Vermont State Employees' Retirement System

Actuarial Valuation and Review as of June 30, 2024

Segal

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October 28, 2024

Board of Trustees
Vermont State Employees' Retirement System
Montpelier, Vermont 05609

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of June 30, 2024, of the Vermont State Employees' Retirement System (VSERS). It summarizes the actuarial data used in the valuation, analyzes the preceding year's experience, and establishes the funding requirements for the fiscal year ending June 30, 2026.

This report has been prepared in accordance with generally accepted actuarial principles and practices for the exclusive use and benefit of the Board of Trustees, based upon information provided by the staff of the Office of the State Treasurer and the System's other service providers.

Segal does not audit the data provided. The accuracy and comprehensiveness of the data is the responsibility of those supplying the data. To the extent we can, however, Segal does review the data for reasonableness and consistency. Based on our review of the data, we have no reason to doubt the substantial accuracy of the information on which we have based this report, and we have no reason to believe there are facts or circumstances that would affect the validity of these results.

The measurements shown in this actuarial valuation may not be applicable for other purposes. 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; and changes in plan provisions or applicable law.

The actuarial calculations were directed under the supervision of Matthew A. Strom, FSA, MAAA, EA. I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of my knowledge, the information supplied in this actuarial valuation is complete and accurate. The investment return and inflation assumptions were selected by the Vermont Pension Investment Commission (VPIC). The remaining actuarial assumptions used in this actuarial valuation were selected by the Board based upon our analysis and recommendations. In my opinion, the assumptions are reasonable and take into account the experience of the System and reasonable expectations. In addition, in my opinion, the combined effect of these assumptions is expected to have no significant bias.

Segal makes no representation or warranty as to the future status of the System and does not guarantee any particular result. This document does not constitute legal, tax, accounting or investment advice or create or imply a fiduciary relationship. The Board is encouraged to discuss any issues raised in this report with the System's legal, tax and other advisors before taking, or refraining from taking, any action.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

Segal

Matthew A. Strom, FSA, MAAA, EA
Senior Vice President and Actuary

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Section 1: Actuarial Valuation Summary

Purpose and basis

This report was prepared by Segal to present a valuation of the System as of June 30, 2024, pursuant to section 471, subsection (k), of Title 3, Chapter 16, Vermont Statutes Annotated, relating to the Vermont State Employees' Retirement System. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits.

The contribution requirements presented in this report are based on:

- The benefit provisions of the System, as administered by the Board;
- The characteristics of covered active members, inactive members, deferred members, and retired members and beneficiaries as of June 30, 2024, provided by the Office of the State Treasurer;
- The unaudited assets of the System as of June 30, 2024, provided by the Office of the State Treasurer;
- Economic assumptions regarding future salary increases, inflation, and investment earnings;
- Other actuarial assumptions regarding employee terminations, retirement, death, etc.; and
- The funding policy prescribed by State statute.

Certain disclosure information required by GASB Statements No. 67 and 68 as of June 30, 2024, for the System is provided in separate reports.

Valuation highlights

- Segal strongly recommends an actuarial funding policy that targets 100% funding of the actuarial accrued liability. Generally, this implies payments that are ultimately at least enough to cover normal cost, interest on the unfunded actuarial accrued liability and the principal balance. The funding policy set in the Vermont State Pension Code meets this standard. Section 473, subsection (c)(4), of Title 3, Chapter 16, Subchapter 1, Vermont Statutes Annotated calls for annual payments on the unfunded actuarial accrued liability to be made over a closed period ending on June 30, 2038. The amount of each annual payment is calculated assuming that the amortization period will remain closed and that the amortization amount will increase annually at the rate of 3% over the preceding year.
- Actual contributions made during the fiscal year ending June 30, 2024, of $140.9 million were 115.6% of the actuarially determined contribution (ADC). In the prior fiscal year, actual contributions were 100.3% of the prior year ADC.
- The actuarial loss of $58.2 million, or 1.5% of actuarial accrued liability, is due to an investment loss of $6.6 million, or 0.2% of actuarial accrued liability, and a loss from sources other than investments of $51.6 million, or 1.4% of the actuarial accrued liability. This loss was primarily due to: actual 2025 COLAs were greater than assumed; members retired earlier than expected; actual salary and/or service increases were greater than assumed; and approximately 350 Group F members transferred to Group G. Additional detail regarding this loss is shown in Section 2, “Non-investment experience”.
- The rate of return on the market value of assets was 10.1% for the year ending June 30, 2024. The return on the actuarial value of assets was 6.7% for the same period due to the recognition of prior years’ investment gains and losses. This resulted in an actuarial loss when measured against the assumed rate of return of 7.0%. This actuarial investment loss increased the employer contribution rate by 0.1% of pay. Given the low fixed income interest rate environment, target asset allocation and expectations of future investment returns for various asset classes, we advise the Board to continue to monitor actual and anticipated investment returns relative to the assumed long-term rate of return on investments of 7.0%.
- The actuarial value of assets is 101.0% of the market value of assets. The investment experience in the past years has only been partially recognized in the actuarial value of assets. As the deferred net loss is recognized in future years, the cost of the System is likely to increase unless the net loss is offset by future experience. The recognition of the deferred net market loss of $26.5 million will also have an impact on the future funded ratio. If the net deferred loss were recognized immediately in the actuarial value of assets, the preliminary contribution requirement would increase from 19.5% to about 19.9% of projected payroll.

Changes from prior valuation

- The funded ratio (the ratio of the actuarial value of assets to actuarial accrued liability) is 71.3%, compared to the prior year funded ratio of 70.3%. This ratio is one measure of funding status, and its history is a measure of funding progress. Using the market value of assets, the funded ratio is 70.6%, compared to 67.5% as of the prior valuation date. These measurements are not necessarily appropriate for assessing the sufficiency of the plan assets to cover the estimated cost of settling the System's benefit obligation or the need for or the amount of future contributions.
- The results of this June 30, 2024, actuarial valuation are used to determine the actuarially determined contribution for the fiscal year ending June 30, 2026, and to estimate the actuarially determined contribution for the fiscal year ending June 30, 2027. The actuarially determined contribution for fiscal 2026 is $136.5 million, an increase of $5.1 million from fiscal year 2025. Last year's estimate of the actuarially determined contribution for fiscal 2026 is $5.4 million less than this year's actual amount. This is due to the investment loss on an actuarial basis and the net demographic loss. The estimated fiscal 2027 actuarially determined contribution is $136.7 million.
- The unfunded actuarial accrued liability is $1,081.7 million, which is an increase of $16.0 million since the prior valuation.
- As a result of Act 114, Group G was created in recognition of the challenges employees in front-line corrections and mental health positions face, with the intention of allowing an earlier retirement for these employees. For valuation purposes, Group G became effective as of July 1, 2023. As of June 30, 2024, there are 467 active members, 77 inactive members, and 4 retirees in Group G. Details on Group G plan provisions and actuarial assumptions can be located in Section 4, Exhibits F and G of this report.

Risk

- It is important to note that this actuarial valuation is based on plan assets as of June 30, 2024. The System's funded status does not reflect short-term fluctuations of the market, but rather is based on the market values on the last day of the plan year. Segal is available to prepare projections of potential outcomes of market conditions and other demographic experience upon request.
- Since the actuarial valuation results are dependent on a given set of assumptions, there is a risk that emerging results may differ significantly as actual experience proves to be different from the assumptions. We have included a brief discussion of some risks that may affect the System in Section 2, "Risk".

GASB

- This report constitutes an actuarial valuation for the purpose of determining the actuarially determined contribution under the System's funding policy and measuring the progress of that funding policy. The Net Pension Liability (NPL) and pension expense under Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68, for inclusion in the System's and employer's financial statements as of June 30, 2024, will be provided separately. The accounting disclosures will utilize different methodologies from those employed in the funding valuation, as required by the GASB. However, the ADC in this valuation is expected to be used as the ADC for GASB financial reporting.

Summary of key valuation results

Valuation Result	Current	Prior
Contributions for fiscal year		
• Actuarially determined employer contributions for fiscal 2026 (and 2025)	$136,481,622	$131,346,935
• Estimated actuarially determined employer contributions for fiscal 2027 (and 2026)	136,712,051	131,081,498
Actuarial accrued liability for plan year beginning	**July 1, 2024**	**July 1, 2023**
• Retired members and beneficiaries	$2,379,469,801	$2,270,533,748
• Deferred members as reported by the System	66,874,667	65,437,477
• Inactive members as reported by the System	43,342,825	40,739,666
• Active members	1,282,374,227	1,212,359,321
• **Total**	**$3,772,061,520**	**$3,589,070,212**
• Employer normal cost for plan year beginning	$35,015,943	$36,384,942
Assets for plan year beginning		
• Market value of assets (MVA)	$2,663,839,711	$2,423,230,404
• Actuarial value of assets (AVA)	2,690,347,928	2,523,348,610
• Actuarial value of assets as a percentage of market value of assets	101.00%	104.13%
Funded status for plan year beginning		
• Unfunded actuarial accrued liability on market value of assets	$1,108,221,809	$1,165,839,808
• Funded percentage on MVA basis	70.62%	67.52%
• Unfunded actuarial accrued liability on actuarial value of assets	$1,081,713,592	$1,065,721,602
• Funded percentage on AVA basis	71.32%	70.31%
• Remaining amortization period (years)	14	15

Section 1: Actuarial Valuation Summary

Valuation Result	Current	Prior
Key assumptions	**July 1, 2024**	**July 1, 2023**
• Net investment return	7.00%	7.00%
• Inflation rate	2.30%	2.30%
Demographic data for plan year beginning		
• Number of retired members and beneficiaries	8,142	8,058
• Number of deferred members as reported by the System	869	844
• Number of inactive members as reported by the System	2,554	2,287
• Number of active members	8,819	8,611
• Total payroll	$663,978,640	$621,255,605
• Average payroll	75,290	72,147
• Total monthly benefits for all retired members and beneficiaries	16,199,459	15,534,832
• Average monthly benefit for all retired members and beneficiaries	1,990	1,928

Important information about actuarial valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – the actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

In order to prepare a valuation, Segal relies on a number of input items. These include:

Input Item	Description
Plan provisions	Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
Member information	An actuarial valuation for a plan is based on data provided to the actuary by the System. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
Financial information	Part of the cost of a plan will be paid from existing assets — the balance will need to come from future contributions and investment income. The valuation is based on the asset values as of the valuation date, typically reported by the System. A snapshot as of a single date may not be an appropriate value for determining a single year's contribution requirement, especially in volatile markets. Plan sponsors often use an "actuarial value of assets" that differs from market value to gradually reflect year-to-year changes in the market value of assets in determining the contribution requirements.
Actuarial assumptions	In preparing an actuarial valuation, Segal starts by developing a forecast of the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of participants in each year, as well as forecasts of the plan's benefits for each of those events. In addition, the benefits forecasted for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The forecasted benefits are then discounted to a present value, typically based on an estimate of the rate of return that will be achieved on the plan's assets. All of these factors are uncertain and unknowable. Thus, there will be a range of reasonable assumptions, and the results may vary materially based on which assumptions are selected within that range. That is, there is no right answer (except with hindsight). It is important for any user of an actuarial valuation to understand and accept this constraint. The actuarial model may use approximations and estimates that will have an immaterial impact on our results. In addition, the actuarial assumptions may change over time, and while this can have a significant impact on the reported results, it does not mean that the previous assumptions or results were unreasonable or wrong.

Section 1: Actuarial Valuation Summary

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

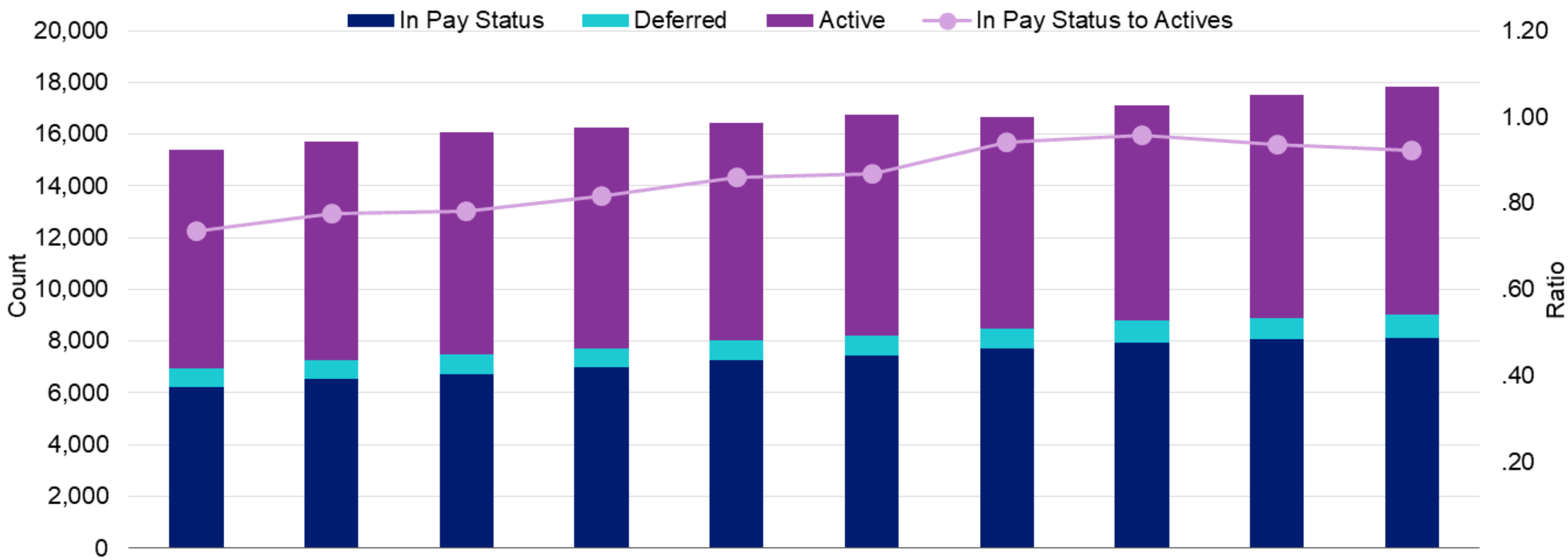
- The actuarial valuation is prepared at the request of the System and Board. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement at a specific date — it is not a prediction of a plan's future financial condition. Accordingly, Segal did not perform an analysis of the potential range of financial measurements, except where otherwise noted.
- If the System is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice and is not acting as a fiduciary to the System. The valuation is based on Segal's understanding of applicable guidance in these areas and of the System's provisions, but they may be subject to alternative interpretations. The System should look to their other advisors for expertise in these areas.
- While Segal maintains extensive quality assurance procedures, an actuarial valuation involves complex computer models and numerous inputs. In the event that an inaccuracy is discovered after presentation of Segal's valuation, Segal may revise that valuation or make an appropriate adjustment in the next valuation.
- Segal's report shall be deemed to be final and accepted by the System upon delivery and review. Trustees should notify Segal immediately of any questions or concerns about the final content.

Section 2: Actuarial Valuation Results

Member information

- This section presents a summary of significant statistical data on covered members.

Member Population as of June 30



Legend	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
In Pay Status	6,204	6,542	6,727	6,974	7,268	7,424	7,716	7,963	8,058	8,142
Deferred[1]	735	728	742	753	747	768	771	815	844	869
Active	8,446	8,436	8,620	8,530	8,443	8,539	8,192	8,324	8,611	8,819
Ratio	0.73	0.78	0.78	0.82	0.86	0.87	0.94	0.96	0.94	0.92

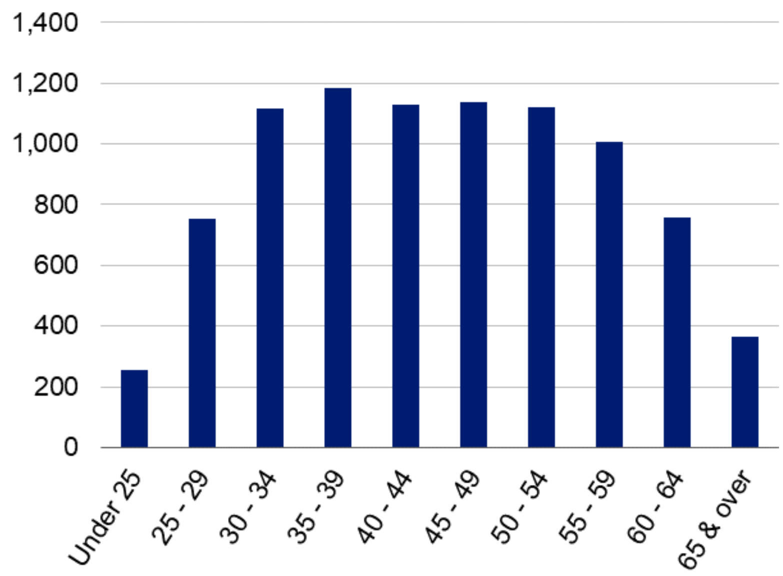
[1] Excludes inactive members as reported by the System.

Active members

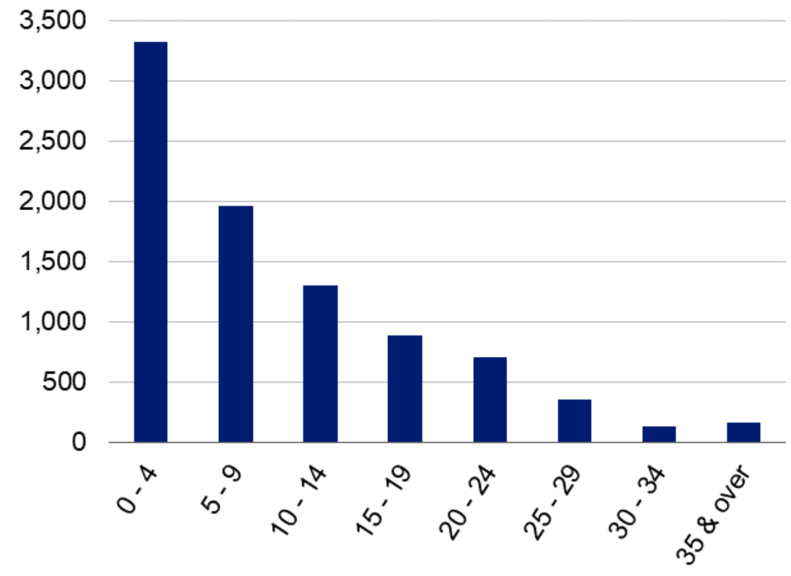
As of June 30	2024	2023	Change
Active members	8,819	8,611	2.4%
Average age	45.1	45.1	0.0
Average years of credited service	10.1	10.2	−0.1
Average payroll	$75,290	$72,147	4.4%

Distribution of Active Members as of June 30, 2024

Actives by Age



Actives by Years of Service



Inactive and deferred members

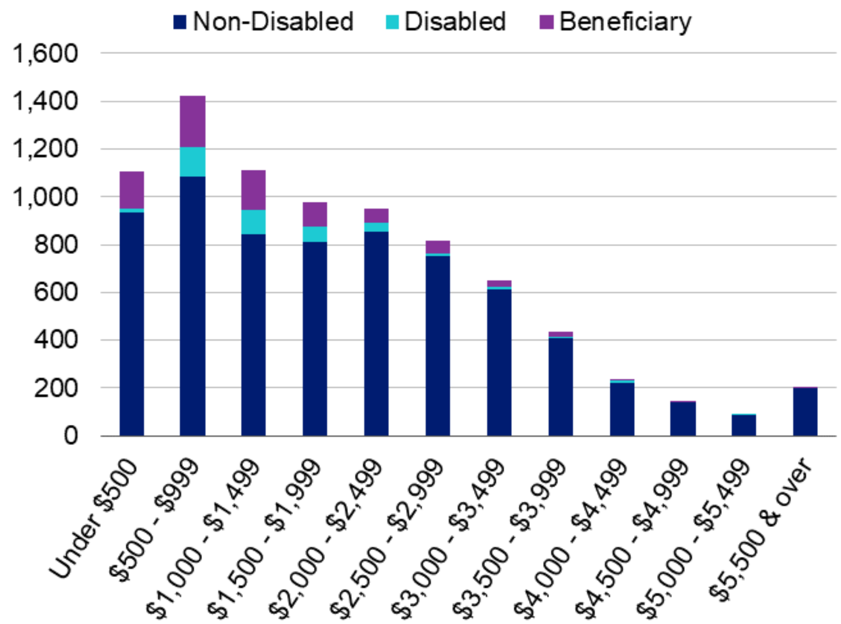
- In this year's valuation, there were 2,554 inactive members as reported by the System. A member is reported as inactive if they have withdrawn from active employment within the three-year period preceding the valuation date, or if they withdrew prior to the three-year period preceding the valuation date, but do not have a vested right to a deferred or immediate vested benefit and have not taken a refund of their employee contributions.
- In addition, there were 869 deferred members as reported by the System. A member is reported as deferred if they have withdrawn from active employment prior to the three-year period preceding the valuation date and have a vested right to a deferred or immediate vested benefit.

Retired members and beneficiaries

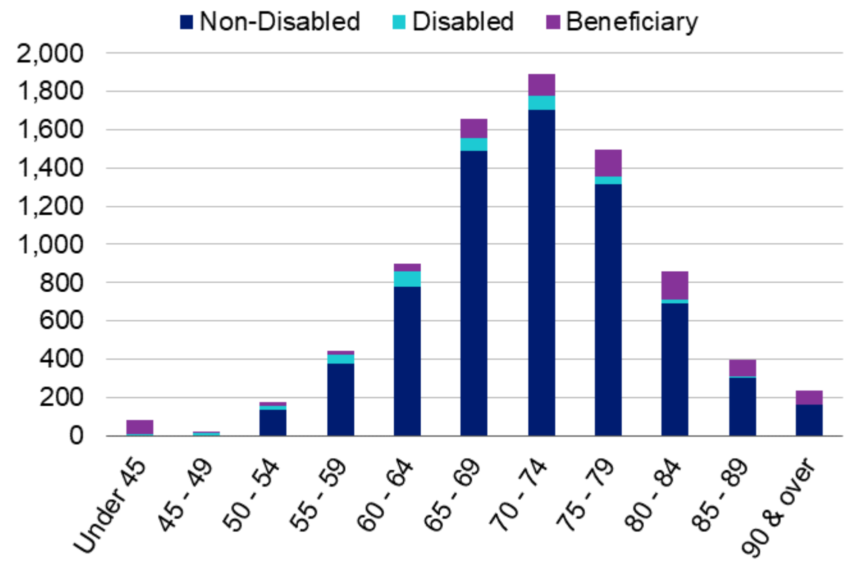
As of June 30	2024	2023	Change
Retired members (including disability)	7,331	7,289	0.6%
Average age	71.9	71.6	0.3
Average amount	$2,060	$1,996	3.2%
Beneficiaries	811	769	5.5%
Total monthly amount	$16,199,459	$15,534,832	4.3%

Distribution of Retired Members and Beneficiaries as of June 30, 2024

By Type and Monthly Amount



By Type and Age



Historical plan population

Member Data Statistics: 2015 – 2024
Active Members versus Retired Members[1]

Year Ended June 30	Active Members Count	Active Members Average Age	Active Members Average Service	Retired Members Count	Retired Members Average Age	Retired Members Average Monthly Amount
2015	8,446	46.5	11.7	5,554	70.0	$1,561
2016	8,436	46.2	11.3	5,858	70.1	1,587
2017	8,620	46.0	11.1	6,092	70.3	1,616
2018	8,530	45.9	11.0	6,302	70.4	1,663
2019	8,443	45.7	10.8	6,567	70.6	1,718
2020	8,539	45.6	10.8	6,704	70.9	1,755
2021	8,192	45.7	10.9	6,973	71.0	1,805
2022	8,324	45.3	10.4	7,196	71.2	1,899
2023	8,611	45.1	10.2	7,289	71.6	1,996
2024	8,819	45.1	10.1	7,331	71.9	2,060

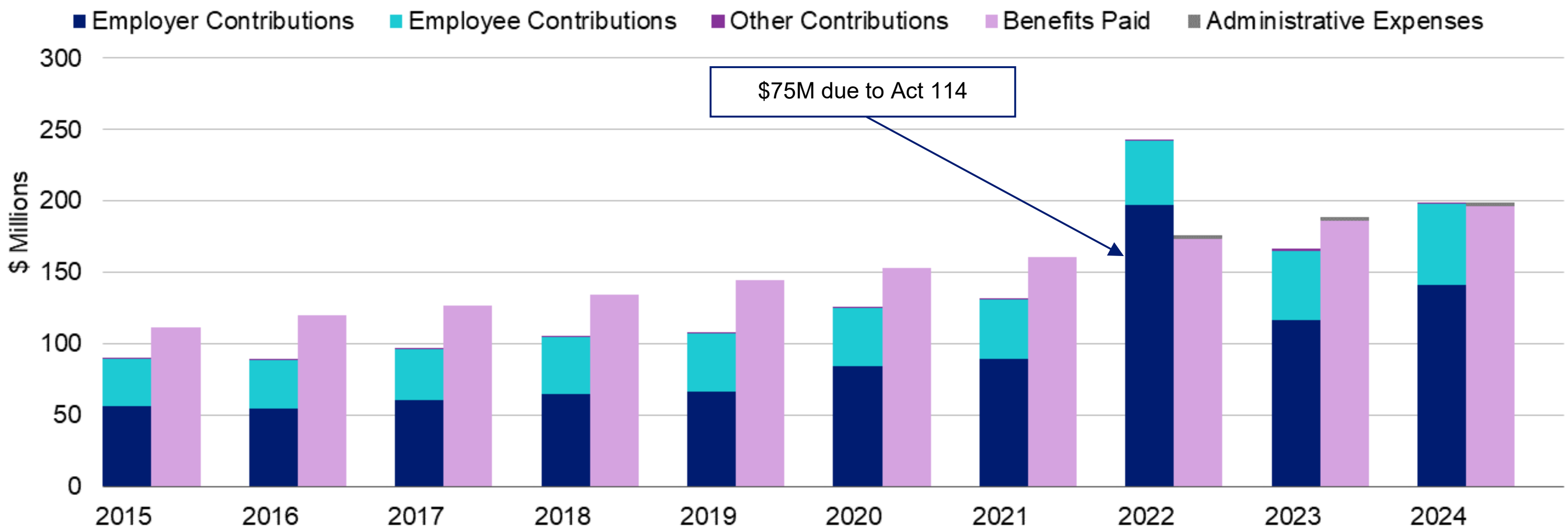
[1] Not including beneficiaries.

Financial information

Retirement plan funding anticipates that, over the long term, both contributions and investment earnings (less investment fees and administrative expenses) will be needed to cover benefit payments. Retirement plan assets change as a result of the net impact of these income and expense components. Benefits have exceeded employer and member contributions for all years shown except for 2022 and 2024 (due to additional contributions required under Act 114).

Additional financial information, including a summary of these transactions for the valuation year, is presented in Section 3, Exhibits C, D and E.

Comparison of Contributions to Benefits Paid for Years Ended June 30, 2015 – 2024



Section 2: Actuarial Valuation Results

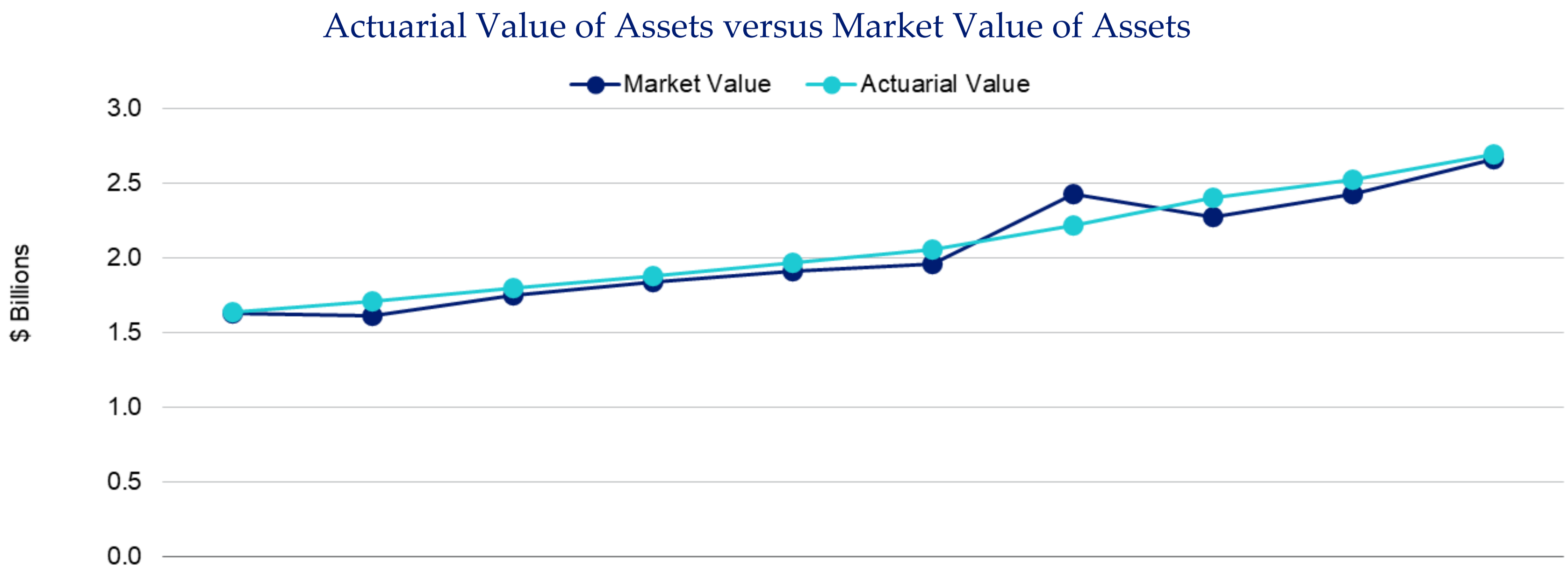
It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Vermont Pension Investment Commission has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable. A characteristic of the asset valuation method is that, over time, it is more likely to produce an actuarial value of assets that is less than the market value of assets. The asset method provides a degree of conservatism to increase the likelihood that benefits are funded. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

Determination of Actuarial Value of Assets for Year Ended June 30, 2024

Step		Amount
1.	Actuarial value of assets, June 30, 2023	$2,523,348,610
2.	Net new money[1], including expected investment income (7.00%)	173,626,372
3.	Preliminary asset value: (1) + (2)	2,696,974,982
4.	Smoothing adjustment	
	a. Market value, June 30, 2024	$2,663,839,711
	b. Preliminary asset value: (3)	2,696,974,982
	c. Unrecognized appreciation: (4a) – (4b)	−33,135,271
	d. Adjustment percentage	20%
	e. Total smoothing adjustment: (4c) x (4d)	−6,627,054
5.	Preliminary actuarial value of assets as of June 30, 2024: (3) + (4e)	$2,690,347,928
6.	Adjustment to be within 20% corridor	0
7.	**Final actuarial value of assets as of June 30, 2024: (5) + (6)**	**$2,690,347,928**
8.	Actuarial value as a percentage of market value: (7) ÷ (4a)	101.00%

[1] Net new money is comprised of contributions, interest, and dividends, less benefit payments and expenses.

Asset history for years ended June 30

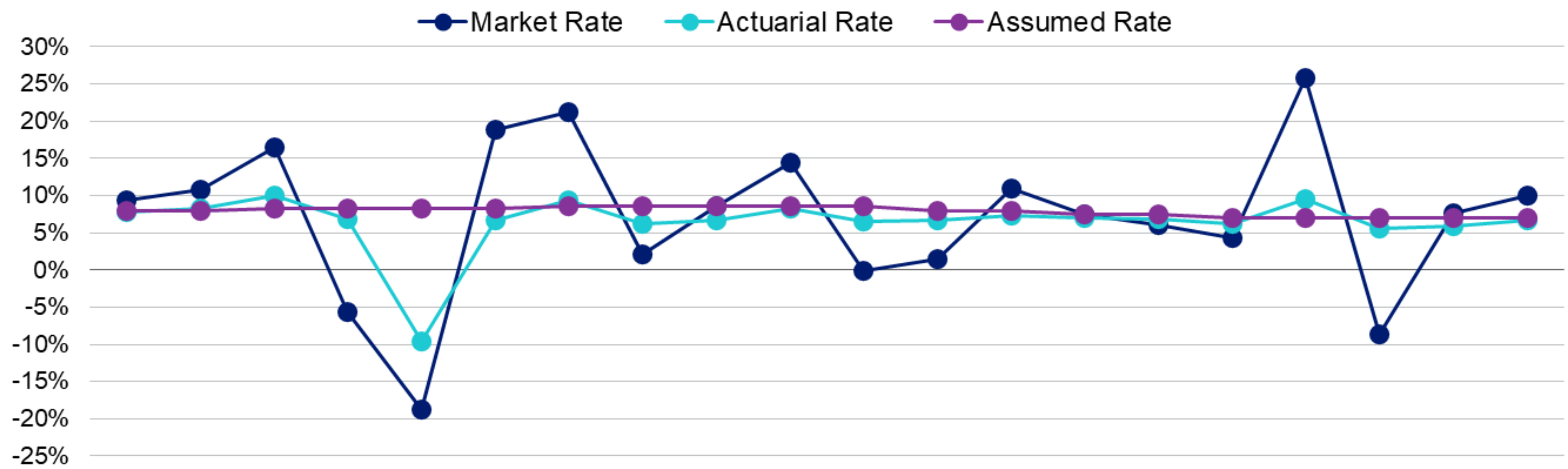


Legend	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Actuarial value[1]	$1.64	$1.71	$1.79	$1.88	$1.96	$2.05	$2.22	$2.41	$2.52	$2.69
Market value[1]	1.62	1.61	1.75	1.84	1.91	1.96	2.43	2.28	2.42	2.66
Ratio	1.01	1.06	1.03	1.02	1.03	1.05	0.91	1.06	1.04	1.01

[1] In $ billions

Historical investment returns

Market and Actuarial Rates of Return versus Assumed Rate for Years Ended June 30



Legend	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Market rate	9.3%	10.7%	16.4%	−5.7%	−18.8%	18.8%	21.2%	2.2%	8.6%	14.4%	−0.1%	1.4%	11.0%	7.4%	6.1%	4.3%	25.7%	−8.7%	7.6%	10.1%
Actuarial rate	7.8%	8.3%	10.0%	6.9%	−9.6%	6.7%	9.3%	6.3%	6.7%	8.3%	6.5%	6.7%	7.3%	6.9%	6.8%	6.3%	9.6%	5.6%	6.0%	6.7%
Assumed rate	8.0%	8.0%	8.25%	8.25%	8.25%	8.25%	8.5%	8.5%	8.5%	8.5%	8.5%	7.95%	7.95%	7.5%	7.5%	7.0%	7.0%	7.0%	7.0%	7.0%

Average Rates of Return	Market Value	Actuarial Value
Most recent five-year average return:	7.13%	6.77%
Most recent ten-year average return:	6.29%	6.80%
Most recent fifteen-year average return:	7.80%	6.97%
Most recent twenty-year average return:	6.63%	6.42%

Actuarial experience

To calculate the actuarially determined contribution (ADC), assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Assumptions should consider experience and should be based on reasonable expectations for the future. Each year actual experience is compared to that projected by the assumptions. Differences are reflected in the actuarial valuation. If overall experience is more favorable than anticipated (an actuarial gain), the ADC will decrease relative to the previous year. On the other hand, the ADC will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single years' experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The net experience loss is $58,178,414, which includes $6,627,054 from investment losses and $51,551,360 in net losses from all other sources. The net experience variation from individual sources other than investments was 1.4% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

Actuarial Experience for Year Ended June 30, 2024

	Assumption	Amount
1.	Net gain/(loss) from investments[1]	−$6,627,054
2.	Gain/(loss) from administrative expenses	355,773
3.	Net gain/(loss) from other experience	−51,907,133
4.	**Net experience gain/(loss): (1) + (2) + (3)**	**−$58,178,414**

[1] Details on next page

Investment experience

Actuarial planning is long term. The obligations of a pension plan are expected to continue for the lifetime of all its participants.

The assumed long-term rate of return of 7.00% considers past experience, the asset allocation policy of the System and future expectations.

Investment Experience
Year Ended (YE) – June 30, 2024 versus June 30, 2023

Item	YE 2024 Market Value	YE 2024 Actuarial Value	YE 2023 Market Value	YE 2023 Actuarial Value
1. Net investment income	$243,515,617	$169,905,628	$171,535,276	$142,502,898
2. Average value of assets	2,421,777,249	2,521,895,455	2,264,170,126	2,393,320,710
3. Rate of return: (1) ÷ (2)	10.06%	6.74%	7.58%	5.95%
4. Assumed rate of return	7.00%	7.00%	7.00%	7.00%
5. Expected investment income: (2) x (4)	$169,524,407	$176,532,682	$158,491,909	$167,532,450
6. Net investment gain/(loss): (1) – (5)	**$73,991,210**	**−$6,627,054**	**$13,043,367**	**−$25,029,552**

Non-investment experience

Administrative expenses

Administrative expenses for the year ended June 30, 2024, totaled $2,696,572, as compared to the assumption of $2,939,373. This resulted in an experience gain of $355,773 for the year, including an adjustment for interest.

Other experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- Mortality experience (more or fewer than expected deaths)
- The extent of turnover among members
- Retirement experience (earlier or later than projected)
- The number of disability retirements (more or fewer than projected)
- Salary and service increases (greater or smaller than projected)
- Actual COLAs paid (more or less than assumed)

The net loss from this other experience for the year ended June 30, 2024 amounted to $51,907,133, which is 1.4% of the actuarial accrued liability.

Liability Changes Due to Demographic Experience for Year Ended June 30

Liability Change	2024	2023	2022	2021	2020	Average
Net turnover	$8,806,334	$4,513,484	$13,686,201	$3,446,914	−$2,812,974	$5,527,992
Retirement	−10,016,416	−5,790,656	−22,922,279	−19,015,951	−8,892,489	−13,327,558
Mortality	5,418,232	8,005,442	10,206,668	−4,440,365	3,692,473	4,576,490
Disability retirements	−1,594,218	−59,419	−1,598,758	−158,342	−434,494	−769,046
Salary/service increases	−6,655,012	−8,552,557	−30,740,425	−4,448,937	−3,697,977	−10,818,982
COLA experience[1]	−29,862,642	3,240,429	−46,706,996	−35,588,639	23,969,841	−16,989,601
Miscellaneous[2]	−18,003,411	−10,721,754	−9,645,414	−3,195,329	−2,407,484	−8,794,678
Total	**−$51,907,133**	**−$9,365,031**	**−$87,721,003**	**−$63,400,649**	**$9,416,896**	**−$40,595,384**

Actuarial assumptions

There are no assumption changes reflected in this report. Details on actuarial assumptions and methods are in Section 4, Exhibit F.

Plan provisions

There were no changes in plan provisions since the prior valuation. A summary of plan provisions is in Section 4, Exhibit G.

[1] COLA experience loss for 2024 is due to actual 2025 COLAs being greater than expected (3.90% actual vs 2.40% expected for Group A, C, and D members, 1.90% actual vs 1.35% expected for Group F members who retired before July 1, 2008, and 3.90% actual vs 2.40% expected for Group F members who retired after July 1, 2008, and Group G members).

[2] Miscellaneous gains and losses are comprised of all demographic gains and losses that are not individually listed in the table above. Some of the largest attributing items typically include data updates, show-up/drop-off records (records that were not previously valued, or records that were previously valued that are no longer being valued), and actual timing of cash flows being different than assumed. For 2024, $8.9 million of the $18.0 million miscellaneous loss is due to approximately 350 Group F members transferring to Group G, which became effective as of July 1, 2023. Members that transferred to Group G are required to pay the Group G member contribution rate; see Section 4, Exhibit G for details.

Development of unfunded actuarial accrued liability

Development of Unfunded Actuarial Accrued Liability for Year Ended June 30, 2024

Item		Amount
1.	Unfunded actuarial accrued liability at beginning of year	$1,065,721,602
2.	Normal cost at beginning of year	83,464,752
3.	Total contributions	−199,124,851
4.	Interest on 1, 2 & 3	73,473,675
5.	Expected unfunded actuarial accrued liability: (1) + (2) + (3) + (4)	$1,023,535,178
6.	Changes due to:	
	a. Net experience (gain)/loss	$58,178,414
	b. Assumptions	0
	c. Funding method	0
	d. Plan provisions	0
	e. Total changes	58,178,414
7.	**Unfunded actuarial accrued liability at end of year: (5) + (6e)**	**$1,081,713,592**

Actuarially determined contribution

The current funding policy is intended to result in predictable employer contributions that eliminate the unfunded actuarial accrued liability within 14 years, thereby providing benefit security to plan participants while balancing the needs of current and future contributors to the plan. The actuarially determined contribution is equal to the employer normal cost payment and a payment on the unfunded actuarial accrued liability. The statute governing the System specifies the funding policy used to calculate the actuarially determined contribution based on a closed amortization period ending on June 30, 2038. As of July 1, 2024, there are 14 years remaining on this schedule.

The actuarially determined contribution for the fiscal year ending June 30, 2025, is $131,346,935 based on the June 30, 2023, actuarial valuation. The results of this June 30, 2024, actuarial valuation with the additional Act 114 contributions are used to determine the actuarially determined contribution for the fiscal year ending June 30, 2026, and to estimate the actuarially determined contribution for the fiscal year ending June 30, 2027, as shown in Section 2, "Projection of actuarially determined contribution for following two fiscal years".

The preliminary contribution requirement as of July 1, 2024, is based on the data previously described, the actuarial assumptions and Plan provisions described in Section 4, including all changes affecting future costs adopted at the time of the actuarial valuation, and actuarial gains and losses.

Preliminary Contribution Requirement for Year Beginning July 1

	Contribution	2024 Amount	2024 Percent of Projected Payroll[1]	2023 Amount	2023 Percent of Projected Payroll[1]
1.	Total normal cost, adjusted for timing[2]	$90,264,333	12.92%	$83,397,238	12.77%
2.	Administrative expenses	3,142,986	0.45%	2,939,373	0.45%
3.	Expected employee contributions	−58,391,376	−8.36%	−49,951,669	−7.65%
4.	Employer normal cost: (1) + (2) + (3)	$35,015,943	5.01%	$36,384,942	5.57%
5.	Actuarial accrued liability	3,772,061,520		3,589,070,212	
6.	Actuarial value of assets	2,690,347,928		2,523,348,610	
7.	Unfunded/(overfunded) actuarial accrued liability: (5) - (6)	$1,081,713,592		$1,065,721,602	
8.	Payment on unfunded/(overfunded) actuarial accrued liability, adjusted for timing[2]	101,185,600	14.49%	94,667,812	14.49%
9.	**Preliminary contribution requirement: (4) + (8)**	**$136,201,543**	**19.50%**	**$131,052,754**	**20.06%**
10.	Projected payroll	698,441,274		653,193,932	

[1] Amounts may not add due to rounding.
[2] Contributions are assumed to be paid at the middle of the year.

Reconciliation of preliminary contribution requirement

Reconciliation of Preliminary Contribution Requirement from July 1, 2023 to July 1, 2024

Step	Amount	Percent of Projected Payroll
Preliminary contribution requirement as of July 1, 2023	$131,052,754	20.06%
Changes in preliminary contribution requirement		
• Effect of plan amendment(s)	0	0.00%
• Effect of change in asset method	0	0.00%
• Effect of expected change in amortization payment due to payroll growth	2,840,035	0.43%
• Effect of change in amortization period	0	0.00%
• Effect of change in administrative expense assumption	203,613	0.03%
• Effect of change in other actuarial assumptions	0	0.00%
• Effect of contributions (more)/less than actuarially determined contribution	−1,754,346	−0.27%
• Effect of investment (gain)/loss	619,908	0.09%
• Effect of other gains and losses on accrued liability[1]	4,822,215	0.74%
• Net effect of other changes, including composition and number of members, payroll[2]	−1,582,636	−1.58%
• **Total change**	**$5,148,789**	**−0.56%**
Preliminary contribution requirement as of July 1, 2024	**$136,201,543**	**19.50%**

[1] For 2024, this amount includes the impact of approximately 350 Group F members transferring to Group G, which became effective as of July 1, 2023. See Section 2, "Non-investment experience" for details.

[2] The percent of payroll value includes the effect of the change in projected payroll basis. All percentages for previous items are calculated on the basis of prior year projected payroll. This percent of payroll value includes an additional element to account for the fact that the percentage in the "Preliminary contribution requirement as of July 1, 2024" row is based on projected payroll from the current valuation. It is possible that the dollar amount of change may be positive while the percent of payroll value is negative, and vice versa. It is expected that the dollar amount as a percentage of prior year projected payroll will not match the percent of payroll value.

Amortization schedule for unfunded actuarial accrued liability – schedule of contributions required by statute

Unfunded Liability Amortization Schedule

As of July 1	Balance	Additional Act 114 State Contribution[1] (Year Following)	Amortization Payment[2] (Year Following)	Funded Percentage
2024	$1,081,713,592	$12,000,000	$97,001,194	71.32%
2025	1,044,681,831	15,000,000	103,420,823	73.18%
2026	995,314,108	15,000,000	104,888,325	75.35%
2027	940,972,648	15,000,000	106,282,436	77.51%
2028	881,385,205	15,000,000	107,577,096	79.67%
2029	816,287,436	15,000,000	108,737,509	81.82%
2030	745,432,482	15,000,000	109,715,906	83.98%
2031	668,605,619	15,000,000	110,444,336	86.13%
2032	585,647,382	15,000,000	110,821,564	88.27%
2033	496,491,861	0	110,687,072	90.40%
2034	416,750,693	0	114,007,685	92.23%
2035	327,992,776	0	117,427,915	94.10%
2036	229,483,890	0	120,950,753	96.02%
2037	120,435,331	0	124,579,275	97.99%
2038	0	0	0	100.00%

[1] Under Act 114, beginning in FY24, the State is contributing an additional payment that grows to $15 million in FY26 and remains at that level until the fund reaches 90%.
[2] The annual payment to amortize the unfunded actuarial liability is calculated based upon installments increasing at a rate of 3% per year.

Projection of actuarially determined contribution for following two fiscal years

On the basis of the June 30, 2024, actuarial valuation, the employer normal cost rate is 5.01%. In order to reflect the future member contribution increases per Act 114, the fiscal 2026 employer normal cost rate is reduced by an estimated 44 basis points and the fiscal 2027 employer normal cost rate is reduced by an additional estimated 32 basis points. These reduced employer normal cost rates are applied to the projected payrolls for fiscal 2026 and fiscal 2027, respectively, to determine the employer normal cost for each year. The payment on the unfunded liability is added to the employer normal cost to determine the actuarially determined contribution for the fiscal year ending June 30, 2026, and to estimate the actuarially determined contribution for the fiscal year ending June 30, 2027, as shown below. The final actuarially determined contribution for fiscal 2027 will be determined with the next valuation.

Actuarially Determined Contribution: 2026 – 2027

Fiscal Year Ended June 30	Projected Payroll[1]	Employer Normal Cost Rate	Projected Employer Normal Cost	Projected Unfunded Liability Payment	Projected Total Contributions
2026	$722,886,719	4.57%	$33,060,799	$103,420,823	$136,481,622
2027	748,187,754	4.25%	31,823,726	104,888,325	136,712,051

[1] In these projections, total payroll is assumed to increase by 3.5% each year.

History of employer contributions

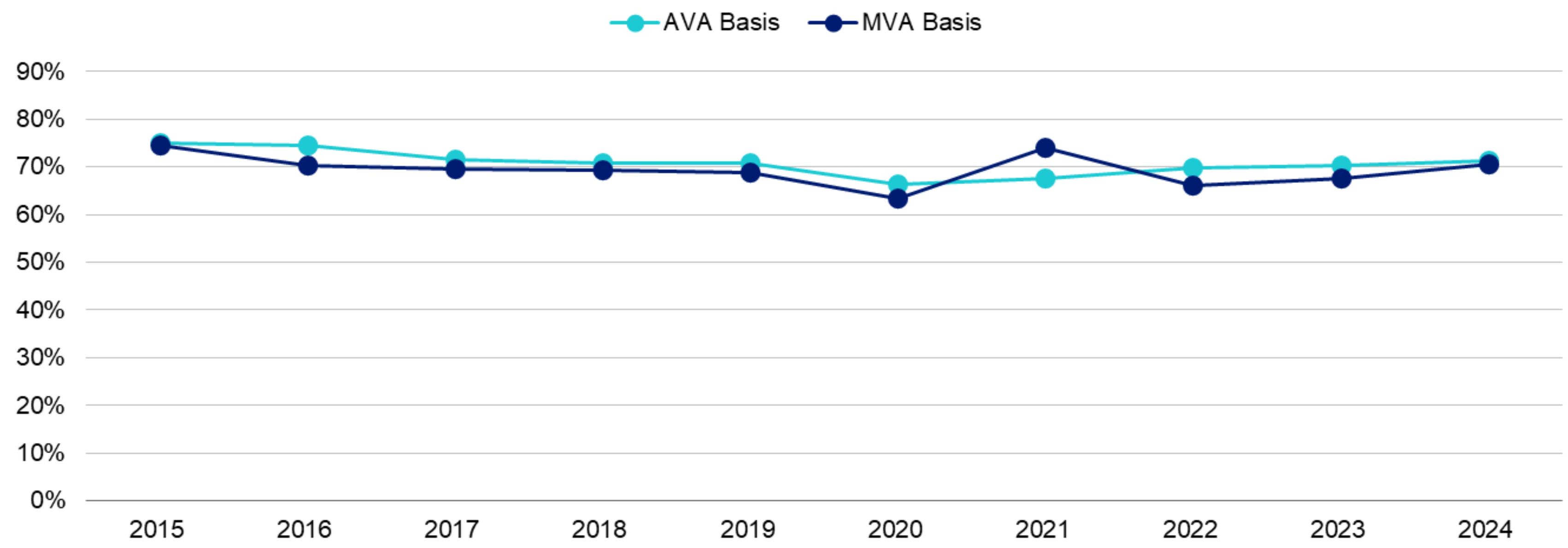
History of Employer Contributions: 2016 – 2025
Actuarially Determined Contribution (ADC) versus Actual Employer Contribution (AEC)

Year Ended June 30	ADC Amount[1]	ADC Percentage of Projected Payroll	AEC Amount	AEC Percentage of Projected Payroll	Percent Contributed
2016	$46,237,853	10.11%	$54,347,060	11.88%	117.54%
2017	48,503,358	10.14%	60,280,480	12.60%	124.28%
2018	52,065,397	10.67%	64,564,323	12.26%	124.01%
2019	62,984,742	11.57%	66,617,894	12.24%	105.77%
2020	78,943,914	14.01%	84,429,972	15.34%	106.95%
2021	83,876,570	14.51%	88,944,172	15.38%	106.04%
2022	119,967,769	20.73%	197,523,008	34.13%	164.65%
2023	116,038,400	19.21%	116,387,502	19.27%	100.30%
2024	121,873,370	18.66%	140,850,622	21.56%	115.57%
2025	131,346,935	18.81%	—	—	—

[1] Budgeted contribution amount from prior valuation report.

History of funded percentage

A history of the most recent years of funded percentage as of June 30th is shown below.



Low-Default-Risk Obligation Measure (LDROM)

In December 2021, the Actuarial Standards Board issued a revision of Actuarial Standard of Practice No. 4 (ASOP 4) Measuring Pension Obligations and Determining Pension Plan Costs or Contributions. One of the revisions to ASOP 4 requires the disclosure of a Low-Default-Risk Obligation Measure (LDROM) when performing a funding valuation. The LDROM presented in this report is calculated using the same methodology and assumptions used to determine the Actuarial Accrued Liability (AAL) used for funding, except for the discount rate. The LDROM is required to be calculated using "a discount rate…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."

The LDROM is a calculation assuming a plan's assets are invested in an all-bond portfolio, generally lowering expected long-term investment returns. The discount rate selected and used for this purpose is the Bond Buyer General Obligation 20-year Municipal Bond Index Rate, published at the end of each week. The last published rate in December of the measurement period, by The Bond Buyer (www.bondbuyer.com), is 3.93% for use effective June 30, 2024. This is the rate used to determine the discount rate for valuing reported public pension plan liabilities in accordance with Governmental Accounting Standards when plan assets are projected to be insufficient to make projected benefit payments, and the 20-year period reasonably approximates the duration of plan liabilities. The LDROM is not used to determine a plan's funded status or Actuarially Determined Contribution. The plan's expected return on assets, currently 7.00%, is used for these calculations.

As of June 30, 2024, the LDROM for the system is $5.61 billion. The difference between the plan's AAL of $3.77 billion and the LDROM, or $1.84 billion, can be thought of as the increase in the AAL if the entire portfolio were invested in low-default-risk securities. Alternatively, this difference could also be viewed as representing the expected savings from investing in the plan's diversified portfolio compared to investing only in low-default-risk securities.

ASOP 4 requires commentary to help the intended user understand the significance of the LDROM with respect to the funded status of the plan, plan contributions, and the security of participant benefits. In general, if plan assets were invested exclusively in low-default-risk securities, the funded status would be lower and the Actuarially Determined Contribution would be higher. While investing in a portfolio with low-default-risk securities may be more likely to reduce investment volatility and the volatility of employer contributions, it also may be more likely to result in higher employer contributions or lower benefits.

Risk

The actuarial valuation results are dependent on a single set of assumptions; however, there is a risk that emerging results may differ significantly as actual experience proves to be different from the current assumptions.

- Economic and Other Related Risks. Potential implications for the System due to the following economic effects (that were not reflected as of the valuation date) include:
  - Volatile financial markets and investment returns lower than assumed
  - High inflationary environment impacting salary increases and COLAs
- Investment Risk (the risk that returns will be different than expected)

  If the actual return on market value for the prior plan year were 1% different (either higher or lower), the unfunded actuarial liability would change by 2.24%, or about $24,217,772, disregarding the asset smoothing method.

  Since the System's assets are much larger than contributions, investment performance may create volatility in the actuarially determined contribution requirements. For example, for the prior plan year, if the actual return on market value were 1% different, the actuarially determined contribution would increase or decrease by $2,190,023, disregarding the asset smoothing method.

  The market value rate of return over the last 20 years has ranged from a low of -18.80% to a high of 25.71%.
- Longevity Risk (the risk that mortality experience will be different than expected)

  The actuarial valuation includes an expectation of future improvement in life expectancy. Emerging plan experience that does not match these expectations will result in either an increase or decrease in the actuarially determined contribution.
- Contribution Risk (the risk that actual contributions will be different from actuarially determined contribution)

  The System's funding policy requires payment of the actuarially determined contribution. As long as this policy is adhered to, contribution risk is negligible.
- Demographic Risk (the risk that participant experience will be different than assumed)

  Examples of this risk include:
  - Actual retirements occurring earlier or later than assumed. The value of retirement plan benefits is sensitive to the rate of benefit accruals and any early retirement subsidies that apply.
  - More or less active participant turnover than assumed.
  - Salary increases more or less than assumed.

Section 2: Actuarial Valuation Results

- There are external factors including legislative or financial reporting changes that could impact the System's funding and disclosure requirements. While we do not assume any changes in such external factors, it is important to understand that they could have significant consequences for the System.
- Actual Experience Over the Last Five Years

  Past experience can help demonstrate the sensitivity of key results to the System's actual experience. Over the past five years:

  – The non-investment gain(loss) for a year has ranged from a loss of $87.7 million to a gain of $9.4 million.

Plan Year Ended	Investment Gain/(Loss)	Administrative Expense Gain/(Loss)	All Other Gains and (Losses)
2020	−$23,939,803	N/A	$9,416,896
2021	52,180,733	N/A	−63,400,649
2022	−32,287,646	$43,700	−87,721,003
2023	−25,029,552	−81,118	−9,365,031
2024	−6,627,054	355,773	−51,907,133

  – The funded percentage on the actuarial value of assets has ranged from a low of 66.4% to a high of 75.1% over the past ten years.

Maturity Measures

- As pension plans mature, the cash needed to fulfill benefit obligations will increase over time. Therefore, cash flow projections and analysis should be performed to assure that the System's asset allocation is aligned to meet emerging pension liabilities.
- Currently the System has an in-pay-status member to active member ratio of 0.92.
- For the prior year, benefits and administrative expenses paid were $0.2 million less than contributions received. Plans where benefits and administrative expenses are close to contributions received may begin to have a need for a larger allocation to income generating assets, which can create a drag on investment return.

Actuarial balance sheet

An overview of the System's funding is given by an Actuarial Balance Sheet. In this approach, first the amount and timing of all future payments that will be made by the System for current members is determined. Then these payments are discounted at the valuation interest rate to the date of the valuation, thereby determining the present value, referred to as the "liability" of the System.

Second, this liability is compared to the assets. The "assets" for this purpose include the net amount of assets already accumulated by the System, the present value of future member contributions, the present value of future employer normal cost contributions, and the present value of future employer amortization payments for the unfunded actuarial accrued liability.

Actuarial Balance Sheet

Item	Year Ended June 30, 2024	Year Ended June 30, 2023
Liabilities		
Present value of benefits for retired members and beneficiaries	$2,379,469,801	$2,270,533,748
Present value of benefits for inactive former members	110,217,492	106,177,143
Present value of benefits for active members	2,111,780,767	1,964,922,284
Total liabilities	**$4,601,468,060**	**$4,341,633,175**
Current and future assets		
Total valuation value of assets	$2,690,347,928	$2,523,348,610
Present value of future contributions by members	654,468,680	484,494,333
Present value of future employer contributions for:		
• Entry age cost	174,937,860	268,068,630
• Unfunded actuarial accrued liability	1,081,713,592	1,065,721,602
Total of current and future assets	**$4,601,468,060**	**$4,341,633,175**

Section 3: Supplemental Information

Exhibit A: Table of plan demographics

Category	Year Ended June 30, 2024	Year Ended June 30, 2023	Change From Prior Year
Active members in valuation:			
• Number	8,819	8,611	2.4%
• Average age	45.1	45.1	0.0
• Average years of credited service	10.1	10.2	−0.1
• Total payroll	$663,978,640	$621,255,605	6.9%
• Average payroll	75,290	72,147	4.4%
• Total active vested members	5,541	5,487	1.0%
Inactive members:			
• Number of deferreds as reported by the System	869	844	3.0%
• Number of inactives as reported by the System	2,554	2,287	11.7%
Retired members:			
• Number in pay status	6,948	6,897	0.7%
• Average age	72.2	71.9	0.3
• Average monthly benefit	$2,091	$2,027	3.2%
Disabled members:			
• Number in pay status	383	392	−2.3%
• Average age	66.9	66.7	0.2
• Average monthly benefit	$1,511	$1,436	5.2%

Category	Year Ended June 30, 2024	Year Ended June 30, 2023	Change From Prior Year
Beneficiaries:			
• Number in pay status	811	769	5.5%
• Average age	71.6	71.2	0.4
• Average monthly benefit	$1,349	$1,286	4.9%

Exhibit B: Reconciliation of member data

	Active Members	Deferreds	Inactives	Disability Retirees	Retired Members	Beneficiaries	Total
Number as of July 1, 2023	**8,611**	**844**	**2,287**	**392**	**6,897**	**769**	**19,800**
New members	972	N/A	214	0	6	N/A	1,192
Inactives as reported by the System	-479	0	479	N/A	N/A	N/A	0
Deferreds as reported by the System	N/A	82	-82	N/A	N/A	N/A	0
Retirements	-219	-39	-11	N/A	269	N/A	0
New disabilities	-9	0	0	10	-1	N/A	0
Return to work from disability	0	N/A	N/A	0	N/A	N/A	0
Died with beneficiary	-3	0	0	-3	-57	63	0
Died without beneficiary	-15	-2	-3	-17	-166	-29	-232
Refund of contributions	-93	-9	-281	0	0	0	-383
Rehire	55	-7	-48	N/A	0	N/A	0
Certain period expired	N/A	N/A	0	0	0	-8	-8
Data adjustments	-1	0	-1	1	0	16	15
Number as of July 1, 2024	**8,819**	**869**	**2,554**	**383**	**6,948**	**811**	**20,384**

Exhibit C: Summary statement of income and expenses on a market value basis

Year Ended June 30, 2024 versus Year Ended June 30, 2023

Item	Income and Expenses	Assets as of YE 2024	Income and Expenses	Assets as of YE 2023
Net assets at market value at the beginning of the year		**$2,423,230,404**		**$2,276,645,124**
Contribution and other income:				
• Employer contributions	$140,850,622		$116,387,502	
• Member contributions	57,061,831		48,580,695	
• Administrative expenses	−2,696,572		−2,578,013	
• **Net contribution income**		**$195,215,881**		**$162,390,184**
• **Net other income and transfers in from other Funds**		**$1,212,398**		**$1,389,818**
Investment income:				
• Interest, dividends and other income	$26,101,998		$20,114,026	
• Asset appreciation	217,413,619		151,421,250	
• Investment fees	−3,134,793		−3,025,871	
• **Net investment income**		**$240,380,824**		**$168,509,405**
• **Total income available for benefits**		**$436,809,103**		**$332,289,407**
Benefit payments:				
• Retirement benefits	−$190,392,968		−$180,735,163	
• Refunds of contributions	−3,908,759		−3,911,594	
• Death claims	−1,222,448		−812,777	
• Transfers to other pension trust funds	−675,621		−244,593	
• **Net benefit payments**		**−$196,199,796**		**−$185,704,127**
Change in reserve for future benefits		**$240,609,307**		**$146,585,280**
Net assets at market value at the end of the year		**$2,663,839,711**		**$2,423,230,404**

Exhibit D: Summary statement of plan assets

Year Ended June 30, 2024 versus Year Ended June 30, 2023

Item	Investments	Assets as of YE 2024	Investments	Assets as of YE 2023
Cash and accounts receivable				
• Cash equivalents		$110,684,835		$36,074,483
• Total accounts receivable		54,533,553		43,342,216
• Prepaid expenses		70,965		70,506
• Capital assets, net of depreciation		63,208		274,203
Investments:				
• Fixed Income	$592,202,549		$110,493,827	
• Equities	70,370,433		69,417,330	
• Mutual and commingled funds	1,075,903,846		1,578,834,310	
• Real estate and venture capital	902,941,652		647,913,594	
• **Total investments at market value**		**$2,641,418,480**		**$2,406,659,061**
Total assets		**$2,806,771,041**		**$2,486,420,469**
Accounts payable				
• Total accounts payable		−$142,931,330		−$63,190,065
Net assets at market value		**$2,663,839,711**		**$2,423,230,404**
Net assets at actuarial value		**$2,690,347,928**		**$2,523,348,610**

Exhibit E: Development of the fund through June 30, 2024

Year Ended June 30	Employer Contributions	Member Contributions	Net Other Income	Net Investment Return[1]	Admin. Expenses	Benefit Payments[2]	Market Value of Assets at Year-End	Actuarial Value of Assets at Year-End	Actuarial Value as a Percent of Market Value
2015	$55,881,364	$33,296,248	$423,273	-$8,484,694	-$2,104,636	-$111,396,184	$1,624,861,239	$1,636,267,663	100.70%
2016	54,347,060	34,055,217	293,444	17,962,425	-1,775,647	-120,093,586	1,609,650,152	1,707,267,941	106.06%
2017	60,280,480	35,966,987	785,504	170,358,016	-2,119,044	-126,479,801	1,748,442,294	1,793,794,733	102.59%
2018	64,564,323	40,423,239	554,842	123,632,169	-2,026,240	-134,090,344	1,841,500,283	1,881,804,847	102.19%
2019	66,617,894	40,818,039	298,872	106,777,462	-2,246,008	-144,296,719	1,909,469,823	1,964,500,825	102.88%
2020	84,429,972	40,902,188	594,069	78,964,510	-2,268,390	-153,025,531	1,959,066,641	2,054,825,853	104.89%
2021	88,944,172	42,113,318	247,033	497,422,654	-2,280,512	-160,290,898	2,425,222,408	2,216,499,478	91.39%
2022	197,523,008	44,654,960	862,283	-215,473,911	-2,352,151	-173,791,473	2,276,645,124	2,405,795,708	105.67%
2023	116,387,502	48,580,695	1,389,818	168,509,405	-2,578,013	-185,704,127	2,423,230,404	2,523,348,610	104.13%
2024	140,850,622	57,061,831	1,212,398	240,380,824	-2,696,572	-196,199,796	2,663,839,711	2,690,347,928	101.00%

[1] On a market basis, net of investment fees
[2] Includes “other expenses”.

Section 4: Actuarial Valuation Basis

Exhibit F: Actuarial assumptions, methods and models

Rationale for assumptions

The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the Actuarial Experience Review dated September 18, 2023 (as prepared by Segal) and in the Economic Experience Study (as prepared by the Gabriel Roeder Smith actuarial consulting firm) adopted by the Vermont Pension Investment Commission during their meeting on July 25, 2023.

Inflation

2.30%

Investment return

7.00%

The investment return assumption is a long-term estimate derived from historical data, current and recent market expectations, and professional judgment. As part of the analysis, a building block approach was used that reflects inflation expectations and anticipated risk premiums for each of the portfolio's asset classes, as well as the System's target asset allocation.

Salary increases

Salary increases include an assumed inflation rate of 2.30%.

Service	Annual Rate of Salary Increase (%)
0	6.38
5	5.67
10	5.04
15	4.71
20	4.42
25	4.29
30	4.02
35	3.80
37+	3.76

Cost-of-living adjustments (COLA)

For active Group A, C, F, and G members who are first eligible for normal or unreduced early retirement on or after July 1, 2022, and for active Group D members who are first appointed or elected on or after July 1, 2022:

- **Group A**
  - Assumed to occur on January 1 following two years of retirement at the rate of 2.25% per annum. The January 1, 2025, COLA is expected to be 3.80%.
- **Group C**
  - Assumed to occur on January 1 following two years of retirement at the rate of 2.10% per annum. The January 1, 2025, COLA is expected to be 3.80%.
- **Group D**
  - Assumed to occur on January 1 following two years of retirement at the rate of 2.25% per annum on the first $75,000 of retirement benefits paid and 1.10% per annum on retirement benefits paid above $75,000. The January 1, 2025, COLA is expected to be 3.80% on the first $75,000 of retirement benefits paid and 1.90% on retirement benefits paid above $75,000.
- **Groups F/G**
  - Assumed to occur on January 1 following two years of retirement at the rate of 2.15% per annum. For members hired before July 1, 2008, assumed to begin two years after the attainment of age 62 for deferred retirements. For members hired on or after July 1, 2008, assumed to begin two years after the attainment of age 65 for deferred retirements. The January 1, 2025, COLA is expected to be 3.80%.

Cost-of-living adjustments (COLA) (continued)

For all other members:

- **Groups A/C/D**
  - Assumed to occur on January 1 following one year of retirement at the rate of 2.25% per annum. The January 1, 2025, COLA is expected to be 3.80%.
- **Groups E/F/G**
  - Assumed to occur on January 1 following one year of retirement at the rate of 1.25% per annum (beginning one year after the attainment of age 62 for deferred retirements) for members who retired on or before June 30, 2008. The January 1, 2025, COLA is expected to be 1.90%.
  - For members retiring on or after July 1, 2008, assumed to occur on January 1 following one year of retirement at the rate of 2.35% per annum. For members hired before July 1, 2008, assumed to begin one year after the attainment of age 62 for deferred retirements. For members hired on or after July 1, 2008, assumed to begin one year after the attainment of age 65 for deferred retirements. The January 1, 2025, COLA is expected to be 3.80%.

Mortality rates

Pre-retirement

- **Groups A/F**
  – PubG-2010 General Employee Amount-Weighted Table with generational projection using scale MP-2021
- **Groups C/G**:
  – PubS-2010 Public Safety Employee Amount-Weighted Table with generational projection using scale MP-2021
- **Group D**[1]:
  – PubG-2010 General Employee Amount-Weighted Above Median Table with generational projection using scale MP-2021

Healthy post-retirement - retirees

- **Groups A/F**
  – PubG-2010 General Healthy Retiree Amount-Weighted Table with credibility adjustments of 101% and 105% for the Male and Female tables, respectively, with generational projection using scale MP-2021
- **Groups C/G**:
  – PubS-2010 Public Safety Retiree Amount-Weighted Table with generational projection using scale MP-2021
- **Group D**:
  – PubG-2010 General Healthy Retiree Amount-Weighted Above Median Table with generational projection using scale MP-2021

Healthy post-retirement - beneficiaries

- **Groups A/F/C/G**
  – Pub-2010 Contingent Survivor Amount-Weighted Table with generational projection using scale MP-2021
- **Group D**:
  – Pub-2010 Contingent Survivor Amount-Weighted Above Median Table with generational projection using scale MP-2021

[1] 30% of deaths are assumed to be accidental.

Mortality rates (continued)

Disabled post-retirement

- **Groups A/F/D**
  - PubNS-2010 Non-Safety Disabled Retiree Amount-Weighted Table with generational projection using scale MP-2021
- **Groups C/G**:
  - PubS-2010 Safety Disabled Retiree Amount-Weighted Table with generational projection using Scale MP-2021

The tables with the generational projection to the ages of members as of the measurement date reasonably reflect the mortality experience of the System as of the measurement date. The mortality tables were then adjusted to future years using the generational projection to reflect future mortality improvement between the measurement date and those years.

Separation from service before retirement (due to withdrawal and disability)

Representative values of the assumed annual rates of withdrawal and disability are as follows:

Age	Groups A/D Ultimate Withdrawal Rate (%)[1] Male/Female
25	4.9066
30	3.9275
35	3.2826
40	3.0392
45	2.6920
50	2.2464
55	1.8346
60	3.9019

Service	Groups A/D Increase Factors[1] Male/Female
1	4.000
3	2.500
5	1.900
7	1.600
9	1.300

[1] The Ultimate Withdrawal Rates are multiplied by the Increase Factors during the first 10 years of service.

Separation from service before retirement (due to withdrawal and disability) (continued)

Service	Group C Withdrawal Rate (%) Male	Group C Withdrawal Rate (%) Female
0	10.800	21.600
1	6.480	12.960
2	5.400	10.800
3	3.456	6.912
4	3.456	6.912
5	3.456	6.912
6-19	3.240	6.480
20+	0.000	0.000

Separation from service before retirement (due to withdrawal and disability) (continued)

Age	Group F/G Ultimate Withdrawal Rate (%)[1] 0-10 Years of Service Male/Female	Group F/G Ultimate Withdrawal Rate (%)[2] 10-30 Years of Service Male/Female
25	6.3933	4.2200
30	5.1207	3.3800
35	4.2723	2.8200
40	3.9542	2.6100
45	3.5148	2.3200
50	2.9240	1.9300
55	2.4695	1.6300
60	2.4695	1.6300

Service	Group F/G Increase Factors[1] Male/Female
0	2.850
2	2.300
4	1.550
6	1.300
8	1.150

[1] The Ultimate Withdrawal Rates are multiplied by the Increase Factors during the first 10 years of service.
[2] The Ultimate Withdrawal Rates are 0.00% for all Group F members with 30+ years of service.

Separation from service before retirement (due to withdrawal and disability) (continued)

Age	Groups A/D/F/G Disability Rate (%)[1] Male/Female	Group C Disability Rate (%)[1] Male/Female
25	0.0095	0.0578
30	0.0122	0.0743
35	0.0163	0.0994
40	0.0244	0.1485
45	0.0399	0.2426
50	0.0633	0.4091
55	0.1117	0.6810
60	0.1803	N/A

[1] 20% of disability incidents are assumed to be accidental for Group C and 10% of disability incidents are assumed to be accidental for all other members.

Retirement rates

All Group A and D members are assumed to retire when first eligible.

Age	Group F/G Male	Group F/G Female
40-52	20.00%	10.00%
53	15.00	10.00
54	15.00	10.00
55	5.00	5.00
56	5.00	5.00
57	5.00	5.00
58	5.00	7.50
59	7.50	7.50
60	7.50	7.50
61	15.00	12.50
62	25.00	25.00
63	17.50	15.00
64	20.00	15.00
65	22.50	20.00
66	25.00	30.00
67	25.00	30.00
68	25.00	30.00
69	25.00	30.00
70+	100.00	100.00

Retirement rates (continued)

Age	Group C[1] Male/Female
50	50.00%
51	10.00
52	10.00
53	10.00
54	5.00
55	5.00
56	5.00
57+	100.00

Inactive members as reported by the system

- **Not Vested**: Valuation liability equals 100% of accumulated contributions.
- **Vested**: Valuation liability based on accrued benefit and 15% of members are assumed to retire from Early Retirement Age for each year until Normal Retirement Age, then 100% of members are assumed to retire at their Normal Retirement Age with a deferred vested benefit.

Deferred members as reported by the system

Valuation liability based on accrued benefit and 15% of members are assumed to retire from Early Retirement Age for each year until Normal Retirement Age, then 100% of members are assumed to retire at their Normal Retirement Age with a deferred vested benefit.

Unknown data for members

Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.

[1] Effective July 1, 2022, the mandatory retirement age for Group C members was increased from age 55 to age 57.

Future administrative expenses

0.45% of projected payroll.

Percent married

- **Groups A/D**
  - 75.4% of male members and 64.0% of female members are assumed to be married.
- ·**Group C**
  - 73.3% of male members and 61.0% of female members are assumed to be married.
- ·**Group F/G**
  - 71.4% of male members and 63.1% of female members are assumed to be married.

Age of spouse

Females are assumed to be three years younger than males.

Benefit election

- **Non-Group C**
  - All members are assumed to elect the single life annuity option.
- **Group C**:
  - Single members are assumed to elect single life annuity. Married members are assumed to elect the 70% joint & survivor option.

Actuarial value of assets

The amount of the assets for valuation purposes equals the preliminary asset value plus 20% of the difference between market and preliminary asset values. The preliminary asset value is equal to the previous year's asset value (for valuation purposes) adjusted for contributions less benefit payments and expenses plus expected investment income. If necessary, a further adjustment is made to ensure that the valuation assets are within 20% of the market value.

Actuarial cost method

Entry Age Actuarial Cost Method. Entry Age is the age at date of employment or, if date is unknown, current age minus years of service. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by salary, with Normal Cost determined using the plan of benefits applicable to each member.

Models

Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative and client requirements. Deterministic cost projections are based on a proprietary forecasting model. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the direction of the supervising actuary.

Justification for change in actuarial assumptions

There have been no changes in actuarial assumptions since the last valuation.

Exhibit G: Summary of plan provisions

This exhibit summarizes the major provisions of the System included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Effective date

July 1, 1972 (for consolidated system)

Creditable service

Service as a member plus purchased service.

Average final compensation (AFC)

- **Groups A/F/G**
  - Average annual compensation during highest 3 consecutive years.
- **Group C**
  - Average annual compensation during highest 2 consecutive years.
- **Group D**
  - For active members who retire on or after July 1, 2022, and do not meet one of the following two requirements: **(1)** at least age 57 with 5 or more years of service as a judge in Group D as of June 30, 2022; **(2)** Group D as of June 30, 2022, with 15 or more years of service:
    - Average annual compensation during final 2 years of service.
  - For all other members:
    - Annual compensation during final year of service.

Normal retirement eligibility

- **Group A**
  - Earlier of age 65 with 5 years of service or age 62 with 20 years of service.
- **Group C**
  - Age 55.
- **Group D**
  - For members first appointed or elected on or before June 30, 2022:
    - Age 62 with 5 years of service.
  - For members first appointed or elected on or after July 1, 2022:
    - Age 65 with 5 years of service.
- **Group F**
  - Age 62 or 30 years of service. For members hired after June 30, 2008, age 65 or a sum of age plus service greater than or equal to 87.
- **Group G**
  - Earlier of age 65 with 5 years of service or age 55 with 20 years of service. For members that transferred from Group F/F* to Group G:
    - Group F to Group G: Earliest of the following: Age 62 with 5 years of service; 30 years of service; or age 55 with 20 years of service.
    - Group F* to Group G: Earliest of the following: Age 65 with 5 years of service; a sum of age plus service greater than or equal to 87; or age 55 with 20 years of service.

Normal retirement amount

- **Group A**
  - 1.67% of AFC times service.
- **Group C**
  - 2.50% of AFC times service, up to a maximum benefit cap of 50% of AFC. The maximum benefit cap is increased by 1.5% of AFC for each year worked after attaining the later of age 50 and 20 years of benefit service, applied prospectively to service worked after July 1, 2022.
- **Group D**
  - For active members who retire on or after July 1, 2022, and do not meet one of the following two requirements: **(1)** at least age 57 with 5 or more years of service as a judge in Group D as of June 30, 2022; **(2)** Group D as of June 30, 2022, with 15 or more years of service:
    - 3.33% of AFC times service, up to a maximum benefit cap of 80% of AFC.
  - For all other members:
    - 3.33% of AFC times service, up to a maximum benefit cap of 100% of AFC.
- **Group F**
  - 1.25% of AFC times service prior to January 1, 1991, plus 1.67% of AFC times service after 1990, up to a maximum benefit cap of 50% of AFC. For members hired on or after July 1, 2008, the maximum benefit cap is 60% of AFC.
- **Group G**
  - 2.50% of AFC times Group G service, up to a maximum benefit cap of 50% of AFC. For members that transferred from Group F/F* to Group G:
    - Group F service credit after January 1, 1991, is calculated at 1.67% of AFC, to a combined maximum benefit cap of 50% of AFC.
    - Group F* service credit for members hired on or after July 1, 2008, is calculated at 1.67% of AFC, to a combined maximum benefit cap of 60% of AFC.

Early retirement eligibility

- **Groups A/D**
  - Age 55 with 5 years of service or 30 years of service.
- **Group C**
  - Age 50 with 20 years of service.
- **Groups F/G**
  - Age 55 with 5 years of service.

Early retirement amount

- **Group A**
  - Actuarial equivalent reduction of normal retirement allowance. For members with 30 years of service, there is no reduction.
- **Group C**
  - Same as normal retirement allowance.
- **Group D**
  - For members first appointed or elected on or before June 30, 2022:
    - Normal allowance reduced by 3% for each year commencement precedes age 62.
  - For members first appointed or elected on or after July 1, 2022:
    - Normal allowance reduced by 3% for each year commencement precedes age 65.

Early retirement amount (continued)

- **Group F**
  - For members hired prior to July 1, 2008, no reduction if 30 years of service; otherwise, normal allowance reduced by 6% for each year commencement precedes age 62. For members hired on or after July 1, 2008, no reduction if combination of years and service equal 87; otherwise, reduced from age 65 based on the following table:

Years of Service	Reduction in Benefit
35	One-eighth of 1% per month
30	One-fourth of 1% per month
25	One-third of 1% per month
20	Five-twelfths of 1% per month
Less than 20	Five-ninths of 1% per month

- **Group G**
  - Actuarial equivalent reduction of normal retirement allowance. For members that transferred from Group F/F* to Group G:
    - Group F to Group G: The lesser of: normal retirement allowance reduced by 6% per year under 20 years of service or actuarial equivalent reduction of normal retirement allowance.
    - Group F* to Group G: The lesser of: normal retirement allowance reduced by 6.67% per year under 20 years of service or actuarial equivalent reduction of normal retirement allowance.

Vesting

- **All groups**
  - 5 years of service.

Ordinary disability eligibility

- **All groups**
  - 5 years of service and incapacitated, not work related, for performance of duty.

Ordinary disability amount

- **All groups**
  - Immediate allowance based on service to date of disability. Benefit is the greatest of 25% of AFC and unreduced accrued benefit as of date of disability.

Accidental disability eligibility

- **All groups**
  - Incapacitated because of work related accident.

Accidental disability amount

- **Groups A/D/F/G**
  - Immediate allowance equal to the greater of 25% of AFC and unreduced accrued benefit as of date of disability.
- **Group C**
  - Immediate allowance equal to 50% of AFC with additional 10% of AFC for each dependent child (up to 30%).

Ordinary death eligibility

- **Groups A/F/G**
  - Death after eligibility for early retirement or 10 years of service.
- **Groups C/D**
  - Death after normal retirement age or 10 years of service.

Ordinary death amount

- **Groups A/D/F/G**
  - Maximum of reduced allowance under 100% survivor option and disability allowance under 100% disability survivor option, commencing immediately.
- **Group C**
  - 70% of the allowance that would have been payable to the member plus additional allowance equal to 10% of AFC for each dependent child (up to 30%).

Accidental death eligibility

- **Groups A/C/D/F/G**
  - Death because of work related accident.

Accidental death amount

- **Groups A/D/F/G**
  - Allowance equal to 25% of AFC payable to spouse.
- **Group C**
  - Allowance equal to 35% of AFC payable to spouse plus 10% for each dependent child (up to 30%).

Post-retirement adjustments

For active Group A, C, F, and G members who are first eligible for normal or unreduced early retirement on or after July 1, 2022, and for active Group D members who are first appointed or elected on or after July 1, 2022:

- **Group A**
  - Allowances in payment for at least two years, increased on each January 1 by the net percentage increase in Consumer Price Index (CPI). The maximum net percentage increase in CPI is capped at 5%. If the net percentage increase in CPI is less than 1%, members will not receive an increase.
- **Group C**
  - Allowances in payment for at least two years, increased on each January 1 by the net percentage increase in CPI. The maximum net percentage increase in CPI is capped at 4%. If the net percentage increase in CPI is less than 1%, members will not receive an increase.
- **Group D**
  - Allowances in payment for at least two years, increased on each January 1 by the net percentage increase in CPI on the first $75,000 of retirement benefits paid and half of the net percentage increase in CPI on retirement benefits paid above $75,000. The maximum net percentage increase in CPI is capped at 5%. If the net percentage increase in CPI is less than 1%, members will not receive an increase.
- **Groups F/G**
  - Allowances in payment for at least two years, increased on each January 1 by the net percentage increase in CPI. The maximum net percentage increase in CPI is capped at 4%. If the net percentage increase in CPI is less than 0%, members will not receive an increase.

Post-retirement adjustments (continued)

For all other members:

- **Groups A/C/D**
  - Allowances in payment for at least one year, increased on each January 1 by the net percentage increase in CPI. The maximum net percentage increase in CPI is capped at 5%. If the net percentage increase in CPI is less than 1%, members will not receive an increase.
- **Groups E/F/G**
  - For members who retired on or before June 30, 2008, allowances in payment for at least one year, increased on each January 1 by half of the net percentage increase in CPI. The maximum net percentage increase in CPI is capped at 5%. If the net percentage increase in CPI is between 0-1%, members will receive a 1% increase. If the net percentage increase in CPI is less than 0%, members will not receive an increase. A Group F member in receipt of an early retirement allowance shall not receive a post-retirement adjustment until such time as the member has attained normal retirement eligibility.
  - For members who retired on or after July 1, 2008, allowances in payment for at least one year, increased on each January 1 by the net percentage increase in CPI. The maximum net percentage increase in CPI is capped at 5%. If the net percentage increase in CPI is between 0-1%, members will receive a 1% increase. If the net percentage increase in CPI is less than 0%, members will not receive an increase. A Group F member in receipt of an early retirement allowance shall not receive a post-retirement adjustment until such time as the member has attained normal retirement eligibility.

Optional benefit and death after retirement

Lifetime allowance or actuarially equivalent allowance with survivor benefit as elected by member upon retirement. Upon death of a Group C member, an allowance equal to 70% of the member's allowance is continued to the surviving spouse.

Refund of contributions

Upon termination, if the member so elects, or if no other benefit is payable, the member's accumulated contributions with interest are refunded.

Member contribution rates

Member contributions as a percentage of earnable compensation are described in the table below:

Group	Salary Percentile	FY24	FY25	FY26	FY27+
Group A					
	All	6.65%	6.65%	6.65%	6.65%
Group C					
	All	9.53%	10.03%	10.03%	10.03%
Group D					
	<25th	6.65%	6.65%	6.65%	6.65%
	25th-50th	7.65%	8.15%	8.15%	8.15%
	50th-75th	7.65%	8.15%	8.65%	8.65%
	75th+	7.65%	8.15%	8.65%	9.15%
Group F					
	<25th	6.65%	6.65%	6.65%	6.65%
	25th-50th	7.65%	8.15%	8.15%	8.15%
	50th-75th	7.65%	8.15%	8.65%	8.65%
	75th+	7.65%	8.15%	8.65%	9.15%
Group G					
	<25th	11.33%	11.33%	11.33%	11.33%
	25th-50th	12.33%	12.83%	12.83%	12.83%
	50th-75th	12.33%	12.83%	13.33%	13.33%
	75th+	12.33%	12.83%	13.33%	13.83%

Changes in plan provisions

Aside from the future contribution rate increases shown above, there were no other changes in plan provisions since the prior valuation.

Section 5: Additional Summary Tables of Member Data

Table 1A: Members in active service as of June 30, 2024, by age, years of service, and average payroll – all employee groups

Years of Credited Service

Age	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 & over
Under 25	257	254	3	—	—	—	—	—	—
	$49,956	$49,756	$66,894	—	—	—	—	—	—
25 - 29	753	660	92	1	—	—	—	—	—
	$58,761	$55,788	$80,096	$57,629	—	—	—	—	—
30 - 34	1,114	613	416	83	2	—	—	—	—
	$67,660	$58,391	$78,028	$83,756	$84,034	—	—	—	—
35 - 39	1,183	526	330	266	61	—	—	—	—
	$71,741	$59,040	$76,656	$87,224	$87,159	—	—	—	—
40 - 44	1,131	364	303	230	186	47	1	—	—
	$76,819	$58,359	$78,469	$86,939	$95,071	$87,484	$72,788	—	—
45 - 49	1,137	303	220	204	178	191	41	—	—
	$83,067	$62,657	$78,342	$86,098	$94,290	$102,706	$103,949	—	—
50 - 54	1,121	256	207	161	183	175	105	31	3
	$82,072	$58,889	$78,291	$84,738	$93,217	$92,248	$102,209	$93,669	$80,120
55 - 59	1,003	183	179	157	135	146	105	57	41
	$81,756	$60,231	$76,967	$83,379	$88,242	$87,849	$93,647	$99,964	$93,700
60 - 64	756	127	138	122	96	98	71	34	70
	$80,914	$60,174	$76,615	$80,713	$86,126	$87,846	$95,505	$91,382	$90,631
65 & over	364	38	72	74	42	46	34	8	50
	$82,819	$58,977	$77,409	$84,868	$80,872	$89,291	$86,996	$97,144	$96,242
Total	**8,819**	**3,324**	**1,960**	**1,298**	**883**	**703**	**357**	**130**	**164**
	$75,290	**$57,917**	**$77,789**	**$85,232**	**$91,266**	**$93,050**	**$97,026**	**$96,045**	**$92,916**

Table 1B: Members in active service as of June 30, 2024, by age, years of service, and average payroll – law enforcement personnel – Group C

Years of Credited Service

Age	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 & over
Under 25	17	17	—	—	—	—	—	—	—
	$62,373	$62,373	—	—	—	—	—	—	—
25 - 29	57	46	11	—	—	—	—	—	—
	$97,978	$94,685	$111,747	—	—	—	—	—	—
30 - 34	78	26	43	9	—	—	—	—	—
	$103,026	$85,194	$110,877	$117,031	—	—	—	—	—
35 - 39	85	16	18	43	8	—	—	—	—
	$102,421	$70,158	$103,285	$110,867	$119,602	—	—	—	—
40 - 44	55	7	2	13	31	2	—	—	—
	$115,150	$70,160	$44,671	$130,394	$122,477	$130,443	—	—	—
45 - 49	71	4	3	9	14	33	8	—	—
	$132,086	$87,958	$86,356	$116,415	$133,870	$140,355	$151,701	—	—
50 - 54	37	2	3	5	10	9	7	1	—
	$111,839	$81,295	$98,113	$90,162	$103,064	$133,800	$127,766	$101,089	—
55 - 59	6	—	—	—	1	4	1	—	—
	$119,302	—	—	—	$145,479	$127,748	$59,339	—	—
60 - 64	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
65 & over	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
Total	**406**	**118**	**80**	**79**	**64**	**48**	**16**	**1**	**—**
	$108,256	**$82,703**	**$106,235**	**$114,104**	**$121,936**	**$137,662**	**$135,457**	**$101,089**	**—**

Table 1C: Members in active service as of June 30, 2024, by age, years of service, and average payroll – judges – Group D

Years of Credited Service

Age	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 & over
Under 25	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
25 - 29	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
30 - 34	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
35 - 39	2	—	—	2	—	—	—	—	—
	$169,197	—	—	$169,197	—	—	—	—	—
40 - 44	7	3	3	1	—	—	—	—	—
	$124,701	$68,398	$174,452	$144,357	—	—	—	—	—
45 - 49	4	1	1	1	1	—	—	—	—
	$153,802	$182,235	$99,178	$151,558	$182,235	—	—	—	—
50 - 54	3	—	2	1	—	—	—	—	—
	$153,481	—	$139,104	$182,235	—	—	—	—	—
55 - 59	11	1	2	5	2	—	1	—	—
	$170,967	$58,281	$182,235	$182,235	$182,235	—	$182,235	—	—
60 - 64	11	2	2	2	4	1	—	—	—
	$157,788	$122,968	$163,637	$182,235	$151,574	$191,686	—	—	—
65 & over	12	1	3	4	1	2	1	—	—
	$157,212	$90,806	$182,235	$120,644	$182,235	$196,266	$191,686	—	—
Total	**50**	**8**	**13**	**16**	**8**	**3**	**2**	**—**	**—**
	$155,796	**$97,806**	**$164,553**	**$160,923**	**$166,905**	**$194,739**	**$186,961**	**—**	**—**

Table 1D: Members in active service as of June 30, 2024, by age, years of service, and average payroll – general employees – Group F

Years of Credited Service

Age	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 & over
Under 25	193	190	3	—	—	—	—	—	—
	$48,177	$47,881	$66,894	—	—	—	—	—	—
25 - 29	641	563	77	1	—	—	—	—	—
	$54,983	$52,274	$74,761	$57,629	—	—	—	—	—
30 - 34	935	528	339	67	1	—	—	—	—
	$63,646	$56,405	$72,017	$77,980	$88,554	—	—	—	—
35 - 39	1,019	472	295	199	53	—	—	—	—
	$68,748	$58,046	$74,722	$81,679	$82,262	—	—	—	—
40 - 44	1,024	339	284	203	152	45	1	—	—
	$73,759	$57,196	$76,845	$83,021	$89,074	$85,575	$72,788	—	—
45 - 49	1,016	281	207	180	159	156	33	—	—
	$79,393	$62,475	$77,157	$83,160	$90,275	$94,651	$92,372	—	—
50 - 54	1,031	243	198	142	160	158	97	30	3
	$80,134	$58,211	$77,490	$83,308	$91,401	$88,116	$100,108	$93,421	$80,120
55 - 59	958	176	174	147	127	136	100	57	41
	$80,248	$60,408	$75,979	$79,743	$85,434	$85,696	$92,590	$99,964	$93,700
60 - 64	731	120	135	114	91	96	71	34	70
	$79,570	$59,786	$75,037	$77,799	$82,815	$85,671	$95,505	$91,382	$90,631
65 & over	348	37	68	69	40	44	32	8	50
	$79,763	$58,117	$72,921	$82,059	$75,859	$84,429	$82,750	$97,144	$96,242
Total	**7,896**	**2,949**	**1,780**	**1,122**	**783**	**635**	**334**	**129**	**164**
	$72,913	**$56,546**	**$75,203**	**$81,499**	**$87,339**	**$88,398**	**$94,370**	**$96,006**	**$92,916**

Table 1E: Members in active service as of June 30, 2024, by age, years of service, and average payroll – department of corrections/mental health employees – Group G

Years of Credited Service

Age	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 & over
Under 25	47	47	—	—	—	—	—	—	—
	$52,772	$52,772	—	—	—	—	—	—	—
25 - 29	55	51	4	—	—	—	—	—	—
	$62,144	$59,507	$95,767	—	—	—	—	—	—
30 - 34	101	59	34	7	1	—	—	—	—
	$77,503	$64,348	$96,411	$96,266	$79,514	—	—	—	—
35 - 39	77	38	17	22	—	—	—	—	—
	$74,950	$66,709	$82,016	$83,723	—	—	—	—	—
40 - 44	45	15	14	13	3	—	—	—	—
	$92,161	$77,146	$95,688	$100,241	$115,759	—	—	—	—
45 - 49	46	17	9	14	4	2	—	—	—
	$82,393	$52,685	$100,623	$99,702	$93,373	$109,747	—	—	—
50 - 54	50	11	4	13	13	8	1	—	—
	$95,726	$69,782	$72,680	$90,771	$108,004	$127,103	$127,083	—	—
55 - 59	28	6	3	5	5	6	3	—	—
	$90,243	$55,352	$64,122	$91,422	$110,522	$110,040	$110,784	—	—
60 - 64	14	5	1	6	1	1	—	—	—
	$90,667	$44,383	$115,601	$102,220	$125,644	$192,854	—	—	—
65 & over	4	—	1	1	1	—	1	—	—
	$125,491	—	$68,141	$135,634	$180,016	—	$118,174	—	—
Total	**467**	**249**	**87**	**81**	**28**	**17**	**5**	**—**	**—**
	$78,199	**$61,129**	**$91,579**	**$93,837**	**$109,379**	**$122,907**	**$115,522**	**—**	**—**

Table 2A: Summary of retired member and beneficiary data by attained age – all employee groups

Allowance Level	Service Pensioner Count	Service Pensioner Annual Allowance Amount	Disability Pensioner Count	Disability Pensioner Annual Allowance Amount	Beneficiary Count	Beneficiary Annual Allowance Amount
≤ 35	0	$0	1	$38,892	68	$573,653
36	0	0	0	0	1	6,467
37	0	0	0	0	0	0
38	0	0	0	0	2	16,587
39	0	0	0	0	0	0
40	0	0	0	0	1	21,486
41	0	0	3	93,361	0	0
42	0	0	2	106,013	0	0
43	0	0	0	0	0	0
44	0	0	1	10,036	1	28,033
45	0	0	0	0	3	29,020
46	0	0	1	15,874	2	20,531
47	1	19,168	3	75,449	0	0
48	1	23,246	5	122,656	0	0
49	0	0	3	90,281	1	9,649
50	11	654,945	1	9,093	3	27,846
51	22	1,040,512	3	65,387	2	28,811
52	24	1,126,936	4	142,522	3	36,580
53	36	1,971,786	4	113,494	2	41,457
54	47	2,084,525	7	122,798	6	134,112
55	58	2,555,230	3	49,642	6	106,807
56	72	2,984,997	12	298,013	3	54,981
57	64	2,731,950	6	155,925	3	42,695
58	88	3,265,592	11	329,366	5	70,705
59	90	2,949,969	14	296,669	3	50,863
60	109	3,465,121	18	333,440	7	129,282
61	110	3,625,116	14	252,034	5	50,261
62	157	4,335,930	20	364,326	11	184,444
63	196	5,237,032	13	272,548	10	193,699
64	207	5,298,078	14	267,050	11	150,014
65	242	5,447,945	11	158,732	13	237,266

Table 2A: Summary of retired member and beneficiary data by attained age – all employee groups (continued)

Allowance Level	Service Pensioner Count	Service Pensioner Annual Allowance Amount	Disability Pensioner Count	Disability Pensioner Annual Allowance Amount	Beneficiary Count	Beneficiary Annual Allowance Amount
66	279	$7,088,490	18	$333,716	23	$429,654
67	320	8,214,539	14	228,707	11	184,481
68	315	6,995,322	10	200,946	25	470,489
69	330	8,319,938	18	277,286	25	425,176
70	357	8,491,835	13	123,034	20	374,999
71	329	8,608,619	16	256,533	26	486,784
72	344	8,133,923	20	263,361	18	327,899
73	336	8,255,288	13	201,720	23	358,030
74	338	7,970,344	14	212,058	25	501,762
75	316	7,517,979	10	173,176	20	291,654
76	316	7,090,216	8	93,260	28	612,588
77	295	7,407,793	8	211,111	37	721,591
78	198	4,702,799	8	116,761	24	382,455
79	191	4,115,731	7	96,713	29	516,203
80	172	3,724,543	4	62,943	32	460,170
81	171	3,903,718	5	64,272	28	472,929
82	138	3,217,529	5	44,057	34	559,995
83	111	2,025,778	5	48,564	31	462,462
84	96	1,829,773	4	50,907	21	339,020
85	73	1,183,867	2	12,190	20	329,495
86	65	1,220,814	2	48,820	13	162,386
87	52	1,086,248	1	4,431	16	316,034
88	63	1,010,313	0	0	23	417,418
89	49	988,029	2	22,336	15	220,866
90	26	437,137	0	0	15	218,551
91	41	716,415	1	8,661	11	131,672
92	25	366,581	0	0	9	105,062
93	21	296,708	1	5,261	11	141,380
94	14	183,214	0	0	9	268,425
≥ 95	32	398,683	0	0	17	193,953
Total	**6,948**	**$174,320,247**	**383**	**$6,944,425**	**811**	**$13,128,832**

Table 2B: Summary of retired member and beneficiary data by attained age – general employees – Group A

Allowance Level	Service Pensioner Count	Service Pensioner Annual Allowance Amount	Disability Pensioner Count	Disability Pensioner Annual Allowance Amount	Beneficiary Count	Beneficiary Annual Allowance Amount
≤ 35	0	$0	0	$0	0	$0
36	0	0	0	0	0	0
37	0	0	0	0	0	0
38	0	0	0	0	0	0
39	0	0	0	0	0	0
40	0	0	0	0	0	0
41	0	0	0	0	0	0
42	0	0	0	0	0	0
43	0	0	0	0	0	0
44	0	0	0	0	0	0
45	0	0	0	0	0	0
46	0	0	0	0	0	0
47	0	0	0	0	0	0
48	0	0	0	0	0	0
49	0	0	0	0	0	0
50	0	0	0	0	0	0
51	0	0	0	0	0	0
52	0	0	0	0	0	0
53	0	0	0	0	0	0
54	0	0	0	0	0	0
55	0	0	0	0	0	0
56	0	0	0	0	0	0
57	0	0	0	0	0	0
58	0	0	0	0	0	0
59	0	0	0	0	0	0
60	2	107,164	0	0	0	0
61	0	0	0	0	0	0
62	1	10,134	0	0	0	0
63	0	0	0	0	0	0
64	0	0	0	0	0	0
65	0	0	0	0	0	0

Table 2B: Summary of retired member and beneficiary data by attained age – general employees – Group A (continued)

Allowance Level	Service Pensioner Count	Service Pensioner Annual Allowance Amount	Disability Pensioner Count	Disability Pensioner Annual Allowance Amount	Beneficiary Count	Beneficiary Annual Allowance Amount
66	2	$76,290	0	$0	2	$28,148
67	0	0	0	0	0	0
68	0	0	0	0	1	22,131
69	2	64,362	1	6,520	0	0
70	0	0	1	2,459	0	0
71	2	86,401	0	0	1	10,795
72	5	127,695	1	9,871	0	0
73	3	90,131	0	0	1	16,044
74	3	91,827	0	0	1	50,766
75	3	94,921	1	24,796	1	13,123
76	4	123,857	0	0	1	27,394
77	1	49,680	0	0	2	65,772
78	4	149,010	0	0	0	0
79	0	0	0	0	3	27,652
80	3	106,292	0	0	2	21,331
81	0	0	0	0	1	18,398
82	5	195,255	0	0	2	29,982
83	4	121,839	0	0	5	59,065
84	2	52,846	0	0	0	0
85	3	103,895	0	0	0	0
86	3	91,953	1	14,870	0	0
87	5	121,857	0	0	0	0
88	1	21,326	0	0	1	24,145
89	7	253,337	0	0	0	0
90	3	77,578	0	0	0	0
91	2	52,456	0	0	0	0
92	1	17,694	0	0	2	25,853
93	0	0	0	0	1	5,881
94	2	19,509	0	0	0	0
≥ 95	3	57,274	0	0	3	23,848
Total	**76**	**$2,364,581**	**5**	**$58,517**	**30**	**$470,327**

Table 2C: Summary of retired member and beneficiary data by attained age – state police and motor vehicle inspectors – Group B

Allowance Level	Service Pensioner Count	Service Pensioner Annual Allowance Amount	Disability Pensioner Count	Disability Pensioner Annual Allowance Amount	Beneficiary Count	Beneficiary Annual Allowance Amount
≤ 35	0	$0	0	$0	0	$0
36	0	0	0	0	0	0
37	0	0	0	0	0	0
38	0	0	0	0	0	0
39	0	0	0	0	0	0
40	0	0	0	0	0	0
41	0	0	0	0	0	0
42	0	0	0	0	0	0
43	0	0	0	0	0	0
44	0	0	0	0	0	0
45	0	0	0	0	0	0
46	0	0	0	0	0	0
47	0	0	0	0	0	0
48	0	0	0	0	0	0
49	0	0	0	0	0	0
50	0	0	0	0	0	0
51	0	0	0	0	0	0
52	0	0	0	0	0	0
53	0	0	0	0	0	0
54	0	0	0	0	0	0
55	0	0	0	0	0	0
56	0	0	0	0	0	0
57	0	0	0	0	0	0
58	0	0	0	0	0	0
59	1	8,248	0	0	1	23,670
60	0	0	0	0	0	0
61	0	0	0	0	0	0
62	0	0	0	0	0	0
63	0	0	0	0	0	0
64	0	0	0	0	0	0
65	0	0	0	0	0	0

Table 2C: Summary of retired member and beneficiary data by attained age – state police and motor vehicle inspectors – Group B (continued)

Allowance Level	Service Pensioner Count	Service Pensioner Annual Allowance Amount	Disability Pensioner Count	Disability Pensioner Annual Allowance Amount	Beneficiary Count	Beneficiary Annual Allowance Amount
66	1	$13,370	0	$0	0	$0
67	0	0	0	0	0	0
68	1	10,580	0	0	0	0
69	0	0	0	0	0	0
70	1	11,486	0	0	0	0
71	0	0	0	0	0	0
72	0	0	0	0	0	0
73	1	5,845	0	0	0	0
74	0	0	0	0	0	0
75	0	0	1	24,610	0	0
76	0	0	0	0	1	15,471
77	1	45,002	0	0	0	0
78	0	0	0	0	0	0
79	0	0	0	0	0	0
80	0	0	1	25,689	0	0
81	1	10,602	0	0	1	20,321
82	0	0	0	0	0	0
83	0	0	0	0	0	0
84	0	0	0	0	0	0
85	0	0	0	0	0	0
86	0	0	0	0	0	0
87	0	0	0	0	0	0
88	0	0	0	0	0	0
89	0	0	0	0	0	0
90	0	0	0	0	0	0
91	0	0	0	0	0	0
92	0	0	0	0	0	0
93	0	0	0	0	0	0
94	0	0	0	0	0	0
≥ 95	0	0	0	0	0	0
Total	**7**	**$105,133**	**2**	**$50,299**	**3**	**$59,462**

Table 2D: Summary of retired member and beneficiary data by attained age – law enforcement personnel – Group C

Allowance Level	Service Pensioner Count	Service Pensioner Annual Allowance Amount	Disability Pensioner Count	Disability Pensioner Annual Allowance Amount	Beneficiary Count	Beneficiary Annual Allowance Amount
≤ 35	0	$0	1	$38,892	28	$297,575
36	0	0	0	0	0	0
37	0	0	0	0	0	0
38	0	0	0	0	0	0
39	0	0	0	0	0	0
40	0	0	0	0	0	0
41	0	0	2	77,100	0	0
42	0	0	2	106,013	0	0
43	0	0	0	0	0	0
44	0	0	0	0	0	0
45	0	0	0	0	0	0
46	0	0	0	0	0	0
47	1	19,168	1	52,626	0	0
48	1	23,246	2	94,252	0	0
49	0	0	1	56,210	0	0
50	7	508,577	0	0	0	0
51	10	574,823	1	36,745	0	0
52	11	655,572	3	131,513	1	14,458
53	16	1,117,120	2	80,994	0	0
54	20	1,142,568	0	0	1	42,743
55	23	1,214,395	0	0	1	15,226
56	29	1,455,310	2	75,956	1	34,321
57	20	1,166,788	1	53,355	0	0
58	22	1,216,753	3	163,149	0	0
59	22	968,873	1	58,191	0	0
60	18	846,607	1	19,059	1	27,918
61	15	943,181	1	30,928	0	0
62	14	455,202	0	0	1	35,538
63	7	318,832	2	93,259	0	0
64	19	846,577	0	0	0	0
65	14	574,888	0	0	0	0

Table 2D: Summary of retired member and beneficiary data by attained age – law enforcement personnel – Group C (continued)

Allowance Level	Service Pensioner Count	Service Pensioner Annual Allowance Amount	Disability Pensioner Count	Disability Pensioner Annual Allowance Amount	Beneficiary Count	Beneficiary Annual Allowance Amount
66	15	$872,949	1	$41,865	1	$24,243
67	20	1,082,060	1	13,315	1	33,345
68	15	698,623	0	0	1	42,534
69	18	959,615	0	0	1	26,917
70	7	344,786	0	0	1	36,930
71	13	690,748	2	87,546	2	50,959
72	9	429,175	0	0	1	13,963
73	4	224,805	0	0	1	36,032
74	13	644,718	1	41,733	1	19,294
75	4	171,146	1	36,678	1	28,770
76	8	380,573	0	0	3	127,067
77	11	612,235	3	141,395	5	196,419
78	8	407,233	1	50,832	2	64,422
79	1	32,555	1	40,896	1	42,136
80	4	174,208	0	0	2	71,977
81	8	421,675	0	0	2	90,931
82	6	332,770	0	0	3	99,305
83	4	169,617	0	0	2	68,217
84	2	105,521	0	0	1	44,529
85	0	0	0	0	1	16,895
86	2	105,264	1	33,950	1	21,235
87	2	115,721	0	0	1	34,929
88	1	37,126	0	0	3	132,676
89	2	120,466	0	0	1	23,646
90	0	0	0	0	2	67,364
91	0	0	0	0	2	67,605
92	1	49,520	0	0	0	0
93	2	79,938	0	0	1	36,945
94	0	0	0	0	2	53,710
≥ 95	1	50,953	0	0	1	19,238
Total	**450**	**$23,362,481**	**38**	**$1,656,453**	**81**	**$2,060,012**

Table 2E: Summary of retired member and beneficiary data by attained age – judges – Group D

Allowance Level	Service Pensioner Count	Service Pensioner Annual Allowance Amount	Disability Pensioner Count	Disability Pensioner Annual Allowance Amount	Beneficiary Count	Beneficiary Annual Allowance Amount
≤ 35	0	$0	0	$0	0	$0
36	0	0	0	0	0	0
37	0	0	0	0	0	0
38	0	0	0	0	0	0
39	0	0	0	0	0	0
40	0	0	0	0	0	0
41	0	0	0	0	0	0
42	0	0	0	0	0	0
43	0	0	0	0	0	0
44	0	0	0	0	0	0
45	0	0	0	0	0	0
46	0	0	0	0	0	0
47	0	0	0	0	0	0
48	0	0	0	0	0	0
49	0	0	0	0	0	0
50	0	0	0	0	0	0
51	0	0	0	0	0	0
52	0	0	0	0	0	0
53	0	0	0	0	0	0
54	1	10,688	0	0	0	0
55	0	0	0	0	0	0
56	0	0	0	0	0	0
57	0	0	0	0	0	0
58	0	0	0	0	0	0
59	0	0	0	0	0	0
60	0	0	0	0	1	19,929
61	0	0	0	0	0	0
62	0	0	0	0	0	0
63	1	128,215	0	0	0	0
64	1	103,602	0	0	0	0
65	1	60,752	0	0	0	0

Table 2E: Summary of retired member and beneficiary data by attained age – judges – Group D (continued)

Allowance Level	Service Pensioner Count	Service Pensioner Annual Allowance Amount	Disability Pensioner Count	Disability Pensioner Annual Allowance Amount	Beneficiary Count	Beneficiary Annual Allowance Amount
66	2	$145,508	0	$0	0	$0
67	3	198,903	0	0	0	0
68	0	0	0	0	0	0
69	5	326,430	0	0	0	0
70	3	289,849	0	0	0	0
71	6	403,197	0	0	0	0
72	5	374,165	0	0	0	0
73	5	395,904	0	0	0	0
74	4	357,750	0	0	0	0
75	6	472,531	0	0	0	0
76	2	237,627	0	0	1	110,801
77	2	311,496	0	0	0	0
78	5	158,900	0	0	0	0
79	1	163,703	0	0	1	23,689
80	3	212,287	0	0	0	0
81	5	401,449	0	0	0	0
82	3	309,168	0	0	0	0
83	0	0	0	0	0	0
84	1	89,845	0	0	0	0
85	1	42,146	0	0	1	79,155
86	1	96,182	0	0	0	0
87	3	205,188	0	0	1	103,411
88	1	73,918	0	0	1	39,541
89	0	0	0	0	1	77,417
90	0	0	0	0	0	0
91	1	114,972	0	0	0	0
92	1	43,270	0	0	0	0
93	0	0	0	0	0	0
94	1	46,203	0	0	3	181,120
≥ 95	1	20,211	0	0	1	57,375
Total	**75**	**$5,794,058**	**0**	**$0**	**11**	**$692,438**

Table 2F: Summary of retired member and beneficiary data by attained age – general employees – Groups E/F/G

Allowance Level	Service Pensioner Count	Service Pensioner Annual Allowance Amount	Disability Pensioner Count	Disability Pensioner Annual Allowance Amount	Beneficiary Count	Beneficiary Annual Allowance Amount
≤ 35	0	$0	0	$0	40	$276,078
36	0	0	0	0	1	6,467
37	0	0	0	0	0	0
38	0	0	0	0	2	16,587
39	0	0	0	0	0	0
40	0	0	0	0	1	21,486
41	0	0	1	16,261	0	0
42	0	0	0	0	0	0
43	0	0	0	0	0	0
44	0	0	1	10,036	1	28,033
45	0	0	0	0	3	29,020
46	0	0	1	15,874	2	20,531
47	0	0	2	22,822	0	0
48	0	0	3	28,404	0	0
49	0	0	2	34,071	1	9,649
50	4	146,368	1	9,093	3	27,846
51	12	465,689	2	28,642	2	28,811
52	13	471,365	1	11,009	2	22,122
53	20	854,666	2	32,500	2	41,457
54	26	931,270	7	122,798	5	91,368
55	35	1,340,835	3	49,642	5	91,582
56	43	1,529,687	10	222,058	2	20,660
57	44	1,565,162	5	102,570	3	42,695
58	66	2,048,839	8	166,217	5	70,705
59	67	1,972,848	13	238,478	2	27,194
60	89	2,511,350	17	314,381	5	81,435
61	95	2,681,934	13	221,106	5	50,261
62	142	3,870,593	20	364,326	10	148,906
63	188	4,789,985	11	179,290	10	193,699
64	187	4,347,900	14	267,050	11	150,014
65	227	4,812,305	11	158,732	13	237,266

Table 2F: Summary of retired member and beneficiary data by attained age – general employees – Groups E/F/G (continued)

Allowance Level	Service Pensioner Count	Service Pensioner Annual Allowance Amount	Disability Pensioner Count	Disability Pensioner Annual Allowance Amount	Beneficiary Count	Beneficiary Annual Allowance Amount
66	259	$5,980,374	17	$291,851	20	$377,264
67	297	6,933,577	13	215,392	10	151,136
68	299	6,286,119	10	200,946	23	405,824
69	305	6,969,531	17	270,765	24	398,259
70	346	7,845,714	12	120,575	19	338,070
71	308	7,428,273	14	168,987	23	425,029
72	325	7,202,889	19	253,490	17	313,935
73	323	7,538,603	13	201,720	21	305,953
74	318	6,876,049	13	170,325	23	431,702
75	303	6,779,382	7	87,090	18	249,761
76	302	6,348,159	8	93,260	22	331,855
77	280	6,389,380	5	69,716	30	459,400
78	181	3,987,657	7	65,929	22	318,034
79	189	3,919,473	6	55,817	24	422,726
80	162	3,231,755	3	37,254	28	366,863
81	157	3,069,991	5	64,272	24	343,279
82	124	2,380,336	5	44,057	29	430,708
83	103	1,734,321	5	48,564	24	335,180
84	91	1,581,561	4	50,907	20	294,490
85	69	1,037,825	2	12,190	18	233,446
86	59	927,416	0	0	12	141,151
87	42	643,482	1	4,431	14	177,694
88	60	877,944	0	0	18	221,056
89	40	614,226	2	22,336	13	119,803
90	23	359,559	0	0	13	151,188
91	38	548,988	1	8,661	9	64,067
92	22	256,097	0	0	7	79,209
93	19	216,769	1	5,261	9	98,554
94	11	117,503	0	0	4	33,595
≥ 95	27	270,245	0	0	12	93,492
Total	**6,340**	**$142,693,995**	**338**	**$5,179,156**	**686**	**$9,846,593**

Table 3: Summary of retired member and beneficiary data by year of retirement – all employee groups

Year of Retirement	Number	Annual Allowance	Average Annual Allowance
≤ 1970	0	$0	$0
1971	0	0	0
1972	0	0	0
1973	0	0	0
1974	0	0	0
1975	0	0	0
1976	0	0	0
1977	1	14,870	14,870
1978	2	32,548	16,274
1979	1	7,133	7,133
1980	4	30,117	7,529
1981	0	0	0
1982	3	84,970	28,323
1983	5	59,999	12,000
1984	0	0	0
1985	6	105,426	17,571
1986	4	54,880	13,720
1987	15	222,888	14,859
1988	13	236,226	18,171
1989	15	304,828	20,322
1990	27	402,689	14,914
1991	27	706,995	26,185
1992	28	340,102	12,146
1993	46	770,498	16,750
1994	28	460,567	16,449
1995	53	802,403	15,140
1996	201	3,934,869	19,576
1997	66	1,383,187	20,957
1998	61	1,046,133	17,150
1999	90	1,845,884	20,510
2000	107	2,087,009	19,505

Table 3: Summary of retired member and beneficiary data by year of retirement – all employee groups (continued)

Year of Retirement	Number	Annual Allowance	Average Annual Allowance
2001	110	$1,912,827	$17,389
2002	125	2,678,931	21,431
2003	140	3,262,540	23,304
2004	194	4,552,265	23,465
2005	198	3,881,346	19,603
2006	205	4,666,387	22,763
2007	236	5,029,756	21,313
2008	247	6,027,683	24,404
2009	418	10,431,156	24,955
2010	313	7,427,118	23,729
2011	300	6,910,267	23,034
2012	320	7,529,766	23,531
2013	281	6,626,468	23,582
2014	325	7,505,146	23,093
2015	467	11,028,251	23,615
2016	365	9,442,184	25,869
2017	380	10,058,583	26,470
2018	420	10,629,078	25,307
2019	475	12,497,117	26,310
2020	356	9,009,712	25,308
2021	477	13,151,378	27,571
2022	452	11,200,745	24,780
2023	319	8,314,982	26,066
2024	216	5,685,596	26,322
Grand Total	**8,142**	**$194,393,504**	**$23,875**

Appendix A: Definition of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Term	Definition
Actuarial accrued liability for actives	The equivalent of the accumulated normal costs allocated to the years before the valuation date.
Actuarial accrued liability for retirees and beneficiaries	Actuarial Present Value of lifetime benefits to existing retirees and beneficiaries. This sum takes account of life expectancies appropriate to the ages of the annuitants and the interest that the sum is expected to earn before it is entirely paid out in benefits.
Actuarial cost method	A procedure allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability that are used to determine the actuarially determined contribution.
Actuarial gain or loss	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., assets earn more than projected, salary increases are less than assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results yield actuarial liabilities that are larger than projected.
Actuarially equivalent	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial present value	The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. Each such amount or series of amounts is: Adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.) Multiplied by the probability of the occurrence of an event (such as survival, death, disability, withdrawal, etc.) on which the payment is conditioned, and Discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Appendix A: Definition of Pension Terms

Term	Definition
Actuarial present value of future benefits	The Actuarial Present Value of benefit amounts expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age, anticipated future compensation, and future service credits. The Actuarial Present Value of Future Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive members entitled to either a refund of member contributions or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
Actuarial valuation	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan, as well as Actuarially Determined Contributions.
Actuarial value of assets	The value of the Plan's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly plans use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the Actuarially Determined Contribution.
Actuarially determined	Values that have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the Plan.
Actuarially determined contribution	The employer's contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under the Plan's funding policy. The ADC consists of the Employer Normal Cost and the Amortization Payment.
Amortization method	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the Unfunded Actuarial Accrued Liability. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the Unfunded Actuarial Accrued Liability. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.
Amortization payment	The portion of the pension plan contribution, or ADC, that is intended to pay off the Unfunded Actuarial Accrued Liability.
Assumptions or actuarial assumptions	The estimates upon which the cost of the Plan is calculated, including: **Investment return** — the rate of investment yield that the Plan will earn over the long-term future; **Mortality rates** — the rate or probability of death at a given age for employees and retirees; **Retirement rates** — the rate or probability of retirement at a given age or service; **Disability rates** — the rate or probability of disability retirement at a given age; **Withdrawal rates** — the rate or probability at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement; **Salary increase rates** — the rates of salary increase due to inflation, real wage growth and merit and promotion increases.

Appendix A: Definition of Pension Terms

Term	Definition
Closed amortization period	A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 20 years, it is 19 years at the end of one year, 18 years at the end of two years, etc. See Open Amortization Period.
Decrements	Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or withdrawal.
Defined benefit plan	A retirement plan in which benefits are defined by a formula based on the member's compensation, age and/or years of service.
Defined contribution plan	A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.
Employer normal cost	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
Experience study	A periodic review and analysis of the actual experience of the Plan that may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified based on recommendations from the Actuary.
Funded ratio	The ratio of the Actuarial Value of Assets (AVA) to the Actuarial Accrued Liability (AAL). Plans sometimes also calculate a market funded ratio, using the Market Value of Assets (MVA), rather than the AVA.
GASB 67 and GASB 68	Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves.
Investment return	The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.
Net Pension Liability (NPL)	The Net Pension Liability is equal to the Total Pension Liability minus the Plan Fiduciary Net Position.
Normal cost	The portion of the Actuarial Present Value of Future Benefits and expenses, if applicable, allocated to a valuation year by the Actuarial Cost Method. Any payment with respect to an Unfunded Actuarial Accrued Liability is not part of the Normal Cost (see Amortization Payment). For pension plan benefits that are provided in part by employee contributions, Normal Cost refers to the total of member contributions and employer Normal Cost unless otherwise specifically stated.
Open amortization period	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. If the initial period is set as 30 years, the same 30-year period is used in each future year in determining the Amortization Period.

Appendix A: Definition of Pension Terms

Term	Definition
Plan Fiduciary Net Position	Market value of assets.
Service costs	The portions of the actuarial present value of projected benefit payments that are attributed to valuation years.
Total Pension Liability (TPL)	The actuarial accrued liability under the entry age normal cost method and based on the blended discount rate as described in GASB 67 and 68.
Unfunded actuarial accrued liability	The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative, in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus or an Overfunded Actuarial Accrued Liability.
Valuation date or actuarial valuation date	The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Benefits is determined. The expected benefits to be paid in the future are discounted to this date.

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