City of Fresno Employees Retirement System

Governmental Accounting Standards Board Statement 67 (GAS 67) Actuarial Valuation

As of June 30, 2023

Segal

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November 15, 2023

Board of Retirement
City of Fresno Employees Retirement System
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Dear Board Members:

We are pleased to submit this Governmental Accounting Standards (GAS) 67 Actuarial Valuation as of June 30, 2023. It contains various information that will need to be disclosed in order to comply with GAS 67. Please refer to the Actuarial Valuation as of June 30, 2023, for the data, assumptions, and plan of benefits underlying these calculations.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the City of Fresno Employees Retirement System. The census and financial information on which our calculations were based was prepared by Retirement System. That assistance is gratefully acknowledged.

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; and changes in plan provisions or applicable law.

The actuarial calculations were completed under the supervision of Andy Yeung, ASA, MAAA, FCA, Enrolled Actuary. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and expectations for the Plan. The assumptions used in this actuarial valuation were selected by the Board based upon our analysis and recommendations. In our opinion, the assumptions are reasonable and take into account the experience of the Plan and reasonable expectations. In addition, in our opinion, the combined effect of these assumptions is expected to have no significant bias.

We look forward to reviewing this report with you and to answering any questions.

Sincerely,

Segal

Paul Angelo, FSA, EA, MAAA, FCA Senior Vice President and Actuary	Andy Yeung, ASA, EA, MAAA, FCA Vice President and Actuary	Todd Tauzer, FSA, CERA, MAAA, FCA Senior Vice President and Actuary

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Section 1: Actuarial Valuation Summary

Purpose and basis

This report has been prepared by Segal to present certain disclosure information required by Governmental Accounting Standards (GAS) 67 as of June 30, 2023. This valuation is based on:

- The benefit provisions of the Retirement System, as administered by the Board of Retirement;
- The characteristics of covered active members, inactive vested members, and retired members and beneficiaries as of June 30, 2023, provided by the Retirement System;
- The assets of the Plan as of June 30, 2023, provided by the Retirement System;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

The Actuarial Standard of Practice (ASOP) No. 4 provides guidelines for actuaries to follow when measuring pension obligations. For a plan such as that offered by the Retirement System that utilizes the actuarial surplus to provide contribution rate offsets and a Post Retirement Supplemental Benefit (PRSB) benefit, the valuation report must indicate that the impact of the application of any future actuarial surplus on the future financial condition of the plan has not been explicitly measured in the valuation. Furthermore, the actuary must consider using alternative procedures (such as stochastic modeling) for “gain sharing provisions that trigger benefit increases when investment returns are favorable but do not trigger benefit decreases when investment returns are unfavorable.” Based on our analysis, we do not believe the System’s actuarial surplus distribution provisions would necessarily fall under the guidelines of ASOP No. 4 so as to require quantification. This is based on the observation that only a portion of the surplus is available for distribution (on an amortized basis over 30 years) when the funded status of the System is over 110% in a particular valuation and that surplus distribution will be suspended immediately if the funded status falls below 110% in the following valuation. Nonetheless, it should be understood that there is still a potential financial impact associated with the surplus distribution provision. The Board may wish to consider authorizing a supplemental study so that the potential impact can be quantified.

General observations on GAS 67 actuarial valuation

1. The Governmental Accounting Standards (GAS) rules only define pension liability and expense for financial reporting purposes, and do not apply to contribution amounts for pension funding purposes. Employers and plans develop and adopt funding policies under current practices.
2. When measuring pension liability GAS uses the same actuarial cost method (Entry Age method) and the same type of discount rate (expected return on assets) as the Retirement System uses for funding. Note that, unrelated to the investment return assumption, the GAS rules use a version of the Entry Age method where the Total Pension Liability (TPL) must be fully accrued by the time a member either enters DROP or is expected to elect the DROP. This is in contrast to the version of the Entry Age method used for funding, where the Actuarial Accrued Liability (AAL) does not have to be fully accrued until members retire from employment after participation in the DROP. Under GAS, actives who are expected to enroll in the DROP in the future would report a Service Cost that is higher than the Normal Cost used for funding, while members already in the DROP would report no Service Cost even though their Normal Cost continues to accrue.

   As the service retirement rates we use in the funding valuation for members who are expected to participate in the DROP are different from the service retirement rates for members who are not expected to participate in the DROP, we have adjusted the service retirement rates for DROP participation accordingly, as described in Section 3.
3. The TPL and the Plan's Fiduciary Net Position include liabilities and assets held for DROP, PRSB and City Surplus reserves.
4. The Net Pension Liability (NPL) is equal to the difference between the TPL and the Plan Fiduciary Net Position. The Plan Fiduciary Net Position is equal to the market value of assets and therefore, the NPL measure is very similar to an Unfunded/(Prefunded) Actuarial Accrued Liability (UAAL) calculated on a market value basis. The NPL reflects all investment gains and losses as of the measurement date. This is different from the UAAL on an actuarial value of assets basis in the funding valuation that reflects investment gains and losses over a five-year period.

Highlights of the valuation

1. For this report, the reporting dates for the Plan are June 30, 2023 and June 30, 2022. The NPLs measured as of June 30, 2023 and June 30, 2022 have been determined from the actuarial valuations as of June 30, 2023 and June 30, 2022, respectively.
2. The NPL decreased from a surplus of $(89.4) million as of June 30, 2022 to a surplus of $(116.3) million as of June 30, 2023 primarily due to a return of about 10.7% on the Plan Fiduciary Net Position during 2022/2023 that was higher than the assumed return of 6.75% (a gain of about $60 million), partially offset by demographic losses due to larger than expected COLA benefit increases for continuing retirees and DROP members, as well as individual salary increases greater than expected (a combined loss of about $35 million from both of these two factors). Changes in these values during the last two fiscal years ending June 30, 2023 and June 30, 2022 can be found in Section 2*, Schedules of changes in Net Pension Liability* on page 17.
3. The discount rate used to determine the TPL and NPL was 6.75% as of both June 30, 2023 and June 30, 2022, following the same assumptions used by the Retirement System in the funding valuations as of those dates. Details on the derivation of the discount rate as of June 30, 2023 can be found in Section 2, Determination of Discount Rate as of June 30, 2023 under Paragraph 43 of Statement 67 on page 21. Various other information that is required to be disclosed can be found throughout Section 2.
4. It is important to note that this actuarial valuation is based on plan assets as of June 30, 2023. The plan'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. Moreover, this actuarial valuation does not include any possible short-term or long-term impacts on mortality of the covered population that may emerge after June 30, 2023 due to COVID-19. Segal is available to prepare projections of potential outcomes of market conditions and other demographic experience upon request.

Summary of key valuation results

Measurement Date		June 30, 2023	June 30, 2022
Disclosure elements for fiscal year ending June 30:	• Service cost[1]	$37,298,819	$32,382,471
	• Total Pension Liability	1,566,983,753	1,472,813,522
	• Plan Fiduciary Net Position	1,683,312,950	1,562,187,480
	• Net Pension Liability	(116,329,197)	(89,373,958)
Schedule of contributions for fiscal year ending June 30:	• Actuarially determined contributions	$22,236,117	$22,016,525
	• Actual contributions	22,236,117	22,016,525
	• Contribution deficiency / (excess)	0	0
Demographic data for fiscal year ending June 30:	• Number of retired members and beneficiaries	2,229	2,176
	• Number of inactive vested members[2]	508	433
	• Number of DROP members	247	274
	• Number of active members	2,447	2,157
Key assumptions as of June 30:	• Investment rate of return	6.75%	6.75%
	• Inflation rate	2.50%	2.50%
	• Projected salary increases[3]	3.75% to 11.50%	3.75% to 11.50%

1 The service cost is based on the previous year's valuation, meaning that the 2023 and 2022 values are based on the valuations as of June 30, 2022 and June 30, 2021, respectively. The 2023 service cost has been calculated using the assumptions shown in the 2022 column and the 2022 service cost has been calculated using the assumptions in the 2021 valuation. The key assumptions used in the 2021 valuation are as follows:

Investment rate of return:	7.00%
Inflation Rate:	2.75%
Projected salary increases:	3.75% to 11.25%

2 Includes inactive members due a refund of member contributions.

3 Includes inflation at 2.50% plus real across-the-board salary increases of 0.50% plus merit and promotional increases.

Important information about actuarial valuations

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

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.
Participant 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	This valuation is based on the fair value of assets as of the measurement date, as provided by the System.
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.
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. 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 supervision of the responsible actuary.

Section 1: Actuarial Valuation Summary

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

The valuation is prepared at the request of the Board to assist the System in preparing items related to the pension plan in their financial reports. 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, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. 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.
Actuarial results in this report are not rounded, but that does not imply precision.
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. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Board 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. The System should notify Segal immediately of any questions or concerns about the final content.

Segal has no discretionary authority with respect to the management or assets of the Retirement System, it is not a fiduciary in its capacity as actuaries and consultants with respect to the Retirement System.

Section 2: GAS 67 Information

General information about the pension plan

Plan Description

Plan administration. The City of Fresno Employees Retirement System was established on June 1, 1939 under Charter Section 910 and is governed by Article 5 of Chapter 3 of the City of Fresno Municipal Code. The Retirement System is a single-employer, contributory, defined benefit pension plan. The Retirement System provides lifetime retirement, disability, and death benefits to the non-safety members employed by City of Fresno.

The Retirement System is administered by a Retirement Board composed of two management employees who are appointed by the Mayor and confirmed by the City Council, one employee who is elected by manual workers of the System, and one employee who is elected by the clerical or supervisory workers of the System. The fifth and final member of the Board shall be a qualified elector of the City, not connected with its government, elected by the previously designated four members. The Board oversees the Retirement Administrator and staff in the performance of their duties in accordance with the Municipal Code and the Board's Rules, Regulations and Policies.

Plan membership. At June 30, 2023, pension plan membership consisted of the following:

Retired members or beneficiaries currently receiving benefits	2,229
Inactive vested members entitled to but not yet receiving benefits[1]	508
DROP members	247
Active members	2,447
Total	**5,431**

Benefits provided. The Retirement System provides lifetime retirement, disability, and death benefits to eligible employees. The Retirement System provides retirement allowances to all non-safety members employed by the City of Fresno.

There is currently one tier applicable to non-safety members. Members are eligible to retire once they attain the age of 50 and have acquired 5 or more years of retirement service credit.

[1] Includes inactive members due a refund of employee contributions.

Section 2: GAS 67 Information

The retirement benefit the member will receive is based upon age at retirement, final average compensation and years of retirement service credit.

The benefit is calculated pursuant to the provisions of Section 3-541 of the Fresno Municipal Code. The monthly allowance for a member is equal to 2% of final compensation times each of the first 25 years of accrued retirement service credit plus 1% of final compensation times any years of accrued retirement service credit in excess of 25, multiplied by the age factor at retirement age.

Final average compensation consists of the highest average consecutive 36 months of compensation earnable calculated using the rate of pay in effect at the time of retirement.

The member may elect an unmodified retirement allowance, or choose an optional retirement allowance. The unmodified retirement allowance provides the highest monthly benefit and a 50% continuance to an eligible surviving spouse or domestic partner. An eligible surviving spouse is one married to the member one year prior to the effective retirement date for members retiring on or before the effective date of Ordinance No. 2000-5. For members retiring after the effective date of Ordinance 2000-5, an eligible surviving spouse or domestic partner is one married to or registered with the member on or before the date of retirement. There are three optional retirement allowances the member may choose. Each of the optional retirement allowances requires a reduction in the unmodified retirement allowance in order to allow the member the ability to provide certain benefits to a surviving spouse, domestic partner, or named beneficiary having an insurable interest in the life of the member.

The Municipal Code provides that the Retirement staff must research the percentage change in Consumer Price Index (US city-average for urban wage earners and clerical workers – all items) and propose that percent to the Retirement Board as the cost-of-living adjustment (COLA) to be adopted for the following fiscal year. This procedure must be complete by the end of April each year for implementation in July. The COLA is limited to a five percent (5%) maximum change per year and any excess over 5% is banked for the retiree for use in a year where the percent of CPI change is less than 5%.

The City of Fresno contributes to the retirement plan based upon actuarially determined contribution rates adopted by the Board of Retirement. Employer contribution rates are adopted annually based upon recommendations received from the Retirement System's actuary after the completion of the annual actuarial valuation. The average employer contribution rate as of June 30, 2023 for 2022-2023 (based on the June 30, 2021 valuation) was 11.94% of compensation.

All members are required to make contributions to the Retirement System. The average member contribution rate as of June 30, 2023 for 2022-2023 (based on the June 30, 2021 valuation) was 8.00% of compensation.[2]

[2] Includes contributions for active members who signed up for the DROP which are deposited into the members' DROP accounts.

Net Pension Liability

Measurement Date	June 30, 2023	June 30, 2022
Components of the Net Pension Liability		
Total Pension Liability	$1,566,983,753	$1,472,813,522
Plan Fiduciary Net Position	(1,683,312,950)	(1,562,187,480)
Net Pension Liability	**$(116,329,197)**	**$(89,373,958)**
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	107.42%	106.07%

The Net Pension Liability (NPL) was measured as of June 30, 2023 and June 30, 2022 and determined based upon the Total Pension Liability (TPL) from actuarial valuations as of June 30, 2023 and June 30, 2022, respectively.

Actuarial assumptions. The TPL as of June 30, 2023 was determined by an actuarial valuation of June 30, 2023. The actuarial assumptions used in the June 30, 2023 valuation were based on the results of an experience study for the period from July 1, 2018 through June 30, 2021, as follows:

Inflation:	2.50%
Salary increases:	3.75% to 11.50%, varying by service, including inflation
Investment rate of return:	6.75%, net of pension plan investment expense, including inflation
Other assumptions:	See June 30, 2023 funding valuation and Appendix A for the service retirement rates after they have been adjusted to treat DROP participation as service retirement.

Determination of discount rate and investment rates of return

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation and deducting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before deducting investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table. These values were used in the derivation of the long-term expected investment rate of return assumption used in the actuarial valuations as of June 30, 2023. The determination of the discount rate and expected investment rate of return may change every three years based on the actuarial experience study.

Asset Class	Target Allocation	Long-Term Expected Arithmetic Real Rate of Return
Large Cap Equities	18.00%	5.40%
Small/Mid Cap Equities	3.00%	6.17%
Int'l Equities (Unhedged)	13.00%	6.13%
Emerging Int'l Equities	5.00%	8.17%
Core Bonds	12.00%	0.39%
Private Equity	8.00%	10.83%
Private Debt	14.00%	5.93%
Real Estate	15.00%	4.59%
Private Real Assets - Infrastructure/Land	7.00%	6.19%
Private credit – credit opportunities	2.50%	7.18%
China Equity	1.25%	9.53%
Hedge fund – macro	1.25%	2.72%
Total	**100.00%**	**5.56%**

Discount rate. The discount rate used to measure the TPL was 6.75% as of both June 30, 2023 and June 30, 2022. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employer contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Pension Plan Fiduciary Net Position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the 6.75% expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the TPL as of June 30, 2023.

Discount rate sensitivity

Sensitivity of the Net Pension Liability to changes in the discount rate. The following presents the NPL of the Retirement System as of June 30, 2023, calculated using the discount rate of 6.75%, as well as what the Retirement System's NPL would be if it were calculated using a discount rate that is 1-percentage-point lower (5.75%) or 1-percentage-point higher (7.75%) than the current rate:

	1% Decrease (5.75%)	Current Discount Rate (6.75%)	1% Increase (7.75%)
Retirement System's Net Pension Liability as of June 30, 2023	$67,160,014	$(116,329,197)	$(266,737,981)

Schedule of changes in Net Pension Liability – Last two fiscal years

Measurement Date	June 30, 2023	June 30, 2022
Total Pension Liability		
• Service cost	$37,298,819	$32,382,471
• Interest	99,304,359	96,311,144
• Change of benefit terms	0	0
• Differences between expected and actual experience	35,440,351	40,832,977
• Changes of assumptions	0	(4,261,891)
• Benefit payments, including refunds of member contributions	(77,873,298)	(71,884,378)
Net change in Total Pension Liability	**$94,170,231**	**$93,380,323**
Total Pension Liability – beginning	**1,472,813,522**	**1,379,433,199**
Total Pension Liability – ending	**$1,566,983,753**	**$1,472,813,522**
Plan Fiduciary Net Position		
• Contributions – employer	$22,236,117	$22,016,525
• Contributions – member	14,894,336	15,492,662
• Net investment income	164,014,181	(132,624,884)
• Benefit payments, including refunds of member contributions	(77,873,298)	(71,884,378)
• Administrative expense	(2,145,866)	(2,049,858)
• Other	0	0
Net change in Plan Fiduciary Net Position	**$121,125,470**	**$(169,049,933)**
Plan Fiduciary Net Position – beginning	**1,562,187,480**	**1,731,237,413**
Plan Fiduciary Net Position – ending	**$1,683,312,950**	**$1,562,187,480**
Net Pension Liability – ending	**$(116,329,197)**	**$(89,373,958)**
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	**107.42%**	**106.07%**
Covered payroll[1]	**$186,218,911**	**$164,642,390**
Net Pension Liability as percentage of covered payroll	**(62.47%)**	**(54.28%)**

[1] Covered payroll represents pensionable compensation. Only pensionable compensation that would possibly go into the determination of retirement benefits is included.

Schedule of contributions – Last ten fiscal years

Year Ended June 30	Actuarially Determined Contributions[1]	Contributions in Relation to the Actuarially Determined Contributions	Contribution Deficiency / (Excess)	Covered Payroll[2]	Contributions as a Percentage of Covered Payroll
2014	$11,439,981	$11,439,981	$0	$103,596,902	11.04%
2015	12,326,570	12,326,570	0	105,820,382	11.65%
2016	13,060,088	13,060,088	0	108,541,068	12.03%
2017	15,205,360	15,205,360	0	119,006,918	12.78%
2018	14,608,659	14,608,659	0	128,461,461	11.37%
2019	14,627,425	14,627,425	0	138,395,785	10.57%
2020	16,553,928	16,553,928	0	149,402,670	11.08%
2021	20,144,322	20,144,322	0	154,030,657	13.08%
2022	22,016,525	22,016,525	0	164,642,390	13.37%
2023	22,236,117	22,236,117	0	186,218,911	11.94%

[1] All “Actuarially Determined Contributions” through June 30, 2015 were determined as the “Annual Required Contribution” under GAS 25 and 27.

[2] Covered payroll represents pensionable compensation. Only pensionable compensation that would possibly go into the determination of retirement benefits is included.

See accompanying notes to this schedule on the next page.

Section 2: GAS 67 Information

Notes to Schedule:

Methods and assumptions used to establish "actuarially determined contribution" rates:

Valuation date:	Actuarially determined contribution rates are calculated as of June 30, two years prior to the end of the fiscal year in which contributions are reported.
Actuarial cost method:	Entry Age Actuarial Cost Method
Amortization method:	Level percent of payroll
Remaining amortization period:	**June 30, 2021 valuation** Effective with the June 30, 2013 valuation, any new UAAL established on each subsequent valuation as a result of actuarial gains or losses or plan amendments are amortized over separate 15-year declining periods (with the exception of temporary retirement incentives which are amortized over its own declining period of up to 5 years). Any new UAAL established as a result of changes in actuarial assumptions or methods at each valuation is amortized over separate 25-year declining periods. Any actuarial surplus (when the funded ratio is over 110%) will be amortized over a non-declining 30-year period.
Asset valuation method:	Market value of assets less unrecognized returns from each of the last five years. Unrecognized returns are equal to the difference between the actual market return and the expected return on a market value basis and are recognized over a five-year period. The Actuarial Value of Assets is reduced by the value of the non-valuation reserves.

Section 2: GAS 67 Information

Actuarial assumptions:

Valuation Date:	June 30, 2021 Valuation
Investment rate of return:	7.00%
Inflation rate:	2.75%
Real across-the-board salary increase:	0.50%
Projected salary increases:[1]	Ranges from 3.75% to 11.25% based on years of service
Cost of living adjustments:	2.75% of retirement income
Other assumptions:	See June 30, 2021 funding valuation

1 Includes inflation at 2.75% plus across the board salary increases of 0.50% plus merit and promotional increases.

Determination of Discount Rate as of June 30, 2023 under Paragraph 43 of Statement 67

The discount rate used to measure the Total Pension Liability (TPL) as of June 30, 2023 was 6.75%.

This rate was determined under the assumption that current members and the employer will continue to make contributions to the System at the required rates. Under that assumption, the Plan Fiduciary Net Position as of June 30, 2023 is greater than the present value of future benefits and administrative expenses, less the present value of future member contributions and employer normal cost contributions, discounted at 6.75% to the same date. In other words, the current level of assets is projected to be more than sufficient to fund all future expected benefit payments and expenses assuming members and the employer continue to make the required normal cost contributions.

This determination was made without projecting the Plan Fiduciary Net Position as required under Paragraph 41 of Statement 67. Per Paragraph 43, if the sufficiency of the Net Position "…can be made with sufficient reliability without a separate projection of cash flows into and out of the pension plan, alternative methods may be applied in making the evaluations." Based on our professional judgment, we believe this standard has been met.

Section 3: Appendices

Appendix A: Retirement Rates after Adjustment for Drop Participation

Service Retirement Rates (For Non-DROP Retirements):

Age	Rate (%)
50	1.00
51	1.00
52	1.75
53	1.75
54	1.75
55	4.50
56	3.00
57	3.00
58	4.00
59	4.00
60	5.50
61	5.50
62	10.00
63	9.00
64	15.00
65	20.00
66	25.00
67	25.00
68	25.00
69	30.00
70	60.00
71	60.00
72	60.00
73	60.00
74	60.00
75 & Above	100.00

For purposes of the GAS 67 valuation, members entering the DROP are treated just like service retirements. We have increased the service retirement rates shown above by the DROP retirements in our GAS 67 valuation.

DROP Retirements:

	Rate (%)				
	Years of Service				
Age	**5 – 10**	**10 – 15**	**15 – 20**	**20 – 25**	**20 & Above**
50 – 51	0.0	0.0	1.5	2.5	2.5
52 – 53	0.0	0.0	1.5	5.0	15.0
54	0.0	0.0	10.0	30.0	45.0
55	1.0	10.0	35.0	40.0	50.0
56	1.0	5.0	20.0	35.0	35.0
57 – 58	1.0	5.0	20.0	30.0	30.0
59 – 61	1.0	5.0	18.0	30.0	10.0
62 – 64	1.0	5.0	10.0	15.0	10.0
65 – 70	1.0	5.0	10.0	10.0	10.0
71 & Above	0.0	0.0	0.0	0.0	0.0

Appendix B: Definition of Terms

Definitions of certain terms as they are used in Statement 67. The terms may have different meanings in other contexts.

Actuarial Present Value of Projected Benefit Payments:	Projected benefit payments discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment.
Actuarial Valuation:	The determination, as of a point in time (the actuarial valuation date), of the service cost, Total Pension Liability, and related actuarial present value of projected benefit payments for pensions performed in conformity with Actuarial Standards of Practice unless otherwise specified by the GASB.
Actuarial Valuation Date:	The date as of which an actuarial valuation is performed.
Actuarially Determined Contribution:	A target or recommended contribution to a defined benefit pension plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.
Ad Hoc Cost-of-Living Adjustments (Ad Hoc COLAs):	Cost-of-living adjustments that require a decision to grant by the authority responsible for making such decisions.
Ad Hoc Postemployment Benefit Changes:	Postemployment benefit changes that require a decision to grant by the authority responsible for making such decisions.
Automatic Cost-of-Living Adjustments (Automatic COLAs):	Cost-of-living adjustments that occur without a requirement for a decision to grant by a responsible authority, including those for which the amounts are determined by reference to a specified experience factor (such as the earnings experience of the pension plan) or to another variable (such as an increase in the consumer price index).
Automatic Postemployment Benefit Changes:	Postemployment benefit changes that occur without a requirement for a decision to grant by a responsible authority, including those for which the amounts are determined by reference to a specified experience factor (such as the earnings experience of the pension plan) or to another variable (such as an increase in the consumer price index).
Cost-of-Living Adjustments:	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (Cost-Sharing Pension Plan):	A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.
Covered Payroll:	Payroll on which contributions to the pension plan are based.
Defined Benefit Pension Plans:	Pension plans that are used to provide defined benefit pensions.

Defined Benefit Pensions:	Pensions for which the income or other benefits that the employee will receive at or after separation from employment are defined by the benefit terms. The pensions may be stated as a specified dollar amount or as an amount that is calculated based on one or more factors such as age, years of service, and compensation. (A pension that does not meet the criteria of a defined contribution pension is classified as a defined benefit pension for purposes of Statement 67.)
Defined Contribution Pension Plans:	Pension plans that are used to provide defined contribution pensions.
Defined Contribution Pensions:	Pensions having terms that (1) provide an individual account for each employee; (2) define the contributions that an employer is required to make (or the credits that it is required to provide) to an active employee's account for periods in which that employee renders service; and (3) provide that the pensions an employee will receive will depend only on the contributions (or credits) to the employee's account, actual earnings on investments of those contributions (or credits), and the effects of forfeitures of contributions (or credits) made for other employees, as well as pension plan administrative costs, that are allocated to the employee's account.
Discount Rate:	The single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the total of the following: 1. The actuarial present value of benefit payments projected to be made in future periods in which (a) the amount of the pension Plan Fiduciary Net Position is projected (under the requirements of Statement 67) to be greater than the benefit payments that are projected to be made in that period and (b) pension plan assets up to that point are expected to be invested using a strategy to achieve the long-term expected rate of return, calculated using the long-term expected rate of return on pension plan investments. 2. The actuarial present value of projected benefit payments not included in (1), calculated using the municipal bond rate.
Entry Age Actuarial Cost Method:	A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age(s). The portion of this actuarial present value allocated to a valuation year is called the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is called the actuarial accrued liability.
Inactive Employees:	Terminated individuals that have accumulated benefits but are not yet receiving them, and retirees or their beneficiaries currently receiving benefits.
Multiple-Employer Defined Benefit Pension Plan:	A defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
Net Pension Liability (NPL):	The liability of employers and non-employer contributing entities to employees for benefits provided through a defined benefit pension plan.

Section 3: Appendices

Other Postemployment Benefits:	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits, regardless of the manner in which they are provided. Other postemployment benefits do not include termination benefits.
Pension Plans:	Arrangements through which pensions are determined, assets dedicated for pensions are accumulated and managed and benefits are paid as they come due.
Pensions:	Retirement income and, if provided through a pension plan, postemployment benefits other than retirement income (such as death benefits, life insurance, and disability benefits). Pensions do not include postemployment healthcare benefits and termination benefits.
Plan Members:	Individuals that are covered under the terms of a pension plan. Plan members generally include (1) employees in active service (active plan members) and (2) terminated employees who have accumulated benefits but are not yet receiving them and retirees or their beneficiaries currently receiving benefits (inactive plan members).
Postemployment:	The period after employment.
Postemployment Benefit Changes:	Adjustments to the pension of an inactive employee.
Postemployment Healthcare Benefits:	Medical, dental, vision, and other health-related benefits paid subsequent to the termination of employment.
Projected Benefit Payments:	All benefits estimated to be payable through the pension plan to current active and inactive employees as a result of their past service and their expected future service.
Public Employee Retirement System:	A special-purpose government that administers one or more pension plans; also may administer other types of employee benefit plans, including postemployment healthcare plans and deferred compensation plans.
Real Rate of Return:	The rate of return on an investment after adjustment to eliminate inflation.
Service Costs:	The portions of the actuarial present value of projected benefit payments that are attributed to valuation years.
Single-Employer Defined Benefit Pension Plan (Single-Employer Pension Plan):	A defined benefit pension plan that is used to provide pensions to employees of only one employer.
Termination Benefits:	Inducements offered by employers to active employees to hasten the termination of services, or payments made in consequence of the early termination of services. Termination benefits include early-retirement incentives, severance benefits, and other termination-related benefits.
Total Pension Liability (TPL):	The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of Statement 67.

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