age	Number	Average Age	Number	Average Age
Teachers' Retirement	17,151	80.8	425	80.2	2,431	81.9
Teachers' Pension	58,672	73.4	3,964	67.1	2,332	75.0
Employees' Retirement – State	11,889	73.3	1,566	62.7	2,292	78.0
Employees' Retirement – Municipal	1,329	81.1	104	80.9	444	80.5
Employees' Retirement – Total	13,218	74.1	1,670	63.9	2,736	78.4
Employees' Pension – State	41,146	73.2	4,978	67.3	3,412	74.1
Employees' Pension – Municipal	14,535	73.3	2,534	66.5	1,179	74.0
Employees' Pension – Total	55,681	73.3	7,512	67.0	4,591	74.1
State Police	1,634	66.0	613	61.5	391	76.2
Judges	358	77.0	4	73.5	109	83.0
LEOPS – State	1,381	66.1	355	58.6	163	70.0
LEOPS – Municipal	539	61.3	141	53.9	29	56.0
LEOPS – Total	1,920	64.8	496	57.2	192	67.9
CORS – Municipal	60	62.2	9	58.1	2	72.9
Total - State	132,231	74.2	11,905	66.5	11,130	76.9
Total - Municipal	16,463	73.5	2,788	66.4	1,654	75.5
TOTAL SYSTEMS	148,694	74.1	14,693	66.5	12,784	76.7



Retired Membership – Attained Age June 30, 2024 (State and Municipal)

Age at Valuation Date	Teachers'		Employees		State Police		Judges		LEOPS		CORS (Municipal)		Total	
	Number	Annual Benefits#	Number	Annual Benefits#	Number	Annual Benefits#	Number	Annual Benefits#	Number	Annual Benefits#	Number	Annual Benefits#	Annual Benefits	
Under 30	11	\$ 125,470	23	\$ 359,477	2	\$ 81,428	-	-	4	\$ 76,874	-	-	40	\$ 643,250
30-34	9	172,454	33	413,924	3	127,202	-	-	4	177,635	-	-	49	891,215
35-39	33	788,665	116	2,728,269	20	932,864	-	-	19	745,669	-	-	188	5,195,468
40-44	98	3,484,301	228	5,383,588	31	1,790,543	-	-	46	1,839,460	2	\$ 41,483	405	12,539,374
45-49	166	6,760,947	521	12,954,300	140	9,518,274	1	\$ 49,162	88	3,928,164	5	193,047	921	33,403,895
50-54	552	24,290,505	1,390	39,441,856	304	20,776,973	1	136,289	358	14,971,702	7	185,356	2,612	99,802,681
55-59	2,263	97,485,315	3,518	99,160,507	406	27,269,915	-	-	474	20,163,953	11	238,716	6,672	244,318,406
60-64	6,145	206,076,267	8,885	231,254,466	350	22,791,307	18	1,711,864	454	19,050,947	17	778,881	15,869	481,663,734
65-69	13,176	413,867,913	17,145	393,303,564	319	21,104,139	45	5,005,321	466	19,256,210	21	602,900	31,172	853,140,047
70-74	20,749	702,175,610	19,818	419,329,820	341	22,250,556	110	12,502,160	366	14,198,306	5	134,655	41,389	1,170,591,107
75-79	20,006	678,477,140	16,225	336,424,650	333	19,667,862	105	11,440,165	209	7,698,283	2	38,387	36,880	1,053,746,487
80-84	12,027	395,306,185	9,553	177,033,899	231	12,662,663	84	8,090,033	78	2,726,489	1	95,227	21,974	595,914,497
85-89	6,112	199,192,179	5,217	91,637,037	110	5,803,055	64	6,255,471	32	1,161,568	-	-	11,535	304,049,310
90-94	2,722	90,543,210	2,114	34,847,403	42	2,056,542	29	2,643,076	9	261,545	-	-	4,916	130,351,776
95-99	795	25,237,611	552	9,596,457	3	234,048	14	785,853	1	14,286	-	-	1,365	35,868,255
100-104	102	3,084,585	63	905,886	3	274,738	-	-	-	-	-	-	168	4,265,209
105-110+	9	290,491	7	50,611	-	-	-	-	-	-	-	-	16	341,102
	84,975	\$ 2,847,358,849	85,408	\$ 1,854,825,715	2,638	\$ 167,342,110	471	\$ 48,619,393	2,608	\$ 106,271,092	71	\$ 2,308,653	176,171	\$ 5,026,725,812

Retiree benefit amounts include the cost-of-living-adjustment granted July 1, 2024.



Retired Membership* – By Calendar Year of Retirement

June 30, 2024

(State and Municipal)

Year of Retirement	Teachers'		Employees		State Police		Judges		LEOPS		CORS (Municipal)		Total	
	Number	Annual Benefits#	Number	Annual Benefits#	Number	Annual Benefits#	Number	Annual Benefits#	Number	Annual Benefits#	Number	Annual Benefits#	Annual Benefits	
Before 1994	4,729	\$ 171,799,433	3,970	\$ 80,971,587	576	\$ 29,307,420	38	\$ 2,133,552	43	\$ 1,335,268	-	-	9,356	\$ 285,547,260
1994	877	30,368,806	707	13,895,101	66	3,783,945	2	262,677	10	345,427	-	-	1,662	48,655,956
1995	1,017	33,909,471	856	16,111,533	54	3,111,177	8	666,417	12	400,091	-	-	1,947	54,198,689
1996	1,221	42,522,315	1,704	38,441,771	68	3,846,255	9	684,335	12	386,750	-	-	3,014	85,881,425
1997	1,325	46,118,602	1,195	25,541,289	54	3,041,583	5	320,323	13	347,582	-	-	2,592	75,369,379
1998	1,568	56,618,961	1,108	20,228,461	56	3,246,229	8	590,046	22	597,213	-	-	2,762	81,280,910
1999	2,014	72,311,278	1,220	22,605,480	59	4,006,082	7	807,599	30	791,722	-	-	3,330	100,522,160
2000	2,038	72,069,960	1,359	24,164,783	132	8,906,516	9	945,044	63	2,160,623	-	-	3,601	108,246,927
2001	2,021	71,783,743	1,490	28,299,608	87	6,166,362	12	1,099,736	93	3,816,740	-	-	3,703	111,166,189
2002	2,191	75,189,976	1,761	33,140,851	84	6,205,728	14	1,403,642	83	3,445,536	-	-	4,133	119,385,733
2003	2,233	77,308,654	2,141	43,619,418	99	7,547,259	8	695,542	86	4,104,275	-	-	4,567	133,275,148
2004	2,590	90,660,270	2,440	51,682,007	94	6,576,256	13	1,289,918	75	3,181,182	-	-	5,212	153,389,633
2005	2,631	86,965,631	2,677	55,775,925	105	7,195,894	13	1,350,813	91	3,900,571	-	-	5,517	155,188,835
2006	2,378	78,296,839	2,418	50,285,419	80	5,275,710	14	1,367,123	76	3,274,776	-	-	4,966	138,499,867
2007	2,671	91,140,160	2,759	59,764,528	91	5,690,573	21	2,281,256	83	3,337,393	-	-	5,625	162,213,911
2008	2,765	91,198,171	2,924	61,367,201	77	4,747,677	13	1,521,773	94	3,948,908	-	-	5,873	162,783,729
2009	2,715	82,349,464	3,014	60,331,161	67	4,402,441	16	1,678,456	117	4,984,568	1	\$ 17,717	5,930	153,763,808
2010	3,242	110,348,511	3,618	79,162,708	74	5,509,703	16	1,597,093	95	4,216,973	6	247,725	7,051	201,082,713
2011	3,976	139,994,939	3,904	87,297,226	77	4,801,527	16	1,559,719	118	4,989,587	3	231,687	8,094	238,874,684
2012	3,431	108,998,365	3,386	66,957,392	51	3,276,789	13	1,672,435	114	4,809,120	2	101,380	6,997	185,815,481
2013	3,576	113,538,709	3,795	77,020,252	60	3,740,355	21	2,089,985	113	4,648,907	6	215,263	7,571	201,253,470
2014	3,716	116,263,030	3,437	66,141,424	42	2,615,707	15	1,879,058	81	3,199,893	3	33,804	7,294	190,132,915
2015	3,866	118,410,319	4,548	98,299,375	50	3,186,794	17	2,009,835	112	4,475,669	3	42,690	8,596	226,424,683
2016	3,579	110,066,047	3,929	80,241,834	41	2,387,713	16	1,822,421	100	4,048,047	3	50,879	7,668	198,616,940
2017	3,360	108,664,868	3,995	91,080,421	54	3,319,159	21	2,324,480	89	3,255,421	2	34,958	7,521	208,679,307
2018	3,179	105,910,188	3,710	89,610,499	46	3,004,057	27	3,355,837	122	5,532,310	2	55,302	7,086	207,468,193
2019	3,116	101,522,254	3,712	90,876,423	46	2,860,855	17	2,145,406	113	4,178,946	6	130,741	7,010	201,714,625
2020	2,956	97,761,209	2,937	70,457,238	59	4,464,784	14	1,639,886	110	4,621,473	7	182,407	6,083	179,126,997
2021	3,230	109,250,224	3,359	80,853,907	66	5,205,487	22	2,125,900	127	5,162,856	4	245,097	6,808	202,843,471
2022	3,337	118,126,104	3,220	81,816,765	44	3,494,496	23	2,549,837	141	5,654,339	9	265,464	6,774	211,907,005
2023	2,823	99,287,180	2,840	72,938,824	49	4,032,793	15	1,721,760	114	4,883,374	10	275,610	5,851	183,139,542
2024	604	18,605,170	1,275	35,845,303	30	2,384,781	8	1,027,491	56	2,235,551	4	177,930	1,977	60,276,227
	84,975	\$ 2,847,358,849	85,408	\$ 1,854,825,715	2,638	\$ 167,342,110	471	\$ 48,619,393	2,608	\$ 106,271,092	71	\$ 2,308,653	176,171	\$ 5,026,725,812

Retiree benefit amounts include the cost-of-living-adjustment granted July 1, 2024.



APPENDIX C

SUMMARY OF PLAN PROVISIONS

This guide provides a general summary of certain features of the Maryland State Retirement and Pension System (“MSRPS”). The MSRPS is governed by law, including Division II of the State Personnel and Pensions Article of the Annotated Code of Maryland, and Title 22 of the Code of Maryland Regulations. If there is a conflict between the law and this guide, the law prevails.

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CITATIONS

All citations "SPP" are to the State Personnel and Pensions Article of the Annotated Code of Maryland.



Teachers' Retirement System of the State of Maryland

1. Membership

System closed to new members hired on or after January 1, 1980. Members on December 31, 1979 continue to be members unless they elected to transfer into the Teachers' Pension System (established January 1, 1980) prior to January 1, 2005.

Membership generally includes any teacher, helping teacher, principal, supervisor, superintendent, attendance officer or clerk employed in public day school within the State of Maryland, or supported and controlled by the State; any librarian or clerical employee of a library established or operated under the Education Article; any professional or clerical employee of a community college established or operated under the Education Article; or staff employee of the University System of Maryland, Morgan State University or St. Mary's College who is a member as of January 1, 1998.

2. Member Contributions

Retirement System members participate under one of three elections (effective July 1, 1984):

- Plan A: Generally, 7% of earnable compensation to maintain all benefits, including unlimited compounded cost-of-living adjustments.
- Plan B: Generally, 5% of earnable compensation to maintain all benefits, except the compounded cost-of-living adjustments which are capped at 5%.
- Plan C: 5% of earnable compensation as determined under the employee contribution for the Teachers' Pension System (Plan C provides a two-part benefit based on benefits of the Teachers' Retirement System and the Teachers' Pension System).

Interest earned on all employee contributions is 4% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.

3. Normal Retirement Age

Normal retirement age is age 60.

4. Normal Service Retirement Allowance

Eligibility: 30 years of eligibility service or attainment of age 60.

Allowance: $1/55^{\text{th}}$ of average final compensation for the three highest years as a member for each year of creditable service. Creditable service is based on a full normal working time for teachers – 10 months equals one year.

Plan C: For creditable service before election date, the amount determined by the service retirement formula for Teachers' Retirement System; for creditable service after election date, the amount determined by the service retirement formula for the applicable component of the Teachers' Pension System.



Teachers' Retirement System of the State of Maryland

5. Early Retirement Allowance

Eligibility: 25 years of eligibility service and less than 60 years old.

Allowance: Service Retirement allowance reduced by 0.5% for each month that date of retirement precedes the earlier of age 60 or the date the member would have completed 30 years of eligibility service (maximum reduction of 30%).

Plan C: For creditable service before election date, the amount determined by the service retirement formula for Teachers' Retirement System (maximum reduction of 30%); for creditable service after election date, the amount determined by the service retirement formula for the applicable component of the Teachers' Pension System for each month retirement occurs prior to age 62 (maximum reduction of 42%).

6. Disability Retirement Allowance

Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is permanent.

Allowance: The benefit is $1/55^{\text{th}}$ of average final compensation for the three highest years as a member for each year of creditable service. The minimum benefit is 25% of average final compensation; the maximum benefit can be no greater than $1/55^{\text{th}}$ of average final compensation for each year of creditable service the member would have accrued if employment continued to age 60.

Plan C: The benefit is the greater of the Teachers' Retirement System allowance noted above, or the ordinary disability benefit of the Teachers' Pension System.

Accidental

Eligibility: Certification of the medical board designated by the Board of Trustees that member is totally and permanently incapacitated from the performance of the normal duties of the member's position as the natural and proximate result of an accident that occurred in the actual performance of duty at a definite time and place without willful negligence by the member.

Allowance: The benefit is 66.67% of average final compensation for the three highest years as a member, plus the annuity provided by accumulated member contributions. The maximum benefit cannot be greater than the average final compensation, including any annuitized accumulated contributions.



Teachers' Retirement System of the State of Maryland

7. Death Benefits

Ordinary Death Benefit for Active Member with Less Than One Year of Service

Eligibility: Less than one year of eligibility service and not eligible for a special death benefit

Benefit: Return of accumulated contributions

Ordinary Death Benefit for Active Member with One Or More Years of Service

Eligibility: One or more years of eligibility service and not eligible for a special death benefit

Benefit:

Members who at the time of death are younger than age 55 or have less than 15 years of service.
One-time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions to the member's designated beneficiary.

Members who at the time of death are eligible to retire and are age 55 or older with at least 15 years of service.

The surviving spouse of a deceased member may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) a monthly allowance under Option 2 (100% survivor benefit). In cases where a deceased member is not survived by a spouse, the decedent's children may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) an allowance equal to 50% of the basic allowance that would have been paid to the deceased member, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. If any child is disabled, the benefit will continue for that child as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, the member's designated beneficiary shall receive a one-time lump sum payment consisting of the member's accumulated contributions and the member's annual compensation at the time of death.

Special Death Benefit for Active Member

Eligibility: Death arising out of or in the course of the actual performance of duty without willful negligence by the member.

Benefit: 66.67% of average final compensation for the three highest years as a member payable to a surviving spouse, decedent's children or dependent parents. Accumulated member contributions are paid to the designated beneficiary. Children of deceased members receiving a special death benefit will continue to receive this benefit, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. Disabled children receiving a special death benefit may receive a special death benefit as long as they remain disabled, regardless of age.



Teachers' Retirement System of the State of Maryland

Death Benefit for Vested Former Member

If member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

8. Vested Allowance

Eligibility: Five years of eligibility service and separation from employment other than by death or retirement.

Allowance: Vested allowance payable at normal retirement age, provided member does not withdraw accumulated contributions.

If member dies before payment of the vested allowance starts, only accumulated member contributions are returned.

9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Any COLAs are effective July 1 for all allowances which have been in payment for one year.

- Selection A (Additional Member Contributions): Uncapped and compounded.
- Selection B (Limited COLA): Capped at 5% and compounded.
- Selection C (Combination Formula): For creditable service on or after the effective date of Selection C, generally, with limited exceptions, COLA is capped at 3% and compounded. For creditable service before the effective date of Selection C, COLA is calculated based on the applicable component (A or B) to which the member was subject prior to electing Section C.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

10. Optional Forms of Payment

Basic service allowance is a single life annuity.

- Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.



Teachers' Retirement System of the State of Maryland

- Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 5: 100% "pop-up" joint and survivor annuity, which pays the designated beneficiary 100% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 6: 50% "pop-up" joint and survivor annuity, which pays the designated beneficiary 50% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

Vested former members who are eligible to receive a vested allowance of less than \$50 a month may elect to receive a lump-sum payment equal to the present value in lieu of a monthly benefit.

11. Reduction for Benefits Payable under Workers' Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers' compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers' compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Teachers' Retirement System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers' compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers' compensation payments are subject to an offset by the Workers' Compensation Commission if a recipient is receiving an ordinary disability payment from the Teachers' Retirement System for the same injury or illness. Any offset taken for an accidental disability from the Teachers' Retirement System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree's employer by the Workers' Compensation Commission.



Teachers' Pension System of the State of Maryland

1. Membership

Membership is generally a condition of employment for those teachers, faculty members, and educational employees, specified in SPP § 23-206 of the Annotated Code of Maryland, hired on or after January 1, 1980. Certain eligible higher education employees may elect to join an optional defined contribution retirement program provided by the State, known as the Optional Retirement Program (ORP). The ORP is separate and distinctive from the supplemental program administered by the Maryland Supplemental Retirement Plan.

All individuals who are members of the Teacher's Pension System on or before June 30, 2011, participate in the Alternate Contributory Pension Selection (ACPS) except for the members who transferred from the Teachers' Retirement System after April 1, 1998 or former vested members who terminated employment prior to July 1, 1998.

All individuals who enroll in the Teachers' Pension System on or after July 1, 2011, participate in the Reformed Contributory Pension Benefit (RCPB).

2. Member Contributions

Members of both the ACPS and the RCPB are required to make contributions of 7% of earnable compensation.

Contributions earn interest at 5% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.

3. Normal Retirement Age

For members of the Alternate Contributory Pension Selection, normal retirement age is age 62.

For members of the Reformed Contributory Pension Benefit, normal retirement age is age 65.

4. Normal Service Retirement Allowance

ACPS Eligibility - 30 years of eligibility service or attainment of one of the following:

- Age 62 with five years of eligibility service.
- Age 63 with four years of eligibility service.
- Age 64 with three years of eligibility service.
- Age 65 and older with two years of eligibility service.

ACPS Allowance - The greater of (i) or (ii), plus (iii), as described below:

- (i) 1.2% of average final compensation for the three highest consecutive years as a member for each year of creditable service on or before June 30, 1998;



Teachers' Pension System of the State of Maryland

- (ii) 0.8% of average final compensation for the three highest consecutive years as a member up to the Social Security Integration Level (SSIL) plus 1.5% of average final compensation over the integration level for each year of creditable service on or before June 30, 1998;
- (iii) the number of years of the member's creditable service on or after July 1, 1998 multiplied by 1.8% of the member's average final compensation for the three highest consecutive years as a member.

RCPB Eligibility: Combined age and eligibility service of at least 90 years or age 65 after 10 years of eligibility service.

RCPB Allowance: 1.5% of average final compensation for the five highest consecutive years as a member for each year of creditable service on or after July 1, 2011.

The SSIL is the average of all Social Security Wage Bases over the 35 calendar years prior to your retirement.

Note: Members who transferred into the Teachers' Pension System, on or after April 1, 1998, receive benefits based on the provisions of the NCPS (refer to page C-28) in effect as of January 1, 1980, except for COLA benefits.

5. Early Retirement Allowance

ACPS Eligibility: Age 55 with at least 15 years of eligibility service.

ACPS Allowance: Service retirement allowance computed as of early retirement date, reduced by 0.5% for each month that early retirement date precedes age 62 (maximum reduction of 42%).

RCPB Eligibility: Age 60 with at least 15 years of eligibility service.

RCPB Allowance: Service retirement allowance computed as of early retirement date, reduced by 0.5% for each month that early retirement date precedes age 65 (maximum reduction of 30%).

6. Disability Retirement Allowance

Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is likely to be permanent.

Allowance: The benefit is the service retirement allowance computed on the basis that service continues until normal retirement age. If disability occurs after age 62 (age 65 for RCPB), the benefit is based on creditable service at time of retirement.



Teachers' Pension System of the State of Maryland

Accidental

Eligibility: Certification of the medical board designated by the Board of Trustees that member is totally and permanently incapacitated from the performance of the normal duties of the member's position as the natural and proximate result of an accident that occurred in the actual performance of duty without willful negligence by the member.

Allowance: The benefit is 66.67% of average final compensation for the three highest consecutive years (five highest for RCPB) as a member plus the annuity provided by accumulated member contributions. The maximum benefit cannot be greater than the average final compensation including any annuitized accumulated contributions.

7. Death Benefits

Ordinary Death Benefit for Active Member with Less Than One Year of Service

Eligibility: Less than one year of eligibility service and not eligible for a special death benefit.

Benefit: Return of accumulated contributions

Ordinary Death Benefit for Active Member with One Or More Years of Service

Eligibility: One or more years of eligibility service and not eligible for a special death benefit

Benefit:

Members who at the time of death are not members of the Reformed Contributory Pension Benefit, are younger than age 55 and have less than 15 years of service or are members of the Reformed Contributory Pension Benefit, are younger than age 60 and have less than 15 years of service.

One-time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions to the member's designated beneficiary.

Members who at the time of death: (1) are eligible to retire; (2) have accrued at least 25 years of eligibility service; (3) are not members of the Reformed Contributory Pension Benefit and are age 55 or older with at least 15 years of service; or (4) are members of the Reformed Contributory Pension Benefit and are age 60 or older with at least 15 years of service.

The surviving spouse of a deceased member may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) a monthly allowance under Option 2 (100% survivor benefit). In cases where a deceased member is not survived by a spouse, the decedent's children may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) an allowance equal to 50% of the basic allowance that would have been paid to the deceased member, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. If any child is disabled, the benefit will continue for that child as long as the child remains disabled, regardless of age. In cases where a deceased member is not



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survived by a spouse or children, the member's designated beneficiary shall receive a one-time lump sum payment consisting of the member's accumulated contributions and the member's annual compensation at the time of death.

Special Death Benefit for Active Member

Eligibility: Death arising out of or in the course of the actual performance of duty without willful negligence by the member.

Benefit: 66.67% of average final compensation for the three highest consecutive years as a member, except for member's participating in the RCPB component for which the average final compensation is the five highest consecutive years as a member, payable to a surviving spouse, decedent's children or dependent parents. Accumulated contributions are paid to the designated beneficiary. Children of deceased members receiving a special death benefit will continue to receive this benefit prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. Disabled children receiving a special death benefit may receive a special death benefit as long as they remain disabled, regardless of age.

Death Benefit for Vested Former Member

If a member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

8. Vested Allowance

ACPS Eligibility: Five years of eligibility service and separation from employment other than by death or retirement.

ACPS Allowance: Accrued retirement allowance payable at age 62 provided member does not withdraw accumulated contributions. A member who has completed 15 years of eligibility service may begin to receive benefit payments at any time on or after attainment of age 55, reduced by 0.5% for each month that benefit commencement date precedes age 62 (maximum reduction of 42%.)

If member dies before payment of the vested allowance starts, only accumulated member contributions are returned.

RCPB Eligibility: 10 years of eligibility service and separation from employment other than by death or retirement

RCPB Allowance: Accrued retirement allowance payable at age 65 provided member does not withdraw accumulated contributions. A member who has completed 15 years of eligibility service may begin to receive benefit payments at any time on or after attainment of age 60, reduced by 0.5% for each month that benefit commencement date precedes age 65 (maximum reduction of 30%.)



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If member dies before payment of the vested allowance starts, only accumulated member contributions are returned.

9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Effective July 1, 1998, and for an allowance based on creditable service before July 1, 2011, the adjustment is capped at a maximum of 3% compounded and is applied to all allowances which have been in payment for one year.

For an allowance based on creditable service earned on or after July 1, 2011, the COLA adjustment is capped at 2.5% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was greater than or equal to the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year. The adjustment is capped at 1% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was less than the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

Any adjustments are effective July 1.

10. Optional Forms of Payment

Basic service allowance is a single life annuity.

- Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.
- Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.



Teachers' Pension System of the State of Maryland

- Option 5: 100% "pop-up" joint and survivor annuity, which pays the designated beneficiary 100% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 6: 50% "pop-up" joint and survivor annuity, which pays the designated beneficiary 50% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

Vested former members who are eligible to receive a vested allowance of less than \$50 a month may elect to receive a lump-sum payment equal to the present value in lieu of a monthly benefit.

11. Reduction for Benefits Payable under Workers' Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers' compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers' compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Teachers' Pension System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers' compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers' compensation payments are subject to an offset by the Workers' Compensation Commission if a recipient is receiving an ordinary disability payment from the Teachers' Pension System for the same injury or illness. Any offset taken for an accidental disability from the Teachers' Pension System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree's employer by the Workers' Compensation Commission.

Employees' Retirement System of the State of Maryland

1. Membership

System closed to new members hired on or after January 1, 1980. Members on December 31, 1979 continue to be members unless they elected to transfer into the Employees' Pension System (established January 1, 1980) prior to January 1, 2005.

Membership generally includes employees of the State and other eligible participating employers.

2. Member Contributions

- Plan A: Generally, 7% of earnable compensation to maintain all benefits, including unlimited compounded cost-of-living adjustments.
- Plan B: Generally, 5% of earnable compensation to maintain all benefits, except the compounded cost-of-living adjustments which are capped at 5%.
- Plan C: Provides a two-part benefit based on benefits of the Employees' Retirement System and the Employees' Pension System. Employee contributions, if any, are based on participation of the employer in the applicable component of the Employees' Pension System. (refer to summary of Employees' Pension System).

Interest earned on all employee contributions is 4% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.

3. Normal Retirement Age

Normal retirement age is age 60.

4. Normal Service Retirement Allowance

Eligibility: 30 years of eligibility service or attainment of age 60.

Allowance: 1/55th of average final compensation for the three highest years as a member for each year of creditable service.

Plan C: For creditable service before election date, the amount determined by the service retirement formula for Employees' Retirement System; for creditable service after election date, the amount determined by the service retirement formula for the applicable component of the Employees' - Pension System under which the employer and member participates.

5. Early Retirement Allowance

Eligibility: 25 years of eligibility service and less than 60 years old.



Employees' Retirement System of the State of Maryland

Allowance: Service retirement allowance reduced by 0.5% for each month that date of retirement precedes the earlier of age 60 or the date the member would have completed 30 years of eligibility service (maximum reduction of 30%).

Plan C: For creditable service before election date, the amount determined by the service retirement formula for Employees' Retirement System with a maximum reduction of 30%; for creditable service after election date, the amount determined by the service retirement formula for the applicable component of the Employees' Pension System under which the employer participates with a 0.5% reduction for each month retirement occurs prior to age 62 (maximum reduction of 42%).

6. Disability Retirement Allowance

Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is permanent.

Allowance: The benefit is $1/55^{\text{th}}$ of average final compensation for the three highest years as a member for each year of creditable service. The minimum benefit is 25% of average final compensation; the maximum benefit can be no greater than $1/55^{\text{th}}$ of average final compensation for each year of creditable service the member would have accrued if employment continued to age 60.

Plan C: The benefit is the greater of the Employees' Retirement System allowance noted above, or the ordinary disability benefit of the Employees' Pension System.

Accidental

Eligibility: Certification of the medical board designated by the Board of Trustees that member is totally and permanently incapacitated from the performance of the normal duties of the member's position as the natural and proximate result of an accident that occurred in the actual performance of duty at a definite time and place without willful negligence by the member.

Allowance: The benefit is 66.67% of average final compensation for the three highest years as a member, plus the annuity provided by accumulated member contributions. The maximum benefit cannot be greater than the average final compensation, including any annuitized accumulated contributions.

7. Death Benefits

Ordinary Death Benefit for Active Member with Less Than One Year of Service

Eligibility: Less than one year of eligibility service and not eligible for a special death benefit.



Employees' Retirement System of the State of Maryland

Benefit: Return of accumulated contributions

Ordinary Death Benefit for Active Member with One or More Years of Service

Eligibility: One or more years of eligibility service and not eligible for a special death benefit.

Benefit:

Members who at the time of death are younger than age 55 or have less than 15 years of service.

One-time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions to the member's designated beneficiary.

Members who at the time of death are eligible to retire and are age 55 or older with at least 15 years of service.

The surviving spouse of a deceased member may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) a monthly allowance under Option 2 (100% survivor benefit). In cases where a deceased member is not survived by a spouse, the decedent's children may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) an allowance equal to 50% of the basic allowance that would have been paid to the deceased member, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. If any child is disabled, the benefit will continue for that child as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, the member's designated beneficiary shall receive a one-time lump sum payment consisting of the member's accumulated contributions and the member's annual compensation at the time of death.

Special Death Benefit for Active Member

Eligibility: Death arising out of or in the course of the actual performance of duty without willful negligence by the member.

Benefit: 66.67% of average final compensation for the three highest years as a member payable to a surviving spouse, decedent's children or dependent parents. Accumulated member contributions are paid to the designated beneficiary. Children of deceased members receiving a special death benefit will continue to receive this benefit, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. Disabled children receiving a special death benefit may receive a special death benefit as long as they remain disabled, regardless of age.

Death Benefit for Vested Former Member

If member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.



Employees' Retirement System of the State of Maryland

8. Vested Allowance

Eligibility: Five years of eligibility service and separation from employment other than by death or retirement.

Allowance: Vested allowance payable at normal retirement age, provided member does not withdraw accumulated member contributions.

9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Any COLAs are effective July 1 for all allowances which have been in payment for one year.

- Selection A (Additional Member Contributions): Uncapped and compounded.
- Selection B (Limited COLA): Capped at 5% and compounded.
- Selection C (Combination Formula): For creditable service on or after the effective date of Selection C, generally, with limited exceptions, COLA is capped at 3% and compounded. For creditable service before the effective date of Selection C, COLA is calculated based on the applicable component (A or B) to which the member was subject prior to electing Selection C.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

10. Optional Forms of Payment

Basic service allowance is a single life annuity.

Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.

Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.

Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.

Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.



Employees' Retirement System of the State of Maryland

- Option 5: 100% “pop-up” joint and survivor annuity, which pays the designated beneficiary 100% of the retiree’s reduced allowance after the retiree’s death or returns the retiree’s benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree’s spouse or disabled child.
- Option 6: 50% “pop-up” joint and survivor annuity, which pays the designated beneficiary 50% of the retiree’s reduced allowance after the retiree’s death or returns the retiree’s benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

Vested former members who are eligible to receive a vested allowance of less than \$50 a month may elect to receive a lump-sum payment equal to the present value in lieu of a monthly benefit.

11. Reduction for Benefits Payable Under Workers’ Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers’ compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers’ compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Employees’ Retirement System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers’ compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers’ compensation payments are subject to an offset by the Workers’ Compensation Commission if a recipient is receiving an ordinary disability payment from the Employees’ Retirement System for the same injury or illness. Any offset taken for an accidental disability from the Employees’ Retirement System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree’s employer by the Workers’ Compensation Commission.



Correctional Officers Retirement System

1. Membership

Membership is generally a condition of employment for correctional officers serving in the first six job classifications, individuals serving as a security chief, a facility administrator, and assistant warden or a warden, maximum security attendants at Clifton T. Perkins Hospital Center, and employees of the State as provided in SPP § 25-201. This includes participating governmental units who elect to have their detention center officers participate in the Correctional Officers' Retirement System.

2. Member Contributions

Members are required to make contributions of 5% of earnable compensation.

Interest earned on all employee contributions is 4% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.

3. Normal Retirement Age

Normal retirement age is age 55 for service retirement, age 60 for disability retirement.

4. Normal Service Retirement Allowance

Eligibility: For individuals who are members on or before June 30, 2011, either age 55 with at least 5 years of eligibility service credit or 20 years of eligibility service, regardless of age. For individuals who are members on or after July 1, 2011, either age 55 with at least 10 years of eligibility service credit, or 20 years of eligibility service, regardless of age.

Allowance: For individuals who are members on or before June 30, 2011, 1/55th of average final compensation for the three highest years as a member for each year of creditable service. For individuals who are members on or after July 1, 2011, 1/55th of average final compensation for the five highest years as a member for each year of creditable service.

5. Early Retirement Allowance

Not applicable to the Correctional Officers' Retirement System, except for certain Baltimore City Jail employees who may retire with 10 years of creditable service., as specified in SPP § 25-401.1.

6. Disability Retirement Allowance

Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is likely to be permanent.



Correctional Officers Retirement System

Allowance: The benefit is 1/55th of the average final compensation for the three highest years as a member (five highest for members enrolled on or after July 1, 2011). The minimum benefit is 25% of average final compensation; the maximum benefit can be no greater than 1/55th of average final compensation for each year of creditable service the member would have accrued if employment continued to age 60.

Accidental

Eligibility: Certification of the medical board designated by the Board of Trustees that member is totally and permanently incapacitated from the performance of the normal duties of the member's position as the natural and proximate result of an accident that occurred in the actual performance of duty at a definite time and place without willful negligence by the member.

Allowance: The benefit is 66.67% of average final compensation for the three highest years as a member (five highest for members enrolled on or after July 1, 2011), plus the annuity provided by accumulated member contributions. The maximum benefit cannot be greater than the average final compensation, including any annuitized accumulated contributions.

7. Death Benefits

Ordinary Death Benefit for Active Member with Less Than One Year of Service

Eligibility: Less than one year of eligibility service and not eligible for a special death benefit.

Benefit: Return of accumulated contributions

Ordinary Death Benefit for Active Members with One Or More Years of Service

Eligibility: One or more years of eligibility service and not eligible for a special death benefit.

Benefit:

Members who at the time of death are younger than age 55 or have less than 15 years of service

One-time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions to the member's designated beneficiary.

Members who at the time of death are eligible to retire and are age 55 or older with at least 15 years of service

The surviving spouse of a deceased member may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) a monthly allowance under Option 2 (100% survivor benefit). In cases where a deceased member is not survived by a spouse, the decedent's children may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) an allowance equal to 50% of the basic allowance that would have been paid to the deceased member, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated



Correctional Officers Retirement System

among the remaining eligible children. If any child is disabled, the benefit will continue for that child past age 26 as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, the member's designated beneficiary shall receive a one-time lump sum payment consisting of the member's accumulated contributions and the member's annual compensation at the time of death.

Special Death Benefit for Active Member

Eligibility: Death arising out of or in the course of the actual performance of duty without willful negligence by the member.

Benefit: 66.67% of average final compensation for the three highest years as a member payable to a surviving spouse, the decedent's children or dependent parents. Accumulated member contributions are paid to the designated beneficiary. Children of deceased members receiving a special death benefit will continue to receive this benefit, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. Disabled children receiving a special death benefit may receive a special death benefit as long as they remain disabled, regardless of age.

Death Benefit for Vested Former Member

If member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

8. Vested Allowance

Eligibility: For individuals who are members on or before June 30, 2011, five years of eligibility service. For individuals who become member on or after July 1, 2011, 10 years of eligibility service. Member must also be separated from employment other than by death or retirement.

Allowance: Service retirement allowance payable at age 55 provided the member does not withdraw the member's accumulated contributions.

9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Any COLAs are effective July 1 for all allowances which have been in payment for one year.

Uncapped compounded COLAs are applied to all benefits attributable to creditable service earned on or before June 30, 2011.

For an allowance based on creditable service earned on or after July 1, 2011, the COLA is capped at 2.5% if, for the calendar year ending December 31 in the previous fiscal year the several systems' total investment performance was greater than or equal to the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year. The adjustment is capped at 1% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was less than the assumed rate of investment



Correctional Officers Retirement System

return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

10. Optional Forms of Payment

Basic service allowance is a single life annuity.

Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.

Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.

Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.

Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.

Option 5: 100% "pop-up" joint and survivor annuity, which pays the designated beneficiary 100% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.

Option 6: 50% "pop-up" joint and survivor annuity, which pays the designated beneficiary 50% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.



Correctional Officers Retirement System

Vested former members who are eligible to receive a vested allowance of less than \$50 a month may elect to receive a lump-sum payment equal to the present value in lieu of a monthly benefit.

11. Reduction for Benefits Payable Under Workers' Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers' compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers' compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Correctional Officers' Retirement System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers' compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers' compensation payments are subject to an offset by the Workers' Compensation Commission if a recipient is receiving an ordinary disability payment from the Correctional Officers' Retirement System for the same injury or illness. Any offset taken for an accidental disability from the Correctional Officers' Retirement System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree's employer by the Workers' Compensation Commission.

Legislative Pension Plan

1. Membership

Membership is generally a condition of employment for members of the Maryland General Assembly during the 2019-2022 term of office.

2. Member Contributions

Members are required to contribute 7% of annual salary up to 22 years and three months of creditable service.

Interest earned on all employee contributions is 4% per year, compounded annually, until retirement or withdrawal of accumulated contributions.

3. Normal Retirement Age

For members who have creditable service prior to January 14, 2015, normal retirement age is age 60.

For members who do not have creditable service prior to January 14, 2015, normal retirement age is age 62.

4. Service Retirement Allowance

Eligibility: For individuals who have creditable service in the Legislative Pension Plan before January 14, 2015, age 60 with eight years of creditable service. For individuals who have no creditable service in the Legislative Pension Plan before January 14, 2015, age 62 with eight years of creditable service.

Allowance: 3% of salary of an active legislator for each year of service, multiplied by the number of years of creditable service. The maximum benefit available for a member is 66.67% of salary payable to an active legislator.

5. Reduced Service Retirement Allowance

Eligibility: For individuals who have creditable service in the Legislative Pension Plan before January 14, 2015, age 50 with eight years of creditable service. For individuals who have no creditable service in the Legislative Pension Plan before January 14, 2015, age 55 with eight years of creditable service.

Allowance: For individuals who have creditable service in the Legislative Pension Plan before January 14, 2015, a service retirement allowance computed as of early retirement date, reduced by 0.5% for each month under age 60 (maximum reduction of 60%). For individuals who have no creditable service in the Legislative Pension Plan before January 14, 2015, a service retirement allowance computed as of early retirement date, reduced by 0.5% for each month under age 62 (maximum reduction of 42%).



Legislative Pension Plan

6. Disability Retirement Allowance

Eligibility: Eight years of creditable service, regardless of age, and certification of the medical board designated by the Board of Trustees that the member is mentally or physically incapacitated from further performance of duty as a legislator, and that incapacity is likely to be permanent.

Allowance: Service retirement allowance, regardless of age.

7. Death Benefits

Death of A Member With At Least Eight Years of Creditable Service

Eligibility: At least eight years of creditable service

Beneficiary: Payment of the benefit shall be made to the member's surviving spouse. If there is no surviving spouse at the time of the member's death, the benefit shall be prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If any child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment will be made to the member's designated beneficiary.

Benefit: The member's beneficiary (surviving spouse, children, or designated beneficiary) may elect to receive: (1) a return of the member's accumulated contributions plus the member's annual salary, if any, at the time of death; or (2) an annuity equal to 50% of the retirement allowance that would have been paid at the member's death, regardless of the member's age. The surviving spouse or children will begin receiving the death benefit at the time of the member's death. A designated beneficiary who elects to receive the annuity may not begin receiving the benefit until the beneficiary reaches age 60, if the deceased member had creditable service in the Legislative Pension Plan before January 14, 2015, or age 62, if the deceased member did not have creditable service before January 14, 2015. The designated beneficiary may elect to begin receiving a reduced annuity at age 50, if the deceased member had creditable service before January 14, 2015, or age 55 if the deceased member did not have creditable service before January 14, 2015.

Death of A Member with Less Than Eight Years of Creditable Service

Eligibility: A member currently serving in the legislature with less than eight years of creditable service

Beneficiary: Payment of the benefit shall be made to the member's surviving spouse. If there is no surviving spouse at the time of the member's death, the benefit shall be prorated equally among the eligible children. A child is eligible for a prorated share if the child is under age 26 or the child is disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment will be made to the member's designated beneficiary. If a member designates more than one beneficiary, the benefit shall be prorated equally among each beneficiary.



Legislative Pension Plan

Benefit: A lump-sum benefit equal to the member's accumulated contributions plus the member's annual salary at the time of death.

Death of A Member with No Beneficiary

On death of a member who is not survived by a spouse, children, or designated beneficiary, the Board of Trustees shall pay the member's accumulated contributions to the estate of the member.

Death of Retiree

Upon the death of a retiree, a survivor allowance equal to 50% of the retiree's retirement allowance is payable to the retiree's surviving spouse for the spouse's life. If the retiree has no surviving spouse and the retiree has creditable service before January 14, 2015, the full survivor allowance is payable to the designated beneficiary for life beginning at age 60 or an optional reduced survivor allowance is payable to the designated beneficiary for life beginning at age 50. If the retiree has no surviving spouse and the retiree has no creditable service before January 14, 2015, the full survivor allowance is payable to the designated beneficiary for life beginning at age 62 or an optional reduced survivor allowance is payable to the designated beneficiary for life beginning at age 55.

8. Vested Allowance

Eligibility: Eight years of creditable service and separation from employment other than by death or retirement.

Allowance: For individuals who have creditable service in the Legislative Pension Plan before January 14, 2015, a service retirement allowance payable at age 60, provided the member has not withdrawn the member's accumulated contributions. For individuals who have no creditable service in the Legislative Pension Plan before January 14, 2015, a service retirement allowance payable at age 62, provided the member has not withdrawn the member's accumulated contributions.

9. Cost-of-Living Adjustments

Generally, allowances are recalculated each time the salary for a sitting legislator increases.

10. Optional Forms of Payment

Basic Allowance: Normal service allowance with a 50% joint and survivor annuity to the retiree's surviving spouse. If there is no surviving spouse, to the retiree's designated beneficiary. A surviving spouse will begin receiving the death benefit at the time of the retiree's death. A designated beneficiary may not begin receiving the benefit until the beneficiary reaches age 60, if the deceased retiree had creditable service in the Legislative Pension Plan before January 14, 2015, or age 62, if the deceased retiree did not have creditable service before January 14, 2015. The designated beneficiary may elect to begin receiving a reduced annuity at age 50, if the deceased retiree had creditable service before January 14, 2015, or age 55 if the deceased retiree did not have creditable service before January 14, 2015.



Legislative Pension Plan

Option 1: 100% joint and survivor annuity. If, at the time of retirement the member is married and elects to receive Option 1, the member's spouse must be the designated beneficiary. The designated beneficiary may not be more than 10 years younger than the member unless the beneficiary is the member's spouse or disabled child.

Employees' Pension System of the State of Maryland

1. Membership

Membership is generally a condition of employment for all regular employees of the State of Maryland hired on or after January 1, 1980, excluding those eligible for the Teachers' Retirement System, Teachers' Pension System, State Police Retirement System, certain judges, correctional officers, Law Enforcement Officers Pension System, and members of the General Assembly. Certain governmental units also have elected to participate in the System.

There are four plans under the Employees' Pension System.

- Noncontributory Pension System (**NCPS**) - The original pension system established on January 1, 1980 that only applies to certain participating governmental units that did not elect to participate in the Contributory Pension System, Alternate Contributory Pension Selection, or Reformed Contributory Pension Benefit.
- Employees' Contributory Pension System (**ECPS**) – The ECPS established July 1, 1998 that only applies to certain participating governmental units that elected the ECPS but did not elect to participate in the Alternate Contributory Pension Selection, or Reformed Contributory Pension Benefit.
- Alternate Contributory Pension Selection (**ACPS**) - Applies to all State employees and employees of participating governmental units that are members of the ACPS on or before June 30, 2011.
- Reformed Contributory Pension Benefit (**RCPB**) – Applies to all State employees and employees of participating governmental units enrolling in the Employees' Pension System on or after July 1, 2011. It does not apply to employees of participating governmental units that did not elect to participate in the ACPS or RCPB.

2. Member Contributions

NCPS: Members are only required to make contributions of 5% on earnable compensation that exceeds the Social Security Taxable Wage Base.

ECPS: Members are required to make contributions of 2% of earnable compensation.

ACPS: Members are required to make contributions of 7% of earnable compensation.

RCPB: Members are required to make contributions of 7% of earnable compensation.

Contributions earn interest at 5% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.



Employees' Pension System of the State of Maryland

3. Normal Retirement Age

For members of the Non-Contributory, Contributory, or Alternate Contributory Pension Selection, normal retirement age is age 62.

For members of the Reformed Contributory Pension Benefit, normal retirement age is age 65.

4. Normal Service Retirement Allowance

NCPS, ECPS, and ACPS Eligibility - 30 years of eligibility service or attainment of one of the following:

- Age 62 with five years of eligibility service
- Age 63 with four years of eligibility service
- Age 64 with three years of eligibility service
- Age 65 or older with two years of eligibility service

NCPS Allowance:

0.8% of average final compensation up to the Social Security Integration Level (SSIL) for the three highest consecutive years as a member plus 1.5% of average final compensation over the SSIL for each year of creditable service;

ECPS Allowance: The greater of (i) or (ii), plus (iii), as described below:

- (i) 1.2% of average final compensation for the three highest consecutive years as a member for each year of creditable service on or before June 30, 1998;
- (ii) 0.8% of average final compensation up to the SSIL for the three highest consecutive years as a member plus 1.5% of average final compensation over the SSIL for each year of creditable service on or before June 30, 1998;
- (iii) 1.4% of average final compensation for the three highest consecutive years as a member for each year of creditable service after June 30, 1998.

ACPS Allowance: The greater of (i) or (ii), plus (iii), as described below:

- (i) 1.2% of average final compensation for the three highest consecutive years as a member for each year of creditable service on or before June 30, 1998;
- (ii) 0.8% of average final compensation up to the SSIL for the three highest consecutive years as a member plus 1.5% of average final compensation over the SSIL for each year of creditable service on or before June 30, 1998;
- (iii) 1.8% of average final compensation for the three highest consecutive years as a member for each year of creditable service after June 30, 1998.



Employees' Pension System of the State of Maryland

RCPB Eligibility - Combined age and eligibility service of at least 90 years or age 65 with 10 or more years of eligibility service.

RCPB Allowance: 1.5% of average final compensation for the five highest consecutive years as a member for each year of creditable service on or after July 1, 2011.

SSIL is the average of all Social Security Wage Bases over the 35 calendar years prior to your retirement.

Note: Members who transferred into the Employees' Pension System, on or after April 1, 1998, receive benefits based on the provisions of the NCPS as in effect on January 1, 1980 except for COLA benefits.

5. Early Retirement Allowance

NCPS, ECPS, and ACPS Eligibility: Age 55 and at least 15 years of eligibility service.

NCPS, ECPS, and ACPS Allowance: Service retirement allowance computed as of early retirement date, reduced by 0.5% for each month that early retirement date precedes age 62 (maximum reduction is 42%).

RCPB Eligibility: Age 60 with at least 15 years of eligibility service.

RCPB Allowance: Service retirement allowance computed as of early retirement date, reduced by 0.5% for each month that early retirement date precedes age 65 (maximum reduction is 30%).

6. Disability Retirement Allowance

Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is likely to be permanent.

Allowance: The benefit is the service retirement allowance computed on the basis that service continues until normal retirement age. If disability occurs on or after age 62 (age 65 for RCPB), the benefit is based on creditable service at time of retirement.

Accidental

Eligibility: Certification of the medical board designated by the Board of Trustees that member is totally and permanently incapacitated from the performance of the normal duties of the member's position as the natural and proximate result of an accident that occurred in the actual performance of duty without willful negligence by the member.



Employees' Pension System of the State of Maryland

Allowance: The benefit is 66.67% of average final compensation for the three highest consecutive years (five highest for RCPB) as a member, plus the annuity provided by accumulated member contributions. The maximum benefit cannot be greater than the average final compensation including any annuitized accumulated contributions.

7. Death Benefits

Ordinary Death Benefit for Active Member with Less Than One Year of Service

Eligibility: Less than one year of eligibility service and not eligible for a special death benefit.

Benefit: Return of accumulated contributions

Ordinary Death Benefit for Active Member with One Or More Years of Service

Eligibility: One or more years of eligibility service and not eligible for a special death benefit.

Benefit:

Members who at the time of death are not members of the Reformed Contributory Pension Benefit, are younger than age 55, and have less than 15 years of service or are members of the Reformed Contributory Pension Benefit, are younger than age 60, and have less than 15 years of service.

One-time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions to the member's designated beneficiary.

Members who at the time of death: (1) are eligible to retire; (2) have accrued at least 25 years of eligibility service; (3) are not members of the Reformed Contributory Pension Benefit and are age 55 or older with at least 15 years of service; or (4) are members of the Reformed Contributory Pension Benefit and are age 60 or older with at least 15 years of service.

The surviving spouse of a deceased member may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) a monthly allowance under Option 2 (100% survivor benefit). In cases where a deceased member is not survived by a spouse, the decedent's children may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) an allowance equal to 50% of the basic allowance that would have been paid to the deceased member, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. If any child is disabled, the benefit will continue for that child as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, the member's designated beneficiary shall receive a one-time lump sum payment consisting of the member's accumulated contributions and the member's annual compensation at the time of death.

Special Death Benefit for Active Member

Eligibility: Death arising out of or in the course of the actual performance of duty without willful negligence by the member.



Employees' Pension System of the State of Maryland

Benefit: 66.67% of average final compensation for the three highest consecutive years as a member, except for member's participating in the RCPB component for which the average final compensation is the five highest consecutive years as a member, payable to a surviving spouse, the decedent's children or dependent parents. Accumulated member contributions are paid to the designated beneficiary. Children of deceased members receiving a special death benefit will continue to receive this benefit, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. Disabled children receiving a special death benefit may receive a special death benefit as long as they remain disabled, regardless of age.

Death Benefit for Vested Former Member

If a member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

8. Vested Allowance

NCPS, ECPS, and ACPS Eligibility: Five years of eligibility service and separation from employment other than by death or retirement.

NCPS, ECPS, and ACPS Allowance: Accrued retirement allowance payable at age 62. A member who has completed 15 years of eligibility service may begin to receive benefit payments at any time on or after attainment of age 55, reduced by 0.5% for each month that benefit commencement date precedes age 62 (maximum reduction of 42%).

If member dies before payment of the vested allowance starts, only accumulated member contributions are returned.

RCPB Eligibility: 10 years of eligibility service and separation from employment other than by death or retirement.

RCPB Allowance: Accrued retirement allowance payable at age 65 provided member does not withdraw accumulated contributions. A member who has completed 15 years of eligibility service may begin to receive benefit payments at any time on or after attainment of age 60, reduced by 0.5% for each month that benefit commencement date precedes age 65 (maximum reduction of 30%).

If member dies before payment of the vested allowance starts, only accumulated member contributions are returned.

9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Generally, effective July 1, 1998, and for an allowance based on creditable service earned before July 1, 2011, the adjustment is capped at a maximum of 3% compounded and is applied to all allowances which have been in payment for one year.



Employees' Pension System of the State of Maryland

Generally, for an allowance based on creditable service earned on or after July 1, 2011, the COLA is capped at 2.5% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was greater than or equal to the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year. The adjustment is capped at 1% if, for the calendar year ending December 31 in the previous fiscal year the several systems' total investment performance was less than the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year.

For certain individuals, such as employees of a participating governmental unit that has not elected the contributory pension benefit or the Alternate Contributory Pension Selection for its members, or their surviving beneficiaries, the allowance is subject to a simple COLA capped at 3%.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

10. Optional Forms of Payment

Basic service allowance is in a single life annuity.

- Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.
- Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 5: 100% "pop-up" joint and survivor annuity, which pays the designated beneficiary 100% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.



Employees' Pension System of the State of Maryland

Option 6: 50% “pop-up” joint and survivor annuity, which pays the designated beneficiary 50% of the retiree’s reduced allowance after the retiree’s death or returns the retiree’s benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

Vested former members who are eligible to receive a vested allowance of less than \$50 a month may elect to receive a lump-sum payment equal to the present value in lieu of a monthly benefit.

11. Reduction for Benefits Payable Under Workers’ Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers’ compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers’ compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Employees’ Pension System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers’ compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers’ compensation payments are subject to an offset by the Workers’ Compensation Commission if a recipient is receiving an ordinary disability payment from the

Employees’ Pension System for the same injury or illness. Any offset taken for an accidental disability from the Employees’ Pension System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree’s employer by the Workers’ Compensation Commission.

State Police Retirement System of the State of Maryland

1. Membership

Membership is a condition of employment for all officers of the Maryland State Police.

2. Member Contributions

Members are required to contribute 8% of earnable compensation, up to 28 years of service.

Contributions earn interest at 4% per year, compounded annually, until retirement, withdrawal of the accumulated contributions, or the end of membership for former members who are not entitled to receive a vested allowance.

3. Normal Retirement Age

Normal retirement age is age 50.

4. Normal Service Retirement Allowance

Eligibility: For individuals who are members on or before June 30, 2011, 22 years of eligibility service or attainment of age 50. For individuals who become members on or after July 1, 2011, 25 years of eligibility service or attainment of age 50. Retirement at age 60 is mandatory for all but the Secretary of State Police.

Allowance: For individuals who are members on or before June 30, 2011, 2.55% of average final compensation for the three highest years as a member. For individuals who become members on or after July 1, 2011, 2.55% of average final compensation for the five highest years as a member. Maximum benefit is 71.4% of average final compensation.

5. Early Retirement Allowance

Not applicable to the State Police Retirement System.

6. Disability Retirement Allowance

Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is likely to be permanent.

Allowance: The allowance is the greater of a normal service retirement allowance (as described above) or 35% of the member's average final compensation.



State Police Retirement System of the State of Maryland

Special (Accidental)

Eligibility: Total and permanent incapacity for duty as certified by the medical board arising out of or in the course of the actual performance of duty without willful negligence by the member.

Allowance: For members who are under normal retirement age, the benefit is the lesser of either the member's average final compensation, or the sum of 66.67% of the member's average final compensation and an annuity that is actuarially equivalent to the member's accumulated contributions. Members who are at least normal retirement age are entitled either to the benefit as calculated for members under normal retirement age, or a normal service retirement allowance, whichever is greater.

7. Death Benefits

Normal Death Benefit – Return of Accumulated Contributions

Eligibility: Death while employed as a member and less than one year of eligibility service. A normal death benefit may be not paid if a special death benefit is paid for that death.

Benefit: Lump sum payment of member's accumulated member contributions to the member's designated beneficiary or, if there is no designated beneficiary, to the member's estate.

Normal Death Benefit – Return of Accumulated Contributions and Annual Earnable Compensation

Eligibility: Death while employed as a member and at least one year of eligibility service. A normal death benefit may not be paid if a special death benefit is paid for that death.

Benefit: Lump sum payment of member's accumulated contributions and an amount equal to the member's annual earnable compensation at the time of death to the member's designated beneficiary or, if there is no designated beneficiary, to the member's estate.

Special Death Benefit for Death While Employed and Not in Performance of Duty

Eligibility: Death while employed as a member, without member's willful negligence, and not in the performance of duty. Member has more than two years of eligibility service. The member is survived by a spouse, a child under the age of 26, a disabled child, or a dependent parent.

Benefit: Accumulated member contributions plus an allowance equal to 50% of the member's average final compensation.

Beneficiary: Payment of the member's accumulated member contributions shall be paid to the member's designated beneficiary, or otherwise to the member's estate. An allowance equal to 50% of the member's average final compensation shall be made to the surviving spouse; however, if there is no surviving spouse or spouse dies before youngest child reaches age 26, 50% of average final compensation continues prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as



State Police Retirement System of the State of Maryland

the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment is made to dependent parents. If none of the above conditions is met, the normal death benefit is paid to the designated beneficiary.

Special Death Benefit for Death in The Performance of Duty

Eligibility: Death while employed as a member, without member's willful negligence, and in the performance of duty. The member is survived by a spouse, a child under the age of 26, a disabled child, or a dependent parent.

Benefit: Accumulated member contributions plus an allowance equal to 66.67% of the member's average final compensation.

Beneficiary: Payment of the member's accumulated member contributions shall be paid to the member's designated beneficiary, or otherwise to the member's estate. An allowance equal to 66.67% of the member's average final compensation shall be made to the surviving spouse; however, if there is no surviving spouse or spouse dies before youngest child reaches age 26, 66.67% of average final compensation continues prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment is made to dependent parents. If none of the above conditions is met, the normal death benefit is paid to the designated beneficiary.

Waiver of Special Death Benefit

Before the payment of any special death benefit is made under this section, if all individuals eligible for a special death benefit elect to waive the payment of the special death benefit, a normal death benefit is paid to the member's designated beneficiary, or otherwise to the member's estate.

Death Benefit for Vested Former Member

If a member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

8. Vested Allowance

Eligibility: For individuals who became members on or before June 30, 2011, five years of eligibility service and separation from employment other than by death or retirement. For individuals who become members on or after July 1, 2011, 10 years of eligibility service and separation from employment other than by death or retirement.

Allowance: Service retirement allowance payable at normal retirement age, provided the member does not withdraw the member's accumulated contributions.



State Police Retirement System of the State of Maryland

9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Any COLAs are effective July 1, for all allowances which have been in payment for one year.

Uncapped compounded COLAs are applied to all benefits attributable to creditable service earned on or before June 30, 2011.

For an allowance based on creditable service earned on or after July 1, 2011, the COLA adjustment is capped at 2.5% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was greater than or equal to the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year. The adjustment is capped at 1% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was less than the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

Retirees and beneficiaries receiving a retirement allowance on or before June 30, 1999, who receive an annual adjustment to their benefit ranging from \$1,200 to \$2,100 receive separate COLAs on this adjustment commencing effective July 1, 2000.

10. Optional Forms of Payment

If, at the time of death, the retiree is married, the retiree's spouse is entitled to receive a survivor benefit consisting of 80% of the retiree's retirement allowance. If there is no surviving spouse or upon the death of the surviving spouse, payment of the survivor benefit is divided equally among any children of the deceased retiree under the age of 18 years, until each child dies or becomes age 18. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. If there is no spouse at time of retirement, member may select an optional allowance.

Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.

Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.

Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.



State Police Retirement System of the State of Maryland

- Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 5: 100% “pop-up” joint and survivor annuity, which pays the designated beneficiary 100% of the retiree’s reduced allowance after the retiree’s death or returns the retiree’s benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree’s spouse or disabled child.
- Option 6: 50% “pop-up” joint and survivor annuity, which pays the designated beneficiary 50% of the retiree’s reduced allowance after the retiree’s death or returns the retiree’s benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

11. Reduction for Benefits Payable Under Workers’ Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers’ compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers’ compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. State Police Retirement System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers’ compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers’ compensation payments are subject to an offset by the Workers’ Compensation Commission if a recipient is receiving an ordinary disability payment from the State Police Retirement System for the same injury or illness. Any offset taken for an accidental disability from the State Police Retirement System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree’s employer by the Workers’ Compensation Commission.

12. Deferred Retirement Option Program (DROP)

Eligibility: Members who joined the State Police Retirement System on or before June 30, 2011 are eligible to participate in the DROP if they are less than 60 years old and have at least 22 but less than 32 years of eligibility service. Members who join the State Police System on or after July 1, 2011 are eligible to participate in the DROP if they are less than 60 years old and have at least 25 but less than 32 years of eligibility service.



State Police Retirement System of the State of Maryland

Participation: An eligible member may participate in the DROP for the lesser of 7 years, the difference between 32 years and the member's creditable service, or a term selected by the member. Participation also ends if the participant dies, is terminated from employment, accepts a special disability retirement allowance, or submits a binding letter of resignation or notice of intent to terminate employment. Members who participate in the DROP are retired and cease making member contributions, and cease accruing service credit and additional benefits.

Allowance: For members who entered the DROP on or before June 30, 2011, the service retirement allowance, with COLAs, is credited to an account earning interest at the rate of 6% per year, compounded monthly. For members who enter DROP on or after July 1, 2011, the service retirement allowance, with COLAs, is credited to an account earning interest at the rate of 4% per year, compounded annually. When the DROP period ends, members terminate employment and begin receiving their monthly allowance plus the lump sum payment from their DROP account. During the DROP period, members remain eligible for Special Disability benefits if incapacitated while in DROP.

Judges' Retirement System of the State of Maryland

1. Membership

Membership is a condition of employment for a judge of the Court of Appeals, Court of Special Appeals, Circuit Court, or District Court of Maryland and members of the State Workers' Compensation Commission. Membership ends if the member is separated from employment for more than four years, withdraws the member's accumulated contributions, retires, or dies.

2. Member Contributions

Members are required to make contributions of 8% of salary until they have completed 16 years of service as a member.

Contributions earn interest at 4% per year, compounded annually, until retirement or withdrawal of accumulated contributions. Non-vested members who became members of the Judges' Retirement System on or after July 1, 2012 shall not receive interest after membership ends.

3. Normal Retirement Age

Normal retirement age is age 60.

4. Retirement Allowance

Eligibility: An individual who is a member of the Judges' Retirement System before July 1, 2012 is entitled to a retirement allowance: (1) on termination of service if the member is at least age 60; (2) on resignation for disability and recommendation of the medical board, (3) when retired by order of the Court of Appeals, or (4) at the age of 60 years. An individual who becomes a member of the Judges' Retirement System on or after July 1, 2012 is entitled to a retirement allowance: (1) on termination of service if the member is at least 60 and has at least 5 years of eligibility service; (2) on resignation for disability and recommendation of the medical board, (3) when retired by order of the Court of Appeals if the member has at least 5 years of eligibility service; (4) at the mandatory retirement age required by the Maryland Constitution with less than five years of service, if the member has eligibility service equal to the mandatory retirement age minus the member's age when the member joined the Judges' Retirement System; or (5) at the age of 60, if the former member's termination of service occurred earlier and the former member had at least five years of eligibility service when the former member terminated service.

Allowance: Generally, the retirement allowance equals 66.67% of salary payable in that fiscal year to member holding same level of judicial position that retiree held on termination of service. For members with less than 16 years of service credit, the benefit is reduced based on the ratio of years of service credit to 16.

5. Early Retirement Allowance

Not applicable to the Judges' Retirement System.



Judges' Retirement System of the State of Maryland

6. Disability Retirement Allowance

Eligibility: Certification of the medical board designated by the Board of Trustees that member is incapacitated for the performance of duty, and that incapacity is likely to be permanent.

Allowance: A retirement allowance payable immediately. However, if a judge has at least three years of service credit as a member, the allowance will be at least .333% of the judge's salary at the time of retirement.

7. Death Benefits

Monthly Allowance

Eligibility: Death of a judge or former judge at any age, leaving a surviving spouse or children under the age of 26, or a child who is disabled, regardless of age.

Allowance: 50% of the pension that would have been payable to the judge or former judge as of the date of death, as if the judge or former judge was eligible to receive a retirement allowance, is payable to surviving spouse. If there is no spouse, payment is divided equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age.

Lump Sum

On death of a member who is not survived by a spouse or children, the Board of Trustees shall pay the member's accumulated contributions and an amount equal to the member's annual salary at time of death to the member's designated beneficiary. If the member has designated more than one beneficiary, this lump-sum death benefit shall be divided equally among the beneficiaries. If a member's service is terminated by death and the member leaves no spouse, child under the age of 18 years, or designated beneficiary, the member's accumulated contributions shall be paid to the member's estate.

Special Death Benefit

Eligibility: Death while employed as a member, without the member's willful negligence and with death arising out of or in the course of the actual performance of duty.

Benefit: Accumulated member contributions paid plus an allowance equal to 66.67% of the salary payable in that fiscal year to a member holding the same level judicial position as that held by the member as of the date of death of the member.



Judges' Retirement System of the State of Maryland

Beneficiary: Payment of the member's accumulated member contributions shall be paid to the member's designated beneficiary, or otherwise to the member's estate. An allowance equal to 66.67% of the salary payable in that fiscal year to a member holding the same level judicial position as that held by the member as of the date of death of the member be made to the surviving spouse. However, if there is no surviving spouse or spouse dies before youngest child reaches age 26, 66.67% of salary payable in that fiscal year to a member holding the same level judicial position as that held by the member as of the date of death of the member continues prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment is made to dependent parents.

8. Vested Allowance

Eligibility: Individuals who became members before July 1, 2012, are eligible once they have both separated from service and reached age 60 years. Individuals who become members on or after July 1, 2012, are eligible once they have separated from service, reached age 60 years, and earned five years of eligibility service. Also eligible are individuals who became members on or after July 1, 2012 who are required to retire due to mandatory retirement and have less than 5 years of service at that time, if they have an amount of eligibility service equal to constitutional mandatory retirement age minus the member's age when the individuals first become members of the System.

Allowance: Same as allowance payable at age 60.

In lieu of a deferred vested allowance pension, a former judge may elect to withdraw accumulated contributions following the judge's termination of service.

9. Cost-of-Living Adjustments (COLA)

Generally, allowances are recalculated each time the salary for a sitting judge from the Court from which the judge retired increases.

NOTE: Magistrates who retire from the Judges' Retirement System receive COLA allowances equal to the percentage increase in salary provided to judges of the Circuit Court.

10. Optional Forms of Payment

For survivor allowance payable to a member's surviving spouse, children under age 26, or disabled children, see Death Benefits section above. A judge or former judge, who at the time of retirement, does not have a spouse or child under the age of 18 years, may elect one of the following optional forms of payment:

Option 1: Lump-sum equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.



Judges' Retirement System of the State of Maryland

- Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.
- Option 4: Lump-sum equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 5: 100% "pop-up" joint and survivor annuity, which pays the designated beneficiary 100% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 6: 50% "pop-up" joint and survivor annuity, which pays the designated beneficiary 50% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree.

A retiree who has elected one of these optional forms of allowance may not change the designated beneficiary.

Law Enforcement Officers' Pension System of the State of Maryland

A. Pension Provisions

1. Membership

Membership generally is a condition of employment for all law enforcement officers who are employees of the State as provided in SPP § 26-201, or whose employers are participating governmental units who elect to have their law enforcement officers or firefighters/paramedics participate in the Law Enforcement Officers' Pension System.

2. Member Contributions

Members are required to contribute 7% of earnable compensation, up to 32 years and six months of service.

Contributions earn interest at 5% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.

3. Normal Retirement Age

Normal retirement age is age 50.

4. Normal Service Retirement Allowance

Eligibility: 25 years of eligibility service or attainment of age 50.

Allowance: For individuals who became members on or before June 30, 2011, 2.0% of average final compensation for the three highest consecutive years as a member. For individuals who became members on or after July 1, 2011, 2.0% of average compensation for the five highest consecutive years as a member. For members who retired before July 1, 2018, the maximum benefit was 60% of average final compensation. For members who retire on or after July 1, 2018, the maximum benefit is 65% of average final compensation.

5. Early Retirement Allowance

Not applicable to the Law Enforcement Officers' Retirement System.

6. Disability Retirement Allowance

Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is incapacitated for the performance of duty, and that incapacity is likely to be permanent.



Law Enforcement Officers Pension System of the State of Maryland

Allowance: Service retirement allowance computed on the basis that service continues until age 50 without any change in rate of earnable compensation. If disability occurs after age 50, the benefit is based on creditable service at time of retirement.

Accidental

Eligibility: Total and permanent incapacity for duty as certified by the medical board arising out of or in the course of the actual performance of duty, without willful negligence.

Allowance: The benefit is 66.7% of average final compensation plus an annuity provided by accumulated member contributions. The maximum benefit cannot be greater than the average final compensation.

7. Death Benefits

Normal Death Benefit – Return of Accumulated Contributions

Eligibility: Death while employed as a member and less than one year of eligibility service. A normal death benefit may not be paid if a special death benefit is paid for that death.

Benefit: Lump sum payment of member's accumulated member contributions to the member's designated beneficiary or, if there is no designated beneficiary, to the member's estate.

Normal Death Benefit – Return of Accumulated Contributions and Annual Earnable Compensation

Eligibility: Death while employed as a member and at least one year of eligibility service. A normal death benefit may not be paid if a special death benefit is paid for that death.

Benefit: Lump sum payment of member's accumulated member contributions and an amount equal to the member's annual earnable compensation at the time of death to the member's designated beneficiary or, if there is no designated beneficiary, to the member's estate.

Special Death Benefit for Death While Employed and Not in Performance of Duty

Eligibility: Death while employed as a member, without the member's willful negligence, and not in the performance of duty. The member is survived by a spouse, a child under the age of 26, a disabled child, or a dependent parent.

Benefit: Accumulated member contributions plus an allowance equal to 50% of the ordinary disability allowance the member would have received at the time of the member's death.



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Beneficiary: Payment of the member's accumulated member contributions shall be paid to the member's designated beneficiary, or otherwise to the member's estate. An allowance equal to 50% of the ordinary disability allowance the member would have received at the time of the member's death shall be made to the surviving spouse; however, if there is no surviving spouse or spouse dies before youngest child reaches age 26, 50% of average final compensation continues prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment is made to dependent parents. If none of the above conditions is met, the normal death benefit is paid to the designated beneficiary.

Special Death Benefit for Death in The Performance of Duty

Eligibility: Death while employed as a member, without the member's willful negligence, and not in the performance of duty. The member is survived by a spouse, a child under the age of 26, a disabled child, or a dependent parent.

Benefit: Accumulated member contributions plus an allowance equal to 66.67% of the member's average final compensation.

Beneficiary: Payment of the member's accumulated member contributions shall be paid to the member's designated beneficiary, or otherwise to the member's estate. An allowance equal to 66.67% of the member's average final compensation be made to the surviving spouse; however, if there is no surviving spouse or spouse dies before youngest child reaches age 26, 66.67% of average final compensation continues prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment is made to dependent parents. If none of the above conditions is met, the normal death benefit is paid to the designated beneficiary.

Waiver of Special Death Benefit

Before the payment of any special death benefit is made under this section, if all individuals eligible for a special death benefit elect to waive the payment of the special death benefit, a normal death benefit is paid to the member's designated beneficiary, or otherwise to the member's estate.

Death Benefit for Vested Former Member

If a member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.



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8. Vested Allowance

Eligibility: For individuals who are members on or before June 30, 2011, five years of eligibility service. For individuals who become members on or after July 1, 2011, 10 years of eligibility service.

Allowance: Accrued retirement allowance payable at age 50 if the member does not withdraw the member's accumulated member contributions.

9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Any COLAs are effective July 1, for allowances which have been in payment for one year. Effective July 1, 2000, for an allowance based on creditable service earned before July 1, 2011, the adjustment is capped at a maximum 3% compounded and is applied to all allowances which have been in payment for one year.

For an allowance based on creditable service earned on or after July 1, 2011, the COLA adjustment is capped at 2.5% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was greater than or equal to the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year. The adjustment is capped at 1% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was less than the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have been applied and the zero COLA is fully recovered.

10. Optional Forms of Payment

If, at the time of death, the retiree is married, the retiree's spouse is entitled to receive a survivor benefit consisting of 50% of the retiree's basic allowance. If there is no surviving spouse or upon the death of the surviving spouse, payment of the survivor benefit is divided equally among any children of the deceased retiree under the age of 26 years, until each child dies or becomes age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. If there is no spouse at time of retirement, member may select an optional allowance.

Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.



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- Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.
- Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 5: 100% "pop-up" joint and survivor annuity, which pays the designated beneficiary 100% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 6: 50% "pop-up" joint and survivor annuity, which pays the designated beneficiary 50% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

11. Reduction for Benefits Payable under Workers' Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers' compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers' compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Law Enforcement Officers' Pension System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers' compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers' compensation payments are subject to an offset by the Workers' Compensation Commission if a recipient is receiving an ordinary disability payment from the Law Enforcement Officers' Pension System for the same injury or illness. Any offset taken for an accidental disability



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from the Law Enforcement Officers' Pension System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree's employer by the Workers' Compensation Commission.

12. Deferred Retirement Option Plan (DROP)

Eligibility: Members are eligible to participate in the DROP if they have at least 25 and less than 32 years of creditable service.

Participation: An eligible member may participate in the DROP for the lesser of 7 years, the difference between 32 years and the member's creditable service, or a term selected by the member. Participation also ends if the participant dies, is terminated from employment, accepts an accidental disability retirement allowance, or submits a binding letter of resignation or notice of intent to terminate employment. Members who participate in the DROP are retired and cease making member contributions, and cease accruing service credit and additional benefits.

Allowance: For members who entered the DROP on or before June 30, 2011, the service retirement allowance, with annual COLAs, is credited to an account earning interest at the rate of 6% per year, compounded monthly. For members who enter DROP on or after July 1, 2011, the service retirement allowance, with annual COLAs, is credited to an account earning interest at the rate of 4% per year, compounded annually. When the DROP period ends, members terminate employment and begin receiving their monthly allowance plus the lump sum payment from their DROP account. During the DROP period, members remain eligible for accidental disability benefits if incapacitated while in DROP.

B. Members Transferring from the Employees' Retirement System¹

1. Membership

The retirement tier was closed to new participants effective January 1, 2005.

2. Member Contributions

Members who transferred from Employees' Retirement System (Plan A) are required to contribute 7% of earnable compensation. Members who transferred from the Employees' Retirement System (Plan B) contribute 5% of earnable compensation.

¹ This Section B outlines the provisions applicable to members of LEOPS who transferred from the Employees' Retirement System before January 1, 2005 and were subject to Selection A or Selection B and did not elect to participate in the contributory law enforcement officers' modified benefit.



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Contributions earn interest at 4% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.

3. Normal Retirement Age

Normal retirement age is age 50.

4. Normal Service Retirement Allowance

Eligibility: 25 years of eligibility service or attainment of age 50.

Allowance: 2.3% of average final compensation for the three highest years as a member for each of the first 30 years of creditable service, plus 1.0% of average final compensation for each additional year.

5. Early Retirement Allowance

Not applicable to this System.

6. Disability Retirement Allowance

Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is incapacitated for the performance of duty, and that incapacity is likely to be permanent.

Allowance: The greater of normal service retirement allowance or 25% of average final compensation.

Accidental

Eligibility: Total and permanent incapacity for duty as certified by the medical board arising out of or in the course of the actual performance of duty, without willful negligence.

Allowance: The benefit is 66.7% of average final compensation plus an annuity that is the actuarial equivalent of accumulated contributions. The maximum benefit cannot be greater than the average final compensation.



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7. Death Benefits

Normal Death Benefit – Return of Accumulated Contributions

Eligibility: Death while employed as a member and less than one year of eligibility service. A normal death benefit may not be paid if a special death benefit is paid for that death.

Benefit: Lump sum payment of member's accumulated member contributions to the member's designated beneficiary or, if there is no designated beneficiary, to the member's estate.

Normal Death Benefit – Return of Accumulated Contributions and Annual Earnable Compensation

Eligibility: Death while employed as a member and at least one year of eligibility service. A normal death benefit may not be paid if a special death benefit is paid for that death.

Benefit: Lump sum payment of member's accumulated member contributions and an amount equal to the member's annual earnable compensation at the time of death to the member's designated beneficiary or, if there is no designated beneficiary, to the member's estate.

Special Death Benefit for Death While Employed and Not in Performance of Duty

Eligibility: Death while employed as a member, without the member's willful negligence, and not in the performance of duty. The member is survived by a spouse, a child under the age of 26, a disabled child, or a dependent parent.

Benefit: Accumulated member contributions plus an allowance equal to 50% of the ordinary disability allowance the member would have received at the time of the member's death.

Beneficiary: Payment of the member's accumulated member contributions shall be paid to the member's designated beneficiary, or otherwise to the member's estate. An allowance equal to 50% of the ordinary disability allowance the member would have received at the time of the member's death shall be made to the surviving spouse; however, if there is no surviving spouse or spouse dies before youngest child reaches age 26, 50% of average final compensation continues prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment is made to dependent parents. If none of the above conditions is met, the normal death benefit is paid to the designated beneficiary.



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Special Death Benefit for Death in The Performance of Duty

Eligibility: Death while employed as a member, without the member's willful negligence, and not in the performance of duty. The member is survived by a spouse, a child under the age of 26, a disabled child, or a dependent parent.

Benefit: Accumulated member contributions paid plus an allowance equal to 66.67% of the member's average final compensation.

Beneficiary: Payment of the member's accumulated member contributions shall be paid to the member's designated beneficiary, or otherwise to the member's estate. An allowance equal to 66.67% of the member's average final compensation be made to the surviving spouse; however, if there is no surviving spouse or spouse dies before youngest child reaches age 26, 66.67% of average final compensation continues prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment is made to dependent parents. If none of the above conditions is met, the normal death benefit is paid to the designated beneficiary.

Waiver of Special Death Benefit

Before the payment of any special death benefit is made under this section, if all individuals eligible for a special death benefit elect to waive the payment of the special death benefit, a normal death benefit is paid to the member's designated beneficiary, or otherwise to the member's estate.

Death Benefit for Vested Former Member

If a member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

8. Vested Allowance

Eligibility: Five years of eligibility service and separation from employment other than by death or retirement.

Allowance: Service retirement allowance payable at normal retirement age if the member does not withdraw the member's accumulated member contributions.

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9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Any COLAs are effective July 1, for all allowances which have been in payment for one year.

For an allowance for members that elected Selection A (contributing 7% of earnable compensation), uncapped COLA is compounded annually. For an allowance for members that elected Selection B (contributing 5% of earnable compensation), the COLA is capped at a maximum 5% compounded annually.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

10. Optional Forms of Payment

If, at the time of death, the retiree is married, the retiree's spouse is entitled to receive a survivor benefit consisting of 50% of the retiree's basic allowance. If there is no surviving spouse or upon the death of the surviving spouse, payment of the survivor benefit is divided equally among any children of the deceased retiree under the age of 26 years, until each child dies or becomes age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. If there is no spouse at time of retirement, member may select an optional allowance.

- Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.
- Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 5: 100% "pop-up" joint and survivor annuity, which pays the designated beneficiary 100% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree.

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The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.

Option 6: 50% "pop-up" joint and survivor annuity, which pays the designated beneficiary 50% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

11. Reduction for Benefits Payable under Workers' Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers' compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers' compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Law Enforcement Officers' Pension System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers' compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers' compensation payments are subject to an offset by the Workers' Compensation Commission if a recipient is receiving an ordinary disability payment from the Law Enforcement Officers' Pension System for the same injury or illness. Any offset taken for an accidental disability from the Law Enforcement Officers' Pension System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree's employer by the Workers' Compensation Commission.

12. Deferred Retirement Option Program (DROP)

Eligibility: Members are eligible to participate in the DROP if they have at least 25 and less than 32 years of creditable service.

Participation: An eligible member may participate in the DROP for the lesser of 7 years, the difference between 32 years and the member's creditable service, or a term selected by the member. Participation also ends if the participant dies, is terminated from employment, accepts an accidental disability retirement allowance, or submits a binding letter of resignation or notice of intent to terminate employment. Members who participate in the DROP are retired and cease making member contributions, and cease accruing service credit and additional benefits.



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Allowance: For members who entered the DROP on or before June 30, 2011, the service retirement allowance, with annual COLAs, is credited to an account earning interest at the rate of 6% per year, compounded monthly. For members who enter DROP on or after July 1, 2011, the service retirement allowance, with annual COLAs, is credited to an account earning interest at the rate of 4% per year, compounded annually. When the DROP period ends, members terminate employment and begin receiving their monthly allowance plus the lump sum payment from their DROP account. During the DROP period, members remain eligible for Accidental Disability benefits if incapacitated while in DROP.