



Tulare County Employees' Retirement Association

Actuarial Valuation Report as of June 30, 2022

Produced by Cheiron

October 2022

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October 31, 2022

Board of Retirement
Tulare County Employees' Retirement Association
136 N. Akers St.
Visalia, California 93291

Dear Members of the Board:

At your request, we have conducted an actuarial valuation of the Tulare County Employees' Retirement Association (TCERA, the System, the Fund, the Plan) as of June 30, 2022. This report contains information on the System's assets, liabilities, and discloses employer contribution levels. Your attention is called 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 TCERA. This report was prepared for the TCERA Board of Retirement for the purposes described herein and for use by the plan auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

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

A handwritten signature in blue ink that reads "Graham A. Schmidt".

Graham A. Schmidt, ASA, EA, FCA, MAAA
Consulting Actuary

A handwritten signature in blue ink that reads "Steven M. Hastings".

Steven M. Hastings, FSA, EA, FCA, MAAA
Consulting Actuary

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

FOREWORD

Cheiron has performed the actuarial valuation of the Tulare County Employees' Retirement Association as of June 30, 2022. 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 System's
 - Section II – Disclosures Related to Risk
 - 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), a glossary of key actuarial terms (Appendix D), and tables containing member contribution rates (Appendix E).

Future results may differ significantly from the current results presented in this 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.

This report was prepared using census data and financial information as of the valuation date, June 30, 2022. Events following that date are not reflected in this report. Actual experience, both demographic and economic, will be reflected in subsequent valuations as experience emerges.

In preparing our report, we relied on information (some oral and some written) supplied by the TCERA 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.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

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 funded status of the System,
- Past and expected trends in the funding progress of the System,
- Employer and employee contribution rates for Plan Year 2023-2024,
- An assessment and disclosure of key risks, and
- Information required by the GFOA for the Annual Comprehensive Financial Report (ACFR).

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 results, (C) an examination of the historical trends, and (D) the projected outlook for the System.

A. Valuation Basis

This valuation determines the employer contributions required for the employers' fiscal years beginning July 1, 2023. The System's funding policy is to collect contributions from the employers and employees equal to the sum of (1) the normal cost under the Entry Age Normal Cost Method and (2) amortization of the Unfunded Actuarial Liability.

The Unfunded Actuarial Liability (UAL) is the excess of the Actuarial Liability over the Actuarial Value of Assets. Based on the funding policy adopted by the Board at its October 28, 2015 meeting, the UAL payment in the current valuation is the amount needed to fund the June 30, 2015 UAL over a closed 19-year period with payments as a level percentage of payroll, assuming payroll increases of 3.00% per year, with subsequent gains and losses being amortized over new 19-year closed periods, also as a level percentage of payroll.

Actuarial experience studies are performed every three years. This valuation was performed using the economic and demographic assumptions adopted by the Board, which are based on the experience study presented by Cheiron on September 23, 2020 and described in detail in a follow-up report delivered to the Board in October 2020. The Board decided to phase in the impact of the June 30, 2020 assumption changes on the employer contribution rate over three years, with the assumption changes fully phased-in with the current valuation. There are no assumption changes for this valuation. The discount rate remains 7.00%. A summary of the assumptions and methods used in the current valuation is shown in Appendix B.

At the direction of the Board, the UAL and contribution rates shown in Tables I-1 and I-4 do not reflect any estimated liabilities associated with future transfers to the Supplemental Retiree Benefit Reserve (SRBR). An estimate of this liability has been disclosed in Table IV-4.

This valuation was prepared based on the plan provisions shown in Appendix C. There have been no changes to the plan provisions since the last valuation. This valuation does not include any consideration of external liabilities (or related debt service payments) incurred by the Plan sponsors outside of TCERA, such as those related to pension obligation bonds, which would be disclosed in Tulare County's Annual Comprehensive Financial Report.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION I – EXECUTIVE SUMMARY

B. Key Findings of this Valuation

The key results of the June 30, 2022 actuarial valuation are as follows:

- The average actuarially determined employer contribution rate increased from 15.19% of payroll to 16.01% of payroll. Information on the contribution rates and changes from last year to this year may be found in Tables I-4 and I-5.
- There was a 0.28% increase in the employer rate due to investment losses for the plan year ending June 30, 2022. On a Market Value of Assets basis, the Plan earned -6.17%, as compared to the prior year's 7.00% assumed return. On a smoothed (Actuarial Value of Assets) basis, the return was 6.37%.
- The UAL is the excess of the System's Actuarial Liability over the Actuarial Value of Assets. The System experienced an increase in the UAL from \$199.0 million as of June 30, 2021 to \$207.2 million as of June 30, 2022. The \$8.2 million increase in the UAL was due to investment losses and contributions being less than the actuarial cost, which increased the UAL by \$15.8 million for the plan year ending June 30, 2022 but were partially offset by demographic gains. A detailed reconciliation of the components of change in the UAL is shown in Table I-3.
- The remaining balance of the June 30, 2015 UAL is being amortized over 12 years and the remaining balances for each of the subsequent UAL layers are being amortized over periods that extend by one additional year each (e.g., the UAL loss from the plan year ending June 30, 2016 is being amortized over 13 years). Finally, the UAL loss for the plan year ending June 30, 2022 is being amortized as a new 19-year layer.
- The System's funded ratio, the ratio of actuarial assets over Actuarial Liability, increased from 89.8% last year to 89.9% as of June 30, 2022. On a market value basis, the funded ratio decreased from 95.4% last year to 83.3% this year. The Actuarial Value of Assets is higher than the market value, meaning that there are deferred investment losses that will be recognized in the Actuarial Value of Assets (and employer contributions) in future years.
- During the 2021-2022 Plan year, the actuarial liabilities of the System increased less than expected. The liability gains were associated primarily with more terminations than expected during the year. These gains were partially offset by salary increases higher than expected. In total, the liability gains decreased the Actuarial Liability by \$1.9 million.
- Overall participant membership increased compared to last year, from 10,251 to 10,484. The total active population decreased from 4,484 to 4,432 and total projected payroll increased from \$286,886,367 to \$293,444,953. The number of inactives increased from 2,295 to 2,467, while the number of retirees increased from 3,472 to 3,585.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION I – EXECUTIVE SUMMARY

- In Table IV-4 of this valuation, we have disclosed a liability of \$118.7 million associated with future transfers to the Supplemental Retiree Benefit Reserve (SRBR). This represents an decrease of roughly \$56.2 million compared to last year due primarily to poor investment returns and the unrecognized asset losses associated with them. These losses will flow to the Actuarial Value of Assets over 10 years and reduce the likelihood of future transfers.

The liability associated with future transfers is based on a simulation of investment returns and represents the accrued portion of the present value of SRBR transfers expected to result from future returns on the Actuarial Value of Assets in excess of the 7.00% assumption. It has not been reflected in the calculation of the employer contribution rate. Future SRBR transfers would result in lower net asset experience, which will be reflected in future amortization layers.

If the liability for future SRBR transfers were to be pre-funded, the employer contribution would be approximately \$14.2 million higher, or about 5.0% of pay. We have also disclosed a liability of \$106 million associated with the current SRBR balance, which is equal to the current balance of the SRBR, less the portion assumed to represent future benefit accruals. Note that the disclosure of these liabilities does not imply that the current benefit levels are guaranteed. Our understanding is that the Board has the power to adjust the benefit amounts paid from the SRBR.

On the following pages, we present Tables I-1 and I-2, which summarize the key results of the valuation with respect to TCERA assets, liabilities, Unfunded Actuarial Liability, funded ratios, and membership. The results are presented and compared for both the current and prior plan year.

The leverage ratios are equal to the Market Value of Assets (or Actuarial Liability) divided by payroll and represent a measure of the size of the plan relative to the plan sponsor. For additional discussion, see the discussion of maturity measures in Section II of this report.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION I – EXECUTIVE SUMMARY

| Table I-1 | | | |
|--|---------------|---------------|----------|
| Summary of Key Valuation Results - Funded Status | | | |
| (in thousands) | | | |
| Valuation Date | June 30, 2021 | June 30, 2022 | % Change |
| Actuarial Liability | \$ 1,957,985 | \$ 2,047,350 | 4.6% |
| Market Value of Assets | \$ 1,976,185 | \$ 1,819,009 | -8.0% |
| Market Value of Assets (Excluding SRBR) | 1,867,739 | 1,705,307 | -8.7% |
| Actuarial Value of Assets (Excluding SRBR) | 1,759,025 | 1,840,109 | 4.6% |
| Unfunded Actuarial Liability (UAL) | | | |
| - based on Market Value of Assets | \$ 90,246 | \$ 342,043 | 279.0% |
| - based on Actuarial Value of Assets | 198,960 | 207,241 | 4.2% |
| Funding Ratio - Market value basis | 95.4% | 83.3% | -12.1% |
| Funding Ratio - Actuarial value basis | 89.8% | 89.9% | 0.1% |
| Expected Payroll | \$ 286,886 | \$ 292,987 | 2.1% |
| Asset Leverage Ratio (Excluding SRBR) | 6.5 | 5.8 | -10.6% |
| Actuarial Liability Leverage Ratio | 6.8 | 7.0 | 2.4% |
| Interest on UAL (MVA basis) | \$ 6,317 | \$ 23,943 | 279.0% |
| Interest Cost as Percent of Payroll | 2.2% | 8.2% | 6.0% |

Numbers may not add to totals due to rounding.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION I – EXECUTIVE SUMMARY

| Table I-2 | | | |
|---|----------------------|----------------------|-----------------|
| Membership Total | | | |
| Item | June 30, 2021 | June 30, 2022 | % Change |
| Actives | 4,484 | 4,432 | -1.2% |
| Inactives | 2,295 | 2,467 | 7.5% |
| Members Receiving Benefits | 3,472 | 3,585 | 3.3% |
| Total Members | 10,251 | 10,484 | 2.3% |
| Ratio of Retired Members to Active Members | 77.4% | 80.9% | 3.5% |
| Active Member Projected Payroll for FYE June 30, 2022 and 2023 | \$ 286,886,367 | \$ 293,444,953 | 2.3% |
| Average Pay per Active | \$ 63,980 | \$ 66,211 | 3.5% |

The Unfunded Actuarial Liability (UAL) for TCERA increased by \$8.2 million, from \$199.0 million to \$207.2 million. Table I-3 below presents the specific components of the change in the UAL.

The UAL was expected to decrease by \$5.6 million, due to the scheduled amortization payment being greater than the interest on the UAL. Asset losses – i.e., the smoothed investment return below last year's assumed rate of 7.00% – increased the UAL by \$11.0 million, however, this was partially offset by liability experience gains of \$1.9 million. Contributions were less than the actuarial cost, due to the phase-in of the assumption changes and the 12-month delay in the implementation of the contribution rates, increasing the UAL by \$4.7 million. A detailed breakdown of the liability experience can be found in Table IV-2.

| Table I-3 | |
|--|-----------------------|
| Change in Unfunded Actuarial Liability | |
| Experience | (in thousands) |
| Unfunded actuarial liability, 6/30/2021 | \$ 198,960 |
| Expected change in unfunded actuarial liability | (5,555) |
| Increase due to investment loss | 11,008 |
| Increase due to contributions less than actuarial cost | 4,748 |
| Decrease due to liability gain | (1,920) |
| Increase due to assumption changes | 0 |
| Total change in unfunded actuarial liability | \$ 8,281 |
| Unfunded actuarial liability, 6/30/2022 | \$ 207,241 |

Numbers may not add to totals due to rounding.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION I – EXECUTIVE SUMMARY

Employer and Employee Contributions

Table I-4 below compares the net employer contribution rate and its components to those from the prior year. The overall net employer contribution rate (prior to the phase-in of the assumption changes) increased by 0.36% for the June 30, 2022 valuation. The net employer normal cost rate decreased by 0.05% and the UAL rate increased by 0.41%. The average employee rate decreased by 0.01%, from 9.08% to 9.07%.

Additional details on contributions may be found in Section V, including separate rates for the County versus the other employers, which have been included in this report to reflect the Board's decision to allocate the cost impact of the POB contribution to the County only. Future investment experience related to the POB contribution will be shared amongst all TCERA employers.

| Table I-4 Summary of Contributions | | | | | |
|--|----------|--------------|----------|---------------|----------|
| | FYE 2023 | | FYE 2024 | | Change |
| <u>Contribution Rates</u> | | | | | |
| Net Employer Contribution Rate | | 15.65% | | 16.01% | 0.36% |
| Estimated Employee Contribution Rate | | <u>9.08%</u> | | <u>9.07%</u> | -0.01% |
| Total Contribution Rate | | 24.73% | | 25.08% | 0.35% |
| | | | | | |
| Net Employer Contribution Rate with Phase-in | | 15.19% | | 16.01% | |
| | | | | | |
| Estimated Net Employer Contributions | \$ | 44,904 | \$ | 48,372 | \$ 3,468 |
| <i>(in thousands)</i> | | | | | |
| | | | | | |
| <u>Total Contribution Rate</u> | | | | | |
| Estimated Employee Contribution Rate | | 9.08% | | 9.07% | -0.01% |
| Employer Normal Cost Rate | | <u>9.08%</u> | | <u>9.03%</u> | -0.05% |
| Total Normal Cost Rate | | 18.16% | | 18.10% | -0.06% |
| UAL Rate | | | | | |
| Interest on Market Value UAL | | 2.20% | | 8.17% | 5.97% |
| Principal on Market Value UAL | | <u>4.37%</u> | | <u>-1.19%</u> | -5.56% |
| Total UAL Rate | | 6.57% | | 6.98% | 0.41% |
| | | | | | |
| Total Contribution Rate | | 24.73% | | 25.08% | 0.35% |
| Total Contribution Rate with Phase-in | | 24.28% | | 25.08% | 0.81% |

Numbers may not add to totals due to rounding.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION I – EXECUTIVE SUMMARY

Table I-5 summarizes the changes in the employer contribution rate. As discussed earlier in this section, the largest sources of change were increases due to the investment losses and contributions being less than the actuarial cost. The costs also increased due to payroll increasing less than expected. The increases were partially offset by demographic gains over the past year. In aggregate, the employer contribution rate increased from 15.19% for FYE 2023 to 16.01% for FYE 2024, after reflecting the final year of the phase-in of the impact of the assumption changes.

| Table I-5 Employer Contribution Reconciliation | | | |
|---|-------------|--------------|--------|
| Item | Normal Cost | Amortization | Total |
| FYE 2023 Net Employer Contribution Rate with Phase-in | 8.97% | 6.22% | 15.19% |
| Change due to asset loss | 0.00% | 0.28% | 0.28% |
| Change due to contributions less than actuarial cost | 0.00% | 0.12% | 0.12% |
| Change due to demographic gains and losses | -0.05% | -0.04% | -0.09% |
| Change due to payroll less than expected | 0.00% | 0.05% | 0.05% |
| Change due to assumption changes | 0.00% | 0.00% | 0.00% |
| Phase-in of assumption changes* | 0.11% | 0.35% | 0.45% |
| Total Change in Employer Rate | 0.06% | 0.76% | 0.82% |
| FYE 2024 Net Employer Contribution Rate | 9.03% | 6.98% | 16.01% |

**Reflects final year of three year phase-in of assumption changes for employer contribution rate
Numbers may not add to totals due to rounding.*

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

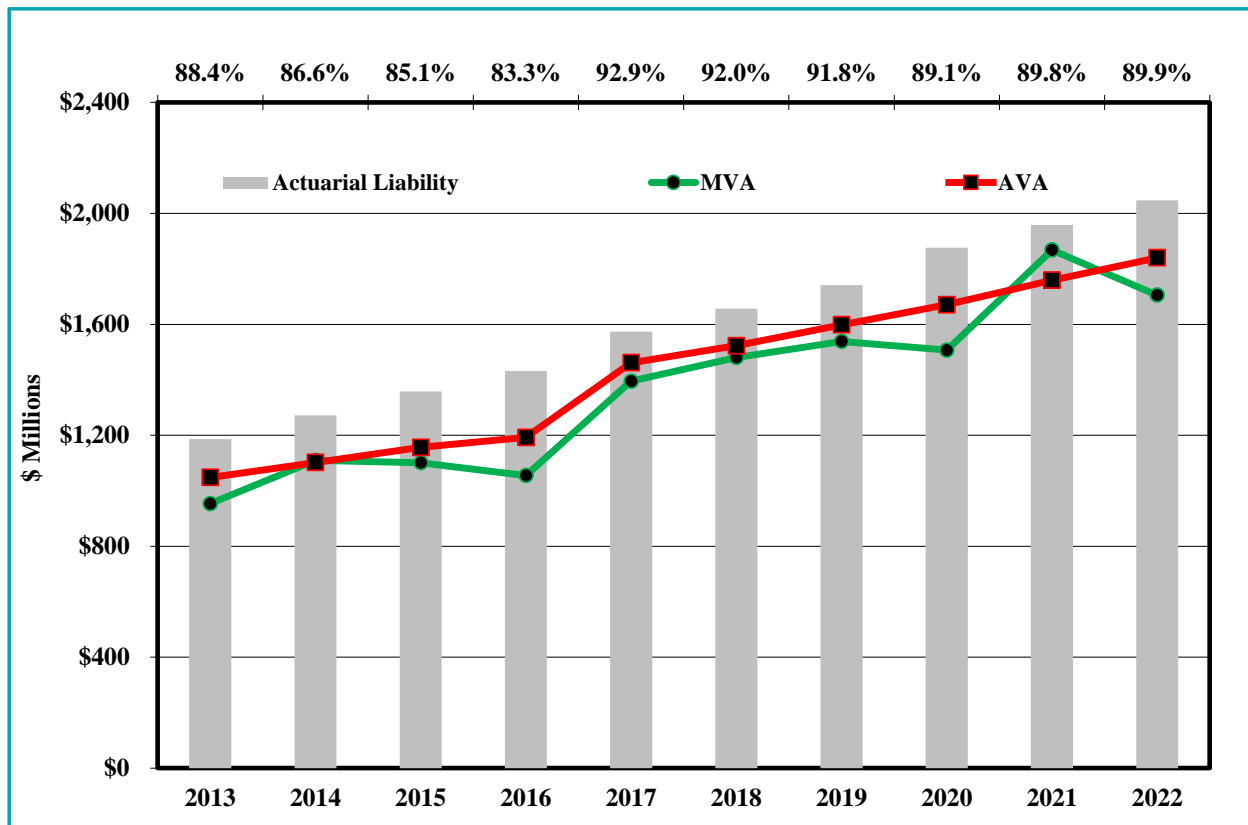
SECTION I – EXECUTIVE SUMMARY

C. Historical Trends

Despite the fact that 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, it is important to remember that each valuation is merely a snapshot in the long-term progress of a pension fund. It is important to judge the current year's valuation results relative to historical trends, as well as trends expected into the future.

Assets and Liabilities

The chart below compares the Market Value of Assets (MVA) and Actuarial Value of Assets (AVA) to the actuarial liabilities. The percentage shown in the graph is the ratio of the Actuarial Value of Assets to the Actuarial Liability (the funded ratio). The funded ratio had declined from 89.1% in 2012 to 83.3% in 2016 but increased to 92.9% as of June 30, 2017. The largest factor for the funding ratio decline was asset losses in 2008-2009, and the significant increase in the funded ratio in 2017 was due to the contribution from POB proceeds. For the 2022 plan year, the funding ratio increased slightly to 89.9%, primarily as result of the continued contributions being made to the Plan and the liability gains.



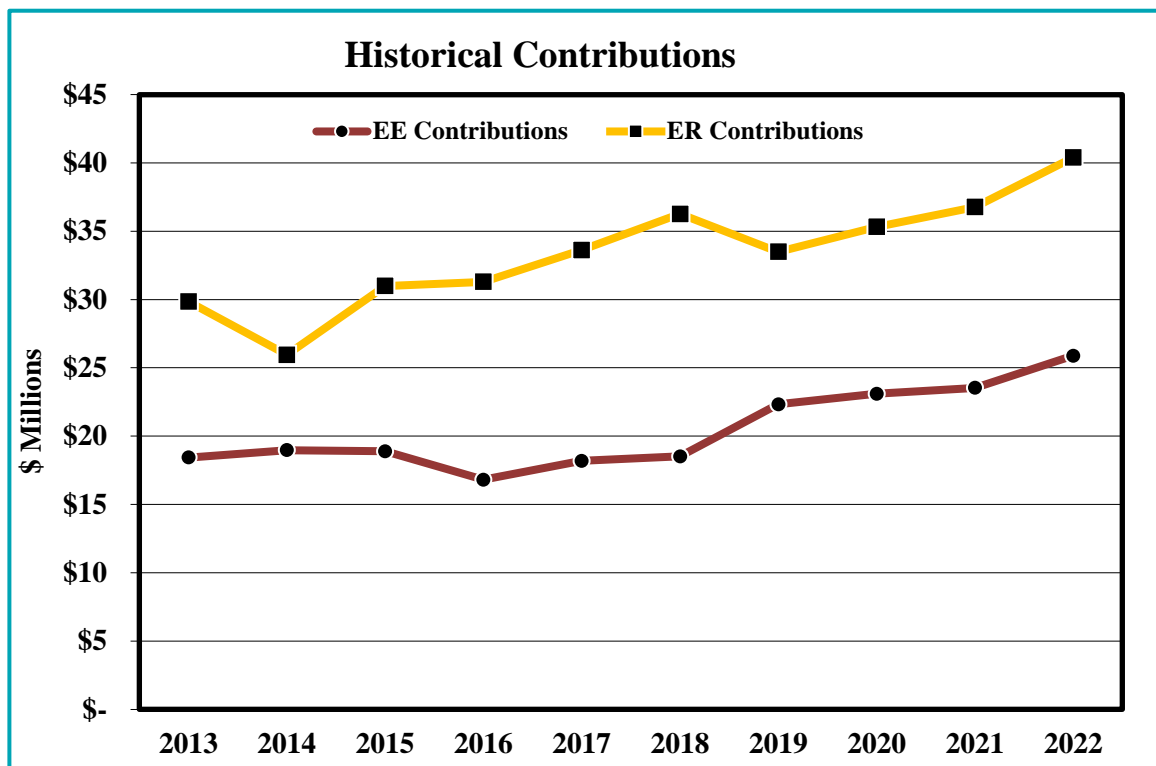
**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION I – EXECUTIVE SUMMARY

Contribution Trends

In the chart below, we present the historical trends for the TCERA employer and employee contributions. The employer contribution rates have increased as a result of the 2008-2009 asset losses that were phased in over 10 years. TCERA has also made assumption changes and experienced additional asset losses, further increasing the employer contribution rates. The assumption changes have also increased the employee contribution rates.

Note that the employer contributions shown below do not include the contribution from POB proceeds in FY2017-2018 that exceeded the regular actuarially determined amounts.



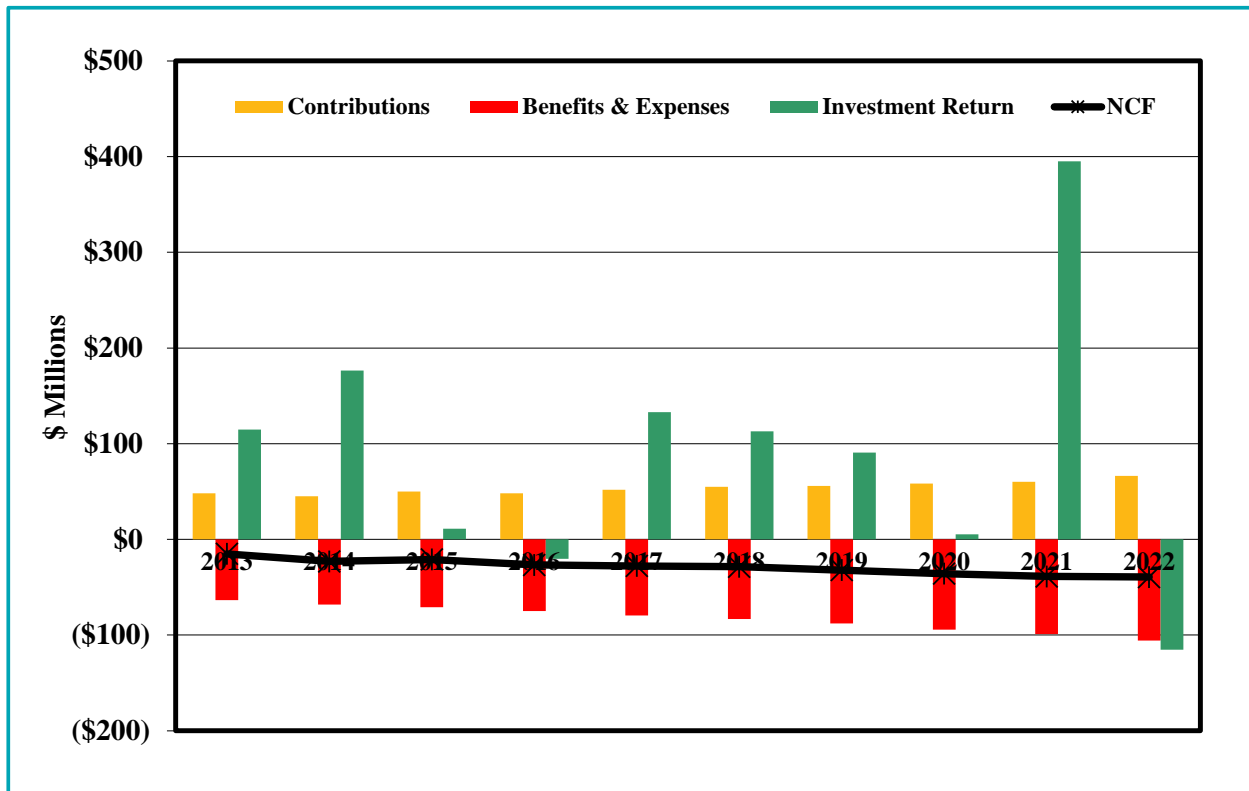
**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION I – EXECUTIVE SUMMARY

Cash Flows

The chart below shows the Plan's cash flow (contributions less benefit payments and administrative expenses). This is a critical 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.

Note that the contributions do not include the excess contributions from POB proceeds.



In the chart above, the contributions, benefit payments plus expenses, and investment returns are shown as bars and the Plan's net cash flow (NCF) is shown as a black line. The NCF, which is equal to contributions less benefit payments and administrative expenses, began close to zero at the beginning of the 10-year period, but has grown consistently more negative over time. For the most recent year, the plan had negative cash flow of approximately 2.3% of assets (market value).

A negative cash flow magnifies the losses during a market decline hindering the Plan in its ability to absorb market fluctuations. The implications of a plan in negative cash flow are that the impact of market fluctuations can be more severe: as assets are being depleted to pay benefits in down markets, there is less principal available to be reinvested during favorable return periods. However, a negative cash flow is also a positive for a well-funded mature plan, as the investment earnings reduce the contributions needed to pay benefits.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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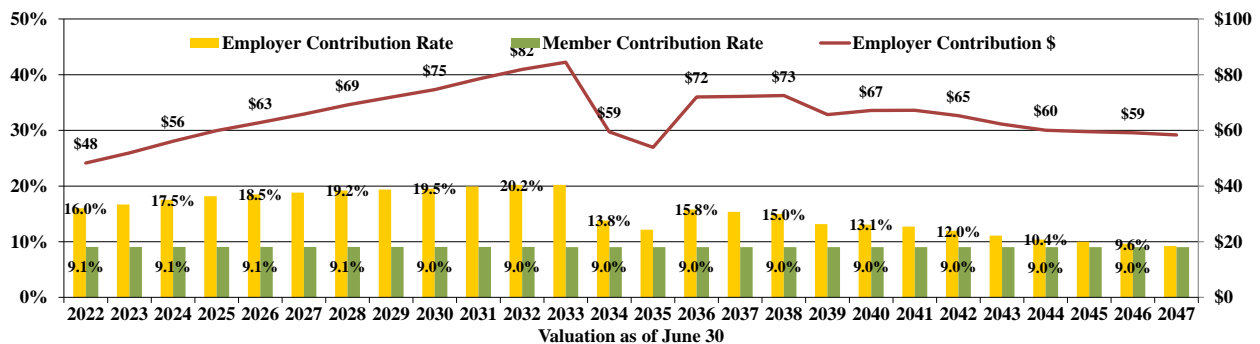
SECTION I – EXECUTIVE SUMMARY

D. Future Expected Financial Trends

The analysis of projected financial trends is an important component of this valuation. In this section, we present our assessment of the implications of the June 30, 2022 valuation results in terms of future projected contribution rates and benefit security (assets over liabilities). All the projections in this section are based on an investment return assumption of 7.00%. We have assumed future increases in total pensionable payroll of 3.00% per year.

The following graph shows the expected employer contribution rate (gold bars) and employee contribution rate (green bars) determined as of the valuation date, and the employer contribution in millions of dollars (red line) for the following fiscal year, based on achieving the investment assumption **each year** for the next 25 years. This scenario is highly unlikely: even if the Plan does achieve the assumed return **on average** over this time period, the returns in each given year will certainly vary.

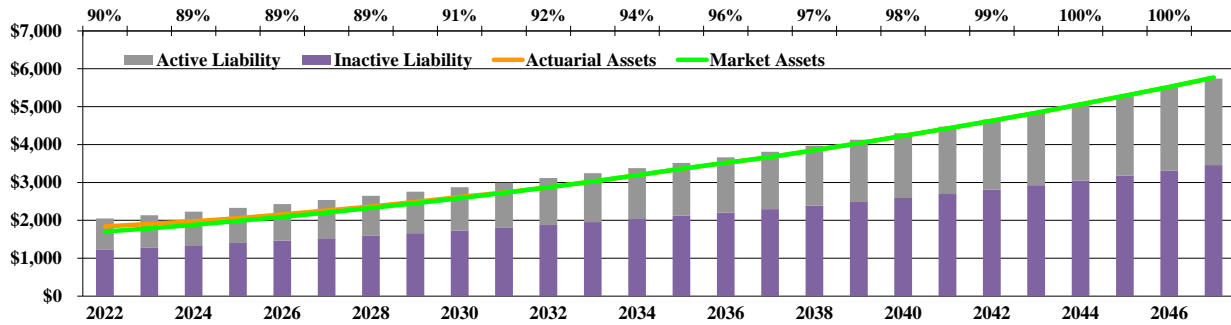
The contribution graph shows that the employer contribution rate is expected to increase for the next 11 years as the current deferred investment losses (approximately \$135 million) are recognized, then drop significantly after 2033 when the UAL layer from 2015 is paid off.



**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION I – EXECUTIVE SUMMARY

The following graph shows the projection of assets and liabilities assuming that assets will earn the investment assumption each year during the projection period (dollars shown in millions). The percentages at the top of the graph represent the funded ratio or status of the System.



The funded status, based on the Actuarial Value of Assets, is expected to reach 100% by 2043 assuming the actuarial assumptions are achieved, which is 12 years later than in last year's report due to the poor investment returns for the year. The Market Value of Assets is currently lower than the actuarial value – due to the deferred losses mentioned above – and the funded status on this basis is currently about 6% lower but is expected to converge to the actuarial value over time if the investment return assumption is met.

However, as with the projection of contribution rates, it is the **actual** return on System assets that will determine the future funded status.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION II – RISK IDENTIFICATION AND ASSESSMENT

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. 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

The fundamental risks to the pension plan are that the contributions needed to pay the benefits become unaffordable or that the contributions needed to support the Plan may differ significantly from expectations. While there are a number of factors that could lead to either of these events, we believe the primary risks are:

- Investment risk,
- Assumption change risk, and
- Contribution and payroll 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 valuation assumptions are different than the current assumptions. For example, declines in interest rates over the last three decades 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.

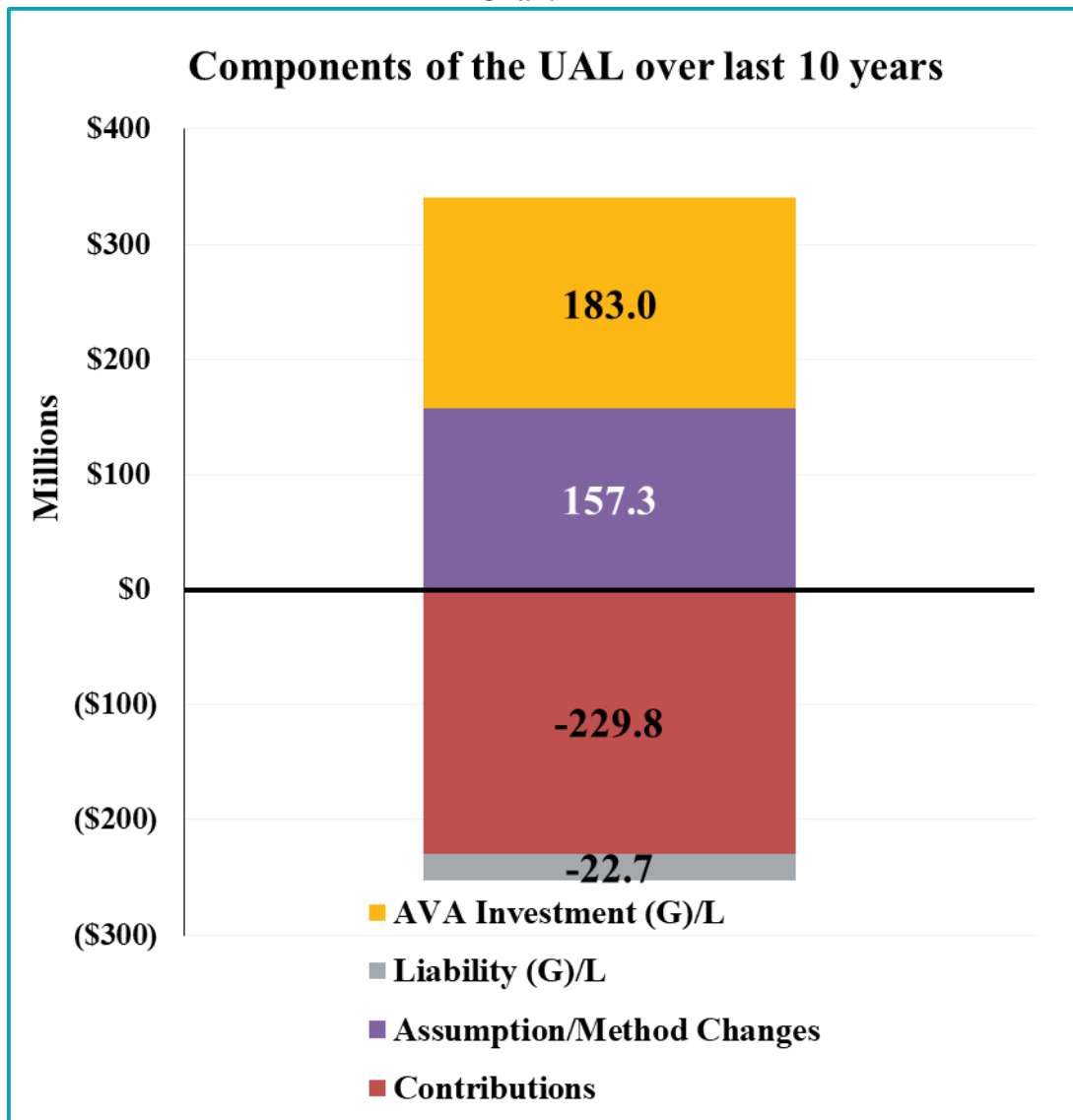
Contribution risk is the potential for actual future contributions to deviate from expected future contributions. There are different sources of contribution risk such as the sponsor choosing to not make contributions in accordance with the funding policy. As another example, the contribution requirement might become a financial strain on the sponsor as a result of material contribution base changes (e.g., covered employees, covered payroll) that affect the amount of contributions the Plan can collect.

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SECTION II – RISK IDENTIFICATION AND ASSESSMENT

The chart below shows the components contributing to the Unfunded Actuarial Liability (UAL) from July 1, 2012 through June 30, 2022. Over the last 10 years, the UAL has increased by approximately \$87.7 million. The investment losses (gold bar) of \$183.0 million on the Actuarial Value of Assets (AVA) and assumption/method changes (purple bar) resulting in a total UAL increase of \$157.3 million are the primary sources in the UAL growth. Contributions in excess of the “tread water” level (red bar) of \$229.8 million, resulting from a pension obligation bond contribution of approximately \$250 million, have partially offset the UAL growth. Finally, net liability gains (gray bar) of \$22.7 million also decreased the UAL.

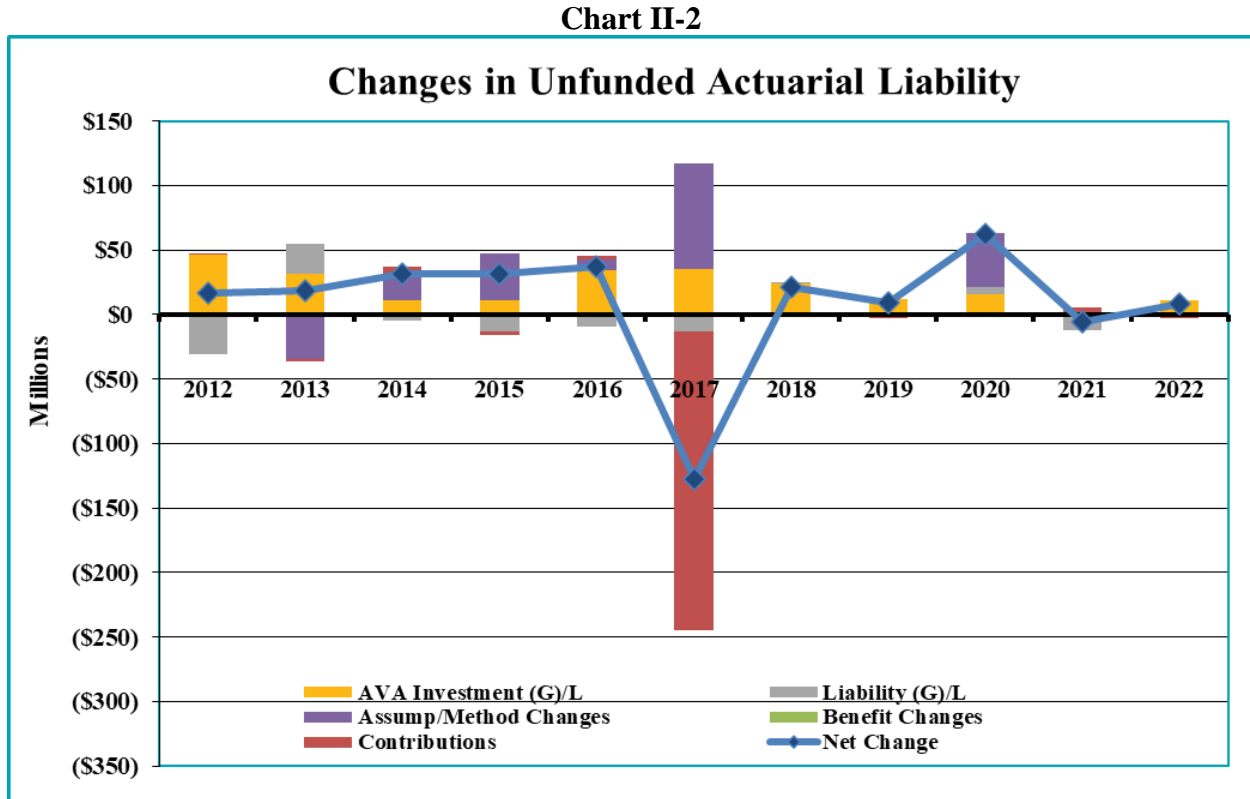
Chart II-1



**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION II – RISK IDENTIFICATION AND ASSESSMENT

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.



On a smoothed basis, the average annual geometric return over the 10-year period is 5.9%, with losses occurring on the AVA every year, except 2021, which have increased the UAL. As of June 30, 2022, there are approximately \$135 million of deferred losses that will be recognized over the next nine years. As a result, even if the Plan earns above the expected return of 7.00% on a market basis, there could still be a loss on the smoothed value of assets.

Over the same time period, the assumed rate of return decreased from 7.90% to 7.00%. It is important to note that these changes simply reflect a downward revision to the estimate of future investment earnings; ultimately costs will be determined by actual investment earnings. Future expectations of investment returns may continue to decline necessitating further reductions in the discount rate.

The net impact of assumption changes is represented by the purple bars and includes changes to demographic assumptions that decreased the UAL in some years.

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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. 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.

The County issued bonds worth approximately \$250 million and included a similar amount as a receivable contribution for the June 30, 2017 valuation. This large contribution went directly toward paying down the principal on the UAL as seen below in Table II-1, which numerically summarizes the changes in the UAL for each year by source over the last 10 years. It should be noted that for bonds to have positive long-term financial impact, pension investments will need to outperform debt service payments over the length of the bonds.

The Board adopted 19-year layered amortization of the UAL at its October 28, 2015 meeting. Under this approach, contributions are typically above the tread water level each year. However, the Board's election to phase in the impact of the most recent assumption changes over three years was the primary cause for the contributions to be less than the tread water level for the 2021 fiscal year end. Contributions for the 2022 fiscal year end were \$0.8 million more than the actuarial cost and subsequently decreased the UAL by that amount.

Table II-1

| Unfunded Actuarial Liability (UAL) Change by Source | | | | | |
|---|-------------------------|-------------------------------|-------------------------|--------------------------|----------------------|
| June 30, | Contributions | Assumption/ Method Changes | Liability Experience | Investment Experience | Total UAL Change |
| 2013 | \$ (1,843,981) | \$ (34,420,710) | \$ 23,026,858 | \$ 31,624,756 | \$ 18,386,923 |
| 2014 | 5,138,315 | 21,095,393 | (5,070,085) | 10,841,064 | 32,004,687 |
| 2015 | (3,043,058) | 36,744,870 | (12,668,401) | 10,912,537 | 31,945,948 |
| 2016 | 2,775,153 | 9,170,277 | (8,948,443) | 33,948,354 | 36,945,341 |
| 2017 | (231,452,683) | 82,259,297 | (12,982,692) | 35,033,717 | (127,142,361) |
| 2018 | (2,307,142) | 0 | 285,647 | 23,696,427 | 21,674,932 |
| 2019 | (2,726,065) | 0 | (161,312) | 12,412,582 | 9,525,205 |
| 2020 | (1,439,104) | 42,435,148 | 5,587,388 | 15,576,636 | 62,160,068 |
| 2021 | 5,856,076 | 0 | (9,839,957) | (2,067,958) | (6,051,840) |
| <u>2022</u> | <u>(806,901)</u> | <u>0</u> | <u>(1,919,754)</u> | <u>11,007,851</u> | <u>8,281,196</u> |
| Total | \$ (229,849,390) | \$ 157,284,275 | \$ (22,690,751) | \$ 182,985,965 | \$ 87,730,099 |

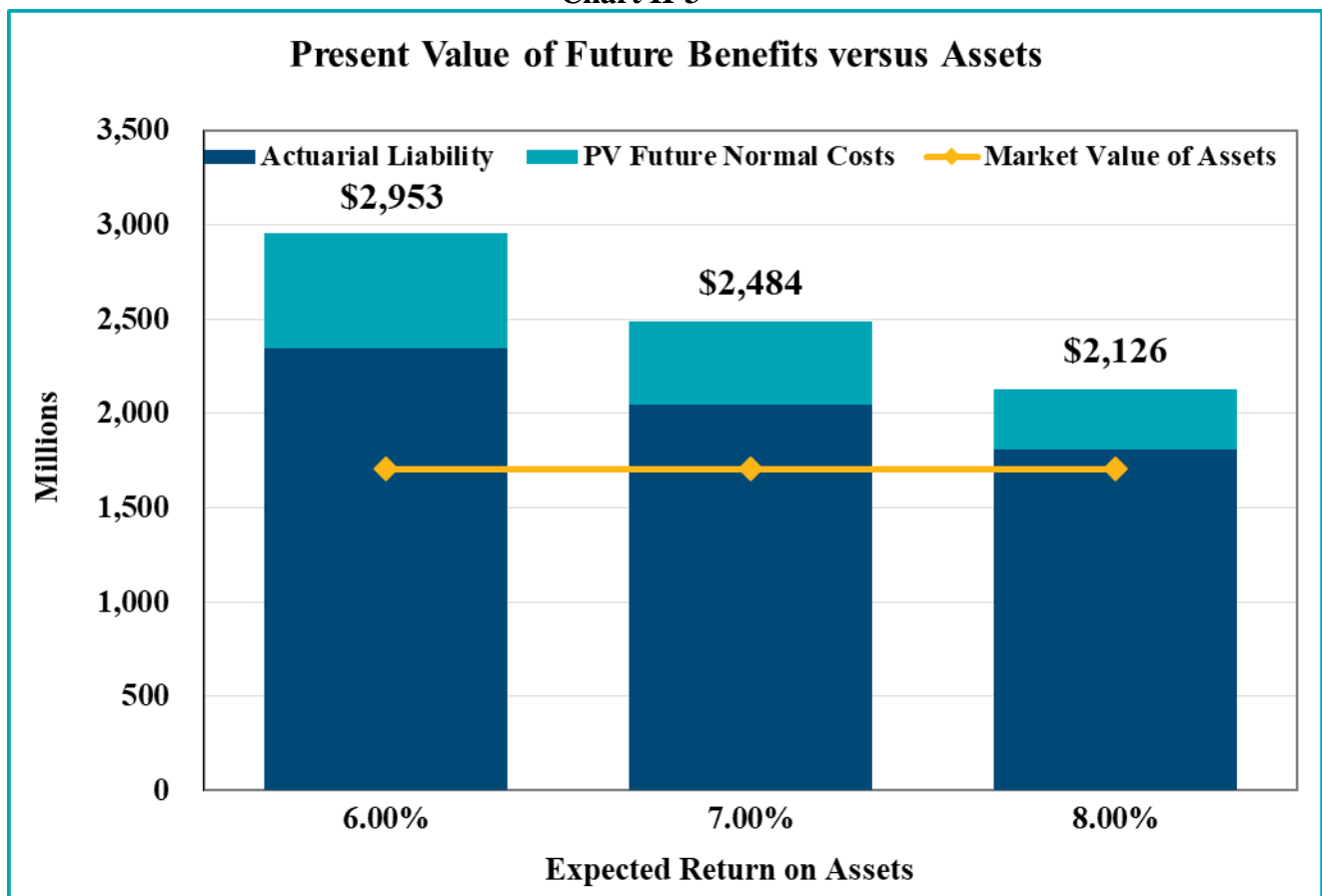
SECTION II – RISK IDENTIFICATION AND ASSESSMENT

Assessing Costs and Risks

Sensitivity to Investment Returns

The chart below compares assets to the present value of all projected future benefits 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. The present value of future benefits is shown as a bar with the portion attributable to past service in dark blue (Actuarial Liability) and the portion attributable to future service in teal (Present Value of Future Normal Costs). The Market Value of Assets is shown by the gold line.

Chart II-3



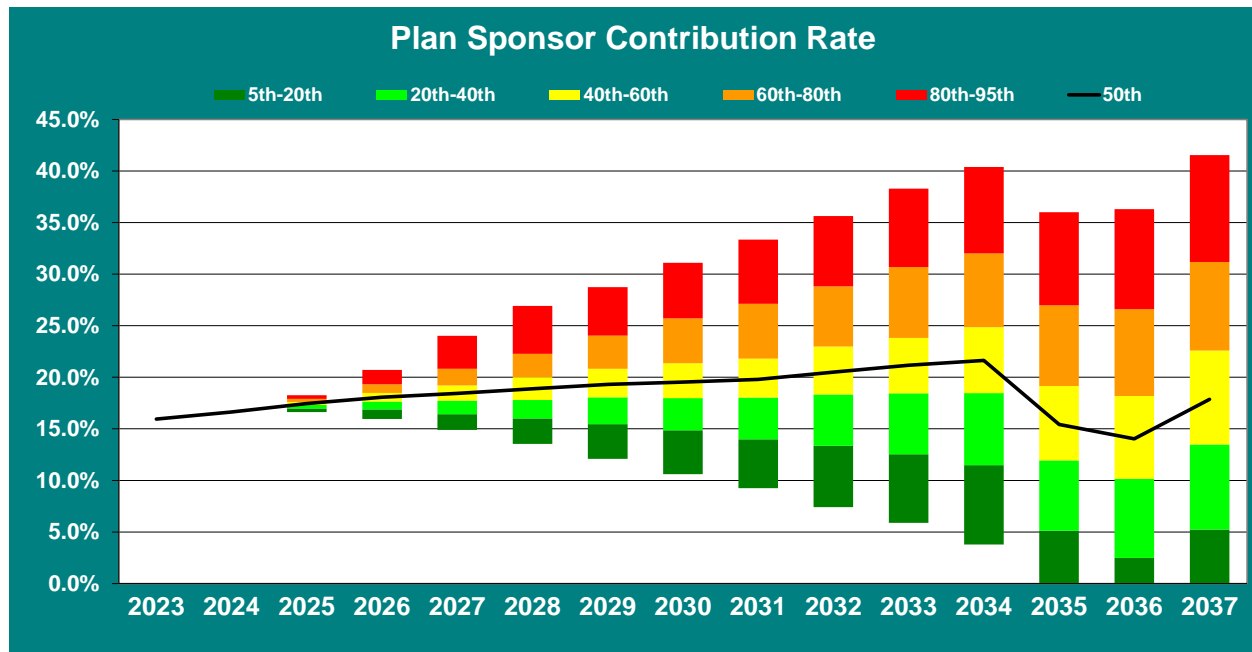
If investments return 7.00% annually, the Plan will need approximately \$2.5 billion in assets today to pay all projected benefits compared to current assets of \$1.7 billion (excluding assets and liabilities related to the Supplemental Retiree Benefit Reserve). If investment returns are only 6.00%, the Plan would need approximately \$3.0 billion in assets today, and if investment returns are 8.00%, the Plan would need approximately \$2.1 billion in assets.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION II – RISK IDENTIFICATION AND ASSESSMENT

Sensitivity to Investment Returns - Stochastic Projections

Stochastic projections serve to show the range of probable outcomes of various measurements. The graphs below and on the following page show the projected range of the employer contribution rate and of the funded ratio on an Actuarial Value of Assets basis. The range in both scenarios is driven by the volatility of investment returns, assumed to be based on a 12.5% standard deviation of annual returns, as indicated by the prior year analysis of target asset allocations and Verus' capital market assumptions.



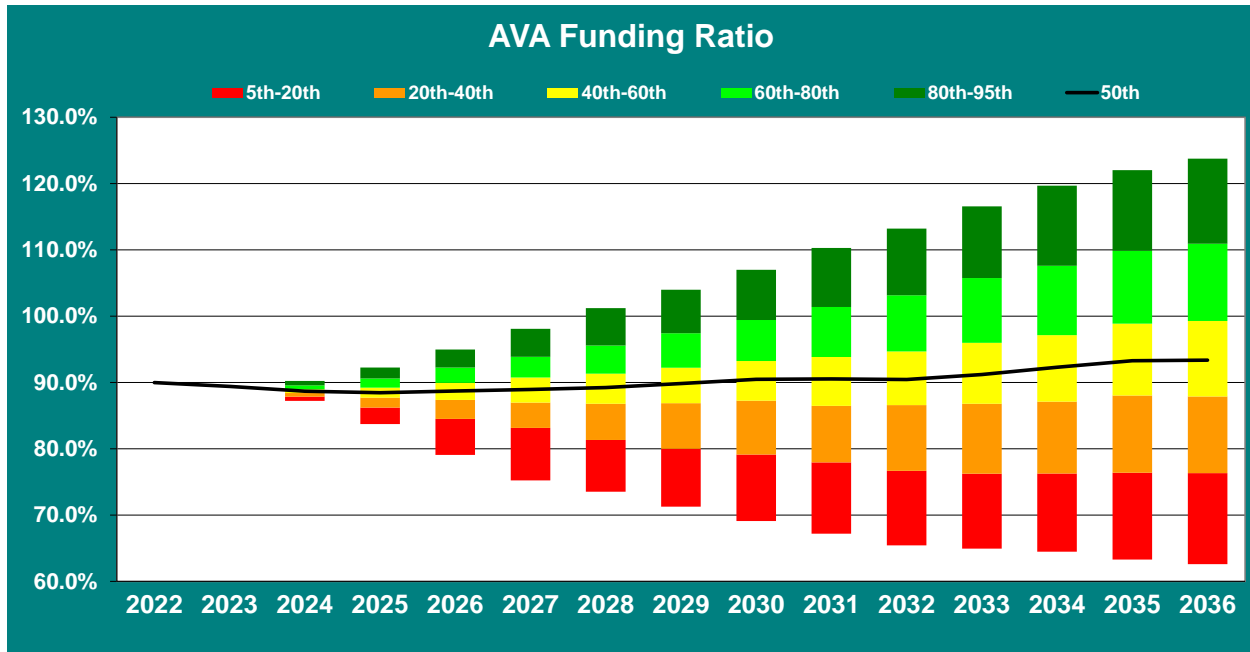
The stochastic projection of employer contributions as a percent of pay shows the probable range of future contribution rates. The baseline contribution rate (black line) is based on the median of the simulations using an average return of 7.00%. It is similar to the *deterministic* projections discussed in subsection D of the Executive Summary of this report, where the returns are expected to be exactly 7.00% each year. However, the median results are somewhat higher than the deterministic projections because of the impact of the SRBR, which may result in fewer assets available to fund the basic benefits in years where the smoothed returns exceed 7.00%.

In the most pessimistic scenario shown, the 95th percentile, the projected employer contribution rate is over 40% of pay in 2034 and 2037. Conversely, the most optimistic scenario shown, the 5th percentile, the projected employer contribution rate declines to 0% in 2035.

We note that these projections only allow the employers' contribution to drop below their share of the normal cost if the Plan becomes extremely overfunded (i.e., a funded ratio above 120%), as is required under PEPR.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION II – RISK IDENTIFICATION AND ASSESSMENT



The graph above shows the projection of the funded ratio based on the Actuarial Value of Assets. While the median funded ratio (black line) is projected to be approximately 93% 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 60% funded on an Actuarial Value of Assets basis, 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 stagnates or declines since contributions are based on payroll levels.

There is also a risk of the contribution rate increasing even higher when payroll decreases since 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 3.00%, so that the payment is expected to remain constant as a percentage of payroll. If payroll growth is less than the expected 3.00% 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.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION II – RISK IDENTIFICATION AND ASSESSMENT

Plan Maturity Measures

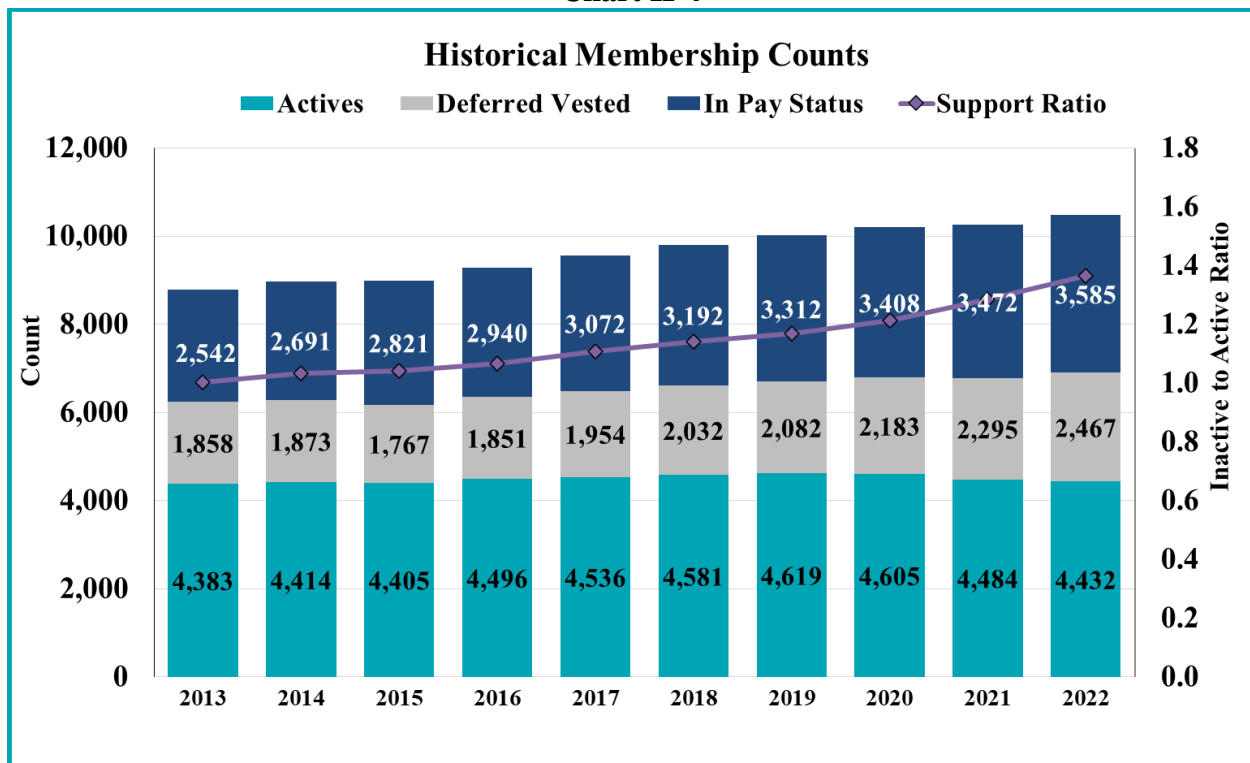
The future financial condition of a mature pension plan is more sensitive to each of the risks identified above than a less mature plan. Before assessing each of these risks, it is important to understand the maturity of the Plan and how the maturity has changed over time.

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

Inactives per Active (Support Ratio)

One simple measure of plan maturity is the ratio of the number of 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 2013 to 2022. The inactive membership level was about equal to the active membership level in 2013, so the Support Ratio was approximately 1.0. During the past few years, the growth in retired membership has exceeded the growth in active membership, increasing the Support Ratio to approximately 1.4. That means for 2022, there are approximately 1.4 inactive members per active member.

Chart II-4



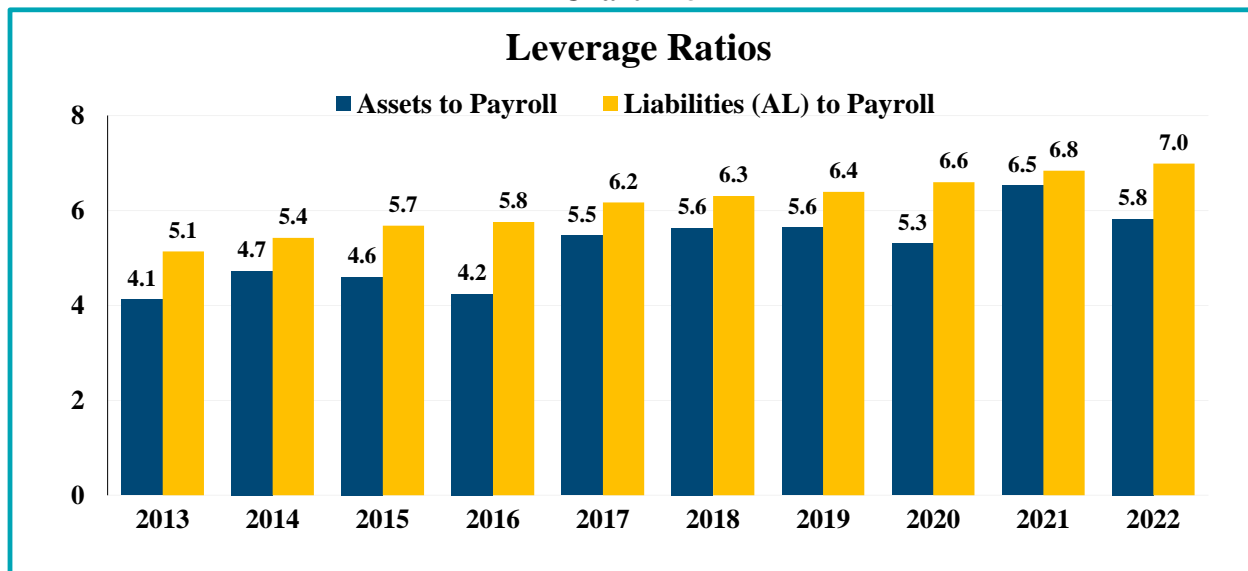
SECTION II – RISK IDENTIFICATION AND ASSESSMENT

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 chart below shows the historical leverage ratios of the Plan. The liability leverage ratio has increased steadily since 2013, driven by changes to more conservative actuarial assumptions and a continued maturing of the Plan. The asset leverage ratios have also increased, but with more volatility, based on variations in investment experience and with a large jump due to the pension obligation bond contribution for 2017. The asset leverage ratio also jumped significantly in 2021 due to strong asset returns but came back down for 2022 following poor investment performance.

Chart II-5



To appreciate the impact of the ratio of assets to payroll on plan cost, 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 plan cost is nil, because the asset level is so small.

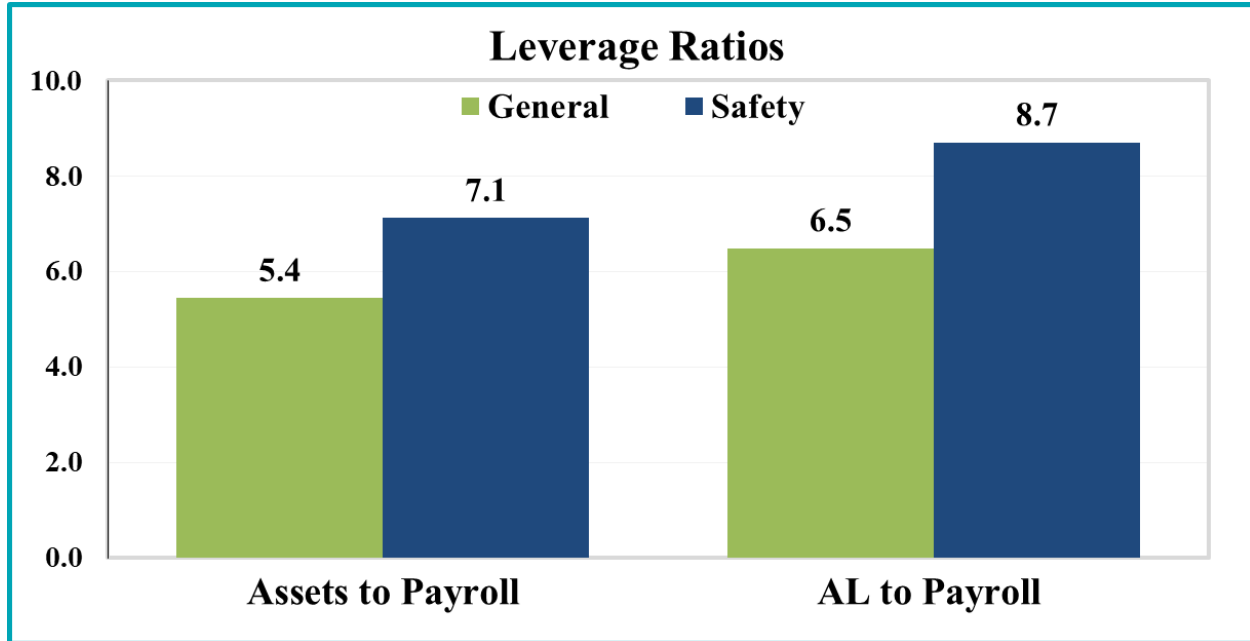
As the Plan becomes better funded, the asset leverage ratio will increase, and if it was 100% funded, the asset leverage ratio would be close to 7.0 times payroll, or the Actuarial Liability (AL) leverage ratio.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION II – RISK IDENTIFICATION AND ASSESSMENT

The following chart shows that the ratio of both assets and liabilities to payroll, and therefore the sensitivity to investment returns, is higher for the Safety members compared to the General members. This is because of the higher benefit amounts and the earlier average retirement ages for Safety.

Chart II-6



The General asset leverage ratio of 5.4 means that if the Plan's assets lose 10% of their value, which is a 17.00% actuarial loss compared to the expected return of 7.00%, the loss would be equivalent to 92% of payroll (17.00% times 5.4). The same investment loss for the Safety group with an asset ratio of 7.1 would be equivalent to approximately 121% of payroll. As illustrated by this example, the contribution rates for the Safety members will generally be more volatile than those of the General members.

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.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION III – ASSETS

Pension plan assets play a key role in the financial operation of the System 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 System assets including:

- **Disclosure** of System assets as of June 30, 2021 and June 30, 2022;
- Statement of the **changes** in market values during the year;
- Development of the **Actuarial Value of Assets**;
- An allocation of the assets by **reserve balances**; and,
- An assessment of historical **investment performance versus inflation**.

Disclosure

There are two types of asset values disclosed in the valuation, the Market Value of Assets and the Actuarial Value of Assets. The market value represents “snap-shot” or “cash-out” values which provide the principal basis for measuring financial performance from one year to the next. The Actuarial Value of Assets reflects smoothing of annual investment returns.

Table III-1 on the next page discloses and compares the market value of assets as of June 30, 2021 and June 30, 2022.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION III – ASSETS

| Table III-1 Statement of Assets at Market Value | | |
|---|-------------------------|-------------------------|
| | June 30, 2021 | June 30, 2022 |
| Cash and Securities Lending Collateral: | | |
| Cash and Short Term Investments | \$ 67,707,000 | \$ 36,024,000 |
| Collateral on Loaned Securities | 56,729,000 | 28,722,000 |
| Total Cash and Securities Lending Collateral | \$ 124,436,000 | \$ 64,746,000 |
| Receivables: | | |
| Sales of Investments | \$ 23,884,000 | \$ 9,575,000 |
| Interest and Dividends | 2,273,000 | 839,000 |
| Employee and Employer Contributions | 1,014,000 | 998,000 |
| Other Receivables | 7,000 | 0 |
| Total Receivables | \$ 27,178,000 | \$ 11,412,000 |
| Investments, at Fair Value: | | |
| Fixed Income | \$ 561,576,000 | \$ 363,409,000 |
| Equities | 950,148,000 | 797,565,000 |
| Real Estate | 195,568,000 | 393,078,000 |
| Alternative Investments (Hedge Funds, Private Equity, Private Credit, Futures, Commodities) | 230,977,000 | 241,242,000 |
| Total Investments, at Fair Value | \$ 1,938,269,000 | \$ 1,795,294,000 |
| Capital Assets | | |
| Land | \$ 370,000 | \$ 370,000 |
| Building, Office Equipment and Furniture Net of Accumulated Depreciation | 699,000 | 746,000 |
| Intangible Assets, Pension Administration System Net of Accumulated Depreciation | 303,000 | 0 |
| Total Capital Assets | \$ 1,372,000 | \$ 1,116,000 |
| Total Assets | \$ 2,091,255,000 | \$ 1,872,568,000 |
| Current Liabilities: | | |
| Purchase of Investments | \$ 51,172,000 | \$ 17,507,000 |
| Obligations under Security Lending Program | 56,729,000 | 28,722,000 |
| Refunds Payable | 4,099,000 | 4,102,000 |
| Accounts Payable | 2,955,000 | 3,122,000 |
| Total Current Liabilities | \$ 114,955,000 | \$ 53,453,000 |
| Long-Term Liabilities: | | |
| Compensated Absences | \$ 115,000 | \$ 106,000 |
| Total Long-Term Liabilities | \$ 115,000 | \$ 106,000 |
| Total Liabilities | \$ 115,070,000 | \$ 53,559,000 |
| Total Market Value of Assets for Valuation | \$ 1,976,185,000 | \$ 1,819,009,000 |

Numbers may not add to totals due to rounding.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION III – ASSETS

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 below and on the following page shows the components of change in the Market Value of Assets during the fiscal years ending June 30, 2021 and June 30, 2022.

| Table III-2 Changes in Market Values | | |
|---|-----------------------|-------------------------|
| | June 30, 2021 | June 30, 2022 |
| Additions: | | |
| Contributions | | |
| Employer | \$ 36,766,000 | \$ 40,392,000 |
| Plan Member | 23,536,000 | 25,880,000 |
| Total Contributions | <u>\$ 60,302,000</u> | <u>\$ 66,272,000</u> |
| Investment Income | | |
| Net Appreciation/(Depreciation) in | | |
| Fair Value of Investments | \$ 381,705,000 | \$ (127,368,000) |
| Interest | 3,649,000 | 3,296,000 |
| Dividends | 4,153,000 | 3,616,000 |
| Real Estate Operating Income | 6,015,000 | 7,493,000 |
| Other Investment Income | 8,446,000 | 5,392,000 |
| Total Investment Activity Income/(Loss) | <u>\$ 403,968,000</u> | <u>\$ (107,571,000)</u> |
| Less Expenses from Investing Activities | <u>9,145,000</u> | <u>10,488,000</u> |
| Net Investing Activity Income/(Loss) | <u>\$ 394,823,000</u> | <u>\$ (118,059,000)</u> |
| From Securities Lending Activities | | |
| Securities Lending Income | \$ 121,000 | \$ 179,000 |
| Less Expenses from Securities Lending Income | | |
| Management Fee | \$ 12,000 | \$ 8,000 |
| Borrower Rebate | 41,000 | 73,000 |
| Net Securities Lending Income | <u>\$ 68,000</u> | <u>\$ 98,000</u> |
| Total Net Investment Income/(Loss) | <u>\$ 394,891,000</u> | <u>\$ (117,961,000)</u> |
| Other Income | \$ 188,000 | \$ 188,000 |
| Total Additions | \$ 455,381,000 | \$ (51,501,000) |

Numbers may not add to totals due to rounding.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION III – ASSETS

| Table III-2 Changes in Market Values (Continued) | | |
|---|-----------------------|-------------------------|
| | June 30, 2021 | June 30, 2022 |
| Deductions: | | |
| Benefits | \$ 92,690,000 | \$ 97,762,000 |
| Refunds of Contributions | 3,586,000 | 4,946,000 |
| Administrative Expenses | <u>2,740,000</u> | <u>2,967,000</u> |
| Total Deductions | \$ 99,016,000 | \$ 105,675,000 |
| Net Increase/(Decrease) | \$ 356,365,000 | \$ (157,176,000) |
| <u>Net Assets Held in Trust for Pension Benefits</u> | | |
| Beginning of Year | \$ 1,615,418,000 | \$ 1,976,185,000 |
| Adjustment to Match 2020 Final Assets | <u>\$ 4,402,000</u> | <u>\$ 0</u> |
| End of Year for Valuation | \$ 1,976,185,000 | \$ 1,819,009,000 |
| Approximate Return* | 24.49% | -6.17% |

Numbers may not add to totals due to rounding.

**Net of investment and administrative expenses*

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION III – ASSETS

Actuarial Value of Assets (AVA)

The table below shows the development of the Actuarial Value of Assets. Based on discussions with TCERA staff, the total actual market returns for each period shown are based on preliminary financial information. Please see Appendix B for a description of the asset smoothing method.

| Table III-3 Development of Actuarial Value of Assets for June 30, 2022 | | | | | | |
|---|--------------------------------|----------------------------|--------------------|-----------------|-----------------|---------------|
| Six month Period | Total Actual Market | Expected Market | Investment | Deferred | Deferred | |
| From To | Return (net) | Return (net) | Gain (Loss) | Factor | Return | |
| 1/13 6/13 | \$ 45,446,072 | \$ 39,915,825 | \$ 5,530,247 | 0.05 | \$ 276,512 | |
| 7/13 12/13 | 114,083,453 | 41,675,731 | 72,407,722 | 0.10 | 7,240,772 | |
| 1/14 6/14 | 62,482,815 | 45,022,478 | 17,460,337 | 0.15 | 2,619,051 | |
| 7/14 12/14 | (17,886,044) | 46,676,782 | (64,562,826) | 0.20 | (12,912,565) | |
| 1/15 6/15 | 26,507,383 | 44,856,580 | (18,349,197) | 0.25 | (4,587,299) | |
| 7/15 12/15 | (45,631,715) | 45,909,756 | (91,541,471) | 0.30 | (27,462,441) | |
| 1/16 6/16 | 24,729,226 | 43,045,278 | (18,316,052) | 0.35 | (6,410,618) | |
| 7/16 12/16 | 44,835,718 | 44,015,787 | 819,931 | 0.40 | 327,972 | |
| 1/17 6/17 | 84,564,705 | 42,691,625 | 41,873,080 | 0.45 | 18,842,886 | |
| 7/17 12/17 | 79,943,304 | 45,809,189 | 34,134,115 | 0.50 | 17,067,058 | |
| 1/18 6/18 | 11,201,303 | 48,460,635 | (37,259,332) | 0.55 | (20,492,633) | |
| 7/18 12/18 | (54,685,836) | 56,898,055 | (111,583,891) | 0.60 | (66,950,335) | |
| 1/19 6/19 | 143,284,434 | 53,981,060 | 89,303,374 | 0.65 | 58,047,193 | |
| 7/19 12/19 | 74,015,847 | 59,050,363 | 14,965,484 | 0.70 | 10,475,839 | |
| 1/20 6/20 | (69,767,060) | 60,619,959 | (130,387,018) | 0.75 | (97,790,264) | |
| 7/20 12/20 | 207,466,372 | 56,098,158 | 151,368,214 | 0.80 | 121,094,571 | |
| 1/21 6/21 | 178,848,571 | 62,147,805 | 116,700,766 | 0.85 | 99,195,651 | |
| 7/21 12/21 | 69,141,260 | 68,227,159 | 914,101 | 0.90 | 822,691 | |
| 1/22 6/22 | (177,123,495) | 69,409,485 | (246,532,980) | 0.95 | (234,206,331) | |
| 1. Total deferred return | | | | | | (134,802,290) |
| 2. Market Value of Assets (includes SRBR) | | | | | | 1,819,009,000 |
| 3. Actuarial Value of Assets for Funding Ratio (2. - 1.) ¹ | | | | | | 1,953,811,000 |
| 4. Non-valuation reserves and designations: | | | | | | |
| a. Supplemental Retiree Benefit Reserve (SRBR) | | | | | | 113,702,000 |
| 5. Preliminary Actuarial Value of Assets (3. - 4.) ² | | | | | | 1,840,109,000 |
| 6. Corridor Limit | | | | | | |
| a. 70% of Market Value of Assets excluding SRBR | | | | | | 1,193,714,900 |
| b. 130% of Market Value of Assets excluding SRBR | | | | | | 2,216,899,100 |
| 7. Actuarial Value of Assets after Corridor | | | | | | 1,840,109,000 |

¹Items will not sum due to a rounding adjustment on the MVA

²Items will not sum due to a rounding adjustment on the SRBR

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION III – ASSETS

Allocation of Reserve Balances

The following table shows the allocation of the assets among the various accounting reserves provided by TCERA staff.

| Table III-4 Allocation of Assets by Accounting Reserve Amounts for the Years Ended June 30, 2021 and June 30, 2022 | | | |
|---|-----------------|---------------|------------------|
| | FYE 2021 | | FYE 2022 |
| 1. Member Deposit Reserve | \$ | 339,547,000 | \$ 359,335,000 |
| 2. Employer Advance Reserve | | 908,887,000 | 966,012,000 |
| 3. Retiree Reserve | | 446,256,000 | 460,586,000 |
| 4. Supplemental Retiree Benefit Reserve | | 108,446,000 | 113,702,000 |
| 5. Contingency Reserve | | 60,736,000 | 55,609,000 |
| 6. Market Stabilization Reserve | | 108,714,000 | (134,802,000) |
| 7. TCERA Property, Inc. Retained Earnings | | 939,000 | 988,000 |
| 8. Other Reserves | | 2,660,000 | (2,421,000) |
| Total Reserves | \$ | 1,976,185,000 | \$ 1,819,009,000 |

Numbers may not add to totals due to rounding.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION III – ASSETS

Asset Returns vs. Inflation

Table III-5 shows the returns on the Market and Actuarial Values of Assets, with the increase in the CPI for comparison, over the last 10 years.

| Table III-5 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** |
| 2013 | 11.1% | 4.6% | 1.8% |
| 2014 | 16.7% | 6.8% | 2.1% |
| 2015 | 0.7% | 6.1% | 0.1% |
| 2016 | -1.9% | 4.7% | 1.0% |
| 2017 | 11.3% | 4.6% | 1.6% |
| 2018 | 7.4% | 5.6% | 2.9% |
| 2019 | 5.6% | 6.5% | 1.6% |
| 2020 | 0.1% | 6.3% | 0.6% |
| 2021 | 24.5% | 7.1% | 5.4% |
| 2022 | -6.2% | 6.4% | 9.1% |
| Compound Average | 6.6% | 5.9% | 2.6% |
| * Net of investment and administrative expenses. | | | |
| ** Based on All Urban Consumers - U.S. City Average, June indices. | | | |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION IV – LIABILITIES

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

- **Disclosure** of System liabilities at June 30, 2021 and June 30, 2022;
- Statement of **changes** in these liabilities during the year;
- Present value of future **SRBR** benefits based on current benefit levels; and,
- Liability and funded status **disclosures** with and without the SRBR.

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 System obligations, represents the amount of money needed today to fully fund all benefits of the System both earned as of the valuation date and those to be earned in the future by current plan participants, under the current System 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 System is called the **Entry Age Normal** (EAN) funding method.
- **Unfunded Actuarial Liability:** The excess of the Actuarial Liability over the Actuarial Value of Assets.

Table IV-1 on the following page discloses each of these liabilities for the current and prior valuations. With respect to each disclosure, a subtraction of the appropriate value of Plan assets yields, for each respective type, a **net surplus**, or an **Unfunded Actuarial Liability**.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION IV – LIABILITIES

| Table IV-1 Present Value of Future Benefits and Actuarial Liability (in thousands) | | | | |
|--|---------------------|-------------------|--------------------------------|--------------------------------|
| Item | General | Safety | June 30, 2022 Total | June 30, 2021 Total |
| Present Value of Future Benefits (PVFB) | | | | |
| Actives | \$ 888,089 | \$ 362,946 | \$ 1,251,035 | \$ 1,221,596 |
| Terminated Vested | 98,017 | 29,522 | 127,539 | 116,332 |
| Retirees | 681,690 | 216,458 | 898,148 | 850,186 |
| Disabled | 55,932 | 66,697 | 122,629 | 119,969 |
| Beneficiaries | 52,733 | 32,411 | 85,143 | 79,877 |
| Total PVFB | \$ 1,776,461 | \$ 708,033 | \$ 2,484,494 | \$ 2,387,960 |
| Actuarial Liability | | | | |
| Total Present Value of Benefits | \$ 1,776,461 | \$ 708,033 | \$ 2,484,494 | \$ 2,387,960 |
| Present Value of Future Normal Costs | | | | |
| Employer Portion | 157,164 | 69,390 | 226,554 | 222,650 |
| Employee Portion | 146,794 | 63,796 | 210,590 | 207,325 |
| Actuarial Liability | \$ 1,472,502 | \$ 574,848 | \$ 2,047,350 | \$ 1,957,985 |
| Actuarial Value of Assets | \$ 1,332,791 | \$ 507,318 | \$ 1,840,109 | \$ 1,759,025 |
| Funded Ratio | 90.5% | 88.3% | 89.9% | 89.8% |
| Unfunded Actuarial Liability/(Surplus) | \$ 139,711 | \$ 67,530 | \$ 207,241 | \$ 198,960 |

Numbers may not add to totals due to rounding.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION IV – LIABILITIES

Changes in Liabilities

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

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

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

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

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION IV – LIABILITIES

| Table IV-2 Development of 2022 Experience Gain/(Loss) (in thousands) | |
|--|----------------|
| Item | Cost |
| 1. Unfunded Actuarial Liability at June 30, 2021 | \$ 198,960 |
| 2. Middle of year actuarial liability payment | (18,834) |
| 3. Interest to end of year on 1 and 2 | 13,279 |
| 4. Impact of assumption changes | <u>0</u> |
| 5. Expected Unfunded Actuarial Liability at June 30, 2022 | \$ 193,405 |
| 6. Actual Unfunded Liability at June 30, 2022 (AVA basis) | <u>207,241</u> |
| 7. Net Gain/(Loss): (5 - 6) | \$ (13,836) |
| 8. Portion of net gain/(loss) due to: | |
| a. Investment experience loss | \$ (11,008) |
| b. Contributions less than actuarial cost | (4,748) |
| c. Inactive mortality gain | 149 |
| d. COLAs more than expected | (424) |
| e. Salaries more than expected | (5,821) |
| f. Retirements | 946 |
| g. Terminations | 6,656 |
| h. Other experience | <u>413</u> |
| i Total gain/(loss) | \$ (13,836) |

Numbers may not add to totals due to rounding.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION IV – LIABILITIES

Table IV-3 shows the present value of future SRBR benefits at current benefit levels and the calculation of the net reserve based on the SRBR balance. The net reserve as of June 30, 2022 is positive, meaning that the current SRBR balance is expected to cover SRBR benefits at current levels.

| Table IV-3 Supplemental Retiree Benefit Reserve as of June 30, 2022 | | |
|--|----------------------|----------------------|
| | June 30, 2021 | June 30, 2022 |
| Level One | | |
| 1. Current Retirees | \$ 61,061,811 | \$ 62,634,020 |
| 2. Inactive Members | 1,960,719 | 1,888,632 |
| 3. Active members | <u>37,820,474</u> | <u>36,155,243</u> |
| 4. Subtotal | \$ 100,843,004 | \$ 100,677,895 |
| Level Two | | |
| 5. Supplemental COLA for those who have lost at least 15% of Purchasing Power | \$ 667,759 | \$ 1,089,150 |
| Level Three | | |
| 6. Supplemental Spousal Death Benefit | \$ 5,459,914 | \$ 6,310,316 |
| 7. Total SRBR Combined Liability: (4) + (5) + (6) | \$ 106,970,677 | \$ 108,077,361 |
| 8. Supplemental Retiree Benefit Reserve: (SRBR) | <u>108,446,000</u> | <u>113,702,000</u> |
| 9. Net Reserve: (8) - (7) | \$ 1,475,323 | \$ 5,624,639 |

Numbers may not add to totals due to rounding.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION IV – LIABILITIES

The top portion of Table IV-4 on the next page shows System assets, liabilities, and funded ratios excluding the SRBR. In the bottom half, the liabilities are adjusted to include the portion associated with the current SRBR balance that has been accrued based on service to date (\$106.0 million) as well as the accrued portion of the present value of future transfers to the SRBR (\$118.7 million). In addition, the SRBR balance of \$113.7 million as of June 30, 2022 is added to the asset values.

The Board has not elected to pre-fund the estimated liability associated with future SRBR transfers. Such transfers will be recognized as asset losses in the valuation as they occur. We note that the estimated liability associated with future transfers has decreased significantly since the prior valuation (from \$174.9 million to \$118.7 million), as a result of the increase in deferred investment losses, which raise the likelihood of the smoothed return trailing the investment return assumption in the future.

These liability disclosures do not imply that the current benefit levels are guaranteed. Our understanding is that the Board has the power to adjust the benefit amounts paid from the SRBR.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION IV – LIABILITIES

**Table IV-4
Disclosure of SRBR Liabilities
(in thousands)**

| Valuation Date | June 30, 2021 | June 30, 2022 |
|--|----------------------|----------------------|
| <u>Without SRBR</u> | | |
| Actuarial Liability (Excluding SRBR) | \$ 1,957,985 | \$ 2,047,350 |
| Actuarial Value of Assets (Excluding SRBR) | 1,759,025 | 1,840,109 |
| Market Value of Assets (Excluding SRBR) | 1,867,739 | 1,705,307 |
| Funded Ratio - Actuarial Value Basis | 89.8% | 89.9% |
| Funded Ratio - Market Value Basis | 95.4% | 83.3% |
| <u>With SRBR</u> | | |
| Actuarial Liability (Excluding SRBR) | \$ 1,957,985 | \$ 2,047,350 |
| Liability Associated with Current SRBR Balance | 100,270 | 106,033 |
| Liability from Future Transfers | 174,882 | 118,668 |
| Total Liability with SRBR | \$ 2,233,137 | \$ 2,272,050 |
| Actuarial Value of Assets (Including SRBR) | \$ 1,867,471 | \$ 1,953,811 |
| Market Value of Assets (Including SRBR) | 1,976,185 | 1,819,009 |
| Funded Ratio - Actuarial Value Basis | 83.6% | 86.0% |
| Funded Ratio - Market Value Basis | 88.5% | 80.1% |

Numbers may not add to totals due to rounding.

TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION V – CONTRIBUTIONS

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

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

The normal cost rate is determined in the following steps. First, an individual normal cost rate is determined by taking the value of each member's projected future benefits as of the member's entry age into the System. This value is then divided by the value of the member's expected future salary, also at entry age, 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 rate is the total normal cost divided by expected salary. Finally, the total normal cost rate is reduced by the member contribution rate to produce the employer normal cost rate.

The Unfunded Actuarial Liability is the difference between the Actuarial Liability and the Actuarial Value of Assets. At its October 28, 2015 meeting, the Board adopted 19-year layered amortization of the UAL. The UAL as of June 30, 2015 is being amortized over a closed 19-year period as a level percentage of payroll (with 12 years remaining), assuming payroll increases of 3.00% per year. Subsequent changes in the UAL due to experience gains and losses, assumption changes, or plan changes will be amortized over new closed 19-year periods.

The tables on the following pages present the calculation of the contribution rates for the System for the current and prior valuations.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION V – CONTRIBUTIONS

The employer contribution rates for FYE 2024 are shown in the table below, split by tier (1-4), membership class (General or Safety), and for the General class, employer (County or non-County). As directed by the TCERA Board at its April 12, 2018 meeting, we have allocated the cost impact of the contribution from POB proceeds to the County only, based on their share of pensionable payroll for the fiscal year ending June 30, 2018 (excluding TCAG). We were notified by Staff that all Safety members are employed by the County, so there is only one set of Safety rates. Based on information provided by Staff, we recommend that the General (Non-County) employer contribution rates be used for the Strathmore Public Utility District (SPUD).

| Table V-1(a) Development of the Net Employer Contribution Rate as of June 30, 2022 for FYE 2024 | | | | |
|--|--------------|---------------|---------------|---------------|
| | Tier 1 | Tier 2 & 3 | Tier 4 | Total |
| General (County) | | | | |
| 1. Total Normal Cost Rate | 18.54% | 16.76% | 15.72% | 16.25% |
| 2. Member Contribution Rate | <u>2.44%</u> | <u>8.54%</u> | <u>7.86%</u> | <u>8.19%</u> |
| 3. Employer Normal Cost Rate (1-2) | 16.10% | 8.21% | 7.86% | 8.05% |
| 4. UAL Amortization | 5.60% | 5.60% | 5.60% | 5.60% |
| 5. Net Employer Contribution Rate (3+4) | 21.70% | 13.81% | 13.46% | 13.65% |
| General (Non-County) | | | | |
| 1. Total Normal Cost Rate | 18.54% | 16.76% | 15.72% | 16.25% |
| 2. Member Contribution Rate | <u>2.44%</u> | <u>8.54%</u> | <u>7.86%</u> | <u>8.19%</u> |
| 3. Employer Normal Cost Rate (1-2) | 16.10% | 8.21% | 7.86% | 8.05% |
| 4. UAL Amortization | 12.94% | 12.94% | 12.94% | 12.94% |
| 5. Net Employer Contribution Rate (3+4) | 29.04% | 21.15% | 20.80% | 20.99% |
| Safety (County) | | | | |
| 1. Total Normal Cost Rate | N/A | 23.42% | 25.88% | 24.46% |
| 2. Member Contribution Rate | <u>N/A</u> | <u>11.47%</u> | <u>12.94%</u> | <u>12.09%</u> |
| 3. Employer Normal Cost Rate (1-2) | N/A | 11.95% | 12.94% | 12.37% |
| 4. UAL Amortization | N/A | 9.68% | 9.68% | 9.68% |
| 5. Net Employer Contribution Rate (3+4) | N/A | 21.63% | 22.62% | 22.05% |

Reflects final year of three year phase-in of assumption changes for employer contribution rate

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION V – CONTRIBUTIONS

The employer contribution rates for FYE 2022 are shown in the table below, split by tier (1-4) and membership class (General or Safety).

| Table V-1(b) Development of the Net Employer Contribution Rate as of June 30, 2021 for FYE 2023 | | | | |
|--|--------------|---------------|---------------|---------------|
| | Tier 1 | Tier 2 & 3 | Tier 4 | Total |
| General (County) | | | | |
| 1. Total Normal Cost Rate | 18.50% | 16.87% | 15.59% | 16.29% |
| 2. Member Contribution Rate | <u>2.48%</u> | <u>8.56%</u> | <u>7.80%</u> | <u>8.20%</u> |
| 3. Employer Normal Cost Rate (1-2) | 16.03% | 8.31% | 7.80% | 8.09% |
| 3a. Employer Normal Cost Rate with Phase-in | 15.65% | 8.24% | 7.62% | 7.97% |
| 4. UAL Amortization | 5.23% | 5.23% | 5.23% | 5.23% |
| 4a. UAL Amortization with Phase-in | 4.98% | 4.98% | 4.98% | 4.98% |
| 5. Net Employer Contribution Rate (3+4) | 21.26% | 13.54% | 13.03% | 13.32% |
| 5a. Net Employer Contribution Rate with Phase-in (3a+4a) | 20.63% | 13.22% | 12.60% | 12.95% |
| General (Non-County) | | | | |
| 1. Total Normal Cost Rate | 18.50% | 16.87% | 15.59% | 16.29% |
| 2. Member Contribution Rate | <u>2.48%</u> | <u>8.56%</u> | <u>7.80%</u> | <u>8.20%</u> |
| 3. Employer Normal Cost Rate (1-2) | 16.03% | 8.31% | 7.80% | 8.09% |
| 3a. Employer Normal Cost Rate with Phase-in | 15.65% | 8.24% | 7.62% | 7.97% |
| 4. UAL Amortization | 12.55% | 12.55% | 12.55% | 12.55% |
| 4a. UAL Amortization with Phase-in | 12.30% | 12.30% | 12.30% | 12.30% |
| 5. Net Employer Contribution Rate (3+4) | 28.58% | 20.86% | 20.35% | 20.64% |
| 5a. Net Employer Contribution Rate with Phase-in (3a+4a) | 27.95% | 20.54% | 19.92% | 20.27% |
| Safety (County) | | | | |
| 1. Total Normal Cost Rate | N/A | 23.37% | 26.02% | 24.41% |
| 2. Member Contribution Rate | <u>N/A</u> | <u>11.42%</u> | <u>13.01%</u> | <u>12.04%</u> |
| 3. Employer Normal Cost Rate (1-2) | N/A | 11.95% | 13.01% | 12.37% |
| 3a. Employer Normal Cost Rate with Phase-in | N/A | 11.99% | 12.77% | 12.30% |
| 4. UAL Amortization | N/A | 9.13% | 9.13% | 9.13% |
| 4a. UAL Amortization with Phase-in | N/A | 8.47% | 8.47% | 8.47% |
| 5. Net Employer Contribution Rate (3+4) | N/A | 21.08% | 22.14% | 21.50% |
| 5a. Net Employer Contribution Rate with Phase-in (3a+4a) | N/A | 20.46% | 21.25% | 20.77% |

Reflects second year of three year phase-in of assumption changes for employer contribution rate

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION V – CONTRIBUTIONS

The combined General and Safety employer contribution rates for FYE 2024 are shown in the table below, split by tier (1-4). Separate rates are shown above and below the first \$161.54 of biweekly compensation (Social Security Integration).

| Table V-2(a) Development of the Employer Contribution Rate as of June 30, 2022 for FYE 2024 with Social Security Integration | | | | |
|---|---------------|-----------------------|---------------|--------------|
| | Tier 1 | Tier 2 & 3 | Tier 4 | Total |
| General and Safety | | | | |
| 1. Employer Normal Cost Rate: | 16.10% | 9.16% | 8.87% | 9.03% |
| a. Rate on first \$161.54 of biweekly compensation | 11.00% | 6.23% | | |
| b. Rate on biweekly compensation in excess of \$161.54 | 16.50% | 9.35% | | |
| 2. UAL Rate: | 6.19% | 7.07% | 6.88% | 6.98% |
| a. Rate on first \$161.54 of biweekly compensation | 4.23% | 4.81% | | |
| b. Rate on biweekly compensation in excess of \$161.54 | 6.34% | 7.22% | | |
| 3. Total Rate (1 + 2): | 22.29% | 16.23% | 15.75% | 16.01% |
| a. Rate on first \$161.54 of biweekly compensation | 15.23% | 11.04% | | |
| b. Rate on biweekly compensation in excess of \$161.54 | 22.84% | 16.57% | | |

Reflects final year of three year phase-in of assumption changes for employer contribution rate

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION V – CONTRIBUTIONS

The employer contribution rates for FYE 2024 are shown in the table below, split by tier (1-4), membership class (General or Safety), and for the General class, employer (County or Non-County). Separate rates are shown above and below the first \$161.54 of biweekly compensation (Social Security Integration).

| Table V-2(b) Development of the Employer Contribution Rate as of June 30, 2022 for FYE 2024 with Social Security Integration | | | | |
|---|---------------|-----------------------|---------------|--------------|
| | Tier 1 | Tier 2 & 3 | Tier 4 | Total |
| General (County) | | | | |
| 1. Employer Normal Cost Rate: | 16.10% | 8.21% | 7.86% | 8.05% |
| a. Rate on first \$161.54 of biweekly compensation | 11.00% | 5.60% | | |
| b. Rate on biweekly compensation in excess of \$161.54 | 16.50% | 8.40% | | |
| 2. UAL Rate: | 5.60% | 5.60% | 5.60% | 5.60% |
| a. Rate on first \$161.54 of biweekly compensation | 3.82% | 3.82% | | |
| b. Rate on biweekly compensation in excess of \$161.54 | 5.74% | 5.72% | | |
| 3. Total Rate (1 + 2): | 21.70% | 13.81% | 13.46% | 13.65% |
| a. Rate on first \$161.54 of biweekly compensation | 14.82% | 9.41% | | |
| b. Rate on biweekly compensation in excess of \$161.54 | 22.23% | 14.11% | | |
| General (Non-County) | | | | |
| 1. Employer Normal Cost Rate: | 16.10% | 8.21% | 7.86% | 8.05% |
| a. Rate on first \$161.54 of biweekly compensation | 11.00% | 5.60% | | |
| b. Rate on biweekly compensation in excess of \$161.54 | 16.50% | 8.40% | | |
| 2. UAL Rate: | 12.94% | 12.94% | 12.94% | 12.94% |
| a. Rate on first \$161.54 of biweekly compensation | 8.84% | 8.82% | | |
| b. Rate on biweekly compensation in excess of \$161.54 | 13.26% | 13.23% | | |
| 3. Total Rate (1 + 2): | 29.04% | 21.15% | 20.80% | 20.99% |
| a. Rate on first \$161.54 of biweekly compensation | 19.83% | 14.41% | | |
| b. Rate on biweekly compensation in excess of \$161.54 | 29.75% | 21.62% | | |
| Safety (County) | | | | |
| 1. Employer Normal Cost Rate: | N/A | 11.95% | 12.94% | 12.37% |
| a. Rate on first \$161.54 of biweekly compensation | N/A | 8.10% | | |
| b. Rate on biweekly compensation in excess of \$161.54 | N/A | 12.16% | | |
| 2. UAL Rate: | N/A | 9.68% | 9.68% | 9.68% |
| a. Rate on first \$161.54 of biweekly compensation | N/A | 6.56% | | |
| b. Rate on biweekly compensation in excess of \$161.54 | N/A | 9.85% | | |
| 3. Total Rate (1 + 2): | N/A | 21.63% | 22.62% | 22.05% |
| a. Rate on first \$161.54 of biweekly compensation | N/A | 14.67% | | |
| b. Rate on biweekly compensation in excess of \$161.54 | N/A | 22.00% | | |

Reflects final year of three year phase-in of assumption changes for employer contribution rate

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION V – CONTRIBUTIONS

Table V-3 below shows information on each layer of the June 30, 2022 UAL. At its October 28, 2015 meeting, the Board adopted 19-year layered amortization of the UAL. The UAL as of June 30, 2015 is being amortized over a closed 19-year period as a level percentage of payroll, assuming payroll increases of 3.00% per year, and subsequent changes in the UAL due to experience gains and losses, assumption changes, or plan changes will be amortized over new closed 19-year periods.

**Table V-3
Development of Amortization Payment
For the June 30, 2022 Actuarial Valuation**

| Type of Base | Date Established | Initial Amount | Initial Amortization Years | June 30, 2022 Outstanding Balance | Remaining Amortization Years | Amortization Amount |
|---------------------------|------------------|----------------|----------------------------|-----------------------------------|------------------------------|---------------------|
| 1. Initial UAL | 6/30/2015 | 201,848,216 | 19 | 178,112,149 | 12 | 18,769,838 |
| 2. (Gain)/Loss Base | 6/30/2016 | 38,033,040 | 19 | 34,602,920 | 13 | 3,425,600 |
| 3. (Gain)/Loss Base | 6/30/2017 | 25,611,386 | 19 | 23,890,887 | 14 | 2,234,800 |
| 4. Assumption Change Base | 6/30/2017 | 82,259,297 | 19 | 76,733,357 | 14 | 7,177,787 |
| 5. POB Contribution Base | 6/30/2017 | (233,100,233) | 19 | (217,441,234) | 14 | (20,339,877) |
| 6. (Gain)/Loss Base | 6/30/2018 | 23,781,349 | 19 | 22,659,352 | 15 | 2,012,825 |
| 7. (Gain)/Loss Base | 6/30/2019 | 12,251,268 | 19 | 11,872,096 | 16 | 1,005,821 |
| 8. (Gain)/Loss Base | 6/30/2020 | 23,103,302 | 19 | 22,683,697 | 17 | 1,839,884 |
| 9. Assumption Change Base | 6/30/2020 | 42,435,148 | 19 | 41,664,434 | 17 | 3,379,421 |
| 10. (Gain)/Loss Base | 6/30/2021 | (1,383,632) | 19 | (1,373,048) | 18 | (106,979) |
| 11. (Gain)/Loss Base | 6/30/2022 | 13,836,166 | 19 | <u>13,836,166</u> | 19 | <u>1,038,623</u> |
| Total | | | | \$ 207,240,776 | | \$ 20,437,743 |

*Does not reflect phase-in of 2019 assumption change base.
Numbers may not add to totals due to rounding.*

If the UAL payment above of \$20,437,743 is calculated based on a single-equivalent period with the June 30, 2022 UAL of \$207,240,776, the number of years to fully pay off the UAL would be approximately 13 years.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION V – CONTRIBUTIONS

Table V-4 below shows the development of the UAL amortization rates. The payroll split between County General and Non-County General is based on pensionable payroll by employer for FYE 2022 provided for the GASB 67/68 report. Following direction from Staff, the pensionable payroll for TCAG is excluded from the County's share.

As shown below (and described earlier in this section), the cost impact of the contribution from POB proceeds has been allocated to the County only.

| Table V-4 Development of UAL Amortization Rates for FYE 2024 | |
|---|-----------------|
| General (County) | |
| 1. General County Projected Payroll for FYE June 30, 2023 | \$ 208,674,452 |
| 2. Total General Projected Payroll for FYE June 30, 2023 | \$ 226,945,209 |
| 3. County Share (1 divided by 2) | 91.9493% |
| 4. UAL Payment, not including POB Contribution | \$ 29,362,772 |
| 5. UAL Payment for POB Contribution | \$ (15,318,410) |
| 6. County Share of 4. (3 multiplied by 4) | \$ 26,998,853 |
| 7. County Share of 5. (100% of 5) | \$ (15,318,410) |
| 8. Total General County UAL Payment (6+7) | \$ 11,680,443 |
| 9. General County UAL Rate (8 divided by 1) | 5.60% |
| General (Non-County) | |
| 1. General Non-County Projected Payroll for FYE June 30, 2023 | \$ 18,270,757 |
| 2. Total General Projected Payroll for FYE June 30, 2023 | \$ 226,945,209 |
| 3. Non-County Share (1 divided by 2) | 8.0507% |
| 4. UAL Payment, not including POB Contribution | \$ 29,362,772 |
| 5. UAL Payment for POB Contribution | \$ (15,318,410) |
| 6. Non-County Share of 4. (3 multiplied by 4) | \$ 2,363,919 |
| 7. Non-County Share of 5. (0% of 5) | \$ 0 |
| 8. Total General Non-County UAL Payment (6+7) | \$ 2,363,919 |
| 9. General Non-County UAL Rate (8 divided by 1) | 12.94% |
| Safety (County) | |
| 1. County Safety Projected Payroll for FYE June 30, 2023 | \$ 66,041,522 |
| 2. Total Safety Projected Payroll for FYE June 30, 2023 | \$ 66,041,522 |
| 3. County Share (1 divided by 2) | 100.0000% |
| 4. UAL Payment, not including POB Contribution | \$ 11,414,848 |
| 5. UAL Payment for POB Contribution | \$ (5,021,467) |
| 6. County Share of 4. (3 multiplied by 4) | \$ 11,414,848 |
| 7. County Share of 5. (100% of 5) | \$ (5,021,467) |
| 8. Total County Safety UAL Payment (6+7) | \$ 6,393,381 |
| 9. County Safety UAL Rate (8 divided by 1) | 9.68% |

Numbers may not add to totals due to rounding.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION V – CONTRIBUTIONS

The employer contribution rates for FYE 2024 are shown in Table V-5 below, split by membership class, employer (County or non-County for General members), and tier (1-4). Separate rates are displayed for normal cost and UAL Amortization, both of which are further split into Basic and COLA rates. Table V-6 on the following page shows employee contribution rates for FYE 2024 at sample ages.

| Table V-5 | | | | | | | | | | |
|--|------|-------------|-----------|------------|-----------------------|-----------|------------|------------|-----------|------------|
| Detailed Employer Contribution Rate as of June 30, 2022 for FYE 2024 | | | | | | | | | | |
| Member Type | Tier | Normal Cost | | | UAL Amortization Cost | | | Total Cost | | |
| | | Basic Rate | COLA Rate | Total Rate | Basic Rate | COLA Rate | Total Rate | Basic Rate | COLA Rate | Total Rate |
| General (County) | 1 | 13.43% | 2.68% | 16.10% | 4.67% | 0.93% | 5.60% | 18.09% | 3.61% | 21.70% |
| General (County) | 2&3 | 6.83% | 1.38% | 8.21% | 4.66% | 0.94% | 5.60% | 11.49% | 2.32% | 13.81% |
| General (County) | 4 | 6.41% | 1.45% | 7.86% | 4.57% | 1.03% | 5.60% | 10.98% | 2.48% | 13.46% |
| General (Non-County) | 1 | 13.43% | 2.68% | 16.10% | 10.79% | 2.15% | 12.94% | 24.21% | 4.83% | 29.04% |
| General (Non-County) | 2&3 | 6.83% | 1.38% | 8.21% | 10.77% | 2.17% | 12.94% | 17.60% | 3.55% | 21.15% |
| General (Non-County) | 4 | 6.41% | 1.45% | 7.86% | 10.56% | 2.38% | 12.94% | 16.97% | 3.83% | 20.80% |
| General (Total) | 1 | 13.43% | 2.68% | 16.10% | 5.16% | 1.03% | 6.19% | 18.59% | 3.71% | 22.29% |
| General (Total) | 2&3 | 6.83% | 1.38% | 8.21% | 5.15% | 1.04% | 6.19% | 11.98% | 2.42% | 14.40% |
| General (Total) | 4 | 6.41% | 1.45% | 7.86% | 5.05% | 1.14% | 6.19% | 11.46% | 2.59% | 14.05% |
| Safety (County) | 1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Safety (County) | 2&3 | 9.70% | 2.25% | 11.95% | 7.85% | 1.83% | 9.68% | 17.55% | 4.08% | 21.63% |
| Safety (County) | 4 | 10.36% | 2.58% | 12.94% | 7.75% | 1.93% | 9.68% | 18.11% | 4.51% | 22.62% |

Reflects final year of three year phase-in of assumption changes for employer contribution rate

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION V – CONTRIBUTIONS

| Table V-6 | | | | | |
|--|------|--------|--------|--------|-------------|
| Employee Contribution Rate at Sample Ages as of June 30, 2022 for FYE 2024 | | | | | |
| Member Type | Tier | Age 25 | Age 35 | Age 45 | Single Rate |
| General | 1 | 4.75% | 5.83% | 7.17% | N/A |
| General | 2&3 | 7.67% | 9.40% | 11.51% | N/A |
| General | 4 | 5.69% | 7.89% | 10.67% | N/A |
| Safety | 1 | N/A | N/A | N/A | N/A |
| Safety | 2&3 | 11.14% | 13.20% | 15.29% | N/A |
| Safety | 4 | 11.55% | 15.25% | 19.31% | N/A |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION V – CONTRIBUTIONS

Table V-7 below shows projected annual employer contributions for FYE 2023, split by membership class, employer (County or non-County for General members), and tier (1-4). The contribution amounts are further split into normal cost and UAL Amortization components.

| Table V-7 | | | | |
|--|------|-------------|------------------|---------------------|
| Estimated Annual Employer Contributions for FYE 2024 | | | | |
| Member Type | Tier | Normal Cost | UAL Amortization | Contributions Total |
| General (County) | 1 | \$ 74,943 | \$ 26,062 | \$ 101,005 |
| General (County) | 2&3 | 8,841,550 | 6,027,403 | 14,868,953 |
| General (County) | 4 | 8,422,406 | 6,001,701 | 14,424,108 |
| General (Non-County) | 1 | 6,562 | 5,273 | 11,835 |
| General (Non-County) | 2&3 | 774,133 | 1,219,449 | 1,993,582 |
| General (Non-County) | 4 | 737,434 | 1,214,249 | 1,951,684 |
| General (Total) | 1 | 81,504 | 31,335 | 112,839 |
| General (Total) | 2&3 | 9,615,683 | 7,246,853 | 16,862,536 |
| General (Total) | 4 | 9,159,841 | 7,215,951 | 16,375,792 |
| Safety (County) | 1 | 0 | 0 | 0 |
| Safety (County) | 2&3 | 4,715,455 | 3,819,597 | 8,535,052 |
| Safety (County) | 4 | 3,710,326 | 2,775,305 | 6,485,631 |

*Reflects final year of three-year phase-in of assumption changes for employer contribution rate
Numbers may not add to totals due to rounding.*

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION V – CONTRIBUTIONS

Table V-8 below shows a projection of the expected contributions (for the fiscal year beginning one year after the valuation date) to cover the employer normal cost and UAL amortization over the next 20 years.

| Table V-8 Retirement Contributions | | | | | | |
|---------------------------------------|-----------------------------------|--|------------------------------|-------------------|-----------------------|-------------------|
| Valuation Year | Employer Normal Cost Contribution | Employer UAL Amortization Contribution | Total Employer Contributions | Employer Rate (%) | Employee Contribution | Employee Rate (%) |
| 2022 | \$ 27,282,809 | \$ 21,089,040 | \$ 48,371,849 | 16.0% | \$ 27,364,603 | 9.1% |
| 2023 | 28,059,191 | 23,842,201 | 51,901,392 | 16.7% | 28,170,463 | 9.1% |
| 2024 | 28,895,613 | 27,221,884 | 56,117,497 | 17.5% | 29,002,122 | 9.1% |
| 2025 | 29,758,036 | 30,138,543 | 59,896,579 | 18.2% | 29,862,321 | 9.1% |
| 2026 | 30,648,569 | 32,196,703 | 62,845,272 | 18.5% | 30,749,090 | 9.1% |
| 2027 | 31,566,246 | 34,294,298 | 65,860,544 | 18.8% | 31,664,252 | 9.1% |
| 2028 | 32,512,595 | 36,673,350 | 69,185,945 | 19.2% | 32,608,958 | 9.1% |
| 2029 | 33,488,626 | 38,442,523 | 71,931,149 | 19.4% | 33,581,367 | 9.0% |
| 2030 | 34,493,406 | 40,146,733 | 74,640,138 | 19.5% | 34,584,783 | 9.0% |
| 2031 | 35,529,422 | 42,941,853 | 78,471,275 | 19.9% | 35,616,809 | 9.0% |
| 2032 | 36,595,465 | 45,332,143 | 81,927,607 | 20.2% | 36,678,693 | 9.0% |
| 2033 | 37,692,661 | 46,777,781 | 84,470,442 | 20.2% | 37,773,906 | 9.0% |
| 2034 | 38,823,666 | 20,623,665 | 59,447,331 | 13.8% | 38,900,671 | 9.0% |
| 2035 | 39,987,576 | 13,921,158 | 53,908,733 | 12.2% | 40,061,682 | 9.0% |
| 2036 | 41,186,565 | 30,794,746 | 71,981,310 | 15.8% | 41,255,027 | 9.0% |
| 2037 | 42,419,806 | 29,766,478 | 72,186,285 | 15.4% | 42,482,002 | 9.0% |
| 2038 | 43,688,536 | 28,845,369 | 72,533,905 | 15.0% | 43,745,388 | 9.0% |
| 2039 | 44,994,921 | 20,684,182 | 65,679,103 | 13.2% | 45,046,208 | 9.0% |
| 2040 | 46,339,974 | 20,791,201 | 67,131,175 | 13.1% | 46,386,259 | 9.0% |
| 2041 | 47,725,344 | 19,498,943 | 67,224,287 | 12.7% | 47,764,277 | 9.0% |
| 2042 | 49,150,614 | 16,147,724 | 65,298,338 | 12.0% | 49,182,651 | 9.0% |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION VI – ANNUAL COMPREHENSIVE FINANCIAL REPORTING INFORMATION

The GASB adopted Statement Nos. 67 and 68, replacing GASB Statement Nos. 25 and 27. GASB 67 was effective for periods beginning after June 15, 2013 (first effective June 30, 2014 for the Plan) and GASB 68 was effective for fiscal years beginning after June 15, 2014 (first effective for the fiscal year July 1, 2014 to June 30, 2015 for the Employers). The disclosures needed to satisfy the GASB requirements will be included in the TCERA GASB 67/68 Report as of June 30, 2022.

In accordance with Government Finance Officers Association (GFOA) and their recommended checklist for Annual Comprehensive Financial Reports (ACFRs), we continue to prepare the Schedule of Funded Liabilities by Type disclosure, as shown in Table VI-1. As requested by TCERA, we have also included the Schedule of Funding Progress (Table VI-2) and the Schedule of Employer Contributions (Table VI-3).

| Table VI-1 SCHEDULE OF FUNDED LIABILITIES BY TYPE (in thousands) | | | | | | | | |
|--|---|-----------------------------------|--|------------------------|--|--|------------|------------|
| Valuation Date | (A) | (B) | (C) | | | Portion of Actuarial Liabilities Covered by Reported Assets | | |
| June 30, | Active/Inactive Member Contributions | Retirees And Beneficiaries | Remaining Active Members' Liabilities | Reported Assets | | (A) | (B) | (C) |
| 2013 | \$ 238,200 | \$ 621,125 | \$ 326,732 | \$ 1,048,160 | | 100% | 100% | 58% |
| 2014 | 252,883 | 660,147 | 358,802 | 1,101,929 | | 100% | 100% | 53% |
| 2015 | 264,870 | 698,147 | 395,418 | 1,156,587 | | 100% | 100% | 49% |
| 2016 | 272,740 | 748,703 | 409,993 | 1,192,642 | | 100% | 100% | 42% |
| 2017 | 278,900 | 808,799 | 485,707 | 1,461,755 | | 100% | 100% | 77% |
| 2018 | 287,078 | 869,729 | 499,550 | 1,523,030 | | 100% | 100% | 73% |
| 2019 | 301,935 | 925,027 | 514,321 | 1,598,431 | | 100% | 100% | 72% |
| 2020 | 319,562 | 1,008,432 | 547,804 | 1,670,786 | | 100% | 100% | 63% |
| 2021 | 339,547 | 1,050,032 | 568,406 | 1,759,025 | | 100% | 100% | 65% |
| 2022 | 359,335 | 1,105,920 | 582,095 | 1,840,109 | | 100% | 100% | 64% |

Numbers may not add to totals due to rounding.

June 30, 2014 and earlier numbers calculated by prior actuary

June 30, 2017 assets include receivable for expected contribution from POB



**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION VI – ANNUAL COMPREHENSIVE FINANCIAL REPORTING INFORMATION

| Table VI-2 SCHEDULE OF FUNDING PROGRESS (dollars in thousands) | | | | | | |
|--|--|---|------------------------|-------------------------|----------------------------|--|
| Actuarial Valuation Date | Actuarial Value of Assets | Actuarial Liability (AL) | Unfunded AL | Funded Ratio | Covered Payroll | Unfunded AL as a % of Covered Payroll |
| June 30, 2002 | \$ 612,469 | \$ 561,377 | \$ (51,092) | 109.1% | \$ 158,263 | -32.3% |
| June 30, 2003 | 634,249 | 608,505 | (25,744) | 104.2% | 162,397 | -15.9% |
| June 30, 2004 | 665,244 | 649,649 | (15,595) | 102.4% | 158,032 | -9.9% |
| June 30, 2005 | 681,618 | 714,656 | 33,038 | 95.4% | 164,777 | 20.1% |
| June 30, 2006 | 729,899 | 792,844 | 62,945 | 92.1% | 186,949 | 33.7% |
| June 30, 2007 | 800,967 | 846,030 | 45,063 | 94.7% | 204,803 | 22.0% |
| June 30, 2008 | 879,051 | 946,414 | 67,363 | 92.9% | 226,836 | 29.7% |
| June 30, 2009 | 919,179 | 996,747 | 77,568 | 92.2% | 227,306 | 34.1% |
| June 30, 2010 | 946,640 | 1,033,211 | 86,571 | 91.6% | 217,811 | 39.7% |
| June 30, 2011 | 969,681 | 1,072,144 | 102,463 | 90.4% | 219,854 | 46.6% |
| June 30, 2012 | 981,946 | 1,101,456 | 119,510 | 89.1% | 222,635 | 53.7% |
| June 30, 2013 | 1,048,160 | 1,186,057 | 137,897 | 88.4% | 230,955 | 59.7% |
| June 30, 2014 | 1,101,929 | 1,271,832 | 169,903 | 86.6% | 234,569 | 72.4% |
| June 30, 2015 | 1,156,587 | 1,358,435 | 201,848 | 85.1% | 239,055 | 84.4% |
| June 30, 2016 | 1,192,642 | 1,431,436 | 238,794 | 83.3% | 248,514 | 96.1% |
| June 30, 2017 | 1,461,755 | 1,573,406 | 111,651 | 92.9% | 254,941 | 43.8% |
| June 30, 2018 | 1,523,030 | 1,656,357 | 133,326 | 92.0% | 262,714 | 50.7% |
| June 30, 2019 | 1,598,431 | 1,741,283 | 142,851 | 91.8% | 272,416 | 52.4% |
| June 30, 2020 | 1,670,786 | 1,875,797 | 205,011 | 89.1% | 284,272 | 72.1% |
| June 30, 2021 | 1,759,025 | 1,957,985 | 198,960 | 89.8% | 286,886 | 69.4% |
| June 30, 2022 | 1,840,109 | 2,047,350 | 207,241 | 89.9% | 293,445 | 70.6% |

Numbers may not add to totals due to rounding.

June 30, 2014 and earlier numbers calculated by prior actuary.

June 30, 2017 assets include receivable for expected contribution from POB.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

SECTION VI – ANNUAL COMPREHENSIVE FINANCIAL REPORTING INFORMATION

| Table VI-3 | | | | |
|------------------------------------|---|------------------------|---------------------------|--|
| SCHEDULE OF EMPLOYER CONTRIBUTIONS | | | | |
| (dollars in thousands) | | | | |
| Year Ended June, 30 | Actuarially Determined Contribution | Actual Contribution | Percentage Contributed | |
| 2002 | \$ 6,186 | \$ 6,186 | 100% | |
| 2003 | 5,245 | 5,245 | 100% | |
| 2004 | 9,595 | 9,595 | 100% | |
| 2005 | 10,502 | 10,502 | 100% | |
| 2006 | 12,443 | 12,443 | 100% | |
| 2007 | 17,975 | 17,975 | 100% | |
| 2008 | 22,692 | 22,692 | 100% | |
| 2009 | 22,431 | 22,431 | 100% | |
| 2010 | 25,339 | 25,339 | 100% | |
| 2011 | 23,434 | 23,434 | 100% | |
| 2012 | 25,257 | 25,257 | 100% | |
| 2013 | 29,847 | 29,847 | 100% | |
| 2014 | 25,953 | 25,953 | 100% | |
| 2015 | 30,992 | 30,992 | 100% | |
| 2016 | 31,297 | 31,297 | 100% | |
| 2017 | 33,616 | 33,616 | 100% | |
| 2018 | 36,263 | 36,263 | 100% | |
| 2019 | 33,494 | 33,494 | 100% | |
| 2020 | 35,310 | 35,310 | 100% | |
| 2021 | 36,766 | 36,766 | 100% | |
| 2022 | 40,392 | 40,392 | 100% | |

June 30, 2014 and earlier numbers calculated by prior actuary.

Note that the actual contributions do not include the contribution from POB proceeds above the actuarially determined amount.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX A – MEMBERSHIP INFORMATION

The data for this valuation was provided by the Tulare County staff as of June 30, 2022. 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.

SUMMARY OF TOTAL ACTIVE MEMBERSHIP

| | June 30, 2021 | June 30, 2022 | Change |
|-------------------------------------|----------------------|----------------------|---------------|
| Total (General & Safety) | | | |
| Count | 4,484 | 4,432 | -1.2% |
| Average Age | 42.4 | 42.5 | 0.1% |
| Average Service | 10.5 | 10.5 | 0.0% |
| Annual Projected Payroll | \$ 286,886,367 | \$ 293,444,953 | 2.3% |
| Average Annual Pay | \$ 63,980 | \$ 66,211 | 3.5% |

SUMMARY OF INACTIVE MEMBERSHIP*

| | June 30, 2021 | June 30, 2022 | Change |
|------------------------------|----------------------|----------------------|---------------|
| General | | | |
| Count | 1,935 | 2,083 | 7.6% |
| Average Age | 43.9 | 43.9 | -0.2% |
| Total Contribution Balance | \$ 46,297,586 | \$ 52,984,947 | 14.4% |
| Average Contribution Balance | \$ 23,926 | \$ 25,437 | 6.3% |
| Safety | | | |
| Count | 360 | 384 | 6.7% |
| Average Age | 39.3 | 39.3 | 0.1% |
| Total Contribution Balance | \$ 14,311,843 | \$ 15,792,000 | 10.3% |
| Average Contribution Balance | \$ 39,755 | \$ 41,125 | 3.4% |
| Total | | | |
| Count | 2,295 | 2,467 | 7.5% |
| Average Age | 43.2 | 43.2 | -0.1% |
| Total Contribution Balance | \$ 60,609,429 | \$ 68,776,947 | 13.5% |
| Average Contribution Balance | \$ 26,409 | \$ 27,879 | 5.6% |

*Includes unclaimed accounts.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX A – MEMBERSHIP INFORMATION

| SUMMARY OF RETIRED MEMBERSHIP | | | | |
|--------------------------------------|----|----------------------|----------------------|---------------|
| | | June 30, 2021 | June 30, 2022 | Change |
| General | | | | |
| Count | | 2,865 | 2,947 | 2.9% |
| Average Age | | 71.5 | 71.8 | 0.4% |
| Total Annual Allowance | \$ | 65,750,480 | \$ 69,411,269 | 5.6% |
| Average Annual Allowance | \$ | 22,950 | \$ 23,553 | 2.6% |
| Safety | | | | |
| Count | | 607 | 638 | 5.1% |
| Average Age | | 65.0 | 65.3 | 0.5% |
| Total Annual Allowance | \$ | 22,872,888 | \$ 24,727,646 | 8.1% |
| Average Annual Allowance | \$ | 37,682 | \$ 38,758 | 2.9% |
| Total | | | | |
| Count | | 3,472 | 3,585 | 3.3% |
| Average Age | | 70.4 | 70.6 | 0.3% |
| Total Annual Allowance | \$ | 88,623,368 | \$ 94,138,915 | 6.2% |
| Average Annual Allowance | \$ | 25,525 | \$ 26,259 | 2.9% |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX A – MEMBERSHIP INFORMATION

| SUMMARY OF ACTIVE GENERAL MEMBERSHIP | | | | | |
|--------------------------------------|---------------|-------------|---------------|-------------|--------|
| | June 30, 2021 | | June 30, 2022 | | Change |
| General Tier 1 | | | | | |
| Count | 7 | | 7 | | 0.0% |
| Average Age | 68.0 | | 69.0 | | 1.5% |
| Average Service | 36.8 | | 37.8 | | 2.7% |
| Annual Projected Payroll | \$ | 476,784 | \$ | 490,633 | 2.9% |
| Average Annual Pay | \$ | 68,112 | \$ | 70,090 | 2.9% |
| General Tier 2 & 3 | | | | | |
| Count | 1,776 | | 1,619 | | -8.8% |
| Average Age | 49.0 | | 49.6 | | 1.3% |
| Average Service | 16.9 | | 17.8 | | 5.1% |
| Annual Projected Payroll | \$ | 119,402,048 | \$ | 113,469,216 | -5.0% |
| Average Annual Pay | \$ | 67,231 | \$ | 70,043 | 4.2% |
| General Tier 4 | | | | | |
| Count | 1,855 | | 1,985 | | 7.0% |
| Average Age | 37.4 | | 37.8 | | 0.9% |
| Average Service | 4.0 | | 4.2 | | 4.2% |
| Annual Projected Payroll | \$ | 101,344,393 | \$ | 113,443,582 | 11.9% |
| Average Annual Pay | \$ | 54,633 | \$ | 57,150 | 4.6% |
| General Total | | | | | |
| Count | 3,638 | | 3,611 | | -0.7% |
| Average Age | 43.1 | | 43.2 | | 0.0% |
| Average Service | 10.4 | | 10.4 | | -0.3% |
| Annual Projected Payroll | \$ | 221,223,225 | \$ | 227,403,431 | 2.8% |
| Average Annual Pay | \$ | 60,809 | \$ | 62,975 | 3.6% |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX A – MEMBERSHIP INFORMATION

| SUMMARY OF ACTIVE SAFETY MEMBERSHIP | | | | | |
|-------------------------------------|---------------|------------|---------------|------------|--------|
| | June 30, 2021 | | June 30, 2022 | | Change |
| Safety Tier 1 | | | | | |
| Count | | 0 | | 0 | 0.0% |
| Average Age | | 0 | | 0 | 0.0% |
| Average Service | | 0 | | 0 | 0.0% |
| Annual Projected Payroll | \$ | 0 | \$ | 0 | 0.0% |
| Average Annual Pay | \$ | 0 | \$ | 0 | 0.0% |
| Safety Tier 2 & 3 | | | | | |
| Count | | 468 | | 428 | -8.5% |
| Average Age | | 44.7 | | 45.4 | 1.7% |
| Average Service | | 16.6 | | 17.4 | 4.5% |
| Annual Projected Payroll | \$ | 39,977,926 | \$ | 38,249,543 | -4.3% |
| Average Annual Pay | \$ | 85,423 | \$ | 89,368 | 4.6% |
| Safety Tier 4 | | | | | |
| Count | | 378 | | 393 | 4.0% |
| Average Age | | 32.6 | | 32.7 | 0.4% |
| Average Service | | 3.9 | | 4.3 | 8.7% |
| Annual Projected Payroll | \$ | 25,685,216 | \$ | 27,791,979 | 8.2% |
| Average Annual Pay | \$ | 67,950 | \$ | 70,710 | 4.1% |
| Safety Total | | | | | |
| Count | | 846 | | 821 | -3.0% |
| Average Age | | 39.3 | | 39.4 | 0.2% |
| Average Service | | 11.0 | | 11.1 | 1.3% |
| Annual Projected Payroll | \$ | 65,663,142 | \$ | 66,041,522 | 0.6% |
| Average Annual Pay | \$ | 77,616 | \$ | 80,440 | 3.6% |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX A – MEMBERSHIP INFORMATION

| SUMMARY OF RETIRED GENERAL MEMBERSHIP | | | | | |
|---------------------------------------|---------------|------------|---------------|------------|--------|
| | June 30, 2021 | | June 30, 2022 | | Change |
| Service Retirement | | | | | |
| Count | 2,262 | | 2,333 | | 3.1% |
| Average Age | 71.4 | | 71.7 | | 0.3% |
| Total Annual Allowance | \$ | 55,447,906 | \$ | 58,704,307 | 5.9% |
| Average Annual Allowance | \$ | 24,513 | \$ | 25,163 | 2.7% |
| Disability | | | | | |
| Count | 204 | | 204 | | 0.0% |
| Average Age | 65.0 | | 65.7 | | 1.0% |
| Total Annual Allowance | \$ | 4,501,396 | \$ | 4,574,239 | 1.6% |
| Average Annual Allowance | \$ | 22,066 | \$ | 22,423 | 1.6% |
| Beneficiaries | | | | | |
| Count | 399 | | 410 | | 2.8% |
| Average Age | 75.4 | | 75.6 | | 0.3% |
| Total Annual Allowance | \$ | 5,801,178 | \$ | 6,132,723 | 5.7% |
| Average Annual Allowance | \$ | 14,539 | \$ | 14,958 | 2.9% |
| Total | | | | | |
| Count | 2,865 | | 2,947 | | 2.9% |
| Average Age | 71.5 | | 71.8 | | 0.4% |
| Total Annual Allowance | \$ | 65,750,480 | \$ | 69,411,269 | 5.6% |
| Average Annual Allowance | \$ | 22,950 | \$ | 23,553 | 2.6% |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX A – MEMBERSHIP INFORMATION

| SUMMARY OF RETIRED SAFETY MEMBERSHIP | | | | | |
|--------------------------------------|---------------|------------|---------------|------------|--------|
| | June 30, 2021 | | June 30, 2022 | | Change |
| Service Retirement | | | | | |
| Count | 357 | | 378 | | 5.9% |
| Average Age | 66.3 | | 66.4 | | 0.1% |
| Total Annual Allowance | \$ | 15,528,655 | \$ | 16,881,299 | 8.7% |
| Average Annual Allowance | \$ | 43,498 | \$ | 44,660 | 2.7% |
| Disability | | | | | |
| Count | 138 | | 141 | | 2.2% |
| Average Age | 59.7 | | 60.2 | | 0.8% |
| Total Annual Allowance | \$ | 4,597,665 | \$ | 4,810,225 | 4.6% |
| Average Annual Allowance | \$ | 33,316 | \$ | 34,115 | 2.4% |
| Beneficiaries | | | | | |
| Count | 112 | | 119 | | 6.3% |
| Average Age | 67.1 | | 67.8 | | 1.1% |
| Total Annual Allowance | \$ | 2,746,568 | \$ | 3,036,122 | 10.5% |
| Average Annual Allowance | \$ | 24,523 | \$ | 25,514 | 4.0% |
| Total | | | | | |
| Count | 607 | | 638 | | 5.1% |
| Average Age | 65.0 | | 65.3 | | 0.5% |
| Total Annual Allowance | \$ | 22,872,888 | \$ | 24,727,646 | 8.1% |
| Average Annual Allowance | \$ | 37,682 | \$ | 38,758 | 2.9% |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX A – MEMBERSHIP INFORMATION

| AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY OF ACTIVE GENERAL MEMBERS AS OF JUNE 30, 2022 TIER 1 | | | | | | | | | | | | | | | | | | | | | | |
|--|---------------------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|
| Attained Age | YEARS OF CREDITED SERVICE | | | | | | | | | | | | | | | | | | | | | |
| | 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 | |
| | Average No. | Average Comp. | Average No. | Average Comp. | Average No. | Average Comp. | Average No. | Average Comp. | Average No. | Average Comp. | Average No. | Average Comp. | Average No. | Average Comp. | Average No. | Average Comp. | Average No. | Average Comp. | Average No. | Average Comp. | Average No. | Average Comp. |
| Under 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 25 to 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 30 to 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 35 to 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 40 to 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 45 to 49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 50 to 54 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 55 to 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 60 to 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 65 to 69 | 0 | 0 | 0 | 0 | 1 | 122,299 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 79,201 | 1 | 50,822 | 2 | 71,244 | 5 | 78,962 |
| 70 & up | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 48,033 | 1 | 47,791 | 2 | 47,912 |
| Total | 0 | 0 | 0 | 0 | 1 | 122,299 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 79,201 | 2 | 49,428 | 3 | 63,426 | 7 | 70,090 |

| AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY OF ACTIVE GENERAL MEMBERS AS OF JUNE 30, 2022 TIER 2 & 3 | | | | | | | | | | | | | | | | | | | | | | |
|--|---------------------------|--------|---------|---------|---------|---------|----------|---------|----------|---------|----------|---------|----------|--------|----------|--------|----------|--------|---------|--------|---------|---------|
| Attained Age | YEARS OF CREDITED SERVICE | | | | | | | | | | | | | | | | | | | | | |
| | 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 | |
| | Average | | Average | | Average | | Average | | Average | | Average | | Average | | Average | | Average | | Average | | Average | |
| | No. | Comp. | No. | Comp. | No. | Comp. | No. | Comp. | No. | Comp. | No. | Comp. | No. | Comp. | No. | Comp. | No. | Comp. | No. | Comp. | No. | Comp. |
| Under 25 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 |
| 25 to 29 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 42,111 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 42,111 |
| 30 to 34 | 0 | 0 | 0 | 0 | 17 | 61,281 | 39 | 57,206 | 1 | 59,188 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 57 | 58,456 |
| 35 to 39 | 0 | 0 | 3 | 109,498 | 25 | 67,816 | 114 | 69,029 | 39 | 67,962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 181 | 69,302 |
| 40 to 44 | 1 | 48,325 | 2 | 69,984 | 30 | 72,580 | 117 | 73,945 | 133 | 72,597 | 47 | 63,515 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 330 | 71,691 |
| 45 to 49 | 0 | 0 | 3 | 57,134 | 21 | 81,635 | 82 | 68,447 | 90 | 68,621 | 83 | 67,503 | 22 | 71,816 | 0 | 0 | 0 | 0 | 0 | 0 | 301 | 69,292 |
| 50 to 54 | 0 | 0 | 3 | 70,683 | 12 | 74,346 | 43 | 58,729 | 81 | 74,345 | 84 | 64,884 | 38 | 61,420 | 9 | 72,441 | 0 | 0 | 0 | 0 | 270 | 66,992 |
| 55 to 59 | 0 | 0 | 0 | 0 | 11 | 65,362 | 48 | 64,086 | 55 | 71,496 | 67 | 67,351 | 35 | 74,990 | 19 | 68,318 | 2 | 73,010 | 0 | 0 | 237 | 68,813 |
| 60 to 64 | 0 | 0 | 0 | 0 | 6 | 111,967 | 37 | 79,543 | 43 | 71,600 | 45 | 63,468 | 21 | 64,893 | 21 | 84,782 | 5 | 86,531 | 1 | 48,884 | 179 | 73,600 |
| 65 to 69 | 0 | 0 | 0 | 0 | 2 | 70,435 | 10 | 80,049 | 11 | 102,413 | 14 | 64,836 | 5 | 67,051 | 4 | 99,295 | 2 | 77,843 | 0 | 0 | 48 | 80,494 |
| 70 & up | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 133,387 | 4 | 73,474 | 4 | 123,344 | 2 | 73,906 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 106,801 |
| Total | 1 | 48,325 | 11 | 77,446 | 124 | 73,006 | 496 | 69,392 | 457 | 72,198 | 344 | 66,302 | 123 | 68,166 | 53 | 77,880 | 9 | 81,596 | 1 | 48,884 | 1,619 | 70,086 |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX A – MEMBERSHIP INFORMATION

**AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY
OF ACTIVE SAFETY MEMBERS AS OF JUNE 30, 2022**

TIER 1

| Attained Age | YEARS OF CREDITED SERVICE | | | | | | | | | | | | | | | | | | | | | |
|--------------|---------------------------|-------|---------|-------|---------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|---------|-------|---------|-------|
| | 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 | |
| | Average | | Average | | Average | | Average | | Average | | Average | | Average | | Average | | Average | | Average | | Average | |
| | No. | Comp. | No. | Comp. | No. | Comp. | No. | Comp. | No. | Comp. | No. | Comp. | No. | Comp. | No. | Comp. | No. | Comp. | No. | Comp. | No. | Comp. |
| Under 25 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 |
| 25 to 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 to 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35 to 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 to 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 45 to 49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50 to 54 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 to 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60 to 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65 to 69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 70 & up | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY
OF ACTIVE SAFETY MEMBERS AS OF JUNE 30, 2022**

TIER 2 & 3

| Attained Age | YEARS OF CREDITED SERVICE | | | | | | | | | | | | | | Total | | | | | | |
|--------------|---------------------------|---------------|--------|---------------|--------|---------------|----------|---------------|----------|---------------|----------|---------------|----------|---------------|-------|---------------|----------|---------------|----------|---------------|---------|
| | 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 |
| | No. | Average Comp. | No. | Average Comp. | No. | Average Comp. | No. | Average Comp. | No. | Average Comp. | No. | Average Comp. | No. | Average Comp. | No. | Average Comp. | No. | Average Comp. | No. | Average Comp. | |
| Under 25 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | |
| 25 to 29 | 0 | 0 | 1 | 81,946 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 81,946 |
| 30 to 34 | 0 | 0 | 0 | 0 | 8 | 80,815 | 15 | 76,527 | 2 | 88,708 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 78,874 |
| 35 to 39 | 0 | 0 | 2 | 88,269 | 7 | 75,109 | 36 | 81,755 | 28 | 88,664 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 | 83,946 |
| 40 to 44 | 0 | 0 | 1 | 83,653 | 10 | 83,506 | 44 | 81,370 | 59 | 90,044 | 11 | 97,251 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 87,051 |
| 45 to 49 | 0 | 0 | 0 | 0 | 2 | 97,928 | 19 | 85,132 | 38 | 89,947 | 31 | 97,612 | 2 | 159,154 | 0 | 0 | 0 | 0 | 0 | 92 | 93,213 |
| 50 to 54 | 0 | 0 | 0 | 0 | 2 | 77,334 | 7 | 80,943 | 22 | 91,050 | 18 | 100,099 | 17 | 100,633 | 1 | 100,724 | 0 | 0 | 0 | 67 | 94,591 |
| 55 to 59 | 0 | 0 | 0 | 0 | 1 | 87,413 | 5 | 93,649 | 7 | 79,001 | 6 | 95,823 | 10 | 96,747 | 2 | 96,780 | 3 | 156,009 | 0 | 34 | 97,431 |
| 60 to 64 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 107,888 | 3 | 89,698 | 2 | 88,975 | 2 | 77,109 | 1 | 78,657 | 0 | 0 | 0 | 10 | 89,569 |
| 65 to 69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 64,702 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 64,702 |
| 70 & up | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 4 | 85,534 | 30 | 81,509 | 128 | 82,340 | 159 | 89,408 | 69 | 97,320 | 31 | 101,637 | 4 | 93,235 | 3 | 156,009 | 0 | 428 | 89,368 |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX A – MEMBERSHIP INFORMATION

| AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY OF ACTIVE SAFETY MEMBERS AS OF JUNE 30, 2022 TIER 4 | | | | | | | | | | | | | | | | | | | | | | |
|---|---------|------------------|--------|------------------|--------|------------------|----------|------------------|----------|------------------|----------|------------------|----------|------------------|----------|------------------|----------|------------------|---------|------------------|-------|------------------|
| YEARS OF CREDITED SERVICE | | | | | | | | | | | | | | | | | | | | | | |
| Attained 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 | |
| | No. | Average Comp. | No. | Average Comp. | No. | Average Comp. | No. | Average Comp. | No. | Average Comp. | No. | Average Comp. | No. | Average Comp. | No. | Average Comp. | No. | Average Comp. | No. | Average Comp. | No. | Average Comp. |
| Under 25 | 20 | \$ 55,436 | 14 | \$ 58,681 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 0 | \$ 0 | 34 | \$ 56,772 |
| 25 to 29 | 25 | 58,454 | 87 | 68,723 | 20 | 74,636 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 132 | 67,674 |
| 30 to 34 | 14 | 62,327 | 51 | 69,921 | 58 | 76,289 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 123 | 72,059 |
| 35 to 39 | 5 | 70,287 | 17 | 73,832 | 32 | 75,986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54 | 74,780 |
| 40 to 44 | 0 | 0 | 9 | 70,977 | 13 | 79,904 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 76,252 |
| 45 to 49 | 1 | 81,913 | 4 | 73,224 | 6 | 82,789 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 79,231 |
| 50 to 54 | 0 | 0 | 5 | 87,846 | 4 | 76,377 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 82,749 |
| 55 to 59 | 0 | 0 | 2 | 77,717 | 3 | 104,248 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 93,636 |
| 60 to 64 | 0 | 0 | 1 | 80,958 | 1 | 92,185 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 86,572 |
| 65 to 69 | 0 | 0 | 0 | 0 | 1 | 92,121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 92,121 |
| 70 & up | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 65 | 59,631 | 190 | 69,626 | 138 | 77,443 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 70,718 |

**Average Increases in Pay
(for upcoming year, based on valuation data)**

| | |
|-----------------------------------|--------------|
| Longevity and Promotion Component | 2.30% |
| Wage Inflation Component | <u>3.00%</u> |
| Total | 5.30% |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX A – MEMBERSHIP INFORMATION

**AGE DISTRIBUTION OF TOTAL INACTIVE PARTICIPANTS
PENSIONERS AND BENEFICIARIES RECEIVING BENEFITS AS OF JUNE 30, 2022**

| Age | Disability Retirements | | Normal, Early Deferred Vested Retirements | | Surviving Spouses and Beneficiaries Receiving Benefits | | Total | |
|--------------|------------------------|---------------------|---|----------------------|--|---------------------|--------------|----------------------|
| | Number | Annual Benefit | Number | Annual Benefit | Number | Annual Benefit | Number | Annual Benefit |
| Under 55 | 81 | \$ 2,439,504 | 64 | \$ 1,238,247 | 40 | \$ 637,072 | 185 | \$ 4,314,823 |
| 55-59 | 46 | 1,391,172 | 202 | 5,302,803 | 16 | 249,351 | 264 | 6,943,326 |
| 60-64 | 52 | 1,285,326 | 384 | 10,623,872 | 44 | 805,736 | 480 | 12,714,934 |
| 65-69 | 59 | 1,466,566 | 614 | 18,241,200 | 68 | 1,306,311 | 741 | 21,014,077 |
| 70-74 | 58 | 1,604,706 | 596 | 17,557,611 | 96 | 1,598,942 | 750 | 20,761,259 |
| 75-79 | 30 | 801,434 | 491 | 14,162,112 | 91 | 1,670,042 | 612 | 16,633,588 |
| 80 & Over | 19 | 395,756 | 360 | 8,459,761 | 174 | 2,901,391 | 553 | 11,756,908 |
| Total | 345 | \$ 9,384,464 | 2,711 | \$ 75,585,606 | 529 | \$ 9,168,845 | 3,585 | \$ 94,138,915 |

**AGE DISTRIBUTION OF INACTIVE GENERAL PARTICIPANTS
PENSIONERS AND BENEFICIARIES RECEIVING BENEFITS AS OF JUNE 30, 2022**

| Age | Disability Retirements | | Normal, Early Deferred Vested Retirements | | Surviving Spouses and Beneficiaries Receiving Benefits | | Total | |
|--------------|------------------------|---------------------|---|----------------------|--|---------------------|--------------|----------------------|
| | Number | Annual Benefit | Number | Annual Benefit | Number | Annual Benefit | Number | Annual Benefit |
| Under 55 | 32 | \$ 698,881 | 34 | \$ 397,226 | 18 | \$ 163,071 | 84 | \$ 1,259,178 |
| 55-59 | 22 | 492,197 | 132 | 2,025,244 | 12 | 149,203 | 166 | 2,666,644 |
| 60-64 | 35 | 820,199 | 310 | 7,487,478 | 30 | 465,719 | 375 | 8,773,396 |
| 65-69 | 43 | 936,580 | 541 | 14,777,109 | 45 | 623,869 | 629 | 16,337,558 |
| 70-74 | 39 | 867,718 | 537 | 14,632,396 | 78 | 1,095,519 | 654 | 16,595,633 |
| 75-79 | 22 | 522,102 | 434 | 11,524,936 | 81 | 1,417,356 | 537 | 13,464,394 |
| 80 & Over | 11 | 236,562 | 345 | 7,859,918 | 146 | 2,217,986 | 502 | 10,314,466 |
| Total | 204 | \$ 4,574,239 | 2,333 | \$ 58,704,307 | 410 | \$ 6,132,723 | 2,947 | \$ 69,411,269 |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX A – MEMBERSHIP INFORMATION

| AGE DISTRIBUTION OF INACTIVE SAFETY PARTICIPANTS PENSIONERS AND BENEFICIARIES RECEIVING BENEFITS AS OF JUNE 30, 2022 | | | | | | | | | |
|---|--------|----------------|--|----------------|---|----------------|--------------|----------------|--|
| Disability Retirements | | | Normal, Early Deferred Vested Retirements | | Surviving Spouses and Beneficiaries Receiving Benefits | | Total | | |
| Age | Number | Annual Benefit | Number | Annual Benefit | Number | Annual Benefit | Number | Annual Benefit | |
| Under 55 | 49 | \$ 1,740,623 | 30 | \$ 841,021 | 22 | \$ 474,001 | 101 | \$ 3,055,645 | |
| 55-59 | 24 | 898,975 | 70 | 3,277,559 | 4 | 100,148 | 98 | 4,276,682 | |
| 60-64 | 17 | 465,127 | 74 | 3,136,394 | 14 | 340,017 | 105 | 3,941,538 | |
| 65-69 | 16 | 529,986 | 73 | 3,464,091 | 23 | 682,442 | 112 | 4,676,519 | |
| 70-74 | 19 | 736,988 | 59 | 2,925,215 | 18 | 503,423 | 96 | 4,165,626 | |
| 75-79 | 8 | 279,332 | 57 | 2,637,176 | 10 | 252,686 | 75 | 3,169,194 | |
| 80 & Over | 8 | 159,194 | 15 | 599,843 | 28 | 683,405 | 51 | 1,442,442 | |
| Total | 141 | \$ 4,810,225 | 378 | \$ 16,881,299 | 119 | \$ 3,036,122 | 638 | \$ 24,727,646 | |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX A – MEMBERSHIP INFORMATION

| Retirants and Beneficiaries Added to and Removed From Payroll | | | | | | | | | | |
|---|--------------|--------|--------------------|---------|-------------------|---------|---------------|--|------------|-----------|
| Plan Year | | Added | | Removed | Annual Allowances | | | | % Increase | Average |
| Ended June | At Beginning | During | Annual Allowances | During | Removed from the | At End | Annual | | in Annual | Annual |
| 30 | of Year | Year | Added to the Rolls | Year | Rolls | of Year | Allowance | | Allowance | Allowance |
| 2012 | 2,313 | 181 | \$ 4,736,189 | 70 | \$ 985,645 | 2,424 | \$ 48,974,812 | | 8.29% | \$ 20,204 |
| 2013 | 2,424 | 183 | \$ 4,745,718 | 65 | \$ 483,264 | 2,542 | \$ 53,237,266 | | 8.70% | \$ 20,943 |
| 2014 | 2,542 | 224 | \$ 4,198,797 | 75 | \$ 659,212 | 2,691 | \$ 56,776,851 | | 6.65% | \$ 21,099 |
| 2015 | 2,691 | 218 | \$ 4,360,151 | 88 | \$ 1,432,880 | 2,821 | \$ 59,960,567 | | 5.61% | \$ 21,255 |
| 2016 | 2,821 | 185 | \$ 4,540,356 | 66 | \$ 986,150 | 2,940 | \$ 64,292,378 | | 7.22% | \$ 21,868 |
| 2017 | 2,940 | 191 | \$ 4,483,587 | 59 | \$ 896,529 | 3,072 | \$ 68,669,924 | | 6.81% | \$ 22,353 |
| 2018 | 3,072 | 178 | \$ 5,487,994 | 58 | \$ 830,938 | 3,192 | \$ 73,731,771 | | 7.37% | \$ 23,099 |
| 2019 | 3,192 | 174 | \$ 4,705,555 | 54 | \$ 1,098,384 | 3,312 | \$ 78,971,061 | | 7.11% | \$ 23,844 |
| 2020 | 3,312 | 163 | \$ 4,626,973 | 67 | \$ 925,421 | 3,408 | \$ 84,412,237 | | 6.89% | \$ 24,769 |
| 2021 | 3,408 | 141 | \$ 3,908,186 | 77 | \$ 1,434,138 | 3,472 | \$ 88,623,368 | | 4.99% | \$ 25,525 |
| 2022 | 3,472 | 178 | \$ 5,109,979 | 65 | \$ 1,181,524 | 3,585 | \$ 94,138,915 | | 6.22% | \$ 26,259 |

Data prior to 2015 was compiled by the previous actuary.

Starting in 2015, Annual Allowances Added to the Rolls no longer includes cost of living adjustments for existing retirees.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX A – MEMBERSHIP INFORMATION

| Reconciliation of System Membership Since Prior Valuation | | | | | | | | | | | |
|---|--------------|-----------------|-------------------------------|---------------------|-----------------|--------------|---------------|------------------------------------|-----------|---------------|---------------|
| Total Members | | | | | | | | | | | |
| | Active | Deferred Vested | Deferred Vested - Transferred | Ordinary Disability | Duty Disability | Retired | Beneficiaries | Non-Vested Terminations Due Refund | QDRO | Deferred QDRO | Totals |
| June 30, 2021 | 4,484 | 467 | 655 | 121 | 221 | 2,619 | 454 | 1,155 | 57 | 18 | 10,251 |
| New Entrants | 526 | | | | | | | | | | 526 |
| Rehires | 25 | (6) | (2) | | | | | (17) | | | - |
| Duty Disabilities | (7) | | | | 9 | (2) | | | | | - |
| Ordinary Disabilities | | | | 1 | | (1) | | | | | - |
| Retirements | (123) | (11) | (27) | | | 161 | | | | | - |
| Vested Terminations | (107) | 107 | | | | | | | | | - |
| Non-Vested Terminations and Death without beneficiary | (212) | (1) | (2) | (1) | (2) | (36) | | 206 | | | (48) |
| Death with beneficiary | (3) | | | (3) | (2) | (29) | 37 | | | | - |
| Transfers | (22) | (7) | 39 | | | | | (10) | | | - |
| Beneficiary Deaths | | | | | | | (25) | | (1) | | (26) |
| Domestic Relations Orders | | | | | | | | | 7 | (2) | 5 |
| Deferred Domestic Relations Orders | | | | | | | | | | 4 | 4 |
| Withdrawals Paid | (129) | (19) | (3) | | | | | (78) | | (1) | (230) |
| Data Corrections | | | | 1 | | (1) | | 2 | | | 2 |
| June 30, 2022 | 4,432 | 530 | 660 | 119 | 226 | 2,711 | 466 | 1,258 | 63 | 19 | 10,484 |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX A – MEMBERSHIP INFORMATION

| Reconciliation of System Membership Since Prior Valuation | | | | | | | | | | | |
|---|--------|-----------------|-------------------------------|---------------------|-----------------|---------|---------------|------------------------------------|------|---------------|--------|
| General Members | | | | | | | | | | | |
| | Active | Deferred Vested | Deferred Vested - Transferred | Ordinary Disability | Duty Disability | Retired | Beneficiaries | Non-Vested Terminations Due Refund | QDRO | Deferred QDRO | Totals |
| June 30, 2021 | 3,638 | 385 | 540 | 103 | 101 | 2,262 | 362 | 1,001 | 37 | 9 | 8,438 |
| New Entrants | 451 | | | | | | | | | | 451 |
| Rehires | 19 | (4) | (2) | | | | | (13) | | | - |
| Duty Disabilities | (3) | - | | | 4 | (1) | | | | | - |
| Ordinary Disabilities | - | - | | 1 | | (1) | | | | | - |
| Retirements | (102) | (11) | (21) | | | 134 | | | | | - |
| Vested Terminations | (92) | 92 | | | | | | | | | - |
| Non-Vested Terminations and Death without beneficiary | (177) | (1) | (2) | (1) | (1) | (36) | | 171 | | - | (47) |
| Death with beneficiary | (2) | | | (3) | (1) | (24) | 30 | | | | - |
| Transfers | (19) | (5) | 28 | | | | | (5) | | | (1) |
| Beneficiary Deaths | | | | | | | (20) | | (1) | | (21) |
| Domestic Relations Orders | | | | | | | | | 2 | | 2 |
| Deferred Domestic Relations Orders | | | | | | | | | | 1 | 1 |
| Withdrawals Paid | (102) | (14) | (3) | | | | | (63) | | (1) | (183) |
| Data Corrections | - | - | - | 1 | | (1) | - | 1 | - | | 1 |
| June 30, 2022 | 3,611 | 442 | 540 | 101 | 103 | 2,333 | 372 | 1,092 | 38 | 9 | 8,641 |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX A – MEMBERSHIP INFORMATION

| Reconciliation of System Membership Since Prior Valuation | | | | | | | | | | | |
|---|--------|--------------------|-------------------------------------|------------------------|--------------------|---------|---------------|--|------|------------------|--------|
| Safety Members | | | | | | | | | | | |
| | Active | Deferred Vested | Deferred Vested - Transferred | Ordinary Disability | Duty Disability | Retired | Beneficiaries | Non-Vested Terminations Due Refund | QDRO | Deferred QDRO | Totals |
| June 30, 2021 | 846 | 82 | 115 | 18 | 120 | 357 | 92 | 154 | 20 | 9 | 1,813 |
| New Entrants | 75 | | | | | | | | | | 75 |
| Rehires | 6 | (2) | - | | | | | (4) | | | - |
| Duty Disabilities | (4) | | | | 5 | (1) | | | | | - |
| Ordinary Disabilities | | | | | | | | | | | - |
| Retirements | (21) | - | (6) | | | 27 | | | - | - | - |
| Vested Terminations | (15) | 15 | - | | | | | | | | - |
| Non-Vested Terminations and Death without beneficiary | (35) | | - | | (1) | - | | 35 | | | (1) |
| Death with beneficiary | (1) | | | | (1) | (5) | 7 | | | | - |
| Transfers | (3) | (2) | 11 | | | | | (5) | | | 1 |
| Beneficiary Deaths | | | | | | | (5) | | | | (5) |
| Domestic Relations Orders | | | | | | | | | 5 | (2) | 3 |
| Deferred Domestic Relations Orders | | | | | | | | | | 3 | 3 |
| Withdrawals Paid | (27) | (5) | - | | | | | (15) | | - | (47) |
| Data Corrections | | - | | - | - | - | - | 1 | | | 1 |
| June 30, 2022 | 821 | 88 | 120 | 18 | 123 | 378 | 94 | 166 | 25 | 10 | 1,843 |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

The methods and assumptions used in the actuarial valuation as of June 30, 2022 are outlined on the following pages.

A. Actuarial Methods

1. Actuarial Cost Method

The actuarial valuation is prepared using the Entry Age Actuarial Cost Method (CERL 31453.5). Under the principles of this method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated as a level percentage of the individual's projected compensation between entry age and assumed exit (until maximum retirement age). For members who transferred between plans, entry age is based on original entry into the system. The normal cost for the Plan is based on the sum of the individual normal costs for each member (Individual Entry Age Method).

The UAL (or Surplus) is amortized as a percentage of the projected salaries of present and future members of TCERA. At its October 28, 2015 meeting, the Board adopted 19-year layered amortization of the UAL. The UAL as of June 30, 2015 is being amortized over a closed 19-year period as a level percentage of payroll, assuming payroll increases of 3.00% per year, and subsequent changes in the UAL due to experience gains and losses, assumption changes, or plan changes will be amortized over new closed 19-year periods.

2. Valuation of Assets

Beginning in fiscal year 2009, the assets are valued using a 10-year smoothed method based on the difference between the expected market value and the actual market value of the assets, net of expenses, as of June 30 and December 31 of each year. The expected market value at the end of each period is the beginning market value increased with the net increase in the cash flow of funds, all increased with interest at the expected investment return rate assumption.

A 30% asset corridor limit is applied.

The contribution of \$250 million expected to be made on or before June 30, 2018 from the proceeds of a POB was included in the 2017 valuation as a receivable in both the Market and Actuarial Values of Assets as of June 30, 2017. Accordingly, it was not recorded as a contribution during the FY 2017-2018.

3. Changes in Actuarial Methods

None.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

B. Actuarial Assumptions

The TCERA Board has the authority to select economic and demographic assumptions for the Plan. The assumptions used in this report reflect the results of an Experience Study performed by Cheiron covering the period July 1, 2017 through June 30, 2020.

1. Rate of Return

Assets are assumed to earn 7.00% net of investment and administrative expenses.

2. Inflation

The Consumer Price Index (CPI) is assumed to increase at the rate of 2.75% per year. This assumption is also used to project the compensation limit for PEPRA members.

3. Post Retirement COLA

Benefits are assumed to increase after retirement at the rate of 2.6% per year for Tier 1 and 2% per year for Tiers 2-4.

4. Internal Revenue Code Limits and PEPRA Pensionable Compensation Limits

The maximum benefit and maximum compensation limitations under Internal Revenue Code Sections 415 and 401(a)(17), respectively, are not reflected in the valuation for funding purposes. Any limitation is reflected in a member's benefit after retirement. The PEPRA compensation limit, which was \$128,059 for calendar year 2021 for members participating in Social Security, was applied.

5. Interest on Member Contributions

The annual credited interest rate on member contributions is assumed to be 7.00%.

6. Family Composition

Percentage married for deferred vested terminations and all active members who retire, become disabled, or die during active service is shown below. Spouses of male members are assumed to be female and three years younger. Spouses of female members are assumed to be male and two years older. Actual spouse demographic data is reflected following benefit commencement.

| Division | Gender | Percentage |
|----------|--------|------------|
| General | Male | 80% |
| General | Female | 60% |
| Safety | Male | 85% |
| Safety | Female | 65% |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

7. Increases in Pay

Wage inflation component: 3.00%

Additional longevity and promotion component:

| Longevity and Promotion Increases | | |
|-----------------------------------|---------|--------|
| Service | General | Safety |
| 0 | 8.00% | 9.00% |
| 1 | 6.50% | 6.00% |
| 2 | 5.50% | 5.00% |
| 3 | 4.00% | 3.00% |
| 4 | 3.00% | 3.00% |
| 5 | 2.00% | 2.00% |
| 6 | 1.75% | 2.00% |
| 7 | 1.50% | 2.00% |
| 8 | 1.00% | 1.00% |
| 9 | 1.00% | 1.00% |
| 10 | 1.00% | 1.00% |
| 11 | 1.00% | 1.00% |
| 12 | 1.00% | 1.00% |
| 13 | 1.00% | 1.00% |
| 14 | 1.00% | 1.00% |
| 15+ | 0.50% | 1.00% |

8. Sick Leave Service Credit Upon Service Retirement

Active members' service retirement benefits are adjusted by a percentage, 1% for General and 2% for Safety, for anticipated conversions of sick leave to retirement service credit.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

9. Termination

| Age | Rates of Termination | | | | | | |
|-------------|----------------------|--------|---------|------------|------------------|--------|-----------|
| | General | | | | Safety | | |
| | Years of Service | | | | Years of Service | | |
| | Less than 3 | 3 to 5 | 5 to 10 | 10 or more | Less than 3 | 3 to 5 | 5 or more |
| 20 | 15.00% | 12.00% | 10.00% | 10.00% | 11.00% | 7.00% | 6.00% |
| 21 | 15.00% | 12.00% | 10.00% | 10.00% | 11.00% | 7.00% | 6.00% |
| 22 | 15.00% | 12.00% | 10.00% | 10.00% | 11.00% | 7.00% | 6.00% |
| 23 | 15.00% | 12.00% | 10.00% | 10.00% | 11.00% | 7.00% | 6.00% |
| 24 | 15.00% | 12.00% | 10.00% | 10.00% | 11.00% | 7.00% | 6.00% |
| 25 | 15.00% | 8.00% | 8.00% | 8.00% | 11.00% | 7.00% | 6.00% |
| 26 | 15.00% | 8.00% | 8.00% | 8.00% | 11.00% | 7.00% | 6.00% |
| 27 | 15.00% | 8.00% | 8.00% | 8.00% | 11.00% | 7.00% | 6.00% |
| 28 | 15.00% | 8.00% | 8.00% | 8.00% | 11.00% | 7.00% | 6.00% |
| 29 | 15.00% | 8.00% | 8.00% | 8.00% | 11.00% | 7.00% | 6.00% |
| 30 | 15.00% | 8.00% | 6.00% | 5.00% | 11.00% | 7.00% | 4.50% |
| 31 | 15.00% | 8.00% | 6.00% | 5.00% | 11.00% | 7.00% | 4.50% |
| 32 | 15.00% | 8.00% | 6.00% | 5.00% | 11.00% | 7.00% | 4.50% |
| 33 | 15.00% | 8.00% | 6.00% | 5.00% | 11.00% | 7.00% | 4.50% |
| 34 | 15.00% | 8.00% | 6.00% | 5.00% | 11.00% | 7.00% | 4.50% |
| 35 | 15.00% | 8.00% | 5.00% | 3.00% | 11.00% | 7.00% | 4.00% |
| 36 | 15.00% | 8.00% | 5.00% | 3.00% | 11.00% | 7.00% | 4.00% |
| 37 | 15.00% | 8.00% | 5.00% | 3.00% | 11.00% | 7.00% | 4.00% |
| 38 | 15.00% | 8.00% | 5.00% | 3.00% | 11.00% | 7.00% | 4.00% |
| 39 | 15.00% | 8.00% | 5.00% | 3.00% | 11.00% | 7.00% | 4.00% |
| 40 | 14.25% | 8.00% | 5.00% | 3.00% | 11.00% | 7.00% | 4.00% |
| 41 | 14.25% | 8.00% | 5.00% | 3.00% | 11.00% | 7.00% | 4.00% |
| 42 | 14.25% | 8.00% | 5.00% | 3.00% | 11.00% | 7.00% | 4.00% |
| 43 | 14.25% | 8.00% | 5.00% | 3.00% | 11.00% | 7.00% | 4.00% |
| 44 | 14.25% | 8.00% | 5.00% | 3.00% | 11.00% | 7.00% | 4.00% |
| 45 | 13.50% | 8.00% | 5.00% | 3.00% | 8.00% | 6.00% | 3.50% |
| 46 | 13.50% | 8.00% | 5.00% | 3.00% | 8.00% | 6.00% | 3.50% |
| 47 | 13.50% | 8.00% | 5.00% | 3.00% | 8.00% | 6.00% | 3.50% |
| 48 | 13.50% | 8.00% | 5.00% | 3.00% | 8.00% | 6.00% | 3.50% |
| 49 | 13.50% | 8.00% | 5.00% | 3.00% | 8.00% | 6.00% | 3.50% |
| 50 | 12.75% | 5.00% | 5.00% | 3.00% | 8.00% | 6.00% | 0.00% |
| 51 | 12.75% | 5.00% | 5.00% | 3.00% | 8.00% | 6.00% | 0.00% |
| 52 | 12.75% | 5.00% | 5.00% | 3.00% | 8.00% | 6.00% | 0.00% |
| 53 | 12.75% | 5.00% | 5.00% | 3.00% | 8.00% | 6.00% | 0.00% |
| 54 | 12.75% | 5.00% | 5.00% | 3.00% | 8.00% | 6.00% | 0.00% |
| 55 | 12.00% | 5.00% | 5.00% | 3.00% | 5.00% | 6.00% | 0.00% |
| 56 | 12.00% | 5.00% | 5.00% | 3.00% | 5.00% | 6.00% | 0.00% |
| 57 | 12.00% | 5.00% | 5.00% | 3.00% | 5.00% | 6.00% | 0.00% |
| 58 | 12.00% | 5.00% | 5.00% | 3.00% | 5.00% | 6.00% | 0.00% |
| 59 | 12.00% | 5.00% | 5.00% | 3.00% | 5.00% | 6.00% | 0.00% |
| 60 | 11.25% | 5.00% | 5.00% | 3.00% | 0.00% | 0.00% | 0.00% |
| 61 | 11.25% | 5.00% | 5.00% | 3.00% | 0.00% | 0.00% | 0.00% |
| 62 | 11.25% | 5.00% | 5.00% | 3.00% | 0.00% | 0.00% | 0.00% |
| 63 | 11.25% | 5.00% | 5.00% | 3.00% | 0.00% | 0.00% | 0.00% |
| 64 | 11.25% | 5.00% | 5.00% | 3.00% | 0.00% | 0.00% | 0.00% |
| 65 and over | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

Rates of termination apply to active Members who terminate their employment. Rates are assumed not to apply after eligibility for retirement.

Former members with contributions on deposit are assumed to receive a retirement benefit commencing at the following ages:

General Members: Age 60

Safety Members: Age 55

10. Rates of Deferred Vested Termination

Rates of deferred vested termination are a percentage of the termination rates shown on the previous page.

| Service | General Males | General Females | Safety |
|---------|---------------|-----------------|--------|
| 5-10 | 75% | 55% | 60% |
| 10-15 | 85% | 70% | 60% |
| 15-20 | 85% | 75% | 60% |
| 20+ | 85% | 75% | 100% |

11. Reciprocal Transfers

60% of General and 65% of Safety deferred vested terminated members that leave their member contributions on deposit with the Plan are assumed to be reciprocal.

Reciprocal members are assumed to remain with the reciprocal agency until retirement, and receive annual salary increases of 3.50% for General members and 4.00% for Safety members.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

12. Rates of Disability

Disability rates of active participants are shown below.

| Age | Rates of Disability | | | | | |
|-------------|---------------------|--------|-------------------|--------|----------|--------|
| | General - Males | | General - Females | | Safety | |
| | Ordinary | Duty | Ordinary | Duty | Ordinary | Duty |
| 20 | 0.000% | 0.010% | 0.000% | 0.010% | 0.000% | 0.110% |
| 21 | 0.000% | 0.010% | 0.000% | 0.010% | 0.000% | 0.120% |
| 22 | 0.000% | 0.010% | 0.000% | 0.010% | 0.000% | 0.130% |
| 23 | 0.000% | 0.010% | 0.000% | 0.010% | 0.000% | 0.140% |
| 24 | 0.000% | 0.010% | 0.000% | 0.010% | 0.000% | 0.150% |
| 25 | 0.010% | 0.010% | 0.010% | 0.010% | 0.050% | 0.170% |
| 26 | 0.010% | 0.010% | 0.010% | 0.010% | 0.050% | 0.200% |
| 27 | 0.010% | 0.010% | 0.010% | 0.010% | 0.050% | 0.250% |
| 28 | 0.010% | 0.010% | 0.010% | 0.010% | 0.050% | 0.300% |
| 29 | 0.010% | 0.010% | 0.010% | 0.010% | 0.050% | 0.350% |
| 30 | 0.010% | 0.010% | 0.010% | 0.010% | 0.050% | 0.400% |
| 31 | 0.010% | 0.010% | 0.010% | 0.010% | 0.050% | 0.450% |
| 32 | 0.010% | 0.010% | 0.010% | 0.010% | 0.050% | 0.500% |
| 33 | 0.010% | 0.010% | 0.010% | 0.010% | 0.050% | 0.520% |
| 34 | 0.010% | 0.010% | 0.010% | 0.010% | 0.050% | 0.540% |
| 35 | 0.020% | 0.020% | 0.080% | 0.020% | 0.050% | 0.560% |
| 36 | 0.020% | 0.020% | 0.080% | 0.020% | 0.050% | 0.580% |
| 37 | 0.020% | 0.020% | 0.080% | 0.020% | 0.050% | 0.600% |
| 38 | 0.030% | 0.030% | 0.120% | 0.030% | 0.050% | 0.620% |
| 39 | 0.030% | 0.030% | 0.130% | 0.030% | 0.050% | 0.640% |
| 40 | 0.030% | 0.030% | 0.140% | 0.030% | 0.075% | 0.660% |
| 41 | 0.040% | 0.045% | 0.160% | 0.045% | 0.075% | 0.670% |
| 42 | 0.040% | 0.045% | 0.170% | 0.045% | 0.080% | 0.680% |
| 43 | 0.040% | 0.045% | 0.180% | 0.045% | 0.085% | 0.690% |
| 44 | 0.050% | 0.050% | 0.190% | 0.050% | 0.090% | 0.700% |
| 45 | 0.050% | 0.055% | 0.200% | 0.055% | 0.095% | 0.750% |
| 46 | 0.050% | 0.060% | 0.220% | 0.060% | 0.100% | 0.800% |
| 47 | 0.060% | 0.070% | 0.240% | 0.070% | 0.150% | 0.850% |
| 48 | 0.070% | 0.080% | 0.260% | 0.080% | 0.200% | 0.900% |
| 49 | 0.080% | 0.090% | 0.280% | 0.090% | 0.250% | 0.950% |
| 50 | 0.090% | 0.100% | 0.300% | 0.100% | 0.300% | 1.000% |
| 51 | 0.100% | 0.150% | 0.320% | 0.150% | 0.350% | 1.250% |
| 52 | 0.120% | 0.200% | 0.340% | 0.200% | 0.400% | 1.500% |
| 53 | 0.140% | 0.250% | 0.360% | 0.250% | 0.450% | 1.750% |
| 54 | 0.160% | 0.300% | 0.380% | 0.300% | 0.500% | 2.000% |
| 55 | 0.180% | 0.350% | 0.400% | 0.350% | 0.550% | 2.250% |
| 56 | 0.200% | 0.400% | 0.420% | 0.400% | 0.600% | 2.300% |
| 57 | 0.220% | 0.450% | 0.440% | 0.450% | 0.650% | 2.350% |
| 58 | 0.240% | 0.500% | 0.480% | 0.500% | 0.700% | 2.400% |
| 59 | 0.260% | 0.550% | 0.520% | 0.550% | 0.750% | 2.450% |
| 60 | 0.280% | 0.600% | 0.540% | 0.600% | 0.000% | 0.000% |
| 61 | 0.300% | 0.650% | 0.560% | 0.650% | 0.000% | 0.000% |
| 62 | 0.320% | 0.700% | 0.600% | 0.700% | 0.000% | 0.000% |
| 63 | 0.340% | 0.750% | 0.620% | 0.750% | 0.000% | 0.000% |
| 64 | 0.360% | 0.800% | 0.640% | 0.800% | 0.000% | 0.000% |
| 65 and over | 0.000% | 0.000% | 0.000% | 0.000% | 0.000% | 0.000% |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

13. Rates of Mortality for Healthy Lives

Mortality rates for General actives, retirees, beneficiaries (both General and Safety), terminated vested, and reciprocals are based on the sex distinct Retired Pensioner (RP) 2014 Combined Healthy Tables, published by the Society of Actuaries, with Generational improvement using Projection Scale MP-2019, and increased by 2.2% for males and 8.0% for females to reflect Plan experience.

Mortality rates for Safety actives, retirees, terminated vested, and reciprocals are based on the sex distinct Retired Pensioner (RP) 2014 Combined Healthy Tables with blue-collar adjustment, published by the Society of Actuaries, with Generational improvement using Projection Scale MP-2019, and increased by 4.5% for males to reflect Plan experience.

14. Rates of Mortality for Retired Disabled Lives

Mortality rates for disabled retirees are based on the sex distinct Retired Pensioner (RP) 2014 Disabled Retiree Mortality Table, published by the Society of Actuaries, with Generational improvement using Projection Scale MP-2019.

15. Duty-Related Deaths (Safety Employees Only)

| Percentage of deaths assumed to be duty related | |
|--|-----|
| Age | |
| 20-24 | 37% |
| 25-30 | 42% |
| 31-34 | 45% |
| 35-43 | 50% |
| 44-45 | 52% |
| 46-47 | 54% |
| 48-49 | 56% |
| 50-54 | 58% |
| 55-56 | 60% |
| 57-58 | 62% |
| 59 | 63% |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

16. Rates of Retirement

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

| Age | General Years of Service | | Safety Years of Service | |
|-------------|-----------------------------|------------|----------------------------|------------|
| | Less than 30 | 30 or more | Less than 20 | 20 or more |
| 45 | 0.00% | 0.00% | 7.00% | 7.00% |
| 46 | 0.00% | 0.00% | 7.00% | 7.00% |
| 47 | 0.00% | 0.00% | 7.00% | 7.00% |
| 48 | 0.00% | 0.00% | 7.00% | 7.00% |
| 49 | 0.00% | 0.00% | 7.00% | 7.00% |
| 50 | 5.00% | 10.00% | 7.00% | 7.00% |
| 51 | 5.00% | 10.00% | 7.00% | 7.00% |
| 52 | 5.00% | 10.00% | 7.00% | 7.00% |
| 53 | 5.00% | 10.00% | 7.00% | 7.00% |
| 54 | 5.00% | 10.00% | 7.00% | 7.00% |
| 55 | 6.00% | 10.00% | 10.00% | 18.00% |
| 56 | 6.00% | 10.00% | 10.00% | 18.00% |
| 57 | 6.00% | 10.00% | 10.00% | 18.00% |
| 58 | 6.00% | 10.00% | 10.00% | 18.00% |
| 59 | 6.00% | 10.00% | 10.00% | 18.00% |
| 60 | 15.00% | 20.00% | 20.00% | 40.00% |
| 61 | 15.00% | 20.00% | 20.00% | 40.00% |
| 62 | 15.00% | 20.00% | 20.00% | 40.00% |
| 63 | 15.00% | 20.00% | 20.00% | 40.00% |
| 64 | 15.00% | 20.00% | 20.00% | 40.00% |
| 65 | 35.00% | 35.00% | 40.00% | 75.00% |
| 66 | 35.00% | 35.00% | 40.00% | 75.00% |
| 67 | 35.00% | 35.00% | 40.00% | 75.00% |
| 68 | 35.00% | 35.00% | 40.00% | 75.00% |
| 69 | 35.00% | 35.00% | 40.00% | 75.00% |
| 70 | 35.00% | 35.00% | 100.00% | 100.00% |
| 71 | 35.00% | 35.00% | 100.00% | 100.00% |
| 72 | 35.00% | 35.00% | 100.00% | 100.00% |
| 73 | 35.00% | 35.00% | 100.00% | 100.00% |
| 74 | 35.00% | 35.00% | 100.00% | 100.00% |
| 75 and over | 100.00% | 100.00% | 100.00% | 100.00% |

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17. Disclosures regarding Models Used

In accordance with Actuarial Standard of Practice (ASOP) No. 56 *Modeling*, the following disclosures are made:

a. Valuation Software

Cheiron utilizes ProVal, an actuarial valuation software program leased from Winklevoss Technologies (WinTech), to calculate liabilities and projected benefit payments. We have reviewed the underlying workings of this model to the degree feasible and consistent with ASOP No. 56 and believe them to be appropriate for the purposes of the valuation.

b. Projections

This valuation report includes projections of future contributions and funded status for the purpose of assisting the Retirement Board and the sponsors of the System with the management of the Fund.

Deterministic projections in this valuation report were developed using P-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 System. P-scan uses standard roll-forward techniques that implicitly assume a stable active population. Because P-scan does not automatically capture how changes in one variable affect all other variables, some scenarios may not be consistent.

Stochastic projections and related calculations (including the estimation of future SRBR transfers) in this valuation report were developed using R-scan, our proprietary tool for assessing the probability of different outcomes based on a range of potential investment returns. We relied on Cheiron colleagues for the development of the model. 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. The standard deviation used in the stochastic projection of investment returns is based on information provided by the System's investment consultant.

The projections are based on the same census data and financial information as of June 30, 2022 as disclosed in this actuarial valuation. The projections assume continuation of the plan provisions and actuarial assumptions in effect as of June 30, 2022 and do not reflect the impact of any changes in benefits or actuarial assumptions that may be adopted after June 30, 2022.

The projections assume that all future assumptions are met except where specifically indicated. The future outcomes become increasingly uncertain over time, and therefore the

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general trends and not the absolute values should be considered in the review of these projections. Further, for the purpose of these projections, we have only reflected the impact of new entrants entering the plan in aggregate and have not developed individual liabilities or detailed profiles related to these potential new entrants. We feel this is appropriate for the purpose of these projections, but if they were to be used for other purposes, this may not be appropriate and alternative projections may need to be developed.

18. Changes in Assumptions

None.

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All actuarial calculations are based on our understanding of the statutes governing the TCERA as contained in the County Employees Retirement Law (CERL) of 1937, with provisions adopted by the County Board of Supervisors, a district Board of Directors, or the TCERA Board, effective through June 30, 2022. The benefit and contribution provisions of this law are summarized briefly below, *(along with corresponding references to the State Code)*. This summary does not attempt to cover all the detailed provisions of the law.

There have been no changes to the Plan provisions since the prior valuation.

A. Membership in Retirement Plans

The County has established several defined benefit tiers based primarily on a member's date of entry into TCERA and in some cases, bargaining unit. There are two types of TCERA members:

Safety members: Employees whose principal duty is active law enforcement or active fire suppression are eligible to be Safety members. Membership in a particular tier depends upon date of entry to the system.

General members: All non-Safety employees are eligible to be General members. Membership in a particular tier depends primarily upon date of entry to the system.

Tier 1: General and Safety employees hired on or before December 31, 1979.

Tier 2: General and Safety employees hired on or after January 1, 1980 through December 31, 1989.

Tier 3: General and Safety employees hired on or after January 1, 1990 through December 31, 2012.

Tier 4 (PEPRA): All new members hired on or after January 1, 2013. Employees who transfer from and are eligible for reciprocity with another public employer will not be PEPRA members if their service in the reciprocal system was under a pre-PEPRA tier.

B. Member Contributions

Basic: Contributions are based on the entry age and class of each member and are required of all members. See Appendix F for details on this calculation. Current member rates are shown in the Appendix. (31621.5, 31621.2, 31639.5, 31639.25)

Contributions cease for all non-PEPRA members credited with 30 years of service. (31625, 31625.2)

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APPENDIX C – SUMMARY OF PLAN PROVISIONS

Tier 4: PEPRA 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.

Interest is credited to contributions semiannually on June 30 and December 31 at an interest rate set by the Board of Retirement on amounts that have been on deposit for at least six months. (31591, 31700)

Cost-of-Living: The following loads are applied to Tier 1-3 Basic rates to pay for the employee portion of Cost-of-Living Adjustments. For PEPRA members, the cost of COLAs is included in the normal cost, of which they contribute half.

| | Tier 1 | Tier 2-3 |
|-------------|-------------------------------------|-------------------------------------|
| 2020 Actual | 53.70% (General) 68.45% (Safety) | 25.29% (General) 31.01% (Safety) |
| 2021 Actual | 53.70% (General) 68.45% (Safety) | 25.29% (General) 31.01% (Safety) |

C. Employer Contributions:

The employer (County or District) contributes to the retirement fund a percentage of the total compensation provided for all members based on an actuarial investigation, valuation, and recommendation of the actuary. (31453, 31453.5, 31453.6, 31454, 31454.1, 31581)

D. Service Retirement Allowance:

Eligibility:

General Plan members:

Tiers 1-3: Age 50 with 10 years of service;
Any age with 30 years of service; or
Age 70 regardless of service. (31672, 31672.1)

Tier 4 (PEPRA): Age 52 with 5 years of service.

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Safety Plan members:

Tiers 1-3: Age 50 with 10 years of service;
Any age with 20 years of service. (31663.25)

Tier 4 (PEPRA): Age 50 with 5 years of service.

Final Compensation:

Tier 1: Monthly average of a member's highest 12 consecutive months of compensation. (31462.1)

Tiers 2-3: Monthly average of a member's highest 36 consecutive months of compensation. (31462)

Tier 4 (PEPRA): Monthly average of a member's highest 36 consecutive months of compensation, limited to the Social Security Wage Base on January 1, 2013, adjusted based on the annual change in the CPI-U each January 1 thereafter.

Compensation

Limit: The amount of compensation that is taken into account in computing benefits payable to any person who first becomes a member on or after July 1, 1996, shall not exceed the dollar limitations in Section 401(a)(17) of Title 26 of the US Code. (31671)

Integration with

Social Security: General and Safety Tier 1-3 members' benefits are integrated with Social Security. Benefits payable from the first \$161.54 of bi-weekly compensation are reduced by 1/3.

Monthly Allowance:

General Plan members:

Tier 1: Sum of (a) + (b):
(a) $1/60 \times \text{Final Compensation} \times \text{Plan Age Factor} \times \text{Years of Service prior to 7/1/2005}$ (31676.11); plus
(b) $1/50 \times \text{Final Compensation} \times \text{Plan Age Factor} \times \text{Years of Service after 7/1/2005}$ (31676.12)

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Tiers 2-3: Sum of (a) + (b):
 (a) $1/60 \times \text{Final Compensation} \times \text{Plan Age Factor} \times \text{Years of Service}$ prior to 7/1/2005 (31676.1); plus
 (b) $1/50 \times \text{Final Compensation} \times \text{Plan Age Factor} \times \text{Years of Service}$ after 7/1/2005 (31676.12)

Tier 4 (PEPRA): $2\% \times \text{Final Compensation} \times \text{PEPRA Age Factor} \times \text{Years of Service}$

Safety Plan members:

Tiers 1-3: $2\% \times \text{Final Compensation} \times \text{Plan Age Factor} \times \text{Years of Service}$ (31664)

Tier 4 (PEPRA): $2\% \times \text{Final Compensation} \times \text{PEPRA Age Factor} \times \text{Years of Service}$

| Code Section: Label: Base: Age | Age Factors By Plan General | | | | Safety | |
|---|--------------------------------|--------------|----------|---------|---------|---------|
| | 31676.11 | 31676.1 | 31676.12 | PEPRA | 31664 | PEPRA |
| | 1.67% @ 55 | 1.67% @ 57.5 | 2% @ 57 | 2% @ 62 | 2% @ 50 | 2% @ 50 |
| | 1.67% | 1.67% | 2.00% | 2.00% | 2.00% | 2.00% |
| 41 | | | | | 0.6258 | |
| 42 | | | | | 0.6625 | |
| 43 | | | | | 0.7004 | |
| 44 | | | | | 0.7397 | |
| 45 | | | | | 0.7805 | |
| 46 | | | | | 0.8226 | |
| 47 | | | | | 0.8678 | |
| 48 | | | | | 0.9085 | |
| 49 | | | | | 0.9522 | |
| 50 | 0.7454 | 0.7091 | 0.6681 | | 1.0000 | 1.0000 |
| 51 | 0.7882 | 0.7457 | 0.7056 | | 1.0516 | 1.0500 |
| 52 | 0.8346 | 0.7816 | 0.7454 | 0.5000 | 1.1078 | 1.1000 |
| 53 | 0.8850 | 0.8181 | 0.7882 | 0.5500 | 1.1692 | 1.1500 |
| 54 | 0.9399 | 0.8556 | 0.8346 | 0.6000 | 1.2366 | 1.2000 |
| 55 | 1.0000 | 0.8954 | 0.885 | 0.6500 | 1.3099 | 1.2500 |
| 56 | 1.0447 | 0.9382 | 0.9399 | 0.7000 | 1.3099 | 1.3000 |
| 57 | 1.1048 | 0.9846 | 1.0000 | 0.7500 | 1.3099 | 1.3500 |
| 58 | 1.1686 | 1.0350 | 1.0447 | 0.8000 | 1.3099 | 1.3500 |
| 59 | 1.2365 | 1.0899 | 1.1048 | 0.8500 | 1.3099 | 1.3500 |
| 60 | 1.3093 | 1.1500 | 1.1686 | 0.9000 | 1.3099 | 1.3500 |
| 61 | 1.3608 | 1.1947 | 1.2365 | 0.9500 | 1.3099 | 1.3500 |
| 62 | 1.4123 | 1.2548 | 1.3093 | 1.0000 | 1.3099 | 1.3500 |
| 63 | 1.4638 | 1.3186 | 1.3093 | 1.0500 | 1.3099 | 1.3500 |
| 64 | 1.5153 | 1.3865 | 1.3093 | 1.1000 | 1.3099 | 1.3500 |
| 65 | 1.5668 | 1.4593 | 1.3093 | 1.1500 | 1.3099 | 1.3500 |
| 66 | 1.5668 | 1.4593 | 1.3093 | 1.2000 | 1.3099 | 1.3500 |
| 67 | 1.5668 | 1.4593 | 1.3093 | 1.2500 | 1.3099 | 1.3500 |

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Maximum Allowance:

Allowance may not exceed 100% of Final Compensation.

Unmodified Retirement Allowance (Normal Form):

All Plans: Life Annuity payable to retired member with 60% continuance to an eligible spouse. (31760.1)

Eligible survivor includes certain domestic partners and dependent children. (31780.2) If there is no eligible survivor, any unpaid remainder of the member's accumulated contributions will be paid to the member's designated beneficiary.

Death after Retirement:

All Plans: Upon a member's death after retirement, a special lump sum of \$5,000 is payable to an eligible survivor, or the member's estate. (31789.3)

All Allowances: All allowances are made on a pro-rata basis (based on the number of days in that month) if not in effect for the entire month of retirement. (31600)

Supplemental Retiree Benefit Reserve:

The County has adopted the financial provisions of Article 5.5 of the 1937 Act for Tiers 1-3. The Article requires that in certain cases, a portion of investment earnings be allocated to a Supplemental Retiree Benefit Reserve (SRBR). Earnings allocated to the SRBR are to be used for the benefit of members in Tiers 1-3. Members of Tier 4 are not eligible for supplemental benefits. (31618)

Level 1: Members with at least 20 years of service are eligible for a supplemental benefit up to \$250 a month. The multiplier in effect is as follows:

| Period | Multiplier |
|-----------------------|------------|
| Prior to July 1, 2013 | \$18.00 |
| After July 1, 2013 | \$17.00 |
| After July 1, 2014 | \$16.00 |
| After July 1, 2015 | \$15.00 |
| After July 1, 2016 | \$14.00 |
| After July 1, 2017 | \$12.50 |

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APPENDIX C – SUMMARY OF PLAN PROVISIONS

Members with less than 20 years of service are eligible for benefits in accordance with the schedule below:

| Years of Service | Percentage of Full Benefit |
|------------------|----------------------------|
| Less than 10 | 0.00% |
| 10 | 50.0% |
| 11 | 55.0% |
| 12 | 60.0% |
| 13 | 65.0% |
| 14 | 70.0% |
| 15 | 75.0% |
| 16 | 80.0% |
| 17 | 85.0% |
| 18 | 90.0% |
| 19 | 95.0% |

Only years of service with Tulare County are included for this benefit. 50% of member's reduced allowance is payable to an eligible spouse, or minor children if no eligible spouse exists.

Level 2: In addition to the Level 1 benefit, a supplemental COLA is available to retirees and beneficiaries who have lost more than 15% of their purchasing power, measured by their COLA Banks. The design of this COLA is to allow retirees to retain at least 85% of their purchasing power.

Level 3: 60% of a service retirement or 100% of a service-connected disability is payable to a spouse not married to the member at retirement. The spouse must be at least age 55 at the member's date of retirement, must have been married for at least two years, and the member must have elected the Unmodified Allowance retirement option to be eligible for this benefit.

E. Service-Connected Disability Retirement Allowance

Eligibility:

All Plans: Any age and length of service; disability must result from occupational injury or disease, and member must be permanently incapacitated for the performance of duty. (31720, 31720.5, 31720.6, 31720.7, 31720.9)

Monthly Allowance:

All Plans: Greater of (1) 50% of final compensation, and (2) the service retirement allowance, if eligible to retire. (31727.4)

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Normal Form of Payment:

All Plans: Life Annuity payable to retired member with 100% continuance to an eligible spouse.

Death after Retirement:

All Plans: Upon a member's death after retirement, a special lump sum of \$5,000 is payable to an eligible survivor, or the member's estate. (31789.3)

F. Non-Service-Connected Disability Retirement Allowance

Eligibility:

All Plans: Any age with five (5) years of service and permanently incapacitated for the performance of duty. (31720)

Monthly Allowance:

All Plans: The monthly allowance is equal to a service retirement allowance if the member is eligible to retire and the service retirement allowance exceeds the benefits described below. Otherwise, allowance equals 20% of Final Compensation, plus 2% for each year of service over five, with a maximum allowance of 40% of Final Compensation at 15 years of service. (31727.7)

Normal Form of Payment:

All Plans: Life Annuity with 60% continuance to a surviving spouse (or eligible children). (31760.1)

Death after Retirement:

All Plans: Upon a member's death after retirement, a special lump sum of \$5,000 is payable to an eligible survivor, or the member's estate. (31789.3)

G. Service-Connected Death Benefits

Eligibility:

All Plans: Active members who die in service as a result of injury or disease arising out of and in the course of employment. (31486.7, 31787)

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Monthly Allowance:

All Plans: A monthly allowance is payable to an eligible survivor equal to the greater of the Member's Service Retirement Allowance or Non-Service-Connected Disability Allowance (if he is eligible for service retirement or non-service disability at his date of death), and (b) 50% x Final Compensation. (31787)

A lump sum is payable to an eligible survivor equal to $1/12 \times$ final 12 months' Salary x years of service (up to max of 6 years). (31781)

H. Non-Service-Connected Death Benefits

Eligibility:

All Plans: Active members who die while in service but not as a result of injury or disease arising out of and in the course of employment.

Monthly Allowance:

All Plans: If an active member is eligible for Non-Service-Connected Disability at his date of death, then a monthly allowance is payable to an eligible survivor equal to 60% x the member's non-service connected disability allowance. Otherwise, the benefit is a refund of contributions. (31781.1)

I. Deferred Vested Benefits

Eligibility:

All other Plans: Member contributions must be left on deposit and the member must have terminated with five (5) years of service or entered a reciprocal agency. Members are eligible for service retirement when they reach service retirement eligibility (based on years of service at termination plus reciprocal service, if any). (31700, 31701, 31702)

Monthly Allowance:

All other Plans: Same as service retirement allowance; payable any time after the member would have been eligible for service retirement. (31703, 31704, 31705)

J. Cost-of-Living Increases

Cost-of-living increases (or decreases) are applied to all retirement allowances (service and disability), optional death allowances, and annual death allowances effective April 1, based on changes in the average annual Consumer Price Index (CPI), rounded to the nearest $\frac{1}{2}$ of 1%. (31870, 31870.1)

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APPENDIX C – SUMMARY OF PLAN PROVISIONS

All Plans (excluding Tier 1):

Members (and their beneficiaries) are limited to a maximum 2% cost-of-living increase. (31870)

Tier 1:

Members (and their beneficiaries) are limited to a maximum 3% cost-of-living increase. (31870.1)

COLA Bank:

All Plans:

When the CPI exceeds the applicable percentage, the difference between the actual CPI and the maximum cost-of-living increase given in any year is credited to the COLA Accumulation (COLA Bank). It may be used in future years to provide cost-of-living increases when the CPI falls below the applicable percentage. (31874, 31874.1, 31874.2, 31874.3)

K. Optional Forms

In addition to the Unmodified Allowance, retirees may choose one of the following options:

Option 1: A slightly reduced monthly retirement allowance will be paid throughout the member's life, with the provision that accumulated contributions less the sum of the annuity portion of the payments received by the member will be paid upon death to the beneficiary.

Option 2: A reduced monthly retirement allowance will be paid to the member for life, with 100% of the allowance continued after death to the beneficiary.

Option 3: A reduced monthly retirement allowance will be paid to the member for life, with 50% of the allowance continued after death to the beneficiary.

Option 4: This option allows the member to name multiple beneficiaries and provides for a reduced monthly retirement allowance paid to the member for the member's lifetime with an actuarially calculated benefit continued throughout the life of the beneficiaries named at retirement.

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Assumptions Used for Optional Forms:

Our understanding is that the following assumptions are used to calculate the reduced monthly retirement allowances for Options 1-4 described above.

General

Mortality: RP-2000 Healthy Annuitant Mortality Table with adjustment for white-collar workers (healthy), RP-2000 Disabled Annuitant Mortality Table (disabled)

Gender Blend: 1/3 male, 2/3 female

Discount Rate: 7.25% per annum

Post-Retirement COLA: 3% per annum (Tier 1), 2% per annum (Tiers 2-3)

Safety

Mortality: RP-2000 Healthy Annuitant Mortality Table with adjustment for blue-collar workers (healthy), RP-2000 Disabled Annuitant Mortality Table with 2-year setback (disabled)

Gender Blend: 5/6 male, 1/6 female

Discount Rate: 7.25% per annum

Post-Retirement COLA: 3% per annum (Tier 1), 2% per annum (Tiers 2-3)

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX D – 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.

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.

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APPENDIX D – GLOSSARY

9. Amortization Payment

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

10. Entry Age Normal Actuarial Cost Method

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

11. Funded Ratio

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

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 Actuarial Value of Assets.

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APPENDIX E – MEMBER CONTRIBUTION RATES

Assumptions used to develop member contribution rates match valuation assumptions detailed in Appendix B, other than mortality which is static for member contribution rates. Additionally, only service retirement benefits are included in Tiers 1-3 member basic rate development.

The table below shows the applicable Code Section for Tier 1-3 member contribution rates as well as the corresponding annuity funded by the member.

| Plan/Tier | Code Section | Member Contribution Provides Average Annuity | FAS Period |
|----------------|--------------|---|------------|
| General Tier 1 | 31621.5 | 1/200 of Final Average Salary (FAS) at age 60 | 1 year |
| General Tier 2 | 31621.2 | 1/100 of Final Average Salary (FAS) at age 60 | 3 years |
| General Tier 3 | 31621.2 | 1/100 of Final Average Salary (FAS) at age 60 | 3 years |
| Safety Tier 1 | 31639.5 | 1/200 of Final Average Salary (FAS) at age 50 | 1 year |
| Safety Tier 2 | 31639.25 | 1/100 of Final Average Salary (FAS) at age 50 | 3 years |
| Safety Tier 3 | 31639.25 | 1/100 of Final Average Salary (FAS) at age 50 | 3 years |

For Tiers 1-3, the following COLA loads were applied to the Basic rates. Starting in 2015, based on discussion with TCERA staff, we developed separate loads for General and Safety.

| | Tier 1 | Tier 2-3 |
|-------------|-------------------------------------|-------------------------------------|
| 2021 Actual | 53.70% (General) 68.45% (Safety) | 25.29% (General) 31.01% (Safety) |
| 2022 Actual | 50.14% (General) 68.45% (Safety) | 25.29% (General) 31.01% (Safety) |

For PEPRA members, the cost of COLAs is included in the normal cost, of which they contribute half.

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APPENDIX E – MEMBER CONTRIBUTION RATES

2022 Member Contribution Rates (for fiscal year ending 2024)

| Entry Age | General Tier 1 | | General Tiers 2 and 3 | | Safety Tier 1 | | Safety Tiers 2 and 3 | | Tier 4 Members | |
|---------------------|--|------------------|-----------------------|------------------|----------------------|------------------|----------------------|------------------|----------------------|--------|
| | First \$161.54 | Over \$161.54 | First \$161.54 | Over \$161.54 | First \$161.54 | Over \$161.54 | First \$161.54 | Over \$161.54 | General | Safety |
| 16 | 2.69% | 4.03% | 4.34% | 6.51% | 4.65% | 6.97% | 6.95% | 10.43% | 4.42% | 9.63% |
| 17 | 2.75% | 4.12% | 4.43% | 6.64% | 4.65% | 6.97% | 6.95% | 10.43% | 4.42% | 9.63% |
| 18 | 2.81% | 4.21% | 4.52% | 6.78% | 4.65% | 6.97% | 6.95% | 10.43% | 4.42% | 9.63% |
| 19 | 2.86% | 4.29% | 4.62% | 6.93% | 4.65% | 6.97% | 6.95% | 10.43% | 4.42% | 9.63% |
| 20 | 2.92% | 4.38% | 4.71% | 7.07% | 4.65% | 6.97% | 6.95% | 10.43% | 4.42% | 9.63% |
| 21 | 2.99% | 4.48% | 4.81% | 7.22% | 4.73% | 7.09% | 7.07% | 10.60% | 4.67% | 10.01% |
| 22 | 3.05% | 4.57% | 4.91% | 7.37% | 4.81% | 7.21% | 7.19% | 10.78% | 4.92% | 10.39% |
| 23 | 3.11% | 4.66% | 5.01% | 7.52% | 4.89% | 7.33% | 7.31% | 10.96% | 5.17% | 10.77% |
| 24 | 3.17% | 4.76% | 5.12% | 7.68% | 4.97% | 7.45% | 7.43% | 11.14% | 5.43% | 11.16% |
| 25 | 3.24% | 4.86% | 5.23% | 7.84% | 5.05% | 7.57% | 7.55% | 11.33% | 5.69% | 11.55% |
| 26 | 3.31% | 4.96% | 5.33% | 8.00% | 5.13% | 7.70% | 7.68% | 11.52% | 5.91% | 11.92% |
| 27 | 3.37% | 5.06% | 5.44% | 8.16% | 5.22% | 7.83% | 7.81% | 11.72% | 6.13% | 12.29% |
| 28 | 3.45% | 5.17% | 5.55% | 8.33% | 5.31% | 7.96% | 7.94% | 11.91% | 6.35% | 12.66% |
| 29 | 3.51% | 5.27% | 5.67% | 8.50% | 5.40% | 8.10% | 8.07% | 12.11% | 6.58% | 13.01% |
| 30 | 3.59% | 5.38% | 5.79% | 8.68% | 5.49% | 8.24% | 8.21% | 12.32% | 6.80% | 13.36% |
| 31 | 3.66% | 5.49% | 5.91% | 8.86% | 5.59% | 8.38% | 8.35% | 12.53% | 7.01% | 13.74% |
| 32 | 3.74% | 5.61% | 6.03% | 9.04% | 5.68% | 8.52% | 8.50% | 12.75% | 7.22% | 14.12% |
| 33 | 3.81% | 5.72% | 6.15% | 9.23% | 5.78% | 8.67% | 8.65% | 12.97% | 7.44% | 14.49% |
| 34 | 3.89% | 5.84% | 6.28% | 9.42% | 5.88% | 8.82% | 8.79% | 13.19% | 7.66% | 14.87% |
| 35 | 3.97% | 5.96% | 6.41% | 9.61% | 5.99% | 8.98% | 8.95% | 13.43% | 7.89% | 15.25% |
| 36 | 4.05% | 6.08% | 6.54% | 9.81% | 6.09% | 9.14% | 9.11% | 13.67% | 8.12% | 15.61% |
| 37 | 4.14% | 6.21% | 6.68% | 10.02% | 6.21% | 9.31% | 9.29% | 13.93% | 8.36% | 15.96% |
| 38 | 4.23% | 6.34% | 6.81% | 10.22% | 6.33% | 9.49% | 9.46% | 14.19% | 8.62% | 16.32% |
| 39 | 4.31% | 6.47% | 6.96% | 10.44% | 6.45% | 9.67% | 9.65% | 14.47% | 8.88% | 16.69% |
| 40 | 4.41% | 6.61% | 7.11% | 10.66% | 6.58% | 9.87% | 9.81% | 14.72% | 9.13% | 17.09% |
| 41 | 4.50% | 6.75% | 7.26% | 10.89% | 6.73% | 10.09% | 9.97% | 14.95% | 9.40% | 17.48% |
| 42 | 4.60% | 6.90% | 7.41% | 11.12% | 6.82% | 10.23% | 10.11% | 15.16% | 9.66% | 17.89% |
| 43 | 4.70% | 7.05% | 7.57% | 11.35% | 6.92% | 10.38% | 10.22% | 15.33% | 9.99% | 18.36% |
| 44 | 4.81% | 7.21% | 7.71% | 11.57% | 7.04% | 10.56% | 10.33% | 15.49% | 10.33% | 18.83% |
| 45 | 4.89% | 7.33% | 7.85% | 11.77% | 7.11% | 10.66% | 10.37% | 15.56% | 10.67% | 19.31% |
| 46 | 4.98% | 7.47% | 7.99% | 11.99% | 7.20% | 10.80% | 10.35% | 15.52% | 11.09% | 19.70% |
| 47 | 5.07% | 7.60% | 8.14% | 12.21% | 7.19% | 10.79% | 10.19% | 15.28% | 11.51% | 20.11% |
| 48 | 5.17% | 7.75% | 8.29% | 12.44% | 7.15% | 10.73% | 10.52% | 15.78% | 11.85% | 20.53% |
| 49 | 5.27% | 7.90% | 8.45% | 12.68% | 6.99% | 10.48% | 10.87% | 16.31% | 12.19% | 20.95% |
| 50 | 5.38% | 8.07% | 8.62% | 12.93% | 6.99% | 10.48% | 10.87% | 16.31% | 12.52% | 20.95% |
| 51 | 5.49% | 8.24% | 8.77% | 13.16% | 6.99% | 10.48% | 10.87% | 16.31% | 12.86% | 20.95% |
| 52 | 5.60% | 8.40% | 8.91% | 13.37% | 6.99% | 10.48% | 10.87% | 16.31% | 13.18% | 20.95% |
| 53 | 5.70% | 8.55% | 9.03% | 13.55% | 6.99% | 10.48% | 10.87% | 16.31% | 13.50% | 20.95% |
| 54 | 5.80% | 8.70% | 9.11% | 13.66% | 6.99% | 10.48% | 10.87% | 16.31% | 13.79% | 20.95% |
| 55 | 5.87% | 8.80% | 9.12% | 13.68% | 6.99% | 10.48% | 10.87% | 16.31% | 14.03% | 20.95% |
| 56 | 5.91% | 8.86% | 9.06% | 13.59% | 6.99% | 10.48% | 10.87% | 16.31% | 14.29% | 20.95% |
| 57 | 5.88% | 8.82% | 8.93% | 13.40% | 6.99% | 10.48% | 10.87% | 16.31% | 14.49% | 20.95% |
| 58 | 5.82% | 8.73% | 9.23% | 13.84% | 6.99% | 10.48% | 10.87% | 16.31% | 14.64% | 20.95% |
| 59 | 5.71% | 8.57% | 9.53% | 14.30% | 6.99% | 10.48% | 10.87% | 16.31% | 14.71% | 20.95% |
| Assumptions: | | | | | | | | | | |
| Interest: | 7.00% | | 7.00% | | 7.00% | | 7.00% | | 7.00% | |
| Salary: | 3.00% plus promotion | | 3.00% plus promotion | | 3.00% plus promotion | | 3.00% plus promotion | | 3.00% plus promotion | |
| COLA: | 2.60% | | 2.00% | | 2.60% | | 2.00% | | 2.00% | |
| Mortality: | For General: Retired Pensioner (RP) 2014 Combined Healthy Table, with 20-year Generational improvement using Projection Scale MP-2019, increased by 2.2% for males and 8.0% for females to reflect Plan experience, and blended 30% male and 70% female For Safety: Retired Pensioner (RP) 2014 Combined Healthy Table with blue-collar adjustment, with 20-year Generational improvement using Projection Scale MP-2019, increased by 4.5% for males to reflect Plan experience, and blended 75% male and 25% female | | | | | | | | | |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX E – MEMBER CONTRIBUTION RATES

The tables on the next six pages show the 2022 member contribution rates split into the Basic and COLA components, by tier.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX E – MEMBER CONTRIBUTION RATES

| Entry Age | General Tier 1 | | | | | |
|--------------|--|---------------|----------------|---------------|----------------|---------------|
| | Basic Rate | | COLA Rate | | Total Rate | |
| | First \$161.54 | Over \$161.54 | First \$161.54 | Over \$161.54 | First \$161.54 | Over \$161.54 |
| 16 | 1.79% | 2.68% | 0.90% | 1.35% | 2.69% | 4.03% |
| 17 | 1.83% | 2.74% | 0.92% | 1.38% | 2.75% | 4.12% |
| 18 | 1.87% | 2.80% | 0.94% | 1.41% | 2.81% | 4.21% |
| 19 | 1.90% | 2.86% | 0.96% | 1.43% | 2.86% | 4.29% |
| 20 | 1.94% | 2.92% | 0.98% | 1.46% | 2.92% | 4.38% |
| 21 | 1.99% | 2.98% | 1.00% | 1.50% | 2.99% | 4.48% |
| 22 | 2.03% | 3.04% | 1.02% | 1.53% | 3.05% | 4.57% |
| 23 | 2.07% | 3.10% | 1.04% | 1.56% | 3.11% | 4.66% |
| 24 | 2.11% | 3.17% | 1.06% | 1.59% | 3.17% | 4.76% |
| 25 | 2.16% | 3.24% | 1.08% | 1.62% | 3.24% | 4.86% |
| 26 | 2.20% | 3.30% | 1.10% | 1.66% | 3.31% | 4.96% |
| 27 | 2.25% | 3.37% | 1.13% | 1.69% | 3.37% | 5.06% |
| 28 | 2.30% | 3.44% | 1.15% | 1.73% | 3.45% | 5.17% |
| 29 | 2.34% | 3.51% | 1.17% | 1.76% | 3.51% | 5.27% |
| 30 | 2.39% | 3.58% | 1.20% | 1.80% | 3.59% | 5.38% |
| 31 | 2.44% | 3.66% | 1.22% | 1.83% | 3.66% | 5.49% |
| 32 | 2.49% | 3.74% | 1.25% | 1.87% | 3.74% | 5.61% |
| 33 | 2.54% | 3.81% | 1.27% | 1.91% | 3.81% | 5.72% |
| 34 | 2.59% | 3.89% | 1.30% | 1.95% | 3.89% | 5.84% |
| 35 | 2.65% | 3.97% | 1.33% | 1.99% | 3.97% | 5.96% |
| 36 | 2.70% | 4.05% | 1.35% | 2.03% | 4.05% | 6.08% |
| 37 | 2.76% | 4.14% | 1.38% | 2.07% | 4.14% | 6.21% |
| 38 | 2.82% | 4.22% | 1.41% | 2.12% | 4.23% | 6.34% |
| 39 | 2.87% | 4.31% | 1.44% | 2.16% | 4.31% | 6.47% |
| 40 | 2.94% | 4.40% | 1.47% | 2.21% | 4.41% | 6.61% |
| 41 | 3.00% | 4.50% | 1.50% | 2.25% | 4.50% | 6.75% |
| 42 | 3.06% | 4.60% | 1.54% | 2.30% | 4.60% | 6.90% |
| 43 | 3.13% | 4.70% | 1.57% | 2.35% | 4.70% | 7.05% |
| 44 | 3.20% | 4.80% | 1.61% | 2.41% | 4.81% | 7.21% |
| 45 | 3.25% | 4.88% | 1.63% | 2.45% | 4.89% | 7.33% |
| 46 | 3.32% | 4.98% | 1.66% | 2.49% | 4.98% | 7.47% |
| 47 | 3.37% | 5.06% | 1.69% | 2.54% | 5.07% | 7.60% |
| 48 | 3.44% | 5.16% | 1.73% | 2.59% | 5.17% | 7.75% |
| 49 | 3.51% | 5.26% | 1.76% | 2.64% | 5.27% | 7.90% |
| 50 | 3.58% | 5.37% | 1.80% | 2.70% | 5.38% | 8.07% |
| 51 | 3.66% | 5.49% | 1.83% | 2.75% | 5.49% | 8.24% |
| 52 | 3.73% | 5.59% | 1.87% | 2.81% | 5.60% | 8.40% |
| 53 | 3.80% | 5.69% | 1.90% | 2.86% | 5.70% | 8.55% |
| 54 | 3.86% | 5.79% | 1.94% | 2.91% | 5.80% | 8.70% |
| 55 | 3.91% | 5.86% | 1.96% | 2.94% | 5.87% | 8.80% |
| 56 | 3.93% | 5.90% | 1.97% | 2.96% | 5.91% | 8.86% |
| 57 | 3.92% | 5.87% | 1.96% | 2.95% | 5.88% | 8.82% |
| 58 | 3.88% | 5.81% | 1.94% | 2.92% | 5.82% | 8.73% |
| 59 | 3.81% | 5.71% | 1.91% | 2.86% | 5.71% | 8.57% |
| Assumptions: | | | | | | |
| Interest: | 7.00% | | | | | |
| Salary: | 3.00% plus promotion | | | | | |
| COLA: | 2.60% | | | | | |
| Mortality: | Retired Pensioner (RP) 2014 Combined Healthy Table, with 22-year Generational improvement using Projection Scale MP-2019, increased by 2.2% for males and 8.0% for females to reflect Plan experience, and blended 30% male and 70% female | | | | | |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX E – MEMBER CONTRIBUTION RATES

| General Tiers 2 and 3 | | | | | | |
|-----------------------|--|---------------|----------------|---------------|----------------|---------------|
| Entry Age | Basic Rate | | COLA Rate | | Total Rate | |
| | First \$161.54 | Over \$161.54 | First \$161.54 | Over \$161.54 | First \$161.54 | Over \$161.54 |
| 16 | 3.46% | 5.20% | 0.88% | 1.31% | 4.34% | 6.51% |
| 17 | 3.53% | 5.30% | 0.89% | 1.34% | 4.43% | 6.64% |
| 18 | 3.61% | 5.41% | 0.91% | 1.37% | 4.52% | 6.78% |
| 19 | 3.69% | 5.53% | 0.93% | 1.40% | 4.62% | 6.93% |
| 20 | 3.76% | 5.64% | 0.95% | 1.43% | 4.71% | 7.07% |
| 21 | 3.84% | 5.76% | 0.97% | 1.46% | 4.81% | 7.22% |
| 22 | 3.92% | 5.88% | 0.99% | 1.49% | 4.91% | 7.37% |
| 23 | 4.00% | 6.00% | 1.01% | 1.52% | 5.01% | 7.52% |
| 24 | 4.09% | 6.13% | 1.03% | 1.55% | 5.12% | 7.68% |
| 25 | 4.17% | 6.26% | 1.05% | 1.58% | 5.23% | 7.84% |
| 26 | 4.26% | 6.39% | 1.08% | 1.61% | 5.33% | 8.00% |
| 27 | 4.34% | 6.51% | 1.10% | 1.65% | 5.44% | 8.16% |
| 28 | 4.43% | 6.65% | 1.12% | 1.68% | 5.55% | 8.33% |
| 29 | 4.52% | 6.78% | 1.14% | 1.72% | 5.67% | 8.50% |
| 30 | 4.62% | 6.93% | 1.17% | 1.75% | 5.79% | 8.68% |
| 31 | 4.71% | 7.07% | 1.19% | 1.79% | 5.91% | 8.86% |
| 32 | 4.81% | 7.22% | 1.22% | 1.82% | 6.03% | 9.04% |
| 33 | 4.91% | 7.37% | 1.24% | 1.86% | 6.15% | 9.23% |
| 34 | 5.01% | 7.52% | 1.27% | 1.90% | 6.28% | 9.42% |
| 35 | 5.11% | 7.67% | 1.29% | 1.94% | 6.41% | 9.61% |
| 36 | 5.22% | 7.83% | 1.32% | 1.98% | 6.54% | 9.81% |
| 37 | 5.33% | 8.00% | 1.35% | 2.02% | 6.68% | 10.02% |
| 38 | 5.44% | 8.16% | 1.38% | 2.06% | 6.81% | 10.22% |
| 39 | 5.56% | 8.33% | 1.40% | 2.11% | 6.96% | 10.44% |
| 40 | 5.67% | 8.51% | 1.43% | 2.15% | 7.11% | 10.66% |
| 41 | 5.79% | 8.69% | 1.47% | 2.20% | 7.26% | 10.89% |
| 42 | 5.92% | 8.88% | 1.50% | 2.24% | 7.41% | 11.12% |
| 43 | 6.04% | 9.06% | 1.53% | 2.29% | 7.57% | 11.35% |
| 44 | 6.16% | 9.23% | 1.56% | 2.34% | 7.71% | 11.57% |
| 45 | 6.26% | 9.39% | 1.58% | 2.38% | 7.85% | 11.77% |
| 46 | 6.38% | 9.57% | 1.61% | 2.42% | 7.99% | 11.99% |
| 47 | 6.50% | 9.75% | 1.64% | 2.46% | 8.14% | 12.21% |
| 48 | 6.62% | 9.93% | 1.67% | 2.51% | 8.29% | 12.44% |
| 49 | 6.75% | 10.12% | 1.71% | 2.56% | 8.45% | 12.68% |
| 50 | 6.88% | 10.32% | 1.74% | 2.61% | 8.62% | 12.93% |
| 51 | 7.00% | 10.50% | 1.77% | 2.66% | 8.77% | 13.16% |
| 52 | 7.11% | 10.67% | 1.80% | 2.70% | 8.91% | 13.37% |
| 53 | 7.21% | 10.82% | 1.82% | 2.73% | 9.03% | 13.55% |
| 54 | 7.27% | 10.90% | 1.84% | 2.76% | 9.11% | 13.66% |
| 55 | 7.28% | 10.92% | 1.84% | 2.76% | 9.12% | 13.68% |
| 56 | 7.23% | 10.85% | 1.83% | 2.74% | 9.06% | 13.59% |
| 57 | 7.13% | 10.70% | 1.80% | 2.70% | 8.93% | 13.40% |
| 58 | 7.36% | 11.05% | 1.86% | 2.79% | 9.23% | 13.84% |
| 59 | 7.61% | 11.41% | 1.92% | 2.89% | 9.53% | 14.30% |
| | | | | | | |
| Assumptions: | | | | | | |
| Interest: | 7.00% | | | | | |
| Salary: | 3.00% plus promotion | | | | | |
| COLA: | 2.00% | | | | | |
| Mortality: | Retired Pensioner (RP) 2014 Combined Healthy Table, with 22-year Generational improvement using Projection Scale MP-2019, increased by 2.2% for males and 8.0% for females to reflect Plan experience, and blended 30% male and 70% female | | | | | |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX E – MEMBER CONTRIBUTION RATES

| General Tier 4 | | | |
|-----------------|--|-----------|------------|
| Entry Age | Basic Rate | COLA Rate | Total Rate |
| 16 | 3.62% | 0.80% | 4.42% |
| 17 | 3.62% | 0.80% | 4.42% |
| 18 | 3.62% | 0.80% | 4.42% |
| 19 | 3.62% | 0.80% | 4.42% |
| 20 | 3.62% | 0.80% | 4.42% |
| 21 | 3.81% | 0.86% | 4.67% |
| 22 | 4.01% | 0.91% | 4.92% |
| 23 | 4.22% | 0.95% | 5.17% |
| 24 | 4.43% | 1.00% | 5.43% |
| 25 | 4.65% | 1.04% | 5.69% |
| 26 | 4.83% | 1.08% | 5.91% |
| 27 | 5.01% | 1.12% | 6.13% |
| 28 | 5.20% | 1.15% | 6.35% |
| 29 | 5.39% | 1.19% | 6.58% |
| 30 | 5.57% | 1.23% | 6.80% |
| 31 | 5.75% | 1.26% | 7.01% |
| 32 | 5.93% | 1.29% | 7.22% |
| 33 | 6.11% | 1.33% | 7.44% |
| 34 | 6.30% | 1.36% | 7.66% |
| 35 | 6.49% | 1.40% | 7.89% |
| 36 | 6.69% | 1.43% | 8.12% |
| 37 | 6.89% | 1.47% | 8.36% |
| 38 | 7.11% | 1.51% | 8.62% |
| 39 | 7.32% | 1.56% | 8.88% |
| 40 | 7.54% | 1.59% | 9.13% |
| 41 | 7.77% | 1.63% | 9.40% |
| 42 | 7.99% | 1.67% | 9.66% |
| 43 | 8.27% | 1.72% | 9.99% |
| 44 | 8.55% | 1.78% | 10.33% |
| 45 | 8.83% | 1.84% | 10.67% |
| 46 | 9.17% | 1.92% | 11.09% |
| 47 | 9.52% | 1.99% | 11.51% |
| 48 | 9.81% | 2.04% | 11.85% |
| 49 | 10.11% | 2.08% | 12.19% |
| 50 | 10.40% | 2.12% | 12.52% |
| 51 | 10.70% | 2.16% | 12.86% |
| 52 | 10.99% | 2.19% | 13.18% |
| 53 | 11.28% | 2.22% | 13.50% |
| 54 | 11.54% | 2.25% | 13.79% |
| 55 | 11.76% | 2.27% | 14.03% |
| 56 | 12.01% | 2.28% | 14.29% |
| 57 | 12.21% | 2.28% | 14.49% |
| 58 | 12.37% | 2.27% | 14.64% |
| 59 | 12.46% | 2.25% | 14.71% |
| Options: | | | |
| Interest: | 7.00% | | |
| Salary: | 3.00% plus promotion | | |
| COLA: | 2.00% | | |
| Mortality: | Retired Pensioner (RP) 2014 Combined Healthy Table, with 22-year Generational improvement using Projection Scale MP-2019, increased by 2.2% for males and 8.0% for females to reflect Plan experience, and blended 30% male and 70% female | | |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX E – MEMBER CONTRIBUTION RATES

| Entry Age | Safety Tier 1 | | | | | |
|---------------------|---|---------------|----------------|---------------|----------------|---------------|
| | Basic Rate | | COLA Rate | | Total Rate | |
| | First \$161.54 | Over \$161.54 | First \$161.54 | Over \$161.54 | First \$161.54 | Over \$161.54 |
| 16 | 2.76% | 4.14% | 1.89% | 2.83% | 4.65% | 6.97% |
| 17 | 2.76% | 4.14% | 1.89% | 2.83% | 4.65% | 6.97% |
| 18 | 2.76% | 4.14% | 1.89% | 2.83% | 4.65% | 6.97% |
| 19 | 2.76% | 4.14% | 1.89% | 2.83% | 4.65% | 6.97% |
| 20 | 2.76% | 4.14% | 1.89% | 2.83% | 4.65% | 6.97% |
| 21 | 2.81% | 4.21% | 1.92% | 2.88% | 4.73% | 7.09% |
| 22 | 2.85% | 4.28% | 1.95% | 2.93% | 4.81% | 7.21% |
| 23 | 2.90% | 4.35% | 1.99% | 2.98% | 4.89% | 7.33% |
| 24 | 2.95% | 4.42% | 2.02% | 3.03% | 4.97% | 7.45% |
| 25 | 3.00% | 4.49% | 2.05% | 3.08% | 5.05% | 7.57% |
| 26 | 3.05% | 4.57% | 2.09% | 3.13% | 5.13% | 7.70% |
| 27 | 3.10% | 4.65% | 2.12% | 3.18% | 5.22% | 7.83% |
| 28 | 3.15% | 4.73% | 2.16% | 3.23% | 5.31% | 7.96% |
| 29 | 3.21% | 4.81% | 2.19% | 3.29% | 5.40% | 8.10% |
| 30 | 3.26% | 4.89% | 2.23% | 3.35% | 5.49% | 8.24% |
| 31 | 3.32% | 4.97% | 2.27% | 3.41% | 5.59% | 8.38% |
| 32 | 3.37% | 5.06% | 2.31% | 3.46% | 5.68% | 8.52% |
| 33 | 3.43% | 5.15% | 2.35% | 3.52% | 5.78% | 8.67% |
| 34 | 3.49% | 5.24% | 2.39% | 3.58% | 5.88% | 8.82% |
| 35 | 3.55% | 5.33% | 2.43% | 3.65% | 5.99% | 8.98% |
| 36 | 3.62% | 5.43% | 2.48% | 3.71% | 6.09% | 9.14% |
| 37 | 3.68% | 5.53% | 2.52% | 3.78% | 6.21% | 9.31% |
| 38 | 3.76% | 5.63% | 2.57% | 3.86% | 6.33% | 9.49% |
| 39 | 3.83% | 5.74% | 2.62% | 3.93% | 6.45% | 9.67% |
| 40 | 3.91% | 5.86% | 2.67% | 4.01% | 6.58% | 9.87% |
| 41 | 3.99% | 5.99% | 2.73% | 4.10% | 6.73% | 10.09% |
| 42 | 4.05% | 6.07% | 2.77% | 4.16% | 6.82% | 10.23% |
| 43 | 4.11% | 6.16% | 2.81% | 4.22% | 6.92% | 10.38% |
| 44 | 4.18% | 6.27% | 2.86% | 4.29% | 7.04% | 10.56% |
| 45 | 4.22% | 6.33% | 2.89% | 4.33% | 7.11% | 10.66% |
| 46 | 4.27% | 6.41% | 2.93% | 4.39% | 7.20% | 10.80% |
| 47 | 4.27% | 6.41% | 2.92% | 4.38% | 7.19% | 10.79% |
| 48 | 4.25% | 6.37% | 2.91% | 4.36% | 7.15% | 10.73% |
| 49 | 4.15% | 6.22% | 2.84% | 4.26% | 6.99% | 10.48% |
| 50 | 4.15% | 6.22% | 2.84% | 4.26% | 6.99% | 10.48% |
| 51 | 4.15% | 6.22% | 2.84% | 4.26% | 6.99% | 10.48% |
| 52 | 4.15% | 6.22% | 2.84% | 4.26% | 6.99% | 10.48% |
| 53 | 4.15% | 6.22% | 2.84% | 4.26% | 6.99% | 10.48% |
| 54 | 4.15% | 6.22% | 2.84% | 4.26% | 6.99% | 10.48% |
| 55 | 4.15% | 6.22% | 2.84% | 4.26% | 6.99% | 10.48% |
| 56 | 4.15% | 6.22% | 2.84% | 4.26% | 6.99% | 10.48% |
| 57 | 4.15% | 6.22% | 2.84% | 4.26% | 6.99% | 10.48% |
| 58 | 4.15% | 6.22% | 2.84% | 4.26% | 6.99% | 10.48% |
| 59 | 4.15% | 6.22% | 2.84% | 4.26% | 6.99% | 10.48% |
| | | | | | | |
| Assumptions: | | | | | | |
| Interest: | 7.00% | | | | | |
| Salary: | 3.00% plus promotion | | | | | |
| COLA: | 2.60% | | | | | |
| Mortality: | Retired Pensioner (RP) 2014 Combined Healthy Table with blue-collar adjustment, with 22-year Generational improvement using Projection Scale MP-2019, increased by 4.5% for males to reflect Plan experience, and blended 75% male and 25% female | | | | | |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX E – MEMBER CONTRIBUTION RATES

| Entry Age | Safety Tiers 2 and 3 | | | | | |
|---------------------|---|---------------|----------------|---------------|----------------|---------------|
| | Basic Rate | | COLA Rate | | Total Rate | |
| | First \$161.54 | Over \$161.54 | First \$161.54 | Over \$161.54 | First \$161.54 | Over \$161.54 |
| 16 | 5.31% | 7.96% | 1.65% | 2.47% | 6.95% | 10.43% |
| 17 | 5.31% | 7.96% | 1.65% | 2.47% | 6.95% | 10.43% |
| 18 | 5.31% | 7.96% | 1.65% | 2.47% | 6.95% | 10.43% |
| 19 | 5.31% | 7.96% | 1.65% | 2.47% | 6.95% | 10.43% |
| 20 | 5.31% | 7.96% | 1.65% | 2.47% | 6.95% | 10.43% |
| 21 | 5.39% | 8.09% | 1.67% | 2.51% | 7.07% | 10.60% |
| 22 | 5.49% | 8.23% | 1.70% | 2.55% | 7.19% | 10.78% |
| 23 | 5.58% | 8.37% | 1.73% | 2.59% | 7.31% | 10.96% |
| 24 | 5.67% | 8.50% | 1.76% | 2.64% | 7.43% | 11.14% |
| 25 | 5.77% | 8.65% | 1.79% | 2.68% | 7.55% | 11.33% |
| 26 | 5.86% | 8.79% | 1.82% | 2.73% | 7.68% | 11.52% |
| 27 | 5.96% | 8.95% | 1.85% | 2.77% | 7.81% | 11.72% |
| 28 | 6.06% | 9.09% | 1.88% | 2.82% | 7.94% | 11.91% |
| 29 | 6.16% | 9.24% | 1.91% | 2.87% | 8.07% | 12.11% |
| 30 | 6.27% | 9.40% | 1.94% | 2.92% | 8.21% | 12.32% |
| 31 | 6.38% | 9.56% | 1.98% | 2.97% | 8.35% | 12.53% |
| 32 | 6.49% | 9.73% | 2.01% | 3.02% | 8.50% | 12.75% |
| 33 | 6.60% | 9.90% | 2.05% | 3.07% | 8.65% | 12.97% |
| 34 | 6.71% | 10.07% | 2.08% | 3.12% | 8.79% | 13.19% |
| 35 | 6.83% | 10.25% | 2.12% | 3.18% | 8.95% | 13.43% |
| 36 | 6.96% | 10.43% | 2.16% | 3.24% | 9.11% | 13.67% |
| 37 | 7.09% | 10.63% | 2.20% | 3.30% | 9.29% | 13.93% |
| 38 | 7.22% | 10.83% | 2.24% | 3.36% | 9.46% | 14.19% |
| 39 | 7.36% | 11.05% | 2.28% | 3.42% | 9.65% | 14.47% |
| 40 | 7.49% | 11.24% | 2.32% | 3.48% | 9.81% | 14.72% |
| 41 | 7.61% | 11.41% | 2.36% | 3.54% | 9.97% | 14.95% |
| 42 | 7.71% | 11.57% | 2.39% | 3.59% | 10.11% | 15.16% |
| 43 | 7.80% | 11.70% | 2.42% | 3.63% | 10.22% | 15.33% |
| 44 | 7.88% | 11.82% | 2.44% | 3.67% | 10.33% | 15.49% |
| 45 | 7.92% | 11.88% | 2.46% | 3.68% | 10.37% | 15.56% |
| 46 | 7.90% | 11.85% | 2.45% | 3.67% | 10.35% | 15.52% |
| 47 | 7.78% | 11.66% | 2.41% | 3.62% | 10.19% | 15.28% |
| 48 | 8.03% | 12.05% | 2.49% | 3.73% | 10.52% | 15.78% |
| 49 | 8.30% | 12.45% | 2.57% | 3.86% | 10.87% | 16.31% |
| 50 | 8.30% | 12.45% | 2.57% | 3.86% | 10.87% | 16.31% |
| 51 | 8.30% | 12.45% | 2.57% | 3.86% | 10.87% | 16.31% |
| 52 | 8.30% | 12.45% | 2.57% | 3.86% | 10.87% | 16.31% |
| 53 | 8.30% | 12.45% | 2.57% | 3.86% | 10.87% | 16.31% |
| 54 | 8.30% | 12.45% | 2.57% | 3.86% | 10.87% | 16.31% |
| 55 | 8.30% | 12.45% | 2.57% | 3.86% | 10.87% | 16.31% |
| 56 | 8.30% | 12.45% | 2.57% | 3.86% | 10.87% | 16.31% |
| 57 | 8.30% | 12.45% | 2.57% | 3.86% | 10.87% | 16.31% |
| 58 | 8.30% | 12.45% | 2.57% | 3.86% | 10.87% | 16.31% |
| 59 | 8.30% | 12.45% | 2.57% | 3.86% | 10.87% | 16.31% |
| Assumptions: | | | | | | |
| Interest: | 7.00% | | | | | |
| Salary: | 3.00% plus promotion | | | | | |
| COLA: | 2.00% | | | | | |
| Mortality: | Retired Pensioner (RP) 2014 Combined Healthy Table with blue-collar adjustment, with 22-year Generational improvement using Projection Scale MP-2019, increased by 4.5% for males to reflect Plan experience, and blended 75% male and 25% female | | | | | |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX E – MEMBER CONTRIBUTION RATES

| Safety Tier 4 | | | |
|---------------------|---|-----------|------------|
| Entry Age | Basic Rate | COLA Rate | Total Rate |
| 16 | 7.72% | 1.91% | 9.63% |
| 17 | 7.72% | 1.91% | 9.63% |
| 18 | 7.72% | 1.91% | 9.63% |
| 19 | 7.72% | 1.91% | 9.63% |
| 20 | 7.72% | 1.91% | 9.63% |
| 21 | 8.02% | 1.99% | 10.01% |
| 22 | 8.33% | 2.06% | 10.39% |
| 23 | 8.64% | 2.13% | 10.77% |
| 24 | 8.95% | 2.21% | 11.16% |
| 25 | 9.27% | 2.28% | 11.55% |
| 26 | 9.57% | 2.35% | 11.92% |
| 27 | 9.87% | 2.42% | 12.29% |
| 28 | 10.17% | 2.49% | 12.66% |
| 29 | 10.46% | 2.55% | 13.01% |
| 30 | 10.75% | 2.61% | 13.36% |
| 31 | 11.06% | 2.68% | 13.74% |
| 32 | 11.36% | 2.76% | 14.12% |
| 33 | 11.66% | 2.83% | 14.49% |
| 34 | 11.97% | 2.90% | 14.87% |
| 35 | 12.28% | 2.97% | 15.25% |
| 36 | 12.58% | 3.03% | 15.61% |
| 37 | 12.87% | 3.09% | 15.96% |
| 38 | 13.17% | 3.15% | 16.32% |
| 39 | 13.48% | 3.21% | 16.69% |
| 40 | 13.81% | 3.28% | 17.09% |
| 41 | 14.13% | 3.35% | 17.48% |
| 42 | 14.47% | 3.42% | 17.89% |
| 43 | 14.85% | 3.51% | 18.36% |
| 44 | 15.25% | 3.58% | 18.83% |
| 45 | 15.64% | 3.67% | 19.31% |
| 46 | 16.00% | 3.70% | 19.70% |
| 47 | 16.36% | 3.75% | 20.11% |
| 48 | 16.74% | 3.79% | 20.53% |
| 49 | 17.12% | 3.83% | 20.95% |
| 50 | 17.12% | 3.83% | 20.95% |
| 51 | 17.12% | 3.83% | 20.95% |
| 52 | 17.12% | 3.83% | 20.95% |
| 53 | 17.12% | 3.83% | 20.95% |
| 54 | 17.12% | 3.83% | 20.95% |
| 55 | 17.12% | 3.83% | 20.95% |
| 56 | 17.12% | 3.83% | 20.95% |
| 57 | 17.12% | 3.83% | 20.95% |
| 58 | 17.12% | 3.83% | 20.95% |
| 59 | 17.12% | 3.83% | 20.95% |
| assumptions: | | | |
| Interest: | 7.00% | | |
| Salary: | 3.00% plus promotion | | |
| COLA: | 2.00% | | |
| Mortality: | Retired Pensioner (RP) 2014 Combined Healthy Table with blue-collar adjustment, with 22-year Generational improvement using Projection Scale MP-2019, increased by 4.5% for males to reflect Plan experience, and blended 75% male and 25% female | | |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX E – MEMBER CONTRIBUTION RATES

2021 Member Contribution Rates (for fiscal year ending 2023)

| | General Tier 1 | | General Tiers 2 and 3 | | Safety Tier 1 | | Safety Tiers 2 and 3 | | Tier 4 Members | |
|--------------|---|----------|-----------------------|----------|----------------------|----------|----------------------|----------|----------------------|--------|
| Entry Age | First | Over | First | Over | First | Over | First | Over | General | Safety |
| | \$161.54 | \$161.54 | \$161.54 | \$161.54 | \$161.54 | \$161.54 | \$161.54 | \$161.54 | | |
| 16 | 2.75% | 4.13% | 4.34% | 6.51% | 4.65% | 6.97% | 6.95% | 10.43% | 4.42% | 9.61% |
| 17 | 2.81% | 4.22% | 4.43% | 6.64% | 4.65% | 6.97% | 6.95% | 10.43% | 4.42% | 9.61% |
| 18 | 2.87% | 4.31% | 4.52% | 6.78% | 4.65% | 6.97% | 6.95% | 10.43% | 4.42% | 9.61% |
| 19 | 2.93% | 4.40% | 4.62% | 6.93% | 4.65% | 6.97% | 6.95% | 10.43% | 4.42% | 9.61% |
| 20 | 2.99% | 4.49% | 4.71% | 7.07% | 4.65% | 6.97% | 6.95% | 10.43% | 4.42% | 9.61% |
| 21 | 3.05% | 4.58% | 4.81% | 7.22% | 4.73% | 7.09% | 7.07% | 10.60% | 4.67% | 9.99% |
| 22 | 3.12% | 4.68% | 4.91% | 7.37% | 4.81% | 7.21% | 7.19% | 10.78% | 4.92% | 10.38% |
| 23 | 3.18% | 4.77% | 5.01% | 7.52% | 4.89% | 7.33% | 7.31% | 10.96% | 5.17% | 10.76% |
| 24 | 3.25% | 4.87% | 5.12% | 7.68% | 4.97% | 7.45% | 7.43% | 11.14% | 5.43% | 11.15% |
| 25 | 3.31% | 4.97% | 5.23% | 7.84% | 5.05% | 7.57% | 7.55% | 11.33% | 5.69% | 11.54% |
| 26 | 3.39% | 5.08% | 5.33% | 8.00% | 5.13% | 7.70% | 7.68% | 11.52% | 5.91% | 11.91% |
| 27 | 3.45% | 5.18% | 5.44% | 8.16% | 5.22% | 7.83% | 7.81% | 11.72% | 6.13% | 12.28% |
| 28 | 3.53% | 5.29% | 5.55% | 8.33% | 5.31% | 7.96% | 7.94% | 11.91% | 6.35% | 12.64% |
| 29 | 3.60% | 5.40% | 5.67% | 8.50% | 5.40% | 8.10% | 8.07% | 12.11% | 6.58% | 12.99% |
| 30 | 3.67% | 5.51% | 5.79% | 8.68% | 5.49% | 8.24% | 8.21% | 12.32% | 6.80% | 13.34% |
| 31 | 3.75% | 5.62% | 5.91% | 8.86% | 5.59% | 8.38% | 8.35% | 12.53% | 7.01% | 13.72% |
| 32 | 3.83% | 5.74% | 6.03% | 9.04% | 5.68% | 8.52% | 8.50% | 12.75% | 7.22% | 14.10% |
| 33 | 3.91% | 5.86% | 6.15% | 9.23% | 5.78% | 8.67% | 8.65% | 12.97% | 7.44% | 14.47% |
| 34 | 3.99% | 5.98% | 6.28% | 9.42% | 5.88% | 8.82% | 8.79% | 13.19% | 7.66% | 14.85% |
| 35 | 4.07% | 6.10% | 6.41% | 9.61% | 5.99% | 8.98% | 8.95% | 13.43% | 7.89% | 15.24% |
| 36 | 4.15% | 6.23% | 6.54% | 9.81% | 6.09% | 9.14% | 9.11% | 13.67% | 8.12% | 15.59% |
| 37 | 4.24% | 6.36% | 6.68% | 10.02% | 6.21% | 9.31% | 9.29% | 13.93% | 8.36% | 15.94% |
| 38 | 4.33% | 6.49% | 6.81% | 10.22% | 6.33% | 9.49% | 9.46% | 14.19% | 8.62% | 16.30% |
| 39 | 4.42% | 6.63% | 6.96% | 10.44% | 6.45% | 9.67% | 9.65% | 14.47% | 8.88% | 16.67% |
| 40 | 4.51% | 6.77% | 7.11% | 10.66% | 6.58% | 9.87% | 9.81% | 14.72% | 9.14% | 17.07% |
| 41 | 4.61% | 6.91% | 7.26% | 10.89% | 6.73% | 10.09% | 9.97% | 14.95% | 9.40% | 17.46% |
| 42 | 4.71% | 7.06% | 7.41% | 11.12% | 6.82% | 10.23% | 10.11% | 15.16% | 9.66% | 17.86% |
| 43 | 4.81% | 7.22% | 7.57% | 11.35% | 6.92% | 10.38% | 10.22% | 15.33% | 9.99% | 18.33% |
| 44 | 4.92% | 7.38% | 7.71% | 11.57% | 7.04% | 10.56% | 10.33% | 15.49% | 10.33% | 18.81% |
| 45 | 5.01% | 7.51% | 7.85% | 11.77% | 7.11% | 10.66% | 10.37% | 15.56% | 10.67% | 19.28% |
| 46 | 5.09% | 7.64% | 7.99% | 11.99% | 7.20% | 10.80% | 10.35% | 15.52% | 11.09% | 19.68% |
| 47 | 5.19% | 7.79% | 8.14% | 12.21% | 7.19% | 10.79% | 10.19% | 15.28% | 11.51% | 20.09% |
| 48 | 5.29% | 7.93% | 8.29% | 12.44% | 7.15% | 10.73% | 10.52% | 15.78% | 11.85% | 20.50% |
| 49 | 5.39% | 8.09% | 8.45% | 12.68% | 6.99% | 10.48% | 10.87% | 16.31% | 12.19% | 20.93% |
| 50 | 5.51% | 8.26% | 8.62% | 12.93% | 6.99% | 10.48% | 10.87% | 16.31% | 12.52% | 20.93% |
| 51 | 5.63% | 8.44% | 8.77% | 13.16% | 6.99% | 10.48% | 10.87% | 16.31% | 12.86% | 20.93% |
| 52 | 5.73% | 8.59% | 8.91% | 13.37% | 6.99% | 10.48% | 10.87% | 16.31% | 13.18% | 20.93% |
| 53 | 5.83% | 8.75% | 9.03% | 13.55% | 6.99% | 10.48% | 10.87% | 16.31% | 13.50% | 20.93% |
| 54 | 5.94% | 8.91% | 9.11% | 13.66% | 6.99% | 10.48% | 10.87% | 16.31% | 13.79% | 20.93% |
| 55 | 6.01% | 9.01% | 9.12% | 13.68% | 6.99% | 10.48% | 10.87% | 16.31% | 14.03% | 20.93% |
| 56 | 6.05% | 9.07% | 9.06% | 13.59% | 6.99% | 10.48% | 10.87% | 16.31% | 14.29% | 20.93% |
| 57 | 6.02% | 9.03% | 8.93% | 13.40% | 6.99% | 10.48% | 10.87% | 16.31% | 14.49% | 20.93% |
| 58 | 5.96% | 8.94% | 9.23% | 13.84% | 6.99% | 10.48% | 10.87% | 16.31% | 14.65% | 20.93% |
| 59 | 5.85% | 8.77% | 9.53% | 14.30% | 6.99% | 10.48% | 10.87% | 16.31% | 14.71% | 20.93% |
| Assumptions: | | | | | | | | | | |
| Interest: | 7.00% | | 7.00% | | 7.00% | | 7.00% | | 7.00% | |
| Salary: | 3.00% plus promotion | | 3.00% plus promotion | | 3.00% plus promotion | | 3.00% plus promotion | | 3.00% plus promotion | |
| COLA: | 2.60% | | 2.00% | | 2.60% | | 2.00% | | 2.00% | |
| Mortality: | For General: Retired Pensioner (RP) 2014 Combined Healthy Table, with 20-year Generational improvement using Projection Scale MP-2019, increased by 2.2% for males and 8.0% for females to reflect Plan experience, and blended 30% male and 70% female | | | | | | | | | |
| | For Safety: Retired Pensioner (RP) 2014 Combined Healthy Table with blue-collar adjustment, with 20-year Generational improvement using Projection Scale MP-2019, increased by 4.5% for males to reflect Plan experience, and blended 75% male and 25% female | | | | | | | | | |

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX F – SUPPLEMENTAL TABLES FOR REPORTING PURPOSES

The tables on this page and the next three pages show selected demographic assumption rates based on age or service as reflected in the June 30, 2022 actuarial valuation.

General - Male

| Demographic Assumption Rates - Age | | | | | |
|------------------------------------|-------|----------------------------------|----------|--------------------------|--|
| Service Retirement | | Mortality of Active Members Rate | | Withdrawal (Termination) | |
| Age | Rate* | Ordinary | Service | Rate** | |
| 25 | 0.000 | 0.000594 | 0.000000 | 0.0800 | |
| 30 | 0.000 | 0.000610 | 0.000000 | 0.0800 | |
| 35 | 0.000 | 0.000737 | 0.000000 | 0.0800 | |
| 40 | 0.000 | 0.000825 | 0.000000 | 0.0800 | |
| 45 | 0.000 | 0.001092 | 0.000000 | 0.0800 | |
| 50 | 0.050 | 0.001690 | 0.000000 | 0.0500 | |
| 55 | 0.060 | 0.002770 | 0.000000 | 0.0500 | |
| 60 | 0.150 | 0.004864 | 0.000000 | 0.0500 | |
| 65 | 0.350 | 0.008629 | 0.000000 | 0.0000 | |
| 70 | 0.350 | 0.013784 | 0.000000 | 0.0000 | |

*The Service Retirement Rates above assume less than 30 years of service.

**The Withdrawal Rates above assume at least 3 but less than 5 years of service.

General - Female

| Demographic Assumption Rates - Age | | | | | |
|------------------------------------|-------|----------------------------------|----------|--------------------------|--|
| Service Retirement | | Mortality of Active Members Rate | | Withdrawal (Termination) | |
| Age | Rate* | Ordinary | Service | Rate** | |
| 25 | 0.000 | 0.000224 | 0.000000 | 0.0800 | |
| 30 | 0.000 | 0.000300 | 0.000000 | 0.0800 | |
| 35 | 0.000 | 0.000398 | 0.000000 | 0.0800 | |
| 40 | 0.000 | 0.000505 | 0.000000 | 0.0800 | |
| 45 | 0.000 | 0.000735 | 0.000000 | 0.0800 | |
| 50 | 0.050 | 0.001155 | 0.000000 | 0.0500 | |
| 55 | 0.060 | 0.001823 | 0.000000 | 0.0500 | |
| 60 | 0.150 | 0.002775 | 0.000000 | 0.0500 | |
| 65 | 0.350 | 0.004013 | 0.000000 | 0.0000 | |
| 70 | 0.350 | 0.006442 | 0.000000 | 0.0000 | |

*The Service Retirement Rates above assume less than 30 years of service.

**The Withdrawal Rates above assume at least 3 but less than 5 years of service.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX F – SUPPLEMENTAL TABLES FOR REPORTING PURPOSES

Safety - Male

| Demographic Assumption Rates - Age | | | | | |
|------------------------------------|--------------------------|----------------------------------|----------|---------------------------------|--|
| Age | Service Retirement Rate* | Mortality of Active Members Rate | | Withdrawal (Termination) Rate** | |
| | | Ordinary | Service | | |
| 25 | 0.000 | 0.000456 | 0.000330 | 0.0700 | |
| 30 | 0.000 | 0.000469 | 0.000339 | 0.0700 | |
| 35 | 0.000 | 0.000488 | 0.000488 | 0.0700 | |
| 40 | 0.000 | 0.000546 | 0.000546 | 0.0700 | |
| 45 | 0.070 | 0.000694 | 0.000751 | 0.0600 | |
| 50 | 0.070 | 0.000940 | 0.001297 | 0.0600 | |
| 55 | 0.100 | 0.001466 | 0.002200 | 0.0600 | |
| 60 | 0.200 | 0.002382 | 0.004055 | 0.0000 | |
| 65 | 0.400 | 0.004224 | 0.007193 | 0.0000 | |
| 70 | 1.000 | 0.006505 | 0.011075 | 0.0000 | |

*The Service Retirement Rates above assume less than 20 years of service.

**The Withdrawal Rates above assume at least 3 but less than 5 years of service.

Safety - Female

| Demographic Assumption Rates - Age | | | | | |
|------------------------------------|--------------------------|----------------------------------|----------|---------------------------------|--|
| Age | Service Retirement Rate* | Mortality of Active Members Rate | | Withdrawal (Termination) Rate** | |
| | | Ordinary | Service | | |
| 25 | 0.000 | 0.000135 | 0.000098 | 0.0700 | |
| 30 | 0.000 | 0.000180 | 0.000131 | 0.0700 | |
| 35 | 0.000 | 0.000207 | 0.000207 | 0.0700 | |
| 40 | 0.000 | 0.000262 | 0.000262 | 0.0700 | |
| 45 | 0.070 | 0.000366 | 0.000397 | 0.0600 | |
| 50 | 0.070 | 0.000504 | 0.000695 | 0.0600 | |
| 55 | 0.100 | 0.000757 | 0.001136 | 0.0600 | |
| 60 | 0.200 | 0.001066 | 0.001816 | 0.0000 | |
| 65 | 0.400 | 0.001542 | 0.002625 | 0.0000 | |
| 70 | 1.000 | 0.002440 | 0.004155 | 0.0000 | |

*The Service Retirement Rates above assume less than 20 years of service.

**The Withdrawal Rates above assume at least 3 but less than 5 years of service.

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX F – SUPPLEMENTAL TABLES FOR REPORTING PURPOSES

General - Male

| Demographic Assumption Rates - Years of Service | | |
|---|--------------------------|---------------------------------|
| Service | Service Retirement Rate* | Withdrawal (Termination) Rate** |
| 5 | 0.150 | 0.050 |
| 10 | 0.150 | 0.030 |
| 15 | 0.150 | 0.030 |
| 20 | 0.150 | 0.030 |
| 25 | 0.150 | 0.030 |
| 30 | 0.200 | 0.030 |
| 35 | 0.200 | 0.030 |
| 40 | 0.200 | 0.030 |
| 45 | 0.200 | 0.030 |
| 50 | 0.200 | 0.030 |

**The Service Retirement Rates above apply to a member at age 60.*

***The Withdrawal Rates above apply to a member at age 40.*

General - Female

| Demographic Assumption Rates - Years of Service* | | |
|--|--------------------------|---------------------------------|
| Service | Service Retirement Rate* | Withdrawal (Termination) Rate** |
| 5 | 0.150 | 0.050 |
| 10 | 0.150 | 0.030 |
| 15 | 0.150 | 0.030 |
| 20 | 0.150 | 0.030 |
| 25 | 0.150 | 0.030 |
| 30 | 0.200 | 0.030 |
| 35 | 0.200 | 0.030 |
| 40 | 0.200 | 0.030 |
| 45 | 0.200 | 0.030 |
| 50 | 0.200 | 0.030 |

**The Service Retirement Rates above apply to a member at age 60.*

***The Withdrawal Rates above apply to a member at age 40.*

**TULARE COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2022**

APPENDIX F – SUPPLEMENTAL TABLES FOR REPORTING PURPOSES

Safety - Male

| Demographic Assumption Rates - Years of Service* | | |
|--|--------------------------|---------------------------------|
| Service | Service Retirement Rate* | Withdrawal (Termination) Rate** |
| 5 | 0.200 | 0.040 |
| 10 | 0.200 | 0.040 |
| 15 | 0.200 | 0.040 |
| 20 | 0.400 | 0.040 |
| 25 | 0.400 | 0.040 |
| 30 | 0.400 | 0.040 |
| 35 | 0.400 | 0.040 |
| 40 | 0.400 | 0.040 |
| 45 | 0.400 | 0.040 |
| 50 | 0.400 | 0.040 |

**The Service Retirement Rates above apply to a member at age 60.*

***The Withdrawal Rates above apply to a member at age 40.*

Safety - Female

| Demographic Assumption Rates - Years of Service* | | |
|--|--------------------------|---------------------------------|
| Service | Service Retirement Rate* | Withdrawal (Termination) Rate** |
| 5 | 0.200 | 0.040 |
| 10 | 0.200 | 0.040 |
| 15 | 0.200 | 0.040 |
| 20 | 0.400 | 0.040 |
| 25 | 0.400 | 0.040 |
| 30 | 0.400 | 0.040 |
| 35 | 0.400 | 0.040 |
| 40 | 0.400 | 0.040 |
| 45 | 0.400 | 0.040 |
| 50 | 0.400 | 0.040 |

**The Service Retirement Rates above apply to a member at age 60.*

***The Withdrawal Rates above apply to a member at age 40.*



Classic Values, Innovative Advice