



Santa Barbara County Employees' Retirement System

Actuarial Valuation Report as of June 30, 2021

Produced by Cheiron

December 2021

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December 1, 2021

Board of Retirement Santa Barbara County Employees' Retirement System 130 Robin Hill Road, Suite 100 Goleta, California 93117

Dear Members of the Board:

At your request, we have conducted an actuarial valuation of the Santa Barbara County Employees' Retirement System (SBCERS, the System, the Fund, the Plan) as of June 30, 2021. This report contains information on the System's assets and liabilities and discloses employer and employee contribution levels. Your attention is called to the Foreword in which we refer to the general approach employed in the preparation of this report.

The purpose of this report is to present the results of the annual actuarial valuation of SBCERS. This report is for the use of the Retirement Board of Santa Barbara and its auditors in preparing financial reports in accordance with applicable law and accounting requirements.

Cheiron's report was prepared solely for the Retirement Board of Santa Barbara for the purposes described herein, except that the plan auditor may rely on this report solely for the purpose of completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

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

Sincerely, Cheiron

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

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

FOREWORD

Cheiron has performed the actuarial valuation of the Santa Barbara County Employees' Retirement System as of June 30, 2021. The valuation is organized as follows:

- In Section I, the **Executive Summary**, we describe the purpose of an actuarial valuation, summarize the key results found in this valuation and disclose important trends.
- The **Main Body** of the report presents details on the System's
 - o Section II Disclosures Related to Risk
 - Section III Assets
 - Section IV Liabilities
 - Section V Contributions
 - o Section VI Annual Comprehensive Financial Reporting Information
- In the **Appendices**, we conclude our report with the following detailed information
 - o Appendix A Membership Information
 - o Appendix B Member Contribution Rates
 - o Appendix C Employer Contribution Rates with Member Cost-Sharing Adjustments
 - Appendix D Actuarial Assumptions and Methods
 - Appendix E Summary of Plan Provisions
 - Appendix F Glossary

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

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

Cheiron utilizes ProVal, an actuarial valuation application leased from Winklevoss Technologies (WinTech), to calculate liabilities and project benefit payments. We have relied on WinTech as the developer of ProVal. We have reviewed ProVal and have a basic understanding of it and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in assumptions or output of ProVal that would affect this report. The deterministic and stochastic projections shown in this report were developed using R-scan, our proprietary stochastic projection tool for assessing probabilities of different outcomes. We have relied on Cheiron colleagues who developed the tool, and we have used the tool in accordance with its purpose.



SECTION I – EXECUTIVE SUMMARY

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

- The funded status of the System,
- Past and expected trends in the funding progress of the System,
- Employer and employee contribution rates for Plan Year 2022-2023,
- Information required by the GFOA for the Annual Comprehensive Financial Report, and
- An assessment and disclosure of key risks.

The information required under GASB standards Nos. 67 and 68 is included in a separate report, with the report for the Plan's Fiscal Year Ending June 30, 2021 provided to SBCERS in November 2021.

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

A. Valuation Basis

This valuation determines the employer contributions required for the employers' fiscal years beginning July 1, 2022.

The System's funding policy is to collect contributions from the employers and employees equal to the sum of:

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

The Unfunded Actuarial Liability payment is determined as the amount needed to fund the outstanding Unfunded Actuarial liability (UAL). Effective with the June 30, 2013 valuation, the UAL as of June 30, 2013 is amortized over a closed 17-year period (currently nine years), except for the additional UAL attributable to the creation of Safety Plan 6, which is being amortized over a separate closed period (currently seven years).

Effective with the June 30, 2014 valuation, any new sources of UAL due to actuarial gains and losses, assumption changes, or method changes are amortized over a closed 19-year period, with a five-year ramp up and four-year ramp down of the amortization payment at the beginning and end of the amortization period and 10 years of level payments as a percentage of payroll between the ramping periods. The Board also adopted a policy to replace the smoothed Actuarial Value of Assets with the Market Value of Assets for valuation purposes. These amortization and funding policies in conjunction are a type of policy known as direct rate smoothing.

This valuation was prepared based on the plan provisions shown in Appendix E.



SECTION I – EXECUTIVE SUMMARY

This valuation was performed based on the economic and demographic assumptions and methods that were recommended in the Actuarial Experience Study performed by Cheiron as of June 30, 2019. More details on the rationale for the demographic and economic assumptions can be found in the Actuarial Experience Study report adopted by the Board on January 22, 2020. A summary of the assumptions and methods used in the current valuation is shown in Appendix D.

B. Key Findings of this Valuation

The key results of the June 30, 2021 actuarial valuation are as follows:

- The actuarially determined employer contribution rate, net of employee cost-sharing, decreased from 41.40% of payroll to 39.07% of payroll. The primary reason for the rate decrease is the actuarial asset gain experienced in the plan year ending June 30, 2021.
- The return on Plan assets for June 30, 2021 was 25.86% net of investment expenses and assuming mid-year cash flows as compared to the 7.00% assumption. This produced an actuarial asset gain of \$600.0 million.
- The System's funded ratio, the ratio of Market Value of Assets over Actuarial Liability, increased from 74.3% last year to 89.5% as of June 30, 2021.
- The UAL is the excess of the System's Actuarial Liability over the Market Value of Assets. The System experienced a decrease in the UAL from \$1,103.8 million to \$470.1 million, a decrease of \$633.7 million. Table I-3 details the changes in UAL.
- The Actuarial Liability of the System increased less than expected. The experience gains were primarily due to smaller COLA increases than expected for current retirees, higher than expected inactive mortality and lower than expected retirements and disabilities. Also, salaries were lower than expected, and there were more terminations than expected. Consequently, the System experienced a net gain on the Actuarial Liability of \$11.4 million, a 0.3% decrease as a percentage of the expected Actuarial Liability.
- Through collective bargaining agreements, certain members began making employer pick-up contributions starting September 10, 2018 with scheduled increases through November 16, 2020. The cost-sharing contributions are estimated to offset the net employer contribution rates by 1.96% for FYE 2022 and 1.88% for FYE 2023. The impact of cost-sharing will continue to gradually decline as legacy members retire or leave the System.



SECTION I – EXECUTIVE SUMMARY

Below and on the following pages, we present Tables I-1, I-2, and I-3 which summarize the key results of the valuation with respect to SBCERS assets, Actuarial Liabilities, Unfunded Actuarial Liability, funded ratios, contribution rates, and membership. The results are shown and compared for both the current and prior plan year.

Table I-1 Santa Barbara County Employees' Retirement System Summary of Key Valuation Results (in thousands)					
Valuation Date Fiscal Year End	Ju	ne 30, 2020 2022	Ju	ne 30, 2021 2023	Change
Actuarial Liability Market Value of Assets	\$	4,297,727 3,193,932	\$	4,460,991 3,990,899	3.8% 25.0%
Unfunded Actuarial Liability (UAL) Funding Ratio	\$	1,103,795 74.3%	\$	470,092 89.5%	-57.4% 15.2%
Employer Contribution Rate Estimated Impact of Employee Cost-Sharing Net Employer Contribution Rate		43.36% <u>-1.96%</u> 41.40%		40.95% <u>-1.88%</u> 39.07%	-2.41% <u>0.08%</u> -2.33%

The key results shown in Table I-1 indicate that the Actuarial Liability increased by 3.8% and the Market Value of Assets increased by 25.0%. As a result, the funding ratio increased from 74.3% to 89.5%, an increase of 15.2%. Additionally, the Unfunded Actuarial Liability (UAL) decreased by \$633.7 million or -57.4% as of June 30, 2021.

The net employer contribution rate decreased 2.33% from 41.40% to 39.07% of payroll, with the estimated offset from employee cost-sharing decreasing by 0.08% as more legacy members retire or leave the System.

Based on estimated fiscal year 2022-23 payroll of \$409.0 million, the estimated employer contributions are \$159.8 million net of cost-sharing for the fiscal year ending June 30, 2023. Note that the estimated fiscal year payroll amount is based on projected payroll from the previous year's valuation dates (see Table I-2) rolled forward at the assumed payroll growth rate of 3.0% to the fiscal year in which the contribution rate applies.



SECTION I – EXECUTIVE SUMMARY

As shown in Table I-2 below, membership in SBCERS increased by 1.3%. Active membership remained stable, inactives increased by 5.2%, and members receiving benefits increased by 1.3%. Total payroll increased by 2.8%, which is less than the assumed 3.0% increase. The average pay per active member also increased by 2.8%.

Table I-2 Membership Total						
	J	une 30, 2020	J	une 30, 2021	% Change	
Actives		4,322		4,321	0.0%	
Terminated Members		1,611		1,694	5.2%	
Members Receiving Benefits		4,844		4,906	1.3%	
Total Members		10,777		10,921	1.3%	
Ratio of Inactives to Active Members		1.49		1.53		
Active Member Projected Payroll	\$	386,136,668	\$	397,040,432	2.8%	
Average Pay per Active	\$	89,342	\$	91,886	2.8%	

Projected payroll is based on valuation data projected for next fiscal year using a full year of salary increases.



SECTION I – EXECUTIVE SUMMARY

Table I-3 Change in Unfunded Actuarial Liab (in thousands)	ility	
Unfunded Actuarial Liability, 6/30/2020	\$	1,103,795
Expected change in Unfunded Actuarial Liability	\$	(30,552)
Unfunded decrease due to actuarial asset gain ¹		(591,788)
Unfunded decrease due to liability gain		(11,363)
Total change in unfunded actuarial liability	\$	(633,703)
Unfunded Actuarial Liability, 6/30/2021	\$	470,092

¹ Includes net loss due to expenses being more than expected and the contribution-timing lag.

The Unfunded Actuarial Liability (UAL) for SBCERS decreased by \$633.7 million, from \$1.104 billion to \$470.1 million. Table I-3 above presents the specific components of the change in the UAL.

The expected decrease in the UAL of \$30.6 million is the amount of expected employer and employee contributions in excess of benefits expected to accrue for active members and interest on the UAL.

The actuarial asset gain, which in this exhibit includes losses due to administrative expenses (\$0.2 million) and the contribution-timing lag (\$8.0 million), decreased the UAL by \$591.8 million. The liability experience decreased the UAL by \$11.4 million.



SECTION I – EXECUTIVE SUMMARY

Employer Contributions Comparison

Thus far, the experience of the 2020-21 plan year has been presented in terms of the UAL and funded ratio. Table I-4 below compares the employer contribution rates and its components from the prior year to the current year. The employer contribution rate decreased by 2.33% for the June 30, 2021 valuation (after the impact of the employee cost-sharing). The employer normal cost decreased by 0.28%. The contribution component for the UAL amortization payment decreased by 2.13%. Overall, the employee contributions, as a weighted average of payroll, increased by 0.18% of pay as PEPRA members, most of whom have higher contribution rates, replace legacy members, decreasing the net employer portion of the normal cost rate.

These decreases to the employer contribution rate were slightly offset by a decrease of 0.08% in the employee cost-sharing rate. When the employee cost-sharing rate decreases, more of the contribution is paid by the employer, so a decrease in the employee cost-sharing rate translates to an increase in the employer contribution rate.

Table I-4 Contributions Rates by Components						
Valuation Year	2020	2021	Total			
Effective for Fiscal Year End	FYE 2022	FYE 2023	Change			
Gross Normal Cost Employee Contributions Employer Normal Cost UAL Amortization Payment Employer Contribution Rate	22.84% <u>7.24%</u> 15.60% <u>27.76%</u> 43.36%	22.74%	-0.10% <u>0.18%</u> -0.28% <u>-2.13%</u> -2.41%			
Estimated Impact of Employee Cost-Sharing	<u>-1.96%</u>	<u>-1.88%</u>	<u>0.08%</u>			
Net Employer Contribution Rate	41.40%	39.07%	-2.33%			



SECTION I – EXECUTIVE SUMMARY

Table I-5 summarizes the change in the net employer contributions rate from the last valuation by source.

Employer Contribution Ra	Table I-5 ate Reconciliation	on (After Cost-Sl	naring)	
	Normal Cost	UAL Payment	Total	Dollars
FYE 2022 Employer Contribution Rate	13.64%	27.76%	41.40%	\$164.6 M
Expected Changes				
DRS amortization phase-in	0.00%	0.77%	0.77%	
PEPRA new hires	-0.36%	0.00%	-0.36%	
Employee Cost-Sharing	0.10%	0.00%	0.10%	
Total Expected Change	-0.26%	$\overline{0.77\%}$	0.51%	
Expected FYE 2023 Employer Rate	13.38%	28.53%	41.91%	\$171.7 M
Effect of payroll on UAL payments	0.00%	0.08%	0.08%	
Change due to actuarial asset gain	0.00%	-2.94%	-2.94%	
Demographic experience	0.06%	-0.04%	0.02%	
Assumption change	0.00%	0.00%	0.00%	
Total Unexpected Change	0.06%	-2.90%	-2.84%	
FYE 2023 Employer Contribution Rate	13.44%	25.63%	39.07%	\$159.8 M

A review of the changes in the employer contribution rate from the prior valuation shows that the FYE 2023 rate was expected to increase by 0.51%, but it actually decreased by 2.33% due to unexpected changes in the Plan's assets and liabilities. The largest driver of the decrease in the employer contribution rate is the change due to the asset gain. The asset gain led to a decrease in the contribution rate of 2.94% of payroll. The other components of the contribution rate change are as follows:

- PEPRA members now make up over 42% of active member payroll. The average employee contribution rate continues to increase since most PEPRA members have higher employee contribution rates than the retiring or terminating legacy members they replace. PEPRA benefits are also lower than the legacy members' benefits. The expected impact of the increasing number of PEPRA members was a 0.36% of pay decrease in the employer contribution rate.
- However, an increasing PEPRA membership also has the effect of a slight cost increase since they have not bargained any employee cost-sharing. When legacy members, who have bargained the employee cost-sharing, retire, and are replaced by PEPRA members, there are fewer cost-sharing contributions as a percentage of total Plan payroll. The expected change in the cost-sharing contribution was a 0.10% of pay decrease, but the actual cost-sharing decreased from 1.96% to 1.88%, which increased the net employer contribution rate by 0.08%.



SECTION I – EXECUTIVE SUMMARY

- Payroll used to amortize unfunded liabilities was lower than expected by about \$0.7 million. As a result, the UAL payments are spread over a smaller payroll base than expected, and the employer contribution rate, as a percentage of payroll, increased by 0.08%.
- Asset experience produced an investment gain that decreased the contribution rate by 2.94% of pay. The assets of the Plan returned 25.86% (net of investment expenses), which is significantly higher than the assumed rate of 7.00%. The impact of the current year gain will continue to be phased-in to the employer contribution rates over the next four years, as provided for under the Plan's funding policy. See Table V-2 Development of Amortization Payment for more details.
- Demographic experience was very close to expected, with a net increase in cost of about 0.02% of pay. The demographic experience of the Plan includes retirement, death, disability, and termination experience, as well as other factors such as changes in benefit and pay amounts. As with the asset gain, the amortized portion of the demographic loss attributable to the change in the UAL will continue to be phased-in to the employer contribution rates over the next four years, as provided for under the Plan's funding policy.



SECTION I – EXECUTIVE SUMMARY

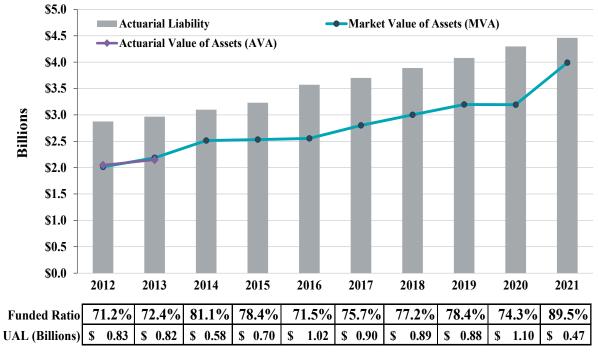
C. Historical Trends

For most retirement plans, the greatest attention is given to the current valuation results and in particular, the size of the current Unfunded Actuarial Liability and the employer contribution. However, it is important to remember that each valuation is merely a snapshot in the long-term progress of a pension fund. The current year's valuation should be judged relative to historical trends, as well as trends expected into the future.

Assets and Liabilities

The chart below compares the Market Value of Assets (MVA) and the Actuarial Value of Assets (AVA), where applicable, to the Actuarial Liabilities. The percentage shown in the table below the graph is the ratio of the Market Value of Assets to the Actuarial Liability (the funded ratio). The large increase in funded ratio in 2014, to 81.1%, was due to an asset gain and the switch to market value of assets from actuarial value of assets. The large decrease in funded ratio to 71.5%, in 2016 was primarily due to changes in the actuarial assumptions. The gradual increase in the funded ratio from 2016 to 2019, reaching 78.4%, was due to asset gains during the period as well as significant contributions. The decrease from 78.4% to 74.3% in 2020 was primarily due to actuarial asset losses. Finally, the significant increase in 2021 from 74.3% to 89.5% is primarily due to actuarial asset gains.

Assets and Liabilities



As of 2014, the market value of assets is used to calculate the unfunded actuarial liability and funded ratio.



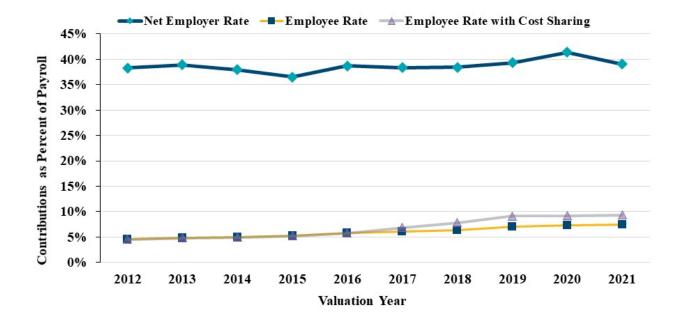
SECTION I – EXECUTIVE SUMMARY

Contribution Trends

In the chart below, we present the historical trends for the SBCERS contribution rates. The employer contribution rates have been very stable for the last ten years, ranging from 36.6% to 41.4%. The contribution stability is primarily due to the Plan's amortization policy which phases in the funding of all unexpected changes in the UAL over a five-year period. The employer rate decreased due to an asset method change in 2014 that eliminated the actuarial asset smoothing and recognized deferred asset gains immediately and favorable asset experience, which continued to be phased-in over the next four years. In 2016, assumption changes increased the employer contribution rate. Subsequently, employer rates have been relatively stable. The increase in contribution rate in 2020 was driven mostly by the FYE 2020 asset losses and the final year of the 2016 assumption change being phased-in. The decrease in contribution rate in 2021 is driven mostly by the 25.9% asset return for June 30, 2021.

The average employee contribution rates were relatively stable from 2010 to 2016, increasing slightly as the Plan's economic assumptions have changed and PEPRA members were hired. Average employee contributions rates have continued to increase since 2017 as more PEPRA members were hired and cost-sharing contributions for legacy members have been bargained.

Historical Contribution Rates





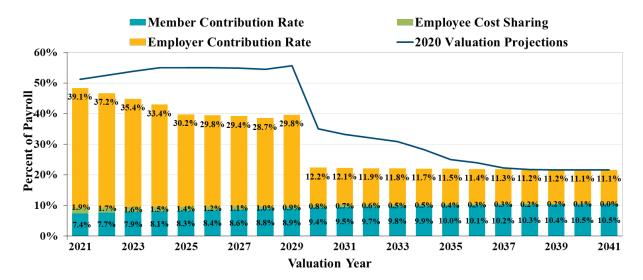
SECTION I – EXECUTIVE SUMMARY

D. Future Expected Financial Trends

The analysis of projected financial trends is an important component of this valuation. All the projections in this section are based on the current investment return assumption of 7.00%. We have assumed future payroll increases of 3.00% per year. The projections also assume that all other actuarial assumptions are met each year.

Projection of Contributions

The following graph shows the expected employer contribution rate – including the impact of expected offsets for additional employee cost-sharing contributions – based on achieving the 7.00% assumption **each year** for the next 20 years. This scenario is highly unlikely; even if the Plan does achieve an **average** return of 7.00% over this period, the returns in each given year will certainly vary.



The employer contribution rate after cost-sharing is approximately 39.1% of member payroll for the June 30, 2021 valuation. The employer rate is expected to decrease by almost 9% of payroll over the next four years to 30.2% in 2025 due to phasing-in the current year's asset gains. The projected contribution rate for 2025 from the 2020 valuation was 45.4%, which is more than 15% of payroll higher than the current valuation's projection. The employer rate remains at approximately the same level between 2025 through 2029. After 2029, the total contribution rate is expected to drop significantly, when the remaining UAL as of June 30, 2013 is fully paid off. After that point, employer contribution rates are expected to stabilize around 11% to 12% and are based on the normal cost rates since the UAL payment is negative. PEPRA mandates that employers must continue to contribute at least the normal cost rate unless the plan is 120% funded and has met meet certain legal requirements as well.

Employee contribution rates are projected to gradually increase as the PEPRA members become a larger proportion of the active member population over time. PEPRA employee contribution rates are 50% of the normal cost rate and are greater on average than for the legacy plans.

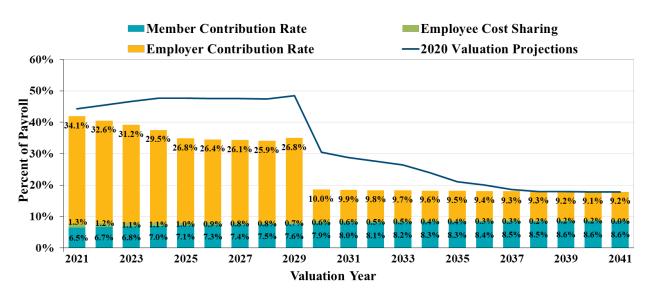


SECTION I – EXECUTIVE SUMMARY

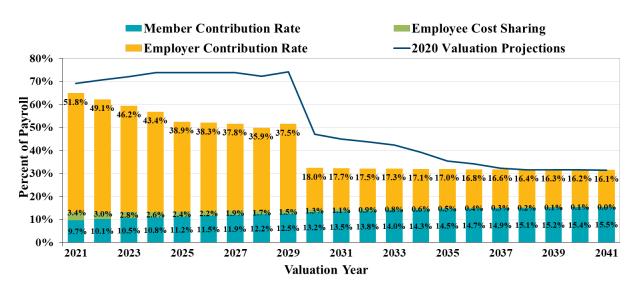
However, the employee cost-sharing contributions, bargained for the legacy members only, are projected to decrease as legacy plan members retire.

The employer contribution rate projections are shown below and on the next page for each group: General, Safety, and APCD. All have similar patterns while the magnitude of contribution increases and decreases varies by group.

General Member Group



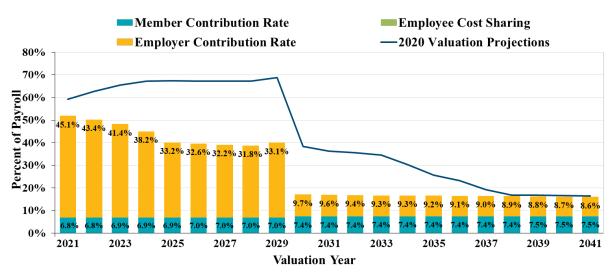
Safety Member Group





SECTION I – EXECUTIVE SUMMARY

APCD Member Group



Please note that there is no employee cost-sharing for the APCD members.

Asset and Liability Projections:

In this section, we present our assessment of the implications of the June 30, 2021 valuation results in terms of benefit security (assets over liabilities). The following graph shows the projection of assets and liabilities assuming that assets will earn the 7.00% assumption each year during the projection period. The percentages along the graph represent the funded ratio or status of the System.



The projected funded ratio increases over the entire projection period. It reaches 100% in 2027, seven years earlier than the 2020 valuation projections, assuming that all actuarial assumptions are achieved each year.

However, as above, it is the **actual** return on System assets that will determine the future funding status and contribution rate to the Fund.



SECTION II – DISCLOSURES RELATED TO RISK

Actuarial valuations are based on a set of assumptions about future economic and demographic experience. These assumptions represent a reasonable estimate of future experience, but actual future experience will undoubtedly be different and may vary significantly. This section of the report is intended to identify the primary risks to the Plan, provide some background information about those risks, and provide an assessment of those risks.

Identification of Risks

The fundamental risk to a pension plan is that the contributions needed to pay the benefits become unaffordable. This is most likely to occur when the contributions needed to support the plan differ significantly from expectations. While there are a number of factors that could lead to contribution amounts deviating from expectations, we believe the primary risks are:

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

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

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

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

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



SECTION II – DISCLOSURES RELATED TO RISK

The chart below shows the components contributing to the Unfunded Actuarial Liability (UAL) from June 30, 2011 through June 30, 2021. Over the last 10 years, the UAL has decreased by approximately \$272 million. The investment gains (gold bar) of \$91 million on the Actuarial Value of Assets (AVA), the net liability gains (gray bar) of \$86 million, the asset method change (teal bar) of \$132 million, and the contributions in excess of the "tread water" level (red bar, defined later in this section) of \$131 million have all decreased the UAL since June 30, 2011. The assumptions changes (purple bar) resulting in a total UAL increase of \$169 million is the primary offset to the other UAL reduction sources.

Components of the UAL since 6/30/2011 \$200 \$100 \$169 **\$0** (\$100)(\$86) (\$200)(\$131) (\$300)(\$132)(\$400)(\$500) ■ AVA Investment (G)/L ■ Assumption Changes ■ Liability (G)/L **■** Contributions ■ Asset Method Change

Chart II-1



SECTION II - DISCLOSURES RELATED TO RISK

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

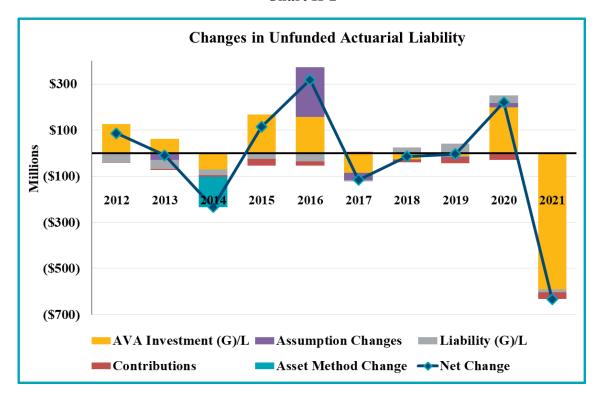


Chart II-2

The Board approved a change in the asset smoothing method effective with the June 30, 2014 actuarial valuation to eliminate the five-year smoothing of investment gains and losses when determining the funded ratio and calculating employer contribution rates. As of June 30, 2014, there were \$132 million in deferred asset gains that were immediately recognized when the Actuarial Value of Assets became the Market Value of Assets.

The average annual geometric market return over the 10-year period is 7.7%. Actuarial gains were greater than the losses over the period, primarily due to the market performance in FYE 2021 of 25.9%, partially offset by the market performance in FYE 2012, 2015, 2016 and 2020 with actual returns between 0.8% - 1.80% during those years. Asset returns during the noted years were well below the assumed rate of return of 7.0%.

Over the same period, the assumed rate of return decreased from 7.75% to 7.00%. It is important to note that these changes simply reflect a downward revision to the estimate of future investment earnings and ultimately costs will be determined by actual investment earnings. At the time of the 2019 Actuarial Experience study, using RVK's capital market assumptions and the Plan's asset allocation, the expected average annual return was about 6.15% compared to the Plan's current assumption of 7.00%. Since that time, low interest rates and high price/earnings ratios have led to capital market assumptions being revised downward by many investment consultants, including RVK. Future expectations of investment returns may continue to decline necessitating further reductions in the discount rate.



SECTION II – DISCLOSURES RELATED TO RISK

The impact of all assumption changes is represented by the purple bars and in some years also included decreases in mortality rates and longevity improvements projected in the future, which had a significant impact on the measurement of the UAL. The assumption changes effective with the July 1, 2019 and July 1, 2020 valuations were only demographic changes with no change to the expected rate of return of 7.00%.

Each year the UAL is expected to increase for benefits earned in the current year (the normal cost) and interest on the UAL. This expected increase is referred to as the tread water level. If contributions are greater than the tread water level, the UAL is expected to decrease. Conversely, if contributions are less than the tread water level, the UAL is expected to increase. The amortization policy (as well as the contribution-timing lag) can affect whether or not the contributions exceed the tread water level. For example, the Board changed the amortization policy in 2013 to amortize the UAL over a closed 17-year period instead of a rolling period. Prior to this amortization policy change, contributions were slightly more tread water level. However, contributions after the policy change have paid down the UAL more substantially, by about \$128 million during the eight-year period after the policy change.

Table II-1

Unfunded Actuarial Liability (UAL) Change by Source						
June 30,	Investment Experience	Liability Experience	Assumption and Method Changes	Contributions	Total UAL Change	
2012	\$125,800,000	(\$39,300,000)	\$0	(\$712,000)	\$85,788,000	
2013	62,682,000	(40,274,000)	(29,264,000)	(2,758,000)	(9,614,000)	
2014	(71,742,000)	(24,833,000)	$(132,340,000)^{1}$	(4,829,000)	(233,744,000)	
2015	167,682,000	(25,874,000)	0	(27,587,000)	114,221,000	
2016	156,742,000	(35,903,000)	215,838,000	(18,022,000)	318,655,000	
2017	(86,209,000)	(6,600,000)	(29,684,000)	6,223,000	(116,270,000)	
2018	(28,015,000)	25,400,000	0	(12,265,000)	(14,880,000)	
2019	(15,690,000)	40,071,000	(7,455,000)	(20,530,000)	(3,604,000)	
2020	198,108,000	32,520,000	19,125,000	(28,461,000)	221,292,000	
2021	(600,018,000)	(11,363,000)	0	(22,322,000)	(633,703,000)	
Total	(\$90,660,000)	(\$86,156,000)	\$36,220,000	(\$131,263,000)	(\$271,859,000)	

¹ Asset Method Change from Actuarial Value to Market Value



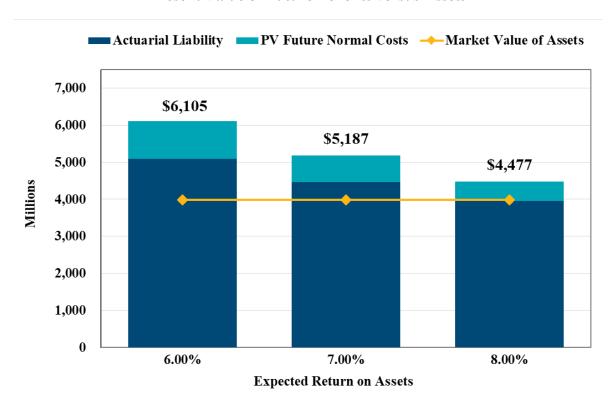
SECTION II – DISCLOSURES RELATED TO RISK

Assessing Costs and Risks

Sensitivity to Investment Returns

The chart below compares assets to the present value of all projected future benefits discounted at the current expected rate of return and at investment returns 100 basis points above and below the expected rate of return. The present value of future benefits is shown as a bar with the portion attributable to past service in dark blue (Actuarial Liability) and the portion attributable to future service in teal (Present Value of Future Normal Costs). The gold line shows the Market Value of Assets.

Present Value of Future Benefits versus Assets



If investments return 7.00% annually, the Plan would need approximately \$5.2 billion in assets today to pay all projected benefits compared to current assets of \$4.0 billion. If investment returns are only 6.00%, the Plan would need approximately \$6.1 billion in assets today, and if investment returns are 8.00%, the Plan would need approximately \$4.5 billion in assets today.

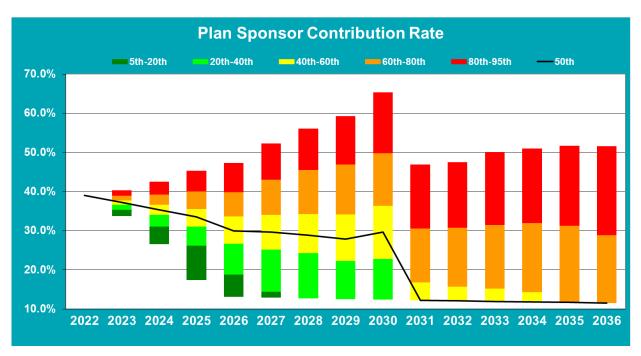


SECTION II – DISCLOSURES RELATED TO RISK

Sensitivity to Investment Returns – Stochastic Projections

Stochastic projections serve to show the range of probable outcomes of various measurements. The graphs on this and the following page show the projected range of the employer contribution rate and of the funded ratio (i.e., the market assets divided by liabilities). The range in both scenarios is driven by the volatility of investment returns (assumed to be based on a 11.04% standard deviation of annual returns, as provided by the Plan's investment consultant). The stochastic projections of investment returns are based on an assumption that each future year's investment return is independent from all other years and is identically distributed according to a lognormal distribution. This assumption may result in an unrealistically wide range of compound investment returns over longer periods of time.

Stochastic Projection of Employer Contributions as a Percent of Pay

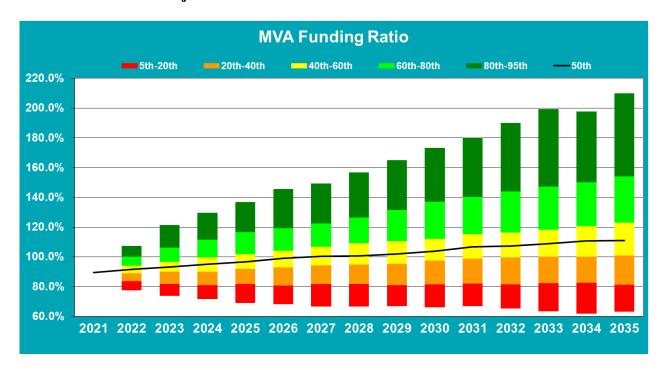


The stochastic projection of employer contributions as a percent of pay shows the probable range of future contribution rates. The baseline contribution rate (black line), which represents the median of the simulations using an average return of 7.00%, aligns closely with the projections discussed in subsection D of the Executive Summary of this report. In the most pessimistic scenario shown, the 95th percentile, the projected employer contribution rate is approximately 65% of pay in 2030. Conversely, in the most optimistic scenario shown, the 5th percentile, the projected employer contribution rate declines to about 12% in 2031 (the minimum allowed under law, since PEPRA requires that employers contribute an amount at least equal to their share of the normal cost, unless the plan becomes "super" funded).



SECTION II – DISCLOSURES RELATED TO RISK

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



The graph above shows the projection of the funded ratio based on the market value of assets. While the median funded ratio (black line) is projected to be approximately 115% at the end of the 15-year period shown here, there is a wide range of potential outcomes. Good investment returns have the likelihood of bringing the funded ratio well over 100%. Due to the sound funding policy of the Plan, even in scenarios with significant unfavorable investment returns, the Plan is projected to remain over 60% funded, as long as the actuarially determined contributions continue to be made.

Contribution Risk

If contribution rates become a significant percentage of payroll, future salary increases and the hiring of new members are potentially at risk. When member payroll growth stagnates or even declines, the dollar level of contributions made to the Plan also stagnates or declines since contributions are based on payroll levels.

There is also a risk of the contribution rates increasing when payroll decreases since the Plan's funding policy amortizes the UAL as a level percentage of pay. This means that the UAL payments are designed to increase at the assumed payroll growth rate of 3.00%, so that the payment is expected to remain constant as a percentage of payroll. If payroll growth is less than the expected 3.00% or there is a decline in payroll, the UAL payments are spread over a smaller payroll base and the contribution rate as a percentage of pay increases, potentially making the Plan less affordable. This risk is particularly relevant for the APCD, as their UAL payment as a percentage of payroll is almost 75% of their total employer contribution rate.



SECTION II – DISCLOSURES RELATED TO RISK

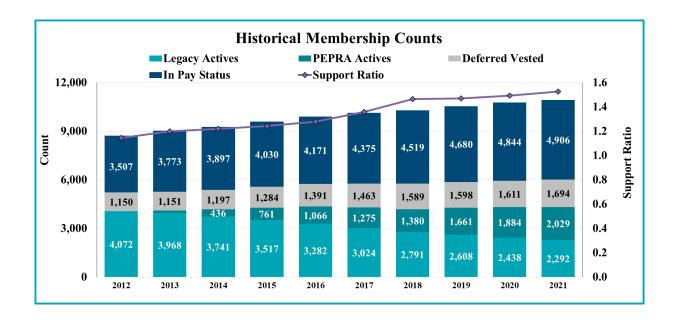
Plan Maturity Measures

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

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

Inactives per Active (Support Ratio)

One simple measure of plan maturity is the ratio of the number of inactive members (those receiving benefits and those entitled to a deferred benefit) to the number of active members. The Support Ratio is expected to increase gradually as a plan matures. The chart below shows the growth in the Support Ratio from 2012 to 2021 as the number of active members has increased by only 6%, while the number of inactives has increased by over 40%.



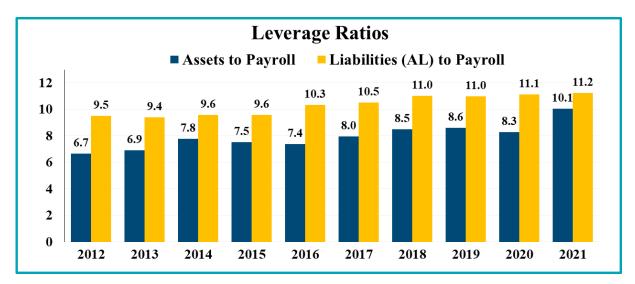


SECTION II – DISCLOSURES RELATED TO RISK

Leverage Ratios

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

The chart below shows the historical leverage ratios of the Plan. Both leverage ratios have gradually increased since 2012.



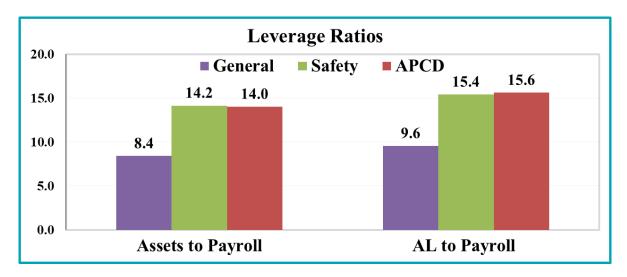
To appreciate the impact of the ratio of assets to payroll on plan cost, consider the situation for a new plan with almost no assets. Even if the assets suffer a bad year of investment returns, the impact on the plan cost is nil, because the asset level is so small.

As the Plan becomes better funded, the asset leverage ratio will increase, and if it was 100% funded, the asset leverage ratio would increase from 10.1 to 11.2 times payroll, or the Actuarial Liability (AL) leverage ratio.

We note that the ratio of both assets and liabilities to payroll, and therefore the sensitivity to investment returns, is higher for the Safety and APCD members compared to the General members. The Safety members have higher leverage ratios because of the higher benefit amounts and the earlier average retirement ages than General members. The APCD members have the highest leverage ratios mainly because their support ratio – inactives to actives – is significantly higher (2.7 compared to 1.5 for both General and Safety), and thus their payroll base is much smaller relative to their asset reserves and liabilities.



SECTION II - DISCLOSURES RELATED TO RISK



The General asset leverage ratio of 8.4 means that if the Plan's assets lose 10% of their value, which is a 17.00% actuarial loss compared to the expected return of 7.00%, the loss would be equivalent to 143% of payroll (17.00% times 8.4). Based on the current amortization policy and economic assumptions, the General contribution rate would ultimately increase by about 14% of payroll.

The same investment loss for the Safety group and APCD with asset leverage ratios around 14.0 would be equivalent to 238% of payroll, or an approximate contribution rate increase of over 23% of pay. Therefore, the employer contribution rates for the Safety and APCD employers will generally be much more volatile than those of the General employers.

More Detailed Assessment

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



SECTION III – ASSETS

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

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

- **Disclosure** of System assets as of June 30, 2020 and June 30, 2021,
- Statement of the **changes** in market values during the year,
- An allocation of the assets by reserve balances,
- An assessment of historical investment performance versus inflation, and
- An allocation of the assets between the **valuation subgroups**.

Disclosure

Only the Market Value of Assets is relevant for this actuarial valuation. It represents a snapshot value, which provides the principal basis for measuring financial performance from one year to the next.

As of June 30, 2014, a smoothed Actuarial Value of Assets is no longer used in the calculations of the Unfunded Actuarial Liability or funded status due to the implementation of the funding policy adopted by the Board in September 2014. This policy change was made in conjunction with the new 19-year layered amortization with phase-in of any unexpected changes in the Unfunded Actuarial Liability starting with the June 30, 2014 valuation.

Table III-1 on the next page discloses and compares the asset values as of June 30, 2020 and June 30, 2021.



SECTION III – ASSETS

Table II Statement of Assets a	Iarket Value	
Assets:	June 30, 2020	June 30, 2021
Cash and Cash Equivalents	\$ 15,984,536	\$ 19,177,461
Prepaid Expenses	3,298,092	3,401,681
Receivables:		
Contributions Receivable	7,713,972	8,979,609
Other	111,135	5,729
Accrued Interest	3,218,852	2,144,876
Dividends	2,557,603	3,812,499
Security Sales	6,339,274	24,096,551
Total Receivables	\$ 19,940,836	\$ 39,039,263
Investments, at Market Value:		
Short Term Investments	69,751,807	49,391,307
Alternative/Private Equity	347,032,449	493,545,704
Domestic Equity	628,892,487	761,791,076
Domestic Bonds	518,596,229	592,979,451
International Equity	312,907,959	406,768,226
Emerging Market Equity	227,498,647	318,036,546
International Bonds/Non-Core Fixed Income	266,379,299	287,020,437
Private Credit	58,900,886	90,111,102
Real Estate	310,592,388	348,686,571
Real Assets/Real Return	436,914,522	604,896,283
Total Investments	\$ 3,177,466,674	\$ 3,953,226,704
Other Assets:		
Collateral Held for Securities Lent	15,387,113	13,608,587
Total Assets	\$ 3,232,077,252	\$ 4,028,453,696
Liabilities:		
Accounts Payable	629,178	685,673
Benefits Payable	13,657,628	14,082,834
Collateral Held for Securities Lent	15,387,113	13,608,587
Investment Manager Fees	41	0
Security Purchases	8,471,327	9,177,844
Total Liabilities	\$ 38,145,287	\$ 37,554,937
Market Value of Assets	\$ 3,193,931,965	\$ 3,990,898,759



SECTION III - ASSETS

Changes in Market Value

The components of asset change are:

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

Table III-2 below shows the components of change in the Market Value of Assets during the fiscal years ending June 30, 2020 and June 30, 2021.

Table III-2 Changes in Market Values						
		Fiscal Year ending		Fiscal Year ending		
<u>Additions</u>		<u>June 30, 2020</u>		<u>June 30, 2021</u>		
Contributions						
Employer's Contribution	\$	141,584,585	\$	150,093,122		
Members' Contributions		31,618,487		35,520,188		
Total Contributions	\$	173,203,072		185,613,310		
Net Investment Income						
Net Appreciation/(Depreciation) in						
Fair Value of Investments	\$	859,117	\$	801,307,683		
Interest		15,352,433		9,885,489		
Dividends		20,654,362		26,586,474		
Investment Expense		(12,501,364)		(15,434,278)		
Net Investment Income	\$	24,364,548	\$	822,345,368		
Securities Lending Income						
Securities Lent Income	\$	377,004	\$	96,519		
Securities Lent Expense		(175,010)		81,392		
Net Securities Lending Income	\$	201,994	\$	177,911		
Miscellaneous Income						
Class Action Settlements		0		0		
Commission Recapture		0		0		
Miscellaneous Income		198,110		184,127		
Net Miscellaneous Income	\$	198,110	\$	184,127		
Total Additions	\$	197,967,724	\$	1,008,320,716		



SECTION III – ASSETS

Table III-2 Changes in Market Values (Continued)				
]	Fiscal Year ending <u>June 30, 2020</u>		Fiscal Year ending June 30, 2021
Deductions				
Benefit payments	\$	193,809,561	\$	204,081,066
Refunds of Members' Contributions	_	1,837,035		1,578,030
Total Benefit Payments	\$	195,646,596	\$	205,659,096
Administrative & Other Expenses				
General Administrative Expenses	\$	5,987,114	\$	5,010,553
Actuary Fees		212,428		158,483
Fund Legal Fees		323,676		525,790
Total Administrative & Other	\$	6,523,218	\$	5,694,826
Expenses				
Total Deductions	\$	202,169,814	\$	211,353,922
Net increase (Decrease)	\$	(4,202,090)	\$	796,966,794
Net Assets Held in Trust for Pension B	enefit	S		
Beginning of Year	\$	3,198,134,055	\$	3,193,931,965
End of Year	\$	3,193,931,965	\$	3,990,898,759
Expected Return	\$	222,872,695	\$	222,689,553
Actual Return		24,764,652	•	822,707,406
Actuarial Gain/(Loss)	\$	(198,108,043)	\$	600,017,853
Expected Return		7.00%		7.00%
Approximate Return		0.78%		25.86%



SECTION III - ASSETS

Allocation of Reserve Balances

The following table shows the allocation of the assets among the various accounting reserves.

A new Interest Crediting and Undesignated Earnings Policy was established on August 25, 2010. In accordance with that policy, the Market Stabilization Account is based on the difference between the Market Value of Assets and the Actuarial Value of Assets. The Market Stabilization Account is zero under the current funding policy. The Contra Tracking Account was established with that policy. In effect, that account is the difference between the Actuarial Value of Assets, now equal to the Market Value of Assets, and the sum of the first three reserves in Table III-3, as long as that account is negative.

Table III-3 Allocation of Assets by Accounting Reserve Amounts for the Years Ended June 30, 2020 and June 30, 2021				
		FYE 2020		FYE 2021
Member Deposit Reserve	\$	230,742,947	\$	254,026,094
County and District Advance Reserve		1,071,458,640		1,191,326,579
Retired Member Reserve		2,784,605,670		2,896,720,575
Transferred Funds Reserve		219,619,413		235,261,805
	\$	4,306,426,670	\$	4,577,335,053
New Market Stabilization Reserve		0		0
Contra Tracking Account		(1,112,494,704)		(586,436,294)
Total Reserves	\$	3,193,931,965	\$	3,990,898,759



SECTION III - ASSETS

Historical Investment Performance

The following table shows the historical annual asset returns on a market value basis, as well as the change in the Consumer Price Index (CPI) since 2002.

	Table III-4	
Net Return on A	Assets vs. Increase in	Consumer Price Index
Year Ended June 30	Net Return at Market Value	Increase in Consumer Price Index ¹
2002	-5.4%	1.1%
2003	4.6%	2.1%
2004	15.7%	3.3%
2005	9.9%	2.5%
2006	10.6%	4.3%
2007	16.6%	2.7%
2008	-7.2%	5.0%
2009	-19.20%	-1.4%
2010	13.40%	1.1%
2011	21.10%	3.6%
2012	1.80%	1.7%
2013	8.10%	1.8%
2014	15.00%	2.1%
2015	0.83%	0.1%
2016	1.30%	1.0%
2017	10.39%	1.6%
2018	8.00%	2.9%
2019	7.53%	1.6%
2020	0.78%	0.6%
2021	25.86%	5.4%
Geometric Avera	ge	
5-Year	10.2%	2.1%
10-Year	7.7%	1.7%
20-Year	6.5%	2.1%

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



SECTION III - ASSETS

Allocation of Assets by Valuation Subgroup

The following table shows the allocation of the Market Value of Assets between the three valuation subgroups (General, Safety, and APCD). The assets are allocated to each subgroup based on their share of the Valuation Reserves maintained by SBCERS. The Market Value of Asset is used to calculate each subgroups' UAL and the resulting amortization payment.

	Table III-5 Allocation of Assets by Subgroup for June 30, 2021 (in thousands)												
		General	Safety		APCD			Total					
1.	Member Deposit Reserve	\$ 188,015	\$	66,052	\$	(42)	\$	254,026					
2.	County and District Advance Reserve	921,476		495,537		9,575		1,426,588					
3.	Retired Member Reserve	1,625,627		1,223,119		47,975		2,896,721					
4.	Transferred Funds Reserve	121,677		111,114		2,470		235,262					
5.	Total Valuation Reserves $(1+2+3)$	\$ 2,735,118	\$	1,784,709	\$	57,508	\$	4,577,335					
6.	Percentage of Line 5, by Plan	59.8%		39.0%		1.3%		100.0%					
7.	Market Value of Assets							3,990,899					
8.	Allocated Market Value of Assets	\$ 2,384,702	\$	1,556,056	\$	50,141	\$	3,990,899					



SECTION IV – LIABILITIES

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

- **Disclosure** of System liabilities at June 30, 2020 and June 30, 2021,
- Statement of **changes** in these liabilities during the year.

Disclosure

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

- **Present Value of Future Benefits:** Used for measuring all future System obligations; the obligations of the System earned as of the valuation date and those to be earned in the future by current plan participants, under the current System provisions.
- Actuarial Liability: Used for funding calculations, this liability is calculated taking the Present Value of Future Benefits and subtracting the present value of future Member Contributions and future Employer Normal Costs under an acceptable actuarial funding method. The method used for this System is called the Entry Age Normal (EAN) funding method.
- **Unfunded Actuarial Liability:** The excess of the Actuarial Liability over the Market Value of Assets.

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



SECTION IV – LIABILITIES

Table IV-1 Present Value of Future Benefits and Actuarial Liability (in thousands)													
	General		Safety		APCD		June 30, 2021 Total		June 30, 2020 Total				
Present Value of Future Benefits		General		Surcey		TH OD		10001		1000			
Actives	\$	1,431,763	\$	863,318	\$	16,910	\$	2,311,991	\$	2,234,418			
Terminated Vested		142,727		39,680		3,361		185,768		164,303			
Retirees		1,418,024		892,576		38,795		2,349,396		2,285,086			
Disabled		51,940		122,216		0		174,156		166,368			
Beneficiaries		81,802		81,857		2,499		166,158		158,596			
Total Present Value of Future Benefits	\$	3,126,256	\$	1,999,647	\$	61,565	\$	5,187,468	\$	5,008,771			
Actuarial Liability													
Total Present Value of Benefits	\$	3,126,256	\$	1,999,647	\$	61,565	\$	5,187,468	\$	5,008,771			
Present Value of Future Normal Costs													
Employer Portion		263,221		202,626		3,414		469,261		467,180			
Employee Portion		152,713		102,169		2,334		257,216		243,863			
Actuarial Liability	\$	2,710,322	\$	1,694,852	\$	55,817	\$	4,460,991	\$	4,297,728			
Market Value of Assets	\$	2,384,702	\$	1,556,056	\$	50,141	\$	3,990,899	\$	3,193,932			
Funded Ratio	88.0%		91.8%			89.8%		89.5%		74.3%			
Unfunded Actuarial Liability/(Surplus)	\$	325,620	\$	138,796	\$	5,676	\$	470,092	\$	1,103,796			



SECTION IV – LIABILITIES

Changes in Liabilities

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

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

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

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

	Table IV-2 Development of 2021 Experience Gain/(Loss) (in thousands)	
		Cost
1.	Unfunded Actuarial Liability (UAL) at June 30, 2020	\$ 1,103,795
2.	Middle of year actuarial liability payment	(104,231)
3.	Interest to end of year on 1 and 2	73,679
4.	Assumption Changes	
5.	Expected UAL at June 30, 2021 (1+2+3+4)	\$ 1,073,243
6.	Actual Unfunded Liability at June 30, 2021	470,092
7.	Net Gain/(Loss): (5 - 6)	\$ 603,151
8.	Portion of net gain/(loss) due to:	
	a. Investment experience gain	\$ 600,018
	b. More retiree deaths than anticipated	4,577
	c. Retiree COLAs less than expected	7,869
	d. Salary increases less than expected	1,862
	e. Less retirements and disabilities than expected	4,298
	f. Contribution timing lag and payroll less than expected	(7,985)
	g. Other experience	(7,488)
	h. Total gain/(loss)	\$ 603,151



SECTION V – CONTRIBUTIONS

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

For this System, the actuarial funding method used to determine the normal cost and the Unfunded Actuarial Liability is the **Entry Age Normal (EAN)** cost method. There are three primary components to the total contribution: the **normal cost rate** (employee and employer), the **Unfunded Actuarial Liability rate** (UAL rate), and **assumed administrative expenses**. Administrative expenses are split between employees and employers based on their share of the overall contributions.

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

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

The Unfunded Actuarial Liability (UAL) is the difference between the EAN Actuarial Liability and the Market Value of Assets. The Unfunded Actuarial Liability payment is determined as the amount needed to fund the outstanding Unfunded Actuarial Liability resulting from the creation of Safety Plan 6 over seven remaining years and the outstanding Unfunded Actuarial Liability as of June 30, 2013 over a closed period with nine years remaining, both as a level percentage of pay. Any subsequent unexpected change in the Unfunded Actuarial Liability after June 30, 2013 is amortized over 19 years that includes a five-year phase-in/out of the payments/credits for each annual layer.

The table on the following page presents the calculation of the contribution rates for the System for this valuation and compares the total contribution rate with the prior year rate. The tables on the following pages contain more details on the calculation of the UAL amortization payments, as well as details on the calculation of the contribution rates for each group and tier.



SECTION V – CONTRIBUTIONS

Table V-1 Development of the Net Employer Contribution Rate as of June 30, 2021 for FYE 2023 June 30, 2021 June 30, 2020 General Safety **APCD COMPOSITE COMPOSITE** 1. Total Normal Cost Rate 18.96% 32.70% 18.22% 22.74% 22.84% 2. Member Contribution Rate 6.54% 9.74% 6.84% 7.42% 7.24% 12.42% 11.38% 15.32% 15.60% 3. Employer Normal Cost Rate (1-2) 22.96% 4. UAL Amortization 22.95% 32.24% 33.67% 25.63% 27.76% 5. Employer Contribution Rate (3+4) 35.37% 55.20% 45.05% 40.95% 43.36% 6. Estimated Impact of Employee Cost-Sharing -1.30% -3.43% 0.00%<u>-1.88%</u> <u>-1.96%</u> 7. Net Employer Contribution Rate (5+6) 34.07% 51.77% 45.05% 39.07% 41.40% Projected Payroll for FYE 2022 \$ 283,503,897 \$ 109,961,278 \$ 3,575,257 **\$** 397,040,432 \$ 386,136,668

Beginning with the June 30, 2013 valuation, the Member and Employer Contribution Rates have been explicitly loaded by 3% to account for anticipated administrative expenses.



SECTION V - CONTRIBUTIONS

The table below presents the calculation of the UAL payments of the System as a dollar amount and as a percentage of pay under the amortization policy. The total UAL payment of the System is 25.63% as a percentage of pay, which is not the sum of the individual amortization bases, since the Safety Plan 6 UAL of 5.69% is paid only for members under Safety Plan 6. Once the (Gain)/Loss and Assumption bases are fully phased-in, the UAL payment from these sources will be 17.74% of pay.

If the UAL payment below of \$98,764,823 were calculated based on a single-equivalent period with the June 30, 2021 UAL of \$470,092,611, the number of years to fully pay off the unfunded liability would be five years.

				Table V-2							
				of Amortization Pay							
	For the June 30, 2021 Actuarial Valuation										
	Date	Initial	Initial Amortization	June 30, 2021 Outstanding	Remaining Amortization	Current Phase-In	Amortization	% of	% of Pay After		
Type of Base	Established	Amount	Years	Balance	Years	Percentage	Amount	Pay ²	Phase-In ²		
1. Safety Plan 6 Base ¹	6/30/2011	\$ 12,800,000	17	\$ 9,819,679	7	N/A	\$ 1,622,074	5.69%	5.69%		
2. Remaining UAL	6/30/2013	803,940,900	17	629,949,503	9	N/A	83,915,464	21.77%	21.77%		
3. (Gain)/Loss Base	6/30/2014	(227,291,825) 19	(220,613,951)	12	100%	(27,011,527)	-7.01%	-7.01%		
4. (Gain)/Loss Base	6/30/2015	137,382,857	19	139,288,901	13	100%	15,776,628	4.09%	4.09%		
5. (Gain)/Loss Base	6/30/2016	117,812,662	19	123,749,411	14	100%	13,073,731	3.39%	3.39%		
6. Assumption Changes	6/30/2016	215,838,077	19	226,714,468	14	100%	23,951,661	6.21%	6.21%		
7. (Gain)/Loss Base	6/30/2017	(83,693,202	19	(90,876,492)	15	100%	(9,016,968)	-2.34%	-2.34%		
8. Assumption Change	6/30/2017	(29,683,810) 19	(32,231,537)	15	100%	(3,198,085)	-0.83%	-0.83%		
9. (Gain)/Loss Base	6/30/2018	869,981	19	953,230	16	80%	72,800	0.02%	0.02%		
10. (Gain)/Loss Base	6/30/2019	25,594,711	19	27,716,892	17	60%	1,559,543	0.40%	0.67%		
11. Assumption Change	6/30/2019	(7,455,037	19	(8,073,170)	17	60%	(454,252)	-0.12%	-0.20%		
12. (Gain)/Loss Base	6/30/2020	234,967,694	. 19	246,762,235	18	40%	9,266,737	2.40%	6.01%		
13. Assumption Change	6/30/2020	19,124,525	19	20,084,508	18	40%	754,240	0.20%	0.49%		
14. (Gain)/Loss Base	6/30/2021	(603,151,064) 19	(603,151,064)	19	20%	(11,547,223)	-3.00%	-14.98%		
Total				\$ 470,092,611			\$ 98,764,823	25.63%	17.74%		

¹ Original amortization base for increase in benefits established in 6/30/2007 with a 15-year period. In 2011, the outstanding balance was re-amortized over a closed 17-year period.



² Includes explicit administrative expense load. Safety Plan 6 Base is shown as a percentage of the Safety Plan 6 payroll only.

SECTION V – CONTRIBUTIONS

The tables below present the calculation of the UAL payments of the System as a dollar amount and as a percentage of pay under the amortization policy, broken out by group.

Table V-2(a) General Development of Amortization Payment For the June 30, 2021 Actuarial Valuation										
	Type of Base	Date Established	Initial Amortization Years	June 30, 2021 Outstanding Balance	Remaining Amortization Years	Current Phase-In Percentage	Amortization Amount	% of Pay¹	% of Pay After Phase-In ¹	
1.	Remaining UAL	6/30/2013	17	\$ 392,661,165	9	N/A	\$ 52,306,326	19.00%	19.00%	
2.	(Gain)/Loss Base	6/30/2014	19	(128,188,505)	12	100%	(15,695,142)	-5.70%	-5.70%	
3.	(Gain)/Loss Base	6/30/2015	19	88,177,008	13	100%	9,987,413	3.63%	3.63%	
4.	(Gain)/Loss Base	6/30/2016	19	77,830,129	14	100%	8,222,505	2.99%	2.99%	
5.	Assumption Changes	6/30/2016	19	146,358,766	14	100%	15,462,338	5.62%	5.62%	
6.	(Gain)/Loss Base	6/30/2017	19	(56,681,354)	15	100%	(5,624,050)	-2.04%	-2.04%	
7.	Assumption Change	6/30/2017	19	(20,215,398)	15	100%	(2,005,817)	-0.73%	-0.73%	
8.	(Gain)/Loss Base	6/30/2018	19	(4,952,465)	16	80%	(378,231)	-0.14%	-0.17%	
9.	(Gain)/Loss Base	6/30/2019	19	11,752,604	17	60%	661,282	0.24%	0.40%	
10.	Assumption Change	6/30/2019	19	19,553,395	17	60%	1,100,209	0.40%	0.67%	
11.	(Gain)/Loss Base	6/30/2020	19	147,172,142	18	40%	5,526,800	2.01%	5.02%	
12.	Assumption Change	6/30/2020	19	14,905,931	18	40%	559,767	0.20%	0.51%	
13.	(Gain)/Loss Base	6/30/2021	19	(362,753,364)	19	20%	(6,944,850)	<u>-2.52%</u>	<u>-12.62%</u>	
	Total			\$ 325,620,054			\$ 63,178,550	22.95%	16.57%	

¹ Includes explicit administrative expense load.



SECTION V – CONTRIBUTIONS

Table V-2(b) Safety Development of Amortization Payment For the June 30, 2021 Actuarial Valuation

			For	the June 30, 2021	Actuarial Valu	ation			
	Type of Base	Date Established	Initial Amortization Years	June 30, 2021 Outstanding Balance	Remaining Amortization Years	Current Phase-In Percentage	Amortization Amount	% of Pay ²	% of Pay After Phase-In ²
1.	Safety Plan 6 Base ¹	6/30/2011	17	\$ 9,819,679	7	N/A	\$ 1,622,074	5.69%	5.69%
2.	Remaining UAL	6/30/2013	17	229,549,768	9	N/A	30,578,285	28.64%	28.64%
3.	(Gain)/Loss Base	6/30/2014	19	(89,926,489)	12	100%	(11,010,418)	-10.31%	-10.31%
4.	(Gain)/Loss Base	6/30/2015	19	49,092,633	13	100%	5,560,502	5.21%	5.21%
5.	(Gain)/Loss Base	6/30/2016	19	45,744,405	14	100%	4,832,751	4.53%	4.53%
6.	Assumption Changes	6/30/2016	19	77,642,302	14	100%	8,202,662	7.68%	7.68%
7.	(Gain)/Loss Base	6/30/2017	19	(32,164,531)	15	100%	(3,191,437)	-2.99%	-2.99%
8.	Assumption Change	6/30/2017	19	(11,628,921)	15	100%	(1,153,847)	-1.08%	-1.08%
9.	(Gain)/Loss Base	6/30/2018	19	5,016,021	16	80%	383,085	0.36%	0.45%
10.	(Gain)/Loss Base	6/30/2019	19	14,319,574	17	60%	805,718	0.75%	1.26%
11.	Assumption Change	6/30/2019	19	(28,174,594)	17	60%	(1,585,297)	-1.48%	-2.47%
12.	(Gain)/Loss Base	6/30/2020	19	96,588,386	18	40%	3,627,213	3.40%	8.49%
13.	Assumption Change	6/30/2020	19	5,089,345	18	40%	191,122	0.18%	0.45%
14.	(Gain)/Loss Base	6/30/2021	19	(232,171,353)	19	20%	(4,444,880)	<u>-4.16%</u>	<u>-20.82%</u>
	Total			\$ 138,796,226			\$ 34,417,532	32.24%	20.55%

¹ Original amortization base for increase in benefits established in 6/30/2007 with a 15-year period. In 2011, the outstanding balance was re-amortized over a closed 17-year period.



² Includes explicit administrative expense load. Safety Plan 6 Base is shown as a percentage of the Safety Plan 6 payroll only.

SECTION V – CONTRIBUTIONS

Table V-2(c) APCD Development of Amortization Payment For the June 30, 2021 Actuarial Valuation

			FUI	the d	June 30, 2021	Actuariai Valua	ation			
	Type of Base	Date Established	Initial Amortization Years		ne 30, 2021 utstanding Balance	Remaining Amortization Years	Current Phase-In Percentage	nortization Amount	% of Pay¹	% of Pay After Phase-In¹
1.	Remaining UAL	6/30/2013	17	\$	7,738,569	9	N/A	\$ 1,030,853	29.70%	29.70%
2.	(Gain)/Loss Base	6/30/2014	19		(2,498,957)	12	100%	(305,967)	-8.81%	-8.81%
3.	(Gain)/Loss Base	6/30/2015	19		2,019,260	13	100%	228,713	6.59%	6.59%
4.	(Gain)/Loss Base	6/30/2016	19		174,877	14	100%	18,475	0.53%	0.53%
5.	Assumption Changes	6/30/2016	19		2,713,399	14	100%	286,662	8.26%	8.26%
6.	(Gain)/Loss Base	6/30/2017	19		(2,030,606)	15	100%	(201,481)	-5.80%	-5.80%
7.	Assumption Change	6/30/2017	19		(387,219)	15	100%	(38,421)	-1.11%	-1.11%
8.	(Gain)/Loss Base	6/30/2018	19		889,674	16	80%	67,946	1.96%	2.45%
9.	(Gain)/Loss Base	6/30/2019	19		1,644,715	17	60%	92,543	2.67%	4.44%
10.	Assumption Change	6/30/2019	19		548,029	17	60%	30,836	0.89%	1.48%
11.	(Gain)/Loss Base	6/30/2020	19		3,001,706	18	40%	112,724	3.25%	8.12%
12.	Assumption Change	6/30/2020	19		89,232	18	40%	3,351	0.10%	0.24%
13.	(Gain)/Loss Base	6/30/2021	19		(8,226,347)	19	20%	 (157,492)	<u>-4.54%</u>	<u>-22.69%</u>
	Total			\$	5,676,331			\$ 1,168,742	33.67%	23.40%

¹ Includes explicit administrative expense load.



SECTION V – CONTRIBUTIONS

As discussed earlier, a portion of the UAL attributable to the implementation of Safety Plan 6 is being amortized over a separate period from the rest of UAL. Beginning with the 2011 actuarial valuation, the outstanding balance of the Safety Plan 6 UAL is being amortized over a closed 17-year period; seven years are now remaining. The amortization payment for this separate base is applied only to the payroll of the Safety Plan 6 members.

Since the Safety Plan 6 is a closed group, its payroll has been declining over the last several years and the extra amortization payment rate as a percentage of payroll has been increasing. It will continue to increase in future years since the Plan 6 payroll is expected to continue to decrease while the amortization payment amount will increase with assumed wage growth of 3.00%.

Table V-3 below contains the details of the calculations of the Safety UAL rates for the Plan 6 members.

Table V-3 Development of Safety UAL Amortization	Rat	es
June 30, 2021 Plan 6 Layer	\$	9,819,679
7-year amortization factor		0.165186
Safety Plan 6 payroll	\$	29,353,755
Middle of year payment		1,622,074
Extra Plan 6 UAL Amortization Rate		5.53%
- including Administrative Expense Load		5.69%
Safety UAL less Extra Plan 6	\$	128,976,547
Middle of year payment		32,795,458
Total Safety Payroll		109,961,278
UAL Rate without Extra Plan 6		29.82%
- including Administrative Expense Load		30.72%
UAL Rate - Plan 6 including Admin Expense Load		36.41%



SECTION V – CONTRIBUTIONS

Tables V-4 through V-7 show the calculations of the employer contribution rates for each group and tier, as well as a comparison to the prior year rates.

Table V-4 Development of the General Net Employer Contribution Rate as of June 30, 2021 for FYE 2023 (Prior to Cost-Sharing)															
	•						PEPRA								
		5A		5B		5C		Plan 2		Plan 7	2% COLA	3%	COLA ¹		Total
Current Year															
A. Basic Employer Normal Cost Rate		10.11%		9.15%		11.41%		3.64%		12.76%	7.01%		7.40%		9.09%
B. COLA Normal Cost Rate		<u>4.49%</u>		<u>5.42%</u>		<u>4.91%</u>		0.00%		<u>3.51%</u>	<u>1.40%</u>		<u>2.12%</u>		<u>3.33%</u>
C. Employer Normal Cost Rate		14.60%		14.57%		16.32%		3.64%		16.27%	8.41%		9.52%		12.42%
D. Basic UAL Contribution Rate		15.93%		15.93%		15.93%		15.93%		15.93%	15.93%		15.93%		15.93%
E. COLA UAL Contribution Rate		7.02%		7.02%		7.02%		<u>7.02%</u>		7.02%	7.02%		7.02%		<u>7.02%</u>
F. UAL Contribution Rate		22.95%		22.95%		22.95%		22.95%		22.95%	22.95%		22.95%		22.95%
G. Total June 30, 2021 Contribution Rate (C+F)		37.55%		37.52%		39.27%		26.59%		39.22%	31.36%		32.47%		35.37%
Projected Payroll for FYE 2022 (in thousands)	\$	27,063	\$	37,540	\$	80,361	\$	381	\$	11,683	\$ 119,855	\$	6,621	\$	283,504
Prior Year															
A. Basic Employer Normal Cost Rate		10.18%		9.29%		11.52%		3.60%		12.18%	6.96%		7.49%		9.23%
B. COLA Normal Cost Rate		<u>4.51%</u>		<u>5.45%</u>		<u>4.94%</u>		0.00%		3.36%	1.40%		<u>2.14%</u>		<u>3.46%</u>
C. Employer Normal Cost Rate		14.69%		14.74%		16.46%		3.60%		15.54%	8.36%		9.63%		12.69%
D. Basic UAL Contribution Rate		17.12%		17.12%		17.12%		17.12%		17.12%	17.12%		17.12%		17.12%
E. COLA UAL Contribution Rate		<u>7.47%</u>		<u>7.47%</u>		7.47%		<u>7.47%</u>		<u>7.47%</u>	<u>7.47%</u>		<u>7.47%</u>		<u>7.47%</u>
F. UAL Contribution Rate		24.59%		24.59%		24.59%		24.59%		24.59%	24.59%		24.59%		24.59%
G. Total June 30, 2020 Contribution Rate (C+F)		39.28%		39.33%		41.05%		28.19%		40.13%	32.95%		34.22%		37.28%
Projected Payroll for FYE 2021 (in thousands)	\$	29,412	\$	37,810	\$	83,797	\$	446	\$	11,060	\$ 107,681	\$	6,473	\$	276,679

¹ Beginning with the Plan Year July 1, 2020, LAFCO is a new employer and only pays the normal cost rate since there is no additional UAL as of June 30, 2021.



SECTION V – CONTRIBUTIONS

Table V-5 Development of the Safety Net Employer Contribution Rate as of June 30, 2021 for FYE 2023 (Prior to Cost Sharing)														
		4A		4B		4C		6A		6B	I	PEPRA	Total	
Current Year														
A. Basic Employer Normal Cost Rate		18.84%		21.87%		17.69%		20.73%		19.31%		11.27%	15.8	0%
B. COLA Normal Cost Rate		<u>8.82%</u>		10.92%		<u>8.65%</u>		9.27%		9.65%		3.95%	7.1	6%
C. Employer Normal Cost Rate		27.66%		32.79%		26.34%		30.00%		28.96%		15.22%	22.9	6%
D. Basic UAL Contribution Rate		19.92%		19.92%		19.92%		23.61%		23.61%		19.92%	20.9	2%
E. COLA UAL Contribution Rate		10.80%		<u>10.80%</u>		10.80%		<u>12.80%</u>		12.80%		10.80%	11.3	2%
F. UAL Contribution Rate		30.72%		30.72%		30.72%		36.41%		36.41%		30.72%	32.2	4%
G. Total June 30, 2021 Contribution Rate (C+F)		58.38%		63.51%		57.06%		66.41%		65.37%		45.94%	55.20)%
Projected Payroll for FYE 2022 (in thousands)	\$	4,162	\$	1,790	\$	33,253	\$	2,385	\$	26,969	\$	41,403	\$ 109,9	61
Prior Year														
A. Basic Employer Normal Cost Rate		18.61%		18.38%		17.57%		20.71%		19.38%		11.20%	15.9	7%
B. COLA Normal Cost Rate		<u>8.81%</u>		10.70%		8.61%		<u>9.19%</u>		9.64%		3.94%	7.3	1%
C. Employer Normal Cost Rate		27.42%		29.08%		26.18%		29.90%		29.02%		15.14%	23.2	8%
D. Basic UAL Contribution Rate		22.29%		22.29%		22.29%		25.70%		25.70%		22.29%	23.3	0%
E. COLA UAL Contribution Rate		11.92%		<u>11.92%</u>		<u>11.92%</u>		13.74%		13.74%		11.92%	12.4	4%
F. UAL Contribution Rate		34.21%		34.21%		34.21%		39.44%		39.44%		34.21%	35.7	4%
G. Total June 30, 2020 Contribution Rate (C+F)		61.63%		63.29%		60.39%		69.34%		68.46%		49.35%	59.02	2%
Projected Payroll for FYE 2021 (in thousands)	\$	4,365	\$	1,622	\$	32,783	\$	3,622	\$	27,359	\$	36,444	\$ 106,19	95



SECTION V – CONTRIBUTIONS

Table V-6
Development of the APCD Net Employer Contribution Rate as of June 30, 2021 for FYE 2023 (Prior to Cost Sharing)

Development of the APCD Net Employer Contribution	п ка	te as of J	ıne	30, 2021 10)r r	YE 2023 (or to Cost	ЭШ	aring)
	P	Plan 1		Plan 2		Plan 7]	PEPRA		Total
Current Year										
A. Basic Employer Normal Cost Rate		10.32%		7.90%		12.76%		5.86%		8.12%
B. COLA Normal Cost Rate		<u>4.73%</u>		<u>5.40%</u>		<u>3.51%</u>		<u>1.23%</u>		3.26%
C. Employer Normal Cost Rate		15.05%		13.30%		16.27%		7.09%		11.38%
D. Basic UAL Contribution Rate		23.02%		23.02%		23.02%		23.02%		23.02%
E. COLA UAL Contribution Rate		<u>10.65%</u>		<u>10.65%</u>		<u>10.65%</u>		<u>10.65%</u>		10.65%
F. UAL Contribution Rate		33.67%		33.67%		33.67%		33.67%		33.67%
G. Total June 30, 2021 Contribution Rate (C+F)		48.72%		46.97%		49.94%		40.76%		45.05%
Projected Payroll for FYE 2022 (in thousands)	\$	496	\$	1,059	\$	419	\$	1,601	\$	3,575
Prior Year										
A. Basic Employer Normal Cost Rate		10.36%		8.06%		12.18%		5.98%		8.39%
B. COLA Normal Cost Rate		<u>4.72%</u>		<u>5.53%</u>		3.36%		<u>1.26%</u>		3.53%
C. Employer Normal Cost Rate		15.08%		13.59%		15.54%		7.24%		11.92%
D. Basic UAL Contribution Rate		26.58%		26.58%		26.58%		26.58%		26.58%
E. COLA UAL Contribution Rate		<u>11.95%</u>		<u>11.95%</u>		<u>11.95%</u>		<u>11.95%</u>		11.95%
F. UAL Contribution Rate		38.53%		38.53%		38.53%		38.53%		38.53%
G. Total June 30, 2020 Contribution Rate (C+F)		53.61%		52.12%		54.07%		45.77%		50.45%
Projected Payroll for FYE 2021 (in thousands)	\$	471	\$	1,110	\$	405	\$	1,276	\$	3,262



SECTION V – CONTRIBUTIONS

Table V-7 Development of the PEPRA Member and Net Employer Contribution Rates as of June 30, 2021 for FYE 2023 General

as of Jun	as of June 30, 2021 for FYE 2023											
	Gene	eral										
	2% COLA	3% COLA	Safety	APCD								
Current Year												
Basic Member Contribution Rate	7.00%	7.41%	11.27%	5.86%								
COLA Member Contribution Rate	1.40%	<u>2.10%</u>	<u>3.95%</u>	<u>1.23%</u>								
Member Contribution Rate	8.40%	9.51%	15.22%	7.09%								
Basic Employer Normal Cost Rate	7.01%	7.40%	11.27%	5.86%								
COLA Employer Normal Cost Rate	1.40%	<u>2.12%</u>	3.95%	1.23%								
Employer Normal Cost Rate	8.41%	9.52%	15.22%	7.09%								
Basic UAL Contribution Rate	15.93%	15.93%	19.92%	23.02%								
COLA UAL Contribution Rate	<u>7.02%</u>	<u>7.02%</u>	<u>10.80%</u>	<u>10.65%</u>								
Employer UAL Contribution Rate	22.95%	22.95%	30.72%	33.67%								
Employer Contribution Rate	31.36%	32.47%	45.94%	40.76%								
Prior Year												
Basic Member Contribution Rate	6.96%	7.49%	11.20%	5.97%								
COLA Member Contribution Rate	1.40%	<u>2.14%</u>	<u>3.94%</u>	<u>1.26%</u>								
Member Contribution Rate	8.36%	9.63%	15.14%	7.23%								
Basic Employer Normal Cost Rate	6.96%	7.49%	11.20%	5.98%								
COLA Employer Normal Cost Rate	1.40%	<u>2.14%</u>	3.94%	1.26%								
Employer Normal Cost Rate	8.36%	9.63%	15.14%	7.24%								
Basic UAL Contribution Rate	17.12%	17.12%	22.29%	26.58%								
COLA UAL Contribution Rate	7.47%	<u>7.47%</u>	<u>11.92%</u>	<u>11.95%</u>								
Employer UAL Contribution Rate	24.59%	24.59%	34.21%	38.53%								
Employer Contribution Rate	32.95%	34.22%	49.35%	45.77%								



SECTION VI – ANNUAL COMPREHENSIVE FINANCIAL REPORTING INFORMATION

The GASB adopted Statement Nos. 67 and 68, which replaced GASB Statement Nos. 25 and 27. GASB 67 became effective June 30, 2014 for the Plan and GASB 68 became effective for the fiscal year ending June 30, 2015 for the Employers. The disclosures needed to satisfy the GASB requirements can be found in the SBCERS GASB 67/68 Report as of June 30, 2021.

In accordance with Government Finance Officers Association (GFOA) and their recommended checklist for Annual Comprehensive Financial Reports, the Schedule of Funded Liabilities by Type (formerly known as the Solvency Test), Actuarial Analysis of Financial Experience, and the Schedule of Funding Progress disclosures are included below.

			Tab	ole VI-1						
		SCHEDU	LE OF FUNDE (dollars i	ED LIABILITII n thousands)	ES BY TYP	E				
Valuation	(A)	(B)	(C) Remaining Active			Portion of Actu Liabilities Cov				
Date	Member	And	Members'	Reported		by Reported Assets				
June 30,	Contributions	Beneficiaries	Liabilities	Assets ¹	(A)	(B)	(C)			
2021	\$ 254,026	\$ 2,875,477	\$ 1,331,489	\$ 3,990,899	100%	100%	65%			
2020	230,743	2,774,353	1,292,632	3,193,932	100%	100%	15%			
2019	217,070	2,610,235	1,253,333	3,198,134	100%	100%	30%			
2018	203,168	2,463,993	1,220,966	3,002,019	100%	100%	27%			
2017	187,084	2,295,926	1,219,287	2,801,307	100%	100%	26%			
2016	183,954	2,142,873	1,244,971	2,554,539	100%	100%	18%			
2015	178,233	1,926,975	1,125,926	2,532,529	100%	100%	38%			
2014	174,958	1,822,654	1,100,403	2,513,630	100%	100%	47%			
2013	171,614	1,747,430	1,049,090	2,150,006	100%	100%	22%			
2012 2	165,623	1,660,773	1,047,987	2,046,641	100%	100%	21%			

Actuarial Value of Assets. As of June 30 2014, the Actuarial Value of Assets is the Market Value of Assets.

The Schedule of Funded Liabilities by Type shows the portion of actuarial liabilities for active member contributions, inactive members, and the employer-financed portion of the active members that are covered by the Actuarial Value of Assets. As of June 30, 2016, the assumed rate of investment return is 7.00%. As of June 30, 2013, the assumed rate of investment return was reduced from 7.75% to 7.50%.



² June 30, 2012 and earlier numbers calculated by prior actuary.

SECTION VI – ANNUAL COMPREHENSIVE FINANCIAL REPORTING INFORMATION

Table VI-2 ACTUARIAL ANALYSIS OF FINANCIAL EXPERIENCE (dollars in thousands)	€	
Unfunded Actuarial Liability (UAL) as of June 30, 2020	\$	1,103,795
Expected Change in UAL Assumption Changes		(30,552) 0
Actuarial (Gains) or Losses During the Year Asset Return (Greater) or Less than Expected	\$	(600,018)
Salary Increases Greater or (Less) than Expected All Other (Including Demographic Experience)	<u> </u>	(1,862) (1,271)
Total Changes	\$	(633,703)
Unfunded Actuarial Liability (UAL) as of June 30, 2021	\$	470,092

	Table VI-3											
		Schedul	e of Funding Pi	rogress ¹								
(dollars in thousands)												
Actuarial Valuation	Actuarial Value	Actuarial Liability	Unfunded	Funded	Covered	Unfunded AL as a % of						
Date	of Assets ²	(AL)	AL	Ratio	Payroll	Covered Payroll						
June 30, 2021	\$ 3,990,899	\$ 4,460,991	\$ 470,092	89.5%	\$ 397,040	118.4%						
June 30, 2020	3,193,932	4,297,728	1,103,796	74.3%	386,137	285.9%						
June 30, 2019	3,198,134	4,080,639	882,505	78.4%	370,936	237.9%						
June 30, 2018	3,002,019	3,888,126	886,107	77.2%	353,016	251.0%						
June 30, 2017	2,801,307	3,702,297	900,990	75.7%	351,829	256.1%						
June 30, 2016	2,554,539	3,356,333	801,794	76.1%	346,975	231.1%						
June 30, 2015	2,532,529	3,231,134	698,605	78.4%	336,982	207.3%						
June 30, 2014	2,513,630	3,098,014	584,384	81.1%	323,831	180.5%						
June 30, 2013	2,150,006	2,968,134	818,128	72.4%	316,177	258.8%						
June 30, 2012	2,046,641	2,874,383	827,742	71.2%	302,114	274.0%						

¹Amounts for June 30, 2012 were calculated by the prior actuary.



²As of June 30, 2014 the Actuarial Value of Assets is the Market Value of Assets.

APPENDIX A – MEMBERSHIP INFORMATION

The data for this valuation was provided by the System staff as of June 30, 2021. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

SBCERS' Membership

SECEITS MEMBERSHIP		
As of June 30, 2020 and 2021	2020	2021
Members Now Receiving Benefits		
Service Retirement	3,959	4,002
Disability Retirement	281	285
Beneficiaries and Survivors	604	619
Subtotal	4,844	4,906
Active Members		
Active Vested Members	3,033	3,122
Active Nonvested Members	1,289	1,199
Subtotal	4,322	4,321
Deferred Vested and Inactive Members	1,611	1,694
Total Membership	10,777	10,921

	Sched	ule of Aver	age Benefit	Payments					
	Years of Service Credit								
June 30, 2021	0-4	5-9	10-14	15-19	20-24	25-29	30+		
Average Monthly Benefit	\$800	\$1,366	\$2,005	\$2,979	\$4,020	\$5,683	\$7,929		
Average Annual Benefit	9,600	16,392	24,060	35,748	48,240	68,196	95,148		
Number of Members in Pay Status	418	775	1,019	731	653	540	770		



APPENDIX A – MEMBERSHIP INFORMATION

Schedule of Active Member Valuation Data

Valuation Date	Plan	Active Members	Aı	ınual Salary ¹	Average ¹	% Increase in Average Salary
June 30, 2021	General	3,327	\$	275,536,788	\$ 82,818	2.78%
	Safety	960		105,176,155	109,558	3.86%
	APCD	34		3,415,541	100,457	6.37%
	Total	4,321	\$	384,128,484	88,898	3.09%

¹Based on salary data provided in the June 30, 2021 valuation data for FYE 2021.



APPENDIX A – MEMBERSHIP INFORMATION

Schedule of Retirees & Beneficiaries Added to and Removed from Retirement Payroll Added to rolls **Removed from rolls** Rolls at end of year % Increase in Average Annual Annual Retiree Annual Annual **Fiscal Year** Number Allowance¹ Number **Allowance** Number Allowance Allowance **Allowance** 2012 226 \$ 9,082,861 -106 2,884,973 3,507 \$ 118,545,000 7.6% \$ 33,802 2013 364^{2} \$ 8,811,248 -98 1,787,108 3,773 \$ 126,691,263 6.9% 33,578 \$ \$ 2014 203 \$ 6,842,058 -79 2,112,523 3,897 \$ 132,766,493 4.8% \$ 34,069 2015 241 \$ 9,044,486 -108 2,627,746 4,030 \$ 141,193,001 6.3% \$ 35,016 2016 9,705,939 -103 2,534,190 4.171 \$ 149,683,889 6.0% \$ 35,886 244 2017 8.6% 314 \$ 13,124,187 -110 3,255,813 4,375 \$ 162,510,138 \$ 37,146 \$ 2018 270 10,896,350 -126 3,280,607 4,519 \$ 174,765,068 7.5% \$ 38,673 2019 40,102 294 \$ 12,466,673 -133 4,484,686 4,680 \$ 187,679,334 7.4% \$ \$ 2020 269 11,952,403 -105 3,671,844 4,844 \$ 201,478,012 7.4% 41,593 2021 208 \$ 8,791,425 -146 \$ 5,740,837 4,906 \$ 208,961,900 3.7% \$ 42,593



 $^{^1}$ Annual allowance added during the year does not include COLAs granted in year to continuing retirees and beneficiaries.

² Includes 119 new records for members with benefits in more than one plan. Previously these members had only one record that accounted for their total benefit.

APPENDIX A – MEMBERSHIP INFORMATION

SBCERS Membership - Active Members as of June 30, 2021 Average Average **Monthly** Vesting Annual Salary¹ Average Age Salary¹ Count Service Group General Members Plan 2 5 \$369,000 60.2 \$6,150 30.0 Plan 5A 287 \$26,165,000 57.2 \$7,597 28.7 51.2 Plan 5B 295 \$36,223,000 \$10,232 17.5 Plan 5C 50.0 17.3 1,025 \$77,557,000 \$6,305 Plan 7 110 \$11,240,000 44.6 \$8,515 12.6 **PEPRA** 39.4 3.7 1,605 \$123,983,000 \$6,437 **Total** 3,327 45.4 \$6,902 11.6 \$275,537,000 **APCD Members** 5 58.8 Plan 1 \$480,000 \$8,000 31.6 Plan 2 8 \$1,019,000 42.3 \$10,615 12.0 Plan 7 3 \$404,000 44.0 \$11,222 16.7 **PEPRA** 32.9 <u>18</u> \$1,512,000 \$7,000 3.7 34 39.9 **Total** \$3,415,000 \$8,371 10.9 Safety Members Plan 4A 27 \$4,010,000 53.6 \$12,377 23.1 Plan 4B 12 \$1,723,000 51.3 \$11,965 23.2 \$32,011,000 Plan 4C 274 46.1 \$9,736 17.7 Plan 6A 15 \$2,296,000 54.7 \$12,756 28.7 Plan 6B 226 \$25,961,000 45.5 \$9,573 17.2 \$39,176,000 **PEPRA** 34.5 \$8,041 4.1 406 **Total** 960 \$105,176,000 41.5 \$9,130 12.2 4,321 \$384,128,000 44.5 \$7,408 11.8 **Total Actives**



¹Based on salary data provided in the June 30, 2021 valuation data for FYE 2021.

APPENDIX A – MEMBERSHIP INFORMATION

SBCERS Membership - Schedule of Active Member Valuation Data

Valuation Date	Plan	Count	Annual Salary ¹	Average Annual Salary ¹	Increase in Average Salary
June 30, 2015	General	3,307	\$231,757,487	\$70,081	1.96%
	APCD	40	3,079,706	\$76,993	-5.35%
	Safety	<u>931</u>	86,077,154	\$92,457	0.57%
	Total	4,278	\$320,914,347	\$75,015	1.49%
June 30, 2016	General	3,394	\$241,729,055	\$71,222	1.63%
	APCD	38	2,979,643	\$78,412	1.84%
	Safety	<u>916</u>	86,041,656	\$93,932	1.60%
	Total	4,348	\$330,750,354	\$76,070	1.41%
June 30, 2017	General	3,315	\$242,037,608	\$73,013	2.51%
Í	APCD	35	2,886,965	\$82,485	5.19%
	Safety	<u>949</u>	91,187,124	\$96,088	2.30%
	Total	4,299	\$336,111,696	\$78,184	2.78%
June 30, 2018	General	3,212	\$246,464,767	\$76,732	5.09%
	APCD	30	2,585,875	\$86,196	4.50%
	Safety	<u>929</u>	91,508,536	\$98,502	2.51%
	Total	4,171	\$340,559,179	\$81,649	4.43%
June 30, 2019	General	3,293	\$254,877,894	\$77,400	0.87%
	APCD	32	2,917,484	\$91,171	5.77%
	Safety	<u>944</u>	<u>95,991,720</u>	\$101,686	3.23%
	Total	4,269	\$353,787,098	\$82,874	1.50%
June 30, 2020	General	3,327	\$268,092,934	\$80,581	4.11%
	APCD	33	3,116,418	\$94,437	3.58%
	Safety	<u>962</u>	<u>101,475,166</u>	\$105,484	3.74%
	Total	4,322	\$372,684,519	\$86,230	4.05%
June 30, 2021	General	3,327	\$275,536,788	\$82,818	2.78%
	APCD	34	3,415,541	\$100,457	6.37%
	Safety	<u>960</u>	105,176,155	\$109,558	3.86%
	Total	4,321	\$384,128,484	\$88,898	3.09%

¹Based on salary data provided in the June 30, 2021 valuation data for FYE 2021.



APPENDIX A – MEMBERSHIP INFORMATION

SBCERS Membership – Deferred Vested Members as of June 30, 2021

SBCERS Membership Deferred Vested and Inactive Members as of June 30, 2021									
		Average							
Group	Count	Age							
General Members									
Plan 2	13	60.5							
Plan 5A	131	57.4							
Plan 5B	420	51.2							
Plan 5C	342	46.6							
Plan 7	71	45.0							
PEPRA	452	38.5							
Total	1,429	46.4							
APCD Members									
Plan 1	4	55.5							
Plan 2	11	40.7							
PEPRA	5	38.0							
Total	20	43.0							
Safety Members									
Plan 4A	5	49.2							
Plan 4B	42	48.8							
Plan 4C	43	44.2							
Plan 6A	18	57.8							
Plan 6B	70	41.3							
PEPRA	67	35.1							
Total	245	42.8							
Total Inactives	1,694	45.9							



APPENDIX A – MEMBERSHIP INFORMATION

SBCERS Membership - Retired Members as of June 30, 2021

Cyoun	Count	Average Current Age	Average Retirement Age ¹	Monthly Allowances	Average Monthly Benefit
Group Consul Mombaus	Count	rige	Age	mowances	Belletit
General Members	600	0.4.2		** * * * * * * * * *	#1.040
Plan 1	622	84.3	57.4	\$1,149,000	\$1,848
Plan 2	74	71.7	61.2	57,000	764
Plan 3	6	68.7	56.4	7,000	1,224
Plan 4A	175	78.6	59.0	438,000	2,503
Plan 4B	4	75.8	55.6	1,000	315
Plan 5A	1,777	69.7	59.4	6,763,000	3,806
Plan 5B	403	68.5	60.7	819,000	2,032
Plan 5C	544	66.6	62.0	1,233,000	2,266
Plan 7	4	65.0	61.1	2,000	515
Plan 8	13	64.2	62.6	11,000	846
Total	3,622	72.1	59.7	\$10,480,000	\$2,893
APCD Members					
Plan 1	56	68.4	58.7	\$216,000	\$3,855
Plan 2	16	68.3	61.2	40,000	2,497
Total	72	68.4	59.3	\$256,000	\$3,553
Safety Members					
Plan 1	260	78.3	54.6	\$1,227,000	\$4,720
Plan 2	20	76.4	53.6	47,000	2,342
Plan 3	4	69.0	55.3	17,000	4,235
Plan 4A	296	68.3	56.1	2,250,000	7,600
Plan 4B	111	68.4	56.1	362,000	3,262
Plan 4C	128	62.1	57.8	515,000	4,023
Plan 4D	2	66.0	63.0	8,000	4,089
Plan 6A	284	61.4	53.6	1,853,000	6,526
Plan 6B	107	57.3	55.9	399,000	3,729
Total	1,212	67.4	55.4	\$6,678,000	\$5,510
Total in Pay Status	4,906	70.8	58.8	\$17,414,000	\$3,550

 $^{^{\}it I}$ For healthy retired members only, excludes disabled members and beneficiaries.



APPENDIX A – MEMBERSHIP INFORMATION

SBCERS Membership - Retired Members as of June 30, 2021

	Count	Monthly Allowances	Average Monthly Benefit
General Members			
Healthy	3,062	\$9,415,000	\$3,075
Disabled	135	338,000	2,504
Beneficiaries	425	727,000	1,711
Total	3,622	\$10,480,000	\$2,893
APCD Members			
Healthy	66	\$241,000	\$3,652
Disabled	0	0	0
Beneficiaries	6	15,000	2,500
Total	72	\$256,000	\$3,553
Safety Members			
Healthy	874	\$5,375,000	\$6,150
Disabled	150	701,000	4,673
Beneficiaries	188	602,000	3,202
Total	1,212	\$6,678,000	\$5,510
Total in Pay Status	4,906	\$17,414,000	\$3,550



APPENDIX A – MEMBERSHIP INFORMATION

Age & Service Distribution of Active Members by Count and Average Salary as of June 30, 2021 All Members

Count

	Years of Service												
Age	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	Total Count			
Under 25	17	30	0	0	0	0	0	0	0	47			
25-29	42	248	62	1	0	0	0	0	0	353			
30-34	37	260	241	21	0	0	0	0	0	559			
35-39	15	192	285	140	58	0	0	0	0	690			
40-44	7	85	131	121	164	36	0	0	0	544			
45-49	6	75	88	56	148	164	35	2	0	574			
50-54	9	70	56	70	107	179	87	25	1	604			
55-59	8	58	63	55	66	109	71	54	26	510			
60-64	4	26	51	32	50	65	43	33	21	325			
65 & Over	1	9	19	19	24	17	10	9	7	115			
Total Count	146	1,053	996	515	617	570	246	123	55	4,321			



APPENDIX A – MEMBERSHIP INFORMATION

Salary

	Years of Service										
Age	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	Salary ¹	
Under 25	\$54,086	\$65,316	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$61,254	
25-29	55,453	68,678	82,570	118,296	0	0	0	0	0	69,685	
30-34	67,028	72,077	81,863	88,117	0	0	0	0	0	76,564	
35-39	86,526	79,512	86,185	87,724	94,794	0	0	0	0	85,372	
40-44	80,142	91,041	90,190	90,747	92,806	103,684	0	0	0	91,999	
45-49	79,615	83,024	90,183	85,382	96,478	104,413	97,854	83,481	0	94,802	
50-54	82,893	85,720	84,500	93,384	94,151	100,671	105,853	105,878	95,887	96,129	
55-59	62,443	94,550	97,315	104,809	82,672	98,570	103,095	99,574	94,951	96,558	
60-64	105,114	100,475	107,707	90,355	95,004	92,237	99,368	104,738	96,185	98,190	
65 & Over	24,857	81,548	102,257	123,356	102,242	84,563	80,180	93,468	97,552	97,936	
Average Salary ¹	\$66,822	\$77,677	\$87,812	\$92,327	\$93,568	\$100,094	\$101,742	\$101,532	\$95,770	\$88,898	

¹Based on salary data provided in the June 30, 2021 valuation data for FYE 2021.



APPENDIX A – MEMBERSHIP INFORMATION

Age & Service Distribution of Active Members by Count as of June 30, 2021 General Members

Count

				Ye	ears of Sei	rvice				
Age	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	Total Count
Under 25	11	17	0	0	0	0	0	0	0	28
25-29	37	171	36	0	0	0	0	0	0	244
30-34	30	193	172	14	0	0	0	0	0	409
35-39	14	160	212	97	34	0	0	0	0	517
40-44	7	78	109	77	101	22	0	0	0	394
45-49	6	69	74	45	105	94	24	1	0	418
50-54	7	62	55	54	83	122	62	18	1	464
55-59	8	50	53	50	56	91	60	47	26	441
60-64	4	24	46	28	49	62	42	30	17	302
65 & Over	1	9	19	17	23	16	10	9	6	110
Total Count	125	833	776	382	451	407	198	105	50	3,327



APPENDIX A – MEMBERSHIP INFORMATION

Age & Service Distribution of Active Members by Average Salary as of June 30, 2021 General Members

Salary

	Years of Service											
Age	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	Salary ¹		
Under 25	\$44,572	\$55,330	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$51,103		
25-29	53,073	60,906	71,149	0	0	0	0	0	0	61,229		
30-34	63,671	66,771	74,047	83,883	0	0	0	0	0	70,189		
35-39	87,648	77,182	79,523	77,182	80,392	0	0	0	0	78,637		
40-44	80,142	89,896	87,021	80,959	80,924	89,418	0	0	0	84,854		
45-49	79,615	81,238	87,191	78,372	85,554	89,706	83,064	52,085	0	84,984		
50-54	73,566	81,741	84,448	88,517	87,117	91,188	92,880	85,536	95,887	87,839		
55-59	62,443	88,451	95,779	104,019	75,747	92,466	97,387	94,238	94,951	92,056		
60-64	105,114	101,831	104,017	88,752	94,984	90,275	98,857	97,824	89,237	95,991		
65 & Over	24,857	81,548	102,257	117,629	101,118	83,105	80,180	93,468	84,096	95,494		
Average Salary ¹	\$64,718	\$74,282	\$83,173	\$86,092	\$85,016	\$90,579	\$93,683	\$93,303	\$91,724	\$82,818		

¹Based on salary data provided in the June 30, 2021 valuation data for FYE 2021.



APPENDIX A – MEMBERSHIP INFORMATION

Age & Service Distribution of Active Members by Count as of June 30, 2021 Safety Members

Count

				Ye	ears of Se	rvice				
Age	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	Total Count
Under 25	5	13	0	0	0	0	0	0	0	18
25-29	5	74	24	1	0	0	0	0	0	104
30-34	7	61	65	7	0	0	0	0	0	140
35-39	1	32	73	39	23	0	0	0	0	168
40-44	0	7	21	44	62	14	0	0	0	148
45-49	0	5	14	10	43	70	11	1	0	154
50-54	2	8	1	15	24	56	25	7	0	138
55-59	0	8	9	4	10	18	11	4	0	64
60-64	0	2	5	4	1	3	0	3	3	21
65 & Over	0	0	0	2	1	1	0	0	1	5
Total Count	20	210	212	126	164	162	47	15	4	960



APPENDIX A – MEMBERSHIP INFORMATION

Age & Service Distribution of Active Members by Average Salary as of June 30, 2021 Safety Members

Salary

				,	Years of Se	rvice				Average
Age	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	Salary ¹
Under 25	\$70,847	\$78,375	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$76,284
25-29	73,063	86,689	98,733	118,296	0	0	0	0	0	89,117
30-34	81,415	89,023	101,092	96,583	0	0	0	0	0	94,624
35-39	70,820	91,160	105,533	110,587	113,785	0	0	0	0	104,892
40-44	0	103,803	106,413	107,877	112,225	126,102	0	0	0	111,022
45-49	0	99,034	106,001	115,892	123,150	124,162	130,121	114,877	0	121,241
50-54	115,537	116,561	87,360	107,288	118,477	119,244	138,026	158,186	0	122,749
55-59	0	132,667	106,540	108,527	121,453	129,429	134,226	161,924	0	126,918
60-64	0	84,197	141,656	101,576	95,961	132,773	0	173,874	148,003	130,614
65 & Over	0	0	0	172,043	128,072	107,905	0	0	178,292	151,671
Average Salary ¹	\$79,568	\$91,264	\$104,329	\$109,576	\$116,784	\$123,274	\$135,287	\$159,433	\$155,575	\$109,558

¹Based on salary data provided in the June 30, 2021 valuation data for FYE 2021.



APPENDIX A – MEMBERSHIP INFORMATION

Age & Service Distribution of Active Members by Count as of June 30, 2021 APCD Members

Count

				Ye	ears of Se	rvice				
Age	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	Total Count
Under 25	1	0	0	0	0	0	0	0	0	1
25-29	0	3	2	0	0	0	0	0	0	5
30-34	0	6	4	0	0	0	0	0	0	10
35-39	0	0	0	4	1	0	0	0	0	5
40-44	0	0	1	0	1	0	0	0	0	2
45-49	0	1	0	1	0	0	0	0	0	2
50-54	0	0	0	1	0	1	0	0	0	2
55-59	0	0	1	1	0	0	0	3	0	5
60-64	0	0	0	0	0	0	1	0	1	2
65 & Over	0	0	0	0	0	0	0	0	0	0
Total Count	1	10	8	7	2	1	1	3	1	34



APPENDIX A – MEMBERSHIP INFORMATION

Age & Service Distribution of Active Members by Average Salary as of June 30, 2021 APCD Members

Salary

					Years of Se	rvice				Average
Age	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	Salary ¹
Under 25	\$74,932	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$74,932
25-29	0	67,456	94,202	0	0	0	0	0	0	78,155
30-34	0	70,492	105,438	0	0	0	0	0	0	84,470
35-39	0	0	0	120,430	147,636	0	0	0	0	125,871
40-44	0	0	94,835	0	88,951	0	0	0	0	91,893
45-49	0	126,213	0	95,716	0	0	0	0	0	110,964
50-54	0	0	0	147,639	0	217,483	0	0	0	182,561
55-59	0	0	95,716	129,424	0	0	0	100,046	0	105,055
60-64	0	0	0	0	0	0	120,807	0	58,855	89,831
65 & Over	0	0	0	0	0	0	0	0	0	0
Average Salary ¹	\$74,932	\$75,153	\$100,088	\$122,071	\$118,294	\$217,483	\$120,807	\$100,046	\$58,855	\$100,457

¹Based on salary data provided in the June 30, 2021 valuation data for FYE 2021.



APPENDIX A – MEMBERSHIP INFORMATION

Distribution of Retired Members by Age and Retirement Year as of June 30, 2021 All Members

				Bene	fit Effective	Date				Total	Average Monthly
Age	Pre-1985	1985-89	1990-94	1995-99	2000-04	2005-09	2010-14	2015-19	2020-2021	Count	Benefit
Under 35	0	0	0	3	0	0	2	2	1	8	\$673
35-39	0	0	0	0	1	0	1	3	0	5	\$2,676
40-44	0	0	0	0	2	1	0	7	0	10	\$2,661
45-49	0	0	0	0	1	0	7	10	6	24	\$3,412
50-54	0	0	1	4	3	1	8	94	47	158	\$3,033
55-59	0	0	1	1	8	10	79	183	57	339	\$3,434
60-64	0	0	0	13	11	94	210	299	106	733	\$3,780
65-69	1	0	1	10	58	224	281	374	63	1,012	\$3,866
70-74	4	6	5	48	141	281	296	181	21	983	\$3,873
75-79	18	5	24	122	206	215	103	73	11	777	\$3,724
80-84	12	10	54	79	111	61	28	27	9	391	\$2,966
85-89	13	23	37	73	29	18	14	22	6	235	\$2,460
90-94	23	25	43	13	16	7	12	11	5	155	\$2,180
95-99	15	19	10	5	4	3	3	4	1	64	\$2,478
100 & Over	8	2	1	0	1	0	0	0	0	12	\$2,045
Total Count	94	90	177	371	592	915	1,044	1,290	333	4,906	
Avg Monthly Benefit	\$2,272	\$2,399	\$2,628	\$3,027	\$3,330	\$3,748	\$3,671	\$3,766	\$3,914		\$3,550



APPENDIX A – MEMBERSHIP INFORMATION

Distribution of Retired Members by Age and Retirement Year as of June 30, 2021 General Members

				Bene	fit Effective	Date				Total	Average Monthly
Age	Pre-1985	1985-89	1990-94	1995-99	2000-04	2005-09	2010-14	2015-19	2020	Count	Benefit
Under 35	0	0	0	3	0	0	1	0	1	5	\$335
35-39	0	0	0	0	1	0	0	0	0	1	\$1,480
40-44	0	0	0	0	2	1	0	4	0	7	\$2,053
45-49	0	0	0	0	0	0	4	1	2	7	\$1,518
50-54	0	0	1	2	2	1	2	34	24	66	\$1,386
55-59	0	0	1	1	4	3	41	104	37	191	\$1,862
60-64	0	0	0	8	8	53	116	208	91	484	\$2,933
65-69	0	0	1	8	42	142	202	315	57	767	\$3,165
70-74	2	4	4	38	90	217	266	163	18	802	\$3,426
75-79	2	2	13	67	141	189	88	57	6	565	\$3,031
80-84	1	6	42	54	98	53	25	22	6	307	\$2,451
85-89	10	17	30	67	27	16	10	20	3	200	\$2,259
90-94	22	23	42	13	13	6	11	11	5	146	\$2,199
95-99	15	19	10	5	3	3	3	4	1	63	\$2,474
100 & Over	7	2	1	0	1	0	0	0	0	11	\$1,443
Total Count	59	73	145	266	432	684	769	943	251	3,622	
Avg Monthly Benefit	\$1,704	\$2,127	\$2,169	\$2,047	\$2,444	\$2,991	\$3,124	\$3,231	\$3,242		\$2,893



APPENDIX A – MEMBERSHIP INFORMATION

Distribution of Retired Members by Age and Retirement Year as of June 30, 2021 Safety Members

				Bene	fit Effective	Date				Total	Average Monthly
Age	Pre-1985	1985-89	1990-94	1995-99	2000-04	2005-09	2010-14	2015-19	2020	Count	Benefit
Under 35	0	0	0	0	0	0	1	2	0	3	\$1,238
35-39	0	0	0	0	0	0	1	3	0	4	\$2,975
40-44	0	0	0	0	0	0	0	3	0	3	\$4,079
45-49	0	0	0	0	1	0	3	9	4	17	\$4,192
50-54	0	0	0	2	1	0	6	59	23	91	\$4,241
55-59	0	0	0	0	4	7	35	77	20	143	\$5,600
60-64	0	0	0	5	3	37	87	87	11	230	\$5,621
65-69	1	0	0	2	16	78	72	52	4	225	\$6,194
70-74	2	2	1	10	48	62	24	15	3	167	\$6,005
75-79	16	3	11	55	65	22	12	16	5	205	\$5,650
80-84	11	4	12	25	10	6	3	5	3	79	\$4,940
85-89	3	6	7	6	2	2	4	2	3	35	\$3,608
90-94	1	2	1	0	2	1	1	0	0	8	\$2,101
95-99	0	0	0	0	1	0	0	0	0	1	\$2,749
100 & Over	1	0	0	0	0	0	0	0	0	1	\$8,672
Total Count	35	17	32	105	153	215	249	330	76	1,212	
Avg Monthly Benefit	\$3,230	\$3,568	\$4,711	\$5,510	\$5,874	\$6,213	\$5,387	\$5,270	\$6,056		\$5,510



APPENDIX A – MEMBERSHIP INFORMATION

Distribution of Retired Members by Age and Retirement Year as of June 30, 2021 APCD Members

				Bene	fit Effective	Date				Total	Average Monthly
Age	Pre-1985	1985-89	1990-94	1995-99	2000-04	2005-09	2010-14	2015-19	2020	Count	Benefit
Under 35	0	0	0	0	0	0	0	0	0	0	\$0
35-39	0	0	0	0	0	0	0	0	0	0	\$0
40-44	0	0	0	0	0	0	0	0	0	0	\$0
45-49	0	0	0	0	0	0	0	0	0	0	\$0
50-54	0	0	0	0	0	0	0	1	0	1	\$1,774
55-59	0	0	0	0	0	0	3	2	0	5	\$1,546
60-64	0	0	0	0	0	4	7	4	4	19	\$3,066
65-69	0	0	0	0	0	4	7	7	2	20	\$4,542
70-74	0	0	0	0	3	2	6	3	0	14	\$4,063
75-79	0	0	0	0	0	4	3	0	0	7	\$3,302
80-84	0	0	0	0	3	2	0	0	0	5	\$3,432
85-89	0	0	0	0	0	0	0	0	0	0	\$0
90-94	0	0	0	0	1	0	0	0	0	1	\$60
95-99	0	0	0	0	0	0	0	0	0	0	\$0
100 & Over	0	0	0	0	0	0	0	0	0	0	\$0
Total Count	0	0	0	0	7	16	26	17	6	72	
Avg Monthly Benefit	\$0	\$0	\$0	\$0	\$2,423	\$2,998	\$3,437	\$4,242	\$4,902		\$3,553



APPENDIX A – MEMBERSHIP INFORMATION

Reconciliation of System Membership since Prior Valuation All Members

	Actives	Deferred Members	Non-Duty Disabled	Duty Disabled	Retired	Beneficiaries	Total
June 30, 2020	4,322	1,611	69	212	3,959	604	10,777
New Entrants	342	0	0	0	0	0	342
Rehires	8	(5)	0	0	(3)	0	0
Duty Disabilities	(4)	(1)	0	5	0	0	0
Ordinary Disabilities	(1)	(1)	2	0	0	0	0
Retirements	(107)	(34)	0	0	143	0	2
Retirements from one plan with service in another	0	0	0	0	7	0	7
Vested Terminations	(67)	67	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	(1)	0	0	(3)	(36)	40	0
Non-Vested Terminations and Death without beneficiary	(127)	120	(1)	(3)	(63)	0	(74)
Transfers	0	0	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	(31)	(31)
Domestic Relations Orders	0	2	0	0	0	6	8
Withdrawals Paid	(43)	(64)	0	0	0	0	(107)
Data Corrections	(1)	(1)	0	4	(4)	1	(1)
Benefit Expired	0	0	0	0	(1)	(1)	(2)
June 30, 2021	4,321	1,694	70	215	4,002	619	10,921



APPENDIX A – MEMBERSHIP INFORMATION

Reconciliation of System Membership since Prior Valuation General Members

	Actives	Deferred Members	Non-Duty Disabled	Duty Disabled	Retired	Beneficiaries	Total
June 30, 2020	3,327	1,353	59	74	3,030	417	8,260
New Entrants	297	0	0	0	0	0	297
Rehires	8	(5)	0	0	(3)	0	0
Duty Disabilities	(1)	(1)	0	2	0	0	0
Ordinary Disabilities	(1)	(1)	2	0	0	0	0
Retirements	(83)	(29)	0	0	114	0	2
Retirements from one plan with service in another	0	0	0	0	6	0	6
Vested Terminations	(58)	58	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	(1)	0	0	0	(26)	27	0
Non-Vested Terminations and Death without beneficiary	(116)	109	(1)	(3)	(56)	0	(67)
Transfers	(5)	0	0	0	0	0	(5)
Beneficiary Deaths	0	0	0	0	0	(24)	(24)
Domestic Relations Orders	0	1	0	0	0	5	6
Withdrawals Paid	(39)	(55)	0	0	0	0	(94)
Data Corrections	(1)	(1)	0	2	(2)	1	(1)
Benefit Expired	0	0	0	0	(1)	(1)	(2)
June 30, 2021	3,327	1,429	60	75	3,062	425	8,378



APPENDIX A – MEMBERSHIP INFORMATION

Reconciliation of System Membership since Prior Valuation Safety Members

	Actives	Deferred Members	Non-Duty Disabled	Duty Disabled	Retired	Beneficiaries	Total
June 30, 2020	962	233	10	138	866	181	2,390
New Entrants	43	0	0	0	0	0	43
Rehires	0	0	0	0	0	0	0
Duty Disabilities	(3)	0	0	3	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0
Retirements	(23)	(2)	0	0	25	0	0
Retirements from one plan with service in another	0	0	0	0	1	0	1
Vested Terminations	(9)	9	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	(3)	(10)	13	0
Non-Vested Terminations and Death without beneficiary	(11)	11	0	0	(6)	0	(6)
Transfers	5	0	0	0	0	0	5
Beneficiary Deaths	0	0	0	0	0	(7)	(7)
Domestic Relations Orders	0	1	0	0	0	1	2
Withdrawals Paid	(4)	(7)	0	0	0	0	(11)
Data Corrections	0	0	0	2	(2)	0	0
Benefit Expired	0	0	0	0	0	0	0
June 30, 2021	960	245	10	140	874	188	2,417



APPENDIX A – MEMBERSHIP INFORMATION

Reconciliation of System Membership since Prior Valuation APCD Members

	Actives	Deferred Members	Non-Duty Disabled	Duty Disabled	Retired	Beneficiaries	Total
June 30, 2020	33	25	0	0	63	6	127
New Entrants	2	0	0	0	0	0	2
Rehires	0	0	0	0	0	0	0
Duty Disabilities	0	0	0	0	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0
Retirements	(1)	(3)	0	0	4	0	0
Retirements from one plan with service in another	0	0	0	0	0	0	0
Vested Terminations	0	0	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	0	0
Non-Vested Terminations and Death without beneficiary	0	0	0	0	(1)	0	(1)
Transfers	0	0	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0
Domestic Relations Orders	0	0	0	0	0	0	0
Withdrawals Paid	0	(2)	0	0	0	0	(2)
Data Corrections	0	0	0	0	0	0	0
Benefit Expired	0	0	0	0	0	0	0
June 30, 2021	34	20	0	0	66	6	126



APPENDIX B – MEMBER CONTRIBUTION RATES

Plan/Tier	Code Section	Member Contribution Provides Average Annuity	FAS Period
General 5A	31621.5	1/200th of Final Average Salary (FAS) at age 60	1 year
General 5B	31621.2	1/100th of Final Average Salary (FAS) at age 60	1 year
General 5C	31621.5	1/200th of Final Average Salary (FAS) at age 60	3 year
General 2	NA	NA	3 year
General 7	31621.4	1/240th of Final Average Salary (FAS) at age 60	3 year
APCD 1	31621.6 & 31581.1	1/2 x 1/100th of Final Average Salary (FAS) at age 55	1 year
APCD 2	31621.6	1/100th of Final Average Salary (FAS) at age 55	1 year
Safety 4A & 6A		1/2 x 3/200th of Final Average Salary (FAS) at age 55	1 year
Safety 4B		3/200th of Final Average Salary (FAS) at age 55	1 year
Safety 4C & 6B		1/2 x 3/200th of Final Average Salary (FAS) at age 55	3 year



APPENDIX B – MEMBER CONTRIBUTION RATES

PEPRA Member Contribution Rates effective as of the June 30, 2021 Valuation For the Fiscal Year July 1, 2022 through June 30, 2023

	PEPRA	Rates	
Ge	eneral		
2% COLA	3% COLA	Safety	APCD
8.40%	9.51%	15.22%	7.09%
Assumptions:			
Interest:	7.00%		
Salary:	2019 Scale (Service base	ed, includes wage inflation	on at 3.00%)
Mortality:	The PEPRA contribution Cost. Thus, the mortal actuarial valuation (Pub Public Safety 2010 M improvements projected	ity rates are the same blic General 2010 Above Mortality Tables with	as those used in the ve-Median Income and generational mortality
Administrative expenses:	Rates have been loaded lexpenses allocated to the	•	expected administrative



APPENDIX B – MEMBER CONTRIBUTION RATES

Member Cost-Sharing/Pick-Up Contributions by Bargaining Group Estimated Rate During July 1, 2022 to June 30, 2023 (Non-PEPRA Plans Only)

Bargaining Unit	Union	Employer Contribution Offset ¹	Additional Member Contribution ¹
10, 11	Union of American Physicians & Dentists	2.48%	2.50%
12, 13	Fire Fighters Local 2046	5.97%	6.00%
14, 15	Deputy Sheriffs' Association - Safety	5.97%	6.00%
14, 15	Deputy Sheriffs' Association - non-Safety	2.48%	2.50%
17	Deputy District Attorneys	1.49%	1.50%
18, 19	Probation Peace Officers	5.97%	6.00%
20	Deputy Public Defenders	2.48%	2.50%
21, 22	SEIU Local 721	2.48%	2.50%
23, 24, 25, 26, 27	SEIU Local 620	2.48%	2.50%
28, 29	Engineers & Technicians	2.48%	2.50%
30	Civil Attorneys Association	1.48%	1.49%
32	Confidential	2.48%	2.50%
35, 40, 41, 42, 43	Unrepresented Managers (including CEO)	2.47%	2.49%
35, 40, 41, 42, 43	Unrepresented Managers - Safety	0.83%	0.83%
36	Unrepresented Confidential Attorneys	1.48%	1.49%
39	Board of Supervisors	0.82%	0.83%
44	Sheriff Managers Association	5.97%	6.00%

¹ Contribution rates shown are the estimated rates to be made during the Plan Year, based on the actual timing and amount of cost-sharing, and not the effective rate at the beginning of the Plan Year.



APPENDIX B – MEMBER CONTRIBUTION RATES

SEIU Local 620 (23,24,25,26,27) and Local 721 (21,22), Deputy Sheriffs' Association - Non-Safety (14,15), Deputy Public Defenders (20), Engineers & Technicians (28,29) and Confidential (32)

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	Plan 5A P							Plan 5C		Plan 7			
Entry Age	Basic	Cost-Sharing	Total	Basic	Plan 5B Cost-Sharing	Total	Basic	Cost-Sharing	Total	Basic	Cost-Sharing	Total	
16	3.01%	2.50%	5.51%	6.03%	2.50%	8.53%	2.92%	2.50%	5.42%	2.43%	2.50%	4.93%	
17	3.01%	2.50%	5.51%	6.03%	2.50%	8.53%	2.92%	2.50%	5.42%	2.43%	2.50%	4.93%	
18	3.01%	2.50%	5.51%	6.03%	2.50%	8.53%	2.92%	2.50%	5.42%	2.43%	2.50%	4.93%	
19	3.01%	2.50%	5.51%	6.03%	2.50%	8.53%	2.92%	2.50%	5.42%	2.43%	2.50%	4.93%	
20	3.01%	2.50%	5.51%	6.03%	2.50%	8.53%	2.92%	2.50%	5.42%	2.43%	2.50%	4.93%	
21	3.01%	2.50%	5.58%	6.16%	2.50%	8.66%	2.98%	2.50%	5.48%	2.48%	2.50%	4.98%	
22	3.14%	2.50%	5.64%	6.29%	2.50%	8.79%	3.04%	2.50%	5.54%	2.54%	2.50%	5.04%	
23	3.21%	2.50%	5.71%	6.43%	2.50%	8.93%	3.11%	2.50%	5.61%	2.59%	2.50%	5.09%	
24	3.21%	2.50%	5.78%	6.56%	2.50%	9.06%	3.11%	2.50%	5.68%	2.65%	2.50%	5.15%	
25	3.35%	2.50%	5.85%	6.71%	2.50%	9.21%	3.24%	2.50%	5.74%	2.70%	2.50%	5.20%	
26	3.42%	2.50%	5.92%	6.85%	2.50%	9.35%	3.31%	2.50%	5.81%	2.76%	2.50%	5.26%	
27	3.50%	2.50%	6.00%	7.00%	2.50%	9.50%	3.38%	2.50%	5.88%	2.82%	2.50%	5.32%	
28	3.57%	2.50%	6.07%	7.15%	2.50%	9.65%	3.46%	2.50%	5.96%	2.88%	2.50%	5.38%	
29	3.65%	2.50%	6.15%	7.30%	2.50%	9.80%	3.53%	2.50%	6.03%	2.94%	2.50%	5.44%	
30	3.73%	2.50%	6.23%	7.45%	2.50%	9.95%	3.61%	2.50%	6.11%	3.00%	2.50%	5.50%	
31	3.7376	2.50%	6.31%	7.43%	2.50%	10.11%	3.68%	2.50%	6.18%	3.00%	2.50%	5.57%	
32	3.89%	2.50%	6.39%	7.77%	2.50%	10.1176	3.76%	2.50%	6.26%	3.07%	2.50%	5.63%	
33	3.97%	2.50%	6.47%	7.94%	2.50%	10.2776	3.84%	2.50%	6.34%	3.20%	2.50%	5.70%	
34	4.05%	2.50%	6.55%	8.11%	2.50%	10.44%	3.92%	2.50%	6.42%	3.20%	2.50%	5.77%	
35	4.03%	2.50%	6.64%	8.28%	2.50%	10.01%	4.01%	2.50%	6.51%	3.21%	2.50%	5.84%	
36	4.23%	2.50%	6.73%	8.46%	2.50%	10.78%	4.01%	2.50%	6.59%	3.41%	2.50%	5.91%	
37	4.23%	2.50%	6.82%	8.64%	2.50%	11.14%	4.09%	2.50%	6.68%	3.41%	2.50%	5.98%	
38	4.32%	2.50%	6.91%	8.82%	2.50%	11.14%	4.18%	2.50%	6.77%	3.46%	2.50%	5.98% 6.05%	
39	4.41%	2.50%	7.00%	9.01%	2.50%	11.52%	4.27%	2.50%	6.85%	3.63%	2.50%	6.13%	
40	4.60%	2.50%	7.10%	9.01%	2.50%	11.70%	4.35%	2.50%	6.95%	3.70%	2.50%	6.13%	
40	4.69%	2.50%	7.10%	9.20%	2.50%	11.70%	4.43%	2.50%	7.04%	3.78%	2.50%	6.28%	
42	l			l		12.08%							
1	4.79%	2.50%	7.29%	9.58%	2.50%		4.63%	2.50%	7.13%	3.86%	2.50%	6.36%	
43 44	4.89%	2.50%	7.39%	9.78%	2.50%	12.28% 12.49%	4.72%	2.50%	7.22%	3.94%	2.50%	6.44%	
44	4.99%	2.50%	7.49%	9.99%	2.50%		4.82%	2.50%	7.32%	4.02%	2.50%	6.52%	
45 46	5.09%	2.50%	7.59%	10.19%	2.50%	12.69%	4.91%	2.50%	7.41%	4.09%	2.50%	6.59%	
	5.20%	2.50%	7.70%	10.39%	2.50%	12.89%	5.00%	2.50%	7.50%	4.17%	2.50%	6.67%	
47	5.29%	2.50%	7.79%	10.59%	2.50%	13.09%	5.09%	2.50%	7.59%	4.25%	2.50%	6.75%	
48	5.39%	2.50%	7.89%	10.78%	2.50%	13.28%	5.18%	2.50%	7.68%	4.32%	2.50%	6.82%	
49	5.49%	2.50%	7.99%	10.98%	2.50%	13.48%	5.27%	2.50%	7.77%	4.39%	2.50%	6.89%	
50	5.58%	2.50%	8.08%	11.17%	2.50%	13.67%	5.36%	2.50%	7.86%	4.47%	2.50%	6.97%	
51	5.68%	2.50%	8.18%	11.36%	2.50%	13.86%	5.45%	2.50%	7.95%	4.54%	2.50%	7.04%	
52 53	5.78%	2.50%	8.28%	11.56%	2.50%	14.06%	5.53%	2.50%	8.03%	4.61%	2.50%	7.11%	
	5.87%	2.50%	8.37%	11.74%	2.50%	14.24%	5.60%	2.50%	8.10%	4.67%	2.50%	7.17%	
54	5.96%	2.50%	8.46%	11.92%	2.50%	14.42%	5.65%	2.50%	8.15%	4.71%	2.50%	7.21%	
55 50	6.03%	2.50%	8.53%	12.06%	2.50%	14.56%	5.69%	2.50%	8.19%	4.74%	2.50%	7.24%	
56	6.08%	2.50%	8.58%	12.16%	2.50%	14.66%	5.71%	2.50%	8.21%	4.76%	2.50%	7.26%	
57	6.11%	2.50%	8.61%	12.22%	2.50%	14.72%	5.71%	2.50%	8.21%	4.76%	2.50%	7.26%	
58	6.12%	2.50%	8.62%	12.23%	2.50%	14.73%	5.89%	2.50%	8.39%	4.91%	2.50%	7.41%	
59	6.12%	2.50%	8.62%	12.23%	2.50%	14.73%	6.09%	2.50%	8.59%	5.08%	2.50%	7.58%	
60	6.12%	2.50%	8.62%	12.23%	2.50%	14.73%	6.09%	2.50%	8.59%	5.08%	2.50%	7.58%	

Members do not pay COLA contributions

Assumptions:

Interest: 7.00%

Salary: 2019 Valuation Scale (Service based, includes wage inflation at 3.00%)

Unisex Mortality: Public General 2010 Above-Median Income - PUBG-2010(A) - Retiree Mortality Table, projected to 2044 using MP-2019

(blended 35% Male / 65% Female)



APPENDIX B – MEMBER CONTRIBUTION RATES

					Effective No	ovember	16, 2020					
		Plan 5A			Plan 5B		Plan 5C Basic Cost-Sharing Total Basic 2.92% 2.50% 5.42% 2.43% 2.92% 2.50% 5.42% 2.43% 2.92% 2.50% 5.42% 2.43% 2.92% 2.50% 5.42% 2.43% 2.92% 2.50% 5.42% 2.43% 2.98% 2.50% 5.48% 2.48% 3.04% 2.50% 5.54% 2.54% 3.11% 2.50% 5.61% 2.59% 3.18% 2.50% 5.68% 2.65% 3.24% 2.50% 5.81% 2.70% 3.31% 2.50% 5.81% 2.70% 3.38% 2.50% 5.88% 2.82% 3.46% 2.50% 5.96% 2.88% 3.53% 2.50% 5.96% 2.88% 3.53% 2.50% 6.03% 2.94% 3.61% 2.50% 6.11% 3.00% 3.68% 2.50% 6.34% 3.20%			Plan 7		
Entry Age	Basic	Cost-Sharing	Total	Basic	Cost-Sharing	Total	Basic	Cost-Sharing	Total	Basic	Cost-Sharing	Total
16	3.01%	2.50%	5.51%	6.03%	2.50%	8.53%	2.92%		5.42%	2.43%	2.50%	4.939
17	3.01%	2.50%	5.51%	6.03%	2.50%	8.53%	2.92%	2.50%	5.42%	2.43%	2.50%	4.939
18	3.01%	2.50%	5.51%	6.03%	2.50%	8.53%	2.92%			2.43%	2.50%	4.93
19	3.01%	2.50%	5.51%	6.03%	2.50%	8.53%	2.92%			2.43%	2.50%	4.93
20	3.01%	2.50%	5.51%	6.03%	2.50%	8.53%					2.50%	4.939
21	3.08%	2.50%	5.58%	6.16%	2.50%	8.66%	2.98%	2.50%	5.48%	2.48%	2.50%	4.989
22	3.14%	2.50%	5.64%	6.29%	2.50%	8.79%	3.04%				2.50%	5.049
23	3.21%	2.50%	5.71%	6.43%	2.50%	8.93%					2.50%	5.099
24	3.28%	2.50%	5.78%	6.56%	2.50%	9.06%	l				2.50%	5.15
25	3.35%	2.50%	5.85%	6.71%	2.50%	9.21%	3.24%	2.50%	5.74%	2.70%	2.50%	5.209
26	3.42%	2.50%	5.92%	6.85%	2.50%	9.35%					2.50%	5.26
27	3.50%	2.50%	6.00%	7.00%	2.50%	9.50%					2.50%	5.329
28	3.57%	2.50%	6.07%	7.15%	2.50%	9.65%					2.50%	5.389
29	3.65%	2.50%	6.15%	7.30%	2.50%	9.80%					2.50%	5.449
30	3.73%	2.50%	6.23%	7.45%	2.50%	9.95%	l				2.50%	5.50
31	3.81%	2.50%	6.31%	7.61%	2.50%	10.11%					2.50%	5.579
32	3.89%	2.50%	6.39%	7.77%	2.50%	10.27%					2.50%	5.63
33	3.97%	2.50%	6.47%	7.94%	2.50%	10.44%					2.50%	5.70
34	4.05%	2.50%	6.55%	8.11%	2.50%	10.61%					2.50%	5.779
35	4.14%	2.50%	6.64%	8.28%	2.50%	10.78%					2.50%	5.849
36	4.23%	2.50%	6.73%	8.46%	2.50%	10.96%					2.50%	5.919
37	4.32%	2.50%	6.82%	8.64%	2.50%	11.14%					2.50%	5.989
38	4.41%	2.50%	6.91%	8.82%	2.50%	11.32%					2.50%	6.05
39	4.50%	2.50%	7.00%	9.01%	2.50%	11.51%	l				2.50%	6.13
40	4.60%	2.50%	7.10%	9.20%	2.50%	11.70%					2.50%	6.20
41	4.69%	2.50%	7.19%	9.39%	2.50%	11.89%	l				2.50%	6.28
42	4.79%	2.50%	7.29%	9.58%	2.50%	12.08%					2.50%	6.36
43	4.89%	2.50%	7.39%	9.78%	2.50%	12.28%					2.50%	6.44
44	4.99%	2.50%	7.49%	9.99%	2.50%	12.49%					2.50%	6.529
45	5.09%	2.50%	7.59%	10.19%	2.50%	12.69%					2.50%	6.59
46	5.20%	2.50%	7.70%	10.39%	2.50%	12.89%					2.50%	6.679
47	5.29%	2.50%	7.79%	10.59%	2.50%	13.09%					2.50%	6.75
48	5.39%	2.50%	7.89%	10.78%	2.50%	13.28%					2.50%	6.829
49	5.49%	2.50%	7.99%	10.98%	2.50%	13.48%	l				2.50%	6.899
50	5.58%	2.50%	8.08%	11.17%	2.50%	13.67%					2.50%	6.979
51	5.68%	2.50%	8.18%	11.36%	2.50%	13.86%					2.50%	7.049
52	5.78%	2.50%	8.28%	11.56%	2.50%	14.06%	l				2.50%	7.119
53	5.87%	2.50%	8.37%	11.74%	2.50%	14.24%					2.50%	7.17
54	5.96%	2.50%	8.46%	11.92%	2.50%	14.42%					2.50%	7.219
55	6.03%	2.50%	8.53%	12.06%	2.50%	14.56%	l				2.50%	7.249
56	6.08%	2.50%	8.58%	12.16%	2.50%	14.66%					2.50%	7.26
57	6.11%	2.50%	8.61%	12.22%	2.50%	14.72%					2.50%	7.26
58	6.12%	2.50%	8.62%	12.23%	2.50%	14.73%	5.89%	2.50%	8.39%	4.91%	2.50%	7.419
59	6.12%	2.50%	8.62%	12.23%	2.50%	14.73%	6.09%	2.50%	8.59%	5.08%	2.50%	7.589
60	6.12%	2.50%	8.62%	12.23%	2.50%	14.73%	6.09%	2.50%	8.59%	5.08%	2.50%	7.589

Members do not pay COLA contributions

Assumptions:

Interest: 7.00%

Salary: 2019 Valuation Scale (Service based, includes wage inflation at 3.00%)

Unisex Mortality: Public General 2010 Above-Median Income - PUBG-2010(A) - Retiree Mortality Table, projected to 2044 using MP-2019

(blended 35% Male / 65% Female)



APPENDIX B – MEMBER CONTRIBUTION RATES

					Deputy Dist	rict Attori	1eys (17)					
					Effectiv	e July 1, 2	2020					
		Plan 5A			Plan 5B			Plan 5C			Plan 7	
Entry Age	Basic	Cost-Sharing	Total	Basic	Cost-Sharing	Total	Basic	Cost-Sharing	Total	Basic	Cost-Sharing	Total
16	3.01%	1.50%	4.51%	6.03%	1.50%	7.53%	2.92%	1.50%	4.42%	2.43%	1.50%	3.93%
17	3.01%	1.50%	4.51%	6.03%	1.50%	7.53%	2.92%	1.50%	4.42%	2.43%	1.50%	3.939
18	3.01%	1.50%	4.51%	6.03%	1.50%	7.53%	2.92%	1.50%	4.42%	2.43%	1.50%	3.939
19	3.01%	1.50%	4.51%	6.03%	1.50%	7.53%	2.92%	1.50%	4.42%	2.43%	1.50%	3.939
20	3.01%	1.50%	4.51%	6.03%	1.50%	7.53%	2.92%	1.50%	4.42%	2.43%	1.50%	3.939
21	3.08%	1.50%	4.58%	6.16%	1.50%	7.66%	2.98%	1.50%	4.48%	2.48%	1.50%	3.989
22	3.14%	1.50%	4.64%	6.29%	1.50%	7.79%	3.04%	1.50%	4.54%	2.54%	1.50%	4.049
23	3.21%	1.50%	4.71%	6.43%	1.50%	7.93%	3.11%	1.50%	4.61%	2.59%	1.50%	4.099
24	3.28%	1.50%	4.78%	6.56%	1.50%	8.06%	3.18%	1.50%	4.68%	2.65%	1.50%	4.159
25	3.35%	1.50%	4.85%	6.71%	1.50%	8.21%	3.24%	1.50%	4.74%	2.70%	1.50%	4.209
26	3.42%	1.50%	4.92%	6.85%	1.50%	8.35%	3.31%	1.50%	4.81%	2.76%	1.50%	4.26
27	3.50%	1.50%	5.00%	7.00%	1.50%	8.50%	3.38%	1.50%	4.88%	2.82%	1.50%	4.32
28	3.57%	1.50%	5.07%	7.15%	1.50%	8.65%	3.46%	1.50%	4.96%	2.88%	1.50%	4.38
29	3.65%	1.50%	5.15%	7.30%	1.50%	8.80%	3.53%	1.50%	5.03%	2.94%	1.50%	4.44
30	3.73%	1.50%	5.23%	7.45%	1.50%	8.95%	3.61%	1.50%	5.11%	3.00%	1.50%	4.50
31	3.81%	1.50%	5.31%	7.61%	1.50%	9.11%	3.68%	1.50%	5.18%	3.07%	1.50%	4.57
32	3.89%	1.50%	5.39%	7.77%	1.50%	9.27%	3.76%	1.50%	5.26%	3.13%	1.50%	4.63
33	3.97%	1.50%	5.47%	7.94%	1.50%	9.44%	3.84%	1.50%	5.34%	3.20%	1.50%	4.70
34	4.05%	1.50%	5.55%	8.11%	1.50%	9.61%	3.92%	1.50%	5.42%	3.27%	1.50%	4.77
35	4.14%	1.50%	5.64%	8.28%	1.50%	9.78%	4.01%	1.50%	5.51%	3.34%	1.50%	4.84
36	4.23%	1.50%	5.73%	8.46%	1.50%	9.96%	4.09%	1.50%	5.59%	3.41%	1.50%	4.91
37	4.32%	1.50%	5.82%	8.64%	1.50%	10.14%	4.18%	1.50%	5.68%	3.48%	1.50%	4.98
38	4.41%	1.50%	5.91%	8.82%	1.50%	10.32%	4.27%	1.50%	5.77%	3.55%	1.50%	5.059
39	4.50%	1.50%	6.00%	9.01%	1.50%	10.51%	4.35%	1.50%	5.85%	3.63%	1.50%	5.139
40	4.60%	1.50%	6.10%	9.20%	1.50%	10.70%	4.45%	1.50%	5.95%	3.70%	1.50%	5.20
41	4.69%	1.50%	6.19%	9.39%	1.50%	10.89%	4.54%	1.50%	6.04%	3.78%	1.50%	5.28
42	4.79%	1.50%	6.29%	9.58%	1.50%	11.08%	4.63%	1.50%	6.13%	3.86%	1.50%	5.36
43	4.89%	1.50%	6.39%	9.78%	1.50%	11.28%	4.72%	1.50%	6.22%	3.94%	1.50%	5.44
44	4.99%	1.50%	6.49%	9.99%	1.50%	11.49%	4.82%	1.50%	6.32%	4.02%	1.50%	5.52
45	5.09%	1.50%	6.59%	10.19%	1.50%	11.69%	4.91%	1.50%	6.41%	4.09%	1.50%	5.59
46	5.20%	1.50%	6.70%	10.19%	1.50%	11.89%	5.00%	1.50%	6.50%	4.17%	1.50%	5.67
47	5.29%	1.50%	6.79%	10.59%	1.50%	12.09%	5.09%	1.50%	6.59%	4.25%	1.50%	5.75
48	5.39%	1.50%	6.89%	10.78%	1.50%	12.28%	5.18%	1.50%	6.68%	4.32%	1.50%	5.829
49	5.49%	1.50%	6.99%	10.78%	1.50%	12.48%	5.27%	1.50%	6.77%	4.32%	1.50%	5.899
50	5.58%	1.50%	7.08%	11.17%	1.50%	12.467%	5.36%	1.50%	6.86%	4.47%	1.50%	5.97
51	5.68%	1.50%	7.18%	11.17%	1.50%	12.86%	5.45%	1.50%	6.95%	4.54%	1.50%	6.049
52	5.78%	1.50%	7.18%	11.56%	1.50%	13.06%	5.53%	1.50%	7.03%	4.61%	1.50%	6.119
53	5.87%	1.50%	7.28%	11.74%	1.50%	13.24%	5.60%	1.50%	7.10%	4.67%	1.50%	6.179
55 54	5.96%	1.50%	7.46%	11.74%	1.50%	13.42%	5.65%	1.50%	7.15%	4.07%	1.50%	6.219
55	6.03%	1.50%	7.53%	12.06%	1.50%	13.42%	5.69%	1.50%	7.19%	4.71%	1.50%	6.24
56	6.08%	1.50%	7.58%	12.06%	1.50%	13.56%	5.71%	1.50%	7.19%	4.76%	1.50%	6.26
56 57	6.11%	1.50%	7.58%	12.16%	1.50%	13.72%	5.71%	1.50%	7.21%	4.76%	1.50%	6.26
57 58	6.11%	1.50%	7.62%	12.22%	1.50%	13.72%	5.89%	1.50%	7.21%	4.76%	1.50%	6.419
59	6.12%	1.50%	7.62%	12.23%	1.50%	13.73%	6.09%	1.50%	7.59%	5.08%	1.50%	6.589

Members do not pay COLA contributions

Assumptions:

Interest: 7.00%

Salary: 2016 Valuation Scale (Service based, includes wage inflation at 3.00%)

Unisex Mortality: Public General 2010 Above-Median Income - PUBG-2010(A) - Retiree Mortality Table, projected to 2044 using MP-2019

(blended 35% Male / 65% Female)



APPENDIX B – MEMBER CONTRIBUTION RATES

Civil Attorneys Association (30) and Unrepresented Confidential Attorneys (36) Effective July 1, 2020

		Plan 5A		Plan 5B				Plan 5C		Plan 7			
Entry Age	Basic	Cost-Sharing	Total	Basic	Cost-Sharing	Total	Basic	Cost-Sharing	Total	Basic	Cost-Sharing	Total	
16	3.01%	1.49%	4.50%	6.03%	1.49%	7.52%	2.92%	1.49%	4.41%	2.43%	1.49%	3.92%	
17	3.01%	1.49%	4.50%	6.03%	1.49%	7.52%	2.92%	1.49%	4.41%	2.43%	1.49%	3.92%	
18	3.01%	1.49%	4.50%	6.03%	1.49%	7.52%	2.92%	1.49%	4.41%	2.43%	1.49%	3.92%	
19	3.01%	1.49%	4.50%	6.03%	1.49%	7.52%	2.92%	1.49%	4.41%	2.43%	1.49%	3.92%	
20	3.01%	1.49%	4.50%	6.03%	1.49%	7.52%	2.92%	1.49%	4.41%	2.43%	1.49%	3.92%	
21	3.08%	1.49%	4.57%	6.16%	1.49%	7.65%	2.98%	1.49%	4.47%	2.48%	1.49%	3.97%	
22	3.14%	1.49%	4.63%	6.29%	1.49%	7.78%	3.04%	1.49%	4.53%	2.54%	1.49%	4.03%	
23	3.21%	1.49%	4.70%	6.43%	1.49%	7.92%	3.11%	1.49%	4.60%	2.59%	1.49%	4.08%	
24	3.28%	1.49%	4.77%	6.56%	1.49%	8.05%	3.18%	1.49%	4.67%	2.65%	1.49%	4.14%	
25	3.35%	1.49%	4.84%	6.71%	1.49%	8.20%	3.24%	1.49%	4.73%	2.70%	1.49%	4.19%	
26	3.42%	1.49%	4.91%	6.85%	1.49%	8.34%	3.31%	1.49%	4.80%	2.76%	1.49%	4.25%	
27	3.50%	1.49%	4.99%	7.00%	1.49%	8.49%	3.38%	1.49%	4.87%	2.82%	1.49%	4.31%	
28	3.57%	1.49%	5.06%	7.15%	1.49%	8.64%	3.46%	1.49%	4.95%	2.88%	1.49%	4.37%	
29	3.65%	1.49%	5.14%	7.30%	1.49%	8.79%	3.53%	1.49%	5.02%	2.94%	1.49%	4.43%	
30	3.73%	1.49%	5.22%	7.45%	1.49%	8.94%	3.61%	1.49%	5.10%	3.00%	1.49%	4.49%	
31	3.81%	1.49%	5.30%	7.61%	1.49%	9.10%	3.68%	1.49%	5.17%	3.07%	1.49%	4.56%	
32	3.89%	1.49%	5.38%	7.77%	1.49%	9.26%	3.76%	1.49%	5.25%	3.13%	1.49%	4.62%	
33	3.97%	1.49%	5.46%	7.94%	1.49%	9.43%	3.84%	1.49%	5.33%	3.20%	1.49%	4.69%	
34	4.05%	1.49%	5.54%	8.11%	1.49%	9.60%	3.92%	1.49%	5.41%	3.27%	1.49%	4.76%	
35	4.14%	1.49%	5.63%	8.28%	1.49%	9.77%	4.01%	1.49%	5.50%	3.34%	1.49%	4.83%	
36	4.23%	1.49%	5.72%	8.46%	1.49%	9.95%	4.09%	1.49%	5.58%	3.41%	1.49%	4.90%	
37	4.32%	1.49%	5.81%	8.64%	1.49%	10.13%	4.18%	1.49%	5.67%	3.48%	1.49%	4.97%	
38	4.41%	1.49%	5.90%	8.82%	1.49%	10.31%	4.27%	1.49%	5.76%	3.55%	1.49%	5.04%	
39	4.50%	1.49%	5.99%	9.01%	1.49%	10.50%	4.35%	1.49%	5.84%	3.63%	1.49%	5.12%	
40	4.60%	1.49%	6.09%	9.20%	1.49%	10.69%	4.45%	1.49%	5.94%	3.70%	1.49%	5.19%	
41	4.69%	1.49%	6.18%	9.39%	1.49%	10.88%	4.54%	1.49%	6.03%	3.78%	1.49%	5.27%	
42	4.79%	1.49%	6.28%	9.58%	1.49%	11.07%	4.63%	1.49%	6.12%	3.86%	1.49%	5.35%	
43	4.89%	1.49%	6.38%	9.78%	1.49%	11.27%	4.72%	1.49%	6.21%	3.94%	1.49%	5.43%	
44	4.99%	1.49%	6.48%	9.99%	1.49%	11.48%	4.82%	1.49%	6.31%	4.02%	1.49%	5.51%	
45	5.09%	1.49%	6.58%	10.19%	1.49%	11.68%	4.91%	1.49%	6.40%	4.09%	1.49%	5.58%	
46	5.20%	1.49%	6.69%	10.39%	1.49%	11.88%	5.00%	1.49%	6.49%	4.17%	1.49%	5.66%	
47	5.29%	1.49%	6.78%	10.59%	1.49%	12.08%	5.09%	1.49%	6.58%	4.25%	1.49%	5.74%	
48	5.39%	1.49%	6.88%	10.78%	1.49%	12.27%	5.18%	1.49%	6.67%	4.32%	1.49%	5.81%	
49	5.49%	1.49%	6.98%	10.98%	1.49%	12.47%	5.27%	1.49%	6.76%	4.39%	1.49%	5.88%	
50	5.58%	1.49%	7.07%	11.17%	1.49%	12.66%	5.36%	1.49%	6.85%	4.47%	1.49%	5.96%	
51	5.68%	1.49%	7.17%	11.36%	1.49%	12.85%	5.45%	1.49%	6.94%	4.54%	1.49%	6.03%	
52	5.78%	1.49%	7.27%	11.56%	1.49%	13.05%	5.53%	1.49%	7.02%	4.61%	1.49%	6.10%	
53	5.87%	1.49%	7.36%	11.74%	1.49%	13.23%	5.60%	1.49%	7.09%	4.67%	1.49%	6.16%	
54	5.96%	1.49%	7.45%	11.92%	1.49%	13.41%	5.65%	1.49%	7.14%	4.71%	1.49%	6.20%	
55	6.03%	1.49%	7.52%	12.06%	1.49%	13.55%	5.69%	1.49%	7.18%	4.74%	1.49%	6.23%	
56	6.08%	1.49%	7.57%	12.16%	1.49%	13.65%	5.71%	1.49%	7.20%	4.76%	1.49%	6.25%	
57	6.11%	1.49%	7.60%	12.22%	1.49%	13.71%	5.71%	1.49%	7.20%	4.76%	1.49%	6.25%	
58	6.12%	1.49%	7.61%	12.23%	1.49%	13.72%	5.89%	1.49%	7.38%	4.91%	1.49%	6.40%	
59	6.12%	1.49%	7.61%	12.23%	1.49%	13.72%	6.09%	1.49%	7.58%	5.08%	1.49%	6.57%	
60	6.12%	1.49%	7.61%	12.23%	1.49%	13.72%	6.09%	1.49%	7.58%	5.08%	1.49%	6.57%	

Members do not pay COLA contributions

Assumptions:

Interest: 7.00%

Salary: 2019 Valuation Scale (Service based, includes wage inflation at 3.00%)

Unisex Mortality: Public General 2010 Above-Median Income - PUBG-2010(A) - Retiree Mortality Table, projected to 2044 using MP-2019

(blended 35% Male / 65% Female)



APPENDIX B – MEMBER CONTRIBUTION RATES

	Unrepresented Managers (incl CEO) (35,40,41,42,43)												
					Effectiv	e July 1, 2	2020						
		Plan 5A			Plan 5B			Plan 5C			Plan 7		
Entry Age	Basic	Cost-Sharing	Total	Basic	Cost-Sharing	Total	Basic	Cost-Sharing	Total	Basic	Cost-Sharing	Total	
16	3.01%	2.49%	5.50%	6.03%	2.49%	8.52%	2.92%	2.49%	5.41%	2.43%	2.49%	4.92%	
17	3.01%	2.49%	5.50%	6.03%	2.49%	8.52%	2.92%	2.49%	5.41%	2.43%	2.49%	4.92%	
18	3.01%	2.49%	5.50%	6.03%	2.49%	8.52%	2.92%	2.49%	5.41%	2.43%	2.49%	4.92%	
19	3.01%	2.49%	5.50%	6.03%	2.49%	8.52%	2.92%	2.49%	5.41%	2.43%	2.49%	4.92%	
20	3.01%	2.49%	5.50%	6.03%	2.49%	8.52%	2.92%	2.49%	5.41%	2.43%	2.49%	4.92%	
21	3.08%	2.49%	5.57%	6.16%	2.49%	8.65%	2.98%	2.49%	5.47%	2.48%	2.49%	4.97%	
22	3.14%	2.49%	5.63%	6.29%	2.49%	8.78%	3.04%	2.49%	5.53%	2.54%	2.49%	5.03%	
23	3.21%	2.49%	5.70%	6.43%	2.49%	8.92%	3.11%	2.49%	5.60%	2.59%	2.49%	5.08%	
24	3.28%	2.49%	5.77%	6.56%	2.49%	9.05%	3.18%	2.49%	5.67%	2.65%	2.49%	5.14%	
25	3.35%	2.49%	5.84%	6.71%	2.49%	9.20%	3.24%	2.49%	5.73%	2.70%	2.49%	5.19%	
26	3.42%	2.49%	5.91%	6.85%	2.49%	9.34%	3.31%	2.49%	5.80%	2.76%	2.49%	5.25%	
27	3.50%	2.49%	5.99%	7.00%	2.49%	9.49%	3.38%	2.49%	5.87%	2.82%	2.49%	5.31%	
28	3.57%	2.49%	6.06%	7.15%	2.49%	9.64%	3.46%	2.49%	5.95%	2.88%	2.49%	5.37%	
29	3.65%	2.49%	6.14%	7.30%	2.49%	9.79%	3.53%	2.49%	6.02%	2.94%	2.49%	5.43%	
30	3.73%	2.49%	6.22%	7.45%	2.49%	9.94%	3.61%	2.49%	6.10%	3.00%	2.49%	5.49%	
31	3.81%	2.49%	6.30%	7.61%	2.49%	10.10%	3.68%	2.49%	6.17%	3.07%	2.49%	5.56%	
32	3.89%	2.49%	6.38%	7.77%	2.49%	10.26%	3.76%	2.49%	6.25%	3.13%	2.49%	5.62%	
33	3.97%	2.49%	6.46%	7.94%	2.49%	10.43%	3.84%	2.49%	6.33%	3.20%	2.49%	5.69%	
34	4.05%	2.49%	6.54%	8.11%	2.49%	10.60%	3.92%	2.49%	6.41%	3.27%	2.49%	5.76%	
35	4.14%	2.49%	6.63%	8.28%	2.49%	10.77%	4.01%	2.49%	6.50%	3.34%	2.49%	5.83%	
36	4.23%	2.49%	6.72%	8.46%	2.49%	10.95%	4.09%	2.49%	6.58%	3.41%	2.49%	5.90%	
37	4.32%	2.49%	6.81%	8.64%	2.49%	11.13%	4.18%	2.49%	6.67%	3.48%	2.49%	5.97%	
38	4.41%	2.49%	6.90%	8.82%	2.49%	11.31%	4.27%	2.49%	6.76%	3.55%	2.49%	6.04%	
39	4.50%	2.49%	6.99%	9.01%	2.49%	11.50%	4.35%	2.49%	6.84%	3.63%	2.49%	6.12%	
40	4.60%	2.49%	7.09%	9.20%	2.49%	11.69%	4.45%	2.49%	6.94%	3.70%	2.49%	6.19%	
41	4.69%	2.49%	7.18%	9.39%	2.49%	11.88%	4.54%	2.49%	7.03%	3.78%	2.49%	6.27%	
42	4.79%	2.49%	7.28%	9.58%	2.49%	12.07%	4.63%	2.49%	7.12%	3.86%	2.49%	6.35%	
43	4.89%	2.49%	7.38%	9.78%	2.49%	12.27%	4.72%	2.49%	7.21%	3.94%	2.49%	6.43%	
44	4.99%	2.49%	7.48%	9.99%	2.49%	12.48%	4.82%	2.49%	7.31%	4.02%	2.49%	6.51%	
45	5.09%	2.49%	7.58%	10.19%	2.49%	12.68%	4.91%	2.49%	7.40%	4.09%	2.49%	6.58%	
46	5.20%	2.49%	7.69%	10.39%	2.49%	12.88%	5.00%	2.49%	7.49%	4.17%	2.49%	6.66%	
47	5.29%	2.49%	7.78%	10.59%	2.49%	13.08%	5.09%	2.49%	7.58%	4.25%	2.49%	6.74%	
48	5.39%	2.49%	7.88%	10.78%	2.49%	13.27%	5.18%	2.49%	7.67%	4.32%	2.49%	6.81%	
49	5.49%	2.49%	7.98%	10.98%	2.49%	13.47%	5.27%	2.49%	7.76%	4.39%	2.49%	6.88%	
50	5.58%	2.49%	8.07%	11.17%	2.49%	13.66%	5.36%	2.49%	7.85%	4.47%	2.49%	6.96%	
51	5.68%	2.49%	8.17%	11.36%	2.49%	13.85%	5.45%	2.49%	7.94%	4.54%	2.49%	7.03%	
52	5.78%	2.49%	8.27%	11.56%	2.49%	14.05%	5.53%	2.49%	8.02%	4.61%	2.49%	7.10%	
53	5.87%	2.49%	8.36%	11.74%	2.49%	14.23%	5.60%	2.49%	8.09%	4.67%	2.49%	7.16%	
54	5.96%	2.49%	8.45%	11.92%	2.49%	14.41%	5.65%	2.49%	8.14%	4.71%	2.49%	7.20%	
55	6.03%	2.49%	8.52%	12.06%	2.49%	14.55%	5.69%	2.49%	8.18%	4.74%	2.49%	7.23%	
56	6.08%	2.49%	8.57%	12.16%	2.49%	14.65%	5.71%	2.49%	8.20%	4.76%	2.49%	7.25%	
57	6.11%	2.49%	8.60%	12.22%	2.49%	14.71%	5.71%	2.49%	8.20%	4.76%	2.49%	7.25%	
58	6.12%	2.49%	8.61%	12.23%	2.49%	14.72%	5.89%	2.49%	8.38%	4.91%	2.49%	7.40%	
59	6.12%	2.49%	8.61%	12.23%	2.49%	14.72%	6.09%	2.49%	8.58%	5.08%	2.49%	7.57%	
60	6.12%	2.49%	8.61%	12.23%	2.49%	14.72%	6.09%	2.49%	8.58%	5.08%	2.49%	7.57%	

Members do not pay COLA contributions

Assumptions:

Interest: 7.00%

Salary: 2019 Valuation Scale (Service based, includes wage inflation at 3.00%)

Unisex Mortality: Public General 2010 Above-Median Income - PUBG-2010(A) - Retiree Mortality Table, projected to 2044 using MP-2019

(blended 35% Male / 65% Female)



APPENDIX B – MEMBER CONTRIBUTION RATES

		Uni	represente	d Manage	rs Safety (35,	40,41,42,4	13)		
				Effective J	July 1, 2020				
		Plan 4A & 6A	4		Plan 4B			Plan 4C & 6l	}
Entry Age	Basic	Cost Sharing	Total	Basic	Cost Sharing	Total	Basic	Cost Sharing	Total
16	5.58%	0.83%	6.41%	11.15%	0.83%	11.98%	5.38%	0.83%	6.21%
17	5.58%	0.83%	6.41%	11.15%	0.83%	11.98%	5.38%	0.83%	6.21%
18	5.58%	0.83%	6.41%	11.15%	0.83%	11.98%	5.38%	0.83%	6.21%
19	5.58%	0.83%	6.41%	11.15%	0.83%	11.98%	5.38%	0.83%	6.21%
20	5.58%	0.83%	6.41%	11.15%	0.83%	11.98%	5.38%	0.83%	6.21%
21	5.68%	0.83%	6.51%	11.36%	0.83%	12.19%	5.48%	0.83%	6.31%
22	5.79%	0.83%	6.62%	11.57%	0.83%	12.40%	5.58%	0.83%	6.41%
23	5.89%	0.83%	6.72%	11.79%	0.83%	12.62%	5.68%	0.83%	6.51%
24	6.00%	0.83%	6.83%	12.01%	0.83%	12.84%	5.79%	0.83%	6.62%
25	6.11%	0.83%	6.94%	12.23%	0.83%	13.06%	5.90%	0.83%	6.73%
26	6.23%	0.83%	7.06%	12.46%	0.83%	13.29%	6.00%	0.83%	6.83%
27	6.34%	0.83%	7.17%	12.69%	0.83%	13.52%	6.12%	0.83%	6.95%
28	6.46%	0.83%	7.29%	12.92%	0.83%	13.75%	6.23%	0.83%	7.06%
29	6.58%	0.83%	7.41%	13.16%	0.83%	13.99%	6.34%	0.83%	7.17%
30	6.70%	0.83%	7.53%	13.40%	0.83%	14.23%	6.46%	0.83%	7.29%
31	6.83%	0.83%	7.66%	13.65%	0.83%	14.48%	6.58%	0.83%	7.41%
32	6.95%	0.83%	7.78%	13.91%	0.83%	14.74%	6.70%	0.83%	7.53%
33	7.08%	0.83%	7.91%	14.17%	0.83%	15.00%	6.83%	0.83%	7.66%
34	7.22%	0.83%	8.05%	14.43%	0.83%	15.26%	6.96%	0.83%	7.79%
35	7.35%	0.83%	8.18%	14.70%	0.83%	15.53%	7.08%	0.83%	7.91%
36	7.49%	0.83%	8.32%	14.98%	0.83%	15.81%	7.21%	0.83%	8.04%
37	7.63%	0.83%	8.46%	15.25%	0.83%	16.08%	7.35%	0.83%	8.18%
38	7.77%	0.83%	8.60%	15.53%	0.83%	16.36%	7.48%	0.83%	8.31%
39	7.91%	0.83%	8.74%	15.82%	0.83%	16.65%	7.62%	0.83%	8.45%
40	8.06%	0.83%	8.89%	16.11%	0.83%	16.94%	7.75%	0.83%	8.58%
41	8.20%	0.83%	9.03%	16.41%	0.83%	17.24%	7.89%	0.83%	8.72%
42	8.36%	0.83%	9.19%	16.71%	0.83%	17.54%	8.04%	0.83%	8.87%
43	8.51%	0.83%	9.34%	17.02%	0.83%	17.85%	8.18%	0.83%	9.01%
44	8.67%	0.83%	9.50%	17.33%	0.83%	18.16%	8.33%	0.83%	9.16%
45	8.83%	0.83%	9.66%	17.65%	0.83%	18.48%	8.47%	0.83%	9.30%
46	8.99%	0.83%	9.82%	17.98%	0.83%	18.81%	8.61%	0.83%	9.44%
47	9.15%	0.83%	9.98%	18.31%	0.83%	19.14%	8.74%	0.83%	9.57%
48	9.31%	0.83%	10.14%	18.62%	0.83%	19.45%	8.85%	0.83%	9.68%
49	9.45%	0.83%	10.28%	18.89%	0.83%	19.72%	8.93%	0.83%	9.76%
50	9.56%	0.83%	10.39%	19.12%	0.83%	19.95%	8.98%	0.83%	9.81%
51	9.63%	0.83%	10.46%	19.25%	0.83%	20.08%	8.98%	0.83%	9.81%
52	9.65%	0.83%	10.48%	19.30%	0.83%	20.13%	8.98%	0.83%	9.81%
53	9.65%	0.83%	10.48%	19.30%	0.83%	20.13%	9.21%	0.83%	10.04%
54	9.65%	0.83%	10.48%	19.30%	0.83%	20.13%	9.52%	0.83%	10.35%
55	9.65%	0.83%	10.48%	19.30%	0.83%	20.13%	9.52%	0.83%	10.35%
56	9.65%	0.83%	10.48%	19.30%	0.83%	20.13%	9.52%	0.83%	10.35%
57	9.65%	0.83%	10.48%	19.30%	0.83%	20.13%	9.52%	0.83%	10.35%
58	9.65%	0.83%	10.48%	19.30%	0.83%	20.13%	9.52%	0.83%	10.35%
59	9.65%	0.83%	10.48%	19.30%	0.83%	20.13%	9.52%	0.83%	10.35%
60	9.65%	0.83%	10.48%	19.30%	0.83%	20.13%	9.52%	0.83%	10.35%

Members do not pay COLA contributions

Assumptions:

Interest: 7.00%

Salary: 2019 Valuation Scale (Service based, includes wage inflation at 3.00%)

Unisex Public Safety 2010 – PUBS-2010 – Retiree Mortality Table, projected to 2044 using MP-2019

Mortality: (blended 80% Male / 20% Female)

Administrative Rates have been loaded by 3% to account for expected administrative expenses allocated to the members.

expeneses:



APPENDIX B – MEMBER CONTRIBUTION RATES

Fire Fighters Local 2046 (12,13), Deputy Sheriffs' Association - Safety (14,15) Probation Peace Officers (18,19), Sheriffs Managers Association (44)

Effective July 1, 2020

		Plan 4A & 6A			Plan 4B			Plan 4C & 6B	
Entry Age	Basic	Cost Sharing	Total	Basic	Cost Sharing	Total	Basic	Cost Sharing	Total
16	5.58%	6.00%	11.58%	11.15%	6.00%	17.15%	5.38%	6.00%	11.38%
17	5.58%	6.00%	11.58%	11.15%	6.00%	17.15%	5.38%	6.00%	11.38%
18	5.58%	6.00%	11.58%	11.15%	6.00%	17.15%	5.38%	6.00%	11.38%
19	5.58%	6.00%	11.58%	11.15%	6.00%	17.15%	5.38%	6.00%	11.38%
20	5.58%	6.00%	11.58%	11.15%	6.00%	17.15%	5.38%	6.00%	11.38%
21	5.68%	6.00%	11.68%	11.36%	6.00%	17.36%	5.48%	6.00%	11.48%
22 23	5.79% 5.89%	6.00% 6.00%	11.79% 11.89%	11.57% 11.79%	6.00% 6.00%	17.57% 17.79%	5.58% 5.68%	6.00% 6.00%	11.58% 11.68%
23	6.00%	6.00%	12.00%	12.01%	6.00%	17.79%	5.79%	6.00%	11.08%
25	6.11%	6.00%	12.11%	12.0176	6.00%	18.23%	5.90%	6.00%	11.79%
26	6.23%	6.00%	12.1176	12.25%	6.00%	18.46%	6.00%	6.00%	12.00%
27	6.34%	6.00%	12.34%	12.69%	6.00%	18.69%	6.12%	6.00%	12.12%
28	6.46%	6.00%	12.46%	12.92%	6.00%	18.92%	6.23%	6.00%	12.23%
29	6.58%	6.00%	12.58%	13.16%	6.00%	19.16%	6.34%	6.00%	12.34%
30	6.70%	6.00%	12.70%	13.40%	6.00%	19.40%	6.46%	6.00%	12.46%
31	6.83%	6.00%	12.83%	13.65%	6.00%	19.65%	6.58%	6.00%	12.58%
32	6.95%	6.00%	12.95%	13.91%	6.00%	19.91%	6.70%	6.00%	12.70%
33	7.08%	6.00%	13.08%	14.17%	6.00%	20.17%	6.83%	6.00%	12.83%
34	7.22%	6.00%	13.22%	14.43%	6.00%	20.43%	6.96%	6.00%	12.96%
35	7.35%	6.00%	13.35%	14.70%	6.00%	20.70%	7.08%	6.00%	13.08%
36	7.49%	6.00%	13.49%	14.98%	6.00%	20.98%	7.21%	6.00%	13.21%
37	7.63%	6.00%	13.63%	15.25%	6.00%	21.25%	7.35%	6.00%	13.35%
38	7.77%	6.00%	13.77%	15.53%	6.00%	21.53%	7.48%	6.00%	13.48%
39	7.91%	6.00%	13.91%	15.82%	6.00%	21.82%	7.62%	6.00%	13.62%
40	8.06%	6.00%	14.06%	16.11%	6.00%	22.11%	7.75%	6.00%	13.75%
41	8.20%	6.00%	14.20%	16.41%	6.00%	22.41%	7.89%	6.00%	13.89%
42	8.36%	6.00%	14.36%	16.71%	6.00%	22.71%	8.04%	6.00%	14.04%
43	8.51%	6.00%	14.51%	17.02%	6.00%	23.02%	8.18%	6.00%	14.18%
44	8.67%	6.00%	14.67%	17.33%	6.00%	23.33%	8.33%	6.00%	14.33%
45 46	8.83% 8.99%	6.00% 6.00%	14.83% 14.99%	17.65% 17.98%	6.00% 6.00%	23.65% 23.98%	8.47% 8.61%	6.00% 6.00%	14.47% 14.61%
47	9.15%	6.00%	15.15%	18.31%	6.00%	24.31%	8.74%	6.00%	14.01%
48	9.13%	6.00%	15.13%	18.62%	6.00%	24.62%	8.85%	6.00%	14.85%
49	9.45%	6.00%	15.45%	18.89%	6.00%	24.89%	8.93%	6.00%	14.93%
50	9.56%	6.00%	15.56%	19.12%	6.00%	25.12%	8.98%	6.00%	14.98%
51	9.63%	6.00%	15.63%	19.25%	6.00%	25.25%	8.98%	6.00%	14.98%
52	9.65%	6.00%	15.65%	19.30%	6.00%	25.30%	8.98%	6.00%	14.98%
53	9.65%	6.00%	15.65%	19.30%	6.00%	25.30%	9.21%	6.00%	15.21%
54	9.65%	6.00%	15.65%	19.30%	6.00%	25.30%	9.52%	6.00%	15.52%
55	9.65%	6.00%	15.65%	19.30%	6.00%	25.30%	9.52%	6.00%	15.52%
56	9.65%	6.00%	15.65%	19.30%	6.00%	25.30%	9.52%	6.00%	15.52%
57	9.65%	6.00%	15.65%	19.30%	6.00%	25.30%	9.52%	6.00%	15.52%
58	9.65%	6.00%	15.65%	19.30%	6.00%	25.30%	9.52%	6.00%	15.52%
59	9.65%	6.00%	15.65%	19.30%	6.00%	25.30%	9.52%	6.00%	15.52%
60	9.65%	6.00%	15.65%	19.30%	6.00%	25.30%	9.52%	6.00%	15.52%

Members do not pay COLA contributions

Assumptions:

Interest: 7.00%

Salary: 2019 Valuation Scale (Service based, includes wage inflation at 3.00%)

Unisex Public Safety 2010 – PUBS-2010 – Retiree Mortality Table, projected to 2044 using MP-2019

Mortality: (blended 80% Male / 20% Female)

Administrative Rates have been loaded by 3% to account for expected administrative expenses allocated to the members.

expeneses:



APPENDIX B – MEMBER CONTRIBUTION RATES

		Gen	eral		AP	CD		Safety	
Entry Age	5A	5B	5C	7	1	2	4A & 6A	4B	4C & 6B
16	3.01%	6.03%	2.92%	2.43%	3.53%	7.06%	5.58%	11.15%	5.38%
17	3.01%	6.03%	2.92%	2.43%	3.53%	7.06%	5.58%	11.15%	5.38%
18	3.01%	6.03%	2.92%	2.43%	3.53%	7.06%	5.58%	11.15%	5.38%
19	3.01%	6.03%	2.92%	2.43%	3.53%	7.06%	5.58%	11.15%	5.38%
20	3.01%	6.03%	2.92%	2.43%	3.53%	7.06%	5.58%	11.15%	5.38%
21	3.08%	6.16%	2.98%	2.48%	3.60%	7.21%	5.68%	11.36%	5.48%
22	3.14%	6.29%	3.04%	2.54%	3.68%	7.36%	5.79%	11.57%	5.58%
23	3.21%	6.43%	3.11%	2.59%	3.76%	7.52%	5.89%	11.79%	5.68%
24	3.28%	6.56%	3.18%	2.65%	3.84%	7.68%	6.00%	12.01%	5.79%
25	3.35%	6.71%	3.24%	2.70%	3.92%	7.84%	6.11%	12.23%	5.90%
26	3.42%	6.85%	3.31%	2.76%	4.01%	8.01%	6.23%	12.46%	6.00%
27 28	3.50% 3.57%	7.00% 7.15%	3.38% 3.46%	2.82% 2.88%	4.09% 4.18%	8.18%	6.34% 6.46%	12.69%	6.12% 6.23%
28 29	3.65%	7.13%		2.88%	4.18%	8.36%		12.92%	6.23%
30	3.73%	7.30% 7.45%	3.53% 3.61%	3.00%	4.27%	8.53% 8.72%	6.58% 6.70%	13.16% 13.40%	6.46%
31	3.73%	7.43% 7.61%	3.68%	3.00%	4.36%	8.72% 8.90%	6.83%	13.40%	6.58%
32	3.89%	7.77%	3.76%	3.13%	4.55%	9.09%	6.95%	13.91%	6.70%
33	3.97%	7.77%	3.84%	3.20%	4.64%	9.28%	7.08%	14.17%	6.83%
34	4.05%	8.11%	3.92%	3.27%	4.74%	9.48%	7.03%	14.43%	6.96%
35	4.14%	8.28%	4.01%	3.34%	4.84%	9.68%	7.35%	14.70%	7.08%
36	4.23%	8.46%	4.09%	3.41%	4.94%	9.88%	7.49%	14.98%	7.21%
37	4.32%	8.64%	4.18%	3.48%	5.04%	10.09%	7.63%	15.25%	7.35%
38	4.41%	8.82%	4.27%	3.55%	5.15%	10.30%	7.77%	15.53%	7.48%
39	4.50%	9.01%	4.35%	3.63%	5.26%	10.51%	7.91%	15.82%	7.62%
40	4.60%	9.20%	4.45%	3.70%	5.36%	10.72%	8.06%	16.11%	7.75%
41	4.69%	9.39%	4.54%	3.78%	5.47%	10.94%	8.20%	16.41%	7.89%
42	4.79%	9.58%	4.63%	3.86%	5.57%	11.14%	8.36%	16.71%	8.04%
43	4.89%	9.78%	4.72%	3.94%	5.68%	11.35%	8.51%	17.02%	8.18%
44	4.99%	9.99%	4.82%	4.02%	5.78%	11.55%	8.67%	17.33%	8.33%
45	5.09%	10.19%	4.91%	4.09%	5.88%	11.76%	8.83%	17.65%	8.47%
46	5.20%	10.39%	5.00%	4.17%	5.98%	11.96%	8.99%	17.98%	8.61%
47	5.29%	10.59%	5.09%	4.25%	6.08%	12.17%	9.15%	18.31%	8.74%
48	5.39%	10.78%	5.18%	4.32%	6.18%	12.36%	9.31%	18.62%	8.85%
49	5.49%	10.98%	5.27%	4.39%	6.27%	12.54%	9.45%	18.89%	8.93%
50	5.58%	11.17%	5.36%	4.47%	6.34%	12.69%	9.56%	19.12%	8.98%
51	5.68%	11.36%	5.45%	4.54%	6.40%	12.80%	9.63%	19.25%	8.98%
52	5.78%	11.56%	5.53%	4.61%	6.43%	12.87%	9.65%	19.30%	8.98%
53	5.87%	11.74%	5.60%	4.67%	6.44%	12.88%	9.65%	19.30%	9.21%
54	5.96%	11.92%	5.65%	4.71%	6.44%	12.88%	9.65%	19.30%	9.52%
55	6.03%	12.06%	5.69%	4.74%	6.44%	12.88%	9.65%	19.30%	9.52%
56	6.08%	12.16%	5.71%	4.76%	6.44%	12.88%	9.65%	19.30%	9.52%
57	6.11%	12.22%	5.71%	4.76%	6.44%	12.88%	9.65%	19.30%	9.52%
58	6.12%	12.23%	5.89%	4.91%	6.44%	12.88%	9.65%	19.30%	9.52%
59	6.12%	12.23%	6.09%	5.08%	6.44%	12.88%	9.65%	19.30%	9.52%
60	6.12%	12.23%	6.09%	5.08%	6.44%	12.88%	9.65%	19.30%	9.52%

Assumptions:

Interest: 7.00%

Salary: 2019 Valuation Scale (Service based, includes wage inflation at 3.00%)

Unisex Public General 2010 Above-Median Income and Public Safety 2010 Retiree Mortality Tables Mortality: projected to 2044 using Scale MP-2019 (blended 35% Male / 65% Female for General and APCD,

and blended 80% Male / 20% Female for Safety)



APPENDIX C – EMPLOYER CONTRIBUTION RATES WITH MEMBER COST-SHARING ADJUSTMENTS

General Employer Contribution Rates after Member Cost-Sharing

SEIU Local 620 (23, 24, 25, 26, 27) and Local 721 (21, 22)

Deputy Public Defenders (20) and Deputy Sheriffs' Association (Non-Safety 14, 15)

Engineers & Technicicans (28, 29) and Confidential (32)

	5A	5B	5C	Plan 7
June 30, 2020 Contribution Rate for FYE 2022	39.28%	39.33%	41.05%	40.13%
Adjusted Member Cost-Sharing Contributions	<u>-2.48%</u>	<u>-2.48%</u>	<u>-2.48%</u>	<u>-2.48%</u>
Net Employer Rate Effective July 1, 2021	36.80%	36.85%	38.57%	37.65%
June 30, 2021 Contribution Rate for FYE 2023	37.55%	37.52%	39.27%	39.22%
Adjusted Member Cost-Sharing Contributions	<u>-2.48%</u>	<u>-2.48%</u>	<u>-2.48%</u>	<u>-2.48%</u>
Net Employer Rate Effective July 1, 2022	35.07%	35.04%	36.79%	36.74%

General Employer Contribution Rates after Member Cost-Sharing						
Deputy District Attorneys (17)						
	5A	5B	5C	Plan 7		
June 30, 2020 Contribution Rate for FYE 2022	39.28%	39.33%	41.05%	40.13%		
Adjusted Member Cost-Sharing Contributions	<u>-1.49%</u>	<u>-1.49%</u>	<u>-1.49%</u>	<u>-1.49%</u>		
Net Employer Rate Effective July 1, 2021	37.79%	37.84%	39.56%	38.64%		
June 30, 2021 Contribution Rate for FYE 2023	37.55%	37.52%	39.27%	39.22%		
Adjusted Member Cost-Sharing Contributions	<u>-1.49%</u>	<u>-1.49%</u>	<u>-1.49%</u>	<u>-1.49%</u>		
Net Employer Rate Effective July 1, 2022	36.06%	36.03%	37.78%	37.73%		



APPENDIX C – EMPLOYER CONTRIBUTION RATES WITH MEMBER COST-SHARING ADJUSTMENTS

General Employer Contribution Rates after Member Cost-Sharing Civil Attorneys Association (30) and Unrepresented Confidential Attorneys (36)

	5A	5B	5C	Plan 7
June 30, 2020 Contribution Rate for FYE 2022	39.28%	39.33%	41.05%	40.13%
Adjusted Member Cost-Sharing Contributions	<u>-1.48%</u>	<u>-1.48%</u>	<u>-1.48%</u>	<u>-1.48%</u>
Net Employer Rate Effective July 1, 2021	37.80%	37.85%	39.57%	38.65%
June 30, 2021 Contribution Rate for FYE 2023	37.55%	37.52%	39.27%	39.22%
Adjusted Member Cost-Sharing Contributions	<u>-1.48%</u>	<u>-1.48%</u>	<u>-1.48%</u>	<u>-1.48%</u>
Net Employer Rate Effective July 1, 2022	36.07%	36.04%	37.79%	37.74%

General Employer Contribution Rates after Member Cost-Sharing Unrepresented Managers (including CEO) (35, 40, 41, 42, 43)

	5A	5B	5C	Plan 7
June 30, 2020 Contribution Rate for FYE 2022	39.28%	39.33%	41.05%	40.13%
Adjusted Member Cost-Sharing Contributions	<u>-2.47%</u>	<u>-2.47%</u>	<u>-2.47%</u>	<u>-2.47%</u>
Net Employer Rate Effective July 1, 2021	36.81%	36.86%	38.58%	37.66%
June 30, 2021 Contribution Rate for FYE 2023	37.55%	37.52%	39.27%	39.22%
Adjusted Member Cost-Sharing Contributions	<u>-2.47%</u>	<u>-2.47%</u>	<u>-2.47%</u>	<u>-2.47%</u>
Net Employer Rate Effective July 1, 2022	35.08%	35.05%	36.80%	36.75%



APPENDIX C – EMPLOYER CONTRIBUTION RATES WITH MEMBER COST-SHARING ADJUSTMENTS

General Employer Contribution Rates after Member Cost-Sharing **Union of American Physicians & Dentists (10, 11) 5**A 5B 5C Plan 7 June 30, 2020 Contribution Rate for FYE 2022 39.28% 40.13% 39.33% 41.05% Adjusted Member Cost-Sharing Contributions -2.48% <u>-2.48%</u> <u>-2.48%</u> -2.48% **Net Employer Rate Effective July 1, 2021** 36.80% 36.85% 38.57% 37.65% June 30, 2021 Contribution Rate for FYE 2023 37.55% 37.52% 39.27% 39.22% Adjusted Member Cost-Sharing Contributions <u>-2.48%</u> <u>-2.48%</u> <u>-2.48%</u> -2.48% **Net Employer Rate Effective July 1, 2022** 35.07% 35.04% 36.79% 36.74%

Safety Employer Contribution Rates after Member Cost-Sharing Unrepresented Safety Managers (35, 40, 41, 42, 43)						
	4A	4B	4C	6A	6B	
June 30, 2020 Contribution Rate for FYE 2022	61.63%	63.29%	60.39%	69.34%	68.46%	
Adjusted Member Cost-Sharing Contributions	<u>-0.83%</u>	<u>-0.83%</u>	<u>-0.83%</u>	<u>-0.83%</u>	-0.83%	
Net Employer Rate Effective July 1, 2021	60.80%	62.46%	59.56%	68.51%	67.63%	
June 30, 2021 Contribution Rate for FYE 2023	58.38%	63.51%	57.06%	66.41%	65.37%	
Adjusted Member Cost-Sharing Contributions	<u>-0.83%</u>	<u>-0.83%</u>	<u>-0.83%</u>	<u>-0.83%</u>	-0.83%	
Net Employer Rate Effective July 1, 2022	57.55%	62.68%	56.23%	65.58%	64.54%	



APPENDIX C – EMPLOYER CONTRIBUTION RATES WITH MEMBER COST-SHARING ADJUSTMENTS

Safety Employer Contribution Rates after Member Cost-Sharing Fire Fighters Local 2046 (12, 13) and Deputy Sheriffs' Association (14, 15), Probation Peace Officers (18, 19) **Sheriff Managers Association (44) 4A 4B** 4C **6A 6B** June 30, 2020 Contribution Rate for FYE 2022 61.63% 63.29% 60.39% 69.34% 68.46% <u>-5.97%</u> <u>-5.97%</u> <u>-5.97%</u> Adjusted Member Cost-Sharing Contributions <u>-5.97%</u> -5.97% **Net Employer Rate Effective July 1, 2021** 55.66% 57.32% 54.42% 63.37% 62.49% June 30, 2021 Contribution Rate for FYE 2023 58.38% 63.51% 57.06% 66.41% 65.37% Adjusted Member Cost-Sharing Contributions <u>-5.97%</u> <u>-5.97%</u> <u>-5.97%</u> <u>-5.97%</u> -5.97% **Net Employer Rate Effective July 1, 2022** 52.41% 57.54% 51.09% 60.44% 59.40%



APPENDIX D – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

Contribution Allocation Procedure

The contribution allocation procedure primarily consists of an actuarial cost method, an asset valuation method, and an amortization method as described below. There were no changes to the contribution allocation procedures from the prior valuation.

1. Actuarial Cost Method

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

2. Amortization Method

The UAL (or Surplus Funding) is amortized as a percentage of the projected salaries of present and future members of SBCERS. Effective with the June 30, 2013 valuation, the UAL as of June 30, 2013 is amortized over a closed 17-year period, except for the additional UAL attributable to the creation of Safety Plan 6, which is being amortized over a separate closed period (currently seven years). Effective with the June 30, 2014 valuation, any new sources of UAL due to actuarial gains and losses, assumption changes, or method changes is amortized over a closed 19-year period, with five-year ramp up period at the beginning of the period, a four-year ramp down at the end of the period, and 10 years of level payments as a percentage of payroll. This new method is a type of direct rate smoothing method.

The single equivalent amortization period is five years. As of June 30, 2021, it would take approximately five years to fully pay off the total Unfunded Actuarial Liability based on the current UAL payment increasing as a level percentage of payroll.

3. Asset Valuation Method

As of June 30, 2014, the Market Value of Assets is used to determine the System's UAL. A smoothed Actuarial Value of Assets is no longer used.



APPENDIX D – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

Actuarial Assumptions

The assumptions used in this report reflect the results of an experience study performed by Cheiron covering the period from July 1, 2016 through June 30, 2019. More details on the rationale for the demographic and economic assumptions can be found in the Actuarial Experience Study report adopted by the Board on January 22, 2020.

1. Rate of Return

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

2. Administrative Expenses

Administrative expenses are assumed to be \$5.6 million for the next year, to be split between employees and employers based on their share of the overall contributions. This is equivalent to a 3% load to both the member and employer contribution rates. Administrative expenses are assumed to increase by the assumed wage inflation of 3.00% each year.

3. Cost-of-Living

The cost-of-living as measured by the Consumer Price Index (CPI) will increase at the rate of 2.75% per year. This assumption is also used for increasing the compensation limit that applies to PEPRA members.

4. Post Retirement COLA

Benefits are assumed to increase after retirement at the rate of 2.6% per year for General Plans 5, Safety Plans 4, 6 and 8 (PEPRA), and APCD Plans 1 and 2; 1.90% per year for General Plans 7 and APCD Plan 8 (PEPRA), and 0% per year for General Plan 2.

For General Plan 8 (PEPRA), benefits are assumed to increase at the rate of 1.90% per year if their employer had implemented General Plan 7 prior to January 1, 2013. Otherwise, benefits are assumed to increase at the rate of 2.6% per year.

5. Internal Revenue Code Section 415 Limit

The Internal Revenue Code Section 415 maximum benefit limitations are not reflected in the valuation for funding purposes. Any limitation is reflected in a member's benefit after retirement.

6. Internal Revenue Code Section 401(a)(17)

The Internal Revenue Code Section 401(a)(17) maximum compensation limitation is not reflected in the valuation for funding purposes. Any limitation is reflected in a member's benefit after retirement.



APPENDIX D – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

7. Social Security Wage Base

General Plan 2 members have their benefits offset by an assumed Social Security Benefit. For projecting the Social Security Benefit, the annual Social Security Wage Base increase is assumed to be 2.75% per year.

8. Interest on Member Contributions

The annual credited interest rate on member contributions is assumed to be 3.25%. As of June 30, 2008, the credited interest rate each six-month period is the semi-annual yield of the five-year Treasury note as of the last business day of the interest-crediting period.

9. Sick Leave Service Credit Upon Retirement

Upon retirement, members are entitled to turn their sick leave balances into service credit for retirement benefits. Members are limited to one year of service credit. For safety plan members, a 2.25% load was applied to the expected years of service at retirement for sick leave service credit. For general plan members, the load was 1.25%.

10. Family Composition

Percentage married for all active members who retire, become disabled, or die during active service is shown in the table below. Male members are assumed to be three years older than their spouses and female members are assumed to be one year younger than their spouses.

Percentage Married			
Gender	Percentage		
Males	75%		
Females	60%		

11. Vacation Cash Out

Any cash outs of vacation during the final average salary period affecting the calculation of a retirement benefit are recognized at the time of retirement. There is no pre-recognition of potential costs included in the valuation.



APPENDIX D – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

12. Increases in Pay

Wage inflation component: 3.00%

Additional longevity and promotion component:

Longevi	ity and Promotic	on Increases
Service	General	Safety
0	4.75%	6.00%
1	4.00%	5.00%
2	3.25%	4.00%
3	2.75%	3.25%
4	2.25%	2.50%
5	1.75%	2.00%
6	1.50%	1.60%
7	1.25%	1.30%
8	1.20%	1.20%
9	1.10%	1.10%
10	1.00%	1.00%
11	0.90%	1.00%
12	0.80%	0.92%
13	0.70%	0.89%
14	0.60%	0.87%
15	0.55%	0.85%
16	0.50%	0.82%
17	0.48%	0.80%
18	0.46%	0.77%
19	0.44%	0.75%
20	0.42%	0.75%
21	0.40%	0.75%
22	0.38%	0.75%
23	0.38%	0.75%
24	0.38%	0.75%
25	0.38%	0.75%
26	0.38%	0.75%
27	0.38%	0.75%
28	0.38%	0.75%
29	0.38%	0.75%
30+	0.38%	0.75%

Increases are compound rather than additive.



APPENDIX D – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

13. Rates of Termination

Sample rates of termination are shown in the following table below. The 1.30% rate of termination continues for Safety PEPRA members with 20 or more years of service who are not eligible to retire.

Rates of Termination					
Service	General	Safety			
0	20.00%	9.00%			
1	14.00%	9.00%			
2	10.00%	3.50%			
3	8.00%	3.00%			
4	7.00%	3.00%			
5	7.00%	5.00%			
6	6.00%	2.75%			
7	6.00%	2.75%			
8	6.00%	2.75%			
9	5.00%	2.75%			
10	4.50%	2.00%			
11	3.50%	1.50%			
12	3.00%	1.30%			
13	3.00%	1.30%			
14	2.75%	1.30%			
15	2.75%	1.30%			
16	2.75%	1.30%			
17	2.50%	1.30%			
18	2.50%	1.30%			
19	2.50%	1.30%			
20	1.50%	0.00%			
21	1.50%				
22	1.50%				
23	1.50%				
24	1.50%				
25	1.50%				
26	1.50%				
27	1.50%				
28	1.50%				
29	1.50%				
30	0.00%				

Termination rates do not apply once a member is eligible for retirement.



APPENDIX D – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

14. Withdrawal

Rates of withdrawal apply to active Members who terminate their employment and withdraw their member contributions, forfeiting entitlement to future Plan benefits.

Rates of Withdrawal					
Service	General	Safety			
0	100.00%	100.00%			
1	100.00%	100.00%			
2	100.00%	100.00%			
3	100.00%	100.00%			
4	100.00%	100.00%			
5	20.00%	15.00%			
6	20.00%	15.00%			
7	20.00%	15.00%			
8	20.00%	15.00%			
9	20.00%	15.00%			
10	15.00%	10.00%			
11	15.00%	10.00%			
12	15.00%	10.00%			
13	15.00%	10.00%			
14	15.00%	10.00%			
15	10.00%	5.00%			
16	10.00%	5.00%			
17	10.00%	5.00%			
18	10.00%	5.00%			
19	10.00%	5.00%			
20	5.00%	0.00%			
21	5.00%	0.00%			
22	5.00%	0.00%			
23	5.00%	0.00%			
24	5.00%	0.00%			
25	0.00%	0.00%			
26	0.00%	0.00%			
27	0.00%	0.00%			
28	0.00%	0.00%			
29	0.00%	0.00%			
30	0.00%	0.00%			



APPENDIX D – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

Former members with contributions on deposit who commence benefits from deferred vested status are assumed to receive a retirement benefit commencing at the following ages:

General Plans 5, 7, and 8 (PEPRA) Members:	Age 58
General Plan 2 Members:	Age 60
Safety Plans 4 and 8 (PEPRA) Members:	Age 55
Safety Plan 6 Members:	Age 52
APCD Members:	Age 58

15. Reciprocal Transfers

30% of vested terminated General (except Plan 2) and 35% of vested terminated Safety Members that leave their member contributions on deposit with the Plan are assumed to be reciprocal.

Reciprocal members are assumed to remain with the reciprocal agency until retirement, and receive annual salary increases of:

General & APCD Members: 3.375% Safety Members: 3.750%

Reciprocal members are assumed to commence retirement benefits at the following ages:

General Plans 5, 7, and 8 (PEPRA) Members:	Age 60
General Plan 2 Members:	Age 60
Safety Plans 4 and 8 (PEPRA) Members:	Age 55
Safety Plan 6 Members:	Age 55
APCD Members:	Age 60



APPENDIX D – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

16. Rates of Disability

General member rates are based on the sex distinct 2017 CalPERS Non-Industrial Disability Miscellaneous Public Agency rates.

Safety members are based the sum of the 2017 CalPERS Industrial and Non-Industrial Disability State Safety rates.

Representative disability rates of active participants are shown below.

Rates of Disability								
		Safety						
		Years of Service						
	Ma	les	Fem	ales				
Age	Less than 5	5 or More	Less than 5	5 or More	Less than 5	5 or More		
20	0.009%	0.017%	0.009%	0.016%	0.034%	0.038%		
25	0.009%	0.017%	0.009%	0.016%	0.117%	0.130%		
30	0.010%	0.019%	0.013%	0.024%	0.210%	0.233%		
35	0.021%	0.039%	0.039%	0.071%	0.302%	0.336%		
40	0.056%	0.102%	0.074%	0.135%	0.389%	0.432%		
45	0.083%	0.151%	0.103%	0.188%	0.509%	0.565%		
50	0.087%	0.158%	0.109%	0.199%	0.682%	0.758%		
55	0.087%	0.158%	0.082%	0.149%	0.808%	0.898%		
60	0.084%	0.153%	0.058%	0.105%	0.974%	1.082%		
65	0.070%	0.128%	0.048%	0.088%	0.000%	0.000%		
70	0.056%	0.102%	0.046%	0.084%				
75	0.000%	0.000%	0.000%	0.000%				

55% of General disabilities and 90% of Safety disabilities where the member has five or more years of service are assumed to be service-related. All disabilities for those with less than five years or service are assumed to be service-related.

17. Rates of Mortality for Healthy Lives

Mortality rates for General active members are based on the sex distinct Public General 2010 Above-Median Income Employee Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2019, without adjustment.

Non-duty related mortality rates for Safety active members are based on the sex distinct Public Safety 2010 Employee Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2019, without adjustment.



APPENDIX D – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

Safety active members are also subject to the 2014 CalPERS Preretirement Industrial Mortality Table for duty-related deaths, with generational improvement using Projection Scale MP-2019 from a base year of 2009.

Mortality rates for healthy General annuitants are based on the sex distinct Public General 2010 Above-Median Income Retiree Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2019.

Mortality rates for Safety annuitants are based the sex distinct Public Safety 2010 Retiree Mortality Table, with generational improvements projected from 2010 using Projection Scale MP-2019.

18. Rates of Mortality for Retired Disabled Lives

Mortality rates for disabled retirees are based on 2014 CalPERS Industrial Disabled Annuitant Mortality, with no adjustment (Safety only), 2014 CalPERS Non-Industrial Disabled Annuitant Mortality, with no adjustment (General only), with generational improvement using Projection Scale MP-2019 from a base year of 2009.

19. Benefit Payment Timing

End of the month.

20. Benefit Load for Part-Time Employees

A load is applied to benefits for part-time active members who worked less than 2,080 in the previous plan year to better reflect their projected benefits at retirement. The loads are shown in the table below.

Partial Hours Member Load						
Hours	Legacy	PEPRA				
< 1,040	2.500	1.000				
1,040 to 1,799	1.250	1.000				
1,800 to 2,079	1.085	1.000				

Members not identified as part-time but who work fewer than 2,080 hours are assumed to be on a leave of absence. For these members, salaries are annualized only for purposes of determining benefits and liabilities.



APPENDIX D – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

21. Rates of Retirement

Rates of retirement are based on age and service according to the following table. The rates for Safety PEPRA members are the same as the Safety Plan 4 rates.

Rates of Retirement											
						Safety					
	General		General	- PEPRA	Plai		3,		Plan 6		
Age	Svc < 20	20-29	Svc >= 30	Svc < 25	Svc >= 25	Svc < 20	20-29	$Svc \ge 30$	Svc < 20	20-29	Svc >= 30
< 38	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
38	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.50%	3.00%	0.00%	3.00%	3.00%
39	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.50%	3.00%	0.00%	3.00%	3.00%
40	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.50%	3.00%	0.00%	3.00%	3.00%
41	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.50%	3.00%	0.00%	3.00%	3.00%
42	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.50%	3.00%	0.00%	3.00%	3.00%
43	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.50%	3.00%	0.00%	3.00%	3.00%
44	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.50%	3.00%	0.00%	3.00%	3.00%
45	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.50%	3.00%	0.00%	3.00%	3.00%
46	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.50%	3.00%	0.00%	3.00%	3.00%
47	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.50%	3.00%	0.00%	3.00%	3.00%
48	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.50%	3.00%	0.00%	3.00%	3.00%
49	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.50%	3.00%	0.00%	15.00%	50.00%
50	2.00%	2.00%	10.00%	0.00%	0.00%	3.00%	2.50%	5.00%	10.00%	25.00%	50.00%
51	2.50%	2.50%	4.00%	0.00%	0.00%	3.00%	2.50%	5.00%	10.00%	15.00%	20.00%
52	2.50%	2.50%	4.00%	2.00%	3.00%	3.00%	2.50%	5.00%	10.00%	15.00%	20.00%
53	4.00%	4.00%	4.00%	2.00%	2.00%	3.00%	5.00%	5.00%	7.50%	15.00%	20.00%
54	4.00%	4.00%	5.00%	3.00%	3.50%	10.00%	10.00%	30.00%	7.50%	15.00%	30.00%
55	4.00%	5.00%	10.00%	3.00%	7.00%	10.00%	25.00%	50.00%	7.50%	15.00%	35.00%
56	4.00%	5.00%	10.00%	3.00%	7.00%	10.00%	15.00%	25.00%	7.50%	15.00%	25.00%
57	7.00%	7.00%	10.00%	4.50%	6.00%	10.00%	15.00%	25.00%	10.00%	25.00%	25.00%
58	7.00%	7.00%	10.00%	4.50%	6.00%	10.00%	15.00%	40.00%	10.00%	25.00%	25.00%
59	7.00%	7.00%	15.00%	5.00%	10.00%	10.00%	30.00%	40.00%	15.00%	25.00%	25.00%
60	7.00%	10.00%	15.00%	5.00%	10.00%	10.00%	30.00%	50.00%	15.00%	25.00%	25.00%
61	15.00%	20.00%	30.00%	12.50%	15.00%	25.00%	30.00%	35.00%	20.00%	25.00%	25.00%
62	20.00%	30.00%	40.00%	15.00%	25.00%	25.00%	30.00%	35.00%	20.00%	25.00%	25.00%
63	15.00%	25.00%	40.00%	10.00%	25.00%	15.00%	30.00%	35.00%	10.00%	25.00%	25.00%
64	25.00%	25.00%	40.00%	15.00%	20.00%	15.00%	30.00%	35.00%	10.00%	25.00%	25.00%
65	30.00%	40.00%	50.00%	20.00%	30.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
66	30.00%	40.00%	50.00%	20.00%	30.00%						
67	26.00%	33.00%	40.00%	35.00%	40.00%						
68	26.00%	33.00%	40.00%	20.00%	30.00%						
69	26.00%	33.00%	40.00%	20.00%	30.00%						
70	26.00%	33.00%	40.00%	20.00%	30.00%						
71	26.00%	33.00%	40.00%	20.00%	30.00%						
72	26.00%	33.00%	40.00%	20.00%	30.00%						
73	26.00%	33.00%	40.00%	20.00%	30.00%						
74	26.00%	33.00%	40.00%	20.00%	30.00%						
75	100.00%	100.00%	100.00%	100.00%	100.00%						

22. Changes Since Last Valuation

None.



APPENDIX E – SUMMARY OF PLAN PROVISIONS

All actuarial calculations are based on our understanding of the statutes governing the SBCERS as contained in the County Employees' Retirement Law (CERL) of 1937, with provisions adopted by the County Board of Supervisors, a district Board of Directors, or the SBCERS Board, effective through June 30, 2021. The benefit and contribution provisions of this law are summarized briefly below, (along with corresponding references to the State Code). This summary does not attempt to cover all the detailed provisions of the law.

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

A. Membership in Retirement Plans

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

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

General members: All non-Safety employees are eligible to be General members. Membership in a particular tier depends primarily upon date of entry to the system. General members employed by Santa Barbara County Air Pollution Control District (APCD) are in APCD Plan 1, APCD Plan 2, General Plan 7, or General Plan 8 depending upon their date of entry to the system.

APCD Plan 1: APCD employees hired on or before July 3, 1995.

APCD Plan 2: APCD employees hired after July 3, 1995.

General Plan 2: Employees hired on or before June 30, 1999, who elected to join General Plan 2. Once vested, Plan 2 members have a one-time

election to defer accrued Plan 2 benefits and enter a contributory plan in effect at the time of election. Contributions are based upon age at

time of transfer.

Safety Plan 4A &

General Plan 5A: General employees hired before October 10, 1994, who did not elect

to join General Plan 2, and some Safety employees hired before

October 10, 1994.

Safety Plan 4B &

General Plan 5B: Employees in certain bargaining units hired on or after October 10, 1994.

Some employees are in Safety Plan 4B without regard to hire date.



APPENDIX E – SUMMARY OF PLAN PROVISIONS

General Plan 5C: Members in certain bargaining units hired on or after October 10, 1994.

Members in those bargaining units transferred from Plan 5B on

March 10, 2008.

General Plan 7: County General employees hired on or after June 25, 2012, and other

new non-PEPRA General hires for employers that have adopted Plan 7.

Safety Plan 4C: Members in certain bargaining units who were hired on or after

October 10, 1994. All members in certain bargaining units. Members

in those bargaining units transferred from Plan 4B on July 3, 2006.

Safety Plan 6A: Members in certain bargaining units hired prior to October 10, 1994.

Members in those bargaining units transferred from Plan 4A on

February 25, 2008.

Safety Plan 6B: Members in certain bargaining units hired after October 10, 1994.

Members in those bargaining units transferred from Plan 4B on

February 25, 2008.

Plan 8 (PEPRA): All new members hired on or after January 1, 2013. Employees who

transfer from and are eligible for reciprocity with another public employer will not be PEPRA members if their service in the reciprocal

system was under a pre-PEPRA tier.

B. Member Contributions

Basic:

Contributions are based on the entry age and class of each member and are required of all members except General Plan 2 members. See Appendix E for details on this calculation. Current member rates are shown in the Appendix. (31453, 31454, 31454.1)

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

Plan 8: PEPRA members must contribute half of the normal cost of the Plan. Contributions for these members will be based on the Normal Cost associated with their benefits; General and Safety members will pay different rates.

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



APPENDIX E – SUMMARY OF PLAN PROVISIONS

Cost-of-Living: Some members may contribute towards the cost-of-living benefit based

on increases in COLA Normal Cost rates. No additional employee contributions towards the cost-of-living benefits are included in the

current employee rates.

Cost-Sharing: Members contribute a varying amount based on entry age and Plan.

General Plan 5A member rates are half General Plan 5B member rates.

General Plan 5C is based on half rates.

APCD Plan 1 member rates are half APCD Plan 2 member rates. Safety Plan 4A member rates are half Safety Plan 4B member rates.

Safety Plans 4C, 6A, and 6B are based on half rates. (31621.2, 31621.4, 31621.5, 31621.6, 31581.1)

C. Employer Contributions:

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

D. Service Retirement Allowance:

Eligibility:

General Plan members:

Plans 5A,

5B, 5C, &7: Age 50 with five years of service and 10 years of elapsed time since

membership;

Any age with 30 years of service; or

Age 70 regardless of service. (31672, 31672.1)

Plan 2: Age 55 with 10 years of service and 10 years of elapsed time since

membership. (31486.4)

APCD Plan members:

Age 50 with five years of service and 10 years of elapsed time since

membership;

Any age with 30 years of service; or

Age 70 regardless of service. (31672, 31672.1)

Safety Plan members:

Age 50 with five years of service and 10 years of elapsed time since

membership;

Any age with 20 years of service. (31663.25)



APPENDIX E – SUMMARY OF PLAN PROVISIONS

PEPRA Plan 8 members:

General and APCD: Age 52 with five years of service.

Safety: Age 50 with 5 years of service.

All PEPRA members: Age 70 regardless of service. (31672.3)

Final Compensation:

General Plan members:

Plans 5A & 5B: Monthly average of a member's highest 12 consecutive months of compensation. (31462.1)

Plans 5C & 7: Monthly average of a member's highest 36 consecutive months of compensation. (31462)

Plan 2: Monthly average of a member's highest 36 non-consecutive months of compensation.

APCD Plan members:

Plans 1 & 2: Monthly average of a member's highest 12 consecutive months of compensation. (31486.1)

Safety Plan members

Plans 4A, 4B, Monthly average of a member's highest 12 consecutive months of compensation. (31462.1)

Plans 4C & 6B: Monthly average of a member's highest 36 consecutive months of compensation. (31462)

PEPRA Plan members:

Plan 8: Monthly average of a member's highest 36 consecutive months of pensionable compensation.

Compensation

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

of Title 26 of the US Code. (31671)

Plan 8: For PEPRA members, only pensionable compensation up to the Social Security-integrated PEPRA compensation limit will count for computing Plan benefits and employee contributions and employer contributions for those participating in Social Security (\$128,059 for calendar year 2021 and \$134,974 for calendar year 2022). For those not participating in Social Security, the compensation cap is 120% of the above limit (\$153,671 for calendar year 2021 and \$161,969 for calendar year 2022). In addition, it is



APPENDIX E – SUMMARY OF PLAN PROVISIONS

possible that some sources of compensation, such as any payments deemed to be terminal or special pays, may be excluded from the benefit and contribution computations for PEPRA members.

Monthly Allowance:

General Plan members:

Plans 5A,

5B & 5C: 2% x Final Compensation x Plan 5 Age Factor x Years of Service.

(31676.12)

Plan 7: 1/60 x Final Compensation x Plan 7 Age Factor x Years of Service.

(31676.1)

Plan 2: Sum of (a) + (b) – (c):

(a) 2% x Final Compensation x Years of Service (max. 35 years); plus

(b) 1% x Final Compensation x Years of Service in excess of 35 (max. 10

years); minus

(c) 1/35 x Primary Insurance Amount (PIA) at age 65 x Years of Covered

Service (max. 35 years). (31486.4)

The PIA is calculated based on certain assumptions specified by statute, and an assumed Social Security retirement age of 65. If retirement occurs prior to age 65, the benefit amount is adjusted by an actuarial equivalent factor (see Sample Plan Age Factors).

APCD Plan members:

2% x Final Compensation x APCD Age Factor x Years of Service. (31676.15)

Safety Plan members:

3% x Final Compensation x Safety Age Factor x Years of Service.

(31004.2)

Age Factors are higher for Plans 6A and 6B. (31664.1)

General, Safety and APCD members:

PEPRA Plan 8: PEPRA Age Factor x Final Compensation x Years of Service.

In between exact ages, the multiplier will increase by 0.025% for each quarter year increase in age.



APPENDIX E – SUMMARY OF PLAN PROVISIONS

Age Factors By Plan									
	C	novol	General & APCD	APCD	Safety				
-	General Plan 5 Plan 7		Plan 8	AICD .	Plan 4	Plan 6	Plan 8		
Code Section:	31676.12	31676.1	Tiano	31676.15	31664.2	31664.1	T Idil O		
Label:	2% @ 57	1.67% @ 57.5	PEPRA		3% @ 55	3% @ 50	PEPRA		
Base:	2.00%	1.67%		2.00%	3.00%	3.00%			
Age:									
41					0.4777	0.6258			
42					0.5058	0.6625			
43					0.5347	0.7004			
44					0.5647	0.7397			
45					0.5958	0.7805			
46					0.6280	0.8226			
47					0.6625	0.8678			
48					0.6936	0.9085			
49					0.7269	0.9522			
50	0.6681	0.7091		0.7454	0.7634	1.0000	0.0200		
51	0.7056	0.7457		0.7882	0.8028	1.0000	0.0210		
52	0.7454	0.7816	0.0100	0.8346	0.8457	1.0000	0.0220		
53	0.7882	0.8181	0.0110	0.8850	0.8926	1.0000	0.0230		
54	0.8346	0.8556	0.0120	0.9399	0.9418	1.0000	0.0240		
55	0.8850	0.8954	0.0130	1.0000	1.0000	1.0000	0.0250		
56	0.9399	0.9382	0.0140	1.0447	1.0000	1.0000	0.0260		
57	1.0000	0.9846	0.0150	1.1048	1.0000	1.0000	0.0270		
58	1.0447	1.0350	0.0160	1.1686	1.0000	1.0000	0.0270		
59	1.1048	1.0899	0.0170	1.2365	1.0000	1.0000	0.0270		
60	1.1686	1.1500	0.0180	1.3093	1.0000	1.0000	0.0270		
61	1.2365	1.1947	0.0190	1.3608	1.0000	1.0000	0.0270		
62	1.3093	1.2548	0.0200	1.4123	1.0000	1.0000	0.0270		
63	1.3093	1.3186	0.0210	1.4638	1.0000	1.0000	0.0270		
64	1.3093	1.3865	0.0220	1.5153	1.0000	1.0000	0.0270		
65	1.3093	1.4593	0.0230	1.5668	1.0000	1.0000	0.0270		
66	1.3093	1.4593	0.0240	1.5668	1.0000	1.0000	0.0270		
67	1.3093	1.4593	0.0250	1.5668	1.0000	1.0000	0.0270		



APPENDIX E – SUMMARY OF PLAN PROVISIONS

Maximum Allowance:

General Plan 2: The sum of the normal retirement allowance and the estimated PIA cannot exceed 70% of Final Compensation for a member with 35 or less years of service and cannot exceed 80% of Final Compensation if service exceeds

35 years. (31486.4)

All other Plans: Allowance may not exceed 100% of Final Compensation (does not apply to PEPRA members).

Unmodified Retirement Allowance (Normal Form):

General Plan 2: Life Annuity payable to retired member with 50% continuance to an eligible survivor (or eligible children). (31486.6)

All other Plans: Life Annuity payable to retired member with 60% continuance to an eligible survivor (or eligible children). (31760.1)

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

Optional Retirement Allowance:

A member may elect to have the actuarial equivalent of the service or disability retirement allowance applied to a lesser retirement allowance during the retired member's life in order to provide an optional survivor allowance.

Option 1: Member's allowance is reduced to pay a cash refund of any unpaid annuity payments (up to the amount of the member's contributions at retirement) to the member's estate or to a beneficiary having an insurable interest in the life of the member. (31761)

Option 2: 100% of member's reduced allowance is payable to a surviving spouse or beneficiary having an insurable interest in the life of the member. (31762)

Option 3: 50% of member's reduced allowance is payable to a beneficiary having an insurable interest in the life of the member. (31763)

Option 4: Other % of member's reduced allowance is payable to a beneficiary(ies) having an insurable interest in the life of the member. (31764)

A member may not revoke and name another beneficiary if the member elects Option 2, 3 or 4. (31782)



APPENDIX E – SUMMARY OF PLAN PROVISIONS

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

Death after Retirement:

General Plan 2: No benefit is payable upon death after retirement, other than in accordance with form of benefit allowance.

All other Plans: Upon a member's death after retirement, a special lump sum of \$5,000 is payable to an eligible survivor, or the member's estate. (31789.5)

E. Service-Connected Disability Retirement Allowance

Eligibility:

General Plan 2: Disability benefits not valued since provided outside of the retirement system.

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

Monthly Allowance:

General Plan 2: Service retirement benefit payable at age 65 with service projected from disability until age 65. Prior to age 65, disability benefits are provided outside of retirement system.

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

Supplemental Disability Allowance:

APCD Members: Upon retirement for service disability, APCD members receive a monthly supplemental allowance of \$300. (31740)

Normal Form of Payment:

General Plan 2: Service retirement benefit payable at age 65 with service projected from disability until age 65. Prior to age 65, disability benefits are provided outside of retirement system. (31760, 31786)

All other Plans: Life Annuity payable to retired member with 100% continuance to an eligible survivor (or eligible children).



APPENDIX E – SUMMARY OF PLAN PROVISIONS

Death after Retirement:

General Plan 2: No benefit is payable upon death after retirement, other than in accordance

with form of benefit allowance.

All other Plans: Upon a member's death after retirement, a special lump sum of \$5,000 is

payable to an eligible survivor, or the member's estate. (31789.5)

F. Non-Service-Connected Disability Retirement Allowance

Eligibility:

General Plan 2: Disability benefits not valued since provided outside of the retirement system.

All other Plans: Any age with five years of service and permanently incapacitated for the

performance of duty. (31720)

Monthly Allowance:

General Plan 2: Service retirement benefit payable at age 65 with service projected from

disability until age 65. Prior to age 65, disability benefits are provided

outside of retirement system.

All other Plans: The monthly allowance is equal to a service retirement allowance if the

member is eligible to retire and the service retirement allowance exceeds the benefits described below. Otherwise, allowance equals (a) or (b)

where: (31727, 31727.1, 31727.2, and 31727.3)

(a) 90% x 1/50 (1/60 for PEPRA General and PEPRA APCD members and those in Plan 7) x Final Compensation x years of service, if member must rely on service in another retirement system in order to

be eligible to retire, or allowance exceeds 1/3 of final compensation.

(b) 90% x 1/50 (1/60 for PEPRA General and APCD members and those in Plan 7) x Final Compensation x Projected Service, not to exceed

1/3 of Final Compensation.

Projected Service:

General Members: Age 62. (31727.1); Age 65 for Plan 8 (PEPRA) General members.

APCD Members: Age 65. (31727.3)

Safety Members: Age 55. (31727.2)



APPENDIX E – SUMMARY OF PLAN PROVISIONS

Supplemental Monthly Disability Retirement:

APCD Members: Upon retirement for non-service disability, APCD members receive a monthly supplemental allowance of \$300. (31740)

Normal Form of Payment:

General Plan 2: Service retirement benefit payable at age 65 with service projected from disability until age 65. Prior to age 65, disability benefits are provided outside of retirement system.

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

Death after Retirement:

General Plan 2: No benefit is payable upon death after retirement, other than in accordance with form of benefit allowance.

All other Plans: Life Annuity with 60% continuance to a surviving spouse (or eligible children). Upon a member's death after retirement, a special lump sum of \$5,000 is payable to an eligible survivor, or the member's estate. (31789.5)

G. Service-Connected Death Benefits

Eligibility:

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

Monthly Allowance:

General Plan 2: A lump sum is payable to an eligible survivor equal to 1/12 x final 12 months' Salary x years of service (up to max of six years). (31781)

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



APPENDIX E – SUMMARY OF PLAN PROVISIONS

Supplemental Monthly Death Benefit:

APCD Members: Eligible survivors of an active members who dies while employed with at least 18 months continuous service immediately prior to death, shall receive a supplemental monthly allowance. The amount of the supplemental allowance is based on the family demographics of the beneficiaries. (31855.11, 31855.12)

H. Non-Service-Connected Death Benefits

Eligibility:

All Plans: Active members who die while in service but not as a result of injury or

disease arising out of and in the course of employment.

Monthly Allowance:

General Plan 2: A lump sum is payable to an eligible survivor equal to 1/12 x final 12

months' Salary x years of service (up to maximum of six years). (31781)

All other Plans: If an active member is eligible for Non-Service Connected Disability at

his date of death, then a monthly allowance is payable to an eligible survivor equal to 60% x the member's non-service connected disability allowance. Otherwise, the benefit is a refund of contributions plus a lump sum equal to 1/12 x final 12 months' Salary x years of service (up to

maximum of six years). (31781.1)

Supplemental Monthly Death Benefit:

APCD Members: Eligible survivors of an active member who dies while employed with at least 18 months continuous service immediately prior to death shall receive a supplemental monthly allowance. The amount of the

supplemental allowance is based on the family demographics of the beneficiaries. (31855.11, 31855.12)

I. Deferred Vested Benefits

Eligibility:

General Plan 2: The member must have terminated with 10 years of service. Members are eligible for service retirement when they reach service retirement

eligible for service retirement when they reach service retirement eligibility (based on years of service at termination plus reciprocal service,

if any). (31700)



APPENDIX E – SUMMARY OF PLAN PROVISIONS

All other Plans: Member contributions must be left on deposit and the member must have

terminated with five years of service or entered a reciprocal agency. Members are eligible for service retirement when they reach service retirement eligibility (based on years of service at termination plus

reciprocal service, if any). (31700, 31701, 31702)

Monthly Allowance:

General Plan 2: Same as service retirement allowance at normal retirement age 65 or in an

actuarially equivalent reduced amount at early retirement, after age 55.

All other Plans: Same as service retirement allowance; payable any time after the member

would have been eligible for service retirement. (31703, 31704, 31705)

J. Cost-of-Living Increases

Cost-of-living increases (or decreases) are applied to all retirement allowances (service and disability), optional death allowances, and annual death allowances effective April 1, based on changes in the average annual Consumer Price Index (CPI), rounded to the nearest ½ of 1%. (31870, 31870.1)

All Plans (excluding General Plans 2, 7, and 8):

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

General Plan 7:

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

General Plan 8 (PEPRA):

Members (and their beneficiaries) hired by employers who had implemented General Plan 7 prior to January 1, 2013 are limited to a maximum 2% cost-of-living increase. (31870) Members hired by employers who had not implemented General Plan 7 prior to January 1, 2013, are limited to a maximum 3% cost-of-living increase. (31870.1)

General Plan 2: General Plan 2 does not have a COLA.



APPENDIX E – SUMMARY OF PLAN PROVISIONS

COLA Bank:

All Plans (excluding General Plan 2):

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

General Plan 2: General Plan 2 does not have a COLA and, therefore, does not have a COLA Bank.



APPENDIX F – GLOSSARY

1. Actuarial Assumptions

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

2. Actuarial Cost Method

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

3. Actuarial Gain (Loss)

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

4. Actuarial Liability

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

5. Actuarial Present Value (Present Value)

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

6. Actuarial Valuation

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

7. Actuarial Value of Assets

The value of cash, investments, and other property belonging to a pension plan as used by the actuary for the purpose of an actuarial valuation. The purpose of an Actuarial Value of Assets is to smooth out fluctuations in market values. As of the June 30, 2014, actuarial valuation the Actuarial Value of Assets is equal to the market value.



APPENDIX F – GLOSSARY

8. Actuarially Equivalent

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

9. Amortization Payment

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

10. Entry Age Normal Actuarial Cost Method

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

11. Funded Ratio

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

12. Normal Cost

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

13. Projected Benefits

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

14. Unfunded Actuarial Liability

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





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