Classic Values, Innovative Advice

Merced County Employees' Retirement Association

Actuarial Valuation Report as of June 30, 2023

Produced by Cheiron

January 2024

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January 19, 2024

Retirement Board of
Merced County Employees' Retirement Association
3199 M Street
Merced, CA 95348

Dear Board Members:

At your request, we have conducted an actuarial valuation of the Merced County Employees' Retirement Association (MercedCERA, the Fund, the Plan) as of June 30, 2023. This report contains information on the Plan's assets, liabilities, and discloses employer and employee contribution levels. We call your attention to the Foreword in which we refer to the general approach employed in the preparation of this report.

The purpose of this report is to present the results of the annual actuarial valuation of MercedCERA. This report is for the use of the Retirement Board of MercedCERA and its auditors in preparing financial reports in accordance with applicable law and accounting requirements. Any other user of this report is not an intended user and is considered a third party.

This report was prepared for the Retirement Board of MercedCERA for the purposes described herein and for the use by the Plan auditor in completing an audit related to the matters herein. Other users of this valuation report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

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

Sincerely,
Cheiron

Graham A. Schmidt, FSA, EA, FCA, MAAA
Principal Consulting Actuary

Anne D. Harper, FSA, EA, MAAA
Principal Consulting Actuary

FOREWORD

Cheiron has performed the actuarial valuation of the Merced County Employees' Retirement Association as of June 30, 2023. The valuation is organized as follows:

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

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

  - Section II – Identification and Assessment of Risks
  - Section III – Assets
  - Section IV – Liabilities
  - Section V – Contributions
  - Section VI – Annual Comprehensive Financial Reporting Information

- In the **Appendices,** we conclude our report with detailed information describing plan membership (Appendix A), actuarial assumptions and methods employed in the valuation (Appendix B), a summary of pertinent plan provisions (Appendix C), tables containing member contribution rates (Appendix D), and a glossary of key actuarial terms (Appendix E).

Future results may differ significantly from the current results presented in this valuation report due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; and, changes in plan provisions or applicable law.

In preparing our report, we relied on information (some oral and written) supplied by the MercedCERA staff. This information includes, but is not limited to, plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Cheiron utilizes ProVal, an actuarial valuation application leased from Winklevoss Technologies (WinTech) to calculate liabilities and project benefit payments. We have relied on WinTech as the developer of ProVal. We have a basic understanding of ProVal and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in assumptions or output of ProVal that would affect this valuation.

The deterministic and stochastic projections in this valuation report were developed using R-scan, a proprietary tool used to illustrate the impact of changes in assumptions, methods, plan provisions, or actual experience (particularly investment experience) on the future financial status of the Plan. R-scan uses standard roll-forward techniques that implicitly assume a stable active population. Because R-scan does not automatically capture how changes in one variable affect all other variables, some scenarios may not be consistent. The stochastic projections of investment returns assume that each future year's investment return is independent from all other years and is identically distributed according to a lognormal distribution. We relied on Cheiron colleagues for the development of the model.

SECTION I – EXECUTIVE SUMMARY

The primary purpose of the actuarial valuation and this report is to measure, describe, and identify the following as of the valuation date:

- The financial condition of the Plan,
- Past and expected trends in the financial progress of the Plan,
- Employer and employee contribution rates for Fiscal Year 2025,
- An assessment and disclosure of key risks, and
- Information required by the GFOA for the Annual Comprehensive Financial Report.

In the balance of this Executive Summary, we present (A) the basis upon which this year's valuation was completed, (B) the key findings of this valuation including a summary of all key financial results, (C) an examination of the historical trends, and (D) the projected financial outlook for the Plan.

A. Valuation Basis

This valuation determines the employer contributions for the fiscal year ending June 30, 2025. The Plan's funding policy is to collect contributions from the employers and employees equal to the sum of:

- The normal cost under the Entry Age Normal Cost Method,
- Amortization of the Unfunded Actuarial Liability, and
- The Plan's expected administrative expenses.

The Unfunded Actuarial Liability payment is determined as the amount needed to fund the outstanding Unfunded Actuarial Liability (UAL), using the amortization method as described in Section V of the report. The amortization method is similar to a traditional five- or three-year asset smoothing and a 20-year amortization period with level payments as a percentage of payroll. The Plan also uses the Market Value of Assets to calculate the UAL, rather than a smoothed value. These amortization and funding policies in conjunction are a type of policy known as direct rate smoothing.

Experience studies are performed every three years. This valuation was performed on the basis of the economic and demographic assumptions and methods that were adopted by the Board of Administration with our input at the December 8, 2022 Board meeting, based on Cheiron's Actuarial Experience Study covering plan experience during the period from July 1, 2019 through June 30, 2022. A summary of the assumptions and methods used in the current valuation is shown in Appendix B.

This valuation was prepared based on the Plan provisions shown in Appendix C. Employee contribution rates are shown in Appendix D. The rates for PEPRA members will be recomputed each year to be one-half of the total normal cost rate for their benefits.

B. Key Findings of this Valuation

The following discussion summarizes the key results of the June 30, 2023 valuation and how they compare to the results from the June 30, 2022 valuation.

Summary of Key Valuation Results

Table I-1 summarizes the key results of the valuation with respect to assets, liabilities, and contributions.

Table I-1
Merced County Employees' Retirement Association
Summary of Key Valuation Results
(in millions)

Valuation Date Fiscal Year End	June 30, 2023 2025	June 30, 2022 2024
Actuarial Liability	$ 1,574.6	$ 1,529.3
Market Value of Assets	1,135.1	1,064.4
Unfunded Actuarial Liability	$ 439.5	$ 464.9
Funded Ratio	72.1%	69.6%
Net Employer Contribution Rate	46.03%	45.66%
Projected Payroll	$ 161.6	$ 156.1
Projected Employer Contribution	$ 74.4	$ 71.3

More discussion of the factors that affected these results can be found in the remainder of this section. Some key points are as follows:

- The employer contribution rate increased from 45.66% to 46.03%.
- The Unfunded Actuarial Liability (UAL) is the excess of the Plan's Actuarial Liability over the Market Value of Assets. The Plan's UAL decreased by $25.4 million from $464.9 million to $439.5 million. This decrease in UAL was primarily due to the recent investment gains and the level of contributions made to the Plan.
- The Plan's funded ratio, the ratio of market assets over Actuarial Liability, increased from 69.6% last year to 72.1% as of June 30, 2023.

SECTION I – EXECUTIVE SUMMARY

Plan Membership

Table I-2 summarizes Plan membership as of June 30, 2023 and June 30, 2022. More detailed membership statistics are in Appendix A.

Table I-2
Membership Total

Item	June 30, 2023	June 30, 2022	% Change
Actives	2,165	2,167	-0.1%
Deferred Members	1,375	1,202	14.4%
Retired Members	2,584	2,523	2.4%
Total Members	6,124	5,892	3.9%
Active Member Payroll	$ 157,252,395	$ 151,900,251	3.5%
Average Pay per Active	72,634	70,097	3.6%

Total Plan membership increased by 3.9%, mostly driven by the increase in deferred members, in particular non-vested members who have left their contributions on account.

The pay figures reflect the annualized rate as of June 30, plus expected increases for the upcoming year. Total payroll increased by 3.5% compared to the assumed wage inflation of 2.75%, while the average pay per active member increased by 3.6%.

Components of UAL Change between June 30, 2022 and June 30, 2023

Table I-3 is a detailed reconciliation of the components that affected the UAL between June 30, 2022 and June 30, 2023.

Table I-3
Change in Unfunded Actuarial Liability

Experience	in millions
Unfunded actuarial liability, 6/30/2022	$ 464.9
Expected change in unfunded actuarial liability	$ (22.9)
Unfunded decrease due to investment gain	(12.0)
Unfunded increase due to contributions less than expected	0.6
Unfunded increase due to liability loss	8.9
Total change in unfunded actuarial liability	$ (25.4)
Unfunded actuarial liability, 6/30/2023	$ 439.5

SECTION I – EXECUTIVE SUMMARY

The Plan's UAL decreased from $464.9 million as of June 30, 2022 to $439.5 million as of June 30, 2023. As shown on the previous page, the largest contributing factors were investment gains of $12.0 million and expected UAL contributions, which were scheduled to pay off $22.9 million of principal on the UAL. Contributions were less than expected by $0.6 million, due differences between actual and expected payroll, which increased the UAL. There were losses on the Actuarial Liabilities of $8.9 million, most of which were from higher than expected salary increases and cost-of-living adjustments for continuing actives and retirees, respectively.

Employer Contribution Reconciliation

Table I-4 is a detailed reconciliation between the Fiscal Year 2024 and Fiscal Year 2025 employer contribution rates, in total and by component.

Table I-4
Employer Contribution Reconciliation

Item	Total	Normal Cost	Amortization	Expenses
FYE 2024 Net Employer Contribution Rate	45.66%	9.40%	34.71%	1.55%
Expected Change due to phase-in	0.96%	0.00%	0.96%	0.00%
Change due to investment gain	-0.12%	0.00%	-0.12%	0.00%
Change due to contributions less than expected	0.01%	0.00%	0.01%	0.00%
Change due to PEPRA new hires	-0.21%	-0.21%	0.00%	0.00%
Change due to liability changes	0.01%	-0.08%	0.09%	0.00%
Change due to effect of payroll on amort / expense	-0.28%	0.00%	-0.27%	-0.01%
Total Change	0.37%	-0.29%	0.67%	-0.01%
FYE 2025 Net Employer Contribution Rate	46.03%	9.11%	35.38%	1.54%

The employer contribution rate increased from 45.66% for Fiscal Year 2024 to 46.03% for Fiscal Year 2025:

- The phase-in of the net UAL experience from the last four years due to the direct rate smoothing method (based on net gains in FYE 2021 and net losses, including assumption changes, in FYE 2022, FYE 2020, and FYE 2019) increased the contribution rate by 0.96% this year. The expected phase-in for the next valuation (2024) from previous years' changes is a contribution rate decrease of 0.08%.

- The investment gain for the current fiscal year decreased the current year contribution rate by 0.12% of pay. The assets of the Plan returned 7.88% (net of investment expenses) on a market basis, which is higher than the assumed rate of 6.75%. The amortization payment for the current year investment gain will continue to be phased-in over the next four years.

- Contributions were slightly less than expected and increased the employer contribution rate by 0.01% of pay, due to differences between actual and expected payroll.

SECTION I – EXECUTIVE SUMMARY

- The employer normal cost rate is expected to decrease as more PEPRA members enter the Plan. For the current valuation, the replacement of legacy members by PEPRA members decreased the employer normal cost rate by about 0.21% of pay.

- Demographic experience resulted in a net increase in cost of about 0.01% of pay, based on a 0.09% increase in the UAL amortization payment rate and an 0.08% decrease in employer normal cost rates within tiers. As with the investment gain, the changes in the UAL payment for demographic experience will continue to be phased-in over the next four years.

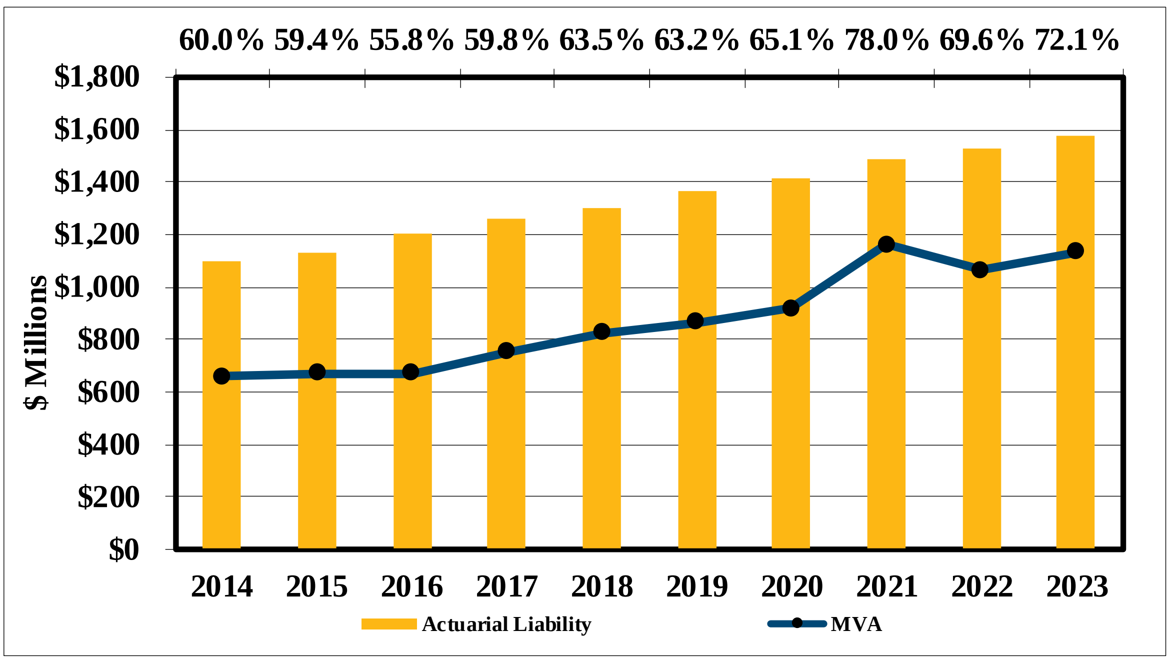
- A larger than expected increase in the projected payroll decreased the employer contribution rate by 0.28% of pay, since it results in the Plan's UAL and administrative expenses being spread over a larger-than-anticipated payroll base.

C. Historical Trends

For most retirement plans the greatest attention is given to the current valuation results and in particular, the size of the current Unfunded Actuarial Liability and the employer contribution. However, it is important to remember that each valuation is only a snapshot in the long-term progress of a pension fund, and the results should be analyzed relative to historical trends.

Assets and Liabilities

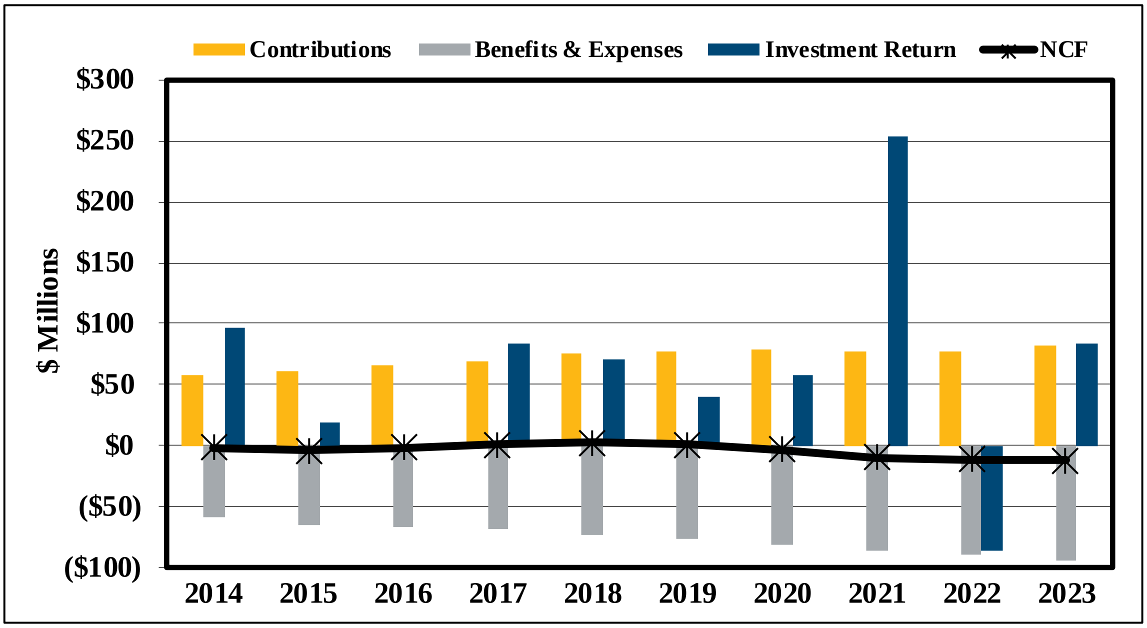
The following chart compares the Market Value of Assets (MVA) to the Actuarial Liabilities. The percentage shown at the top of each bar is the ratio of the Market Value of Assets to the Actuarial Liability (the funded ratio). The funded ratio has increased from 60.0% in 2014 to 72.1% as of June 30, 2023.



The funded ratio decreased in 2016 as a result of investment losses and assumption changes including lowering the discount rate to 7.25% from 7.75%. The 2017 and 2018 funded ratios increased primarily due to investment gains. The 2019 funded ratio remained flat, even with a reduction to the discount rate from 7.25% to 7.00%, because contributions were greater than the interest on the UAL plus normal cost and administrative expenses. The 2020 funded ratio increased primarily due to the high level of contributions. The 2021 funded ratio increased because of significant investment gains slightly offset by a reduction in the discount rate from 7.00% to 6.75%. The 2022 funded ratio decreased due to investment losses. The increase in the 2023 funded ratio is primarily a result of the contribution level.

Cash Flows

The chart below shows the Plan's cash flows. The contributions, outflows (benefit payments and expenses), and investment returns are shown as bars and the Plan's net cash flow (NCF) is shown as a black line. This is an important measure, as it reflects the ability to have funds available to meet benefit payments without having to make difficult investment decisions, especially during volatile markets.

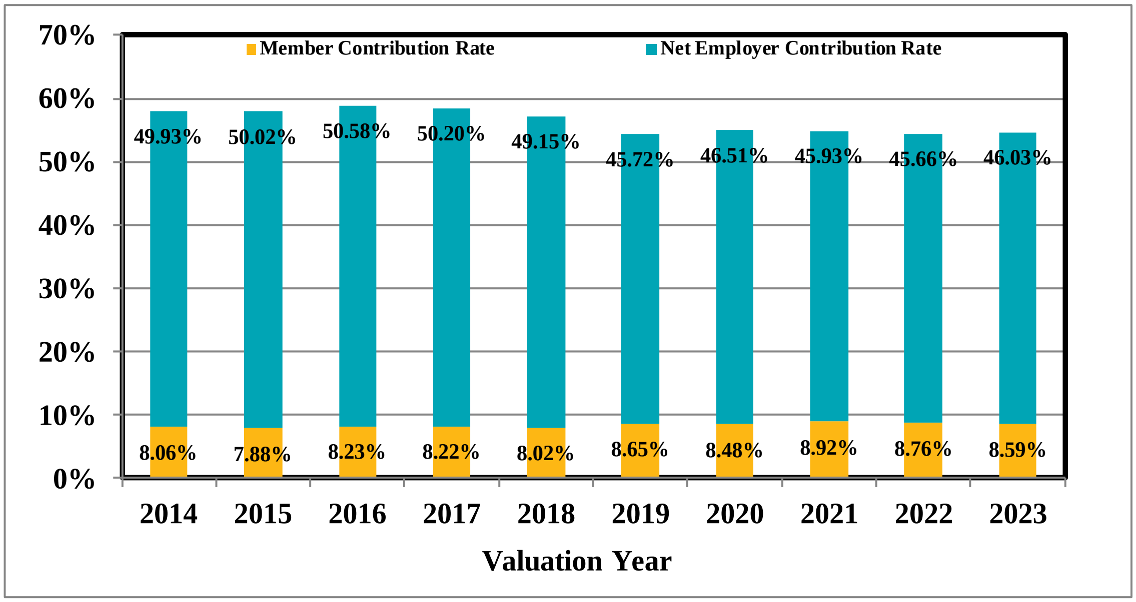


The NCF has remained approximately neutral over the past decade, though since 2021 there has been a small uptick in negative NCF, primarily due to reduced contributions following adjustments in the amortization of the 2013 UAL base. While a significant negative NCF can exacerbate losses in a market downturn, MercedCERA's current negative cash flow, representing only about 1% of Plan assets, does not pose a substantial risk to its market fluctuation absorption capacity.

SECTION I – EXECUTIVE SUMMARY

Contributions

The chart below shows the historical member and employer contribution rates calculated as of the valuation date over the past decade. The employer contribution rates have remained relatively stable – other than a substantial decrease in 2019 mostly due to an adjustment to the amortization of the 2013 UAL base – as positive investment experience and the shift towards the lower-cost PEPRA membership have offset the use of more conservative assumptions. The weighted-average member contribution rate increased with discount rate reductions in 2016, 2019, and 2021, and has also fluctuated based in shifts in the population.



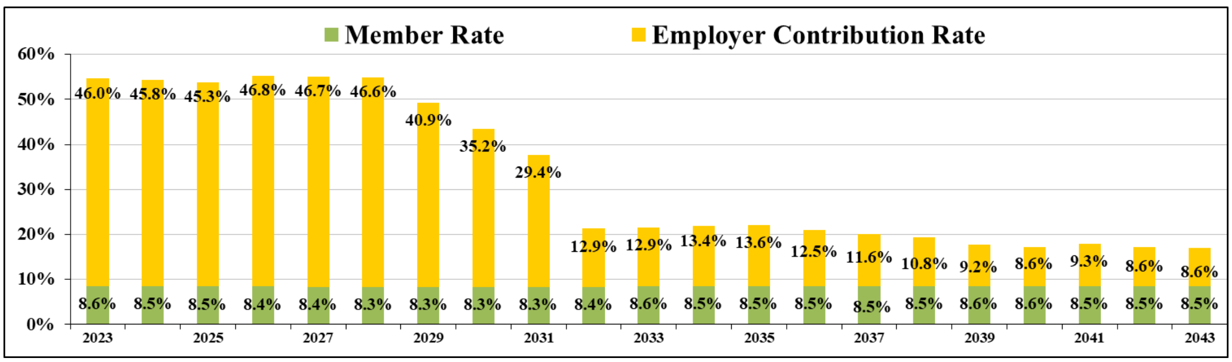
D. Future Expected Financial Trends

The analysis of projected financial trends is perhaps the most important component of this valuation. In this section, we present our assessment of the implications of the June 30, 2023 valuation results in terms of contributions and benefit security (assets compared to liabilities). All the projections in this section are based on the current interest rate assumption of 6.75%. We have assumed increases in future pensionable payroll of 2.75% per year.

Contribution Projections:

The following graph shows the expected employer and member contribution rates based on actually achieving the 6.75% assumption each year for the next 20 years. This scenario is highly unlikely; even if the Plan does achieve an average return of 6.75% over this period, the returns in each given year will certainly vary.

Projection of Employer and Member Contributions, 6.75% return each year



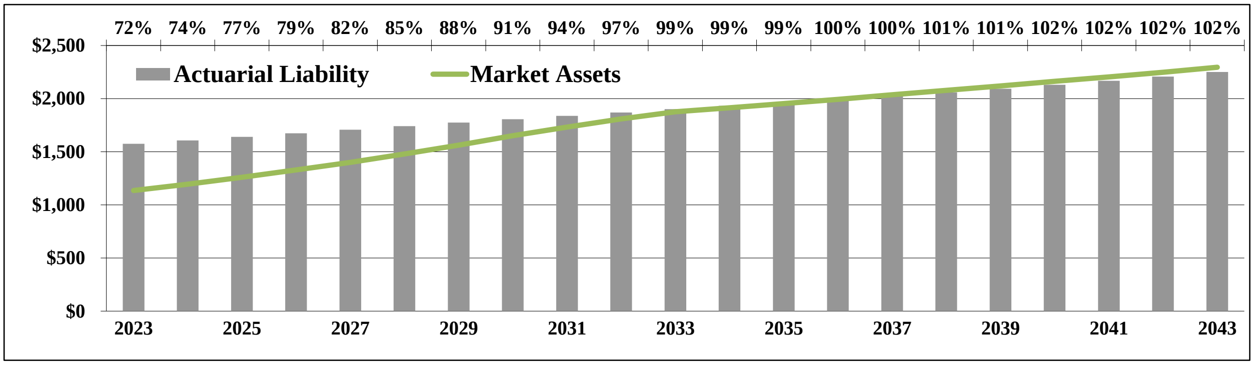
The graph above shows employer contributions remaining relatively stable, with slight increases after 2025, and then dropping off significantly from 2029 to 2032 as the amortization of the 2013 UAL is phased out. After that point, employer contribution rates are expected to stabilize and eventually approach the normal cost rates. The employee rates are expected to remain stable, shifting slightly as the Tier 1 and Tier 2 Legacy members retire and are replaced by PEPRA members.

SECTION I – EXECUTIVE SUMMARY

Asset and Liability Projections:

The graph below shows the projection of assets and liabilities assuming that assets will earn the 6.75% assumption each year during the projection period. The percentages along the top of the graph represent the funded ratio or status of the Plan.

Projection of Assets and Liabilities, 6.75% return each year



The graph shows that the projected funded status increases over the next 20 years to 102%, assuming the actuarial assumptions are achieved. The projections show the funded status increasing above 100% because PEPRA mandates that employers must continue to contribute at least the normal cost rate unless the plan is 120% funded and has met certain legal requirements as well. However, it is the actual return on plan assets that will determine the future funded status and contribution rates.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISKS

Actuarial valuations are based on a set of assumptions about future economic and demographic experience. These assumptions represent a reasonable estimate of future experience, but actual future experience will undoubtedly be different and may vary significantly. Actuarial Standard of Practice #51 requires actuaries to identify and assess risks that "may reasonably be anticipated to significantly affect the plan's future financial condition." This section of the report is intended to identify the primary risks to the Plan, provide some background information about those risks, and provide an assessment of those risks.

Identification of Risks

A fundamental risk to a pension plan is that the contributions needed to pay the benefits become unaffordable. While MercedCERA cannot determine on its own what contribution level is unaffordable, we can project expected contribution rates and illustrate the potential impact of key sources of risk on those contribution rates so the employers can assess affordability. While there are a number of factors that could lead to contribution amounts becoming unaffordable, we believe the primary risks are:

- Investment risk,
- Assumption change risk, and
- Contribution risk.

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

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

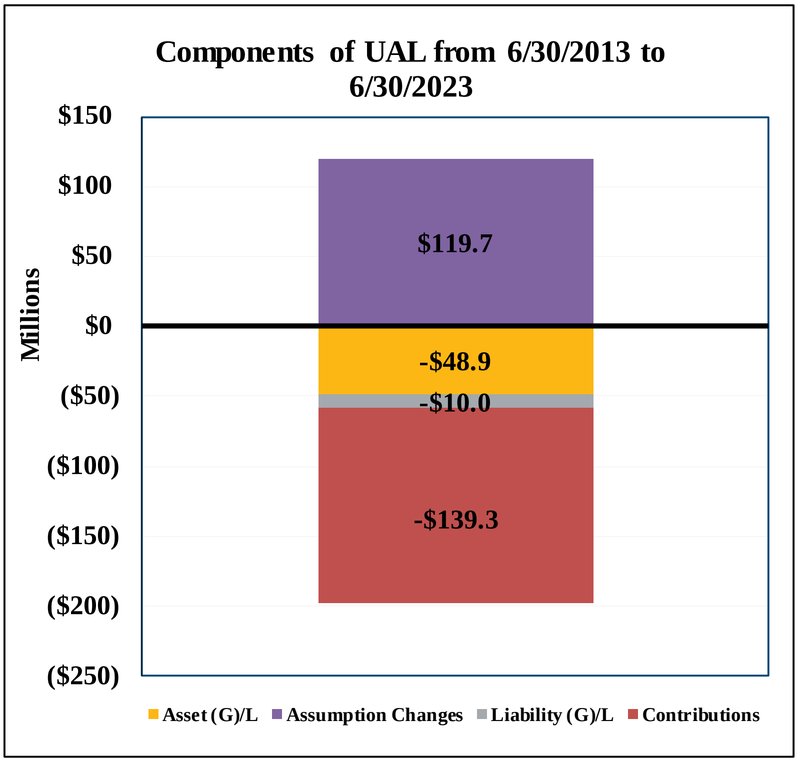
Assumption change risk is the potential for the environment to change such that future appropriate valuation assumptions are different than the current assumptions. For example, declines in interest rates over the last three decades (which have recently reversed) resulted in higher investment returns for fixed income investments, but lower expected future returns necessitating either a change in investment policy, a reduction in discount rate, or some combination of the two. Assumption change risk is an extension of the other risks identified, but rather than capturing the risk as it is experienced, it captures the cost of recognizing a change in environment when the current assumption is no longer reasonable.

Contribution risk is the potential for actual future contributions to deviate from expected future contributions. There are different sources of contribution risk such as the sponsor failing to make contributions in accordance with the funding policy or the contribution requirement becoming such a financial strain on the sponsor as a result of material changes in the contribution base (e.g., covered employees, covered payroll) that affects the amount of contributions the Plan can collect.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISKS

The chart below shows the components contributing to the Unfunded Actuarial Liability (UAL) from June 30, 2013 through June 30, 2023. Over the last 10 years, the UAL has decreased by approximately $78.5 million. Liability gains (gray bar) of $10.0 million, asset gains (gold bar) of $48.9 million, and contributions in excess of the "tread water" level (red bar) of $139.3 million are the primary sources in the UAL decrease. Assumptions changes (purple bar) of $119.7 million have increased the UAL since June 30, 2013.

Chart II-1



SECTION II – IDENTIFICATION AND ASSESSMENT OF RISKS

Chart II-2 below details the annual sources of the UAL change (colored bars) for the plan years ending June 30. The net UAL change for each year is represented by the blue diamonds.

Chart II-2

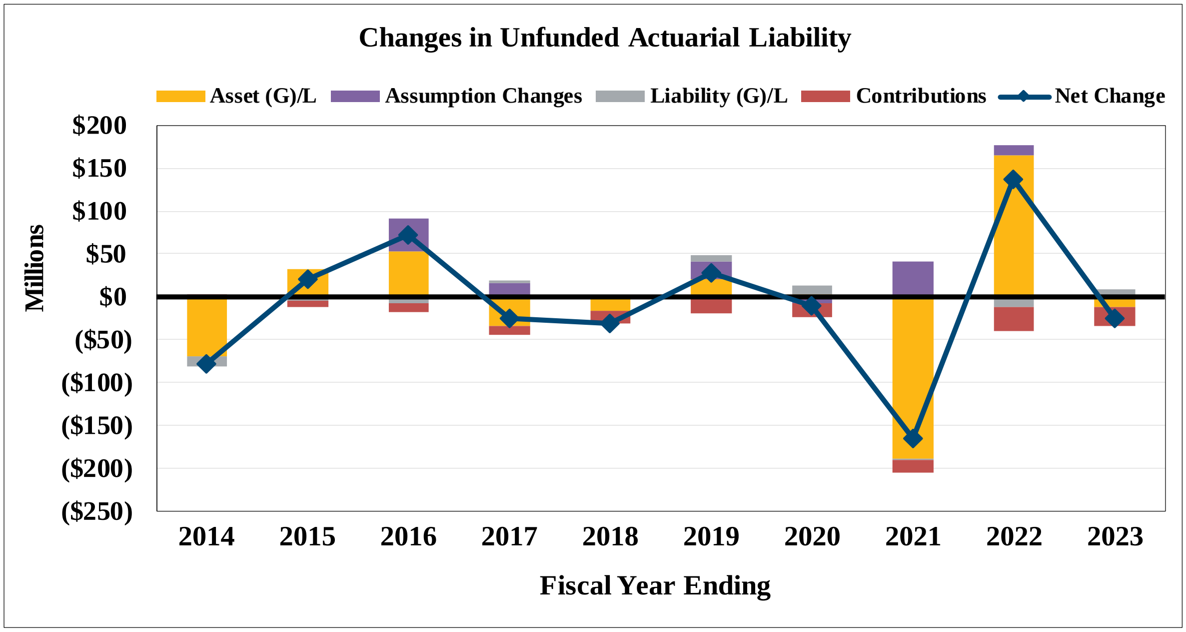


Table II-1 below summarizes the changes in the UAL for each year by source over the last 10 years.

Table II-1

Unfunded Actuarial Liability (UAL) Change by Source
(in millions)

FYE	Asset Experience	Liability Experience	Assumption Changes	Contributions	Total UAL Change
2014	($69.6)	($12.5)	$0.0	$3.0	($79.1)
2015	31.5	(5.1)	0.0	(6.5)	19.9
2016	52.4	(8.3)	38.1	(9.9)	72.3
2017	(34.5)	2.7	16.0	(9.4)	(25.2)
2018	(16.0)	1.2	0.0	(15.9)	(30.7)
2019	20.2	7.0	20.7	(19.5)	28.4
2020	3.3	9.7	(7.7)	(15.9)	(10.6)
2021	(189.4)	(1.0)	40.7	(15.4)	(165.1)
2022	165.2	(12.6)	11.9	(27.6)	136.9
2023	(12.0)	8.9	0.0	(22.3)	(25.4)
Total	**($48.9)**	**($10.0)**	**$119.7**	**($139.3)**	**($78.5)**

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISKS

The average annual geometric investment return over the 10-year period is 7.7% and has resulted in investment gains in five of the last 10 years, and decreased the UAL in total over the period. The significant gain in 2021 was largely offset by a large loss in 2022. The gains and losses from 2020 to 2023 are still being phased-in to the contribution rate calculation under the direct rate smoothing amortization method but are fully recognized immediately in the UAL calculation.

Over the same time period, the assumed rate of return decreased from 7.75% to 6.75%. It is important to note that these changes simply reflect a downward revision of the estimate of future investment earnings and ultimately costs will be determined by actual investment earnings.

The impact of all assumption changes is represented by the purple bars in the earlier charts and also includes changes in mortality rates projected in the future which had an impact on the measurement of the UAL.

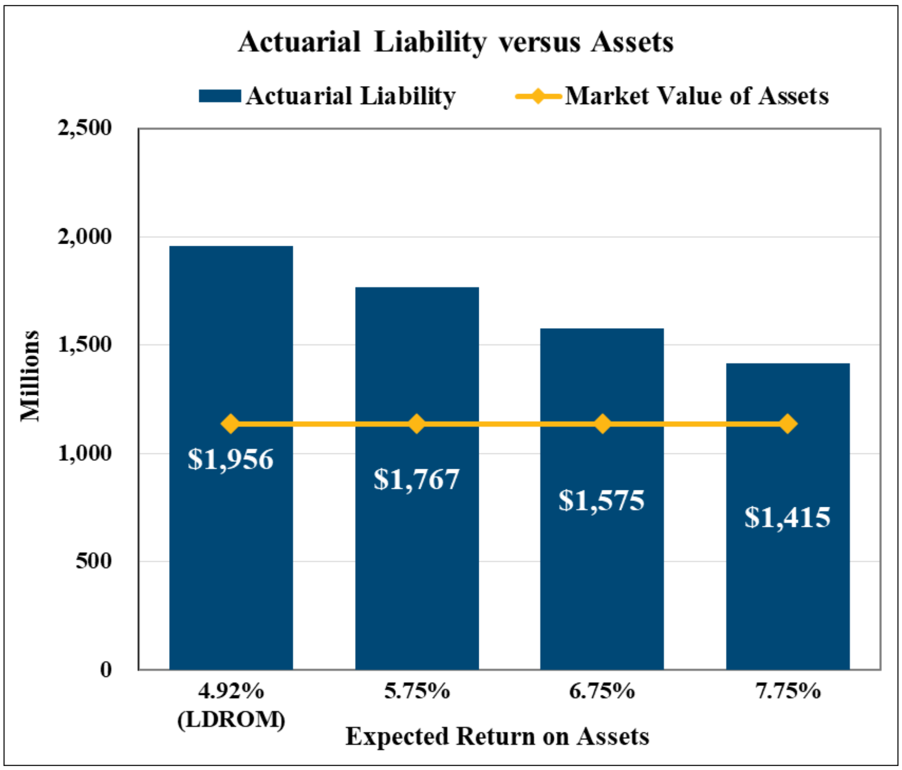
Each year, the UAL is expected to increase for benefits earned in the current year (the normal cost), administrative expenses, and interest on the UAL. This expected increase is referred to as the tread water level. The difference between actual contributions and the tread water level are shown by the red bars in the prior charts. If contributions are greater than the tread water level, the UAL is expected to decrease. Conversely, if contributions are less than the tread water level, the UAL is expected to increase. The amortization policy (as well as the contribution-timing lag) can impact whether or not the contributions exceed the tread water level. Contributions have been above the tread water level since 2015.

Effective with the June 30, 2019 valuation, changes were made to the amortization policy that reduced the current contribution level by extending the amortization schedule for the remaining 2013 UAL. However, even with these changes, contributions are still significantly above the tread water level. The single period equivalent amortization period – i.e., the length of time required to amortize the overall UAL as a level percentage of payroll based on the total current amortization payment – is approximately 10 years.

Assessing Costs and Risks

Sensitivity to Investment Returns

The chart below compares the Market Value of Assets (line) to the Actuarial Liabilities (bars) discounted at the current expected rate of return (7.00%) and at discount rates 100 basis points above and below the expected rate of return. In addition, we have added an additional measurement, the Low Default Risk Obligation Measure (LDROM), which is the Actuarial Liability using a discount rate derived from low-default-risk fixed income securities that approximately match the benefit payments of the plan.



If investments return 6.75% annually, the Plan will need approximately $1.6 billion in assets today to pay the benefits associated with service earned to date, compared to current assets of $1.1 billion. If investment returns are only 5.75%, the Plan would need approximately $1.8 billion in assets today, and if investment returns are 7.75%, the Plan would need approximately $1.4 billion in assets.

MercedCERA invests in a diversified portfolio to achieve the best possible returns at an acceptable level of risk. MercedCERA's average return over the last 20 years is 6.6%. Please refer to Table III-4 (page 26) for the asset returns by year since 2000.

The lowest risk portfolio for a pension plan would be composed entirely of low-default-risk fixed income securities whose cash flows approximately match the benefit cash flows of the plan. However, such a portfolio would have a lower expected rate of return (4.92% as of June 30,

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISKS

2023) than the diversified portfolio (6.75%). The Low-Default-Risk Obligation Measure (LDROM) represents what the Actuarial Liability would be if MercedCERA's assets were invested in such a portfolio. As of June 30, 2023, the LDROM is $1.96 billion[1] compared to the Actuarial Liability of $1.57 billion for MercedCERA. The $0.39 billion difference can be viewed as the expected savings from taking on the investment risk of the diversified portfolio. Alternatively, it can be viewed as the potential cost of minimizing the investment risk.

If MercedCERA were to invest in the LDROM portfolio and not a diversified portfolio, the funded status would be lower, and expected contribution requirements would increase. The security of MercedCERA's pension benefits relies on the current assets, future investment earnings, and the ability and willingness of employers to make future contributions. If MercedCERA were to invest in the LDROM portfolio, it would not change current assets, but it could potentially reduce future investment earnings, potentially changing the level of reliance on future employer contributions. However, investing in an LDROM portfolio would generate more predictable future investment earnings and future contributions.

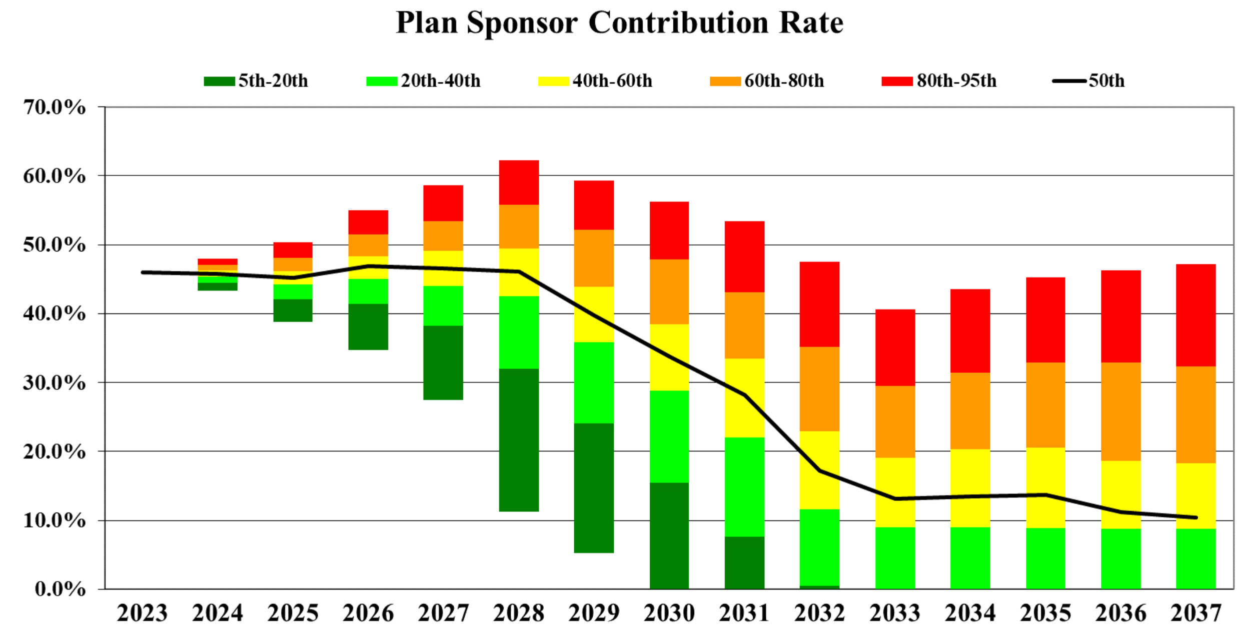
[1] Based on a discount rate equal to the June 30, 2023 FTSE Pension Liability Index of 4.92%, and all other assumptions and methods as used to calculate the Actuarial Liability.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISKS

Sensitivity to Investment Returns - Stochastic Projections

Stochastic projections serve to show the range of probable outcomes of various measurements. The following graphs show the projected range of the employer contribution rate and the funded ratio on a Market Value of Assets basis. The range in both scenarios is driven by the volatility of investment returns, which reflect a 13.7% standard deviation of annual returns, as indicated by Meketa's capital market assumptions at the end of 2022.

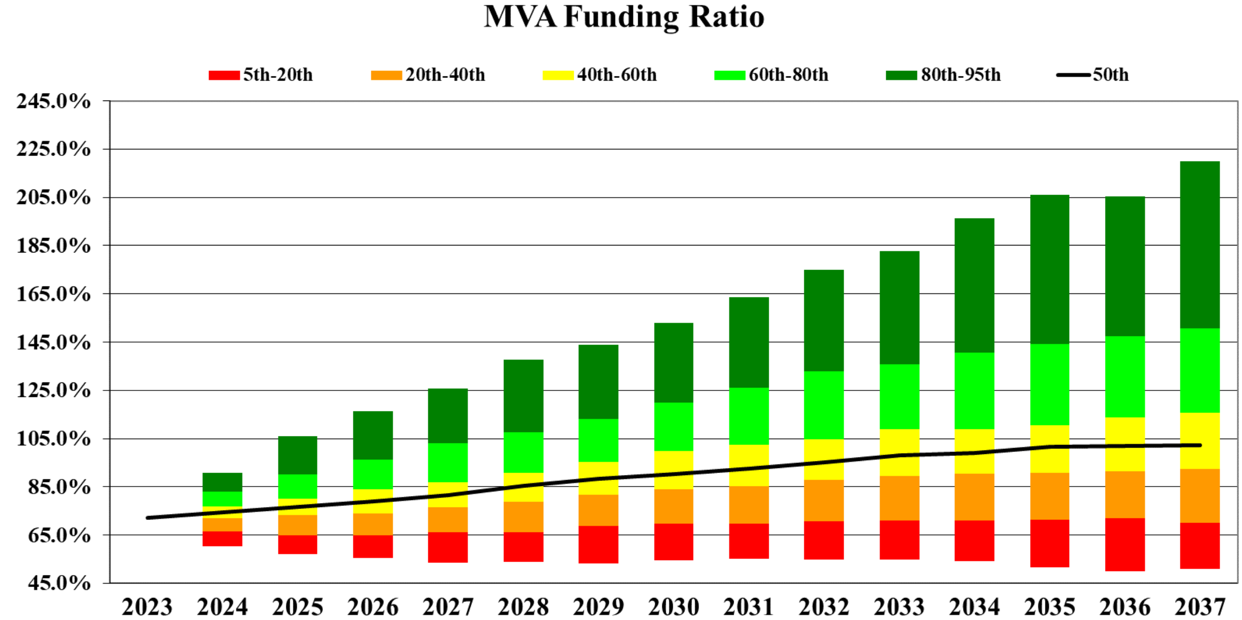
Stochastic Projection of Employer Contributions as a Percent of Pay



The stochastic projection of employer contributions as a percent of pay shows the probable range of future contribution rates. The baseline contribution rate (black line), which is based on the median of the simulations using an average return of 6.75%, aligns closely with the projections discussed in subsection D of the Executive Summary of this report. In the most pessimistic scenario shown, the 95th percentile, the projected employer contribution rate is above 60% of pay in 2028. Conversely, the most optimistic scenario shown, the 5th percentile, the projected employer contribution rate declines to 0% in 2030. We note that these projections allow the employer contribution to drop below the normal cost only if the Plan becomes extremely over-funded (above 120%), as required under PEPRA.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISKS

Stochastic Projection of Funded Ratio on a Market Value of Assets Basis



The graph above shows the projection of the funded ratio based on the market value of assets. While the baseline-funded ratio (black line) is projected to be approximately 100% at the end of the 15-year period shown here, there is a wide range of potential outcomes. Good investment returns have the likelihood of bringing the funded ratio well over 100%. Due to the current funding policy of the Plan, even in scenarios with unfavorable investment returns, the Plan is projected to remain over 50% funded as long as the actuarially determined contributions continue to be made.

Contribution Risk

While investment returns are typically the dominant factor in volatility, contribution rates can also be sensitive to future salary increases and the hiring of new members. When member payroll growth stagnates or even declines, the dollar level of contributions made to the Plan also stagnate or decline because contributions are based on payroll levels, though this will generally only present a funding issue if there is an extended pattern of payroll reductions.

There is also a risk of the contribution rate increasing even higher when payroll decreases because the Plan's funding policy amortizes the UAL as a level percentage of pay. This means that the UAL payments increase at the assumed payroll growth rate of 2.75%, so that the payment is expected to remain constant as a percentage of payroll. If payroll growth is less than the expected 2.75% or there is a decline in payroll, the UAL payments are spread over a smaller payroll base and the contribution rate as a percentage of pay increases, potentially making the Plan less affordable for a sponsor with a declining payroll and/or revenue base.

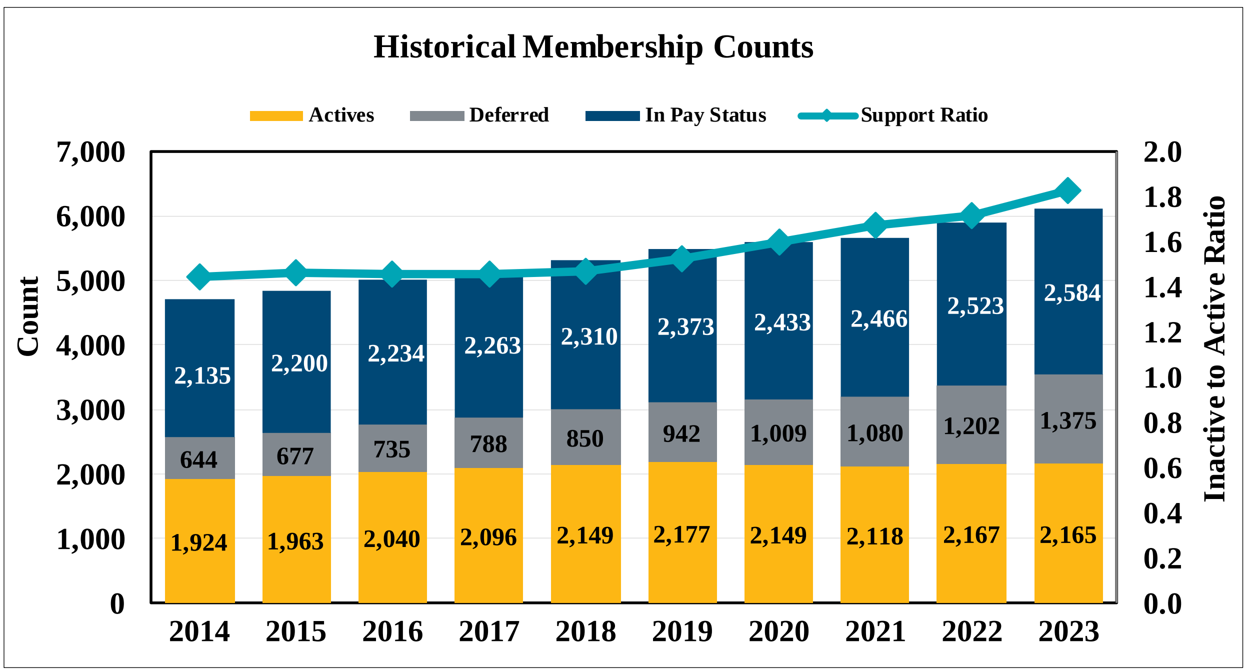
Plan Maturity Measures

The future financial condition of a mature pension plan is more sensitive to each of the risks identified above than a less mature plan. It is important to understand the maturity of the Plan and how the maturity has changed over time.

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

Inactives per Active (Support Ratio)

One simple measure of plan maturity is the ratio of the number of inactive members (those receiving benefits or those entitled to a deferred benefit) to the number of active members. The Support Ratio is expected to increase gradually as a plan matures. The chart below shows the growth in the Support Ratio from 2014 to 2023 as the number of inactives increased relative to the number of actives.

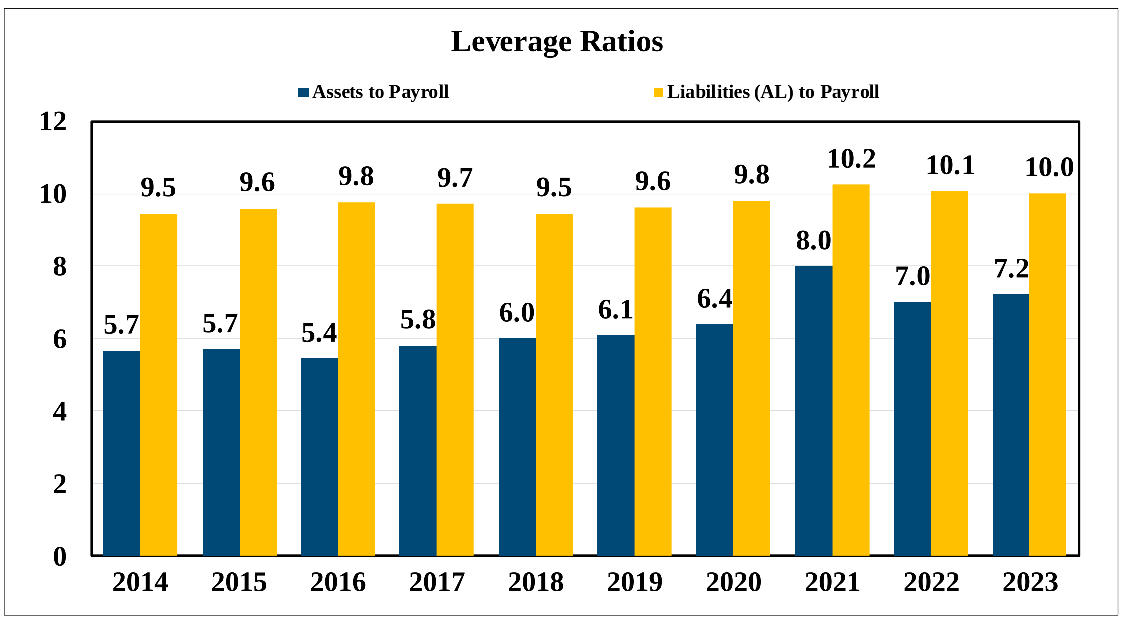


SECTION II – IDENTIFICATION AND ASSESSMENT OF RISKS

Leverage Ratios

Leverage or volatility ratios measure the size of the plan compared to its revenue base more directly. The asset leverage ratio is simply the Market Value of Assets to active member payroll and indicates the sensitivity of the Plan to investment returns. The liability leverage ratio is the Plan's Actuarial Liability to active member payroll and indicates the sensitivity of the Plan to assumption changes or demographic experience.

The following charts show the historical leverage ratios of the Plan. Both leverage ratios have gradually increased since 2014, but the asset to payroll ratio still lags behind the liability to payroll ratio, due to the funded status of the Plan. We note that the asset leverage ratio increased significantly in 2021, from 6.4 to 8.0, due to investment returns, and conversely decreased in 2022 to 7.0 due to investment losses. We expect these ratios to converge over time as the Plan becomes better funded if assumptions are met. Therefore, the Plan is expected to become more sensitive to market variation in the future than it is today.



To appreciate the impact of the ratio of assets to payroll on contributions rates, consider the situation for a new plan with almost no assets. Even if the assets suffer a bad year of investment returns, the impact on the contribution rate is nil, because the assets are so small.

Suppose MercedCERA's assets lose 10% of their value in a year. Because they were assumed to earn 6.75%, there is an actuarial loss of 16.75% of plan assets. Based on the current ratio of assets to payroll (720%), that means the loss in assets is about 120.6% of active payroll (720% of the 16.75% loss). There is only one source of funding to make up for this loss: contributions. Consequently, barring future offsetting investment gains, the employers must make up the asset loss in future contributions. In this example of a one-year loss of 10%, this shortfall will eventually require an additional amortization payment of approximately 9.5% of payroll once fully phased-in, if amortized over the Plan's 24-year schedule for gains and losses.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISKS

More Detailed Assessment

While a more detailed assessment is always valuable to enhance the understanding of the risks identified above, we believe the scenarios illustrated above cover the primary risks facing the Plan at this time. We would be happy to provide the Board with a more in-depth analysis at their request.

SECTION III – ASSETS

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

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

- **Disclosure** of Plan assets as of June 30, 2022 and June 30, 2023,
- Statement of the **changes** in market values during the year,
- Comparison of the actual and expected investment performance during the year, and
- Historical **investment performance.**

As of June 30, 2014, an Actuarial Value of Assets distinct from the Market Value of Assets is no longer used in the calculations of the Unfunded Actuarial Liability or funded status due to the implementation of the funding policy adopted by the Board on January 22, 2015. This policy change was made in conjunction with 24-year (22-year for assumption changes) layered amortization of any unexpected changes in the Unfunded Actuarial Liability starting with the June 30, 2014 valuation. A calculation of the Actuarial Value of Assets is no longer shown in the valuation report, except to show the history of returns on the actuarial assets in Table III-4.

Also in prior valuations, a distinction was made between actuarial assets and valuation assets, with the latter reduced for non-valuation reserves, such as the Contingency Reserve. Because there are no such reserves as of June 30, 2022 and June 30, 2023, the two asset values are equal, and throughout this report we have used the term Market Value of Assets exclusively, except to show the history of returns on the valuation assets in Table III-4.

Disclosure

The market value represents "snapshot" or "cash out" values that provide the principal basis for measuring financial performance from one year to the next.

Table III-1 on the next page discloses and compares each asset value as of June 30, 2022 and June 30, 2023.

SECTION III – ASSETS

Table III-1
Statement of Assets at Market Value

Assets		**June 30, 2023**		**June 30, 2022**
Cash and Short-Term Investments:				
Cash invested with Merced County Treasurer	$	542,775	$	962,632
Cash invested with Northern Trust		6,734,512		5,405,400
Other cash and cash equivalents with Northern Trust		358,464		1,606,020
Total Cash and Short-Term Investments	$	7,635,751	$	7,974,052
Receivables:				
Bond interest	$	275,529	$	594,819
Dividends		0		0
Contributions		3,148,475		2,748,334
Distributions		78,443		66,780
Securities sold		0		0
Other		6,621		16,543
Total Receivables	$	3,509,068	$	3,426,476
Investments at Market Value:				
U.S. government and agency obligations	$	2,507	$	39,370,729
Domestic fixed income		152,015,158		163,748,458
Common stocks (domestic)		28,608,415		24,197,364
Common stocks (index funds)		237,131,866		211,862,277
Common stocks (international)		210,796,922		184,743,517
Common stocks (international index funds)		0		0
Real estate		83,852,232		91,666,608
Alternative investments		411,138,098		336,826,066
Total Investments at Market Value	$	1,123,545,198	$	1,052,415,019
Other Assets:				
Prepaid expense	$	111,612	$	119,533
Capital assets, net of accumulated depreciation of $2,413,926 and $2,149,188 respectively		1,038,580		1,281,753
Total Assets		1,135,840,209		1,065,216,833
Liabilities				
Accounts payable	$	655,575	$	682,234
Securities purchased		17,846		8,451
Unclaimed contributions		85,403		85,403
Capital Calls		0		0
Total Liabilities		758,824		776,088
Market Value of Assets	**$**	**1,135,081,385**	**$**	**1,064,440,745**

Changes in Market Value

The components of asset change are:

- Contributions (employer and employee)
- Benefit payments
- Expenses (investment and administrative)
- Investment income (realized and unrealized)

Table III-2 shows the components of change in the Market Value of Assets during 2022 and 2023.

Table III-2
Changes in Market Values

Additions		**Fiscal Year ending June 30, 2023**		**Fiscal Year ending June 30, 2022**
Contributions:				
Employer	$	68,648,166	$	65,629,994
Plan members		13,445,557		12,124,583
Total Contributions	$	82,093,723	$	77,754,577
Investment Income/(Loss) from Investment Activities:				
Net appreciation/(depreciation) in fair value of investments	$	73,272,953	$	(94,850,878)
Investment income		13,243,231		10,671,989
Other revenue		503		57,231
Less investment expenses		(3,099,245)		(2,994,233)
Total Investment Income/(Loss) from Investment Activities	$	83,417,442	$	(87,115,891)
Total Additions		165,511,165		(9,361,314)
Deductions				
Benefits paid	$	90,585,672	$	85,912,580
Refunds of contributions		1,262,876		896,116
Administrative expense		2,789,967		2,522,797
Actuarial expense		232,010		120,292
Total Deductions		94,870,525		89,451,785
Net Increase/(Decrease)	$	70,640,640	$	(98,813,099)
Market Value of Assets, Beginning of Year		1,064,440,745		1,163,253,844
Market Value of Assets, End of Year	**$**	**1,135,081,385**	**$**	**1,064,440,745**

SECTION III – ASSETS

Investment Performance

The following table shows the development of the asset gain/(loss) and investment return.

Table III-3
Development of Asset Return

Market Value of Assets, Beginning of Year	$	1,064,440,745
Contributions		82,093,723
Benefit Paid and Refunds of Contributions		(91,848,548)
Administrative Expense		(3,021,977)
Expected Investment Earnings (6.75%)		71,425,574
Expected Market Value of Assets, End of Year	$	1,123,089,517
Investment Gain / (Loss)		11,991,868
Market Value of Assets, End of Year		$1,135,081,385
Actual Investment Earnings	$	83,417,442
Return		7.88%

SECTION III – ASSETS

The table below shows the historical annual asset returns on a market value and actuarial value basis, as well as the increase in the Consumer Price Index (CPI) since 2000. Beginning June 30, 2014, the Actuarial Value of Assets is equal to the Market Value of Assets, so the net returns are the same for FY 2015 onwards.

Table III-4
Net Return on Assets vs. Increase in Consumer Price Index

Year Ended June 30	Net Return at Market Value	Net Return at Actuarial Value	Increase in Consumer Price Index[1]
2000	9.1%	11.5%	3.7%
2001	-3.6%	8.6%	3.2%
2002	-5.6%	4.9%	1.1%
2003	4.6%	3.3%	2.1%
2004	12.6%	3.3%	3.3%
2005	8.7%	2.5%	2.5%
2006	7.6%	4.7%	4.3%
2007	16.3%	8.9%	2.7%
2008	-6.7%	1.2%	5.0%
2009	-22.1%	-4.9%	-1.4%
2010	12.7%	7.0%	1.1%
2011	22.6%	2.6%	3.6%
2012	-1.6%	0.6%	1.7%
2013	11.8%	3.8%	1.8%
2014	17.1%	11.8%	2.1%
2015	2.9%	2.9%	0.1%
2016	-0.1%	-0.1%	1.0%
2017	12.4%	12.4%	1.6%
2018	9.4%	9.4%	2.9%
2019	4.8%	4.8%	1.6%
2020	6.6%	6.6%	0.6%
2021	27.7%	27.7%	5.4%
2022	-7.5%	-7.5%	9.1%
2023	7.9%	7.9%	3.0%
20-Year Compound Average	**6.6%**	**5.1%**	**2.6%**
15-Year Compound Average	**6.3%**	**5.4%**	**2.3%**
10-Year Compound Average	**7.7%**	**7.2%**	**2.7%**
5-Year Compound Average	**7.3%**	**7.3%**	**3.9%**

[1] *Based on All Urban Consumers - U.S. City Average, June indices.*

SECTION IV – LIABILITIES

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

- **Disclosure** of Plan liabilities at June 30, 2022 and June 30, 2023, and
- Plan liabilities by **tier** as of June 30, 2023.

Disclosure

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the people ultimately using the figures and the purpose for which they are using them. Note that these liabilities are not applicable for settlement purposes, including the purchase of annuities and the payment of lump sums.

- **Present Value of Future Benefits:** Used for measuring all future Plan obligations, represents the amount of money needed today to fully fund all benefits of the Plan both earned as of the valuation date and those to be earned in the future by current plan participants, under the current Plan provisions.

- **Actuarial Liability:** Used for funding calculations, this liability is calculated taking the Present Value of Future Benefits and subtracting the present value of future Member Contributions and future employer normal costs under an acceptable actuarial funding method. The method used for this Plan is called the **Entry Age Normal** (EAN) funding method.

- **Unfunded Actuarial Liability:** The excess of the Actuarial Liability over the Market Value of Assets.

Table IV-1 on the following page discloses each of these liabilities for the current and prior valuations.

SECTION IV – LIABILITIES

Table IV-1
Present Value of Future Benefits and Actuarial Liability
(in thousands)

Item	June 30, 2023	June 30, 2022
Present Value of Future Benefits		
Actives	$ 599,529	$ 591,954
Deferred Members	78,002	68,625
Retirees	958,429	927,596
Disabled	71,743	72,211
Beneficiaries	72,131	71,322
Total MercedCERA	$ 1,779,834	$ 1,731,708
Actuarial Liability		
Total Present Value of Future Benefits	$ 1,779,834	$ 1,731,708
Present Value of Future Normal Costs		
Employer Portion	100,386	100,282
Employee Portion	104,838	102,092
Actuarial Liability	$ 1,574,609	$ 1,529,334
Market Value of Assets	$ 1,135,081	$ 1,064,441
Unfunded Actuarial Liability/(Surplus)	$ 439,528	$ 464,893

SECTION IV – LIABILITIES

Table IV-2 discloses the liabilities of the Plan as of June 30, 2023, split by tier.

Table IV-2
Liabilities by Group as of June 30, 2023
(in thousands)

Present Value of Future Benefits	General Tier 1	General Tier 2	General Tier 3	General Tier 4	General Total	Safety Tier 1	Safety Tier 2	Safety Tier 3	Safety Tier 4	Safety Total	All Total
Actives	$ 30,574	$ 276,394	$ 12,764	$ 147,039	$ 466,771	$ 8,809	$ 83,217	$ 1,386	$ 39,346	$ 132,757	$ 599,529
Deferred Members	8,319	48,455	1,615	5,726	64,115	300	12,317	211	1,058	13,887	78,002
Retirees	618,817	172,707	278	1,978	793,780	143,412	20,796	0	441	164,649	958,429
Disabled	15,651	8,358	225	236	24,471	34,614	12,658	0	0	47,272	71,743
Beneficiaries	45,215	5,393	0	38	50,646	20,712	773	0	0	21,485	72,131
Total	**$ 718,576**	**$ 511,307**	**$ 14,883**	**$ 155,018**	**$ 1,399,784**	**$ 207,847**	**$ 129,761**	**$ 1,597**	**$ 40,845**	**$ 380,050**	**$ 1,779,834**
Actuarial Liability											
Actives	$ 28,052	$ 221,509	$ 5,896	$ 50,805	$ 306,262	$ 8,275	$ 66,246	$ 658	$ 12,863	$ 88,042	$ 394,304
Deferred Members	8,319	48,455	1,615	5,726	64,115	300	12,317	211	1,058	13,887	78,002
Retirees	618,817	172,707	278	1,978	793,780	143,412	20,796	0	441	164,649	958,429
Disabled	15,651	8,358	225	236	24,471	34,614	12,658	0	0	47,272	71,743
Beneficiaries	45,215	5,393	0	38	50,646	20,712	773	0	0	21,485	72,131
Total	**$ 716,055**	**$ 456,422**	**$ 8,015**	**$ 58,783**	**$ 1,239,275**	**$ 207,313**	**$ 112,790**	**$ 869**	**$ 14,362**	**$ 335,335**	**$ 1,574,609**

SECTION V – CONTRIBUTIONS

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

For this Plan, the actuarial funding method used to determine the normal cost and the Unfunded Actuarial Liability is the **Entry Age Normal (EAN) C**ost Method. There are three primary components to the total contribution: the **normal cost rate** (employee and employer), the **Unfunded Actuarial Liability rate** (UAL rate), and the **administrative expense rate**.

The normal cost rate is determined in the following steps. First, an individual normal cost rate is determined by taking the value, as of entry age into the Plan, of each member's projected future benefits. This value is then divided by the value, also at entry age, of the member's expected future salary producing a normal cost rate that should remain relatively constant over a member's career.

The total normal cost is computed by adding the expected dollar amount of each active member's normal cost for the current year – known as the Individual Entry Age Method. The total normal cost is adjusted with interest to the middle of the year, to reflect the fact that the normal cost contributions are paid throughout the year as member payroll payments are made. Finally, the total normal cost rate, calculated by dividing the total normal cost by expected payroll of the closed group, is reduced by the member contribution rate to produce the employer normal cost rate.

Starting with the June 30, 2014 valuation, the Unfunded Actuarial Liability (UAL) is the difference between the EAN Actuarial Liability and the Market Value of Assets. The Unfunded Actuarial Liability payment was determined as the amount needed to fund the outstanding Unfunded Actuarial Liability as of June 30, 2013 over a closed period of 16 years, as a level percentage of pay. Effective with the June 30, 2019 valuation, 15% of the outstanding balance as of June 30, 2019 of the June 30, 2013 UAL amortization base is carved out as a separate base and amortized over a closed 14-year period (with 10 years remaining with this valuation) as a level percentage of payroll. The remaining 85% is amortized over a closed 14-year period (with 10 years remaining with this valuation), with 10 years of level payments as a percentage of payroll, and a four-year ramp down at the end of the period. Any subsequent unexpected change in the Unfunded Actuarial Liability after June 30, 2013 is amortized over 24 years (22 years for assumption changes) that includes a five-year phase-in/four-year phase-out (three-year phase-in/two-year phase-out for assumption changes) of the payments/credits for each annual layer.

The administrative expenses are assumed to be $2.9 million for the current Plan year, and are expected to increase by the inflation rate in future years. The administrative expenses are split between the employees and employers based on each group's share of the normal cost and UAL rates.

SECTION V – CONTRIBUTIONS

The table below and on the next page present the employer contribution rates for the Plan for this valuation.

Table V-1
Development of the Net Employer Contribution Rate as of June 30, 2023 for FYE 2025

	June 30, 2023	June 30, 2022
1. Total Normal Cost Rate	17.40%	17.86%
2. Member Contribution Rate[1]	8.29%	8.46%
3. Employer Normal Cost Rate (1-2)	9.11%	9.40%
4. UAL Amortization Rate	35.38%	34.71%
5. Administrative Expense Rate	1.54%	1.55%
6. Net Employer Contribution Rate (3+4+5)	46.03%	45.66%

[1] *Not including member's share of administrative expenses.*

SECTION V – CONTRIBUTIONS

Table V-2
FYE 2025 Net Employer Contribution Rate by Group

	General					Safety					All
	Tier 1	Tier 2	Tier 3	Tier 4	Total	Tier 1	Tier 2	Tier 3	Tier 4	Total	Total
County											
1. Total Normal Cost Rate	27.33%	19.35%	16.84%	13.95%	16.20%	37.62%	24.81%	25.11%	21.95%	23.56%	17.40%
2. Member Contribution Rate[1]	12.60%	9.41%	6.71%	6.97%	7.91%	14.98%	9.35%	9.17%	10.97%	10.26%	8.29%
3. Employer Normal Cost Rate (1-2)	14.73%	9.94%	10.13%	6.98%	8.29%	22.64%	15.46%	15.94%	10.98%	13.30%	9.11%
4. UAL Amortization Rate	32.97%	32.97%	32.97%	32.97%	32.97%	47.57%	47.57%	47.57%	47.57%	47.57%	35.38%
5. Administrative Expense Rate	1.65%	1.48%	1.49%	1.38%	1.43%	2.43%	2.18%	2.20%	2.03%	2.11%	1.54%
6. Net Employer Contribution Rate (3+4+5)	**49.35%**	**44.39%**	**44.59%**	**41.33%**	**42.69%**	**72.64%**	**65.21%**	**65.71%**	**60.58%**	**62.98%**	**46.03%**

[1] *Not including member's share of administrative expenses.*

SECTION V – CONTRIBUTIONS

The assets of the Plan are allocated between the General and Safety groups based on their share of the liability for non-active members. If the assets of the Plan exceed the liabilities of the non-active members, the remaining assets are allocated between the General and Safety groups based on their share of the liabilities for active members.

Table V-3
Allocation of the June 30, 2023 UAL and Development of UAL Amortization Rates for FYE 2025

	General	Safety	Total
1. Market Value of Assets			$ 1,135,081,385
2. Inactive Actuarial Liability	933,012,308	247,292,677	1,180,304,985
3. Allocation of Assets for Inactives	79.05%	20.95%	100.00%
4. Total Assets for Inactives	897,263,772	237,817,613	1,135,081,385
5. Net Assets for Distribution (1 - 4 not less than zero)			$ 0
6. Active Actuarial Liability	$ 306,262,301	$ 88,042,151	$ 394,304,452
7. Allocation of Remaining Assets	77.67%	22.33%	100.00%
8. Total Assets for Actives (7 x 5)	0	0	0
9. Market Value of Assets (4 + 8)	$ 897,263,772	$ 237,817,613	$ 1,135,081,385
10. Total Actuarial Liability	1,239,274,609	335,334,828	1,574,609,437
11. Unfunded Actuarial Liability (UAL) (10 - 9)	**$ 342,010,837**	**$ 97,517,215**	**$ 439,528,052**
12. UAL Amortization (see table V-4)	43,292,070	12,343,826	55,635,896
13. Total Payroll	131,306,182	25,946,213	157,252,395
14. UAL Amortization Rate (12 divided by 13)	**32.97%**	**47.57%**	**35.38%**

SECTION V – CONTRIBUTIONS

Table V-4 presents the calculation of the UAL payments for the Plan.

Table V-4
Development of Amortization Payment
For the June 30, 2023 Actuarial Valuation

Type of Base	Date Established	Initial Amount	Initial Amortization Years	June 30, 2023 Outstanding Balance	Remaining Amortization Years	Current Phase In/Out Percentage	Amortization Amount	% of Pay	% of Pay After Phase-In
1. Initial UAL - extended	6/30/2019	$ 367,575,087	14	$ 293,505,618	10	100%	$ 43,338,823	27.56%	27.56%
2. Initial UAL - carve out	6/30/2019	64,866,192	14	55,527,645	10	100%	6,772,059	4.31%	4.31%
3. (Gain)/Loss Base	6/30/2014	(71,384,203)	24	(73,559,509)	15	100%	(7,293,863)	-4.64%	-4.64%
4. (Gain)/Loss Base	6/30/2015	34,000,650	24	35,884,861	16	100%	3,361,550	2.14%	2.14%
5. (Gain)/Loss Base	6/30/2016	47,466,429	24	51,024,889	17	100%	4,538,386	2.89%	2.89%
6. (Gain)/Loss Assumption	6/30/2016	38,112,827	22	37,445,477	15	100%	3,502,911	2.23%	2.23%
7. (Gain)/Loss Base	6/30/2017	(29,098,191)	24	(31,849,389)	18	100%	(2,701,494)	-1.72%	-1.72%
8. (Gain)/Loss Assumption	6/30/2017	15,960,129	22	16,042,189	16	100%	1,425,069	0.91%	0.91%
9. (Gain)/Loss Base	6/30/2018	(14,219,151)	24	(15,778,459)	19	100%	(1,281,171)	-0.81%	-0.81%
10. (Gain)/Loss Base	6/30/2019	28,753,231	24	32,220,548	20	100%	2,512,903	1.60%	1.60%
11. (Gain)/Loss Assumption	6/30/2019	20,714,918	22	21,493,631	18	100%	1,743,371	1.11%	1.11%
12. (Gain)/Loss Base	6/30/2020	12,189,143	24	13,575,400	21	80%	828,028	0.53%	0.66%
13. (Gain)/Loss Assumption	6/30/2020	(7,652,716)	22	(8,034,220)	19	100%	(625,978)	-0.40%	-0.40%
14. (Gain)/Loss Base	6/30/2021	(187,358,380)	24	(204,061,112)	22	60%	(9,271,892)	-5.90%	-9.83%
15. (Gain)/Loss Assumption	6/30/2021	40,723,349	22	43,110,260	20	100%	3,236,112	2.06%	2.06%
16. (Gain)/Loss Base	6/30/2022	154,923,054	24	162,879,380	23	40%	4,974,371	3.16%	7.91%
17. (Gain)/Loss Assumption	6/30/2022	11,871,588	22	12,365,177	21	67%	612,091	0.39%	0.58%
18. (Gain)/Loss Base	6/30/2023	(2,264,333)	24	(2,264,333)	24	20%	(35,379)	-0.02%	-0.11%
Total				$ 439,528,052			$ 55,635,896	35.38%	36.43%

The single period equivalent amortization period – i.e., the length of time required to amortize the overall UAL as a level percentage of payroll based on the total current amortization payment – is approximately 10 years.

SECTION VI – ANNUAL COMPREHENSIVE FINANCIAL REPORTING INFORMATION

The Governmental Accounting Standards Board (GASB) adopted Statement Nos. 67 and 68, replacing GASB Statement Nos. 25 and 27. GASB 67 is effective for periods beginning after June 15, 2013 (first effective for the fiscal year ending June 30, 2014 for the Plan) and GASB 68 is effective for fiscal years beginning after June 15, 2014 (first effective for the fiscal year ending June 30, 2015 for the Employer). The disclosures needed to satisfy the GASB requirements can be found in the MercedCERA GASB 67/68 Report as of June 30, 2023.

In accordance with Governmental Finance Officers Association (GFOA) and their recommended checklist for Annual Comprehensive Financial Reports (ACFRs), we continue to prepare the following disclosures:

Analysis of Financial Experience

This schedule shows the history of gains or losses arising from investment and liability sources, as well as non-recurring items.

Schedule of Funded Liabilities by Type

The schedule of funded liabilities by type (formerly referred to as the solvency test) shows the portion of Actuarial Liabilities for active member contributions, inactive members, and the employer financed portion of the active members that are covered by the Actuarial Value of Assets.

Actuarial Balance Sheet

The actuarial balance sheet shows the components of the Actuarial Liabilities of the Plan and the actuarial assets that are intended to satisfy those liabilities.

SECTION VI – ANNUAL COMPREHENSIVE FINANCIAL REPORTING INFORMATION

Table VI-1
Analysis of Financial Experience
Gain (or Loss) in Actuarial Liability During Years Ended June 30
Resulting from Differences Between Assumed Experience
and Actual Experience
(in thousands)

Type of Activity	Gain (or Loss) for Year Ending June 30: 2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Investment Income and Expenses	$ 11,992	$ (165,247)	$ 189,425	$ (3,288)	$ (20,208)	$ 15,963	$ 34,498	$ (52,420)	$ (31,459)	$ 22,058
Combined Liability Experience	(8,913)	12,615	999	(9,654)	(7,038)	(1,158)	(2,720)	8,327	5,096	12,533
Gain (or Loss) During Year from Financial Experience	$ 3,079	$ (152,632)	$ 190,424	$ (12,942)	$ (27,246)	$ 14,805	$ 31,778	$ (44,093)	$ (26,363)	$ 34,591
Non-Recurring Gain (or Loss) Items	(819)	(14,169)	(43,792)	8,408	(22,230)	(576)	(18,639)	(41,488)	(7,636)	36,803
Composite Gain (or Loss) During Year	$ 2,260	$ (166,801)	$ 146,632	$ (4,534)	$ (49,476)	$ 14,229	$ 13,139	$ (85,581)	$ (33,999)	$ 71,394

SECTION VI – ANNUAL COMPREHENSIVE FINANCIAL REPORTING INFORMATION

Table VI-2
Schedule of Funded Liabilities by Type
(dollars in thousands)

Valuation Date June 30,	(A) Active Member Contributions	(B) Retirees And Beneficiaries	(C) Remaining Active Members' Liabilities[1]	Reported Assets	Portion of Actuarial Liabilities Covered by Reported Assets (A)	(B)	(C)
2023	$ 91,021	$ 1,102,303	$ 381,285	$ 1,135,081	100%	95%	0%
2022 [2]	89,217	1,071,129	368,988	1,064,441	100%	91%	0%
2021 [4]	88,147	1,038,307	364,778	1,163,254	100%	100%	10%
2020 [3]	84,767	986,071	342,043	919,815	100%	85%	0%
2019 [2]	86,356	932,909	350,930	866,503	100%	84%	0%
2018	86,585	871,095	344,239	826,654	100%	85%	0%
2017	85,150	834,643	339,909	753,769	100%	80%	0%
2016 [2]	81,880	804,658	314,657	670,016	100%	73%	0%
2015	78,078	765,738	287,365	672,319	100%	78%	0%
2014	75,582	739,428	281,231	657,325	100%	79%	0%

[1] *Includes deferred members.*

[2] *Reflects revised economic and demographic assumptions.*

[3] *Reflects revised demographic assumptions.*

[4] *Reflects revised economic assumptions.*

Table VI-3
Actuarial Balance Sheet as of June 30, 2023

	Assets	
1.	Market value of assets	$ 1,135,081,385
2.	Present value of future contributions by members	104,838,029
3.	Present value of future employer contributions for normal cost	100,386,139
4.	Present value of other future employer contributions (UAL)	439,528,052
5.	**Total actuarial assets**	**$ 1,779,833,605**
	Liabilities	
6.	Present value of retirement allowances payable to retired/disabled members and their survivors	$ 1,102,302,904
7.	Present value of service retirement allowances payable to presently active members and their survivors	497,155,067
8.	Present value of allowances payable to current and future vested terminated and their survivors	138,877,087
9.	Present value of disability retirement allowances payable to presently active members and their survivors	26,707,855
10.	Present value of death benefits payable on behalf of presently active members	3,974,512
11.	Present value of members' contributions to be returned upon withdrawal	10,816,180
12.	Special Reserves	-
13.	**Total present value of benefits**	**$ 1,779,833,605**

APPENDIX A – MEMBERSHIP INFORMATION

Summary of Participant Data (By Group) As of June 30, 2023			
	General	Safety	Total
Active Participants			
Number	1,857	308	2,165
Average Age	42.75	38.80	42.19
Average Benefit Service	8.55	9.65	8.71
Average Pay	$67,989	$80,816	$69,814
Service Retired			
Number	1,810	242	2,052
Average Age	71.79	66.01	71.11
Average Annual Total Benefit	$36,979	$50,718	$38,599
Beneficiaries & QDROs			
Number	277	75	352
Average Age	75.58	72.73	74.97
Average Annual Total Benefit	$20,079	$29,644	$22,117
Duty Disabled			
Number	51	88	139
Average Age	69.83	63.92	66.09
Average Annual Total Benefit	$29,486	$38,418	$35,141
Non-Duty Disabled			
Number	39	2	41
Average Age	68.56	64.66	68.37
Average Annual Total Benefit	$18,762	$26,774	$19,152
Total Receiving Benefits			
Number	2,177	407	2,584
Average Age	72.17	66.79	71.32
Average Annual Total Benefit	$34,327	$44,057	$35,859
Terminated Vested			
Number	410	53	463
Average Age	47.61	42.92	47.07
Average Benefit Service	9.13	9.27	9.15
Transfers			
Number	173	53	226
Average Age	50.18	45.24	49.02
Average Benefit Service	4.40	4.27	4.37
Funds on Account			
Number	614	72	686
Average Age	39.31	34.33	38.79
Average Benefit Service	1.34	1.38	1.34
Total Deferred			
Number	1,197	178	1,375
Average Age	43.72	40.14	43.26
Average Benefit Service	4.45	4.59	4.47

APPENDIX A – MEMBERSHIP INFORMATION

Summary of Participant Data (General) As of June 30, 2023	General Tier 1	General Tier 2	General Tier 3	General Tier 4	General Total
Active Participants					
Number	28	552	52	1,225	1,857
Average Age	58.31	50.21	46.70	38.86	42.75
Average Benefit Service	26.50	18.19	6.44	3.89	8.55
Average Pay	$103,983	$78,732	$102,277	$60,870	$67,989
Service Retired					
Number	1,188	598	7	17	1,810
Average Age	73.85	67.92	65.20	66.31	71.79
Average Annual Total Benefit	$43,307	$25,569	3,249	10,047	$36,979
Beneficiaries & QDROs					
Number	231	45	0	1	277
Average Age	77.52	65.79	N/A	67.40	75.58
Average Annual Total Benefit	$21,810	$11,559	N/A	$3,573	$20,079
Duty Disabled					
Number	30	21	0	0	51
Average Age	75.71	61.42	N/A	N/A	69.83
Average Annual Total Benefit	$32,132	$25,706	N/A	N/A	$29,486
Non-Duty Disabled					
Number	24	13	1	1	39
Average Age	74.87	59.65	51.33	50.41	68.56
Average Annual Total Benefit	$21,585	$13,438	$17,236	$21,737	$18,762
Total Receiving Benefits					
Number	1,473	677	8	19	2,177
Average Age	74.48	67.42	63.47	65.53	72.17
Average Annual Total Benefit	$39,354	$24,409	$4,997	$10,321	$34,327
Terminated Vested					
Number	30	251	41	88	410
Average Age	62.30	48.91	44.82	40.20	47.61
Average Benefit Service	9.96	11.05	4.07	5.75	9.13
Transfers					
Number	13	130	1	29	173
Average Age	59.52	51.83	55.60	38.43	50.18
Average Benefit Service	6.49	4.57	3.03	2.74	4.40
Funds on Account					
Number	3	62	9	540	614
Average Age	63.79	48.57	41.21	38.08	39.31
Average Benefit Service	2.68	2.06	1.58	1.24	1.34
Total Deferred					
Number	46	443	51	657	1,197
Average Age	61.61	49.72	44.40	38.38	43.72
Average Benefit Service	8.50	7.89	3.61	1.91	4.45

APPENDIX A – MEMBERSHIP INFORMATION

Summary of Participant Data (Safety) As of June 30, 2023	Safety Tier 1	Safety Tier 2	Safety Tier 3	Safety Tier 4	Safety Total
Active Participants					
Number	5	123	5	175	308
Average Age	57.86	45.49	41.74	33.46	38.80
Average Benefit Service	21.14	17.18	6.48	4.12	9.65
Average Pay	$164,893	$93,055	$84,726	$69,699	$80,816
Service Retired					
Number	189	51	0	2	242
Average Age	68.29	57.73	N/A	61.00	66.01
Average Annual Total Benefit	$56,111	$32,068	N/A	$16,654	$50,718
Beneficiaries & QDROs					
Number	72	3	0	0	75
Average Age	73.58	52.52	N/A	N/A	72.73
Average Annual Total Benefit	$30,063	$19,589	N/A	N/A	$29,644
Duty Disabled					
Number	56	32	0	0	88
Average Age	70.20	52.93	N/A	N/A	63.92
Average Annual Total Benefit	$43,921	$28,788	N/A	N/A	$38,418
Non-Duty Disabled					
Number	1	1	0	0	2
Average Age	53.54	75.78	N/A	N/A	64.66
Average Annual Total Benefit	$34,391	$19,156	N/A	N/A	$26,774
Total Receiving Benefits					
Number	318	87	0	2	407
Average Age	69.78	55.99	N/A	61.00	66.79
Average Annual Total Benefit	$47,998	$30,283	N/A	$16,654	$44,057
Terminated Vested					
Number	1	43	3	6	53
Average Age	57.07	43.67	40.65	36.29	42.92
Average Benefit Service	7.83	9.81	5.99	7.30	9.27
Transfers					
Number	2	42	0	9	53
Average Age	56.49	46.74	N/A	35.74	45.24
Average Benefit Service	3.04	4.65	N/A	2.76	4.27
Funds on Account					
Number	1	7	1	63	72
Average Age	68.14	45.33	34.73	32.57	34.33
Average Benefit Service	2.01	1.05	0.09	1.43	1.38
Total Deferred					
Number	4	92	4	78	178
Average Age	59.55	45.20	39.17	33.22	40.14
Average Benefit Service	3.98	6.79	4.51	2.03	4.59

APPENDIX A – MEMBERSHIP INFORMATION

Change in Plan Membership: Total

	Actives	Transfers	Non-Vested Terminations	Vested Terminations	Non-Duty Disabled	Duty Disabled	Retired	Beneficiaries & QDROs	Total
June 30, 2022	**2,167**	**209**	**581**	**412**	**46**	**141**	**1,989**	**347**	**5,892**
New Entrants	335	1	56	1	0	0	0	0	393
Rehires	18	0	(11)	(7)	0	0	0	0	0
Duty Disabilities	(1)	0	0	0	0	2	(1)	0	0
Non-Duty Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(64)	(10)	(1)	(20)	0	0	95	0	0
Dual Service Retirements	0	0	0	0	0	0	0	0	0
Vested Terminations	(84)	0	(2)	86	0	0	0	0	0
Transfers	(17)	27	(6)	(4)	0	0	0	0	0
Non-Vested Terminations with Funds on Account	(109)	0	109	0	0	0	0	0	0
Withdrawals Paid	(75)	(1)	(40)	(5)	0	0	0	0	(121)
Died, With Beneficiary	(1)	0	0	0	(3)	(1)	(18)	23	0
Died, Without Beneficiary	(1)	0	0	0	(2)	(3)	(25)	0	(31)
Beneficiary Deaths	0	0	0	0	0	0	0	(22)	(22)
Domestic Relations Orders	0	0	0	0	0	0	0	3	3
Data Corrections	(3)	0	0	0	0	0	12	1	10
June 30, 2023	**2,165**	**226**	**686**	**463**	**41**	**139**	**2,052**	**352**	**6,124**

APPENDIX A – MEMBERSHIP INFORMATION

Change in Plan Membership: General									
	Actives	Transfers	Non-Vested Terminations	Vested Terminations	Non-Duty Disabled	Duty Disabled	Retired	Beneficiaries & QDROs	Total
June 30, 2022	**1,842**	**162**	**513**	**357**	**43**	**51**	**1,758**	**276**	**5,002**
New Entrants	307	1	51	1	0	0	0	0	360
Rehires	15	0	(10)	(5)	0	0	0	0	0
Duty Disabilities	0	0	0	0	0	0	0	0	0
Non-Duty Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(53)	(10)	(1)	(17)	0	0	81	0	0
Dual Service Retirements	0	0	0	0	0	0	0	0	0
Vested Terminations	(79)	0	(2)	81	0	0	0	0	0
Transfers	(14)	20	(4)	(2)	0	0	0	0	0
Non-Vested Terminations with Funds on Account	(100)	0	100	0	0	0	0	0	0
Withdrawals Paid	(60)	0	(33)	(5)	0	0	0	0	(98)
Died, With Beneficiary	(1)	0	0	0	(3)	0	(14)	18	0
Died, Without Beneficiary	0	0	0	0	(1)	0	(24)	0	(25)
Beneficiary Deaths	0	0	0	0	0	0	0	(20)	(20)
Domestic Relations Orders	0	0	0	0	0	0	0	3	3
Data Corrections	0	0	0	0	0	0	9	0	9
June 30, 2023	**1,857**	**173**	**614**	**410**	**39**	**51**	**1,810**	**277**	**5,231**

APPENDIX A – MEMBERSHIP INFORMATION

Change in Plan Membership: Safety

	Actives	Transfers	Non-Vested Terminations	Vested Terminations	Non-Duty Disabled	Duty Disabled	Retired	Beneficiaries & QDROs	Total
June 30, 2022	**325**	**47**	**68**	**55**	**3**	**90**	**231**	**71**	**890**
New Entrants	28	0	5	0	0	0	0	0	33
Rehires	3	0	(1)	(2)	0	0	0	0	0
Duty Disabilities	(1)	0	0	0	0	2	(1)	0	0
Non-Duty Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(11)	0	0	(3)	0	0	14	0	0
Dual Service Retirements	0	0	0	0	0	0	0	0	0
Vested Terminations	(5)	0	0	5	0	0	0	0	0
Transfers	(3)	7	(2)	(2)	0	0	0	0	0
Non-Vested Terminations with Funds on Account	(9)	0	9	0	0	0	0	0	0
Withdrawals Paid	(15)	(1)	(7)	0	0	0	0	0	(23)
Died, With Beneficiary	0	0	0	0	0	(1)	(4)	5	0
Died, Without Beneficiary	(1)	0	0	0	(1)	(3)	(1)	0	(6)
Beneficiary Deaths	0	0	0	0	0	0	0	(2)	(2)
Domestic Relations Orders	0	0	0	0	0	0	0	0	0
Data Corrections	(3)	0	0	0	0	0	3	1	1
June 30, 2023	**308**	**53**	**72**	**53**	**2**	**88**	**242**	**75**	**893**

APPENDIX A – MEMBERSHIP INFORMATION

Active Member Data by Plan					
Valuation at Year End	Plan Type	Member Count	Annual Payroll	Average Annual Salary	Average Salary Increase
2014	General	1,624	$91,704,083	$56,468	-1.27%
	Safety	300	$18,620,870	$62,070	-2.08%
	Total	**1,924**	**$110,324,953**	**$57,341**	**-1.40%**
2015	General	1,664	$93,938,857	$56,454	-0.03%
	Safety	298	$18,397,233	$61,736	-0.54%
	Total	**1,962**	**$112,336,090**	**$57,256**	**-0.15%**
2016	General	1,729	$97,337,917	$56,297	-0.28%
	Safety	311	$19,394,922	$62,363	1.02%
	Total	**2,040**	**$116,732,839**	**$57,222**	**-0.06%**
2017	General	1,783	$102,498,328	$57,486	2.11%
	Safety	313	$20,136,322	$64,333	3.16%
	Total	**2,096**	**$122,634,651**	**$58,509**	**2.25%**
2018	General	1,827	$108,067,248	$59,150	2.89%
	Safety	322	$22,018,174	$68,379	6.29%
	Total	**2,149**	**$130,085,423**	**$60,533**	**3.46%**
2019	General	1,861	$111,267,187	$59,789	1.08%
	Safety	316	$22,498,224	$71,197	4.12%
	Total	**2,177**	**$133,765,412**	**$61,445**	**1.51%**
2020	General	1,828	$112,315,867	$61,442	2.76%
	Safety	321	$22,982,055	$71,595	0.56%
	Total	**2,149**	**$135,297,921**	**$62,959**	**2.46%**
2021	General	1,799	$116,284,193	$64,638	5.20%
	Safety	319	$23,871,550	$74,832	4.52%
	Total	**2,118**	**$140,155,743**	**$66,174**	**5.11%**
2022	General	1,842	$120,774,476	$65,567	1.44%
	Safety	325	$25,176,047	$77,465	3.52%
	Total	**2,167**	**$145,950,524**	**$67,351**	**1.78%**
2023	General	1,857	$126,256,107	$67,989	3.69%
	Safety	308	$24,891,179	$80,816	4.33%
	Total	**2,165**	**$151,147,286**	**$69,814**	**3.66%**

Payroll figures represent active members' annualized pay rates on June 30.

APPENDIX A – MEMBERSHIP INFORMATION

Retirees and Beneficiaries Added to and Removed from Retiree Payroll										
Fiscal Year	Beginning of Year	Added During Year	Allowances Added	Removed During Year	Allowances Removed	End of Year	Annual Retirement Payroll (in 000s)	Total Allowance Percentage Increase	Average Annual Allowance	Average Allowance Percentage Increase
2005	1,441	109	2,445,000	49	450,000	1,501	24,867,000	9.16%	16,567	4.80%
2006	1,477	98	2,007,000	53	785,000	1,522	27,297,000	9.77%	16,836	1.62%
2007	1,521	136	4,419,000	38	560,000	1,619	31,823,000	16.58%	17,947	6.60%
2008	1,620	105	2,757,000	67	902,000	1,658	34,603,000	8.74%	19,644	9.46%
2009	1,658	105	3,402,523	52	812,828	1,711	37,747,525	9.09%	22,062	12.31%
2010	1,711	171	6,097,956	56	981,465	1,826	43,653,374	15.65%	23,907	8.36%
2011	1,826	103	2,627,234	44	781,283	1,885	46,116,686	5.64%	24,465	2.34%
2012	1,885	175	6,484,652	64	960,185	1,996	52,887,845	14.68%	26,497	8.31%
2013	1,996	103	3,028,612	49	855,980	2,050	56,048,022	5.98%	27,340	3.18%
2014	2,050	116	3,950,045	31	590,636	2,135	60,297,112	7.58%	28,242	3.30%
2015	2,135	100	2,508,828	35	720,242	2,200	63,254,229	4.90%	28,752	1.80%
2016	2,200	68	1,716,361	34	946,189	2,234	65,505,679	3.56%	29,322	1.98%
2017	2,234	85	2,282,779	56	1,022,708	2,263	68,476,111	4.53%	30,259	3.20%
2018	2,263	120	3,617,034	73	1,671,956	2,310	72,002,829	5.15%	31,170	3.01%
2019	2,310	141	4,908,365	78	1,805,138	2,373	76,948,959	6.87%	32,427	4.03%
2020	2,373	126	4,589,556	66	1,555,353	2,433	81,827,236	6.34%	33,632	3.72%
2021	2,433	117	3,953,617	84	2,671,254	2,466	84,975,315	3.85%	34,459	2.46%
2022	2,466	144	4,842,484	87	2,714,427	2,523	88,406,770	4.04%	35,040	1.69%
2023	2,523	135	4,160,108	74	1,793,800	2,584	92,660,543	4.81%	35,859	2.34%

APPENDIX A – MEMBERSHIP INFORMATION

GENERAL

Count

	Benefit Service										
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	Total
Under 20	1	0	0	0	0	0	0	0	0	0	1
20 to 25	35	16	0	0	0	0	0	0	0	0	51
25 to 29	85	89	8	0	0	0	0	0	0	0	182
30 to 34	59	126	76	7	1	0	0	0	0	0	269
35 to 39	48	96	102	40	10	2	0	0	0	0	298
40 to 44	30	78	102	30	64	24	1	0	0	0	329
45 to 49	18	45	62	23	49	44	13	0	0	0	254
50 to 54	12	27	41	24	37	31	23	4	0	0	199
55 to 59	5	16	25	9	24	33	14	3	0	0	129
60 to 64	8	15	16	14	15	24	5	2	2	0	101
65 to 69	3	6	8	3	9	5	2	1	0	0	37
70 & up	2	1	2	1	0	0	0	1	0	0	7
Total	306	515	442	151	209	163	58	11	2	0	1,857

Average Compensation

	Benefit Service										
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	Total
Under 20	45,614	0	0	0	0	0	0	0	0	0	45,614
20 to 25	44,837	47,394	0	0	0	0	0	0	0	0	45,639
25 to 29	47,254	51,283	57,380	0	0	0	0	0	0	0	49,669
30 to 34	46,784	57,770	67,594	85,748	84,198	0	0	0	0	0	58,962
35 to 39	49,192	60,115	67,078	79,494	66,109	83,290	0	0	0	0	63,697
40 to 44	58,419	65,360	68,046	81,868	84,061	83,297	57,182	0	0	0	71,986
45 to 49	75,016	69,572	73,337	77,853	81,844	84,997	77,543	0	0	0	77,074
50 to 54	53,716	76,664	83,256	86,645	78,740	79,384	77,119	88,017	0	0	78,933
55 to 59	91,782	74,646	76,803	73,138	64,375	72,542	99,752	87,224	0	0	76,191
60 to 64	69,407	60,586	80,916	104,493	71,541	68,854	62,518	54,023	60,186	0	74,141
65 to 69	73,611	72,471	73,760	59,129	78,699	65,660	60,110	202,497	0	0	75,201
70 & up	156,853	156,021	60,729	281,135	0	0	0	60,975	0	0	133,328
Total	52,448	60,904	70,736	84,012	78,351	78,167	80,488	89,569	60,186	0	67,989

APPENDIX A – MEMBERSHIP INFORMATION

SAFETY

Count

	Benefit Service										
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	Total
Under 20	1	0	0	0	0	0	0	0	0	0	1
20 to 25	12	8	0	0	0	0	0	0	0	0	20
25 to 29	10	33	3	0	0	0	0	0	0	0	46
30 to 34	2	24	30	0	0	0	0	0	0	0	56
35 to 39	1	6	17	7	10	0	0	0	0	0	41
40 to 44	1	5	12	11	30	3	0	0	0	0	62
45 to 49	0	2	3	4	22	11	0	0	0	0	42
50 to 54	1	2	4	4	4	5	2	0	0	0	22
55 to 59	0	3	2	1	2	3	2	0	0	0	13
60 to 64	0	0	1	2	0	1	1	0	0	0	5
65 to 69	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	0	0
Total	28	83	72	29	68	23	5	0	0	0	308

Average Compensation

	Benefit Service										
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	Total
Under 20	48,152	0	0	0	0	0	0	0	0	0	48,152
20 to 25	51,556	53,875	0	0	0	0	0	0	0	0	52,484
25 to 29	47,963	63,685	61,229	0	0	0	0	0	0	0	60,107
30 to 34	48,152	66,672	85,174	0	0	0	0	0	0	0	75,923
35 to 39	0	66,337	85,407	102,441	103,485	0	0	0	0	0	87,851
40 to 44	56,888	66,974	78,706	90,442	90,133	97,408	0	0	0	0	85,924
45 to 49	0	91,821	93,195	88,077	89,830	117,088	0	0	0	0	97,137
50 to 54	82,160	79,095	92,487	88,077	76,814	87,707	130,076	0	0	0	89,480
55 to 59	0	94,156	95,589	68,326	83,989	77,334	110,492	0	0	0	89,457
60 to 64	0	0	91,228	112,717	0	63,186	256,500	0	0	0	127,270
65 to 69	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	0	0
Total	49,350	66,143	84,267	93,460	91,034	100,605	147,528	0	0	0	80,816

APPENDIX A – MEMBERSHIP INFORMATION

Service Retired Benefits						
	General		Safety		Total	
Current Age	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit
0-24	0	$0	0	$0	0	$0
25-29	0	$0	0	$0	0	$0
30-34	0	$0	0	$0	0	$0
35-39	0	$0	0	$0	0	$0
40-44	0	$0	0	$0	0	$0
45-49	0	$0	5	$36,665	5	$36,665
50-54	12	$44,828	33	$41,767	45	$42,583
55-59	125	$35,070	38	$64,165	163	$41,853
60-64	283	$36,302	42	$44,634	325	$37,379
65-69	371	$37,829	35	$54,848	406	$39,296
70-74	397	$42,255	40	$53,730	437	$43,305
75-79	319	$36,926	31	$51,732	350	$38,237
80-84	177	$31,935	13	$39,222	190	$32,433
85-89	84	$29,076	2	$38,350	86	$29,292
90-94	31	$26,394	2	$35,272	33	$26,932
95+	11	$21,313	1	$69,509	12	$25,329
All Ages	1,810	$36,979	242	$50,718	2,052	$38,599

Duty Disabled Benefits						
	General		Safety		Total	
Current Age	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit
0-24	0	$0	0	$0	0	$0
25-29	0	$0	0	$0	0	$0
30-34	0	$0	0	$0	0	$0
35-39	1	$26,458	0	$0	1	$26,458
40-44	0	$0	10	$25,281	10	$25,281
45-49	3	$25,738	7	$28,930	10	$27,972
50-54	3	$34,756	8	$47,234	11	$43,831
55-59	2	$54,779	8	$35,733	10	$39,542
60-64	9	$25,416	8	$54,820	17	$39,253
65-69	4	$24,522	15	$35,454	19	$33,153
70-74	13	$31,058	13	$32,012	26	$31,535
75-79	8	$27,636	12	$51,446	20	$41,922
80-84	4	$34,409	7	$36,832	11	$35,951
85-89	0	$0	0	$0	0	$0
90-94	3	$19,659	0	$0	3	$19,659
95+	1	$38,023	0	$0	1	$38,023
All Ages	51	$29,486	88	$38,418	139	$35,141

APPENDIX A – MEMBERSHIP INFORMATION

Non-Duty Disabled Benefits						
	General		Safety		Total	
Current Age	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit
0-24	0	$0	0	$0	0	$0
25-20	0	$0	0	$0	0	$0
30-34	0	$0	0	$0	0	$0
35-39	0	$0	0	$0	0	$0
40-44	1	$14,883	0	$0	1	$14,883
45-49	1	$20,403	0	$0	1	$20,403
50-54	5	$15,486	1	$34,391	6	$18,637
55-59	3	$16,934	0	$0	3	$16,934
60-64	5	$21,163	0	$0	5	$21,163
65-69	6	$17,496	0	$0	6	$17,496
70-74	6	$17,602	0	$0	6	$17,602
75-79	4	$17,152	1	$19,156	5	$17,553
80-84	4	$20,629	0	$0	4	$20,629
85-89	3	$25,122	0	$0	3	$25,122
90-94	1	$25,285	0	$0	1	$25,285
95+	0	$0	0	$0	0	$0
All Ages	39	$18,762	2	$26,774	41	$19,152

Surviving Beneficiary & QDRO Benefits						
	General		Safety		Total	
Current Age	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit
0-24	0	$0	0	$0	0	$0
25-29	1	$14,577	0	$0	1	$14,577
30-34	1	$1,610	0	$0	1	$1,610
35-39	0	$0	0	$0	0	$0
40-44	3	$21,864	2	$20,552	5	$21,339
45-49	4	$9,659	2	$39,116	6	$19,478
50-54	8	$5,418	3	$7,442	11	$5,970
55-59	18	$16,612	2	$0	20	$14,951
60-64	23	$15,055	9	$17,202	32	$15,659
65-69	22	$18,562	6	$33,200	28	$21,699
70-74	40	$26,511	11	$33,635	51	$28,047
75-79	47	$27,584	20	$36,558	67	$30,263
80-84	44	$16,286	12	$35,480	56	$20,399
85-89	41	$18,068	7	$24,507	48	$19,007
90-94	14	$16,761	1	$29,158	15	$17,587
95+	11	$26,873	0	$0	11	$26,873
All Ages	277	$20,079	75	$29,644	352	$22,117

APPENDIX B – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

The assumptions and methods used in the actuarial valuation reflect the results of an experience study performed by Cheiron covering the period from July 1, 2019 through June 30, 2022 and adopted by the Board at their December 8, 2022 meeting. More details on the rationale for the demographic and economic assumptions can be found in the experience study presentation from that meeting. The combined effect of the assumptions is expected to have no significant bias for the purpose of this measurement.

A. Actuarial Assumptions

1. Rate of Return

Assets are assumed to earn 6.75% net of investment expenses.

2. Low-Default-Risk Obligation Measure Discount Rate (effective June 30, 2023)

The discount rate used to calculate the Low-Default-Risk Obligation Measure (LDROM) is the FTSE Pension Liability Index as of the valuation date. This index was selected because it reflects the types of fixed-income securities the Plan would likely invest in if the Trustees wanted to match cash flows. The rate for this valuation is 4.92%.

3. Administrative Expenses

Administrative expenses are assumed to be $2.870 million for the next year to be allocated between the employer and employees based on each group's share of the non-expense related contributions. Administrative expenses in future years are expected to increase with the Consumer Price Index (CPI).

4. Cost of Living

The cost of living as measured by the Consumer Price Index (CPI) will increase at the rate of 2.50% per year.

5. Post Retirement COLA

Benefits are assumed to increase after retirement at the rate of 2.40% per year for current Tier 1 Active and Deferred Vested members and are assumed to increase at a rate of 2.65% for Tier 1 members that are currently in pay status.

APPENDIX B – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

6. Increases in Pay

Wage inflation component: 2.75%

Additional longevity and promotion component:

Years of Service	General	Safety	Years of Service	General	Safety
0	8.00%	8.50%	11	2.50%	1.25%
1	6.50%	7.50%	12	2.25%	1.25%
2	6.00%	5.25%	13	2.00%	1.25%
3	5.50%	4.50%	14	1.85%	1.25%
4	5.00%	3.75%	15	1.70%	1.25%
5	4.00%	3.25%	16	1.55%	1.25%
6	3.25%	2.75%	17	1.40%	1.25%
7	2.75%	2.25%	18	1.25%	1.25%
8	2.50%	2.00%	19	1.10%	1.25%
9	2.50%	1.50%	20+	1.00%	1.25%
10	2.50%	1.50%			

7. Final Average Compensation Load

None.

8. Family Composition

55% of female General members, 75% of male General members and 80% of Safety members are assumed to be married at retirement. Male members are assumed to be three years older than their spouses and female members are assumed to be two years younger than their spouses.

APPENDIX B – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

9. Rates of Mortality

Mortality rates for actives, retirees, disabled members, beneficiaries, terminated vesteds, and reciprocal transfers are based on the sex-distinct employee and annuitant mortality tables as described below. Future mortality improvements are reflected by applying 80% of the SOA MP-2020 projection scale on a generational basis from the base year of 2017 for the CalPERS tables and the base year of 2010 for the Below Median Safety Member Pub-2010 tables.

Category	Base Mortality Table	
	General	Safety
Healthy Annuitant	1.05 times the CalPERS 2021 Healthy Annuitant Mortality Table	1.05 times the Pub-2010 Safety Below Median Mortality Table for Healthy Retirees
Duty Disabled Annuitants	CalPERS 2021 Industrial Disability Mortality Table	CalPERS 2021 Industrial Disability Mortality Table
Non-Duty Disabled Annuitant	CalPERS 2021 Non-Industrial Disability Mortality Table	CalPERS 2021 Non-Industrial Disability Mortality Table
Active Employees	CalPERS 2021 Non-Industrial Employees Mortality Table (Miscellaneous Plans Only)	Pub-2010 Safety Below Median Mortality Table for Healthy Employees
Actives, Line of Duty (Safety only)	N/A	CalPERS 2021 Industrial Employees Mortality Table

For determining mortality rates for future disabled members, 50% of future General disabilities are assumed to be duty-related and 50% are assumed to be non-duty related. 100% of future Safety disabilities are assumed to be duty related.

10. Rates of Termination

Sample rates of termination[1] are shown in the following table.

Years of Service	General	Safety
0	22.50%	21.00%
5	9.00%	6.50%
10	5.50%	4.75%
15	4.00%	3.50%
20	4.00%	0.00%
25	4.00%	0.00%
30	0.00%	0.00%

[1] *Termination rates do not apply once a member is eligible for retirement.*

There are three types of terminations: withdrawals, reciprocal transfers, and vested terminations. Rates of withdrawal apply to active Members who terminate their employment and withdraw their member contributions, forfeiting entitlement to future Plan benefits. Rates of reciprocal transfer are for members who leave their member contributions on deposit and engage in employment covered by a pension plan with a reciprocal relationship with MercedCERA. Finally, rates of vested termination apply to active Members who terminate their employment and leave their member contributions on deposit with the Plan.

The table below shows the percentages of total terminations falling into these categories.

	Years of Service						
	General				Safety		
	0 – 4	5 – 9	10-14	15+	0 – 4	5-9	10+
Withdrawals	92.5%	30.0%	20.0%	5.0%	95.0%	30.0%	15.0%
Transfers	7.5%	35.0%	40.0%	47.5%	5.0%	52.5%	63.75%
Vested Terminations	0.0%	35.0%	40.0%	47.5%	0.0%	17.5%	21.25%

Vested terminated General Members are assumed to begin receiving benefits at age 60; Vested terminated Safety Members are assumed to begin receiving benefits at age 50. Future reciprocal transfer General members are assumed to begin receiving benefits at age 61; future reciprocal transfer Safety members are assumed to begin receiving benefits at age 55. Current reciprocal transfer members are assumed to begin receiving benefits based on the probabilities of retirement applied to the active members.

Future reciprocal transfers' annual pay growth is assumed to be 3.75% for General Members and 4.00% for Safety Members while employed by a reciprocal employer. Current reciprocal transfers' pay growth is assumed to increase according to the assumptions applied to the active members until the assumed retirement age.

APPENDIX B – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

11. Rates of Retirement

Rates of retirement are based on age and service according to the following table.

General						Safety[1]		
	Non-PEPRA			PEPRA				
	Years of Service						Years of Service	
Age	<0	20-29	30+	5-19	20+	Age	<20	20+
<50	0.0%	0.0%	15.0%	0.0%	0.0%	<40	0.0%	0.0%
50	10.0%	12.5%	15.0%	0.0%	0.0%	40	0.0%	1.5%
51	10.0%	12.5%	15.0%	0.0%	0.0%	41	0.0%	1.5%
52	10.0%	12.5%	15.0%	10.0%	10.0%	42	0.0%	1.5%
53	10.0%	12.5%	15.0%	10.0%	10.0%	43	0.0%	1.5%
54	10.0%	12.5%	25.0%	10.0%	10.0%	44	0.0%	1.5%
55	10.0%	12.5%	30.0%	10.0%	10.0%	45	0.0%	1.5%
56	10.0%	12.5%	30.0%	10.0%	10.0%	46	0.0%	5.0%
57	10.0%	15.0%	30.0%	10.0%	10.0%	47	0.0%	10.0%
58	15.0%	15.0%	30.0%	10.0%	10.0%	48	0.0%	15.0%
59	15.0%	25.0%	30.0%	10.0%	15.0%	49	0.0%	25.0%
60	20.0%	25.0%	30.0%	10.0%	15.0%	50	15.0%	25.0%
61	20.0%	25.0%	30.0%	10.0%	15.0%	51	5.0%	25.0%
62	20.0%	25.0%	30.0%	10.0%	15.0%	52	5.0%	15.0%
63	15.0%	25.0%	30.0%	10.0%	15.0%	53	5.0%	15.0%
64	15.0%	25.0%	30.0%	10.0%	15.0%	54	15.0%	20.0%
65	35.0%	35.0%	35.0%	10.0%	15.0%	55	25.0%	25.0%
66	35.0%	35.0%	35.0%	10.0%	15.0%	56	25.0%	25.0%
67	35.0%	35.0%	35.0%	35.0%	35.0%	57	25.0%	25.0%
68	35.0%	35.0%	35.0%	35.0%	35.0%	58	25.0%	25.0%
69	35.0%	35.0%	35.0%	35.0%	35.0%	59	25.0%	25.0%

[1] *PEPRA rates are 0% below Age 50*

100% of General and Safety members are assumed to retire when they reach ages 70 and 60, respectively.

APPENDIX B – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

12. Rates of Disability

Sample disability rates of active participants are provided in the table.

	General		Safety	
Age	Service-Connected	Non-Service Connected[1]	Service-Connected	Non-Service Connected[1]
20	0.0135%	0.0135%	0.0420%	0.0090%
25	0.0136%	0.0136%	0.1310%	0.0090%
30	0.0182%	0.0182%	0.2490%	0.0110%
35	0.0331%	0.0331%	0.3700%	0.0340%
40	0.0678%	0.0678%	0.5130%	0.0590%
45	0.1325%	0.1325%	0.6720%	0.1120%
50	0.1822%	0.1822%	0.9190%	0.1600%
55	0.1380%	0.1380%	1.5050%	0.0850%
60	0.1134%	0.1134%	1.7400%	0.0510%
65	0.1390%	0.1390%	2.0930%	0.0510%

[1] *Rates are applied once members have at least five years of service.*

13. Member Contribution Balance Crediting Rate

4.75% (2.00% less than the assumed rate of return of 6.75%).

14. Changes Since Last Valuation

The LDROM discount rate assumption was added.

B. Contribution Allocation Procedure

The contribution allocation procedure primarily consists of an actuarial cost method, an asset valuation method, and an amortization method as described below. This contribution allocation procedure, combined with reasonable assumptions, produces a Reasonable Actuarially Determined Contribution as defined in Actuarial Standard of Practice No. 4. The contribution allocation procedure was selected to balance benefit security, intergenerational equity, and the stability of actuarially determined contributions. The selection also considered the demographics of plan members, the funding goals and objectives of the Board, and the need to accumulate assets to make benefit payments when due. There were no changes to the contribution allocation procedures from the prior valuation.

1. Actuarial Cost Method

The Entry Age Normal actuarial funding method was used for active employees, whereby the normal cost is computed as the level annual percentage of pay required to fund the retirement benefits between each Member's date of hire and assumed retirement. The Actuarial Liability is the difference between the Present Value of Future Benefits and the Present Value of Future Normal Cost. The Unfunded Actuarial Liability is the difference between the Actuarial Liability and the Actuarial Value of Assets.

2. Amortization Method

The UAL (or Surplus Funding) is amortized as a percentage of the projected salaries of present and future members of MercedCERA.

- Effective with the June 30, 2013 valuation, the UAL as of June 30, 2013 is amortized over a closed 16-year period. Effective with the June 30, 2019 valuation, 15% of the outstanding balance as of June 30, 2019 of the June 30, 2013 UAL amortization base is carved out as a separate base and amortized over a closed 14-year period as a level percentage of payroll. The remaining 85% is amortized over a closed 14-year period, with 10 years of level payments as a percentage of payroll, and a four-year ramp down at the end of the period.
- Effective with the June 30, 2014 valuation, any new sources of UAL due to actuarial gains and losses or method changes is amortized over a closed 24-year period, with five-year ramp up period at the beginning of the period, a four-year ramp down at the end of the period, and 15 years of level payments as a percentage of payroll.
- Assumption changes will be amortized over a closed 22-year period, with a three-year ramp up period, two-year ramp down period, and 17 years of level payments as a percentage of payroll. This method is a type of direct rate smoothing method.

3. Asset Valuation Method

As of June 30, 2014, the Market Value of Assets is used to determine the Plan's UAL.

APPENDIX B – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

4. Changes Since Last Valuation

None.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

A. Definitions

Compensation: Compensation means the cash remuneration for services paid by the employer. It includes base pay and certain differential, incentive, and special pay allowances defined by the Board of Retirement. Overtime is excluded, with the exception of overtime paid under the Fair Labor Standards Act that is regular and recurring.

PEPRA: For members joining the Plan on and after January 1, 2013 (Tier 4 Members), only pensionable compensation up to the PEPRA Compensation Limit (for 2024, $151,446 for those participating in Social Security, $181,734 for those not participating in Social Security) will count for computing Plan benefits and employee contributions and employer contributions. In future years, the cap on pensionable compensation will increase with the increase in the CPI-U. In addition, some sources of compensation, such as any payments deemed to be terminal or special pays, are excluded from benefit and contribution computations for Tier 4 Members.

Credited Service: In general, Credited Service is earned for the period during which Member Contributions are paid. One year of service credit is earned for each 2,080 hours worked (not including overtime), not to exceed one year of service per year.

Temporary service for which the Member was not credited, or service for which the Member withdrew his or her Member Contributions, may be purchased by paying or repaying the Member Contributions with interest. The categories of services for which credit may be purchased are listed below:

Prior Part-Time Service: If a Member worked for an employer within the Association on a part-time or 'extra help' basis before his membership in the Retirement Association, the Member may buyback this service.

Intermittent Part-Time Service.

Prior Full-Time Service: Member may buyback full-time service that may have been cashed out upon termination.

Leave of Absence (Including Absence with State Disability or Worker's Compensation): No unpaid leave of absence can be bought back except for absence due to medical reasons up to one year.

Public Service: Members may purchase service credit for prior service in the following public agencies: Federal Civil Service, Military Service, and

APPENDIX C – SUMMARY OF PLAN PROVISIONS

some public employers in California. This service is only eligible for purchase when the Board of Supervisors opens the window for purchase.

Military Time: Members who resign or obtain a leave of absence to enter the military may purchase service credit for the period of military service. Members must re-enter employment within one year of terminating military service to be eligible to purchase service.

At retirement, Members have the option to convert 100% of sick leave time into retirement years of service credit. Unrepresented Management and Unit 7 will instead have some or all of their sick leave contributed to the Post Employment Health Plan.

Final Compensation: For Tier 1 Members, Final Compensation means the highest average Compensation earned during any 26 consecutive pay periods of the Member's employment. For Tier 2 and Tier 3 Members, Final Compensation means the highest average Compensation earned during any 78 consecutive pay periods of the Member's employment.

The following compensation elements are no longer included in Final Compensation computation:

- Loyalty Bonus
- Up to 160 hours of vacation payoff

For Tier 4 Members, highest average Compensation will be based on the highest 36 consecutive months of the Member's employment.

General Member: Any Member who is not a Safety Member is a General Member.

Public Service: During designated periods of time authorized by the County Board of Supervisors, Members may elect to purchase Public Service for time spent while employed in another recognized public agency. The public agency must have a reciprocal agreement with the Plan or be one of several specified municipalities, counties, special districts, or State and Federal agencies. Public Service cannot be purchased if it is used for eligibility for another pension.

The cost to purchase Public Service is twice the Member Contributions and interest applicable for the period of time purchased. Public Service is used to compute benefits but does not count toward eligibility for benefits or vesting.

Safety Member: Any sworn Member engaged in law enforcement or as a probation officer is a Safety Member.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

B. Membership

Eligibility: All full-time and variable-shift permanent employees of Merced County and other participating employers become Members on their first date of service. Membership is mandatory; only elected officials and those entering employment at age 60 or older who are not reciprocal members of another system may choose not to participate.

PEPRA: A New Member is any Member joining the Plan for the first time on or after January 1, 2013. Employees who transfer from and are eligible for reciprocity with another public employer will not be Tier 4 Members if their service in the reciprocal system was under a pre-PEPRA tier. Employees who were Members of MercedCERA prior to January 1, 2013, experienced a break in service of more than six months, and then were re-employed by a *different* MercedCERA-participating employer on or after January 1, 2013 will be considered Tier 4 Members for all subsequent service.

Member Contributions: Each Member contributes a percentage of Compensation to the Plan through a pre-tax payroll deduction. The percentage contributed depends on the Member's age upon joining the Plan. Complete Rates are shown in Appendix D.

Members covered by Social Security have their contributions reduced by one-third on the first $161.54 of biweekly Compensation. General Members who joined the Plan prior to March 7, 1973, and who have earned 30 years of Credited Service do not contribute; Safety Members do not contribute after earning 30 years of Credited Service.

PEPRA: Tier 4 Members must contribute half of the normal cost of the Plan. Contributions for these Members will be based on the Normal Cost associated with their benefits; General and Safety members will pay different Rates.

Tier 4 Members will pay a single contribution rate, not a rate based on entry age. All Tier 4 Members are expected to continue contributing after earning 30 years of service.

Interest is credited semi-annually to each Member's accumulated contributions. The crediting rate is set by the Board, and will fluctuate between zero and two percent less than the assumed rate of return (currently 6.75% – 2.00% = 4.75%), based in part on the investment earnings during that period.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

C. Service Retirement

Eligibility: Tier 1 General Members are eligible to retire at age 50 if they have earned 10 years of Credited Service. Tier 1 General Members hired prior to December 31, 1978, may retire upon reaching age 65 with no service requirement.

Tier 2 and Tier 3 General Members are eligible to retire at age 55 if they have earned 10 years of Credited Service or upon reaching age 70 with no service requirement.

Alternatively, all Tier 1, 2, and 3 General Members are eligible to retire at any age after having earned 30 years of Credited Service, or upon reaching age 70 with no service requirement.

Safety Members are eligible to retire at age 50 if they have earned 10 years of Credited Service. Alternatively, Safety Members are eligible to retire at any age after having earned 20 years of Credited Service, or upon reaching age 70 with no service requirement. All Tier 1, 2, and 3 Safety Members hired prior to December 31, 1978, may retire upon reaching age 65 with no service requirement.

PEPRA: Tier 4 General Members are eligible to retire upon attaining age 52 and completing five or more years of service. Tier 4 Safety Members are eligible to retire upon attaining age 50 and completing five or more years of service. Tier 4 Members are eligible to retire, regardless of service, after attaining age 70.

Benefit Amount: The Service Retirement Benefit payable to the Member is equal to the Member's Final Compensation multiplied by credited service, the benefit factor from Table 1, and the age factor from Table 2 corresponding to the Member's code section. The appropriate code sections for each group are listed in Table 1. For General Members in the Merced County Cemetery District and those in Deferred Inactive Reciprocity status prior to March 15, 2005, benefits are calculated using the formula in Government Code Section 31676.11 or 31676.1.

For Tiers 1, 2, and 3, the percentage of Final Compensation may not exceed 100%. For those members integrated with Social Security, Retirement Benefits based on the first $350 of monthly Final Average Compensation are reduced by one-third.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Table 1:

Group	Open or Closed	FAP	Max COLA	Code Section	Description	Top Retirement Factor Age	Benefit Factor
General Tier 1	Closed	1	3	31676.17	3% at 60	60	2.00%
General Tier 2	Closed[1]	3	0	31676.17	3% at 60	60	2.00%
General Tier 2 (Cemetery)	Closed[1]	3	0	31676.11	2% at 58 1/2	65	1.67%
General Tier 3	Closed[1]	3	0	31676.1	2.43% at 65	65	1.67%
General Tier 4	Open	3	0	7522.20(a)	PEPRA	67	1.00%
Safety Tier 1	Closed	1	3	31664.1	3% at 50	50	3.00%
Safety Tier 2	Closed	3	0	31664.1	3% at 50	50	3.00%
Safety Tier 3	Closed[1]	3	0	31664	2% at 50	55	2.00%
Safety Tier 4	Open	3	0	7522.25(d)	PEPRA	57	1.00%

[1] *Open for reciprocal members.*

Table 2:

Age	General 3% @ 60 CERL: 31676.17	General 2% @ 58 1/2 CERL: 31676.11	General 2.43% @ 65 CERL: 31676.1	General PEPRA GC: 7522.20(a)	Safety 3% @ 50 CERL: 31664.1	Safety 2% @ 50 CERL: 31664	Safety PEPRA GC: 7522.25(d)
41	N/A	N/A	N/A	N/A	0.6258	0.6258	N/A
42	N/A	N/A	N/A	N/A	0.6625	0.6625	N/A
43	N/A	N/A	N/A	N/A	0.7004	0.7004	N/A
44	N/A	N/A	N/A	N/A	0.7397	0.7397	N/A
45	N/A	N/A	N/A	N/A	0.7805	0.7805	N/A
46	N/A	N/A	N/A	N/A	0.8226	0.8226	N/A
47	N/A	N/A	N/A	N/A	0.8678	0.8678	N/A
48	N/A	N/A	N/A	N/A	0.9085	0.9085	N/A
49	N/A	N/A	N/A	N/A	0.9522	0.9522	N/A
50	1.0000	0.7454	0.7091	N/A	1.0000	1.0000	2.0000
51	1.0500	0.7882	0.7457	N/A	1.0000	1.0516	2.1000
52	1.1000	0.8346	0.7816	1.0000	1.0000	1.1078	2.2000
53	1.1500	0.8850	0.8181	1.1000	1.0000	1.1692	2.3000
54	1.2000	0.9399	0.8556	1.2000	1.0000	1.2366	2.4000
55	1.2500	1.0000	0.8954	1.3000	1.0000	1.3099	2.5000
56	1.3000	1.0447	0.9382	1.4000	1.0000	1.3099	2.6000
57	1.3500	1.1048	0.9846	1.5000	1.0000	1.3099	2.7000
58	1.4000	1.1686	1.0350	1.6000	1.0000	1.3099	2.7000
59	1.4500	1.2365	1.0899	1.7000	1.0000	1.3099	2.7000
60	1.5000	1.3093	1.1500	1.8000	1.0000	1.3099	2.7000
61	1.5000	1.3608	1.1947	1.9000	1.0000	1.3099	2.7000
62	1.5000	1.4123	1.2548	2.0000	1.0000	1.3099	2.7000
63	1.5000	1.4638	1.3186	2.1000	1.0000	1.3099	2.7000
64	1.5000	1.5153	1.3865	2.2000	1.0000	1.3099	2.7000
65	1.5000	1.5668	1.4593	2.3000	1.0000	1.3099	2.7000
66	1.5000	1.5668	1.4593	2.4000	1.0000	1.3099	2.7000
67	1.5000	1.5668	1.4593	2.5000	1.0000	1.3099	2.7000

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Form of Benefit: The Service Retirement Benefit will be paid monthly beginning at retirement and for the life of the Member. If the member selects the unmodified benefit form, in the event of the Member's death 60% of the benefit will continue for the life of the Member's eligible spouse, domestic partner, or to the age of majority of dependent minor children if there is no eligible spouse or domestic partner. To be eligible to receive this benefit, a surviving spouse or domestic partner must be married or state-registered at least one year prior to retirement. In the event there is no eligible surviving spouse, domestic partner, or minor children, any unpaid remainder of the Member's accumulated contributions will be paid to the Member's designated beneficiary.

Actuarially equivalent optional benefit forms are also available.

Annually on April 1, Tier 1 benefits are increased to reflect increases in the CPI for the San Francisco Bay Area. Annual increases may not exceed 3%, but CPI increases in excess of 3% are "banked" and used for future increases when the CPI increases by less than 3%.

A lump sum benefit of $3,000 will be payable upon the death of a retired member.

D. Service-Connected Disability

Eligibility: Members are eligible for Service-Connected Disability Retirement benefits at any age if they are permanently disabled as a result of injuries or illness sustained in the line of duty.

Benefit Amount: The Service-Connected Disability Retirement Benefit payable to Members is equal to the greater of 50% of their Final Compensation or – if the Member is eligible at disability for a Service Retirement Benefit – the Service Retirement Benefit accrued on the date of disability.

Members who return to work at a different position with lower pay may receive a Supplemental Disability Allowance that, when added to their new pay, may bring the Member's total income up to the current pay for his or her position at the time of disability. The Supplemental Disability Allowance may not exceed the Service-Connected Disability Retirement benefit.

Form of Benefit: The Service-Connected Disability Retirement Benefit will be paid monthly beginning at the effective date of disability retirement and for the life of the Member; in the event of the Member's death, 100% of the benefit will continue for the life of the Member's eligible spouse, domestic partner, or to the age of majority of dependent minor children if there is no eligible spouse or domestic partner. In the event there is no eligible

APPENDIX C – SUMMARY OF PLAN PROVISIONS

surviving spouse, domestic partner, or minor children, any unpaid remainder of the Member's accumulated contributions will be paid to the Member's designated beneficiary.

Actuarially equivalent optional benefit forms are also available.

Annually on April 1, Tier 1 benefits are increased to reflect increases in the CPI for the San Francisco Bay Area. Annual increases may not exceed 3%, but CPI increases in excess of 3% are "banked" and used for future increases when the CPI increases by less than 3%.

A lump sum benefit of $3,000 will be payable upon the death of a retired member.

E. Non Service-Connected Disability

Eligibility: Members are eligible for Non Service-Connected Disability Retirement benefits if they are permanently disabled at any age after earning five years of Credited Service or after becoming eligible for a deferred vested benefit.

Benefit Amount: The Non Service-Connected Disability Retirement Benefit payable to General Members is equal to the greatest of:

- 1.5% of Final Compensation at disability multiplied by years of Credited Service at disability,
- 1.5% of Final Compensation at disability multiplied by years of Credited Service projected to age 65, but not to exceed one-third of Final Compensation, or
- If the Member is eligible at disability for a Service Retirement Benefit, the Service Retirement Benefit accrued on the date of disability.

The Non Service-Connected Disability Retirement Benefit payable to Safety Members is equal to the greatest of:

- 1.8% of Final Compensation at disability multiplied by years of Credited Service at disability,
- 1.8% of Final Compensation at disability multiplied by years of Credited Service projected to age 55, but not to exceed one-third of Final Compensation, or
- If the Member is eligible at disability for a Service Retirement Benefit, the Service Retirement Benefit accrued on the date of disability.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Members who return to work at a different position with lower pay may receive a Supplemental Disability Allowance that, when added to their new pay, may bring the Member's total income up to the current pay for his or her position at the time of disability. The Supplemental Disability Allowance may not exceed the Non Service-Connected Disability Retirement benefit.

Form of Benefit: The Non Service-Connected Disability Retirement Benefit will be paid monthly beginning at the effective date of disability retirement, and for the life of the Member; in the event of the Member's death, 60% of the benefit will continue for the life of the Member's eligible spouse, domestic partner, or to the age of majority of dependent minor children if there is no spouse. In the event there is no eligible surviving spouse, domestic partner, or minor children, any unpaid remainder of the Member's accumulated contributions will be paid to the Member's designated beneficiary.

Actuarially equivalent optional benefit forms are also available.

Annually on April 1, Tier 1 benefits are increased to reflect increases in the CPI for the San Francisco Bay Area. Annual increases may not exceed 3%, but CPI increases in excess of 3% are "banked" and used for future increases when the CPI increases by less than 3%.

A lump sum benefit of $3,000 will be payable upon the death of a retired member.

F. Service-Connected Death

Eligibility: A Member's survivors are eligible to receive Service-Connected Death benefits if the Member's death resulted from injury or illness sustained in connection with the Member's duties.

Benefit Amount: The Service-Connected Death benefit payable to an eligible surviving spouse, domestic partner, or minor children will be 50% of the Member's Final Compensation.

Furthermore, for Safety Members only, there will be an additional lump sum benefit of 12 months of pay at the time of death. An additional benefit of 25% of the above basic benefit will be paid for the first minor child, 15% for the second, and 10% for the third.

Form of Benefit: The Service-Connected Death Benefit will be paid monthly beginning at the Member's death and for the life of the eligible surviving spouse, domestic partner, or to the age of majority of dependent minor children if there is no eligible surviving spouse or domestic partner.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Annually on April 1, Tier 1 benefits are increased to reflect increases in the CPI for the San Francisco Bay Area. Annual increases may not exceed 3%, but CPI increases in excess of 3% are "banked" and used for future increases when the CPI increases by less than 3%.

G. Non Service-Connected Death

Eligibility: A Member's survivors are eligible to receive Non Service-Connected Death benefits if the Member's death arose from causes unrelated to the Member's duties.

Benefit Amount: In the event the Member had earned fewer than five years of Credited Service and has no or insufficient reciprocity service from another system, the Non Service-Connected Death benefit will be a refund of the Member's accumulated contributions with interest plus a payment of one month of Final Compensation for each year of Credited Service, not to exceed six months.

In the event the Member had earned five or more years of Credited Service, the Non Service-Connected Death benefit payable to an eligible surviving spouse, domestic partner, or minor children will be 60% of the amount the Member would have received as a Non Service-Connected Disability Retirement Benefit on the date of death.

Form of Benefit: For Members who had earned fewer than five years of Credited Service at death, the benefit will be paid as a lump sum.

For Members with five or more years of Credited Service, the Non Service-Connected Death Benefit will be paid monthly beginning at the Member's death and for the life of the eligible surviving spouse, domestic partner, or to the age of majority of dependent minor children if there is no eligible spouse or domestic partner.

Annually on April 1, Tier 1 benefits are increased to reflect increases in the CPI for the San Francisco Bay Area. Annual increases may not exceed 3%, but CPI increases in excess of 3% are "banked" and used for future increases when the CPI increases by less than 3%.

H. Withdrawal Benefit

Eligibility: A Member is eligible for a Withdrawal Benefit upon termination of employment.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Benefit Amount: The Withdrawal Benefit is a refund of the Member's accumulated Contributions with interest. Upon receipt of the Withdrawal Benefit, the Member forfeits all Credited Service.

Form of Benefit: The Withdrawal Benefit is paid in a lump sum upon election by the Member.

I. Deferred Vested Benefit

Eligibility: A Member is eligible for a Deferred Vested Benefit upon termination of employment after earning five years of Credited Service, including reciprocity service from another system. The Member must leave his or her Member Contributions with interest on deposit with the Plan.

Benefit Amount: The Deferred Vested Benefit is computed in the same manner as the Service Retirement Benefit, but it is based on Credited Service and Final Compensation on the date of termination.

Form of Benefit: The Deferred Vested Benefit will be paid monthly beginning at retirement and for the life of the Member; in the event of the Member's death, 60% of the benefit will continue for the life of the Member's eligible surviving spouse, domestic partner, or to the age of majority of dependent minor children if there is no eligible surviving spouse or domestic partner. In the event there is no eligible surviving spouse, domestic partner, or minor children, any unpaid remainder of the Member's accumulated contributions will be paid to the Member's designated beneficiary.

Actuarially equivalent optional benefit forms are also available.

Annually on April 1, Tier 1 benefits are increased to reflect increases in the CPI for the San Francisco Bay Area. Annual increases may not exceed 3%, but CPI increases in excess of 3% are "banked" and used for future increases when the CPI increases by less than 3%.

A lump sum benefit of $3,000 will be payable upon the death of a retired member.

J. Reciprocal Benefit

Eligibility: A Member is eligible for a Reciprocal Benefit upon termination of employment and entry, within a specified period of time, into another retirement system recognized as a reciprocal system by the Plan. In addition, the Member must leave his or her Member Contributions with interest on deposit with the Plan.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Benefit Amount: The Reciprocal Benefit is computed in the same manner as the Service Retirement Benefit, but it is based on Credited Service on the date of termination and Final Compensation on the date of retirement; Final Compensation is based on the highest of the Compensation earned under this Plan or the reciprocal plan.

Form of Benefit: The Reciprocal Benefit will be paid monthly beginning at retirement and for the life of the Member; in the event of the Member's death, 60% of the benefit will continue for the life of the Member's eligible surviving spouse, domestic partner, or to the age of majority of dependent minor children if there is no eligible surviving spouse or domestic partner. In the event there is no eligible surviving spouse, domestic partner, or minor children, any unpaid remainder of the Member's accumulated contributions will be paid to the Member's designated beneficiary.

Actuarially equivalent optional benefit forms are also available.

Annually on April 1, Tier 1 benefits are increased to reflect increases in the CPI for the San Francisco Bay Area. Annual increases may not exceed 3%, but CPI increases in excess of 3% are "banked" and used for future increases when the CPI increases by less than 3%.

A lump sum benefit may be payable upon the death of a retired Member by the last system under which the Member's service was covered.

K. Changes Since Last Valuation

None.

APPENDIX D – MEMBER CONTRIBUTION RATES

Contribution Rates

Employee contribution rates vary by member Group and Tier. For non-PEPRA members, the rates are the same as those from the prior year, which were updated following an experience study covering the period July 1, 2019 – June 30, 2023. For PEPRA members, the Rates were re-computed this year, in accordance with the requirement that employees pay half of the total normal cost rate from the most recent actuarial valuation.

Non-PEPRA Members

- The basic rates are determined based on Government Code Section 31621.8 for General Tier 1 and Tier 2 members (31621.1 for Tier 2 members under benefit section 31676.11), 31621 for General Tier 3 members, and Section 31639.25 for Safety members. The COLA Rates for members in Tier 1 are determined based on 50% of the normal cost associated with the expected COLA benefits, including joint and survivor benefits, determined for each individual entry age.
- The rates are determined based on an interest rate of 6.75% per annum, an average salary increase of 2.75% per year (plus service-based increases for merit/longevity) and the healthy annuitant mortality tables used in the most recent valuation, projected using 80% of Projection Scale MP-2020 to 2043. The rates are blended based on a male/female weighting of 30% male / 70% female for General members, and 70% male / 30% female for Safety members.
- Effective with the June 30, 2013 valuation, an administrative expense load was added to the rates. The expense load added is currently 3.6%. This load was determined to account for the employees' share of the assumed administrative expense assumption, assuming the employer and employees would share administrative expenses in proportion to their overall share of the contributions. The load produces an average increase in the employee rates of approximately 0.29% of payroll.

PEPRA Members

- Employee contribution rates are equal to half of the total normal cost rate from the actuarial valuation, determined separately for General and Safety. Due to the passage of SB13, contribution rates for PEPRA members are not rounded, and will be recomputed each year.
- An administrative expenses load of 3.6% was applied to the PEPRA rates.

APPENDIX D – MEMBER CONTRIBUTION RATES

Current Year Contribution Rates (General Non-PEPRA):

	Tier 1						Tier 2		Tier 3	
	Basic		COLA		Total		Basic		Basic	
Entry Age	First $350	Over $350	First $350	Over $350	First $350	Over $350	First $350	Over $350	First $350	Over $350
16	5.57%	8.36%	1.46%	2.19%	7.03%	10.55%	5.38%	8.06%	3.86%	5.79%
17	5.57%	8.36%	1.46%	2.19%	7.03%	10.55%	5.38%	8.06%	3.86%	5.79%
18	5.57%	8.36%	1.46%	2.19%	7.03%	10.55%	5.38%	8.06%	3.86%	5.79%
19	5.57%	8.36%	1.46%	2.19%	7.03%	10.55%	5.38%	8.06%	3.86%	5.79%
20	5.57%	8.36%	1.46%	2.19%	7.03%	10.55%	5.38%	8.06%	3.86%	5.79%
21	5.67%	8.51%	1.50%	2.26%	7.17%	10.77%	5.47%	8.21%	3.93%	5.89%
22	5.77%	8.66%	1.55%	2.33%	7.32%	10.99%	5.56%	8.35%	4.00%	6.00%
23	5.88%	8.83%	1.61%	2.41%	7.49%	11.24%	5.67%	8.51%	4.07%	6.11%
24	5.99%	8.98%	1.66%	2.49%	7.65%	11.47%	5.77%	8.66%	4.14%	6.22%
25	6.10%	9.16%	1.71%	2.56%	7.81%	11.72%	5.88%	8.83%	4.22%	6.33%
26	6.22%	9.32%	1.75%	2.62%	7.97%	11.94%	6.00%	8.99%	4.30%	6.44%
27	6.33%	9.50%	1.79%	2.69%	8.12%	12.19%	6.10%	9.16%	4.38%	6.57%
28	6.45%	9.68%	1.84%	2.77%	8.29%	12.45%	6.23%	9.33%	4.45%	6.68%
29	6.58%	9.86%	1.90%	2.84%	8.48%	12.70%	6.34%	9.51%	4.54%	6.81%
30	6.70%	10.05%	1.94%	2.91%	8.64%	12.96%	6.45%	9.69%	4.62%	6.93%
31	6.83%	10.25%	2.00%	2.99%	8.83%	13.24%	6.59%	9.88%	4.71%	7.07%
32	6.97%	10.45%	2.04%	3.07%	9.01%	13.52%	6.71%	10.07%	4.80%	7.20%
33	7.11%	10.66%	2.10%	3.15%	9.21%	13.81%	6.85%	10.28%	4.89%	7.33%
34	7.25%	10.88%	2.14%	3.22%	9.39%	14.10%	6.98%	10.47%	4.98%	7.47%
35	7.40%	11.10%	2.21%	3.30%	9.61%	14.40%	7.11%	10.66%	5.08%	7.61%
36	7.53%	11.30%	2.26%	3.39%	9.79%	14.69%	7.23%	10.85%	5.17%	7.76%
37	7.68%	11.51%	2.31%	3.47%	9.99%	14.98%	7.36%	11.03%	5.27%	7.92%
38	7.80%	11.70%	2.37%	3.55%	10.17%	15.25%	7.47%	11.20%	5.38%	8.07%
39	7.93%	11.89%	2.43%	3.65%	10.36%	15.54%	7.57%	11.36%	5.48%	8.23%
40	8.05%	12.07%	2.49%	3.73%	10.54%	15.80%	7.68%	11.51%	5.58%	8.38%
41	8.16%	12.25%	2.50%	3.75%	10.66%	16.00%	7.77%	11.66%	5.69%	8.53%
42	8.26%	12.39%	2.52%	3.78%	10.78%	16.17%	7.85%	11.78%	5.78%	8.67%
43	8.35%	12.53%	2.54%	3.80%	10.89%	16.33%	7.94%	11.90%	5.87%	8.81%
44	8.44%	12.67%	2.54%	3.80%	10.98%	16.47%	8.03%	12.05%	5.96%	8.93%
45	8.56%	12.84%	2.54%	3.80%	11.10%	16.64%	8.12%	12.18%	6.03%	9.04%
46	8.67%	13.00%	2.54%	3.80%	11.21%	16.80%	8.22%	12.32%	6.10%	9.16%
47	8.79%	13.18%	2.54%	3.80%	11.33%	16.98%	8.27%	12.40%	6.17%	9.26%
48	8.88%	13.31%	2.53%	3.79%	11.41%	17.10%	8.30%	12.44%	6.24%	9.36%
49	8.92%	13.39%	2.50%	3.75%	11.42%	17.14%	8.28%	12.41%	6.31%	9.47%
50	8.91%	13.36%	2.47%	3.70%	11.38%	17.06%	8.22%	12.33%	6.38%	9.57%
51	8.86%	13.29%	2.41%	3.63%	11.27%	16.92%	8.15%	12.22%	6.45%	9.68%
52	8.80%	13.20%	2.37%	3.55%	11.17%	16.75%	8.03%	12.04%	6.50%	9.75%
53	8.71%	13.06%	2.31%	3.47%	11.02%	16.53%	8.28%	12.42%	6.52%	9.77%
54	8.55%	12.82%	2.27%	3.41%	10.82%	16.23%	8.55%	12.82%	6.50%	9.75%
55	8.46%	12.69%	2.23%	3.34%	10.69%	16.03%	8.46%	12.69%	6.46%	9.70%
56	8.37%	12.56%	2.14%	3.21%	10.51%	15.77%	8.37%	12.56%	6.40%	9.60%
57	8.28%	12.41%	2.06%	3.09%	10.34%	15.50%	8.28%	12.41%	6.31%	9.46%
58	8.17%	12.26%	1.99%	2.98%	10.16%	15.24%	8.17%	12.26%	6.51%	9.76%
59+	8.06%	12.09%	1.94%	2.90%	10.00%	14.99%	8.06%	12.09%	6.71%	10.07%

APPENDIX D – MEMBER CONTRIBUTION RATES

Current Year Contribution Rates (Safety Non-PEPRA):

	Tier 1						Tier 2 & 3	
	Basic		COLA		Total		Basic	
Entry Age	First $350	Over $350	First $350	Over $350	First $350	Over $350	First $350	Over $350
20	6.07%	9.11%	2.50%	3.75%	8.57%	12.86%	5.84%	8.76%
21	6.16%	9.25%	2.56%	3.84%	8.72%	13.09%	5.94%	8.90%
22	6.27%	9.40%	2.62%	3.93%	8.89%	13.33%	6.02%	9.03%
23	6.36%	9.54%	2.67%	4.01%	9.03%	13.55%	6.12%	9.18%
24	6.46%	9.70%	2.74%	4.10%	9.20%	13.80%	6.22%	9.32%
25	6.56%	9.84%	2.79%	4.19%	9.35%	14.03%	6.31%	9.47%
26	6.66%	10.00%	2.84%	4.26%	9.50%	14.26%	6.41%	9.61%
27	6.78%	10.16%	2.89%	4.34%	9.67%	14.50%	6.52%	9.77%
28	6.88%	10.32%	2.93%	4.40%	9.81%	14.72%	6.62%	9.92%
29	6.99%	10.48%	2.96%	4.44%	9.95%	14.92%	6.72%	10.09%
30	7.11%	10.66%	2.95%	4.43%	10.06%	15.09%	6.83%	10.25%
31	7.22%	10.83%	2.98%	4.48%	10.20%	15.31%	6.94%	10.41%
32	7.35%	11.01%	2.98%	4.48%	10.33%	15.49%	7.06%	10.59%
33	7.47%	11.20%	3.03%	4.54%	10.50%	15.74%	7.18%	10.76%
34	7.59%	11.39%	3.07%	4.60%	10.66%	15.99%	7.30%	10.95%
35	7.73%	11.59%	3.12%	4.67%	10.85%	16.26%	7.43%	11.15%
36	7.86%	11.80%	3.18%	4.78%	11.04%	16.58%	7.56%	11.34%
37	8.01%	12.02%	3.24%	4.87%	11.25%	16.89%	7.70%	11.55%
38	8.17%	12.26%	3.30%	4.96%	11.47%	17.22%	7.84%	11.76%
39	8.32%	12.47%	3.37%	5.06%	11.69%	17.53%	7.97%	11.95%
40	8.47%	12.71%	3.44%	5.16%	11.91%	17.87%	8.09%	12.13%
41	8.61%	12.92%	3.42%	5.13%	12.03%	18.05%	8.19%	12.29%
42	8.73%	13.11%	3.45%	5.18%	12.18%	18.29%	8.28%	12.41%
43	8.84%	13.26%	3.49%	5.23%	12.33%	18.49%	8.34%	12.50%
44	8.92%	13.39%	3.52%	5.28%	12.44%	18.67%	8.36%	12.55%
45	8.98%	13.48%	3.53%	5.30%	12.51%	18.78%	8.36%	12.55%
46	9.01%	13.52%	3.51%	5.27%	12.52%	18.79%	8.30%	12.44%
47	9.01%	13.52%	3.51%	5.26%	12.52%	18.78%	8.16%	12.25%
48	8.88%	13.31%	3.51%	5.27%	12.39%	18.58%	8.42%	12.63%
49+	8.69%	13.03%	3.53%	5.29%	12.22%	18.32%	8.69%	13.03%

APPENDIX D – MEMBER CONTRIBUTION RATES

Prior Year Contribution Rates (General Non-PEPRA):

	Tier 1						Tier 2		Tier 3	
	Basic		COLA		Total		Basic		Basic	
Entry Age	First $350	Over $350	First $350	Over $350	First $350	Over $350	First $350	Over $350	First $350	Over $350
16	5.57%	8.36%	1.46%	2.19%	7.03%	10.55%	5.38%	8.06%	3.86%	5.79%
17	5.57%	8.36%	1.46%	2.19%	7.03%	10.55%	5.38%	8.06%	3.86%	5.79%
18	5.57%	8.36%	1.46%	2.19%	7.03%	10.55%	5.38%	8.06%	3.86%	5.79%
19	5.57%	8.36%	1.46%	2.19%	7.03%	10.55%	5.38%	8.06%	3.86%	5.79%
20	5.57%	8.36%	1.46%	2.19%	7.03%	10.55%	5.38%	8.06%	3.86%	5.79%
21	5.67%	8.51%	1.50%	2.26%	7.17%	10.77%	5.47%	8.21%	3.93%	5.89%
22	5.77%	8.66%	1.55%	2.33%	7.32%	10.99%	5.56%	8.35%	4.00%	6.00%
23	5.88%	8.83%	1.61%	2.41%	7.49%	11.24%	5.67%	8.51%	4.07%	6.11%
24	5.99%	8.98%	1.66%	2.49%	7.65%	11.47%	5.77%	8.66%	4.14%	6.22%
25	6.10%	9.16%	1.71%	2.56%	7.81%	11.72%	5.88%	8.83%	4.22%	6.33%
26	6.22%	9.32%	1.75%	2.62%	7.97%	11.94%	6.00%	8.99%	4.30%	6.44%
27	6.33%	9.50%	1.79%	2.69%	8.12%	12.19%	6.10%	9.16%	4.38%	6.57%
28	6.45%	9.68%	1.84%	2.77%	8.29%	12.45%	6.23%	9.33%	4.45%	6.68%
29	6.58%	9.86%	1.90%	2.84%	8.48%	12.70%	6.34%	9.51%	4.54%	6.81%
30	6.70%	10.05%	1.94%	2.91%	8.64%	12.96%	6.45%	9.69%	4.62%	6.93%
31	6.83%	10.25%	2.00%	2.99%	8.83%	13.24%	6.59%	9.88%	4.71%	7.07%
32	6.97%	10.45%	2.04%	3.07%	9.01%	13.52%	6.71%	10.07%	4.80%	7.20%
33	7.11%	10.66%	2.10%	3.15%	9.21%	13.81%	6.85%	10.28%	4.89%	7.33%
34	7.25%	10.88%	2.14%	3.22%	9.39%	14.10%	6.98%	10.47%	4.98%	7.47%
35	7.40%	11.10%	2.21%	3.30%	9.61%	14.40%	7.11%	10.66%	5.08%	7.61%
36	7.53%	11.30%	2.26%	3.39%	9.79%	14.69%	7.23%	10.85%	5.17%	7.76%
37	7.68%	11.51%	2.31%	3.47%	9.99%	14.98%	7.36%	11.03%	5.27%	7.92%
38	7.80%	11.70%	2.37%	3.55%	10.17%	15.25%	7.47%	11.20%	5.38%	8.07%
39	7.93%	11.89%	2.43%	3.65%	10.36%	15.54%	7.57%	11.36%	5.48%	8.23%
40	8.05%	12.07%	2.49%	3.73%	10.54%	15.80%	7.68%	11.51%	5.58%	8.38%
41	8.16%	12.25%	2.50%	3.75%	10.66%	16.00%	7.77%	11.66%	5.69%	8.53%
42	8.26%	12.39%	2.52%	3.78%	10.78%	16.17%	7.85%	11.78%	5.78%	8.67%
43	8.35%	12.53%	2.54%	3.80%	10.89%	16.33%	7.94%	11.90%	5.87%	8.81%
44	8.44%	12.67%	2.54%	3.80%	10.98%	16.47%	8.03%	12.05%	5.96%	8.93%
45	8.56%	12.84%	2.54%	3.80%	11.10%	16.64%	8.12%	12.18%	6.03%	9.04%
46	8.67%	13.00%	2.54%	3.80%	11.21%	16.80%	8.22%	12.32%	6.10%	9.16%
47	8.79%	13.18%	2.54%	3.80%	11.33%	16.98%	8.27%	12.40%	6.17%	9.26%
48	8.88%	13.31%	2.53%	3.79%	11.41%	17.10%	8.30%	12.44%	6.24%	9.36%
49	8.92%	13.39%	2.50%	3.75%	11.42%	17.14%	8.28%	12.41%	6.31%	9.47%
50	8.91%	13.36%	2.47%	3.70%	11.38%	17.06%	8.22%	12.33%	6.38%	9.57%
51	8.86%	13.29%	2.41%	3.63%	11.27%	16.92%	8.15%	12.22%	6.45%	9.68%
52	8.80%	13.20%	2.37%	3.55%	11.17%	16.75%	8.03%	12.04%	6.50%	9.75%
53	8.71%	13.06%	2.31%	3.47%	11.02%	16.53%	8.28%	12.42%	6.52%	9.77%
54	8.55%	12.82%	2.27%	3.41%	10.82%	16.23%	8.55%	12.82%	6.50%	9.75%
55	8.46%	12.69%	2.23%	3.34%	10.69%	16.03%	8.46%	12.69%	6.46%	9.70%
56	8.37%	12.56%	2.14%	3.21%	10.51%	15.77%	8.37%	12.56%	6.40%	9.60%
57	8.28%	12.41%	2.06%	3.09%	10.34%	15.50%	8.28%	12.41%	6.31%	9.46%
58	8.17%	12.26%	1.99%	2.98%	10.16%	15.24%	8.17%	12.26%	6.51%	9.76%
59+	8.06%	12.09%	1.94%	2.90%	10.00%	14.99%	8.06%	12.09%	6.71%	10.07%

APPENDIX D – MEMBER CONTRIBUTION RATES

Prior Year Contribution Rates (Safety Non-PEPRA):

	Tier 1						Tier 2 & 3	
	Basic		COLA		Total		Basic	
Entry Age	First $350	Over $350	First $350	Over $350	First $350	Over $350	First $350	Over $350
20	6.07%	9.11%	2.50%	3.75%	8.57%	12.86%	5.84%	8.76%
21	6.16%	9.25%	2.56%	3.84%	8.72%	13.09%	5.94%	8.90%
22	6.27%	9.40%	2.62%	3.93%	8.89%	13.33%	6.02%	9.03%
23	6.36%	9.54%	2.67%	4.01%	9.03%	13.55%	6.12%	9.18%
24	6.46%	9.70%	2.74%	4.10%	9.20%	13.80%	6.22%	9.32%
25	6.56%	9.84%	2.79%	4.19%	9.35%	14.03%	6.31%	9.47%
26	6.66%	10.00%	2.84%	4.26%	9.50%	14.26%	6.41%	9.61%
27	6.78%	10.16%	2.89%	4.34%	9.67%	14.50%	6.52%	9.77%
28	6.88%	10.32%	2.93%	4.40%	9.81%	14.72%	6.62%	9.92%
29	6.99%	10.48%	2.96%	4.44%	9.95%	14.92%	6.72%	10.09%
30	7.11%	10.66%	2.95%	4.43%	10.06%	15.09%	6.83%	10.25%
31	7.22%	10.83%	2.98%	4.48%	10.20%	15.31%	6.94%	10.41%
32	7.35%	11.01%	2.98%	4.48%	10.33%	15.49%	7.06%	10.59%
33	7.47%	11.20%	3.03%	4.54%	10.50%	15.74%	7.18%	10.76%
34	7.59%	11.39%	3.07%	4.60%	10.66%	15.99%	7.30%	10.95%
35	7.73%	11.59%	3.12%	4.67%	10.85%	16.26%	7.43%	11.15%
36	7.86%	11.80%	3.18%	4.78%	11.04%	16.58%	7.56%	11.34%
37	8.01%	12.02%	3.24%	4.87%	11.25%	16.89%	7.70%	11.55%
38	8.17%	12.26%	3.30%	4.96%	11.47%	17.22%	7.84%	11.76%
39	8.32%	12.47%	3.37%	5.06%	11.69%	17.53%	7.97%	11.95%
40	8.47%	12.71%	3.44%	5.16%	11.91%	17.87%	8.09%	12.13%
41	8.61%	12.92%	3.42%	5.13%	12.03%	18.05%	8.19%	12.29%
42	8.73%	13.11%	3.45%	5.18%	12.18%	18.29%	8.28%	12.41%
43	8.84%	13.26%	3.49%	5.23%	12.33%	18.49%	8.34%	12.50%
44	8.92%	13.39%	3.52%	5.28%	12.44%	18.67%	8.36%	12.55%
45	8.98%	13.48%	3.53%	5.30%	12.51%	18.78%	8.36%	12.55%
46	9.01%	13.52%	3.51%	5.27%	12.52%	18.79%	8.30%	12.44%
47	9.01%	13.52%	3.51%	5.26%	12.52%	18.78%	8.16%	12.25%
48	8.88%	13.31%	3.51%	5.27%	12.39%	18.58%	8.42%	12.63%
49+	8.69%	13.03%	3.53%	5.29%	12.22%	18.32%	8.69%	13.03%

APPENDIX D – MEMBER CONTRIBUTION RATES

Current Year Contribution Rates (PEPRA):

PEPRA Rates		
	General	Safety
	7.22%	11.36%
Assumptions:		
Interest	6.75%	
Salary	2022 Valuation Scale (service-based, includes inflation at 2.5%)	
Mortality	CalPERS 2021 / PubS(B) 2010 tables, projected with 80% of MP-2020	
Other	Same as June 30, 2023 valuation (see Appendix B)	

Prior Year Contribution Rates (PEPRA):

PEPRA Rates		
	General	Safety
	7.26%	11.46%
Assumptions:		
Interest	6.75%	
Salary	2022 Valuation Scale (service-based, includes inflation at 2.5%)	
Mortality	CalPERS 2021 / PubS(B) 2010 tables, projected with 80% of MP-2020	
Other	Same as June 30, 2022 valuation (see Appendix B)	

APPENDIX E – GLOSSARY

1. Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs such as mortality, withdrawal, disability, retirement, changes in compensation, and rates of investment return.

2. Actuarial Cost Method

A procedure for determining the actuarial present value of pension plan benefits and expenses and for developing an allocation of such value to each year of service, usually in the form of a normal cost and an Actuarial Liability.

3. Actuarial Gain (Loss)

The difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

4. Actuarial Liability

The portion of the actuarial present value of projected benefits which will not be paid by future normal costs. It represents the value of the past normal costs with interest to the valuation date.

5. Actuarial Present Value (Present Value)

The value as of a given date of a future amount or series of payments. The actuarial present value discounts the payments to the given date at the assumed investment return and includes the probability of the payment being made.

6. Actuarial Valuation

The determination, as of a specified date, of the normal cost, Actuarial Liability, Actuarial Value of Assets, and related actuarial present values for a pension plan.

7. Actuarial Value of Assets

The value of cash, investments, and other property belonging to a pension plan as used by the actuary for the purpose of an actuarial valuation. The purpose of an Actuarial Value of Assets is to smooth out fluctuations in market values. No longer applicable as of the June 30, 2014 actuarial valuation.

APPENDIX E – GLOSSARY

8. Actuarially Equivalent

Of equal actuarial present value, determined as of a given date, with each value based on the same set of actuarial assumptions.

9. Amortization Payment

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

10. Entry Age Normal Actuarial Cost Method

A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages.

11. Funded Ratio

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

12. Normal Cost

That portion of the actuarial present value of pension plan benefits and expenses, which is allocated to a valuation year by the actuarial cost method.

13. Projected Benefits

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

14. Unfunded Actuarial Liability

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

Classic Values, Innovative Advice