# Ventura County Employees' Retirement Association

## Actuarial Valuation and Review as of June 30, 2024



Segal

180 Howard Street
Suite 1100
San Francisco, CA 94105-6147
segalco.com
T 415.263.8200

November 20, 2024

Board of Retirement
Ventura County Employees' Retirement Association
1190 S. Victoria Avenue, Suite 200
Ventura, CA 93003-6572

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of June 30, 2024. It summarizes the actuarial data used in the valuation, analyzes the preceding year's experience, and establishes the funding requirements for fiscal year 2025–2026.

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

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

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law.

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

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

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

Sincerely,

Segal

Todd Tauzer
Todd Tauzer, FSA, MAAA, FCA, CERA
Senior Vice President and Actuary

Molly Calcagno
Molly Calcagno, ASA, MAAA, EA
Senior Actuary

JY/jl

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# Section 1: Actuarial Valuation Summary

## Purpose and basis

This report has been prepared by Segal to present a valuation of the Ventura County Employees' Retirement Association ("VCERA" or "the Association" or "the Plan") as of June 30, 2024. The valuation was performed to determine whether the assets and contribution rates are sufficient to provide the prescribed benefits.

The contribution requirements presented in this report are based on:

- The benefit provisions of the Plan, as administered by the Board of Retirement;
- The characteristics of covered active members, inactive members and retired members and beneficiaries as of June 30, 2024, provided by the staff of VCERA;
- The assets of the Plan as of June 30, 2024, provided by the staff of VCERA;
- Economic assumptions regarding future salary increases and investment earnings adopted by the Board of Retirement for the June 30, 2024 valuation;
- Other actuarial assumptions regarding employee terminations, retirement, death, etc. adopted by the Board of Retirement for the June 30, 2024 valuation; and
- The funding policy adopted by the Board of Retirement.

Certain disclosure information required by Governmental Accounting Standards Board (GASB) Statements No. 67 and 68 as of June 30, 2024 for the Plan and the employers, respectively, are provided in separate reports.

One of the general goals of an actuarial valuation is to establish contributions which fully fund the Association's liabilities, and which, as a percentage of payroll, remain as level as possible for each generation of active members. Annual actuarial valuations measure the progress toward this goal, as well as test the adequacy of the contribution rates.

The contribution requirements are determined as a percentage of payroll. The Association's employer rates provide for both normal cost and a contribution to amortize any unfunded or overfunded actuarial accrued liabilities. In this valuation, we have applied the funding policy adopted by the Board on May 21, 2012 and last updated on January 24, 2022. Details of the funding policy are provided in *Section 4, Exhibit 1* starting on page 80.

# Section 1: Actuarial Valuation Summary

The rates calculated in this report may be adopted by the Board of Retirement for the fiscal year that extends from July 1, 2025 through June 30, 2026.

## Valuation highlights

### Experience study and other refinements

1. The results of this valuation reflect changes in the actuarial assumptions as recommended by Segal and adopted by the Board of Retirement for the June 30, 2024 valuation. These changes were documented in our July 1, 2020 through June 30, 2023 Actuarial Experience Study report dated June 5, 2024 and are also outlined in *Section 4, Exhibit 1* starting on page 80 of this report. These assumption changes resulted in an increase in the average employer rate of 3.91% of payroll and an increase in the average member rate of 0.94% of payroll. There is also an increase in the unfunded actuarial accrued liability (the difference between the actuarial accrued liability and the valuation value of assets) by $366.8 million associated with the updated assumptions.
2. The valuation also reflects a reallocation of Tier 1 liability for members in pay status between General and Safety when they have both General and Safety service. Previously, all Tier 1 liability for a member in pay status was allocated to the membership class immediately prior to their retirement. For this valuation, additional demographic data for retired members and beneficiaries was provided that allocated the Tier 1 benefit between General and Safety. This refinement has no impact on the average aggregate employer contribution rate; however, it resulted in an increase in the General employer UAAL contribution rate of 0.52% of payroll and corresponding decrease in the Safety employer UAAL contribution rate of 1.98% of payroll. As the County is the only Safety employer and represents about 95% of the General payroll, there is not a material impact on the County's aggregate employer contribution rate. The remaining 5% of the General payroll is composed of special districts and as a result of the reallocation the annual employer contribution amount increased by about $200,000 for those employers in total.

### Funding measures

3. The funded ratio (the ratio of valuation value of assets to the actuarial accrued liability) decreased from 97.1% to 97.0%. This ratio is one measure of funding status, and its history is a measure of funding progress. Using the market value of assets, the funded ratio increased from 96.3% to 98.7%. These measurements are not necessarily appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the Plan's benefit obligation or the need for, or the amount of, future contributions. A history of the Association's funded ratios is provided in *Section 2, Subsection G* on pages 41 and 42.

4. The unfunded actuarial accrued liability (UAAL) increased from $230.1 million to $255.5 million. The increase in UAAL is primarily due to changes in actuarial assumptions, offset somewhat by an investment return on the valuation value (i.e., after asset smoothing) greater than the assumed rate of 7.00% used in the June 30, 2023 valuation and individual salary increases less than expected. A reconciliation of the Association's UAAL from the prior year is provided in *Section 2, Subsection E* on page 32.

   A schedule of the current UAAL amortization balances and payments may be found in *Section 3, Exhibit H* starting on page 72. A graphical projection of the UAAL amortization balances and payments is provided in *Section 3, Exhibit I* starting on page 78.

## Actuarial experience

5. The net actuarial gain of $275.6 million, or 3.28% of actuarial accrued liability, is due to an investment gain of $122.2 million, or 1.45% of actuarial accrued liability, a contribution loss of $19.8 million, or 0.24% of actuarial accrued liability, and a net gain from sources other than investments and contributions of $173.2 million, or 2.06% of the actuarial accrued liability, prior to reflection of the assumption changes. The gain from sources other than investments and contributions was primarily due to individual salary increases less than expected.
6. The rate of return on the market value of assets was 11.43% for the year ending June 30, 2024. The return on the valuation value of assets was 8.61% for the same period after recognizing a portion of this year's investment gain and a portion of prior years' investment gains and losses. This resulted in an actuarial gain when measured against the assumed rate of return of 7.00% used in the June 30, 2023 valuation. This actuarial investment gain (after asset smoothing) decreased the average employer contribution rate by 1.14% of payroll.
7. On July 30, 2020, the California Supreme Court issued a decision in the Alameda County Deputy Sheriffs' Assn. et al. v. Alameda County Employees' Retirement Assn. litigation that clarified what should be considered compensation earnable for non-PEPRA members and pensionable compensation for PEPRA members. In response, the Board adopted a series of Resolutions to implement certain aspects of the Alameda Decision. The October 2020 Resolution set forth exclusions from compensation earnable and pensionable compensation consisting of payment for services outside of normal working hours (e.g., standby and call-back pay), excess leave cash-outs beyond what is both earned and payable in each 12-month period, and leave donations which are an "in-kind" benefit. The July 2021 Resolution limited inclusion of flexible benefit plan allowances, or "flex credit," to the "employee-only" rate for labor agreements that provide tiered rates for healthcare coverage, subject to further modification based on pending legislation concerning flex credit. Following the subsequent veto of such legislation, the Board adopted a Resolution in April of 2023, excluding from compensation earnable flex credit amounts in excess of what all members in a bargaining group may receive in unrestricted cash, which are deemed "in-kind" benefits. As discussed with VCERA staff, the effect of the Alameda Decision will be reflected as gains and losses as issues are settled and corrections are made to the membership data provided for each valuation. In addition, any additional impact on the UAAL related to recovery of benefits

and/or refunds of member contributions previously paid in conjunction with these pay items will also be reflected in each valuation once it is known.

These adjustments were partially reflected in the June 30, 2024 valuation. When preparing the financial and membership data provided for the June 30, 2024 valuation, VCERA had not finished refunding member contributions and reducing retiree and beneficiary benefits. Reports prepared by VCERA show roughly $37,500 in refund payments in the 2023-2024 plan year to affected members. Those refunds were calculated without taking into account the reduction in liabilities in the valuations through June 30, 2024 as pay items associated with those refunds are no longer used in determining members' benefits.

## Contributions

8. In this report, the employer and member contribution rates shown in *Section 2, Subsection F* and *Section 4, Exhibit 3*, respectively, are calculated based on a 50/50 sharing of normal cost for both PEPRA and non-PEPRA tiers. For purposes of these calculations, we have been previously directed by VCERA to assume that the cessation of member contributions after 30 years of service for non-PEPRA members continues per the County Employees Retirement Law (CERL) and that the cost associated with this provision is to be paid for by employers.

   The employer and member contribution rates calculated under the prior method (i.e., under the CERL statutory formula without 50/50 sharing of normal cost for non-PEPRA tiers) are shown in *Section 4, Exhibit 4* and *Section 4, Exhibit 5*, respectively, starting on page 112.

9. The average employer rate calculated in this valuation has decreased from 18.56% to 16.56% of payroll. This decrease is primarily due to the effect of several UAAL amortization layers becoming fully amortized, investment return on the valuation value (i.e., after asset smoothing) greater than the assumed rate of 7.00% used in the June 30, 2023 valuation, and individual salary increases less than expected, offset somewhat by changes in actuarial assumptions. A complete reconciliation of the Association's aggregate employer rate is provided in *Section 2, Subsection F* on page 35.

   As previously adopted by the Board, we have continued to calculate the Basic and COLA UAAL rates on a combined basis for all General tiers even though General Tier 2 and associated PEPRA tiers are overfunded this year. This results in more stable UAAL rates for General Tier 1. Starting with the June 30, 2024 valuation, we have also combined the amortization schedules for General Tier 1 and General Tier 2 as shown in *Section 3, Exhibit H* starting on page 72.

10. The average member rate calculated in this valuation has increased from 10.76% to 11.61% of payroll due to changes in actuarial assumptions, offset somewhat by changes in active member demographics. A complete reconciliation of the Association's aggregate member rate is provided in *Section 2, Subsection F* on page 36.

    The detailed member rates by cost group are provided in *Section 4, Exhibit 3* of this report.

11. Segal strongly recommends an actuarial funding method that targets 100% funding of the actuarial accrued liability. Generally, this implies payments that are ultimately at least enough to cover normal cost, interest on the UAAL and the principal balance. The funding policy adopted by the Board of Retirement meets this standard.

## Future expectations

12. Based on the Association's UAAL amortization schedule, the June 30, 2010 actuarial loss layer will be fully amortized in the June 30, 2025 valuation. As a result, the employer UAAL contributions for the plan as a whole will reflect a decrease of about $29.7 million or about 3.11% of payroll (approximately 1.87% of payroll for General and 7.77% of payroll for Safety) in the June 30, 2025 valuation before any other experience is accounted for.

13. The total unrecognized net investment **gain** as of June 30, 2024 is $144 million as compared to an unrecognized net investment **loss** of $63 million in the previous valuation. This net deferred gain of $144 million will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years as shown in *Section 2, Subsection B* on page 24.

    The net deferred gain of $144 million represents about 1.7% of the market value of assets. Unless offset by future investment losses or other unfavorable experience, the recognition of the $144 million net market gain is expected to have an impact on the Association's future funded ratio and contribution rate requirements. This potential impact may be illustrated as follows:

    a. If the net deferred gain was recognized immediately in the valuation value of assets, the funded percentage would increase from 97.0% to 98.7%.

       For comparison purposes, if the net deferred loss in the June 30, 2023 valuation had been recognized immediately in the June 30, 2023 valuation, the funded percentage would have decreased from 97.1% to 96.3%.

    b. If the net deferred gain was recognized immediately in the valuation value of assets, the average employer contribution rate would decrease from 16.56% to 15.24% of payroll.

       For comparison purposes, if the net deferred loss in the June 30, 2023 valuation had been recognized immediately in the June 30, 2023 valuation, the average employer contribution rate would have increased from 18.56% to 19.15% of payroll.

14. Emerging best practice[1] for public pension plans is to consider building a formal Surplus Management Policy within the Plan's funding policy. Such a policy would be put in place prior to reaching full funding and would guide the Plan in the management of surplus on potential risk reduction considerations, contribution volatility management, and related items. Since the Plan is reasonably close to full funding, it may be prudent to consider such a policy. Segal is available to aid in any such discussion.

[1] See "Core Elements of a Funding Policy" from the Government Finance Officers Association and "Surplus Management Considerations for Public Plans" by the American Academy of Actuaries.

## Risk

15. It is important to note that this actuarial valuation is based on plan assets as of June 30, 2024. The Plan's funded status does not reflect short-term fluctuations of the market, but rather is based on the market values on the last day of the plan year. Segal is available to prepare projections of potential outcomes of market conditions and other demographic experience upon request.
16. Because the actuarial valuation results are dependent on a given set of assumptions, there is a risk that emerging results may differ significantly as actual experience proves to be different from the assumptions. We have not been engaged to perform a detailed analysis of the potential range of the impact of risk relative to the Plan's future financial condition, but have included a brief discussion of some risks that may affect the Plan in *Section 2, Subsection I*, starting on page 44. A more detailed assessment would provide the Board of Retirement with a better understanding of the inherent risks.
17. The risk assessment in *Section 2, Subsection I* includes the disclosure of a "Low-Default-Risk Obligation Measure" (LDROM). This disclosure, along with commentary on the significance of the LDROM, is a new requirement under Actuarial Standard of Practice No. 4 (ASOP 4) for all pension funding actuarial valuation reports and can be found starting on page 46.
18. For a plan such as that offered by the Association that may use undesignated excess earnings to provide supplemental benefits, the valuation report must indicate that the impact of any such future use of undesignated excess earnings on the future financial condition of the plan has not been explicitly measured or otherwise reflected in the valuation. However, it should be noted that under the Board's Interest Crediting Policy, the balance of $1.34 billion (negative) in the Interest Crediting Shortfall Tracking Account (ICSTA) has to be fully restored out of future excess earnings before any subsequent earnings can be used to provide for any supplemental benefits. The ICSTA tracks any cumulative shortfalls in investment earnings relative to earnings required to credit full interest at the assumed rate to valuation reserves.

## GASB

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

## Summary of key valuation results

### Average Employer Contribution[1] Rate Calculated as of June 30

*($ in '000s)*

| Membership Tier | 2024 Contribution Rate | 2024 Annual Amount[2] | 2023 Contribution Rate | 2023 Annual Amount[2] |
|---|---|---|---|---|
| **General** | | | | |
| • General Tier 1 | 19.78% | $99 | 20.30% | $278 |
| • General Tier 2 | 8.86% | 13,924 | 11.01% | 18,464 |
| • General PEPRA Tier 2 | 8.75% | 11,170 | 11.05% | 12,342 |
| • General Tier 2 with COLA[3] | 16.63% | 29,204 | 16.89% | 34,643 |
| • General PEPRA Tier 2 with COLA[3] | 16.33% | 47,710 | 16.84% | 41,833 |
| – **General Combined** | **13.56%** | **$102,107** | **14.64%** | **$107,560** |
| **Safety** | | | | |
| • Safety | 28.92% | 36,022 | 33.11% | 46,093 |
| • Safety PEPRA | 25.94% | 19,877 | 31.03% | 20,956 |
| – **Safety Combined** | **27.79%** | **$55,899** | **32.43%** | **$67,049** |
| • **All Categories Combined** | **16.56%** | **$158,006** | **18.56%** | **$174,609** |

1 Before reflection of any member rate that may be "picked-up" by the employer. Contributions are assumed to be paid throughout the year.
2 Based on projected compensation for each year.
3 Throughout this report, this category represents those Tier 2 members who contribute a negotiated 2.63% of compensation for a fixed 2% COLA pursuant to Government Code 31627 that applies to service after March 2003 for SEIU members and July 2023 for CNA members.

### Average Member Contribution[1,2,3] Rate Calculated as of June 30

*($ in '000s)*

| Membership Tier | 2024 Contribution Rate | 2024 Annual Amount[4] | 2023 Contribution Rate | 2023 Annual Amount[4] |
|---|---|---|---|---|
| **General** | | | | |
| • General Tier 1 | 12.76% | $64 | 11.83% | $162 |
| • General Tier 2 | 8.46% | 13,295 | 7.70% | 12,913 |
| • General PEPRA Tier 2 | 8.35% | 10,659 | 7.74% | 8,645 |
| • General Tier 2 with COLA[5] | 11.09% | 19,475 | 10.33% | 21,188 |
| • General PEPRA Tier 2 with COLA[5] | 10.98% | 32,080 | 10.37% | 25,761 |
| **Safety** | | | | |
| • Safety | 17.52% | 21,822 | 15.76% | 21,940 |
| • Safety PEPRA | 17.54% | 13,440 | 15.70% | 10,603 |
| **All Categories Combined** | **11.61%** | **$110,835** | **10.76%** | **$101,212** |

[1] Before reflection of any member rate that may be "picked-up" by the employer. Contributions are assumed to be paid throughout the year.

[2] The non-refundability factors are 1.00 for General Tier 1, Tier 2 (non-PEPRA) and Safety (non-PEPRA) for both June 30, 2024 and June 30, 2023.

[3] Average member contribution rates for non-PEPRA tiers as shown in this exhibit are after reflecting the impact of the cessation of member contributions after 30 years of service. Individual member rates can be found in *Section 4, Exhibit 3*.

[4] Based on projected compensation for each year.

[5] Throughout this report, this category represents those Tier 2 members who contribute a negotiated 2.63% of compensation for a fixed 2% COLA pursuant to Government Code 31627 that applies to service after March 2003 for SEIU members and July 2023 for CNA members.

# Section 1: Actuarial Valuation Summary

## Valuation Results as of June 30

*($ in '000s)*

| Line Description | 2024 | 2023 |
|---|---|---|
| **Actuarial accrued liability** | | |
| • Total actuarial accrued liability | $8,403,987 | $7,870,801 |
| – Retired members and beneficiaries | 5,029,560 | 4,640,127 |
| – Inactive members[1] | 300,307 | 250,638 |
| – Active members | 3,074,120 | 2,980,036 |
| • Normal cost for plan year beginning June 30 | 217,928 | 196,440 |
| **Assets** | | |
| • Market value of assets (MVA) | $8,292,117 | $7,578,238 |
| • Actuarial value of assets (AVA) | 8,148,538 | 7,640,765 |
| • Actuarial value of assets as a percentage of market value of assets | 98.3% | 100.8% |
| • Valuation value of assets (VVA)[2] | $8,148,479 | $7,640,705 |
| **Funded status** | | |
| • Unfunded actuarial accrued liability on market value of assets | $111,870 | $292,563 |
| • Funded percentage on MVA basis | 98.67% | 96.28% |
| • Unfunded actuarial accrued liability on valuation value of assets | 255,508 | $230,096 |
| • Funded percentage on VVA basis | 96.96% | 97.08% |

[1] Includes inactive members with member contributions on deposit.
[2] Excludes non-valuation reserves.

# Section 1: Actuarial Valuation Summary

| Line Description | 2024 | 2023 |
|---|---|---|
| **Key assumptions** | | |
| • Net investment return | 6.75% | 7.00% |
| • Inflation rate | 2.50% | 2.50% |
| • Payroll growth | 3.00% | 3.00% |
| • Cost-of-living adjustments | | |
| – Tiers with 3.00% COLA | 2.75% | 2.75% |
| – Tiers with fixed 2.00% COLA | 2.00% | 2.00% |
| – Tiers without COLA | 0.00% | 0.00% |

## Demographic Data as of June 30

| Demographic Data by Status | 2024 | 2023 | Change |
|---|---|---|---|
| **Active members** | | | |
| • Number of members | 9,656 | 9,384 | 2.9% |
| • Average age | 44.0 | 44.2 | (0.2) |
| • Average service | 10.2 | 10.5 | (0.3) |
| • Total projected compensation | $954,250,417 | $941,042,109 | 1.4% |
| • Average projected compensation | $98,825 | $100,282 | (1.5%) |
| **Retired members and beneficiaries** | | | |
| • Number of members | 8,511 | 8,257 | 3.1% |
| – Service retired | 6,487 | 6,278 | 3.3% |
| – Disability retired | 816 | 809 | 0.9% |
| – Beneficiaries | 1,208 | 1,170 | 3.2% |
| • Average age | 71.6 | 71.3 | 0.3 |
| • Average monthly benefit | $3,844 | $3,758 | 2.3% |
| **Inactive members** | | | |
| • Number of members[1] | 4,360 | 4,085 | 6.7% |
| • Average age | 45.6 | 45.6 | 0.0 |
| **Total members** | **22,527** | **21,726** | **3.7%** |

[1] Includes inactive members with member contributions on deposit.

## Important information about actuarial valuations

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

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

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

# Section 1: Actuarial Valuation Summary

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

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

# Section 2: Actuarial Valuation Results

## A. Member information

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, inactive vested members, retired members and beneficiaries.

This section presents a summary of significant statistical data on these member groups. More detailed information for this valuation year and the preceding valuation can be found in *Section 3, Exhibits A, B,* and *C*.

### Member Population

| As of June 30 | Active Members | Inactive Members[1] | Retired Members and Beneficiaries (Pay Status) | Total Non-Actives | Ratio of Non-Actives to Actives | Ratio of Pay Status to Actives |
|---|---|---|---|---|---|---|
| 2015 | 8,299 | 2,441 | 6,338 | 8,779 | 1.06 | 0.76 |
| 2016 | 8,509 | 2,639 | 6,539 | 9,178 | 1.08 | 0.77 |
| 2017 | 8,636 | 2,809 | 6,766 | 9,575 | 1.11 | 0.78 |
| 2018 | 8,611 | 2,909 | 7,038 | 9,947 | 1.16 | 0.82 |
| 2019 | 8,696 | 3,041 | 7,280 | 10,321 | 1.19 | 0.84 |
| 2020 | 8,644 | 3,218 | 7,521 | 10,739 | 1.24 | 0.87 |
| 2021 | 8,491 | 3,491 | 7,751 | 11,242 | 1.32 | 0.91 |
| 2022 | 9,077 | 3,812 | 8,007 | 11,819 | 1.30 | 0.88 |
| 2023 | 9,384 | 4,085 | 8,257 | 12,342 | 1.32 | 0.88 |
| 2024 | 9,656 | 4,360 | 8,511 | 12,871 | 1.33 | 0.88 |

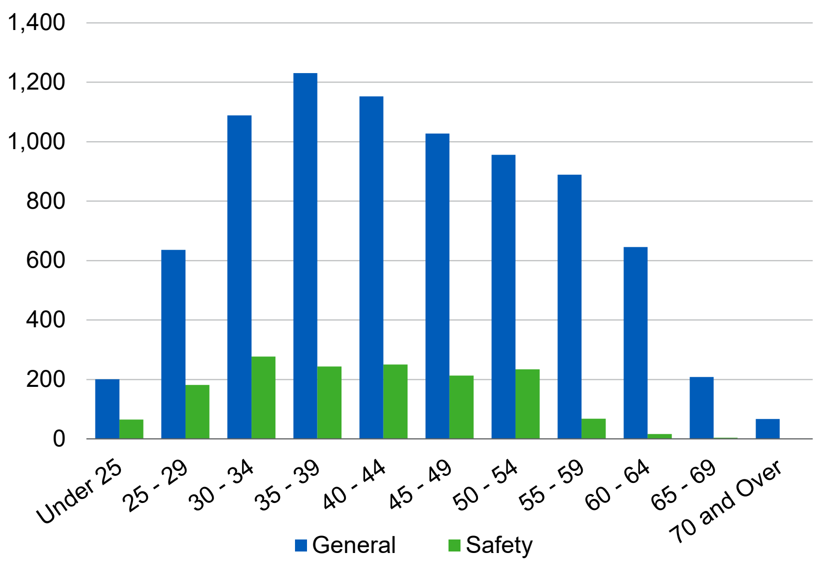
[1] Includes inactive members with member contributions on deposit.

## Active members

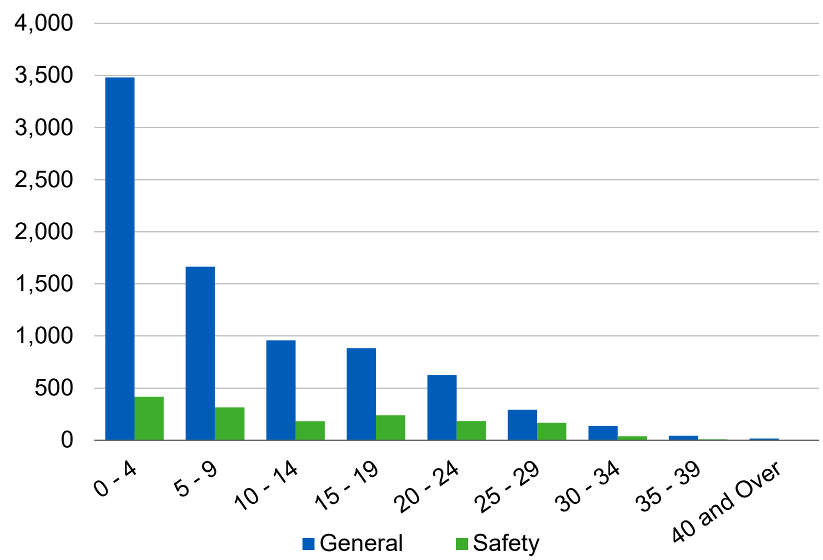
| Demographic Data | As of June 30, 2024 | As of June 30, 2023 | Change |
|---|---|---|---|
| Active members | 9,656 | 9,384 | 2.9% |
| Average age[1] | 44.0 | 44.2 | (0.2) |
| Average years of service | 10.2 | 10.5 | (0.3) |
| Average compensation | $98,825 | $100,282 | (1.5%) |

### Distribution of Active Members as of June 30, 2024

#### Actives by Age




#### Actives by Years of Service




## Inactive members

| Demographic Data | As of June 30, 2024 | As of June 30, 2023 | Change |
|---|---|---|---|
| Inactive members[2] | 4,360 | 4,085 | 6.7% |

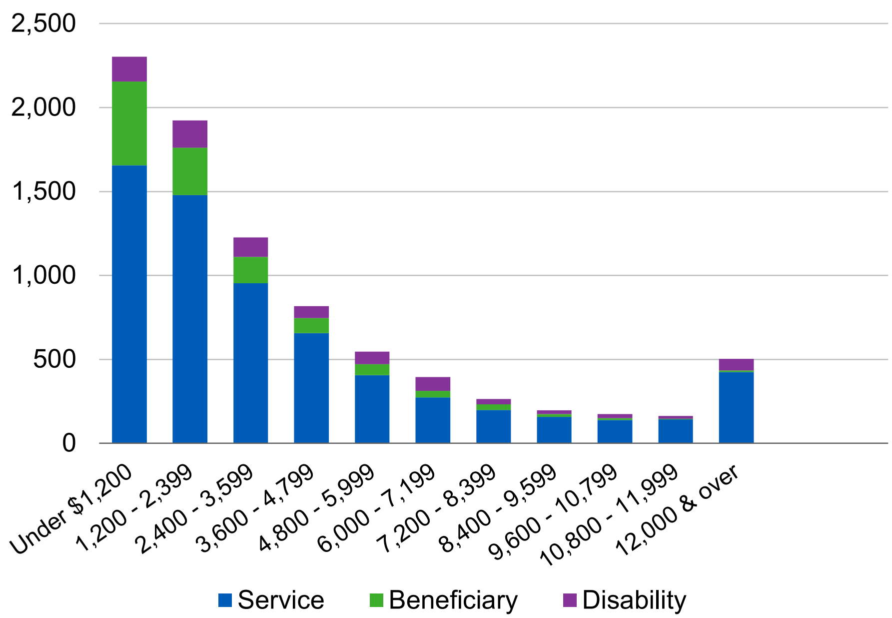
[1] Among the active members, there were none with unknown age information.
[2] Includes inactive members with member contributions on deposit.

## Retired members and beneficiaries

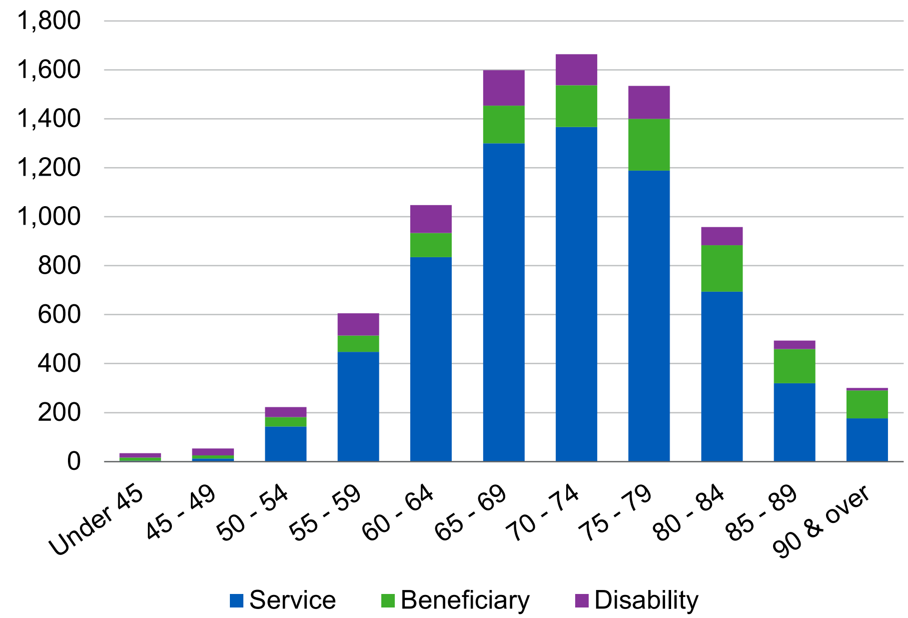
| Demographic Data | As of June 30, 2024 | As of June 30, 2023 | Change |
|---|---|---|---|
| Retired members | 7,303 | 7,087 | 3.0% |
| Beneficiaries | 1,208 | 1,170 | 3.2% |
| Average age | 71.6 | 71.3 | 0.3 |
| Average monthly amount[1] | $3,844 | $3,758 | 2.3% |
| Total monthly amount[1] | $32,719,146 | $31,028,363 | 5.4% |

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

#### By Type and Monthly Amount




#### By Type and Age




[1] Excludes any benefits for vested fixed supplemental and non-vested supplemental benefit amounts.

## Historical plan population

The chart below demonstrates the progression of the active population over the last ten years. The chart also shows the growth among the retired population over the same time period.

### Historical Member Data

*Active Members versus Retired Members and Beneficiaries (Pay Status)*

| As of June 30 | Active Count | Active Average Age | Active Average Service | Pay Status Count | Pay Status Average Age | Pay Status Monthly Amount |
|---|---|---|---|---|---|---|
| 2015 | 8,299 | 45.2 | 11.2 | 6,338 | 69.6 | $2,936 |
| 2016 | 8,509 | 45.0 | 11.2 | 6,539 | 69.8 | 3,024 |
| 2017 | 8,636 | 45.0 | 11.2 | 6,766 | 70.2 | 3,108 |
| 2018 | 8,611 | 44.9 | 11.3 | 7,038 | 70.3 | 3,230 |
| 2019 | 8,696 | 44.9 | 11.3 | 7,280 | 70.5 | 3,329 |
| 2020 | 8,644 | 44.9 | 11.4 | 7,521 | 70.7 | 3,423 |
| 2021 | 8,491 | 45.0 | 11.6 | 7,751 | 70.9 | 3,512 |
| 2022 | 9,077 | 44.5 | 10.8 | 8,007 | 71.1 | 3,653 |
| 2023 | 9,384 | 44.2 | 10.5 | 8,257 | 71.3 | 3,758 |
| 2024 | 9,656 | 44.0 | 10.2 | 8,511 | 71.6 | 3,844 |

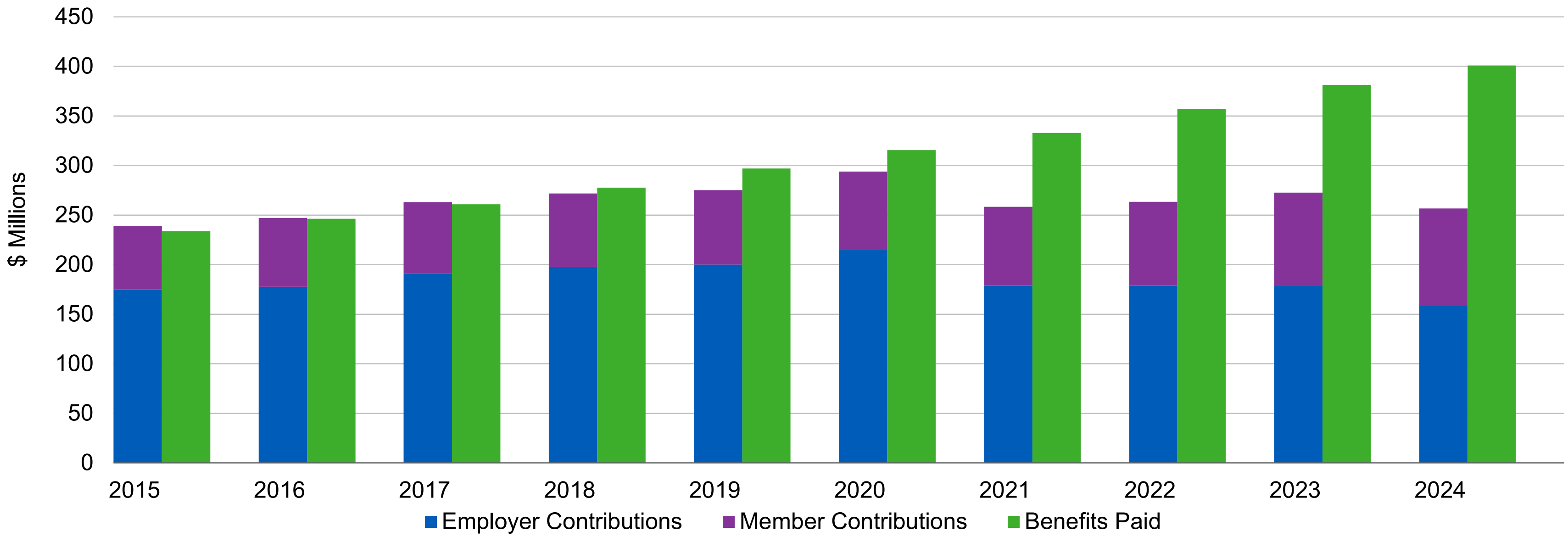
## B. Financial information

Retirement plan funding anticipates that, over the long term, both contributions and investment earnings (less investment fees and administrative expenses) will be needed to cover benefit payments. Retirement plan assets change as a result of the net impact of these income and expense components.

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

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the valuation asset value and the plan costs are more stable. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

### Comparison of Contributions Made with Benefits for Years Ended June 30



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

| | Step | Actual Return | Expected Return | Investment Gain/(Loss) | Percent Deferred[1] | Amount |
|---|---|---|---|---|---|---|
| 1. | Market value of assets | | | | | $8,292,116,726 |
| **2.** | **Calculation of deferred return** | | | | | |
| a. | Six months ended June 30, 2019 | $608,522,342 | $192,294,765 | $416,227,577 | 0% | $0 |
| b. | Six months ended December 31, 2019 | 363,251,754 | 207,517,685 | 155,734,069 | 0 | 0 |
| c. | Six months ended June 30, 2020 | (161,966,237) | 220,290,552 | (382,256,789) | 10 | (38,225,679) |
| d. | Six months ended December 31, 2020 | 963,486,000 | 213,744,479 | 749,741,521 | 20 | 149,948,304 |
| e. | Six months ended June 30, 2021 | 877,898,342 | 247,317,215 | 630,581,127 | 30 | 189,174,338 |
| f. | Six months ended December 31, 2021 | 443,525,133 | 277,610,478 | 165,914,655 | 40 | 66,365,862 |
| g. | Six months ended June 30, 2022 | (1,006,035,394) | 291,989,759 | (1,298,025,153) | 50 | (649,012,576) |
| h. | Six months ended December 31, 2022 | 59,053,538 | 244,852,200 | (185,798,662) | 60 | (111,479,197) |
| i. | Six months ended June 30, 2023 | 602,682,492 | 245,014,538 | 357,667,954 | 70 | 250,367,568 |
| j. | Six months ended December 31, 2023 | 300,412,095 | 263,886,950 | 36,525,145 | 80 | 29,220,116 |
| k. | Six months ended June 30, 2024 | 557,678,105 | 271,877,676 | 285,800,429 | 90 | 257,220,386 |
| **l.** | **Total deferred return**[2] | | | | | **$143,579,122** |
| **3.** | **Actuarial value of assets 1 – 2l** | | | | | **$8,148,537,604** |
| 4. | Ratio of actuarial to market value **3 ÷ 1** | | | | | 98.3% |
| **5.** | **Non-valuation reserves** | | | | | |
| a. | Non-vested supplemental benefit | | | | | $58,885 |
| b. | Statutory contingency | | | | | 0 |
| **c.** | **Subtotal** | | | | | **$58,885** |
| 6. | **Valuation value of assets 3 – 5c** | | | | | **$8,148,478,719** |

**Note:** Results may not total due to rounding.

[1] Recognition at 10% per six-month period over 5 years.

[2] The total deferred return as of June 30, 2024 is recognized in each of the next five years as follows:

| | |
|---|---|
| a. Amount recognized on June 30, 2025 | $110,255,725 |
| b. Amount recognized on June 30, 2026 | $(64,525,014) |
| c. Amount recognized on June 30, 2027 | $(30,963,542) |
| d. Amount recognized on June 30, 2028 | $100,231,910 |
| e. Amount recognized on June 30, 2029 | $28,580,043 |

## Allocation of Valuation Value of Assets as of June 30, 2024

| Line Description | | General Tier 1 | General Tier 2 | Safety | Total |
|---|---|---|---|---|---|
| **1.** | **Allocated assets as of beginning of year** | $163,889,329 | $3,994,930,084 | $3,481,885,545 | $7,640,704,958 |
| 2. | Member contributions | 110,972 | 64,788,496 | 30,712,334 | 95,611,802 |
| 3. | Member buybacks | 81,870 | 998,508 | 530,752 | 1,611,130 |
| 4. | Employer pick-up contributions credited to member account | 15,515 | 807,572 | 0 | 823,087 |
| 5. | Employer contributions | 321,341 | 98,965,415 | 59,359,497 | 158,646,253 |
| 6. | Refunds of member contributions and death benefits paid | 204,880 | 6,813,357 | 861,729 | 7,879,966 |
| 7. | Retiree benefit payments excluding non vested supplemental payments | 81,441,638 | 148,554,022 | 163,027,085 | 393,022,745 |
| **8.** | **Subtotal 1 + 2 + 3 + 4 + 5 − 6 − 7** | **$82,772,509** | **$4,005,122,696** | **$3,408,599,314** | **$7,496,494,519** |
| 9. | Weighted average fund balance<br>**1 + ½ of (2, 3, 4, 5) − ½ of (6, 7)** | 123,330,919 | 4,000,026,390 | 3,445,242,430 | 7,568,599,739 |
| 10. | Earnings allocated in proportion to **9** | 10,624,133 | 344,575,496 | 296,784,571 | 651,984,200 |
| **11.** | **Valuation value of assets 8 + 10** | **$93,396,642** | **$4,349,698,192** | **$3,705,383,885** | **$8,148,478,719** |

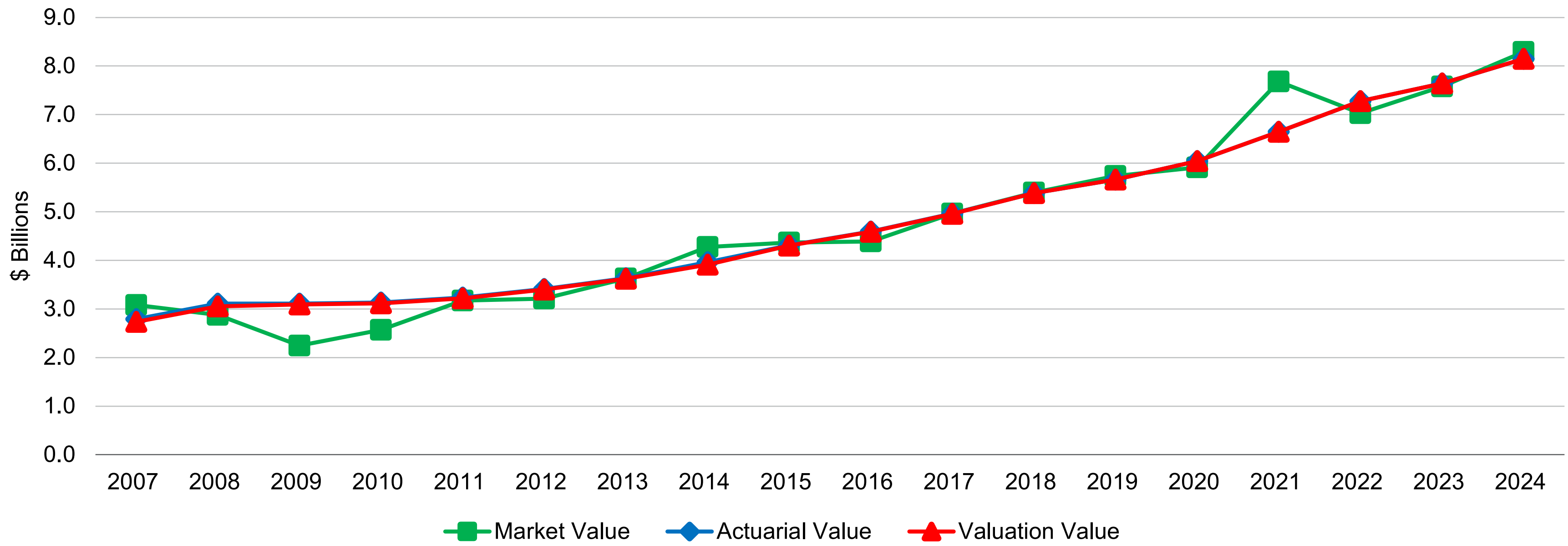
**Note:** Results may not total due to rounding.

## Asset history

The market value, actuarial value and valuation value of assets are representations of the Plan's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The valuation value of assets is generally the actuarial value, excluding any non-valuation reserves.

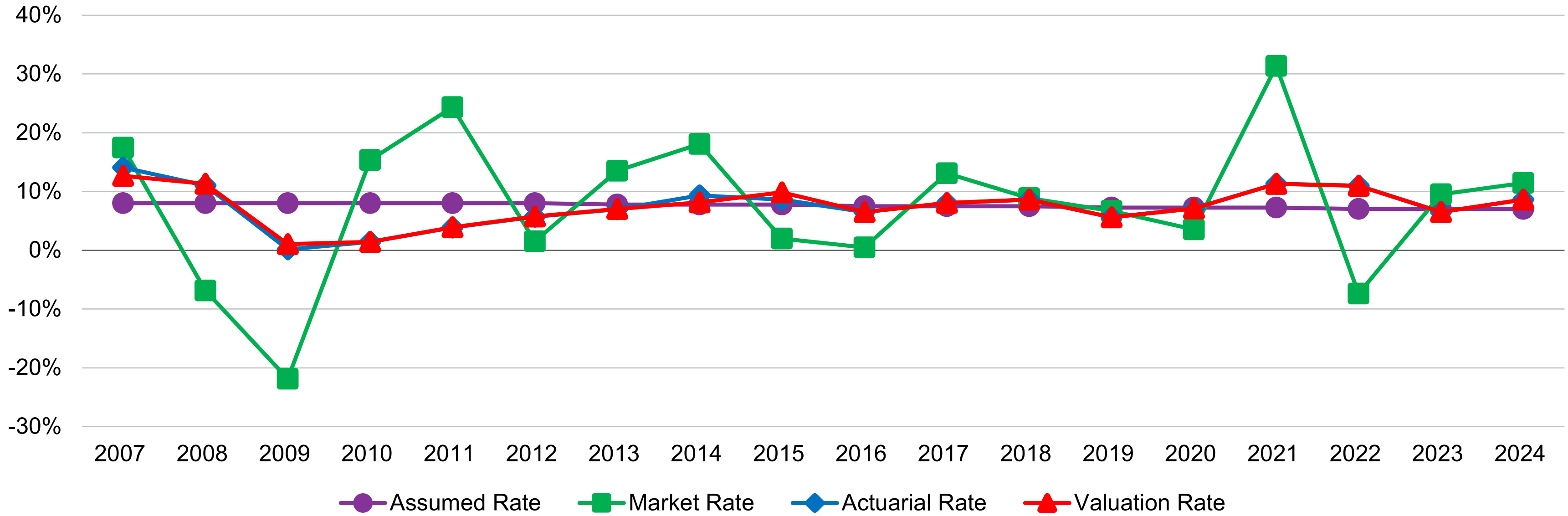
The valuation value of assets is significant because the Plan's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

Market Value, Actuarial Value, and Valuation Value of Assets as of June 30



## Historical investment returns

Market, Actuarial and Valuation Rates of Return for Years Ended June 30




| Legend | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ■ Market rate | 17.48% | (6.86%) | (21.86%) | 15.33% | 24.34% | 1.49% | 13.51% | 18.06% | 1.98% | 0.49% | 13.10% | 8.83% | 6.70% | 3.52% | 31.33% | (7.37%) | 9.49% | 11.43% |
| ◆ Actuarial rate | 14.06% | 11.01% | 0.17% | 1.41% | 3.89% | 5.72% | 6.97% | 9.32% | 8.60% | 6.51% | 8.03% | 8.62% | 5.61% | 7.10% | 11.30% | 10.99% | 6.50% | 8.61% |
| ▲ Valuation rate | 12.68% | 11.32% | 1.02% | 1.42% | 3.91% | 5.75% | 7.00% | 8.13% | 9.82% | 6.52% | 8.04% | 8.62% | 5.61% | 7.10% | 11.30% | 10.99% | 6.50% | 8.61% |
| ● Assumed rate | 8.00% | 8.00% | 8.00% | 8.00% | 8.00% | 8.00% | 7.75% | 7.75% | 7.75% | 7.50% | 7.50% | 7.50% | 7.25% | 7.25% | 7.25% | 7.00% | 7.00% | 7.00% |

| Average Rates of Return | Market Value | Actuarial Value | Valuation Value |
|---|---|---|---|
| Most recent five-year geometric average return | 8.97% | 8.88% | 8.88% |
| Most recent 10-year geometric average return | 7.54% | 8.17% | 8.30% |
| Most recent 15-year geometric average return | 9.74% | 7.25% | 7.26% |

## C. Actuarial experience

To calculate any actuarially determined contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the actuarially determined contribution will decrease from the previous year. On the other hand, the actuarially determined contribution will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

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

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years. The changes in actuarial assumptions based on the experience study performed earlier this year are reflected in this valuation.

The actuarial experience for the year can be found below and a discussion of the major components can be found on the following pages.

### Actuarial Experience for Year Ended June 30, 2024

| | Source | Amount |
|---|---|---|
| 1. | Net (gain)/loss from investments[1] | $(122,182,000) |
| 2. | Net (gain)/loss from contributions | 19,787,000 |
| 3. | Net (gain)/loss from other experience[2] | (173,184,000) |
| **4.** | **Net experience (gain)/loss** | **$(275,579,000)** |

[1] Details on next page.
[2] See *Subsection E* for further details. Does not include the effect of plan, method or assumption changes, if any.

## Investment experience

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the Plan's investment policy.

For valuation purposes, the assumed rate of return on the valuation value of assets is 7.00% based on the June 30, 2023 valuation. The actual rate of return on a valuation basis for the 2023-2024 plan year was 8.61% after recognizing a portion of this year's investment gain and a portion of prior years' investment gains and losses. Since the actual return for the year was greater than the assumed return, the Plan experienced an actuarial gain during the year ended June 30, 2024 with regard to its investments.

### Investment Experience for Year Ended June 30, 2024

| Line Description | Market Value | Actuarial Value | Valuation Value |
|---|---|---|---|
| 1. Net investment income | $858,090,200 | $651,984,200 | $651,984,200 |
| 2. Average value of assets | 7,506,132,187 | 7,568,659,065 | 7,568,599,739 |
| 3. Rate of return **1 ÷ 2** | 11.43% | 8.61% | 8.61% |
| 4. Assumed rate of return | 7.00% | 7.00% | 7.00% |
| 5. Expected investment income **2 × 4** | 525,429,253 | 529,806,135 | 529,801,982 |
| **6. Investment gain/(loss) 1 − 5** | **$332,660,947** | **$122,178,065** | **$122,182,218** |

## Contributions

Contributions for the year ended June 30, 2024 totaled $256.7 million, compared to the projected amount of $275.8 million. This resulted in a loss of $19.8 million for the year, when adjusted for timing.

## Other experience

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

- Mortality experience (more or fewer than expected deaths)
- The extent of turnover among members
- Retirement experience (earlier or later than projected)
- The number of disability retirements (more or fewer than projected)
- Salary increases (greater or smaller than projected)
- Cost-of-living adjustments (COLAs) higher or lower than anticipated

The net gain from this other experience for the year ended June 30, 2024 amounted to $173.2 million, which is 2.1% of the actuarial accrued liability. See *Section 2, Subsection E* for a detailed development of the unfunded actuarial accrued liability.

## D. Other changes impacting the actuarial accrued liability

The valuation reflects a reallocation of Tier 1 liability for members in pay status between General and Safety when they have both General and Safety service. Previously, all Tier 1 liability for a member in pay status was allocated to the membership class immediately prior to their retirement. For this valuation, additional demographic data for retired members and beneficiaries was provided that allocated the Tier 1 benefit between General and Safety. This refinement has no impact on the average aggregate employer contribution rate; however, it resulted in an increase in the General employer UAAL contribution rate of 0.52% of payroll and corresponding decrease in the Safety employer UAAL contribution rate of 1.98% of payroll.

### Actuarial assumptions and methods

The results of this valuation reflect changes in the actuarial assumptions as recommended by Segal and adopted by the Board of Retirement for the June 30, 2024 valuation. These assumption changes resulted in an increase in the UAAL by $366.8 million, an increase in the average employer rate of 3.91% of payroll, and an increase in the average member rate of 0.94% of payroll. Of the 3.91% of payroll increase in the average employer rate, 1.15% of payroll is due to an increase in the normal cost rate and 2.76% of payroll is due to an increase in the UAAL rate.

Details on actuarial assumptions and methods are in *Section 4, Exhibit 1*.

### Plan provisions

There were no changes in plan provisions since the prior valuation.

A summary of plan provisions is in *Section 4, Exhibit 2*.

# E. Unfunded actuarial accrued liability

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

*($ in '000s)*

| | Line Description | Amount |
|---|---|---|
| 1. | Unfunded actuarial accrued liability at beginning of year | $230,096 |
| 2. | Normal cost at middle of year | 196,440 |
| 3. | Expected employer and member contributions | (275,821) |
| 4. | Interest to end of year | 13,609 |
| **5.** | **Expected unfunded actuarial accrued liability at end of year** | $164,324 |
| **6.** | **Changes due to:** | |
| | a. Investment return greater than expected, after asset smoothing | $(122,182) |
| | b. Actual contributions less than expected under funding policy | 19,787 |
| | c. COLA increases greater than expected | 2,813 |
| | d. Individual salary increases less than expected | (146,439) |
| | e. Other net experience gain[1] | (29,558) |
| | f. Changes in actuarial assumptions | 366,763 |
| | **g. Total changes** | **$91,184** |
| **7.** | **Unfunded actuarial accrued liability at end of year 5 + 6g** | **$255,508** |

**Note:** The sum of items 6c through 6e equals the "Net (gain)/loss from other experience" shown in *Section 2, Subsection C*.

[1] Other differences in actual versus expected experience including (but not limited to) retirement, mortality, disability, termination and in-service redemption experience.

## F. Recommended contribution

The recommended contribution is equal to the employer normal cost payment and a payment on the unfunded actuarial accrued liability. As of June 30, 2024, the average recommended employer contribution is 16.56% of payroll.

The Board sets the funding policy used to calculate the recommended contribution based on layered 15-year amortization periods for gains or losses and plan amendments (20-year periods for changes in actuarial assumptions or methods) as a level percentage of payroll. See *Section 4, Exhibit 1* for further details on the funding policy. Based on this policy, there is no negative amortization and each amortization layer is fully funded in 15 years (or 20 years for changes in actuarial assumptions or methods). As shown in the graphical projection of the UAAL amortization balances and payments found in *Section 3, Exhibit I*, before taking into consideration the deferred investment gains and/or losses that will be recognized in the next several valuations, the UAAL of the Plan is expected to be fully amortized by 2044 assuming all assumptions are realized and contributions are made in accordance with the funding policy.

The current funding policy is intended to fully fund the cost of the benefits and to allocate the cost of benefits reasonably and equitably over time while minimizing the volatility of employer contributions. The recommended contribution is expected to remain level as a percent of payroll, except when any current amortization layer is fully amortized and assuming there are no future actuarial gains or losses. Furthermore, the funded ratio is expected to increase as the UAAL is methodically funded by employer contributions. The recommended contribution under the funding policy is a “Reasonable Actuarially Determined Contribution” as required under Actuarial Standard of Practice No. 4 Measuring Pension Obligations and Determining Pension Plan Costs or Contributions.

## Average Recommended Employer Contribution Calculated as of June 30

*($ in '000s)*

| Line Description | 2024 Amount | 2024 % of Projected Compensation | 2023 Amount | 2023 % of Projected Compensation |
|---|---|---|---|---|
| 1. Total normal cost | $217,928 | 22.83% | $196,440 | 20.88% |
| 2. Expected member normal cost contributions | 110,835 | 11.61% | 101,212 | 10.76% |
| 3. Employer normal cost **1 − 2** | $107,093 | 11.22% | $95,228 | 10.12% |
| 4. Actuarial accrued liability | $8,403,987 | | $7,870,801 | |
| 5. Valuation value of assets | 8,148,479 | | 7,640,705 | |
| 6. Unfunded actuarial accrued liability **4 − 5** | $255,508 | | $230,096 | |
| 7. Payment on UAAL | $50,913 | 5.34% | $79,381 | 8.44% |
| **8. Average recommended employer contribution 3 + 7** | **$158,006** | **16.56%** | **$174,609** | **18.56%** |
| 9. Projected compensation | $954,250 | | $941,042 | |

**Note:** Contributions are assumed to be paid at the middle of the year.

## Reconciliation of average recommended employer contribution rate

### Reconciliation from June 30, 2023 to June 30, 2024

*($ in '000s)*

| Item | | Contribution Rate | Estimated Annual Dollar Amount[1] |
|---|---|---|---|
| 1. | Average recommended employer contribution as of June 30, 2023 | 18.56% | $174,609 |
| **2.** | **Changes due to:** | | |
| a. | Investment return greater than expected after asset smoothing | (1.14%) | $(10,878) |
| b. | Actual contributions less than expected | 0.18% | 1,718 |
| c. | COLA increases greater than expected | 0.03% | 286 |
| d. | Individual salary increases less than expected | (1.37%) | (13,073) |
| e. | Amortizing prior year's UAAL over a smaller than expected total payroll | 0.13% | 1,241 |
| f. | Certain UAAL layers being fully amortized | (3.32%) | (31,681) |
| g. | Change in member demographics amongst tiers on normal cost | (0.05%) | (477) |
| h. | Other net experience gain[2] | (0.37%) | (1,050) |
| i. | Changes in actuarial assumptions | 3.91% | 37,311 |
| **j.** | **Total change** | **(2.00%)** | **$(16,603)** |
| **3.** | **Average recommended employer contribution as of June 30, 2024** 1 + 2j | **16.56%** | **$158,006** |

[1] Based on projected compensation for each year.

[2] Other differences in actual versus expected experience including (but not limited to) retirement, mortality, disability, termination and in-service redemption experience. Estimated annual dollar cost also reflects change in payroll from prior valuation.

## Reconciliation of average recommended member contribution rate

### Reconciliation from June 30, 2023 to June 30, 2024

*($ in '000s)*

| Item | Contribution Rate[1] | Estimated Annual Dollar Amount[2] |
|---|---|---|
| 1. Average recommended member contribution as of June 30, 2023 | 10.76% | $101,212 |
| **2. Changes due to:** | | |
| a. Change in member demographics on normal cost[3] | (0.09%) | $653 |
| b. Changes in actuarial assumptions | 0.94% | 8,970 |
| **c. Total change** | **0.85%** | **$9,623** |
| **3. Average recommended member contribution as of June 30, 2024 1 + 2c** | **11.61%** | **$110,835** |

[1] Average member contribution rates are after reflecting the impact of the cessation of member contribution after 30 years of service for non-PEPRA tiers.
[2] Based on projected compensation for each year.
[3] Estimated annual dollar cost also reflects change in payroll from prior valuation.

## Recommended employer contribution rate

### General — Recommended Employer Contribution Calculated as of June 30

*($ in '000s)*

| Component by Membership Tier | 2024 Basic | 2024 COLA | 2024 Total | 2024 Estimated Annual Amount[1] | 2023 Basic | 2023 COLA | 2023 Total | 2023 Estimated Annual Amount[1] |
|---|---|---|---|---|---|---|---|---|
| **General Tier 1** | | | | | | | | |
| Normal cost[2] | 9.52% | 3.24% | 12.76% | $64 | 8.90% | 2.95% | 11.85% | $162 |
| UAAL[3] | 0.40% | 6.62% | 7.02% | 35 | 3.31% | 5.14% | 8.45% | 116 |
| **Total contribution** | **9.92%** | **9.86%** | **19.78%** | **$99** | **12.21%** | **8.09%** | **20.30%** | **$278** |
| **General Tier 2** | | | | | | | | |
| Normal cost | 8.46% | 0.00% | 8.46% | $13,295 | 7.70% | 0.00% | 7.70% | $12,913 |
| UAAL[3] | 0.40% | 0.00% | 0.40% | 629 | 3.31% | 0.00% | 3.31% | 5,551 |
| **Total contribution** | **8.86%** | **0.00%** | **8.86%** | **$13,924** | **11.01%** | **0.00%** | **11.01%** | **$18,464** |
| **General PEPRA Tier 2** | | | | | | | | |
| Normal cost | 8.35% | 0.00% | 8.35% | $10,659 | 7.74% | 0.00% | 7.74% | $8,645 |
| UAAL[3] | 0.40% | 0.00% | 0.40% | 511 | 3.31% | 0.00% | 3.31% | 3,697 |
| **Total contribution** | **8.75%** | **0.00%** | **8.75%** | **$11,170** | **11.05%** | **0.00%** | **11.05%** | **$12,342** |

[1] Based on projected compensation for each year shown on page 40.

[2] The total General Tier 1 employer rate has been adjusted by 0.00% and 0.01% for June 30, 2024 and June 30, 2023, respectively, to account for the cost associated with the cessation of member contributions after 30 years of service.

[3] Basic UAAL rates have been calculated on a combined basis for all General tiers. COLA UAAL rates have been calculated on a combined basis for all General tiers that have a COLA (excludes General Tier 2 without COLA and General PEPRA Tier 2 without COLA).

## General — Recommended Employer Contribution Calculated as of June 30

*($ in '000s)*

| Component by Membership Tier | 2024 Basic | 2024 COLA | 2024 Total | 2024 Estimated Annual Amount[1] | 2023 Basic | 2023 COLA | 2023 Total | 2023 Estimated Annual Amount[1] |
|---|---|---|---|---|---|---|---|---|
| **General Tier 2 with COLA** | | | | | | | | |
| Normal cost[2] | 8.46% | 1.15% | 9.61% | $16,876 | 7.70% | 0.74% | 8.44% | $17,311 |
| UAAL[3,4] | 0.40% | 6.62% | 7.02% | 12,328 | 3.31% | 5.14% | 8.45% | 17,332 |
| **Total contribution** | **8.86%** | **7.77%** | **16.63%** | **$29,204** | **11.01%** | **5.88%** | **16.89%** | **$34,643** |
| **General PEPRA Tier 2 with COLA** | | | | | | | | |
| Normal cost[2] | 8.35% | 0.96% | 9.31% | $27,200 | 7.74% | 0.65% | 8.39% | $20,842 |
| UAAL[3,4] | 0.40% | 6.62% | 7.02% | 20,510 | 3.31% | 5.14% | 8.45% | 20,991 |
| **Total contribution** | **8.75%** | **7.58%** | **16.33%** | **$47,710** | **11.05%** | **5.79%** | **16.84%** | **$41,833** |
| **All General members[5]** | | | | | | | | |
| Normal cost | 8.40% | 0.64% | 9.04% | $68,094 | 7.72% | 0.43% | 8.15% | $59,873 |
| UAAL | 0.40% | 4.12% | 4.52% | 34,013 | 3.31% | 3.18% | 6.49% | 47,687 |
| **Total contribution** | **8.80%** | **4.76%** | **13.56%** | **$102,107** | **11.03%** | **3.61%** | **14.64%** | **$107,560** |

1 Based on projected compensation for each year shown on page 40.
2 Reflects General Tier 2 member COLA contribution rate of 2.63% based on current bargaining agreements.
3 Basic UAAL rates have been calculated on a combined basis for all General tiers. COLA UAAL rates have been calculated on a combined basis for all General tiers that have a COLA (excludes General Tier 2 without COLA and General PEPRA Tier 2 without COLA).
4 Includes 0.32% in COLA UAAL cost for June 30, 2023, attributed to the first two years of service accrued for the fixed 2% COLA pursuant to Government Code 31627. Note these rates are calculated as a percentage of SEIU only payroll. As of June 30, 2024, the COLA UAAL cost attributed to the first two years of service accrued for the fixed 2% COLA has been fully amortized.
5 These aggregated rates are provided for informational purposes only as we understand that the tier specific rates will be implemented.

## Safety — Recommended Employer Contribution Calculated as of June 30

*($ in '000s)*

| Component by Membership Tier | 2024 Basic | 2024 COLA | 2024 Total | 2024 Estimated Annual Amount[1] | 2023 Basic | 2023 COLA | 2023 Total | 2023 Estimated Annual Amount[1] |
|---|---|---|---|---|---|---|---|---|
| **Safety** | | | | | | | | |
| Normal cost[2] | 14.56% | 5.96% | 20.52% | $25,559 | 12.75% | 5.03% | 17.78% | $24,752 |
| UAAL | 26.84% | (18.44%) | 8.40% | 10,463 | 39.32% | (23.99%) | 15.33% | 21,341 |
| **Total contribution** | **41.40%** | **(12.48%)** | **28.92%** | **$36,022** | **52.07%** | **(18.96%)** | **33.11%** | **$46,093** |
| **Safety PEPRA** | | | | | | | | |
| Normal cost | 12.46% | 5.08% | 17.54% | $13,440 | 11.26% | 4.44% | 15.70% | $10,603 |
| UAAL | 26.84% | (18.44%) | 8.40% | 6,437 | 39.32% | (23.99%) | 15.33% | 10,353 |
| **Total contribution** | **39.30%** | **(13.36%)** | **25.94%** | **$19,877** | **50.58%** | **(19.55%)** | **31.03%** | **$20,956** |
| **All Safety members[3]** | | | | | | | | |
| Normal cost | 13.76% | 5.63% | 19.39% | $38,999 | 12.26% | 4.84% | 17.10% | $35,355 |
| UAAL | 26.84% | (18.44%) | 8.40% | 16,900 | 39.32% | (23.99%) | 15.33% | 31,694 |
| **Total contribution** | **40.60%** | **(12.81%)** | **27.79%** | **$55,899** | **51.58%** | **(19.15%)** | **32.43%** | **$67,049** |

## Total Plan — Recommended Employer Contribution Calculated as of June 30

*($ in '000s)*

| Component by Membership Tier | 2024 Basic | 2024 COLA | 2024 Total | 2024 Estimated Annual Amount[1] | 2023 Basic | 2023 COLA | 2023 Total | 2023 Estimated Annual Amount[1] |
|---|---|---|---|---|---|---|---|---|
| **All categories combined[3]** | | | | | | | | |
| Normal cost | 9.53% | 1.69% | 11.22% | $107,093 | 8.72% | 1.40% | 10.12% | $95,228 |
| UAAL | 5.97% | (0.63%) | 5.34% | 50,913 | 11.22% | (2.78%) | 8.44% | 79,381 |
| **Total contribution** | **15.50%** | **1.06%** | **16.56%** | **$158,006** | **19.94%** | **(1.38%)** | **18.56%** | **$174,609** |

1 Based on projected compensation for each year shown on page 40.
2 The total Safety employer rate has been adjusted by 1.50% and 1.01% for June 30, 2024 and June 30, 2023, respectively, to account for the cost associated with the cessation of member contributions after 30 years of service.
3 These aggregated rates are provided for informational purposes only as we understand that the tier specific rates will be implemented.

The projected compensation that is used to estimate the annual dollar amount shown on the prior pages as of June 30, 2024 and June 30, 2023 are as follows:

### Projected Compensation as of June 30
*($ in '000s)*

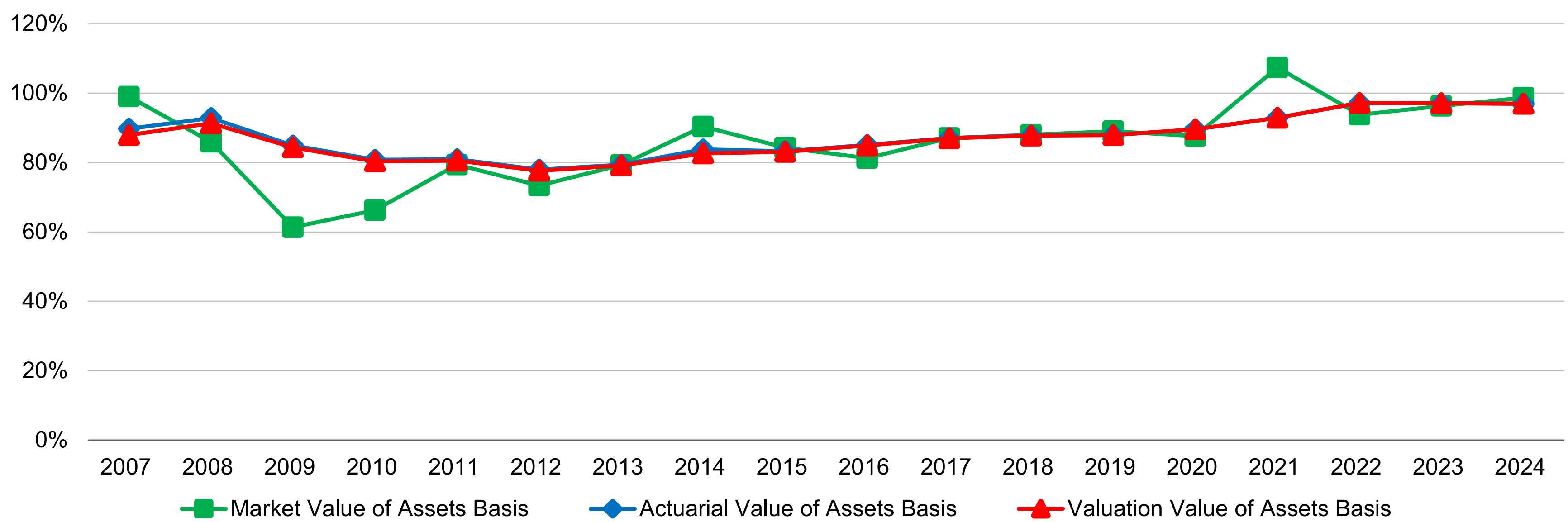
| Membership Tier | 2024 | 2023 |
|---|---|---|
| General Tier 1 | $498 | $1,369 |
| General Tier 2 | 157,151 | 167,702 |
| General PEPRA Tier 2 | 127,649 | 111,697 |
| General Tier 2 with COLA | 175,608 | 205,107 |
| General PEPRA Tier 2 with COLA | 292,164 | 248,418 |
| Safety | 124,555 | 139,212 |
| Safety PEPRA | 76,625 | 67,537 |
| **Total** | **$954,250** | **$941,042** |

## G. Funded status

A commonly reported piece of information regarding the Plan's financial status is the funded ratio. These ratios compare the market, actuarial and valuation value of assets to the actuarial accrued liability of the Plan. Higher ratios indicate a relatively well-funded plan while lower ratios may indicate recent changes to actuarial assumptions, funding of the plan below actuarial requirements, poor asset performance, or a variety of other causes.

The funded status measures shown in this valuation are appropriate for assessing the need for or amount of future contributions. However, they are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligations. As the chart below shows, the measures are different depending on whether the market, actuarial, or valuation value of assets is used.

Funded Ratio as of June 30



## Schedule of Funding Progress

| As of June 30 | Valuation Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (UAAL) (b) − (a) | Funded Ratio (a) ÷ (b) | Projected Compensation (c) | UAAL as a % of Projected Compensation [(b) − (a)] ÷ (c) |
|---|---|---|---|---|---|---|
| 2015 | $4,302,330,000 | $5,178,157,000 | $875,827,000 | 83.09% | $678,705,000 | 129.04% |
| 2016 | 4,585,713,000 | 5,398,756,000 | 813,043,000 | 84.94% | 706,000,000 | 115.16% |
| 2017 | 4,959,070,000 | 5,703,396,000 | 744,326,000 | 86.95% | 744,917,000 | 99.92% |
| 2018 | 5,382,777,000 | 6,129,758,000 | 746,981,000 | 87.81% | 760,815,000 | 98.18% |
| 2019 | 5,664,526,000 | 6,439,388,000 | 774,862,000 | 87.97% | 785,403,000 | 98.66% |
| 2020 | 6,044,036,000 | 6,747,772,000 | 703,736,000 | 89.57% | 803,381,000 | 87.60% |
| 2021 | 6,648,154,000 | 7,154,885,000 | 506,731,000 | 92.92% | 817,636,000 | 61.98% |
| 2022 | 7,279,606,000 | 7,491,327,000 | 211,721,000 | 97.17% | 873,043,000 | 24.25% |
| 2023 | 7,640,705,000 | 7,870,801,000 | 230,096,000 | 97.08% | 941,042,000 | 24.45% |
| 2024 | 8,148,479,000 | 8,403,987,000 | 255,508,000 | 96.96% | 954,250,000 | 26.78% |

## H. Actuarial balance sheet

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

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

### Actuarial Balance Sheet as of June 30

*($ in '000s)*

| Line Description | 2024 | 2023 |
|---|---|---|
| **Liabilities** | | |
| Present value of benefits for retired members and beneficiaries | $5,029,560 | $4,640,127 |
| Present value of benefits for inactive members[1] | 300,307 | 250,638 |
| Present value of benefits for active members | 4,990,802 | 4,645,077 |
| **Total liabilities** | **$10,320,669** | **$9,535,842** |
| **Current and Future Assets** | | |
| Total valuation value of assets | $8,148,479 | $7,640,705 |
| Present value of future contributions by members | 982,121 | 852,021 |
| Present value of future employer contributions for: | | |
| • Entry age normal cost | 934,561 | 813,020 |
| • Unfunded actuarial accrued liability | 255,508 | 230,096 |
| **Total of current and future assets** | **$10,320,669** | **$9,535,842** |

[1] Includes inactive members with member contributions on deposit.

# I. Risk

Because the actuarial valuation results are dependent on a fixed set of assumptions and data as of a specific date, there is risk that emerging results may differ, perhaps significantly, as actual experience is fluid and will not exactly track current assumptions. This potential divergence may have a significant impact on the future financial condition of the plan.

This report does not contain a detailed analysis of the potential range of future measurements, but does include a concise discussion of some of the primary risks that may affect the Plan's future financial condition. We recommend a more detailed assessment of the risks to provide the Board with a better understanding of the risks inherent in the Plan that can inform both financial preparation and future decision making. This assessment would enable us to work with the Board to highlight and illustrate particular risks or potential future outcomes they may be interested in discussing and could include scenario testing, sensitivity testing, stress testing and stochastic modeling.

This section provides descriptions and basic assessments of the primary risks that are likely to have an ongoing influence on the Plan's financial health, as well as a discussion of historical trends and maturity measures:

## Risk assessments

- **Asset/Liability Mismatch Risk** (the potential that future plan experience does not affect asset and liability values in the same way, causing them to diverge)

  The most significant asset/liability mismatch risk to the Plan is investment risk, as discussed below. In fact, investment risk has the potential to impact asset/liability mismatch in two ways. The first is evident in annual valuations; when asset values deviate from assumptions they are typically independent from liability changes. The second can be caused when systemic asset deviations from assumptions may signal the need for an assumption change, which causes liability values and contribution rates to move in the opposite direction from any change in the expected experience of asset growth rates.

  Asset/liability mismatch can also be caused by demographic assumption risk such as longevity, which affects liabilities but has no impact on asset levels. This risk is also discussed below.

- **Investment Risk** (the risk that investment returns will be different than expected)

  The investment return assumption is a long-term, static assumption for valuation purposes even though in reality market experience can be quite volatile in any given year. That volatility can cause significant changes in the financial condition of the Plan, affecting both funded status and contribution rates. The inherent year-to-year volatility is reduced by smoothing through the valuation value of assets, however investment experience can still have a sizable impact. As discussed in *Section 2, Subsection J, Volatility Ratios*, on page 48, a 1% asset gain or loss (relative to the assumed investment return) translates to about 8.7% of one-year's payroll. Since actuarial gains and losses are amortized over 15 years, there would be a 0.8% of payroll decrease/(increase) in the required contribution for each 1% asset gain/(loss).

The year-by-year market value rate of return over the last 10 years has ranged from a low of -7.37% to a high of 31.33%.

- **Longevity Risk** (the risk that mortality experience will be different than expected)

  The actuarial valuation includes current life expectancy assumptions and an expectation of future improvement in life expectancy, which are significant assumptions given the relatively long duration of liabilities for pension plans. Emerging plan experience that does not match these expectations will result in increases or decreases in the actuarially determined contribution over time. This risk can be reduced by using tables appropriate for the Plan (public experience tables) that are weighted by benefit levels, and by using generational mortality projections. The Board has adopted mortality tables based on this methodology.

- **Other Risks**

  In addition to longevity, the valuation includes a variety of other assumptions that are unlikely to match future experience exactly. One example is projected salary scales over time. As salary is central to the determination of benefits paid in retirement, deviations from the projected salary scales could have a material impact on the benefits anticipated for each member. Examples of other demographic assumptions include retirement, termination and disability assumptions, and will likely vary in significance for different groups (for example, disability assumptions are typically more significant for Safety groups).

Some plans also carry significant contribution risk, defined as the potential for actual future contributions deviating from expected future contributions. However, the employers have a proven track-record of making the actuarially determined contributions based on the Board's Actuarial Funding Policy, so contribution risk is minimal.

## Evaluation of historical trends

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

- The funded percentage on the valuation value of assets basis has increased from 83.1% to 97.0%. This is primarily due to contributions made to amortize the UAAL offset to some extent by the adoption of more conservative investment, mortality, and retirement assumptions throughout this time period. For a more detailed history see *Section 2, Subsection G, Funded status* starting on page 41.

- The average geometric investment return on the valuation value of assets over the last 10 years was 8.30%. This includes a high of 11.30% and a low of 5.61%. The average over the last five years is 8.88%. For more details see the *Section 2, Subsection B, Historical investment returns* on page 27.

- Beyond investment experience, the primary source of new UAAL was the strengthening of assumptions through multiple assumption changes. In particular, the assumption changes in 2015 changed the discount rate from 7.75% to 7.50% (as well as various other changes) adding $218 million in unfunded liability. The assumption changes in 2018 changed the discount rate from 7.50% to 7.25% (as well as various other changes) adding $149 million in unfunded liability. The assumption changes in 2021 changed the discount rate from 7.25% to 7.00% (as well as various other changes) adding $115 million in unfunded liability. The assumption changes in 2024 changed the discount rate from 7.00% to 6.75% (as well as various other changes) adding $367 million in unfunded liability. For more details on unfunded liability changes see *Section 3, Exhibit H, Table of Amortization Bases* starting on page 72.
- The plan's funding policy effectively deals with these unfunded liabilities over time. This can be seen most clearly in *Section 3, Exhibit I, Projection of UAAL balances and payments* starting on page 78.

## Maturity measures

In the last 10 years the ratio of members in pay status to active participants has increased from 0.76 to 0.88. An increased ratio indicates that the plan has grown in maturity over time. This is to be expected, but is also informative for understanding plan sensitivity to particular risks. For more details see *Section 2, Subsection A, Member information* on page 19.

As pension plans mature, the cash needed to fulfill benefit obligations will increase over time. Therefore, cash flow projections and analysis should be performed to assure that the Plan's asset allocation is aligned to meet emerging pension liabilities. Over the past year, benefits paid were $144 million more than contributions received. Plans with high levels of negative cash flows may have a need for a larger allocation to income generating assets, which can create a drag on investment return. However, the Plan currently has a low level of negative cash flow and is relatively well funded (at a 97.0% funded ratio). For more details on historical cash flows see *Section 2, Subsection B, Financial information* on page 23.

A further discussion of plan maturity measures and how they relate to changes in assets and liabilities is included in *Section 2, Subsection J, Volatility ratios* on page 48.

## Low-Default-Risk Obligation Measure (LDROM)

In December 2021, the Actuarial Standards Board issued a revision of Actuarial Standard of Practice No. 4 (ASOP 4) *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*. One of the revisions to ASOP 4 requires the disclosure of a Low-Default-Risk Obligation Measure (LDROM) when performing a funding valuation. The LDROM presented in this report is calculated using the same methodology and assumptions used to determine the actuarial accrued liability used for funding, except for the discount rate. The LDROM is required to be calculated using "a discount rate…derived from low-default-risk fixed income securities whose cash flows are reasonably consistent with the pattern of benefits expected to be paid in the future."

The LDROM is a calculation assuming a plan's assets are invested in an all-bond portfolio, generally lowering expected long-term investment returns. The discount rate selected and used for this purpose is the Bond Buyer General Obligation 20-year Municipal Bond Index Rate, published at the end of each week. The last published rate in December of the measurement period, by The Bond Buyer, is 3.93% for use effective June 30, 2024. This is the rate used to determine the discount rate for valuing reported public pension plan liabilities in accordance with Governmental Accounting Standards when plan assets are projected to be insufficient to make projected benefit payments, and the 20-year period reasonably approximates the duration of plan liabilities. The LDROM is not used to determine a plan's funded status or actuarially determined contribution rates. The plan's expected return on assets, currently 6.75%, is used for these calculations.

As of June 30, 2024, the LDROM for the Plan is $12.3 billion.[1] The difference between the Plan's AAL of $8.4 billion and the LDROM can be thought of as the increase in the actuarial accrued liability if the entire portfolio were invested in low-default-risk securities. Alternatively, this difference could also be viewed as representing the expected savings from investing in the Plan's diversified portfolio compared to investing only in low-default-risk securities.

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

[1] For comparison purposes, as of June 30, 2023, the LDROM was $12.4 billion based on a discount rate of 3.65%, while the Plan's actuarial accrued liability was $7.9 billion.

## J. Volatility ratios

Retirement plans are subject to volatility in the level of required contributions. This volatility tends to increase as retirement plans become more mature.

The Asset Volatility Ratio (AVR), which is equal to the market value of assets divided by total projected compensation, provides an indication of the potential contribution volatility for any given level of investment volatility. A higher AVR indicates that the plan is subject to a greater level of contribution volatility. This is a current measurement since it is based on the current level of assets.

The current AVR is about 8.7. This means that a 1% asset gain or loss (relative to the assumed investment return) translates to about 8.7% of one-year's payroll. Since actuarial gains and losses are amortized over 15 years, there would be a 0.8% of payroll decrease/(increase) in the required contribution for each 1% asset gain/(loss).

The Liability Volatility Ratio (LVR), which is equal to the actuarial accrued liability divided by total projected compensation, provides an indication of the longer-term potential for contribution volatility for any given level of investment volatility. This is because, over an extended period of time, the plan's assets should track the plan's liabilities. For example, if a plan is 50% funded on a market value basis, the liability volatility ratio would be double the asset volatility ratio and the plan sponsor should expect contribution volatility to increase over time as the plan becomes better funded.

The LVR also indicates how volatile contributions will be in response to changes in the actuarial accrued liability due to actual experience or to changes in actuarial assumptions. The current total Plan LVR is about 8.8 but is 6.2 for General compared to 18.7 for Safety. This means, for example, that assumption changes will have a greater impact on employer contribution rates for Safety than for General. The total Plan LVR is about 1% higher than the AVR. Therefore, we would expect that contribution volatility will increase over the long term.

## Volatility Ratios

*Asset Volatility Ratio (AVR) versus Liability Volatility Ratio (LVR)*

| As of June 30 | AVR General | AVR Safety | AVR Total | LVR General | LVR Safety | LVR Total |
|---|---|---|---|---|---|---|
| 2015 | 4.8 | 11.4 | 6.4 | 5.6 | 13.8 | 7.6 |
| 2016 | 4.5 | 11.7 | 6.2 | 5.5 | 14.5 | 7.6 |
| 2017 | 4.8 | 12.7 | 6.7 | 5.5 | 14.6 | 7.7 |
| 2018 | 5.1 | 13.6 | 7.1 | 5.9 | 15.2 | 8.1 |
| 2019 | 5.2 | 14.1 | 7.3 | 5.9 | 15.5 | 8.2 |
| 2020 | 5.2 | 14.3 | 7.4 | 6.1 | 15.9 | 8.4 |
| 2021 | 6.7 | 18.3 | 9.4 | 6.4 | 16.4 | 8.8 |
| 2022 | 5.6 | 16.3 | 8.0 | 6.1 | 17.1 | 8.6 |
| 2023 | 5.6 | 16.7 | 8.1 | 5.9 | 17.1 | 8.4 |
| 2024 | 6.0 | 18.7 | 8.7 | 6.2 | 18.7 | 8.8 |

# Section 3: Supplemental Information

## Exhibit A: Table of plan demographics

### Total Plan — Demographics as of June 30

| Demographic Data by Status | 2024 | 2023 | Change |
|---|---|---|---|
| **Active members** | | | |
| • Number | 9,656 | 9,384 | 2.9% |
| • Average age | 44.0 | 44.2 | (0.2) |
| • Average years of service | 10.2 | 10.5 | (0.3) |
| • Total projected compensation[1] | $954,250,417 | $941,042,109 | 1.4% |
| • Average projected compensation | $98,825 | $100,282 | (1.5%) |
| • Account balances | $877,388,828 | $828,051,431 | 6.0% |
| • Total active vested members | 5,929 | 5,952 | (0.4%) |
| **Inactive members[2]** | | | |
| • Number | 4,360 | 4,085 | 6.7% |
| • Average age | 45.6 | 45.6 | 0.0 |
| **Retired members** | | | |
| • Number | 6,487 | 6,278 | 3.3% |
| • Average age | 71.5 | 71.3 | 0.2 |
| • Average monthly benefit[3] | $3,991 | $3,927 | 1.6% |
| **Disabled members** | | | |
| • Number | 816 | 809 | 0.9% |
| • Average age | 68.1 | 67.8 | 0.3 |
| • Average monthly benefit[3] | $4,751 | $4,500 | 5.6% |
| **Beneficiaries** | | | |
| • Number | 1,208 | 1,170 | 3.2% |
| • Average age | 74.6 | 74.1 | 0.5 |
| • Average monthly benefit[3] | $2,447 | $2,340 | 4.6% |

[1] Calculated by increasing annualized bi-weekly compensation as of valuation date by one-half year of inflation and “across the board” salary increases.
[2] Includes inactive members with member contributions on deposit.
[3] Excludes vested fixed supplemental benefit amount.

## General Tier 1 — Demographics as of June 30

| Demographic Data by Status | 2024 | 2023 | Change |
|---|---|---|---|
| **Active members** | | | |
| • Number | 3 | 6 | (50.0%) |
| • Average age | 74.4 | 68.3 | 6.1 |
| • Average years of service | 44.6 | 37.5 | 7.1 |
| • Total projected compensation[1] | $498,080 | $1,369,456 | (63.6%) |
| • Average projected compensation | $166,027 | $228,243 | (27.3%) |
| • Account balances | $1,017,659 | $2,318,471 | (56.1%) |
| • Total active vested members | 3 | 6 | (50.0%) |
| **Inactive members[2]** | | | |
| • Number | 33 | 33 | 0.0% |
| • Average age | 49.8 | 49.0 | 0.8 |
| **Retired members** | | | |
| • Number | 1,004 | 1,050 | (4.4%) |
| • Average age | 79.7 | 79.1 | 0.6 |
| • Average monthly benefit[3] | $5,377 | $5,219 | 3.0% |
| **Disabled members** | | | |
| • Number | 66 | 67 | (1.5%) |
| • Average age | 77.7 | 76.7 | 1.0 |
| • Average monthly benefit[3] | $3,408 | $3,314 | 2.8% |
| **Beneficiaries** | | | |
| • Number | 328 | 328 | 0.0% |
| • Average age | 81.6 | 81.2 | 0.4 |
| • Average monthly benefit[3] | $2,599 | $2,385 | 9.0% |

[1] Calculated by increasing annualized bi-weekly compensation as of valuation date by one-half year of inflation and “across the board” salary increases.
[2] Includes inactive members with member contributions on deposit.
[3] Excludes vested fixed supplemental benefit amount.

## General Tier 2 — Demographics as of June 30

| Demographic Data by Status | 2024 | 2023 | Change |
|---|---|---|---|
| **Active members** | | | |
| • Number | 1,106 | 1,151 | (3.9%) |
| • Average age | 52.2 | 51.9 | 0.3 |
| • Average years of service | 20.2 | 19.7 | 0.5 |
| • Total projected compensation[1] | $157,150,409 | $167,701,403 | (6.3%) |
| • Average projected compensation | $142,089 | $145,701 | (2.5%) |
| • Account balances | $181,044,537 | $173,982,369 | 4.1% |
| • Total active vested members | 1,096 | 1,143 | (4.1%) |
| **Inactive members[2]** | | | |
| • Number | 832 | 857 | (2.9%) |
| • Average age | 53.7 | 53.1 | 0.6 |
| **Retired members** | | | |
| • Number | 2,316 | 2,249 | 3.0% |
| • Average age | 71.3 | 70.9 | 0.4 |
| • Average monthly benefit[3] | $2,674 | $2,590 | 3.2% |
| **Disabled members** | | | |
| • Number | 215 | 222 | (3.2%) |
| • Average age | 70.5 | 69.7 | 0.8 |
| • Average monthly benefit[3] | $1,630 | $1,613 | 1.1% |
| **Beneficiaries** | | | |
| • Number | 336 | 322 | 4.3% |
| • Average age | 74.3 | 73.7 | 0.6 |
| • Average monthly benefit[3] | $1,145 | $1,132 | 1.1% |

1 Calculated by increasing annualized bi-weekly compensation as of valuation date by one-half year of inflation and "across the board" salary increases.
2 Includes inactive members with member contributions on deposit.
3 Excludes vested fixed supplemental benefit amount.

## General Tier 2 w/COLA — Demographics as of June 30

| Demographic Data by Status | 2024 | 2023 | Change |
|---|---|---|---|
| **Active members** | | | |
| • Number | 1,849 | 2,050 | (9.8%) |
| • Average age | 52.2 | 51.8 | 0.4 |
| • Average years of service | 18.3 | 17.8 | 0.5 |
| • Total projected compensation[1] | $175,608,382 | $205,107,544 | (14.4%) |
| • Average projected compensation | $94,975 | $100,052 | (5.1%) |
| • Account balances | $250,797,082 | $256,050,149 | (2.1%) |
| • Total active vested members | 1,800 | 2,000 | (10.0%) |
| **Inactive members[2]** | | | |
| • Number | 1,047 | 1,042 | 0.5% |
| • Average age | 50.5 | 49.8 | 0.7 |
| **Retired members** | | | |
| • Number | 2,001 | 1,890 | 5.9% |
| • Average age | 70.0 | 69.8 | 0.2 |
| • Average monthly benefit[3] | $2,234 | $2,158 | 3.5% |
| **Disabled members** | | | |
| • Number | 97 | 95 | 2.1% |
| • Average age | 64.8 | 65.3 | (0.5) |
| • Average monthly benefit[3] | $1,784 | $1,717 | 3.9% |
| **Beneficiaries** | | | |
| • Number | 165 | 152 | 8.6% |
| • Average age | 70.6 | 70.1 | 0.5 |
| • Average monthly benefit[3] | $1,165 | $1,140 | 2.2% |

1 Calculated by increasing annualized bi-weekly compensation as of valuation date by one-half year of inflation and "across the board" salary increases.
2 Includes inactive members with member contributions on deposit.
3 Excludes vested fixed supplemental benefit amount.

## General PEPRA Tier 1 — Demographics as of June 30

| Demographic Data by Status | 2024 | 2023 | Change |
|---|---|---|---|
| **Active members** | | | |
| • Number | 0 | 0 | N/A |
| • Average age | N/A | N/A | N/A |
| • Average years of service | N/A | N/A | N/A |
| • Total projected compensation[1] | N/A | N/A | N/A |
| • Average projected compensation | N/A | N/A | N/A |
| • Account balances | N/A | N/A | N/A |
| • Total active vested members | 0 | 0 | N/A |
| **Inactive members[2]** | | | |
| • Number | 2 | 2 | 0.0% |
| • Average age | 49.0 | 48.0 | 1.0 |
| **Retired members** | | | |
| • Number | 0 | 0 | N/A |
| • Average age | N/A | N/A | N/A |
| • Average monthly benefit[3] | N/A | N/A | N/A |
| **Disabled members** | | | |
| • Number | 0 | 0 | N/A |
| • Average age | N/A | N/A | N/A |
| • Average monthly benefit[3] | N/A | N/A | N/A |
| **Beneficiaries** | | | |
| • Number | 0 | 0 | N/A |
| • Average age | N/A | N/A | N/A |
| • Average monthly benefit[3] | N/A | N/A | N/A |

[1] Calculated by increasing annualized bi-weekly compensation as of valuation date by one-half year of inflation and “across the board” salary increases.
[2] Includes inactive members with member contributions on deposit.
[3] Excludes vested fixed supplemental benefit amount.

## General PEPRA Tier 2 — Demographics as of June 30

| Demographic Data by Status | 2024 | 2023 | Change |
|---|---|---|---|
| **Active members** | | | |
| • Number | 1,194 | 1,091 | 9.4% |
| • Average age | 42.9 | 42.6 | 0.3 |
| • Average years of service | 5.0 | 4.5 | 0.5 |
| • Total projected compensation[1] | $127,649,737 | $111,697,421 | 14.3% |
| • Average projected compensation | $106,909 | $102,381 | 4.4% |
| • Account balances | $42,369,068 | $33,084,501 | 28.1% |
| • Total active vested members | 586 | 492 | 19.1% |
| **Inactive members[2]** | | | |
| • Number | 644 | 594 | 8.4% |
| • Average age | 42.2 | 41.5 | 0.7 |
| **Retired members** | | | |
| • Number | 35 | 25 | 40.0% |
| • Average age | 68.1 | 68.3 | (0.2) |
| • Average monthly benefit[3] | $942 | $855 | 10.2% |
| **Disabled members** | | | |
| • Number | 1 | 1 | 0.0% |
| • Average age | 57.7 | 56.7 | 1.0 |
| • Average monthly benefit[3] | $3,661 | $3,661 | 0.0% |
| **Beneficiaries** | | | |
| • Number | 0 | 0 | N/A |
| • Average age | N/A | N/A | N/A |
| • Average monthly benefit[3] | N/A | N/A | N/A |

[1] Calculated by increasing annualized bi-weekly compensation as of valuation date by one-half year of inflation and "across the board" salary increases.
[2] Includes inactive members with member contributions on deposit.
[3] Excludes vested fixed supplemental benefit amount.

## General PEPRA Tier 2 w/COLA — Demographics as of June 30

| Demographic Data by Status | 2024 | 2023 | Change |
|---|---|---|---|
| **Active members** | | | |
| • Number | 3,952 | 3,530 | 12.0% |
| • Average age | 39.6 | 39.4 | 0.2 |
| • Average years of service | 3.9 | 3.7 | 0.2 |
| • Total projected compensation[1] | $292,163,752 | $248,418,042 | 17.6% |
| • Average projected compensation | $73,928 | $70,373 | 5.1% |
| • Account balances | $100,848,907 | $78,218,560 | 28.9% |
| • Total active vested members | 1,277 | 1,127 | 13.3% |
| **Inactive members[2]** | | | |
| • Number | 1,373 | 1,146 | 19.8% |
| • Average age | 39.7 | 39.5 | 0.2 |
| **Retired members** | | | |
| • Number | 70 | 45 | 55.6% |
| • Average age | 66.6 | 66.7 | (0.1) |
| • Average monthly benefit[3] | $734 | $733 | 0.1% |
| **Disabled members** | | | |
| • Number | 2 | 1 | 100.0% |
| • Average age | 49.2 | 59.0 | (9.8) |
| • Average monthly benefit[3] | $1,068 | $1,181 | (9.6%) |
| **Beneficiaries** | | | |
| • Number | 0 | 0 | N/A |
| • Average age | N/A | N/A | N/A |
| • Average monthly benefit[3] | N/A | N/A | N/A |

[1] Calculated by increasing annualized bi-weekly compensation as of valuation date by one-half year of inflation and “across the board” salary increases.
[2] Includes inactive members with member contributions on deposit.
[3] Excludes vested fixed supplemental benefit amount.

## Safety — Demographics as of June 30

| Demographic Data by Status | 2024 | 2023 | Change |
|---|---|---|---|
| **Active members** | | | |
| • Number | 810 | 880 | (8.0%) |
| • Average age | 47.1 | 46.6 | 0.5 |
| • Average years of service | 20.9 | 20.4 | 0.5 |
| • Total projected compensation[1] | $124,554,841 | $139,211,711 | (10.5%) |
| • Average projected compensation | $153,771 | $158,195 | (2.8%) |
| • Account balances | $252,235,629 | $246,353,990 | 2.4% |
| • Total active vested members | 806 | 876 | (8.0%) |
| **Inactive members[2]** | | | |
| • Number | 255 | 262 | (2.7%) |
| • Average age | 46.8 | 46.1 | 0.7 |
| **Retired members** | | | |
| • Number | 1,054 | 1,014 | 3.9% |
| • Average age | 67.3 | 67.2 | 0.1 |
| • Average monthly benefit[3] | $9,230 | $9,078 | 1.7% |
| **Disabled members** | | | |
| • Number | 435 | 423 | 2.8% |
| • Average age | 66.3 | 66.0 | 0.3 |
| • Average monthly benefit[3] | $7,179 | $6,837 | 5.0% |
| **Beneficiaries** | | | |
| • Number | 379 | 368 | 3.0% |
| • Average age | 70.4 | 69.7 | 0.7 |
| • Average monthly benefit[3] | $4,026 | $3,851 | 4.5% |

[1] Calculated by increasing annualized bi-weekly compensation as of valuation date by one-half year of inflation and “across the board” salary increases.
[2] Includes inactive members with member contributions on deposit.
[3] Excludes vested fixed supplemental benefit amount.

## Safety PEPRA — Demographics as of June 30

| Demographic Data by Status | 2024 | 2023 | Change |
|---|---|---|---|
| **Active members** | | | |
| • Number | 742 | 676 | 9.8% |
| • Average age | 33.3 | 32.7 | 0.6 |
| • Average years of service | 5.0 | 4.5 | 0.5 |
| • Total projected compensation[1] | $76,625,216 | $67,536,531 | 13.5% |
| • Average projected compensation | $103,268 | $99,906 | 3.4% |
| • Account balances | $49,075,946 | $38,043,389 | 29.0% |
| • Total active vested members | 361 | 308 | 17.2% |
| **Inactive members[2]** | | | |
| • Number | 174 | 149 | 16.8% |
| • Average age | 34.1 | 33.4 | 0.7 |
| **Retired members** | | | |
| • Number | 7 | 5 | 40.0% |
| • Average age | 60.4 | 60.7 | (0.3) |
| • Average monthly benefit[3] | $1,723 | $1,865 | (7.6%) |
| **Disabled members** | | | |
| • Number | 0 | 0 | N/A |
| • Average age | N/A | N/A | N/A |
| • Average monthly benefit[3] | N/A | N/A | N/A |
| **Beneficiaries** | | | |
| • Number | 0 | 0 | N/A |
| • Average age | N/A | N/A | N/A |
| • Average monthly benefit[3] | N/A | N/A | N/A |

[1] Calculated by increasing annualized bi-weekly compensation as of valuation date by one-half year of inflation and “across the board” salary increases.
[2] Includes inactive members with member contributions on deposit.
[3] Excludes vested fixed supplemental benefit amount.

# Exhibit B: Distribution of active members

## Total Plan
## Active Counts & Average Projected Compensation by Age and Years of Service as of June 30, 2024

| Age | Total | 0–4 Years | 5–9 Years | 10–14 Years | 15–19 Years | 20–24 Years | 25–29 Years | 30–34 Years | 35–39 Years | 40 Years and Over |
|---|---|---|---|---|---|---|---|---|---|---|
| Under 25 | 266 | 266 | — | — | — | — | — | — | — | — |
| | $59,686 | $59,686 | — | — | — | — | — | — | — | — |
| 25–29 | 817 | 742 | 75 | — | — | — | — | — | — | — |
| | $72,489 | $70,045 | $96,678 | — | — | — | — | — | — | — |
| 30–34 | 1,366 | 861 | 422 | 83 | — | — | — | — | — | — |
| | $83,396 | $76,688 | $93,270 | $102,780 | — | — | — | — | — | — |
| 35–39 | 1,475 | 626 | 481 | 279 | 89 | — | — | — | — | — |
| | $94,174 | $81,834 | $95,461 | $114,620 | $109,914 | — | — | — | — | — |
| 40–44 | 1,403 | 462 | 309 | 253 | 302 | 77 | — | — | — | — |
| | $104,940 | $84,061 | $99,669 | $120,722 | $122,759 | $129,621 | — | — | — | — |
| 45–49 | 1,241 | 320 | 212 | 164 | 225 | 245 | 74 | 1 | — | — |
| | $108,651 | $84,284 | $100,999 | $110,247 | $121,874 | $123,905 | $140,760 | $177,591 | — | — |
| 50–54 | 1,190 | 246 | 171 | 128 | 194 | 210 | 199 | 41 | 1 | — |
| | $116,636 | $91,478 | $102,118 | $111,757 | $119,279 | $127,054 | $140,522 | $160,088 | $177,624 | — |
| 55–59 | 957 | 200 | 138 | 107 | 160 | 143 | 110 | 76 | 21 | 2 |
| | $110,664 | $92,480 | $97,620 | $111,388 | $115,266 | $116,223 | $137,640 | $113,477 | $140,996 | $115,611 |
| 60–64 | 662 | 119 | 105 | 77 | 118 | 113 | 56 | 44 | 16 | 14 |
| | $106,595 | $90,424 | $104,530 | $106,120 | $108,966 | $108,957 | $115,924 | $107,638 | $142,908 | $140,993 |
| 65–69 | 212 | 44 | 51 | 37 | 24 | 15 | 18 | 11 | 9 | 3 |
| | $104,756 | $95,823 | $103,434 | $106,498 | $99,796 | $92,177 | $114,837 | $140,715 | $112,081 | $125,037 |
| 70 and over | 67 | 12 | 16 | 12 | 9 | 8 | 4 | 2 | 3 | 1 |
| | $101,218 | $101,152 | $105,307 | $83,202 | $93,091 | $115,649 | $93,632 | $125,459 | $144,559 | $62,335 |
| **Total** | **9,656** | **3,898** | **1,980** | **1,140** | **1,121** | **811** | **461** | **175** | **50** | **20** |
| | **$98,825** | **$79,042** | **$97,781** | **$112,690** | **$117,708** | **$121,157** | **$135,475** | **$125,145** | **$137,349** | **$132,128** |

## General Tier 1
## Active Counts & Average Projected Compensation by Age and Years of Service as of June 30, 2024

| Age | Total | 0–4 Years | 5–9 Years | 10–14 Years | 15–19 Years | 20–24 Years | 25–29 Years | 30–34 Years | 35–39 Years | 40 Years and Over |
|---|---|---|---|---|---|---|---|---|---|---|
| Under 25 | — | — | — | — | — | — | — | — | — | — |
| | — | — | — | — | — | — | — | — | — | — |
| 25–29 | — | — | — | — | — | — | — | — | — | — |
| | — | — | — | — | — | — | — | — | — | — |
| 30–34 | — | — | — | — | — | — | — | — | — | — |
| | — | — | — | — | — | — | — | — | — | — |
| 35–39 | — | — | — | — | — | — | — | — | — | — |
| | — | — | — | — | — | — | — | — | — | — |
| 40–44 | — | — | — | — | — | — | — | — | — | — |
| | — | — | — | — | — | — | — | — | — | — |
| 45–49 | — | — | — | — | — | — | — | — | — | — |
| | — | — | — | — | — | — | — | — | — | — |
| 50–54 | — | — | — | — | — | — | — | — | — | — |
| | — | — | — | — | — | — | — | — | — | — |
| 55–59 | — | — | — | — | — | — | — | — | — | — |
| | — | — | — | — | — | — | — | — | — | — |
| 60–64 | — | — | — | — | — | — | — | — | — | — |
| | — | — | — | — | — | — | — | — | — | — |
| 65–69 | 2 | — | — | — | — | — | 1 | — | — | 1 |
| | $217,873 | — | — | — | — | — | $295,562 | — | — | $140,183 |
| 70 and over | 1 | — | — | — | — | — | — | — | — | 1 |
| | $62,335 | — | — | — | — | — | — | — | — | $62,335 |
| **Total** | **3** | **—** | **—** | **—** | **—** | **—** | **1** | **—** | **—** | **2** |
| | **$166,027** | **—** | **—** | **—** | **—** | **—** | **$295,562** | **—** | **—** | **$101,259** |

## General Tier 2
## Active Counts & Average Projected Compensation by Age and Years of Service as of June 30, 2024

| Age | Total | 0–4 Years | 5–9 Years | 10–14 Years | 15–19 Years | 20–24 Years | 25–29 Years | 30–34 Years | 35–39 Years | 40 Years and Over |
|---|---|---|---|---|---|---|---|---|---|---|
| Under 25 | — | — | — | — | — | — | — | — | — | — |
| | — | — | — | — | — | — | — | — | — | — |
| 25–29 | — | — | — | — | — | — | — | — | — | — |
| | — | — | — | — | — | — | — | — | — | — |
| 30–34 | 7 | — | — | 7 | — | — | — | — | — | — |
| | $97,837 | — | — | $97,837 | — | — | — | — | — | — |
| 35–39 | 62 | 3 | 5 | 41 | 13 | — | — | — | — | — |
| | $131,092 | $162,969 | $125,399 | $131,150 | $125,743 | — | — | — | — | — |
| 40–44 | 179 | 5 | 18 | 62 | 70 | 24 | — | — | — | — |
| | $139,641 | $156,513 | $140,597 | $150,969 | $131,776 | $129,088 | — | — | — | — |
| 45–49 | 190 | 12 | 7 | 31 | 61 | 63 | 16 | — | — | — |
| | $139,059 | $164,493 | $178,708 | $145,298 | $138,344 | $134,544 | $111,048 | — | — | — |
| 50–54 | 243 | 9 | 7 | 28 | 64 | 76 | 52 | 6 | 1 | — |
| | $140,884 | $190,413 | $147,719 | $134,625 | $144,228 | $139,501 | $132,023 | $140,351 | $177,624 | — |
| 55–59 | 221 | 5 | 10 | 27 | 54 | 41 | 47 | 28 | 7 | 2 |
| | $148,028 | $166,763 | $155,729 | $145,720 | $143,822 | $146,582 | $160,195 | $141,535 | $127,012 | $115,611 |
| 60–64 | 147 | — | 10 | 14 | 41 | 30 | 18 | 18 | 8 | 8 |
| | $150,652 | — | $178,020 | $150,150 | $142,893 | $155,224 | $144,006 | $135,804 | $185,370 | $153,579 |
| 65–69 | 42 | 1 | 4 | 11 | 6 | 4 | 5 | 7 | 2 | 2 |
| | $135,890 | $219,897 | $142,879 | $112,196 | $149,683 | $117,675 | $120,977 | $152,924 | $201,371 | $117,465 |
| 70 and over | 15 | 1 | 1 | 1 | 4 | 3 | 2 | 1 | 2 | — |
| | $141,239 | $173,959 | $193,530 | $75,246 | $122,951 | $165,734 | $118,446 | $139,257 | $155,348 | — |
| **Total** | **1,106** | **36** | **62** | **222** | **313** | **241** | **140** | **60** | **20** | **12** |
| | **$142,089** | **$171,855** | **$153,956** | **$139,828** | **$139,116** | **$140,295** | **$140,036** | **$140,988** | **$163,155** | **$141,232** |

## General Tier 2 with COLA
## Active Counts & Average Projected Compensation by Age and Years of Service as of June 30, 2024

| Age | Total | 0–4 Years | 5–9 Years | 10–14 Years | 15–19 Years | 20–24 Years | 25–29 Years | 30–34 Years | 35–39 Years | 40 Years and Over |
|---|---|---|---|---|---|---|---|---|---|---|
| Under 25 | — | — | — | — | — | — | — | — | — | — |
| | — | — | — | — | — | — | — | — | — | — |
| 25–29 | — | — | — | — | — | — | — | — | — | — |
| | — | — | — | — | — | — | — | — | — | — |
| 30–34 | 10 | — | 2 | 8 | — | — | — | — | — | — |
| | $71,913 | — | $71,215 | $72,088 | — | — | — | — | — | — |
| 35–39 | 153 | 3 | 14 | 95 | 41 | — | — | — | — | — |
| | $94,463 | $98,329 | $111,334 | $97,017 | $82,503 | — | — | — | — | — |
| 40–44 | 260 | 8 | 23 | 100 | 110 | 19 | — | — | — | — |
| | $97,717 | $88,514 | $95,422 | $104,233 | $93,685 | $93,423 | — | — | — | — |
| 45–49 | 348 | 19 | 21 | 84 | 109 | 98 | 17 | — | — | — |
| | $95,837 | $82,072 | $89,255 | $101,210 | $100,555 | $92,941 | $79,252 | — | — | — |
| 50–54 | 343 | 16 | 12 | 66 | 108 | 87 | 48 | 6 | — | — |
| | $97,616 | $84,415 | $91,450 | $105,634 | $99,044 | $96,561 | $92,183 | $90,002 | — | — |
| 55–59 | 351 | 10 | 9 | 56 | 101 | 84 | 41 | 42 | 8 | — |
| | $94,772 | $85,127 | $80,172 | $98,542 | $99,077 | $93,431 | $93,616 | $86,311 | $106,923 | — |
| 60–64 | 293 | 8 | 12 | 47 | 75 | 81 | 34 | 26 | 7 | 3 |
| | $91,664 | $75,070 | $105,161 | $94,922 | $88,770 | $90,581 | $97,900 | $88,139 | $95,688 | $82,944 |
| 65–69 | 71 | 5 | 2 | 14 | 18 | 11 | 11 | 3 | 7 | — |
| | $91,393 | $87,059 | $116,816 | $101,005 | $83,167 | $82,904 | $97,373 | $106,620 | $86,569 | — |
| 70 and over | 20 | — | — | 6 | 5 | 5 | 2 | 1 | 1 | — |
| | $79,242 | — | — | $73,094 | $69,203 | $85,598 | $68,818 | $111,661 | $122,981 | — |
| **Total** | **1,849** | **69** | **95** | **476** | **567** | **385** | **153** | **78** | **23** | **3** |
| | **$94,975** | **$84,061** | **$95,628** | **$99,837** | **$94,979** | **$93,011** | **$92,469** | **$88,311** | **$98,007** | **$82,944** |

## General PEPRA Tier 2

## Active Counts & Average Projected Compensation by Age and Years of Service as of June 30, 2024

| Age | Total | 0–4 Years | 5–9 Years | 10–14 Years | 15–19 Years | 20–24 Years | 25–29 Years | 30–34 Years | 35–39 Years | 40 Years and Over |
|---|---|---|---|---|---|---|---|---|---|---|
| Under 25 | 36 | 36 | — | — | — | — | — | — | — | — |
| | $60,377 | $60,377 | — | — | — | — | — | — | — | — |
| 25–29 | 116 | 103 | 13 | — | — | — | — | — | — | — |
| | $76,709 | $76,647 | $77,201 | — | — | — | — | — | — | — |
| 30–34 | 200 | 111 | 82 | 7 | — | — | — | — | — | — |
| | $94,977 | $94,946 | $93,948 | $107,522 | — | — | — | — | — | — |
| 35–39 | 218 | 104 | 102 | 12 | — | — | — | — | — | — |
| | $110,352 | $112,030 | $108,309 | $113,172 | — | — | — | — | — | — |
| 40–44 | 173 | 92 | 62 | 18 | 1 | — | — | — | — | — |
| | $117,042 | $119,032 | $111,680 | $123,431 | $151,446 | — | — | — | — | — |
| 45–49 | 120 | 56 | 52 | 12 | — | — | — | — | — | — |
| | $115,272 | $115,902 | $115,978 | $109,274 | — | — | — | — | — | — |
| 50–54 | 107 | 46 | 54 | 7 | — | — | — | — | — | — |
| | $117,470 | $113,290 | $120,145 | $124,309 | — | — | — | — | — | — |
| 55–59 | 108 | 57 | 42 | 8 | 1 | — | — | — | — | — |
| | $116,924 | $119,771 | $110,619 | $125,423 | $151,446 | — | — | — | — | — |
| 60–64 | 67 | 31 | 31 | 5 | — | — | — | — | — | — |
| | $125,572 | $124,791 | $125,205 | $132,700 | — | — | — | — | — | — |
| 65–69 | 34 | 13 | 14 | 7 | — | — | — | — | — | — |
| | $120,955 | $125,397 | $123,716 | $107,183 | — | — | — | — | — | — |
| 70 and over | 15 | 4 | 9 | 2 | — | — | — | — | — | — |
| | $114,796 | $121,681 | $114,905 | $100,537 | — | — | — | — | — | — |
| **Total** | **1,194** | **653** | **461** | **78** | **2** | **—** | **—** | **—** | **—** | **—** |
| | **$106,909** | **$103,711** | **$109,525** | **$117,079** | **$151,446** | **—** | **—** | **—** | **—** | **—** |

## General PEPRA Tier 2 with COLA
## Active Counts & Average Projected Compensation by Age and Years of Service as of June 30, 2024

| Age | Total | 0–4 Years | 5–9 Years | 10–14 Years | 15–19 Years | 20–24 Years | 25–29 Years | 30–34 Years | 35–39 Years | 40 Years and Over |
|---|---|---|---|---|---|---|---|---|---|---|
| Under 25 | 165 | 165 | — | — | — | — | — | — | — | — |
| | $52,994 | $52,994 | — | — | — | — | — | — | — | — |
| 25–29 | 520 | 496 | 24 | — | — | — | — | — | — | — |
| | $64,423 | $63,833 | $76,625 | — | — | — | — | — | — | — |
| 30–34 | 872 | 638 | 207 | 27 | — | — | — | — | — | — |
| | $72,806 | $70,708 | $78,863 | $75,950 | — | — | — | — | — | — |
| 35–39 | 798 | 473 | 282 | 43 | — | — | — | — | — | — |
| | $77,459 | $72,976 | $83,138 | $89,536 | — | — | — | — | — | — |
| 40–44 | 541 | 336 | 171 | 34 | — | — | — | — | — | — |
| | $77,611 | $71,938 | $86,698 | $87,969 | — | — | — | — | — | — |
| 45–49 | 370 | 225 | 119 | 26 | — | — | — | — | — | — |
| | $77,586 | $72,078 | $86,770 | $83,216 | — | — | — | — | — | — |
| 50–54 | 263 | 158 | 86 | 19 | — | — | — | — | — | — |
| | $79,309 | $76,547 | $83,623 | $82,746 | — | — | — | — | — | — |
| 55–59 | 209 | 120 | 74 | 15 | — | — | — | — | — | — |
| | $77,502 | $73,494 | $82,878 | $83,045 | — | — | — | — | — | — |
| 60–64 | 139 | 79 | 49 | 11 | — | — | — | — | — | — |
| | $76,957 | $78,101 | $73,117 | $85,845 | — | — | — | — | — | — |
| 65–69 | 59 | 25 | 30 | 4 | — | — | — | — | — | — |
| | $82,694 | $77,234 | $85,404 | $96,493 | — | — | — | — | — | — |
| 70 and over | 16 | 7 | 6 | 3 | — | — | — | — | — | — |
| | $80,871 | $79,021 | $76,207 | $94,515 | — | — | — | — | — | — |
| **Total** | **3,952** | **2,722** | **1,048** | **182** | **—** | **—** | **—** | **—** | **—** | **—** |
| | **$73,928** | **$69,798** | **$82,716** | **$85,093** | **—** | **—** | **—** | **—** | **—** | **—** |

## Safety
## Active Counts & Average Projected Compensation by Age and Years of Service as of June 30, 2024

| Age | Total | 0–4 Years | 5–9 Years | 10–14 Years | 15–19 Years | 20–24 Years | 25–29 Years | 30–34 Years | 35–39 Years | 40 Years and Over |
|---|---|---|---|---|---|---|---|---|---|---|
| Under 25 | — | — | — | — | — | — | — | — | — | — |
| | — | — | — | — | — | — | — | — | — | — |
| 25–29 | — | — | — | — | — | — | — | — | — | — |
| | — | — | — | — | — | — | — | — | — | — |
| 30–34 | 17 | — | 2 | 15 | — | — | — | — | — | — |
| | $143,074 | — | $132,984 | $144,419 | — | — | — | — | — | — |
| 35–39 | 108 | 4 | 5 | 64 | 35 | — | — | — | — | — |
| | $138,815 | $143,407 | $123,866 | $141,156 | $136,145 | — | — | — | — | — |
| 40–44 | 196 | 3 | 6 | 33 | 120 | 34 | — | — | — | — |
| | $144,799 | $146,982 | $136,438 | $144,242 | $143,777 | $150,227 | — | — | — | — |
| 45–49 | 201 | — | 9 | 11 | 55 | 84 | 41 | 1 | — | — |
| | $155,771 | — | $160,680 | $145,434 | $145,859 | $152,049 | $177,859 | $177,591 | — | — |
| 50–54 | 213 | 2 | 7 | 7 | 22 | 47 | 99 | 29 | — | — |
| | $165,243 | $156,009 | $155,302 | $150,172 | $146,033 | $163,371 | $168,422 | $178,673 | — | — |
| 55–59 | 58 | — | 1 | 1 | 4 | 18 | 22 | 6 | 6 | — |
| | $166,646 | — | $143,441 | $216,633 | $129,493 | $153,435 | $171,497 | $172,698 | $202,740 | — |
| 60–64 | 14 | — | 2 | — | 2 | 2 | 4 | — | 1 | 3 |
| | $153,495 | — | $143,862 | — | $170,818 | $159,163 | $142,763 | — | $133,757 | $165,479 |
| 65–69 | 3 | — | 1 | — | — | — | 1 | 1 | — | — |
| | $142,955 | — | $175,812 | — | — | — | $95,518 | $157,535 | — | — |
| 70 and over | — | — | — | — | — | — | — | — | — | — |
| | — | — | — | — | — | — | — | — | — | — |
| **Total** | **810** | **9** | **33** | **131** | **238** | **185** | **167** | **37** | **7** | **3** |
| | **$153,771** | **$147,399** | **$146,792** | **$143,724** | **$143,331** | **$154,802** | **$170,093** | **$177,103** | **$192,885** | **$165,479** |

## Safety PEPRA
## Active Counts & Average Projected Compensation by Age and Years of Service as of June 30, 2024

| Age | Total | 0–4 Years | 5–9 Years | 10–14 Years | 15–19 Years | 20–24 Years | 25–29 Years | 30–34 Years | 35–39 Years | 40 Years and Over |
|---|---|---|---|---|---|---|---|---|---|---|
| Under 25 | 65 | 65 | — | — | — | — | — | — | — | — |
| | $76,293 | $76,293 | — | — | — | — | — | — | — | — |
| 25–29 | 181 | 143 | 38 | — | — | — | — | — | — | — |
| | $92,959 | $86,834 | $116,006 | — | — | — | — | — | — | — |
| 30–34 | 260 | 112 | 129 | 19 | — | — | — | — | — | — |
| | $106,157 | $92,662 | $115,684 | $121,031 | — | — | — | — | — | — |
| 35–39 | 136 | 39 | 73 | 24 | — | — | — | — | — | — |
| | $113,708 | $94,928 | $118,070 | $130,958 | — | — | — | — | — | — |
| 40–44 | 54 | 18 | 29 | 6 | 1 | — | — | — | — | — |
| | $115,035 | $99,023 | $120,831 | $131,114 | $138,705 | — | — | — | — | — |
| 45–49 | 12 | 8 | 4 | — | — | — | — | — | — | — |
| | $101,136 | $91,215 | $120,979 | — | — | — | — | — | — | — |
| 50–54 | 21 | 15 | 5 | 1 | — | — | — | — | — | — |
| | $116,940 | $121,432 | $112,842 | $70,063 | — | — | — | — | — | — |
| 55–59 | 10 | 8 | 2 | — | — | — | — | — | — | — |
| | $143,500 | $145,582 | $135,173 | — | — | — | — | — | — | — |
| 60–64 | 2 | 1 | 1 | — | — | — | — | — | — | — |
| | $151,585 | $121,436 | $181,734 | — | — | — | — | — | — | — |
| 65–69 | 1 | — | — | 1 | — | — | — | — | — | — |
| | $155,927 | — | — | $155,927 | — | — | — | — | — | — |
| 70 and over | — | — | — | — | — | — | — | — | — | — |
| | — | — | — | — | — | — | — | — | — | — |
| **Total** | **742** | **409** | **281** | **51** | **1** | **—** | **—** | **—** | **—** | **—** |
| | **$103,268** | **$90,651** | **$117,277** | **$126,574** | **$138,705** | **—** | **—** | **—** | **—** | **—** |

# Exhibit C: Reconciliation of member data

| Line Description | Active Members | Inactive Members[1] | Retired Members | Disabled Members | Beneficiaries | Total |
|---|---|---|---|---|---|---|
| Number as of June 30, 2023 | 9,384 | 4,085 | 6,278 | 809 | 1,170 | 21,726 |
| New members | 997 | 140 | 0 | 0 | 82 | 1,219 |
| Terminations with vested rights | (401) | 401 | 0 | 0 | 0 | 0 |
| Contribution refunds | (110) | (85) | 0 | 0 | 0 | (195) |
| Retirements | (262) | (99) | 361 | 0 | 0 | 0 |
| New disabilities | (13) | (1) | (13) | 27 | 0 | 0 |
| Return to work | 72 | (72) | 0 | 0 | 0 | 0 |
| Died with or without beneficiary | (11) | (7) | (139) | (20) | (43) | (220) |
| Data adjustments | 0 | (2) | 0 | 0 | (1) | (3) |
| **Number as of June 30, 2024** | **9,656** | **4,360** | **6,487** | **816** | **1,208** | **22,527** |

[1] Includes inactive members with member contributions on deposit.

# Exhibit D: Summary of income and expenses on a market value basis

## Statement of Income and Expenses for Years Ended June 30

| Line Description | 2024 | 2023 |
|---|---|---|
| **Contribution income** | | |
| • Employer contributions | $158,646,253 | $178,532,352 |
| • Member contributions | 98,046,019 | 93,974,033 |
| – **Net contribution income** | **$256,692,272** | **$272,506,385** |
| **Investment income** | | |
| • Investment, dividends, asset appreciation, and other income | $934,636,653 | $717,852,770 |
| • Less investment and administrative fees | (73,567,646) | (53,692,010) |
| • Less other expenses | (2,978,807) | (2,424,730) |
| – **Net investment income** | **$858,090,200** | **$661,736,030** |
| **Total income available for benefits** | **$1,114,782,472** | **$934,242,415** |
| **Less benefit payments** | | |
| • Benefits paid | $(393,023,628) | $(372,642,831) |
| • Member refunds | (7,879,966) | (8,694,127) |
| – **Net benefit payments** | **$(400,903,594)** | **$(381,336,958)** |
| **Change in market value of assets** | **$713,878,878** | **$552,905,457** |
| **Net assets at market value at the beginning of the year** | **$7,578,237,848** | **$7,025,332,391** |
| **Net assets at market value at the end of the year** | **$8,292,116,726** | **$7,578,237,848** |

**Note:** Results may not total due to rounding.

## Exhibit E: Summary statement of plan assets

### Statement of Plan Assets as of June 30

| Line Description | 2024 | 2023 |
|---|---|---|
| Cash equivalents | $151,726,606 | $150,194,748 |
| Cash collateral on loaned securities | 35,297,921 | 56,543,781 |
| Capital assets, net of accumulated depreciation and amortization | 6,079,906 | 7,832,454 |
| **Accounts receivable** | | |
| • Securities sold | $6,199,264 | $11,886,317 |
| • Member and employer contributions | 5,991,206 | 4,174,625 |
| • Accrued interest and dividends | 5,835,431 | 4,988,657 |
| • Others | 306,716 | 210,692 |
| – **Total accounts receivable** | **$18,332,617** | **$21,260,292** |
| **Investments** | | |
| • Equities | $5,769,806,387 | $5,292,586,940 |
| • Fixed income | 1,448,467,772 | 1,240,938,850 |
| • Other assets | 929,806,397 | 892,556,771 |
| – **Total investments at market value** | **$8,148,080,556** | **$7,426,082,560** |
| **Total assets** | **$8,359,517,606** | **$7,661,913,835** |
| **Liabilities** | | |
| • Collateral held for loaned securities | $(35,297,921) | $(56,543,781) |
| • Security purchases | (23,291,570) | (18,259,991) |
| • Account payable | (7,551,608) | (7,405,974) |
| • Others | (1,259,781) | (1,466,240) |
| **Total liabilities** | **$(67,400,880)** | **$(83,675,986)** |
| **Net assets at market value** | **$8,292,116,726** | **$7,578,237,848** |
| **Net assets at actuarial value** | **$8,148,537,604** | **$7,640,764,726** |
| **Net assets at valuation value** | **$8,148,478,719** | **$7,640,704,958** |

**Note:** Results may not total due to rounding.

# Exhibit F: Summary of reported reserve information

## Reserve Information as of June 30

| Line Description | 2024 | 2023 |
|---|---|---|
| **Used in development of valuation value of assets** | | |
| • Member contributions reserve | $1,012,828,410 | $947,972,132 |
| • Employer advance reserve | 4,442,564,725 | 4,175,176,136 |
| • Offset: Interest crediting shortfall tracking account (Contra reserve) | (1,335,745,730) | (1,337,601,703) |
| • Retiree reserve | 3,861,561,532 | 3,685,528,043 |
| • Supplemental death benefit reserve | 19,195,610 | 18,594,756 |
| • Vested fixed supplemental ($108.44) reserve | 148,074,172 | 151,035,594 |
| • Undistributed earnings | 0 | 0 |
| – **Valuation value of assets** | **$8,148,478,719** | **$7,640,704,958** |
| **Not used in development of valuation value of assets** | | |
| • Non-vested supplemental ($27.50) reserve | $58,885 | $59,768 |
| • Contingency reserve | 0 | 0 |
| – **Subtotal** | **$58,885** | **$59,768** |
| **Actuarial value of assets** | **$8,148,537,604** | **$7,640,764,726** |
| • Market stabilization reserve | 143,579,122 | (62,526,878) |
| **Gross market value of assets** | **$8,292,116,726** | **$7,578,237,848** |

**Note:** Results may not total due to rounding.

# Exhibit G: Development of the Plan through June 30, 2024

| Year Ended June 30 | Employer Contributions | Member Contributions | Net Investment Return[1] | Benefit Payments | Market Value of Assets at Year-End | Valuation Value of Assets at Year-End | Valuation Value as a Percent of Market Value |
|---|---|---|---|---|---|---|---|
| 2015 | $175,099,550 | $63,678,770 | $84,826,217 | $233,695,213 | $4,364,795,188 | $4,302,330,424 | 98.57% |
| 2016 | 177,709,688 | 69,469,771 | 21,265,100 | 246,403,038 | 4,386,836,709 | 4,585,712,958 | 104.53% |
| 2017 | 190,759,001 | 72,394,542 | 575,001,597 | 260,745,073 | 4,964,246,776 | 4,959,070,151 | 99.90% |
| 2018 | 197,682,857 | 74,044,246 | 438,207,040 | 277,718,396 | 5,396,462,523 | 5,382,777,075 | 99.75% |
| 2019 | 199,932,498 | 75,157,256 | 360,926,420 | 297,118,538 | 5,735,360,159 | 5,664,526,062 | 98.76% |
| 2020 | 214,587,909 | 79,242,637 | 201,285,517 | 315,624,151 | 5,914,852,070 | 6,044,035,808 | 102.18% |
| 2021 | 178,662,058 | 79,620,088 | 1,841,384,342 | 332,965,261 | 7,681,553,297 | 6,648,153,534 | 86.55% |
| 2022 | 178,688,292 | 84,698,789 | (562,510,261) | 357,097,727 | 7,025,332,391 | 7,279,605,840 | 103.62% |
| 2023 | 178,532,352 | 93,974,033 | 661,736,030 | 381,336,958 | 7,578,237,848 | 7,640,704,958 | 100.82% |
| 2024 | 158,646,253 | 98,046,019 | 858,090,200 | 400,903,594 | 8,292,116,726 | 8,148,478,719 | 98.27% |

**Note:** Results may not total due to rounding.

[1] On a market value basis, net of investment fees and administrative and other expenses.

# Exhibit H: Table of amortization bases

## Total Plan
*($ in '000s)*

| Base Type | Date Established: June 30 | Initial Amount | Initial Period | Outstanding Balance | Years Remaining | Annual Payment |
|---|---|---|---|---|---|---|
| Actuarial loss | 2006 | $1,358 | 15 | $0 | 0 [1] | $0 |
| Assumption change | 2006 | 102,790 | 15 | 0 | 0 [1] | 0 |
| Plan provision change | 2006 | 14,731 | 15 | 0 | 0 [1] | 0 |
| Actuarial gain | 2007 | (96,898) | 15 | 0 | 0 [1] | 0 |
| Actuarial gain | 2008 | (75,365) | 15 | 0 | 0 [1] | 0 |
| Actuarial loss | 2009 | 204,600 | 15 | 0 | 0 | 0 |
| Assumption change | 2009 | 91,252 | 15 | 0 | 0 | 0 |
| Actuarial loss | 2010 | 206,081 | 15 | 28,675 | 1 | 29,706 |
| Actuarial loss | 2011 | 38,155 | 15 | 10,008 | 2 | 5,276 |
| Actuarial loss | 2012 | 4,258 | 15 | 1,584 | 3 | 567 |
| Demographic assumption change | 2012 | 123,037 | 20 | 90,619 | 8 | 13,255 |
| Economic assumption change | 2012 | 104,278 | 20 | 76,787 | 8 | 11,232 |
| Actuarial loss | 2013 | 15,435 | 15 | 7,205 | 4 | 1,967 |
| Actuarial gain | 2014 | (87,484) | 15 | (57,860) | 8 [1] | (8,463) |
| Actuarial gain | 2015 | (109,606) | 15 | (76,166) | 8 [1] | (11,141) |
| Assumption change | 2015 | 218,002 | 20 | 186,563 | 11 | 20,876 |
| Actuarial gain | 2016 | (453) | 15 | (323) | 7 | (53) |
| Actuarial loss | 2017 | 2,730 | 15 | 2,044 | 8 | 299 |
| Actuarial gain | 2018 | (64,335) | 15 | (51,601) | 9 | (6,824) |
| Assumption change | 2018 | 148,510 | 20 | 138,456 | 14 | 12,793 |

[1] Reflects the adjustment to UAAL amortization periods made in 2020.

| Base Type | Date Established: June 30 | Initial Amount | Initial Period | Outstanding Balance | Years Remaining | Annual Payment |
|---|---|---|---|---|---|---|
| Actuarial loss | 2019 | $120,814 | 15 | $102,427 | 10 | $12,398 |
| Actuarial gain | 2020 | (17,088) | 15 | (15,168) | 11 | (1,697) |
| Actuarial gain | 2021 | (258,945) | 15 | (238,530) | 12 | (24,879) |
| Assumption change | 2021 | 114,803 | 20 | 112,176 | 17 | 8,962 |
| Actuarial gain | 2022 | (238,606) | 15 | (227,143) | 13 | (22,233) |
| Actuarial loss | 2023 | 73,221 | 15 | 71,606 | 14 | 6,616 |
| Plan provision change | 2023 | 3,026 | 15 | 2,965 | 14 | 274 |
| Actuarial gain | 2024 | (275,579) | 15 | (275,579) | 15 | (24,157) |
| Reallocation of Tier 1 benefits | 2024 | 0 | 15 | 0 | 15 | 0 |
| Assumption change | 2024 | 366,763 | 20 | 366,763 | 20 | 26,124 |
| **Total** | | | | **$255,508** | | **$50,898** |

## General
*($ in '000s)*

| Base Type | Date Established: June 30 | Initial Amount | Initial Period | Outstanding Balance | Years Remaining | Annual Payment |
|---|---|---|---|---|---|---|
| Actuarial gain | 2006 | $(2,060) | 15 | $0 | 0 [1] | $0 |
| Assumption change | 2006 | 60,623 | 15 | 0 | 0 [1] | 0 |
| Plan provision change | 2006 | 14,731 | 15 | 0 | 0 [1] | 0 |
| Actuarial gain | 2007 | (59,409) | 15 | 0 | 0 [1] | 0 |
| Actuarial gain | 2008 | (52,922) | 15 | 0 | 0 [1] | 0 |
| Actuarial loss | 2009 | 126,443 | 15 | 0 | 0 | 0 |
| Assumption change | 2009 | 41,270 | 15 | 0 | 0 | 0 |
| Actuarial loss | 2010 | 97,633 | 15 | 13,583 | 1 | 14,071 |
| Actuarial loss | 2011 | 29,276 | 15 | 7,677 | 2 | 4,047 |
| Actuarial loss | 2012 | 11,759 | 15 | 4,358 | 3 | 1,559 |
| Demographic assumption change | 2012 | 67,524 | 20 | 49,724 | 8 | 7,273 |
| Economic assumption change | 2012 | 52,391 | 20 | 38,592 | 8 | 5,645 |
| Actuarial loss | 2013 | 7,847 | 15 | 3,653 | 4 | 997 |
| Actuarial gain | 2014 | (33,006) | 15 | (21,836) | 8 [1] | (3,194) |
| Actuarial gain | 2015 | (53,949) | 15 | (37,497) | 8 [1] | (5,485) |
| Assumption change | 2015 | 98,049 | 20 | 83,910 | 11 | 9,389 |
| Actuarial loss | 2016 | 16,609 | 15 | 11,498 | 7 | 1,890 |
| Actuarial loss | 2017 | 12,018 | 15 | 9,016 | 8 | 1,319 |
| Actuarial gain | 2018 | (35,247) | 15 | (28,276) | 9 | (3,739) |
| Assumption change | 2018 | 115,204 | 20 | 107,413 | 14 | 9,925 |
| Actuarial loss | 2019 | 71,837 | 15 | 60,904 | 10 | 7,372 |
| Actuarial loss | 2020 | 9,439 | 15 | 8,367 | 11 | 937 |

[1] Reflects the adjustment to UAAL amortization periods made in 2020.

| Base Type | Date Established: June 30 | Initial Amount | Initial Period | Outstanding Balance | Years Remaining | Annual Payment |
|---|---|---|---|---|---|---|
| Actuarial gain | 2021 | $(132,983) | 15 | $(122,501) | 12 | $(12,777) |
| Assumption change | 2021 | 89,164 | 20 | 87,127 | 17 | 6,961 |
| Actuarial gain | 2022 | (183,729) | 15 | (174,902) | 13 | (17,120) |
| Actuarial loss | 2023 | 27,109 | 15 | 26,508 | 14 | 2,449 |
| Plan provision change | 2023 | 3,026 | 15 | 2,965 | 14 | 274 |
| Actuarial gain | 2024 | (170,138) | 15 | (170,138) | 15 | (14,914) |
| Reallocation of Tier 1 benefits | 2024 | 44,875 | 15 | 44,875 | 15 | 3,934 |
| Assumption change | 2024 | 185,220 | 20 | 185,220 | 20 | 13,193 |
| **Subtotal** | | | | **$190,240** | | **$34,006** |

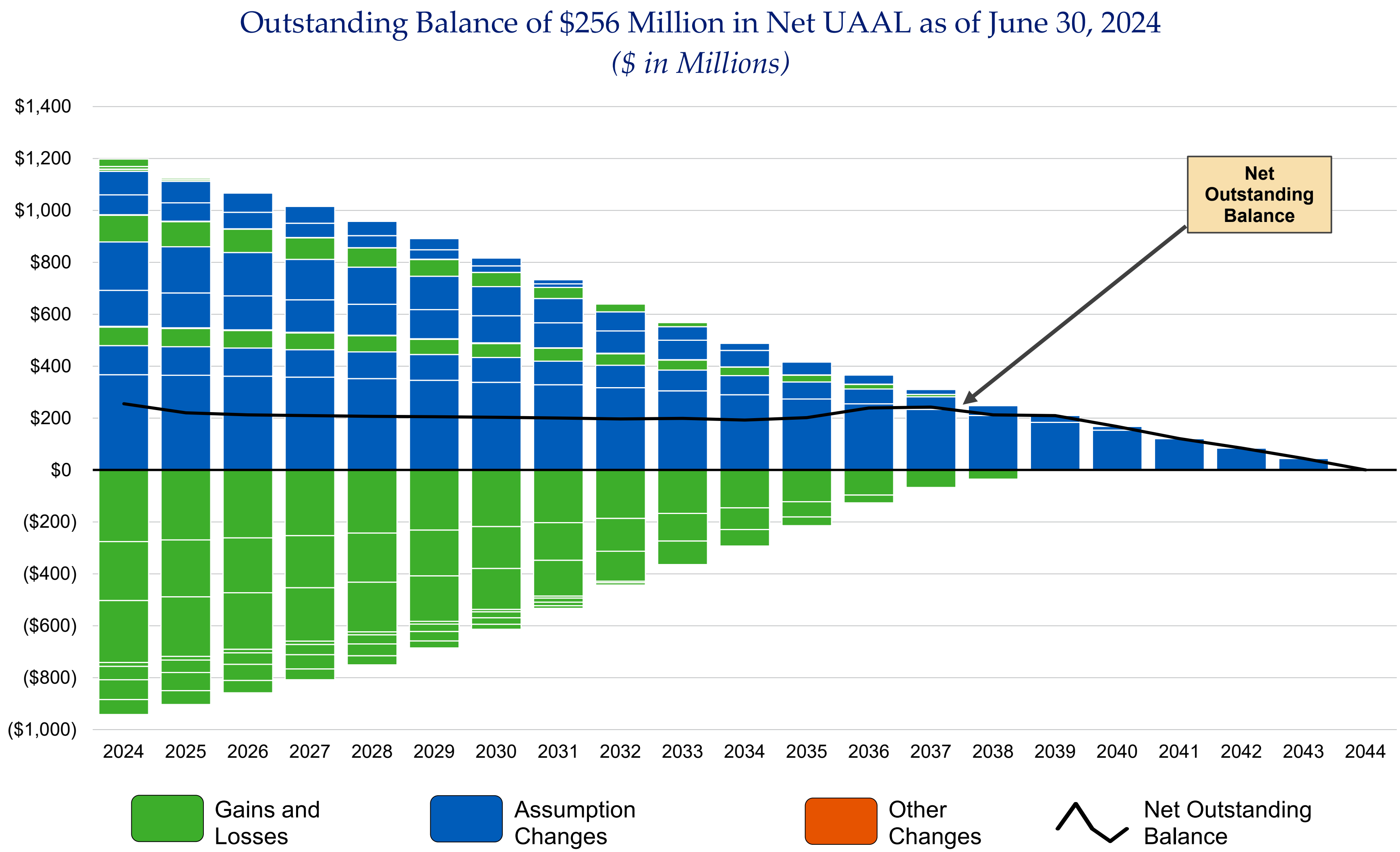
## Safety
*($ in '000s)*

| Base Type | Date Established: June 30 | Initial Amount | Initial Period | Outstanding Balance | Years Remaining | Annual Payment |
|---|---|---|---|---|---|---|
| Actuarial loss | 2006 | $3,418 | 15 | $0 | 0 [1] | $0 |
| Assumption change | 2006 | 42,167 | 15 | 0 | 0 [1] | 0 |
| Actuarial gain | 2007 | (37,489) | 15 | 0 | 0 [1] | 0 |
| Actuarial gain | 2008 | (22,443) | 15 | 0 | 0 [1] | 0 |
| Actuarial loss | 2009 | 78,157 | 15 | 0 | 0 | 0 |
| Assumption change | 2009 | 49,982 | 15 | 0 | 0 | 0 |
| Actuarial loss | 2010 | 108,448 | 15 | 15,092 | 1 | 15,635 |
| Actuarial loss | 2011 | 8,879 | 15 | 2,331 | 2 | 1,229 |
| Actuarial gain | 2012 | (7,501) | 15 | (2,774) | 3 | (992) |
| Demographic assumption change | 2012 | 55,513 | 20 | 40,895 | 8 | 5,982 |
| Economic assumption change | 2012 | 51,887 | 20 | 38,195 | 8 | 5,587 |
| Actuarial loss | 2013 | 7,588 | 15 | 3,552 | 4 | 970 |
| Actuarial gain | 2014 | (54,478) | 15 | (36,024) | 8 [1] | (5,269) |
| Actuarial gain | 2015 | (55,657) | 15 | (38,669) | 8 [1] | (5,656) |
| Assumption change | 2015 | 119,953 | 20 | 102,653 | 11 | 11,487 |
| Actuarial gain | 2016 | (17,062) | 15 | (11,821) | 7 | (1,943) |
| Actuarial gain | 2017 | (9,288) | 15 | (6,972) | 8 | (1,020) |
| Actuarial gain | 2018 | (29,088) | 15 | (23,325) | 9 | (3,085) |
| Assumption change | 2018 | 33,306 | 20 | 31,043 | 14 | 2,868 |
| Actuarial loss | 2019 | 48,977 | 15 | 41,523 | 10 | 5,026 |
| Actuarial gain | 2020 | (26,527) | 15 | (23,535) | 11 | (2,634) |
| Actuarial gain | 2021 | (125,962) | 15 | (116,029) | 12 | (12,102) |

[1] Reflects the adjustment to UAAL amortization periods made in 2020.

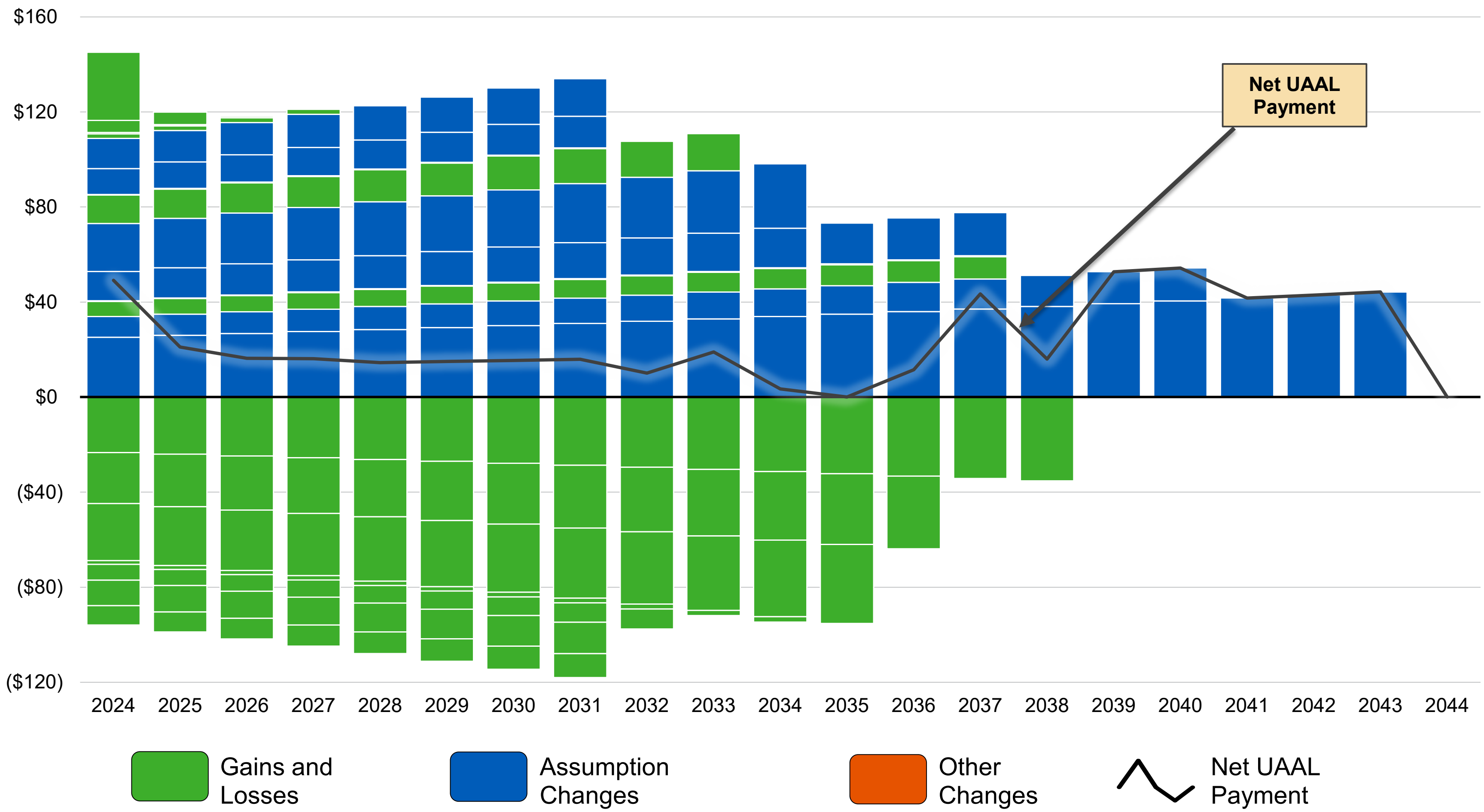
| Base Type | Date Established: June 30 | Initial Amount | Initial Period | Outstanding Balance | Years Remaining | Annual Payment |
|---|---|---|---|---|---|---|
| Assumption change | 2021 | $25,639 | 20 | $25,049 | 17 | $2,001 |
| Actuarial gain | 2022 | (54,877) | 15 | (52,241) | 13 | (5,113) |
| Actuarial loss | 2023 | 46,112 | 15 | 45,098 | 14 | 4,167 |
| Actuarial gain | 2024 | (105,441) | 15 | (105,441) | 15 | (9,243) |
| Reallocation of Tier 1 benefits | 2024 | (44,875) | 15 | (44,875) | 15 | (3,934) |
| Assumption change | 2024 | 181,543 | 20 | 181,543 | 20 | 12,931 |
| **Subtotal** | | | | **$65,268** | | **$16,892** |

## Exhibit I: Projection of UAAL balances and payments



## Annual Payments Required to Amortize $256 Million in Net UAAL as of June 30, 2024

*($ in Millions)*



# Section 4: Actuarial Valuation Basis

## Exhibit 1: Actuarial assumptions, methods and models

### Rationale for assumptions

The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the July 1, 2020 through June 30, 2023 Actuarial Experience Study dated June 5, 2024. Unless otherwise noted, all actuarial assumptions and methods shown below apply to members for all tiers. These assumptions were adopted by the Board.

### Net investment return

6.75%; net of investment and administrative expenses.

Based on the Actuarial Experience Study reference above, expected investment expenses (excluding investment management fees) represent about 0.20% of the actuarial value of assets.

### Member contribution crediting rate

2.50% (actual increase is based on projected long term ten-year Treasury rate).

### Inflation

Increase of 2.50% per year.

### Cost of Living Adjustments (COLA)

Retiree COLA increases of 2.75% are subject to a 3.00% maximum change per year for both PEPRA and non-PEPRA General Tier 1 and both PEPRA and non-PEPRA Safety.

For both PEPRA and non-PEPRA General Tier 2, SEIU members receive a fixed 2% cost-of-living adjustment, not subject to changes in the CPI that applies to future service after March 2003 (members represented by CNA receive a fixed 2% COLA that applies to future service after July 2023).

## Payroll growth

Inflation of 2.50% per year plus “across the board” real salary increases of 0.50% per year, used to amortize the UAAL as a level percentage of payroll.

## Increase in Internal Revenue Code Section 401(a)(17) compensation limit

Increase of 2.50% per year from the valuation date.

## Increase in Section 7522.10 compensation limit

Increase of 2.50% per year from the valuation date.

## Salary increase

The annual rate of compensation increase includes:

- Inflation at 2.50%, plus
- "Across-the-board" salary increase of 0.50% per year, plus
- Merit and promotion increase based on years of service:

### Merit and Promotion Increases (%)

| Years of Service | Non-PEPRA General | PEPRA General | Non-PEPRA Safety | PEPRA Safety |
|---|---|---|---|---|
| Less than 1 | 7.00 | 7.00 | 9.00 | 9.00 |
| 1–2 | 5.25 | 5.50 | 6.25 | 6.25 |
| 2–3 | 4.00 | 4.50 | 4.75 | 5.00 |
| 3–4 | 3.50 | 4.00 | 4.50 | 4.75 |
| 4–5 | 3.00 | 3.50 | 4.25 | 4.50 |
| 5–6 | 2.75 | 3.25 | 4.00 | 4.25 |
| 6–7 | 2.50 | 3.00 | 2.75 | 3.00 |
| 7–8 | 2.40 | 2.75 | 2.25 | 2.25 |
| 8–9 | 2.30 | 2.50 | 2.00 | 2.00 |
| 9–10 | 2.15 | 2.25 | 1.75 | 1.75 |
| 10–11 | 2.00 | 2.00 | 1.70 | 1.70 |
| 11–12 | 1.90 | 1.90 | 1.60 | 1.60 |
| 12–13 | 1.80 | 1.80 | 1.50 | 1.50 |
| 13–14 | 1.70 | 1.70 | 1.40 | 1.40 |
| 14–15 | 1.60 | 1.60 | 1.30 | 1.30 |
| 15–16 | 1.50 | 1.50 | 1.25 | 1.25 |
| 16–17 | 1.40 | 1.40 | 1.25 | 1.25 |
| 17–18 | 1.30 | 1.30 | 1.25 | 1.25 |
| 18–19 | 1.20 | 1.20 | 1.25 | 1.25 |
| 19–20 | 1.10 | 1.10 | 1.25 | 1.25 |
| 20 and over | 1.00 | 1.00 | 1.25 | 1.25 |

## Post-retirement mortality rates

The Pub-2010 mortality tables and adjustments as shown below reflect the mortality experience as of the measurement date. The generational projection is a provision for future mortality improvement.

### Healthy

- **General members:** Pub-2010 General Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates increased by 5% for females, projected generationally with the two-dimensional mortality improvement scale MP-2021.
- **Safety members:** Pub-2010 Safety Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates decreased by 5% for males, projected generationally with the two-dimensional mortality improvement scale MP-2021.

### Disabled

- **General members:** Pub-2010 Non-Safety Disabled Retiree Amount-Weighted Mortality Table (separate tables for males and females) with rates decreased by 5% for males, projected generationally with the two-dimensional mortality improvement scale MP-2021.
- **Safety members:** Pub-2010 Safety Disabled Retiree Amount-Weighted Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2021.

### Beneficiary

- **Beneficiaries not currently in pay status:** Pub-2010 General Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates increased by 5% for females, projected generationally with the two-dimensional mortality improvement scale MP-2021.

- **Beneficiaries in pay status:** Pub-2010 General Contingent Survivor Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates increased by 5%, projected generationally with the two-dimensional mortality improvement scale MP-2021.

## Pre-retirement mortality rates

- **General members:** Pub-2010 General Employee Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2021.
- **Safety members:** Pub-2010 Safety Employee Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2021.

### Pre-Retirement Mortality Rates (%) — Before Generational Projection from 2010

| Age | General Male | General Female | Safety Male | Safety Female |
|---|---|---|---|---|
| 20 | 0.04 | 0.01 | 0.04 | 0.02 |
| 25 | 0.02 | 0.01 | 0.03 | 0.02 |
| 30 | 0.03 | 0.01 | 0.04 | 0.02 |
| 35 | 0.04 | 0.02 | 0.04 | 0.03 |
| 40 | 0.06 | 0.03 | 0.05 | 0.04 |
| 45 | 0.09 | 0.05 | 0.07 | 0.06 |
| 50 | 0.13 | 0.08 | 0.10 | 0.08 |
| 55 | 0.19 | 0.11 | 0.15 | 0.11 |
| 60 | 0.28 | 0.17 | 0.23 | 0.14 |
| 65 | 0.41 | 0.27 | 0.35 | 0.20 |
| 70 | 0.61 | 0.44 | 0.66 | 0.39 |

All pre-retirement deaths are assumed to be non-service-connected.

## Mortality rates for member contributions

- **General members:** Pub-2010 General Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates increased by 5% for females, projected 30 years (from 2010) with the two-dimensional mortality improvement scale MP-2021, weighted 30% male and 70% female.
- **Safety members:** Pub-2010 Safety Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates decreased by 5% for males, projected 30 years (from 2010) with the two-dimensional mortality improvement scale MP-2021, weighted 80% male and 20% female.

## Disability incidence

### Disability Incidence Rates (%)

| Age | General | Safety |
|---|---|---|
| 20 | 0.01 | 0.03 |
| 25 | 0.01 | 0.06 |
| 30 | 0.02 | 0.24 |
| 35 | 0.04 | 0.38 |
| 40 | 0.08 | 0.52 |
| 45 | 0.12 | 0.84 |
| 50 | 0.16 | 1.12 |
| 55 | 0.22 | 2.64 |
| 60 | 0.31 | 6.24 |
| 65 | 0.38 | 0.00 |
| 70 | 0.40 | 0.00 |

50% of General disabilities are assumed to be service-connected (duty) disabilities and the other 50% are assumed to be non-service-connected (ordinary) disabilities.

95% of Safety disabilities are assumed to be service-connected (duty) disabilities and the other 5% are assumed to be non-service connected (ordinary) disabilities.

## Termination

### Termination Rates (%)

| Years of Service | General | Safety |
|---|---|---|
| Less than 1 | 14.00 | 11.00 |
| 1–2 | 10.50 | 6.50 |
| 2–3 | 9.00 | 5.50 |
| 3–4 | 7.00 | 4.50 |
| 4–5 | 6.00 | 4.25 |
| 5–6 | 5.50 | 2.50 |
| 6–7 | 5.00 | 2.25 |
| 7–8 | 4.50 | 2.00 |
| 8–9 | 4.00 | 1.90 |
| 9–10 | 4.00 | 1.80 |
| 10–11 | 4.00 | 1.70 |
| 11–12 | 3.50 | 1.60 |
| 12–13 | 3.50 | 1.50 |
| 13–14 | 3.50 | 1.10 |
| 14–15 | 3.25 | 1.00 |
| 15–16 | 3.25 | 0.95 |
| 16–17 | 3.00 | 0.85 |
| 17–18 | 3.00 | 0.75 |
| 18–19 | 2.50 | 0.50 |
| 19–20 | 2.00 | 0.50 |
| 20 and over | 1.75 | 0.50 |

The greater of a refund of member contributions and a deferred annuity is valued when a member terminates.

No termination is assumed after a member is first assumed to retire.

## Retirement

### Retirement Rates (%)

| Age | Non-PEPRA General Tier 1 and 2: Less than 30 Years of Service | Non-PEPRA General Tier 1 and 2: Greater than 30 Years of Service | Non-PEPRA Safety: Less than 30 Years of Service | Non-PEPRA Safety: Greater than 30 Years of Service | PEPRA General Tier 1 and 2 | PEPRA Safety |
|---|---|---|---|---|---|---|
| Under 45 | 0.00 | 0.00 | 1.50 | 1.50 | 0.00 | 0.00 |
| 46 | 0.00 | 0.00 | 1.50 | 1.50 | 0.00 | 0.00 |
| 47 | 0.00 | 0.00 | 1.50 | 1.50 | 0.00 | 0.00 |
| 48 | 0.00 | 0.00 | 2.00 | 2.00 | 0.00 | 0.00 |
| 49 | 0.00 | 40.00 | 2.00 | 2.00 | 0.00 | 0.00 |
| 50 | 2.00 | 2.00 | 2.25 | 2.25 | 0.00 | 4.00 |
| 51 | 2.25 | 2.25 | 2.25 | 2.50 | 0.00 | 1.75 |
| 52 | 2.75 | 2.75 | 2.25 | 3.00 | 1.50 | 3.25 |
| 53 | 3.00 | 3.00 | 4.50 | 7.00 | 1.50 | 5.50 |
| 54 | 3.25 | 4.00 | 15.00 | 30.00 | 2.00 | 16.00 |
| 55 | 4.50 | 6.00 | 20.00 | 40.00 | 3.00 | 20.00 |
| 56 | 5.00 | 7.00 | 22.00 | 30.00 | 4.00 | 20.00 |
| 57 | 5.50 | 8.00 | 22.00 | 35.00 | 5.00 | 20.00 |
| 58 | 6.00 | 9.00 | 22.00 | 35.00 | 5.50 | 18.00 |
| 59 | 8.00 | 11.00 | 22.00 | 35.00 | 6.00 | 25.00 |
| 60 | 10.00 | 14.00 | 35.00 | 35.00 | 8.00 | 30.00 |
| 61 | 12.50 | 20.00 | 35.00 | 40.00 | 10.00 | 30.00 |
| 62 | 18.00 | 30.00 | 35.00 | 40.00 | 14.00 | 35.00 |
| 63 | 18.00 | 25.00 | 35.00 | 40.00 | 16.00 | 35.00 |
| 64 | 20.00 | 25.00 | 35.00 | 40.00 | 16.00 | 35.00 |
| 65 | 30.00 | 40.00 | 100.00 | 100.00 | 20.00 | 100.00 |
| 66 | 35.00 | 50.00 | 100.00 | 100.00 | 35.00 | 100.00 |
| 67 | 35.00 | 40.00 | 100.00 | 100.00 | 30.00 | 100.00 |
| 68 | 27.50 | 40.00 | 100.00 | 100.00 | 30.00 | 100.00 |
| 69 | 25.00 | 25.00 | 100.00 | 100.00 | 30.00 | 100.00 |
| 70 | 30.00 | 30.00 | 100.00 | 100.00 | 30.00 | 100.00 |
| 71 | 30.00 | 30.00 | 100.00 | 100.00 | 30.00 | 100.00 |
| 72 | 30.00 | 30.00 | 100.00 | 100.00 | 30.00 | 100.00 |
| 73 | 30.00 | 30.00 | 100.00 | 100.00 | 30.00 | 100.00 |
| 74 | 30.00 | 30.00 | 100.00 | 100.00 | 30.00 | 100.00 |
| 75 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

## Inactive members

### Current and Future Inactive Member Assumptions

| Membership and Reciprocity | % of Future[1] Deferred Vested Members | Annual Salary Increases from Separation Date | Retirement Age (Vested) | Retirement Age (Non-Vested) |
|---|---|---|---|---|
| General with reciprocity | 40% | 4.00% | 60 | 60 |
| General without reciprocity | 60% | N/A | 60 | 70 |
| Safety with reciprocity | 60% | 4.25% | 55 | 55 |
| Safety without reciprocity | 40% | N/A | 53 | 70 |

## Future benefit accruals

1.0 year of service per year of employment.

## Unknown data for members

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

## Definition of active members

All active members of VCERA as of the valuation date.

## Form of payment

All active and inactive members are assumed to elect the unmodified option at retirement.

[1] VCERA provides the reciprocity status for current deferred vested members in the valuation census data.

## Spousal assumptions

### Current Active and Inactive Member Spousal Assumptions

| Member Gender | % with Spouse at Retirement or Pre-Retirement Death | Spouse Age | Spouse Gender |
|---|---|---|---|
| Male member | 70% | 3 years younger than member | Female |
| Female member | 55% | 2 years older than member | Male |

## In-service redemptions

The following assumptions for in-service redemptions pay as a percentage of final average compensation are used:

### In-Service Redemptions Rates (% of Pay)

| Category | Rate |
|---|---|
| General Tier 1 | 8.00% |
| General Tier 2 | 4.00% |
| Safety | 7.00% |
| General PEPRA | 0.00% |
| Safety PEPRA | 0.00% |

For determining the cost of the basic benefit (i.e., non-COLA component), the cost of this pay element is currently recognized in the valuation as an employer only cost and does not affect member contribution rates.

## Average entry age for member contribution rates

For non-PEPRA members hired after November 1974 who are not contributing fifty percent of normal cost, they will pay a contribution corresponding to a General and Safety member hired at entry age 35 and 27, respectively.

## Actuarial cost method

Entry Age Actuarial Cost Method.

Entry Age is the age on the valuation date minus the lesser of years of employment or years of benefit service. Normal cost and actuarial accrued liability are calculated on an individual basis and are based on costs allocated as a level percentage of compensation, as if the current benefit formula for each individual has always been in effect.

## Actuarial value of assets

Market value of assets less unrecognized returns in each of the last ten semi-annual accounting periods. Unrecognized returns are equal to the difference between the actual market return and the expected return on the market value, and are recognized annually over a five-year period.

## Valuation value of assets

Actuarial value of assets, reduced by the value of the non-vested supplemental benefit reserve and statutory contingency reserve.

## Amortization policy

The UAAL as of June 30, 2011 shall continue to be amortized over separate 15-year period amortization layers based on the valuations during which each separate layer was previously established.

Any new UAAL as a result of actuarial gains or losses identified in the annual valuation as of June 30 will be amortized over a period of 15 years.

Any new UAAL as a result of change in actuarial assumptions or methods will be amortized over a period of 20 years.

Unless an alternative amortization period is recommended by the Actuary and accepted by the Board based on the results of an actuarial analysis:

- With the exception noted below, the increase in UAAL as a result of any plan amendments will be amortized over a period of 15 years.
- The increase in UAAL resulting from a temporary retirement incentive, including the impact of benefits resulting from additional service permitted in Section 31641.04 of the 1937 CERL (Golden Handshake), will be funded over a period of up to 5 years.

The UAAL will be amortized over "closed" amortization periods so that the amortization period for each layer decreases by one year with each actuarial valuation.

The UAAL will be amortized as a level percentage of payroll so that the amortization amount in each year during the amortization period shall be expected to be a level percentage of covered payroll, taking into consideration the current assumption for general payroll increase (i.e., wage inflation).

If an overfunding or "surplus" exists (i.e., the valuation value of assets exceeds the actuarial accrued liability, so that the total of all UAAL amortization layers becomes negative), any prior UAAL amortization layers will be considered fully amortized, and any subsequent UAAL will be amortized as the first of a new series of amortization layers, using the above amortization periods.

If the surplus exceeds 20% of the AAL per Section 7522.52 of the Government Code, then the amount of surplus in excess of 20% of the AAL (and any subsequent surpluses in excess of that amount) will be amortized over an "open" amortization period of 30 years, but only if the other conditions of Section 7522.52 have also been met. If those conditions are not met, then the surplus will not be amortized and the full normal cost will be contributed.

These amortization policy components will generally apply separately to each of VCERA's UAAL cost groups with the exception that the conditions of Section 7522.52 apply to the total plan. Basic UAAL contribution rates have been calculated on a combined basis for all General tiers. COLA UAAL contribution rates have been calculated on a combined basis for all General tiers that have a COLA.

In April 2020, the Board directed Segal to adjust the remaining amortization periods for certain amortization layers in order to minimize the contribution rate tail volatility associated with the UAAL layers that were first established in 2006, 2007 and 2008, and in 2014 and 2015. Effective with the 2020 actuarial valuation the remaining amortization periods for the 2006, 2007, and 2008 UAAL amortization layers were set to 4 years and those for the 2014 and 2015 UAAL actuarial gain/loss amortization layers were set to 12 years.

## Employer contributions

The recommended employer contributions are provided in *Section 2, Subsection F* and consist of two components:

### Normal cost

The annual contribution rate that, if paid annually from a member's first year of membership through the year of retirement, would accumulate to the amount necessary to fully fund the member's retirement-related benefits. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution rate is expressed as a level percentage of the member's compensation.

### Contribution to the UAAL

The annual contribution rate that, if paid annually over the UAAL amortization period, would accumulate to the amount necessary to fully fund the UAAL. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution (or rate credit in the case of a negative UAAL) is calculated to remain as a level percentage of future active member payroll (including payroll for new members as they enter the Association) assuming a constant number of active members. In order to remain as a level percentage of payroll, amortization payments (credits) are scheduled to increase at the annual rate of 3.00% (i.e., 2.50% inflation plus 0.50% "across the board" salary increase).

The amortization policy is described above.

The recommended employer contributions shown in *Section 2, Subsection F* are calculated based on a 50/50 sharing of normal cost for non-PEPRA tiers. For purposes of these calculations, we have been previously directed by VCERA to assume that the cessation of member contributions after 30 years of service for non-PEPRA members continues per the County Employees Retirement Law (CERL) and that the cost associated with this provision is to be paid for by employers.

The employer contributions shown in *Section 4, Exhibit 4* are calculated under the prior method (i.e., without 50/50 sharing of normal cost for non-PEPRA tiers).

## Member contributions

The member contribution rates for all members are provided in *Section 4, Exhibit 3*, which are calculated based on a 50/50 sharing of normal cost.

Member contributions accumulate with interest at the lesser of the assumed investment earning rate or the rate on ten-year U.S. Treasury notes. Any difference between the assumed investment earning rate and the actual interest crediting rate will be credited to the County Advance reserve. Please note that in calculating the basic member rate, we follow the Board's past practice and have not included any in-service pay redemptions that may potentially increase a member's final average compensation and hence retirement benefit.

The member rates provided in the report are the full rate before reflecting any employer pickup. General Tier 2 members eligible for the fixed 2% cost-of-living benefit contribute a negotiated 2.63% of compensation per year towards the cost of that benefit that is reflected in this report.

### Non-PEPRA Members (Prior Methodology)

The member contributions shown in *Section 4, Exhibit 5* are calculated under the prior method (i.e., without 50/50 sharing of normal cost for non-PEPRA tiers). The basic member contribution rate is determined so that the accumulation of a member's basic contributions made in a given year until a certain age will be sufficient to fund an annuity at that age that is equal to 1/120 of Final Average Compensation for General members and 1/100 of Final Average Compensation for Safety members. That age is 55 for General Tier 1 members, 60 for General Tier 2 members and 50 for Safety members. It is assumed that contributions are made annually at the same rate, starting at entry age. In addition to their basic contributions, General Tier 1 and Safety members pay one-half of the total normal cost necessary to fund their cost-of-living benefits.

### PEPRA Members

Pursuant to Section 7522.30(a) of the Government Code, members under PEPRA tiers are required to contribute at least 50% of the normal cost. In addition, there are certain additional requirements that would have to be met such as requiring the new employees to pay the contribution rate of "similarly situated employees", if it is greater. (reference: Section 7522.30(c)). We further understand that different rules may have to be applied for collectively bargained employees, non-represented, managerial or other supervisory employees. (reference: Section 7522.30(e)). In preparing the normal cost rates in this report, we have assumed that exactly 50% of the normal cost would be paid by the new members and we have taken into account in this valuation only the requirements of Section 7522.30(c), but not the requirements of Section 7522.30(e). The only exception to this is that we have also shown the PEPRA Tier 2 with COLA contribution rates including the member COLA contribution rate of 2.63% of compensation based on current bargaining agreements.

Also of note is that based on our discussions with VCERA, we have used the discretion made available by AB1380 to not round the PEPRA member's contribution rates to the nearest one quarter of one percent as was previously required by PEPRA.

## Tier 2 COLA procedures

This benefit has been valued consistent with the methodologies described in our October 9, 2006 report entitled "Funding Policies and Procedures for General Tier 2 COLA Benefit".

## Internal Revenue Code Section 415

Section 415 of the Internal Revenue Code (IRC) specifies the maximum benefits that may be paid to an individual from a defined benefit plan and the maximum amounts that may be allocated each year to an individual's account in a defined contribution plan.

A qualified pension plan may not pay benefits in excess of the Section 415 limits. The ultimate penalty for non-compliance is disqualification: active participants could be taxed on their vested benefits and the IRS may seek to tax the income earned on the plan's assets.

In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar limit of $160,000 indexed for inflation. That limit is $275,000 for 2024. Normal Retirement Age for these purposes is age 62. These are the limits in simplified terms. They must be adjusted based on each participant's circumstances, for such things as age at retirement, form of benefits chosen and after-tax contributions.

Non-PEPRA benefits in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m).

Legal Counsel's review and interpretation of the law and regulations should be sought on any questions in this regard.

Contribution rates determined in this valuation have not been reduced for the Section 415 limitations. However, it is anticipated that PEPRA members will not be limited in the future due to the PEPRA compensation limit applied in the determination of their benefit. Actual limitations will result in actuarial gains as they occur.

## Models

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

## Justification for change in actuarial assumptions, methods or models

Based on past experience and future expectations, the following actuarial assumptions were changed. Previously these assumptions were as follows:

## Net investment return

7.00%; net of investment and administrative expenses.

## Salary increase

The annual rate of compensation increase includes:

- Inflation at 2.50%, plus
- “Across-the-board” salary increase of 0.50% per year, plus
- Merit and promotion increase based on years of service:

### Merit and Promotion Increases (%)

| Years of Service | General | Safety |
|---|---|---|
| Less than 1 | 7.00 | 9.00 |
| 1–2 | 5.25 | 6.25 |
| 2–3 | 4.00 | 4.75 |
| 3–4 | 3.50 | 4.50 |
| 4–5 | 3.00 | 4.25 |
| 5–6 | 2.75 | 4.00 |
| 6–7 | 2.50 | 2.75 |
| 7–8 | 2.25 | 1.75 |
| 8–9 | 2.00 | 1.50 |
| 9–10 | 1.75 | 1.25 |
| 10–11 | 1.50 | 1.20 |
| 11–12 | 1.40 | 1.15 |
| 12–13 | 1.30 | 1.10 |
| 13–14 | 1.20 | 1.05 |
| 14–15 | 1.10 | 1.00 |
| 15–16 | 1.00 | 1.00 |
| 16–17 | 0.95 | 1.00 |
| 17–18 | 0.90 | 1.00 |
| 18–19 | 0.85 | 1.00 |
| 19–20 | 0.80 | 1.00 |
| 20 and over | 0.75 | 1.00 |

## Post-retirement mortality rates

The Pub-2010 mortality tables and adjustments as shown below reflect the mortality experience as of the measurement date. The generational projection is a provision for future mortality improvement.

### Healthy

- **General members:** Pub-2010 General Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates increased by 5% for females, projected generationally with the two-dimensional mortality improvement scale MP-2020.
- **Safety members:** Pub-2010 Safety Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2020.

### Disabled

- **General members:** Pub-2010 Non-Safety Disabled Retiree Amount-Weighted Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2020.
- **Safety members:** Pub-2010 Safety Disabled Retiree Amount-Weighted Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2020.

### Beneficiary

- **All beneficiaries:** Pub-2010 General Contingent Survivor Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates increased by 10% for females, projected generationally with the two dimensional mortality improvement scale MP-2020.

## Pre-retirement mortality rates

- **General members:** Pub-2010 General Employee Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2020.
- **Safety members:** Pub-2010 Safety Employee Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2020.

## Mortality rates for member contributions

- **General members:** Pub-2010 General Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates increased by 5% for females, projected 30 years (from 2010) with the two-dimensional mortality improvement scale MP-2020, weighted one-third male and two-thirds female.
- **Safety members:** Pub-2010 Safety Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected 30 years (from 2010) with the two-dimensional mortality improvement scale MP-2020, weighted 80% male and 20% female.

## Disability incidence

### Disability Incidence Rates (%)

| Age | General | Safety |
|---|---|---|
| 20 | 0.01 | 0.03 |
| 25 | 0.01 | 0.06 |
| 30 | 0.02 | 0.24 |
| 35 | 0.04 | 0.38 |
| 40 | 0.08 | 0.52 |
| 45 | 0.12 | 0.84 |
| 50 | 0.19 | 1.12 |
| 55 | 0.24 | 2.52 |
| 60 | 0.31 | 5.86 |
| 65 | 0.41 | 0.00 |
| 70 | 0.45 | 0.00 |

30% of General disabilities are assumed to be service-connected (duty) disabilities and the other 70% are assumed to be non-service-connected (ordinary) disabilities.

90% of Safety disabilities are assumed to be service-connected (duty) disabilities and the other 10% are assumed to be non-service connected (ordinary) disabilities.

## Termination

Termination Rates (%)

| Years of Service | General | Safety |
|---|---|---|
| Less than 1 | 13.50 | 10.00 |
| 1–2 | 9.50 | 5.50 |
| 2–3 | 8.50 | 5.25 |
| 3–4 | 6.75 | 4.50 |
| 4–5 | 5.50 | 4.25 |
| 5–6 | 5.00 | 2.50 |
| 6–7 | 4.00 | 2.25 |
| 7–8 | 3.50 | 2.00 |
| 8–9 | 3.50 | 1.80 |
| 9–10 | 3.50 | 1.60 |
| 10–11 | 3.50 | 1.50 |
| 11–12 | 3.25 | 1.40 |
| 12–13 | 3.25 | 1.20 |
| 13–14 | 3.00 | 1.10 |
| 14–15 | 2.75 | 1.00 |
| 15–16 | 2.75 | 0.95 |
| 16–17 | 2.50 | 0.85 |
| 17–18 | 2.50 | 0.75 |
| 18–19 | 2.00 | 0.50 |
| 19–20 | 1.75 | 0.50 |
| 20 and over | 1.75 | 0.50 |

The greater of a refund of member contributions and a deferred annuity is valued when a member terminates.

No termination is assumed after a member is first assumed to retire.

## Retirement

### Retirement Rates (%)

| Age | Non-PEPRA General Tier 1 and 2: Less than 30 Years of Service | Non-PEPRA General Tier 1 and 2: Greater than 30 Years of Service | Non-PEPRA Safety: Less than 30 Years of Service | Non-PEPRA Safety: Greater than 30 Years of Service | PEPRA General Tier 1 and 2 | PEPRA Safety |
|---|---|---|---|---|---|---|
| Under 50 | 0.00 | 50.00 | 1.50 | 1.50 | 0.00 | 0.00 |
| 50 | 2.00 | 2.00 | 2.00 | 2.00 | 0.00 | 4.00 |
| 51 | 2.25 | 2.25 | 1.75 | 1.75 | 0.00 | 1.75 |
| 52 | 2.75 | 2.75 | 2.25 | 2.25 | 1.50 | 3.25 |
| 53 | 3.00 | 3.00 | 3.25 | 3.25 | 1.50 | 5.50 |
| 54 | 3.25 | 4.00 | 15.00 | 20.00 | 2.00 | 16.00 |
| 55 | 4.50 | 5.00 | 20.00 | 37.00 | 4.00 | 20.00 |
| 56 | 5.25 | 6.00 | 20.00 | 25.00 | 4.75 | 20.00 |
| 57 | 5.50 | 7.00 | 22.00 | 30.00 | 5.25 | 20.00 |
| 58 | 6.00 | 9.00 | 22.00 | 33.00 | 5.50 | 18.00 |
| 59 | 8.00 | 9.50 | 22.00 | 35.00 | 6.50 | 25.00 |
| 60 | 10.50 | 14.00 | 35.00 | 35.00 | 9.00 | 30.00 |
| 61 | 13.00 | 20.00 | 35.00 | 45.00 | 11.00 | 30.00 |
| 62 | 22.00 | 30.00 | 35.00 | 45.00 | 20.00 | 35.00 |
| 63 | 18.00 | 25.00 | 35.00 | 45.00 | 18.00 | 35.00 |
| 64 | 18.00 | 25.00 | 35.00 | 45.00 | 16.00 | 35.00 |
| 65 | 30.00 | 45.00 | 100.00 | 100.00 | 20.00 | 100.00 |
| 66 | 35.00 | 50.00 | 100.00 | 100.00 | 30.00 | 100.00 |
| 67 | 35.00 | 47.50 | 100.00 | 100.00 | 35.00 | 100.00 |
| 68 | 27.50 | 47.50 | 100.00 | 100.00 | 25.00 | 100.00 |
| 69 | 25.00 | 25.00 | 100.00 | 100.00 | 35.00 | 100.00 |
| 70 | 25.00 | 25.00 | 100.00 | 100.00 | 55.00 | 100.00 |
| 71 | 25.00 | 25.00 | 100.00 | 100.00 | 55.00 | 100.00 |
| 72 | 25.00 | 25.00 | 100.00 | 100.00 | 55.00 | 100.00 |
| 73 | 25.00 | 25.00 | 100.00 | 100.00 | 55.00 | 100.00 |
| 74 | 25.00 | 25.00 | 100.00 | 100.00 | 55.00 | 100.00 |
| 75 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

## Inactive members

### Current and Future Inactive Member Assumptions

| Membership and Reciprocity | % of Future[1] Deferred Vested Members | Annual Salary Increases from Separation Date | Retirement Age (Vested) | Retirement Age (Non-Vested) |
|---|---|---|---|---|
| General with reciprocity | 45% | 3.75% | 60 | 60 |
| General without reciprocity | 55% | N/A | 60 | 70 |
| Safety with reciprocity | 60% | 4.00% | 55 | 55 |
| Safety without reciprocity | 40% | N/A | 52 | 70 |

## In-service redemptions

The following assumptions for in-service redemptions pay as a percentage of final average compensation are used:

### In-Service Redemptions Rates (% of Pay)

| Category | Rate |
|---|---|
| General Tier 1 | 8.00% |
| General Tier 2 | 3.50% |
| Safety | 6.50% |
| General PEPRA | 0.00% |
| Safety PEPRA | 0.00% |

[1] VCERA provides the reciprocity status for current deferred vested members in the valuation census data.

# Exhibit 2: Summary of plan provisions

This exhibit summarizes the major provisions of the Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions. If the Association should find the plan summary not in accordance with the actual provisions, the Association should alert the actuary so they can both be sure the proper provisions are valued.

## Plan year

July 1 through June 30

## Membership eligibility

All regular employees of the County of Ventura or contracting district, scheduled to work 64 or more hours biweekly, are eligible to become a member of the plan subject to classification below:

| Membership Tier | Membership Eligibility |
|---|---|
| General Tier 1 | All General members with membership dates before June 30, 1979, plus Deputy Sheriff trainees and certain executive management with membership dates before January 1, 2013. |
| General Tier 2 | All General members with membership dates on or after June 30, 1979 and before January 1, 2013, except as noted above for General Tier 1. |
| General PEPRA Tier 1 | Deputy Sheriff trainees with membership dates on or after January 1, 2013 and before April 17, 2014. |
| General PEPRA Tier 2 | All General members with membership dates on or after January 1, 2013, except as noted above for General PEPRA Tier 1. |
| Safety | All Safety members with membership dates before January 1, 2013. |
| Safety PEPRA | All Safety members with membership dates on or after January 1, 2013. |

## Final compensation and service for benefit determination

| Final Compensation and Service | Plan Provision |
|---|---|
| **Final average compensation** | |
| General Tier 1 and Safety | Highest consecutive twelve months of compensation earnable (§31462.1) (FAS1). |
| General Tier 2 | Highest consecutive thirty-six months of compensation earnable (§31462) (FAS3). |

| Final Compensation and Service | Plan Provision |
| --- | --- |
| General PEPRA Tier 1, General PEPRA Tier 2 and Safety PEPRA | Highest consecutive thirty-six months of pensionable compensation (§7522.10(c), §7522.32 and §7522.34) (FAS3). |
| **Compensation limit** | |
| General Tier 1, General Tier 2 and Safety | For members with membership dates on or after July 1, 1996, Compensation Earnable is limited to Internal Revenue Code Section 401(a)(17). The limit as of July 1, 2024 is $345,000. The limit is indexed for inflation on an annual basis. |
| General PEPRA Tier 1, General PEPRA Tier 2 and Safety PEPRA | Pensionable Compensation is limited to $151,446 for 2024 ($181,734, if not enrolled in Social Security). The limit is indexed for inflation on an annual basis. |
| **Service** | |
| All members | Years of service. (Yrs). |

## Service retirement benefits

| Provision by Tier | Service Retirement Plan Provision |
| --- | --- |
| **Eligibility** | |
| General | Age 50 with 10 years of service, or age 70 regardless of service, or after 30 years regardless of age (§31672). |
| Safety | Age 50 with 10 years of service, or age 70 regardless of service, or after 20 years regardless of age (§31663.25). |
| General PEPRA | Age 52 with 5 years of service (§7522.20(a)) or age 70 regardless of service (§31672.3). |
| Safety PEPRA | Age 50 with 5 years of service (§7522.25(d)) or age 70 regardless of service (§31672.3). |
| **Benefit amount** | |
| All members | The benefit formula for all members varies by membership tier and retirement age. See the tables below for a selection of benefit formulas at various ages for each membership tier. |
| **Maximum benefit** | |
| General Tier 1, General Tier 2 and Safety | 100% of Highest Average Compensation (§31676.1, §31664.11, §31664). |
| General PEPRA Tier 1, General PEPRA Tier 2 and Safety PEPRA | There is no final compensation limit on the maximum retirement benefit. |

## Service retirement benefit formula

| Tier and Retirement Age | Service Retirement Benefit Formula by Tier |
|---|---|
| **General Tier 1 (§31676.11)** | |
| 50 | 1.24% × (FAS1 − $1,400) × Yrs |
| 55 | 1.67% × (FAS1 − $1,400) × Yrs |
| 60 | 2.18% × (FAS1 − $1,400) × Yrs |
| 62 | 2.35% × (FAS1 − $1,400) × Yrs |
| 65 and over | 2.61% × (FAS1 − $1,400) × Yrs |
| **General Tier 2 (§31676.1)** | |
| 50 | 1.18% × (FAS3 − $1,400) × Yrs |
| 55 | 1.49% × (FAS3 − $1,400) × Yrs |
| 60 | 1.92% × (FAS3 − $1,400) × Yrs |
| 62 | 2.09% × (FAS3 − $1,400) × Yrs |
| 65 and over | 2.43% × (FAS3 − $1,400) × Yrs |
| **General PEPRA Tier 1 and General PEPRA Tier 2 (§7522.20(a))** | |
| 52 | 1.00% × FAS3 × Yrs |
| 55 | 1.30% × FAS3 × Yrs |
| 60 | 1.80% × FAS3 × Yrs |
| 62 | 2.00% × FAS3 × Yrs |
| 65 | 2.30% × FAS3 × Yrs |
| 67 and over | 2.50% × FAS3 × Yrs |
| **Safety (§31664)** | |
| 50 | 2.00% × FAS1 × Yrs |
| 55 and over | 2.62% × FAS1 × Yrs |

| Tier and Retirement Age | Service Retirement Benefit Formula by Tier |
|---|---|
| **Safety PEPRA (§7522.25(d))** | |
| 50 | 2.00% × FAS3 × Yrs |
| 55 | 2.50% × FAS3 × Yrs |
| 57 and over | 2.70% × FAS3 × Yrs |

## Disability benefits

### Non-service connected disability (ordinary)

| Provision by Tier | Non-Service Connected Disability (Ordinary) Plan Provision |
|---|---|
| **Eligibility** | |
| All members | Five years of service (§31720). |
| **Benefit amount** | |
| General | 1.5% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 65, but the total benefit cannot be more than one-third of Final Compensation (§31727).<br>For all members, 100% of the Service Retirement benefit will be paid, if greater. |
| Safety | 1.8% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 55, but the total benefit cannot be more than one-third of Final Compensation (§31727.2).<br>For all members, 100% of the Service Retirement benefit will be paid, if greater. |

### Service-connected disability (line-of-duty)

| Provision by Tier | Service-Connected Disability (Line-of-Duty) Plan Provision |
|---|---|
| **Eligibility** | |
| All members | No age or service requirements (§31720). |
| **Benefit amount** | |
| All members | 50% of the Final Compensation or 100% of Service Retirement benefit, if greater (§31727.4). |

## Pre-retirement death benefits

### Basic death benefit

| Provision by Tier | Pre-Retirement Basic Death Benefit Plan Provision |
|---|---|
| **Eligibility** | |
| All members | No age or service requirements. |
| Vested members | Five years of service. |
| **Benefit amount** | |
| All members | Refund of member contributions with interest, plus one month's compensation for each year of service, to a maximum of six months' compensation (§31781). |
| Vested members | 60% of the greater of Service Retirement or Ordinary Disability Retirement benefit payable to surviving eligible spouse or eligible children (§31765.1, §31781.1), in lieu of the basic lump sum benefit above (§31781). |

### Line-of-duty death benefit

| Provision by Tier | Pre-Retirement Line-of-Duty Death Benefit Plan Provision |
|---|---|
| **Eligibility** | |
| All members | No age or service requirements. |
| **Benefit amount** | |
| All members | 50% of Final Compensation or 100% of Service Retirement benefit, if greater, payable to spouse or minor children (§31787).<br>An additional lump sum payment of one-year of compensation is paid if Line-of-Duty death for Safety member (§31787.6). |

## Post-retirement death benefits

### Service retirement or ordinary disability retirement

Unless another option was selected at retirement, 60% of member's unmodified allowance continued to eligible spouse (§31760.1). An eligible spouse is a surviving spouse who was married to the member one year prior to the effective retirement date or at least two years prior to the date of death and has attained age 55 on or prior to the date of death (§31760.2, §31785.1).

### Line-of-duty disability

Unless another option was selected at retirement, 100% of member's unmodified allowance continued to eligible spouse (§31786). An eligible spouse is a surviving spouse who was married to the member one year prior to the effective retirement date or at least two years prior to the date of death and has attained age 55 on or prior to the date of death (§31786.1).

### Additional death benefit

A lump sum benefit of $5,000 lump sum benefit payable to member's beneficiary (§31789.3).

## Withdrawal benefits

### Less than five years of service

Refund of accumulated member contributions with interest (§31628). A member may also elect to leave contributions on deposit in the retirement fund (§31629.5).

### Five or more years of service

If contributions left on deposit, a member is entitled to earned benefits commencing at any time after eligible to retire (§31700). Service for eligibility includes service credited as an employee of a reciprocal system.

## Post-retirement cost-of-living benefits

| Membership Tier | Cost-of-Living Benefits Plan Provision |
|---|---|
| General Tier 1, Safety, General PEPRA Tier 1 and Safety PEPRA | Future changes based on changes to the Consumer Price Index to a maximum of 3% per year, excess "banked" (§31870.1). |
| General Tier 2 and General PEPRA Tier 2 | Members represented by SEIU receive a fixed 2% cost-of-living adjustment, not subject to changes in the CPI that applies to future service after March 2003 (members represented by CNA receive a fixed 2% COLA that applies to future service after July 2023). This benefit has been valued consistent with the methodologies described in our October 9, 2006 report entitled "Funding Policies and Procedures for General Tier II COLA Benefit". |

## Supplemental benefit

A supplemental benefit in the amount of $108.44 per month is paid to retirees and their survivors.

## Member normal cost contributions

Please refer to *Section 4, Exhibit 3* for the specific rates.

| Membership Tier | Member Contribution Plan Provision |
|---|---|
| General Tier 1, Safety and Safety PEPRA | Provide for 50% of total normal cost. |
| General Tier 2 and General PEPRA Tier 2 | Provide for 50% of total basic normal cost. In addition, for General Tier 2 with COLA members, the current member COLA contribution rate of 2.63% of compensation has been reflected. |

## Other information

For non-PEPRA members hired after November 1974, they will pay a contribution corresponding to a General and Safety member hired at entry age 35 and 27, respectively. Safety non-PEPRA members with 30 or more years of service are exempt from paying member contributions. The same applies for General non-PEPRA members hired on or before March 7, 1973.

## Plan provisions not valued

- The Board of Retirement has approved a non-vested supplemental benefit. This benefit is funded from Undistributed Excess Earnings, paid from a reserve that is not included in the valuation value of assets and is subject at all times to the availability of funds.
- The non-vested supplemental benefit of $27.50 per month paid to retirees and their survivors terminated upon issuance of the June 2019 payment. This was due to the depletion of the funds in this reserve.

## Changes in plan provisions

There have been no changes in plan provisions since the prior valuation.

## Exhibit 3: Member contribution rates

### 50/50 Sharing of Normal Cost for Non-PEPRA Tiers
*(as a % of Monthly Payroll)*

| Membership Tier | Basic First $350 | Basic Over $350 | COLA First $350 | COLA Over $350 | Total First $350 | Total Over $350 |
|---|---|---|---|---|---|---|
| General Tier 1 | 6.40% | 9.60% | 2.18% | 3.27% | 8.58% | 12.87% |
| General Tier 2 | 5.71% | 8.57% | 0.00% | 0.00% | 5.71% | 8.57% |
| General Tier 2 with COLA[1] | 5.71% | 8.57% | 2.63% | 2.63% | 8.34% | 11.20% |
| Safety | 13.50% | 13.50% | 5.52% | 5.52% | 19.02% | 19.02% |

### Member Contribution Rates for PEPRA Members
*(as a % of Monthly Payroll)*

| Membership Tier | Basic | COLA | Total |
|---|---|---|---|
| General Tier 2 | 8.35% | 0.00% | 8.35% |
| General Tier 2 with COLA[1] | 8.35% | 2.63% | 10.98% |
| Safety | 12.46% | 5.08% | 17.54% |

[1] General Tier 2 members with COLA are required to pay COLA contributions of 2.63% of compensation based on current bargaining agreements.

# Exhibit 4: Employer contribution rates under the CERL statutory formula

## General – Recommended Employer Contribution Calculated as of June 30 Without 50/50 Sharing of Normal Cost For Non-PEPRA Tiers *($ in '000s)*

| Component by Membership Tier | 2024 Basic | 2024 COLA | 2024 Total | 2024 Estimated Annual Amount[1] | 2023 Basic | 2023 COLA | 2023 Total | 2023 Estimated Annual Amount[1] |
|---|---|---|---|---|---|---|---|---|
| **General Tier 1** | | | | | | | | |
| Normal cost | 10.20% | 3.07% | 13.27% | $66 | 9.77% | 3.04% | 12.81% | $175 |
| UAAL[2] | 0.40% | 6.62% | 7.02% | 35 | 3.31% | 5.14% | 8.45% | 116 |
| **Total contribution** | **10.60%** | **9.69%** | **20.29%** | **$101** | **13.08%** | **8.18%** | **21.26%** | **$291** |
| **General Tier 2** | | | | | | | | |
| Normal cost | 9.61% | 0.00% | 9.61% | $15,102 | 8.74% | 0.00% | 8.74% | $14,657 |
| UAAL[2] | 0.40% | 0.00% | 0.40% | 629 | 3.31% | 0.00% | 3.31% | 5,551 |
| **Total contribution** | **10.01%** | **0.00%** | **10.01%** | **$15,731** | **12.05%** | **0.00%** | **12.05%** | **$20,208** |
| **General PEPRA Tier 2** | | | | | | | | |
| Normal cost | 8.35% | 0.00% | 8.35% | $10,659 | 7.74% | 0.00% | 7.74% | $8,645 |
| UAAL[2] | 0.40% | 0.00% | 0.40% | 511 | 3.31% | 0.00% | 3.31% | 3,697 |
| **Total contribution** | **8.75%** | **0.00%** | **8.75%** | **$11,170** | **11.05%** | **0.00%** | **11.05%** | **$12,342** |

[1] Based on projected compensation for each year shown on page 40.

[2] Basic UAAL rates have been calculated on a combined basis for all General tiers. COLA UAAL rates have been calculated on a combined basis for all General tiers that have a COLA (excludes General Tier 2 without COLA and General PEPRA Tier 2 without COLA).

## General – Recommended Employer Contribution Calculated as of June 30 Without 50/50 Sharing of Normal Cost For Non-PEPRA Tiers *($ in ’000s)*

| Component by Membership Tier | 2024 Basic | 2024 COLA | 2024 Total | 2024 Estimated Annual Amount[1] | 2023 Basic | 2023 COLA | 2023 Total | 2023 Estimated Annual Amount[1] |
|---|---|---|---|---|---|---|---|---|
| **General Tier 2 with COLA** | | | | | | | | |
| Normal cost[2] | 9.61% | 1.15% | 10.76% | $18,895 | 8.74% | 0.74% | 9.48% | $19,444 |
| UAAL[3,4] | 0.40% | 6.62% | 7.02% | 12,328 | 3.31% | 5.14% | 8.45% | 17,332 |
| **Total contribution** | **10.01%** | **7.77%** | **17.78%** | **$31,223** | **12.05%** | **5.88%** | **17.93%** | **$36,776** |
| **General PEPRA Tier 2 with COLA** | | | | | | | | |
| Normal cost[2] | 8.35% | 0.96% | 9.31% | $27,200 | 7.74% | 0.65% | 8.39% | $20,842 |
| UAAL[3,4] | 0.40% | 6.62% | 7.02% | 20,510 | 3.31% | 5.14% | 8.45% | 20,991 |
| **Total contribution** | **8.75%** | **7.58%** | **16.33%** | **$47,710** | **11.05%** | **5.79%** | **16.84%** | **$41,833** |
| **All General members[5]** | | | | | | | | |
| Normal cost | 8.91% | 0.64% | 9.55% | $71,922 | 8.25% | 0.43% | 8.68% | $63,763 |
| UAAL | 0.40% | 4.12% | 4.52% | 34,013 | 3.31% | 3.18% | 6.49% | 47,687 |
| **Total contribution** | **9.31%** | **4.76%** | **14.07%** | **$105,935** | **11.56%** | **3.61%** | **15.17%** | **$111,450** |

1 Based on projected compensation for each year shown on page 40.
2 Reflects General Tier 2 member COLA contribution rate of 2.63% based on current bargaining agreements.
3 Basic UAAL rates have been calculated on a combined basis for all General tiers. COLA UAAL rates have been calculated on a combined basis for all General tiers that have a COLA (excludes General Tier 2 without COLA and General PEPRA Tier 2 without COLA).
4 Includes 0.32% in COLA UAAL costs for June 30, 2023, attributed to the first two years of service accrued for the fixed 2% COLA pursuant to Government Code 31627. Note these rates are calculated as a percentage of SEIU only payroll. As of June 30, 2024, the COLA UAAL cost attributed to the first two years of service accrued for the fixed 2% COLA has been fully amortized.
5 These aggregated rates are provided for informational purposes only as we understand that the tier specific rates will be implemented.

## Safety – Recommended Employer Contribution Calculated as of June 30 Without 50/50 Sharing of Normal Cost For Non-PEPRA Tiers *($ in '000s)*

| Component by Membership Tier | 2024 Basic | 2024 COLA | 2024 Total | 2024 Estimated Annual Amount[1] | 2023 Basic | 2023 COLA | 2023 Total | 2023 Estimated Annual Amount[1] |
|---|---|---|---|---|---|---|---|---|
| **Safety** | | | | | | | | |
| Normal cost | 17.28% | 5.11% | 22.39% | $27,888 | 15.01% | 4.43% | 19.44% | $27,063 |
| UAAL | 26.84% | (18.44%) | 8.40% | 10,463 | 39.32% | (23.99%) | 15.33% | 21,341 |
| **Total contribution** | **44.12%** | **(13.33%)** | **30.79%** | **$38,351** | **54.33%** | **(19.56%)** | **34.77%** | **$48,404** |
| **Safety PEPRA** | | | | | | | | |
| Normal cost | 12.46% | 5.08% | 17.54% | $13,440 | 11.26% | 4.44% | 15.70% | $10,603 |
| UAAL | 26.84% | (18.44%) | 8.40% | 6,437 | 39.32% | (23.99%) | 15.33% | 10,353 |
| **Total contribution** | **39.30%** | **(13.36%)** | **25.94%** | **$19,877** | **50.58%** | **(19.55%)** | **31.03%** | **$20,956** |
| **All Safety members[2]** | | | | | | | | |
| Normal cost | 15.44% | 5.10% | 20.54% | $41,328 | 13.79% | 4.43% | 18.22% | $37,666 |
| UAAL | 26.84% | (18.44%) | 8.40% | 16,900 | 39.32% | (23.99%) | 15.33% | 31,694 |
| **Total contribution** | **42.28%** | **(13.34%)** | **28.94%** | **$58,228** | **53.11%** | **(19.56%)** | **33.55%** | **$69,360** |

## Total Plan Recommended Employer Contribution Calculated as of June 30 Without 50/50 Sharing of Normal Cost For Non-PEPRA Tiers *($ in '000s)*

| Component by Membership Tier | 2024 Basic | 2024 COLA | 2024 Total | 2024 Estimated Annual Amount[1] | 2023 Basic | 2023 COLA | 2023 Total | 2023 Estimated Annual Amount[1] |
|---|---|---|---|---|---|---|---|---|
| **All categories combined[2]** | | | | | | | | |
| Normal cost | 10.29% | 1.58% | 11.87% | $113,250 | 9.47% | 1.31% | 10.78% | $101,429 |
| UAAL | 5.97% | (0.63%) | 5.34% | 50,913 | 11.22% | (2.78%) | 8.44% | 79,381 |
| **Total contribution** | **16.26%** | **0.95%** | **17.21%** | **$164,163** | **20.69%** | **(1.47%)** | **19.22%** | **$180,810** |

1 Based on projected compensation for each year shown on page 40.
2 These aggregated rates are provided for informational purposes only as we understand that the tier specific rates will be implemented.

## Exhibit 5: Member contribution rates under the CERL statutory formula

### General Tier 1 — Contribution Rates Without 50/50 Sharing of Normal Cost for Non-PEPRA Tiers

*(as a % of Monthly Payroll)*

| Entry Age | Basic First $350 | Basic Over $350 | COLA First $350 | COLA Over $350 | Total First $350 | Total Over $350 |
|---|---|---|---|---|---|---|
| 16 | 4.32% | 6.48% | 1.62% | 2.43% | 5.94% | 8.91% |
| 17 | 4.39% | 6.58% | 1.64% | 2.47% | 6.03% | 9.05% |
| 18 | 4.46% | 6.69% | 1.67% | 2.51% | 6.13% | 9.20% |
| 19 | 4.53% | 6.80% | 1.70% | 2.55% | 6.23% | 9.35% |
| 20 | 4.60% | 6.91% | 1.73% | 2.59% | 6.33% | 9.50% |
| 21 | 4.68% | 7.02% | 1.75% | 2.63% | 6.43% | 9.65% |
| 22 | 4.75% | 7.13% | 1.78% | 2.67% | 6.53% | 9.80% |
| 23 | 4.83% | 7.25% | 1.82% | 2.72% | 6.65% | 9.97% |
| 24 | 4.91% | 7.37% | 1.84% | 2.76% | 6.75% | 10.13% |
| 25 | 4.99% | 7.49% | 1.88% | 2.81% | 6.87% | 10.30% |
| 26 | 5.07% | 7.61% | 1.90% | 2.85% | 6.97% | 10.46% |
| 27 | 5.16% | 7.74% | 1.93% | 2.90% | 7.09% | 10.64% |
| 28 | 5.24% | 7.87% | 1.97% | 2.95% | 7.21% | 10.82% |
| 29 | 5.33% | 8.00% | 2.00% | 3.00% | 7.33% | 11.00% |
| 30 | 5.42% | 8.13% | 2.03% | 3.05% | 7.45% | 11.18% |
| 31 | 5.51% | 8.27% | 2.07% | 3.10% | 7.58% | 11.37% |
| 32 | 5.61% | 8.41% | 2.10% | 3.15% | 7.71% | 11.56% |
| 33 | 5.70% | 8.56% | 2.14% | 3.21% | 7.84% | 11.77% |
| 34 | 5.80% | 8.71% | 2.18% | 3.27% | 7.98% | 11.98% |
| 35 | 5.90% | 8.85% | 2.22% | 3.32% | 8.12% | 12.17% |
| 36 | 6.00% | 9.00% | 2.24% | 3.37% | 8.24% | 12.37% |
| 37 | 6.09% | 9.14% | 2.29% | 3.43% | 8.38% | 12.57% |
| 38 | 6.18% | 9.27% | 2.32% | 3.48% | 8.50% | 12.75% |
| 39 | 6.27% | 9.41% | 2.35% | 3.53% | 8.62% | 12.94% |

| Entry Age | Basic First $350 | Basic Over $350 | COLA First $350 | COLA Over $350 | Total First $350 | Total Over $350 |
|---|---|---|---|---|---|---|
| 40 | 6.36% | 9.53% | 2.38% | 3.58% | 8.74% | 13.11% |
| 41 | 6.44% | 9.66% | 2.41% | 3.62% | 8.85% | 13.28% |
| 42 | 6.52% | 9.78% | 2.45% | 3.67% | 8.97% | 13.45% |
| 43 | 6.60% | 9.90% | 2.47% | 3.71% | 9.07% | 13.61% |
| 44 | 6.67% | 10.01% | 2.50% | 3.75% | 9.17% | 13.76% |
| 45 | 6.75% | 10.12% | 2.52% | 3.79% | 9.27% | 13.91% |
| 46 | 6.81% | 10.22% | 2.56% | 3.83% | 9.37% | 14.05% |
| 47 | 6.88% | 10.32% | 2.58% | 3.87% | 9.46% | 14.19% |
| 48 | 6.95% | 10.42% | 2.60% | 3.91% | 9.55% | 14.33% |
| 49 | 7.01% | 10.51% | 2.62% | 3.94% | 9.63% | 14.45% |
| 50 | 7.06% | 10.59% | 2.65% | 3.97% | 9.71% | 14.56% |
| 51 | 7.10% | 10.64% | 2.66% | 3.99% | 9.76% | 14.63% |
| 52 | 7.12% | 10.68% | 2.66% | 4.00% | 9.78% | 14.68% |
| 53 | 7.09% | 10.63% | 2.66% | 3.99% | 9.75% | 14.62% |
| 54 and over | 6.98% | 10.47% | 2.62% | 3.93% | 9.60% | 14.40% |

| | |
|---|---|
| Interest: | 6.75% per annum |
| COLA: | 2.75% |
| Mortality: | See *Section 4, Exhibit 1* |
| Salary Increase: | Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*) |
| COLA Loading Factor: | 37.50% |

**Note:** All members hired after November 1974 will pay a contribution corresponding to entry age 35. These rates are determined before any pickups by the employer.

## General Tier 2 — Contribution Rates Without 50/50 Sharing of Normal Cost for Non-PEPRA Tiers

*(as a % of Monthly Payroll)*

| Entry Age | Basic First $350 | Basic Over $350 | COLA First $350 | COLA Over $350 | Total First $350 | Total Over $350 |
|---|---|---|---|---|---|---|
| 16 | 3.63% | 5.44% | 0.00% | 0.00% | 3.63% | 5.44% |
| 17 | 3.68% | 5.53% | 0.00% | 0.00% | 3.68% | 5.53% |
| 18 | 3.74% | 5.62% | 0.00% | 0.00% | 3.74% | 5.62% |
| 19 | 3.81% | 5.71% | 0.00% | 0.00% | 3.81% | 5.71% |
| 20 | 3.87% | 5.80% | 0.00% | 0.00% | 3.87% | 5.80% |
| 21 | 3.93% | 5.90% | 0.00% | 0.00% | 3.93% | 5.90% |
| 22 | 3.99% | 5.99% | 0.00% | 0.00% | 3.99% | 5.99% |
| 23 | 4.06% | 6.09% | 0.00% | 0.00% | 4.06% | 6.09% |
| 24 | 4.12% | 6.19% | 0.00% | 0.00% | 4.12% | 6.19% |
| 25 | 4.19% | 6.29% | 0.00% | 0.00% | 4.19% | 6.29% |
| 26 | 4.26% | 6.39% | 0.00% | 0.00% | 4.26% | 6.39% |
| 27 | 4.33% | 6.49% | 0.00% | 0.00% | 4.33% | 6.49% |
| 28 | 4.40% | 6.60% | 0.00% | 0.00% | 4.40% | 6.60% |
| 29 | 4.47% | 6.71% | 0.00% | 0.00% | 4.47% | 6.71% |
| 30 | 4.55% | 6.82% | 0.00% | 0.00% | 4.55% | 6.82% |
| 31 | 4.62% | 6.93% | 0.00% | 0.00% | 4.62% | 6.93% |
| 32 | 4.70% | 7.04% | 0.00% | 0.00% | 4.70% | 7.04% |
| 33 | 4.77% | 7.16% | 0.00% | 0.00% | 4.77% | 7.16% |
| 34 | 4.85% | 7.28% | 0.00% | 0.00% | 4.85% | 7.28% |
| 35 | 4.94% | 7.40% | 0.00% | 0.00% | 4.94% | 7.40% |
| 36 | 5.02% | 7.53% | 0.00% | 0.00% | 5.02% | 7.53% |
| 37 | 5.11% | 7.66% | 0.00% | 0.00% | 5.11% | 7.66% |
| 38 | 5.19% | 7.79% | 0.00% | 0.00% | 5.19% | 7.79% |
| 39 | 5.28% | 7.92% | 0.00% | 0.00% | 5.28% | 7.92% |
| 40 | 5.36% | 8.04% | 0.00% | 0.00% | 5.36% | 8.04% |
| 41 | 5.44% | 8.17% | 0.00% | 0.00% | 5.44% | 8.17% |

| Entry Age | Basic First $350 | Basic Over $350 | COLA First $350 | COLA Over $350 | Total First $350 | Total Over $350 |
|---|---|---|---|---|---|---|
| 42 | 5.52% | 8.29% | 0.00% | 0.00% | 5.52% | 8.29% |
| 43 | 5.60% | 8.40% | 0.00% | 0.00% | 5.60% | 8.40% |
| 44 | 5.68% | 8.51% | 0.00% | 0.00% | 5.68% | 8.51% |
| 45 | 5.75% | 8.62% | 0.00% | 0.00% | 5.75% | 8.62% |
| 46 | 5.82% | 8.73% | 0.00% | 0.00% | 5.82% | 8.73% |
| 47 | 5.88% | 8.83% | 0.00% | 0.00% | 5.88% | 8.83% |
| 48 | 5.95% | 8.92% | 0.00% | 0.00% | 5.95% | 8.92% |
| 49 | 6.01% | 9.01% | 0.00% | 0.00% | 6.01% | 9.01% |
| 50 | 6.07% | 9.10% | 0.00% | 0.00% | 6.07% | 9.10% |
| 51 | 6.12% | 9.18% | 0.00% | 0.00% | 6.12% | 9.18% |
| 52 | 6.17% | 9.26% | 0.00% | 0.00% | 6.17% | 9.26% |
| 53 | 6.22% | 9.33% | 0.00% | 0.00% | 6.22% | 9.33% |
| 54 | 6.25% | 9.38% | 0.00% | 0.00% | 6.25% | 9.38% |
| 55 | 6.27% | 9.41% | 0.00% | 0.00% | 6.27% | 9.41% |
| 56 | 6.26% | 9.40% | 0.00% | 0.00% | 6.26% | 9.40% |
| 57 | 6.21% | 9.31% | 0.00% | 0.00% | 6.21% | 9.31% |
| 58 | 6.40% | 9.61% | 0.00% | 0.00% | 6.40% | 9.61% |
| 59 and over | 6.61% | 9.91% | 0.00% | 0.00% | 6.61% | 9.91% |

Interest: 6.75% per annum

COLA: Members represented by SEIU and CNA contribute a negotiated 2.63% for a fixed 2% COLA pursuant to Government Code 31627.

Mortality: See *Section 4, Exhibit 1*

Salary Increase: Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)

**Note:** All members hired after November 1974 will pay a contribution corresponding to entry age 35. These rates are determined before any pickups by the employer.

## Safety — Contribution Rates Without 50/50 Sharing of Normal Cost for Non-PEPRA Tiers

*(as a % of Monthly Payroll)*

| Entry Age | Basic First $350 | COLA First $350 | Total First $350 |
|---|---|---|---|
| 16 | 9.00% | 5.51% | 14.51% |
| 17 | 9.12% | 5.59% | 14.71% |
| 18 | 9.26% | 5.67% | 14.93% |
| 19 | 9.39% | 5.75% | 15.14% |
| 20 | 9.52% | 5.83% | 15.35% |
| 21 | 9.66% | 5.91% | 15.57% |
| 22 | 9.80% | 6.00% | 15.80% |
| 23 | 9.94% | 6.09% | 16.03% |
| 24 | 10.09% | 6.18% | 16.27% |
| 25 | 10.24% | 6.27% | 16.51% |
| 26 | 10.39% | 6.36% | 16.75% |
| 27 | 10.54% | 6.45% | 16.99% |
| 28 | 10.70% | 6.55% | 17.25% |
| 29 | 10.86% | 6.65% | 17.51% |
| 30 | 11.03% | 6.75% | 17.78% |
| 31 | 11.20% | 6.86% | 18.06% |
| 32 | 11.37% | 6.96% | 18.33% |
| 33 | 11.56% | 7.08% | 18.64% |
| 34 | 11.75% | 7.19% | 18.94% |
| 35 | 11.94% | 7.31% | 19.25% |
| 36 | 12.13% | 7.43% | 19.56% |
| 37 | 12.32% | 7.55% | 19.87% |
| 38 | 12.52% | 7.66% | 20.18% |
| 39 | 12.71% | 7.78% | 20.49% |
| 40 | 12.91% | 7.91% | 20.82% |
| 41 | 13.11% | 8.03% | 21.14% |

# Section 4: Actuarial Valuation Basis

| Entry Age | Basic First $350 | COLA First $350 | Total First $350 |
|---|---|---|---|
| 42 | 13.30% | 8.14% | 21.44% |
| 43 | 13.45% | 8.23% | 21.68% |
| 44 | 13.48% | 8.25% | 21.73% |
| 45 | 13.49% | 8.26% | 21.75% |
| 46 | 13.50% | 8.27% | 21.77% |
| 47 | 13.51% | 8.27% | 21.78% |
| 48 | 13.42% | 8.21% | 21.63% |
| 49 and over | 13.10% | 8.02% | 21.12% |

Interest: 6.75% per annum

COLA: 2.75%

Mortality: See *Section 4, Exhibit 1*

Salary Increase: Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)

COLA Loading Factor: 61.22%

**Note:** All members hired after November 1974 will pay a contribution corresponding to entry age 27. These rates are determined before any pickups by the employer.

# Appendix A: Definition of Pension Terms

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

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

# Appendix A: Definition of Pension Terms

| Term | Definition |
|---|---|
| Actuarial present value of future benefits | The actuarial present value of benefit amounts expected to be paid at various future times under a particular set of actuarial assumptions, taking into account such items as the effect of advancement in age, anticipated future compensation, and future service credits. The actuarial present value of future benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive members entitled to either a refund of member contributions or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due. |
| Actuarial valuation | The determination, as of a valuation date, of the normal cost, actuarial accrued liability, actuarial value of assets, and related actuarial present values for a plan, as well as actuarially determined contributions. |
| Actuarial value of assets | The value of the Plan's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly plans use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the actuarially determined contribution. |
| Actuarially determined | Values that have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the Plan. |
| Actuarially determined contribution | The employer's contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under the Plan's funding policy. The actuarially determined contribution consists of the employer normal cost and the amortization payment. |
| Amortization method | A method for determining the amortization payment. The most common methods used are level dollar and level percentage of payroll. Under the level dollar method, the amortization payment is one of a stream of payments, all equal, whose actuarial present value is equal to the unfunded actuarial accrued liability. Under the level percentage of pay method, the amortization payment is one of a stream of increasing payments, whose actuarial present value is equal to the unfunded actuarial accrued liability. Under the level percentage of pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase. |
| Amortization payment | The portion of the pension plan contribution, or actuarially determined contribution, that is intended to pay off the unfunded actuarial accrued liability. |

# Appendix A: Definition of Pension Terms

| Term | Definition |
|---|---|
| Assumptions or actuarial assumptions | The estimates upon which the cost of the Plan is calculated, including:<br>**Investment return** — the rate of investment yield that the Plan will earn over the long-term future;<br>**Mortality rates** — the rate or probability of death at a given age for employees and retirees;<br>**Retirement rates** — the rate or probability of retirement at a given age or service;<br>**Disability rates** — the rate or probability of disability retirement at a given age;<br>**Withdrawal rates** — the rate or probability at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement;<br>**Salary increase rates** — the rates of salary increase due to inflation, real wage growth and merit and promotion increases. |
| Closed amortization period | A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 20 years, it is 19 years at the end of one year, 18 years at the end of two years, etc. See “open amortization period.” |
| Decrements | Those causes/events due to which a member’s status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or withdrawal. |
| Defined benefit plan | A retirement plan in which benefits are defined by a formula based on the member’s compensation, age and/or years of service. |
| Defined contribution plan | A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, the plan’s earnings are allocated to each account, and each member’s benefits are a direct function of the account balance. |
| Employer normal cost | The portion of the normal cost to be paid by the employer. This is equal to the normal cost less expected member contributions. |
| Experience study | A periodic review and analysis of the actual experience of the Plan that may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified based on recommendations from the Actuary. |
| Funded ratio | The ratio of the valuation value of assets to the actuarial accrued liability. Plans sometimes also calculate a market funded ratio, using the market value of assets, rather than the valuation value of assets. |
| GASB 67 and GASB 68 | Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves. |

# Appendix A: Definition of Pension Terms

| Term | Definition |
|---|---|
| Investment return | The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next. |
| Negative amortization | Negative amortization is a result of an increase in the unfunded actuarial accrued liability when the amortization payment is less than the interest accrued on the unfunded actuarial accrued liability. |
| Net pension liability | The net pension liability is equal to the total pension liability minus the plan fiduciary net position. |
| Normal cost | The portion of the actuarial present value of future benefits and expenses, if applicable, allocated to a valuation year by the actuarial cost method. Any payment with respect to an unfunded actuarial accrued liability is not part of the normal cost (see "amortization payment"). For pension plan benefits that are provided in part by employee contributions, normal cost refers to the total of member contributions and employer normal cost unless otherwise specifically stated. |
| Open amortization period | An open amortization period is one which is used to determine the amortization payment but which does not change over time. If the initial period is set as 30 years, the same 30-year period is used in each future year in determining the amortization period. |
| Plan fiduciary net position | Market value of assets. |
| Service costs | The portions of the actuarial present value of projected benefit payments that are attributed to valuation years. |
| Total pension liability | The actuarial accrued liability under the entry age normal cost method and based on the blended discount rate as described in GASB 67 and 68. |
| Unfunded actuarial accrued liability | The excess of the actuarial accrued liability over the valuation value of assets. This value may be negative, in which case it may be expressed as a negative unfunded actuarial accrued liability, also called the funding surplus or an overfunded actuarial accrued liability. |
| Valuation date or actuarial valuation date | The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Benefits is determined. The expected benefits to be paid in the future are discounted to this date. |
| Valuation value of assets | The actuarial value of assets reduced by the value of non-valuation reserves. |

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