

# 1959 Survivor Benefit Program

## Actuarial Valuation as of June 30, 2024

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### **Required Contributions for Fiscal Year**

July 1, 2025, through June 30, 2026



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# Actuarial Certification

It is our opinion that the valuation has been performed in accordance with generally accepted actuarial principles as well as the applicable Standards of Practice promulgated by the Actuarial Standards Board. While this report is intended to be complete, our office is available to answer questions as needed. All of the undersigned are actuaries who satisfy the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States of the American Academy of Actuaries with regard to pensions.

## **Actuarial Methods and Assumptions**

It is our opinion that the assumptions and methods, as recommended by the Chief Actuary and adopted by the CalPERS Board of Administration, are internally consistent and reasonable for this plan.

Randall Dziubek, ASA, MAAA, FCA  
Deputy Chief Actuary, Valuation Services, CalPERS

Scott Terando, ASA, EA, MAAA, FCA, CFA  
Chief Actuary, CalPERS

## **Actuarial Data and Rate Plan Results**

To the best of our knowledge and having relied upon the attestation above that the actuarial methods and assumptions are reasonable, this report is complete and accurate and contains sufficient information to disclose, fully and fairly, the funded condition of the 1959 Survivor Program for Public Agencies 1st, 2nd, 3rd, 4th, and Indexed Level pools, and the State and Schools 5th Level pools and satisfies the actuarial valuation requirements of Government Code section 7504. This valuation and related validation work was performed by the CalPERS Actuarial Office. The valuation was based on member and financial data as of June 30, 2024, provided by the CalPERS databases and the benefits with CalPERS as of the date this report was produced.

SHELLY CHU, ASA, MAAA  
*Senior Actuary, CalPERS*

Tony Cuny, ASA, MAAA  
*Senior Actuary, CalPERS*

# Highlights and Executive Summary

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## Introduction

The 1959 Survivor program was designed to provide pre-retirement death benefits comparable to those provided by Social Security, formally the Federal Old Age and Survivor Insurance (OASI) program, to CalPERS' members not covered by Social Security.

## Purpose

This actuarial valuation of the 1959 Survivor Program for Public Agencies 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, and Indexed Level pools, and the State and Schools 5<sup>th</sup> Level pools within the California Public Employees' Retirement System (CalPERS) was performed by CalPERS staff actuaries as of June 30, 2024 in order to:

- Set forth the funded status of the program, reflecting the assets and funding liabilities of this program as of June 30, 2024.
- Establish the actuarially required premiums for all levels and employee premiums for the Indexed Level, and State and Schools 5<sup>th</sup> Levels for the fiscal year July 1, 2025 through June 30, 2026; and
- Provide actuarial information as of June 30, 2024 to the CalPERS Board of Administration and other interested parties.

The use of this report for any other purposes may be inappropriate.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; changes in actuarial policies; changes in plan provisions or applicable law; and differences between the required premiums determined by the valuation and the actual premiums made by the agency.

## Funded Status

Shown below are the Accrued Liability, Market Value of Assets (MVA), and Funded Ratio of all pools within the 1959 Survivor Benefit Program as of June 30, 2024.

Plan	Accrued Liability <sup>1</sup>	Market Value of Assets	Funded Ratio
State 5 <sup>th</sup> Level Pool	\$153,785,899	\$127,171,416	82.7%
Schools 5 <sup>th</sup> Level Pool	14,059,937	110,559,351	786.3%
PA 1 <sup>st</sup> Level Pool	2,552,168	75,315,322	2,951.0%
PA 2 <sup>nd</sup> Level Pool	2,200,586	16,771,258	762.1%
PA 3 <sup>rd</sup> Level Pool	32,729,893	160,454,199	490.2%
PA 4 <sup>th</sup> Level Pool	150,896,962	159,315,252	105.6%
PA Indexed Level Pool	22,659,024	31,459,101	138.8%
<b>Total</b>	<b>\$378,884,469</b>	<b>\$681,045,899</b>	<b>179.8%</b>

- (1) Under the Term Insurance Method, the accrued liability and the present value of future benefits are defined to be equal. Under the Entry Age Actuarial Cost Method, which is being used to fund the benefit in the Indexed Level pool, the accrued liability is defined as the difference between the present value of future benefits and the present value of future normal costs.

## Required Employer and Employee Monthly Premiums

Shown below are the 1959 Survivor Program's actuarially required employer and employee monthly premiums per covered member, per month for the fiscal year July 1, 2025 through June 30, 2026. The premiums for fiscal year July 1, 2024 through June 30, 2025 are shown for comparison. Except for the Public Agency Indexed Level pool, these monthly premiums are determined using a Modified Term Insurance Method. Monthly premiums for the Public Agency Indexed Level pool are determined using the Entry Age Actuarial Cost Method.

### Required Monthly Premiums

Plan	2024-25 Premiums			2025-26 Premiums		
	Employer	Employee	Total	Employer	Employee	Total
State 5 <sup>th</sup> Level Pool <sup>1</sup>	\$6.60	\$6.60	\$13.20	\$6.20	\$6.20	\$12.40
Schools 5 <sup>th</sup> Level Pool <sup>1</sup>	0.00	2.00	2.00	0.00	2.00	2.00
PA 1 <sup>st</sup> Level Pool <sup>2</sup>	0.00	2.00	2.00	0.00	2.00	2.00
PA 2 <sup>nd</sup> Level Pool <sup>2</sup>	0.00	2.00	2.00	0.00	2.00	2.00
PA 3 <sup>rd</sup> Level Pool <sup>2</sup>	0.00	2.00	2.00	0.00	2.00	2.00
PA 4 <sup>th</sup> Level Pool <sup>2</sup>	5.80	2.00	7.80	5.20	2.00	7.20
PA Indexed Level Pool <sup>1</sup>	2.95	2.95	5.90	3.00	3.00	6.00

(1) For the Indexed Level and State and Schools 5<sup>th</sup> Levels, Section 21581 of the California Public Employees' Retirement Law requires mandatory cost sharing when the total premium exceeds \$4.00. Mandatory \$2.00 member monthly premium required.

(2) Mandatory \$2.00 member monthly premium required.

The required employee premium for the State 5<sup>th</sup> Level pool will change from \$6.60 to \$6.20 per member, per month (or from \$3.05 to \$2.87 for biweekly paid members) for fiscal year 2025-26. This is in accordance with Section 21581(c), which specifies that for State and Schools 5<sup>th</sup> Levels when the total required premium (after amortization of surplus/unfunded liability) exceeds \$4.00, the employer and the member shall evenly share the required monthly premium.

The required employee premium for the Indexed Level pool will change from \$2.95 to \$3.00 per member, per month (or from \$1.37 to \$1.39 for biweekly paid members) for fiscal year 2025-26. Employer premiums will also change from \$2.95 to \$3.00 per member, per month.

Employee required premiums for Public Agency 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> Level pools will remain the same as in the prior year: \$2.00 per member, per month (or \$0.93 for biweekly paid members). There are no employer required premiums for these pools.

Employee required premiums for Public Agency 4<sup>th</sup> Level pool shall remain the same as in the prior year: \$2.00 per member, per month (or \$0.93 for biweekly paid members). Employer premiums will change from \$5.80 to \$5.20 per member, per month. This decrease is due to favorable non-investment experience in the past year.

## **Changes Since the Prior Year's Valuation**

### **Board Policy**

On April 16, 2024, the board took action to modify the Funding Risk Mitigation Policy to remove the automatic change to the discount rate when the investment return exceeds various thresholds. Rather than an automatic change to the discount rate, a board discussion would be placed on the calendar. The Future Investment Return Scenarios exhibit in this report, which includes a high enough return scenario to trigger a board discussion, does not reflect any change in the discount rate.

### **Actuarial Methods and Assumptions**

There are no significant changes to the actuarial methods and assumptions for the June 30, 2024 actuarial valuation.

### **Plan Provisions**

No changes were made since the prior valuation. A complete description of the principal plan provisions used in the June 30, 2024 valuation may be found in Appendix B of this report.

### **Subsequent Events**

This actuarial valuation report reflects fund investment return through June 30, 2024, as well as statutory changes, regulatory changes and board actions through January 2025.

CalPERS will be completing an Asset Liability Management (ALM) review process in November 2025 that will review the capital market assumptions and the CalPERS Total Fund Investment Policy and ascertain whether a change in the discount is warranted. In addition, the Actuarial Office will be presenting the findings of its Experience Study which reviews economic assumptions other than the discount rate as well as all demographic assumptions and makes recommendations to modify actuarial assumptions where appropriate. Any changes in actuarial assumptions will be reflected in the June 30, 2025, actuarial valuations.

To the best of our knowledge, there have been no other subsequent events that could materially affect current or future certifications rendered in this report.



# Assets

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## Reconciliation of the Market Value of Assets

State 5 <sup>th</sup> Level	June 30, 2023	June 30, 2024
Beginning Balance	\$118,493,561	\$ 120,264,494
Contributions (Employer and Employee) Received During Fiscal Year	10,267,000	10,616,790
Benefit Payments During Fiscal Year	(15,066,329)	(14,894,808)
Net Transfer of Assets Into and Out of this Pool	0	0
Investment Earnings Credited	6,570,262	11,184,940
<b>Ending Balance</b>	<b>\$120,264,494</b>	<b>\$127,171,416</b>

Schools 5 <sup>th</sup> Level	June 30, 2023	June 30, 2024
Beginning Balance	\$98,145,312	\$ 102,193,009
Contributions (Employer and Employee) Received During Fiscal Year	218,747	232,040
Benefit Payments During Fiscal Year	(1,667,152)	(1,416,705)
Net Transfer of Assets Into and Out of this Pool	0	0
Investment Earnings Credited	5,496,102	9,551,008
<b>Ending Balance</b>	<b>\$102,193,009</b>	<b>\$ 110,559,351</b>

Public Agency 1 <sup>st</sup> Level	June 30, 2023	June 30, 2024
Beginning Balance	\$65,355,742	\$ 68,946,830
Contributions (Employer and Employee) Received During Fiscal Year	159,607	165,165
Benefit Payments During Fiscal Year	(252,838)	(261,505)
Net Transfer of Assets Into and Out of this Pool	0	0
Investment Earnings Credited	3,684,319	6,464,832
<b>Ending Balance</b>	<b>\$68,946,830</b>	<b>\$ 75,315,322</b>

Public Agency 2 <sup>nd</sup> Level	June 30, 2023	June 30, 2024
Beginning Balance	\$14,938,427	\$ 15,679,218
Contributions (Employer and Employee) Received During Fiscal Year	104,363	105,485
Benefit Payments During Fiscal Year	(201,857)	(214,755)
Net Transfer of Assets Into and Out of this Pool	0	(252,595)
Investment Earnings Credited	838,285	1,453,905
<b>Ending Balance</b>	<b>\$15,679,218</b>	<b>\$ 16,771,258</b>

Public Agency 3 <sup>rd</sup> Level	June 30, 2023	June 30, 2024
Beginning Balance	\$141,922,852	\$ 148,164,721
Contributions (Employer and Employee) Received During Fiscal Year	1,134,703	1,215,223
Benefit Payments During Fiscal Year	(2,856,647)	(2,762,249)
Net Transfer of Assets Into and Out of this Pool	0	0
Investment Earnings Credited	7,963,813	13,836,504
<b>Ending Balance</b>	<b>\$148,164,721</b>	<b>\$ 160,454,199</b>

## Reconciliation of the Market Value of Assets (continued)

Public Agency 4 <sup>th</sup> Level	June 30, 2023	June 30, 2024
Beginning Balance	\$157,027,464	\$ 154,622,524
Contributions (Employer and Employee) Received During Fiscal Year	3,921,869	6,640,958
Benefit Payments During Fiscal Year	(13,678,612)	(14,191,027)
Net Transfer of Assets Into and Out of this Pool	0	252,595
Investment Earnings Credited	7,351,803	11,990,203
<b>Ending Balance</b>	<b>\$154,622,524</b>	<b>\$ 159,315,252</b>

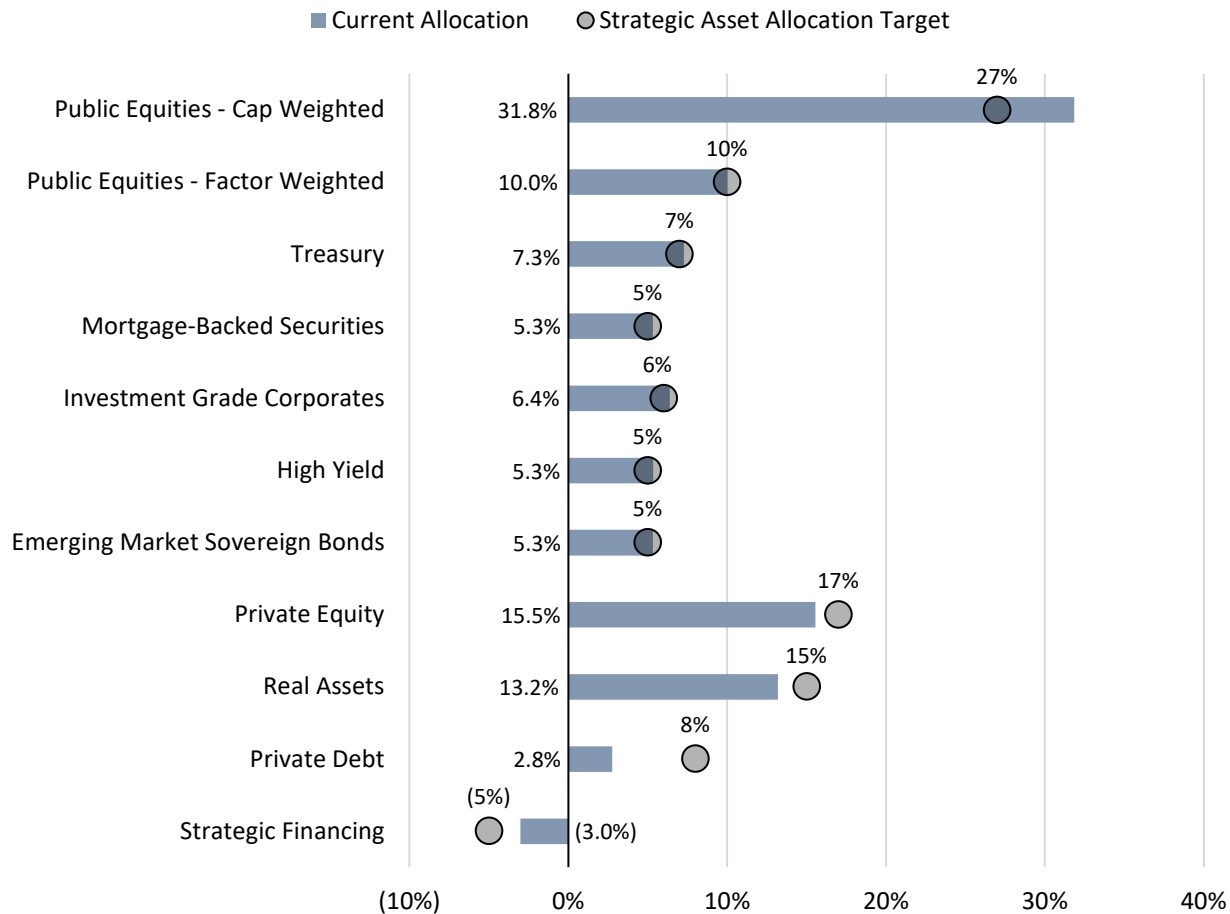
Public Agency Indexed Level	June 30, 2023	June 30, 2024
Beginning Balance	\$29,314,086	\$ 29,793,115
Contributions (Employer and Employee) Received During Fiscal Year	362,698	772,985
Benefit Payments During Fiscal Year	(1,409,264)	(1,674,788)
Net Transfer of Assets Into and Out of this Pool	0	0
Investment Earnings Credited	1,525,595	2,567,789
<b>Ending Balance</b>	<b>\$29,793,115</b>	<b>\$ 31,459,101</b>

## Asset Allocation

CalPERS adheres to an Asset Allocation Strategy which establishes asset class allocation policy targets and ranges and manages those asset class allocations within their policy ranges. CalPERS Investment Belief No. 6 recognizes that strategic asset allocation is the dominant determinant of portfolio risk and return.

The asset allocation shown below reflects the allocation of the Public Employees' Retirement Fund (PERF) in its entirety. The assets for the 1959 Survivor Benefit Program are a subset of the PERF and are invested accordingly.

On March 20, 2024, the board adopted changes to the strategic asset allocation. The new allocation was effective July 1, 2024. The asset allocation as of June 30, 2024, is shown below, along with the strategic asset allocation targets.

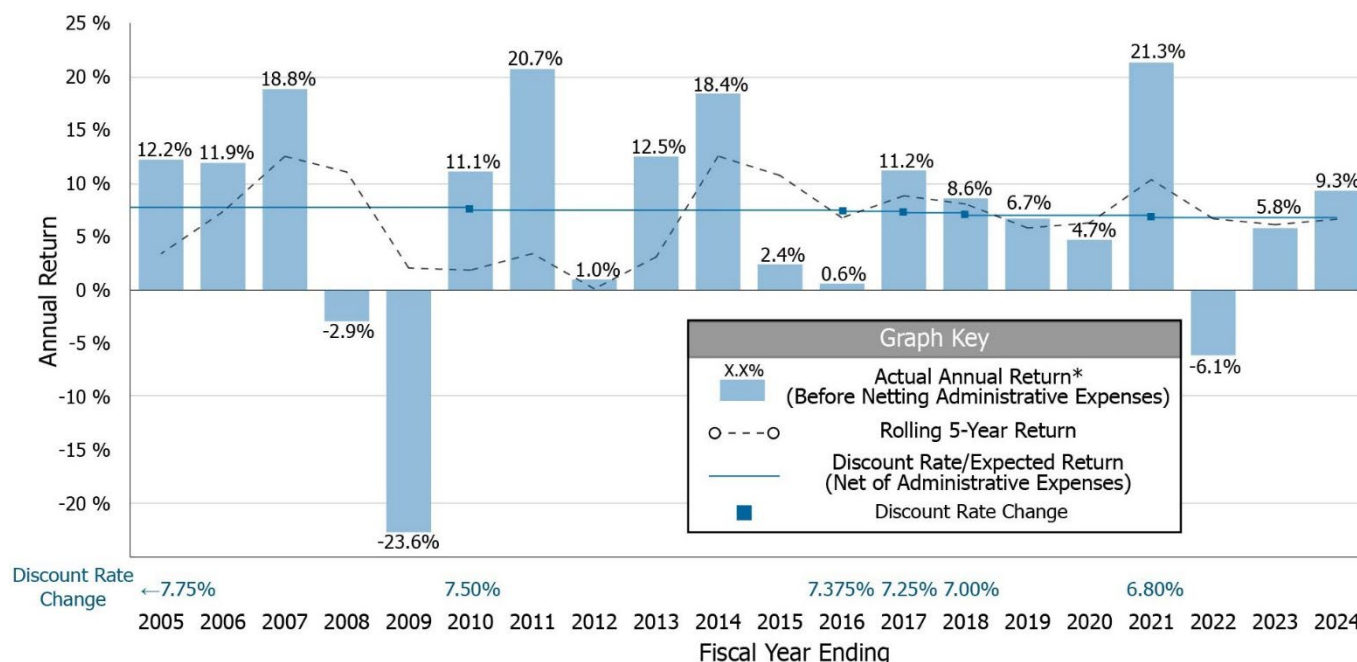


For more information see the [Trust Level Review as of June 30, 2024](#), which is available on the CalPERS website.

## CalPERS History of Investment Returns

The following is a chart with 20 years of historical annual returns of the PERF for each fiscal year ending on June 30 as reported by the Investment Office. Investment returns reported are net of investment expenses but without reduction for administrative expenses. The assumed rate of return, however, is net of both investment and administrative expenses. Also, the Investment Office uses lagged private asset valuations for investment performance reporting purposes. This can lead to a timing difference in private asset contributions to performance in the returns below and those used for financial reporting purposes. The investment gain or loss calculation in this report relies on final assets that have been audited and are appropriate for financial reporting. Because of these differences, the effective investment return for funding purposes in a single year can be higher or lower than the return reported by the Investment Office shown here.

### History of Investment Returns (2005 through 2024)



\* As reported by the Investment Office with lagged private valuations and without any reduction for administrative expenses.

The table below shows annualized investment returns of the PERF for various time periods ending on June 30, 2024. These returns are the annual rates that if compounded over the indicated number of years would equate to the actual time-weighted investment performance of the PERF. It should be recognized that the annual rate of return is volatile, as the chart above illustrates, so when looking at investment returns, it is informative to look at returns over longer time horizons.

PERF Realized Rates of Return as of June 30, 2024					
1 year	3 year	5 year	10 year	20 year	30 year
9.3%	2.8%	6.6%	6.2%	6.7%	7.7%

# Liabilities and Funding Requirements

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## Key Results

Key results of the current and prior valuations are shown below.

State 5 <sup>th</sup> Level	June 30, 2023	June 30, 2024
Covered Active Members	74,885	76,176
Survivors Included in the Valuation		
Deferred (eligible, but not currently receiving benefits)	281	269
Receiving Benefits	1,406	1,427
Total	1,687	1,696
Accrued Liabilities	\$152,615,077	\$153,785,899
Market Value of Assets (MVA)	120,264,494	127,171,416
Unfunded Liability/(Excess Assets)	32,350,583	26,614,483
Required Employer Monthly Premium Per Member		
Before Amortization of Unfunded Liability/(Excess Assets)	\$9.10	\$8.70
After Amortization of Unfunded Liability/(Excess Assets)	13.20	12.40
After Employer/Employee Premium Sharing	6.60	6.20
Funded Ratio	78.8%	82.7%

Schools 5 <sup>th</sup> Level	June 30, 2023	June 30, 2024
Covered Active Members	10,815	11,148
Survivors Included in the Valuation		
Deferred (eligible, but not currently receiving benefits)	17	21
Receiving Benefits	147	140
Total	164	161
Accrued Liabilities	\$14,282,181	\$14,059,937
Market Value of Assets (MVA)	102,193,009	110,559,351
Unfunded Liability/(Excess Assets)	(87,910,828)	(96,499,414)
Required Employer Monthly Premium Per Member		
Before Amortization of Unfunded Liability/(Excess Assets)	\$6.30	\$6.40
After Amortization of Unfunded Liability/(Excess Assets)	0.00	0.00
After Employer/Employee Premium Sharing	0.00	0.00
Funded Ratio	715.5%	786.3%

## Key Results (continued)

Public Agency 1 <sup>st</sup> Level	June 30, 2023	June 30, 2024
Covered Active Members	6,797	6,879
Survivors Included in the Valuation		
Deferred (eligible, but not currently receiving benefits)	23	24
Receiving Benefits	103	98
Total	126	122
Accrued Liabilities	\$2,708,326	\$2,552,168
Market Value of Assets (MVA)	68,946,830	75,315,322
Unfunded Liability/(Excess Assets)	(66,238,504)	(72,763,154)
Required Employer Monthly Premium Per Member		
Total Premium Required	\$1.40	\$1.40
Premium Required After Employee Contributions	0.00	0.00
Employer Premium After Amortization of Unfunded Liability/(Excess Assets)	0.00	0.00
Funded Ratio	2,545.7%	2,951.0%

Public Agency 2 <sup>nd</sup> Level	June 30, 2023	June 30, 2024
Covered Active Members	4,399	4,498
Survivors Included in the Valuation		
Deferred (eligible, but not currently receiving benefits)	15	12
Receiving Benefits	69	74
Total	84	86
Accrued Liabilities	\$2,160,126	\$2,200,586
Market Value of Assets (MVA)	15,679,218	16,771,258
Unfunded Liability/(Excess Assets)	(13,519,092)	(14,570,672)
Required Employer Monthly Premium Per Member		
Total Premium Required	\$1.80	\$1.70
Premium Required After Employee Contributions	0.00	0.00
Employer Premium After Amortization of Unfunded Liability/(Excess Assets)	0.00	0.00
Funded Ratio	725.8%	762.1%

Public Agency 3 <sup>rd</sup> Level	June 30, 2023	June 30, 2024
Covered Active Members	49,081	51,832
Survivors Included in the Valuation		
Deferred (eligible, but not currently receiving benefits)	159	154
Receiving Benefits	628	658
Total	787	812
Accrued Liabilities	\$31,365,075	\$32,729,893
Market Value of Assets (MVA)	148,164,721	160,454,199
Unfunded Liability/(Excess Assets)	(116,799,646)	(127,724,306)
Required Employer Monthly Premium Per Member		
Total Premium Required	\$2.80	\$2.70
Premium Required After Employee Contributions	0.80	0.70
Employer Premium After Amortization of Unfunded Liability/(Excess Assets)	0.00	0.00
Funded Ratio	472.4%	490.2%



## Key Results (continued)

Public Agency 4 <sup>th</sup> Level	June 30, 2023	June 30, 2024
Covered Active Members	75,949	78,677
Survivors Included in the Valuation		
Deferred (eligible, but not currently receiving benefits)	176	175
Receiving Benefits	1,076	1,095
Total	1,252	1,270
Accrued Liabilities	\$149,612,700	\$150,896,962
Market Value of Assets (MVA)	154,622,524	159,315,252
Unfunded Liability/(Excess Assets)	(5,009,824)	(8,418,290)
Required Employer Monthly Premium Per Member		
Total Premium Required	\$7.90	\$7.70
Premium Required After Employee Contributions	5.90	5.70
Employer Premium After Amortization of Unfunded Liability/(Excess Assets)	5.80	5.20
Funded Ratio	103.3%	105.6%

Public Agency Indexed Level	June 30, 2023	June 30, 2024
Covered Active Members		
Counts	12,312	12,746
Average Attained Age	41.15	40.99
Average Years of Credited Service	9.01	8.77
Survivors Included in the Valuation		
Deferred (eligible, but not currently receiving benefits)	22	24
Receiving Benefits	115	120
Total	137	144
Accrued Liabilities	\$21,497,855	\$22,659,024
Market Value of Assets (MVA)	29,793,115	31,459,101
Unfunded Liability/(Excess Assets)	(8,295,260)	(8,800,077)
Required Employer Monthly Premium Per Member		
Before Amortization of Unfunded Liability/(Excess Assets)	\$9.80	\$10.00
After Amortization of Unfunded Liability/(Excess Assets)	5.90	6.00
After Employer/Employee Premium Sharing	2.95	3.00
Funded Ratio	138.6%	138.8%

## Development of Normal Costs

The following six tables show the development of the Normal Cost using the Modified Term Method. The Normal Cost is developed using the historical present value of future benefits arising from deaths that occurred in the given year. These values are divided by the number of members in the given year and weighted by percentages listed below. Please see Appendix A – Actuarial Methods and Assumptions for more details.

### State 5<sup>th</sup> Level Pool

Year	Present Value of Future Benefits (PVB)	Members	Weight	Normal Cost (PVB / Members / 12)
2014	\$6,781,756	72,848	1%	\$7.76
2015	6,638,184	74,372	3%	7.44
2016	7,552,847	75,782	5%	8.31
2017	5,716,168	76,638	7%	6.22
2018	4,066,199	77,362	9%	4.38
2019	6,956,100	78,011	11%	7.43
2020	8,394,269	78,713	13%	8.89
2021	11,337,991	76,995	15%	12.27
2022	11,326,652	75,812	17%	12.45
2023	6,018,234	74,885	19%	6.70
Final Weighted Average Normal Cost				<b>\$8.70</b>

### Schools 5<sup>th</sup> Level Pool

Year	Present Value of Future Benefits (PVB)	Members	Weight	Normal Cost (PVB / Members / 12)
2014	\$356,592	10,287	1%	\$2.89
2015	693,955	10,490	3%	5.51
2016	200,586	10,259	5%	1.63
2017	874,049	10,557	7%	6.90
2018	979,346	10,894	9%	7.49
2019	1,207,548	11,190	11%	8.99
2020	207,912	11,219	13%	1.54
2021	995,922	10,413	15%	7.97
2022	1,054,050	10,390	17%	8.45
2023	767,795	10,815	19%	5.92
Final Weighted Average Normal Cost				<b>\$6.40</b>

### Public Agencies 1<sup>st</sup> Level Pool

Year	Present Value of Future Benefits (PVB)	Members	Weight	Normal Cost (PVB / Members / 12)
2014	\$1,771,714	132,024	1%	\$1.12
2015	1,870,607	134,879	3%	1.16
2016	2,177,004	139,581	5%	1.30
2017	2,300,250	141,063	7%	1.36
2018	2,167,085	140,339	9%	1.29
2019	1,935,701	141,374	11%	1.14
2020	2,013,690	141,081	13%	1.19
2021	2,942,713	139,036	15%	1.76
2022	2,937,211	142,364	17%	1.72
2023	2,257,174	148,538	19%	1.27
Final Weighted Average Normal Cost				<b>\$1.40</b>

## Development of Normal Costs (continued)

### Public Agencies 2<sup>nd</sup> Level Pool

Year	Present Value of Future Benefits (PVB)	Members	Weight	Normal Cost (PVB / Members / 12)
2014	\$2,215,157	132,024	1%	\$1.40
2015	2,338,658	134,879	3%	1.44
2016	2,721,826	139,581	5%	1.62
2017	2,875,981	141,063	7%	1.70
2018	2,709,721	140,339	9%	1.61
2019	2,420,041	141,374	11%	1.43
2020	2,517,912	141,081	13%	1.49
2021	3,679,273	139,036	15%	2.21
2022	3,672,238	142,364	17%	2.15
2023	2,822,116	148,538	19%	1.58

Final Weighted Average Normal Cost \$1.70

### Public Agencies 3<sup>rd</sup> Level Pool

Year	Present Value of Future Benefits (PVB)	Members	Weight	Normal Cost (PVB / Members / 12)
2014	\$3,448,999	132,024	1%	\$2.18
2015	3,640,399	134,879	3%	2.25
2016	4,237,503	139,581	5%	2.53
2017	4,477,909	141,063	7%	2.65
2018	4,220,505	140,339	9%	2.51
2019	3,767,090	141,374	11%	2.22
2020	3,921,728	141,081	13%	2.32
2021	5,728,804	139,036	15%	3.43
2022	5,716,879	142,364	17%	3.35
2023	4,393,991	148,538	19%	2.47

Final Weighted Average Normal Cost \$2.70

### Public Agencies 4<sup>th</sup> Level Pool

Year	Present Value of Future Benefits (PVB)	Members	Weight	Normal Cost (PVB / Members / 12)
2014	\$9,687,436	132,024	1%	\$6.11
2015	10,319,088	134,879	3%	6.38
2016	12,032,521	139,581	5%	7.18
2017	12,656,392	141,063	7%	7.48
2018	11,865,928	140,339	9%	7.05
2019	10,773,469	141,374	11%	6.35
2020	11,045,518	141,081	13%	6.52
2021	16,285,043	139,036	15%	9.76
2022	16,113,051	142,364	17%	9.43
2023	12,444,227	148,538	19%	6.98

Final Weighted Average Normal Cost \$7.70

## Development of Funding Requirements

The following table develops the annual premiums required for fiscal year 2025-26 for the State 5<sup>th</sup> and Schools 5<sup>th</sup> Level pools.

June 30, 2024	State 5 <sup>th</sup> Level	Schools 5 <sup>th</sup> Level
<b>1) Development of Unfunded Liability</b>		
a) Present Value of Future Benefits for Current Survivors as of 6/30/2024	\$151,751,899	\$13,609,937
b) Reserve for Unclaimed Benefits as of 6/30/2024	2,034,000	450,000
c) Total Accrued Liabilities as of 6/30/2024 [(1a) + (1b)]	153,785,899	14,059,937
d) Market Value of Assets as of 6/30/2024	127,171,416	110,559,351
<b>e) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2024 [(1c) - (1d)]</b>	<b>\$26,614,483</b>	<b>(\$96,499,414)</b>
<b>2) Development of Normal Cost</b>		
a) Total Per Member, Per Month 2024-25 Term Insurance Normal Cost rounded to the nearest \$0.10	\$8.70	\$6.40
<b>3) 2025 Projected Unfunded Liability</b>		
a) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2024 [(1e)]	\$26,614,483	(\$96,499,414)
b) Projected Normal Cost Contributions with Interest 7/1/2024 – 6/30/2025	8,452,595	843,784
c) Projected UAL Payment 7/1/2024 – 6/30/2025	3,398,147	(843,784)
d) Projected Required Contributions 7/1/2024 – 6/30/2025 [(3b) + (3c)]	11,850,742	0
e) Projected Employee Contributions 7/1/2024 – 6/30/2025	5,932,080	259,200
f) Changes in Contributions due to Contribution (Gain)/Loss <sup>1</sup>	428,424	(39,686)
g) Excess Assets due to Employee Contributions [maximum, (\$0, (3e) - (3d))]	0	259,200
<b>h) Projected UAL/(Excess Assets) as of 6/30/2025 [(3a) * 1.068 - ((3c) + (3f) + (3g)) * 1.068<sup>1/2</sup>]</b>	<b>\$24,469,733</b>	<b>(\$102,416,228)</b>
<b>4) Required Contribution</b>		
a) Required Normal Cost Per Member, Per Month [(2a)]	\$8.70	\$6.40
b) Projected Active Members as of 6/30/2025	76,200	11,100
c) Required Normal Cost Contribution [(4a) * (4b) * 12 * (1.068) <sup>1/2</sup> ]	\$8,221,311	\$880,988
d) Amortization of the UAL/(Excess Assets) <sup>2</sup>	3,152,899	(880,988)
e) Total Required Contributions [(4c) + (4d)]	11,374,210	0
f) Required Contributions Per Member, Per Month [(4e) / (4b) / 12], rounded to the nearest \$0.10	\$12.40	\$0.00
g) Amortization Period	See Table on Pg. 20	30-year
<b>5) 2025-26 Required Employer and Employee Premiums with Cost Sharing Provision</b>		
a) Required Employee Premium Per Member, Per Month [maximum, (\$2, (4f) / 2)]	\$6.20	\$2.00
b) Required Employer Premium Per Member, Per Month [maximum, (\$0, (4f) - (5a))]	6.20	0.00

(1) This reflects differences in calculated Normal Costs from the prior year and the current year, as well as differences in actual and estimated member counts.

(2) See amortization schedule on Page 20.

## Development of Funding Requirements (continued)

The following table develops the annual premiums required for fiscal year 2025-26 for the Public Agency 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Level pools.

June 30, 2024	Public Agency 1 <sup>st</sup> Level	Public Agency 2 <sup>nd</sup> Level	Public Agency 3 <sup>rd</sup> Level	Public Agency 4 <sup>th</sup> Level
<b>1) Development of Unfunded Liability</b>				
a) Present Value of Future Benefits for Current Survivors as of 6/30/2024	\$2,483,048	\$2,084,486	\$32,137,693	\$147,967,162
b) Reserve for Unclaimed Benefits as of 6/30/2024	69,120	116,100	592,200	2,929,800
c) Total Accrued Liabilities as of 6/30/2024 [(1a) + (1b)]	2,552,168	2,200,586	32,729,893	150,896,962
d) Market Value of Assets as of 6/30/2024	75,315,322	16,771,258	160,454,199	159,315,252
<b>e) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2024</b> <b>[(1c) - (1d)]</b>	<b>(\$72,763,154)</b>	<b>(\$14,570,672)</b>	<b>(\$127,724,306)</b>	<b>(\$8,418,290)</b>
<b>2) Development of Normal Cost</b>				
a) Total Per Member, Per Month 2024-25 Term Insurance Normal Cost rounded to the nearest \$0.10	\$1.40	\$1.70	\$2.70	\$7.70
<b>3) 2025 Projected Unfunded Liability</b>				
a) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2024 [(1e)]	(\$72,763,154)	(\$14,570,672)	(\$127,724,306)	(\$8,418,290)
b) Projected Normal Cost Contributions with Interest 7/1/2024 – 6/30/2025	118,060	98,218	1,704,929	7,435,938
c) Projected UAL Payment 7/1/2024 – 6/30/2025	(118,060)	(98,218)	(1,704,929)	(343,672)
d) Projected Required Contributions 7/1/2024 – 6/30/2025 [(3b) + (3c)]	0	0	0	7,092,266
e) Projected Employee Contributions 7/1/2024 – 6/30/2025	163,200	105,600	1,178,400	1,821,600
f) Changes in Contributions due to Contribution (Gain)/Loss <sup>1</sup>	(1,327)	3,281	(29,597)	185,492
g) Excess Assets due to Employee Contributions [maximum, (\$0, (3e) - (3d))]	163,200	105,600	1,178,400	0
<b>h) Projected UAL/(Excess Assets) as of 6/30/2025</b> <b>[(3a) * 1.068 - ((3c) + (3f) + (3g)) * 1.068<sup>1/2</sup>]</b>	<b>(\$77,756,326)</b>	<b>(\$15,572,497)</b>	<b>(\$135,834,835)</b>	<b>(\$8,827,264)</b>
<b>4) Required Contribution</b>				
a) Required Normal Cost Per Member, Per Month [(2c)]	\$1.40	\$1.70	\$2.70	\$7.70
b) Projected Active Members as of 6/30/2025	6,900	4,500	51,800	78,700
c) Required Normal Cost Contribution [(4a) * (4b) * 12 * (1.068) <sup>1/2</sup> ]	\$119,796	\$94,870	\$1,734,444	\$7,515,058
d) Amortization of the UAL/(Excess Assets)	(119,796)	(94,870)	(1,734,444)	(674,561)
e) Total Required Contributions [(4c) + (4d)]	0	0	0	6,840,497
f) Required Contributions Per Member, Per Month [(4e) / (4b) / 12], rounded to the nearest \$0.10	\$0.00	\$0.00	\$0.00	\$7.20
g) Amortization Period	30-year	30-year	30-year	30-year
<b>5) 2025-26 Required Employer/Employee Premiums</b>				
a) Required Employee Premium Per Member, Per Month [\$2]	\$2.00	\$2.00	\$2.00	\$2.00
b) Required Employer Premium Per Member, Per Month [maximum, (\$0, (4f) - (5a))]	0.00	0.00	0.00	5.20

(1) This reflects differences in calculated Normal Costs from the prior year and the current year, as well as differences in actual and estimated member counts.

## Development of Funding Requirements (continued)

The following table develops the annual premiums required for fiscal year 2025-26 for the Public Agency Indexed Level pool.

June 30, 2024	Public Agency Indexed Level
<b>1) Development of Unfunded Liability</b>	
a) Present Value of Future Benefits for Current Survivors as of 6/30/2024	\$18,407,040
b) Present Value of Future Benefits for Active Members as of 6/30/2024	15,600,623
c) Reserve for Unclaimed Benefits as of 6/30/2024	0
d) Total Present Value of Future Benefits as of 6/30/2024 [(1a) + (1b)]	34,007,663
e) Present Value of Future Normal Costs as of 6/30/2024	11,348,639
f) Total Accrued Liabilities as of 6/30/2024 [(1c) + (1d) - (1e)]	22,659,024
g) Market Value of Assets as of 6/30/2024	31,459,101
<b>h) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2024 [(1f) - (1g)]</b>	<b>(\$8,800,077)</b>
<b>2) Development of Normal Cost</b>	
a) Required Entry Age Normal Cost	\$1,522,089
b) Active Members as of 6/30/2024	12,746
c) Total Per Member, Per Month 2024-25 Entry Age Normal Cost [(2a) / (2b) / 12], rounded to the nearest \$0.10	10.00
<b>3) 2025 Projected Unfunded Liability</b>	
a) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2024 [(1h)]	(\$8,800,077)
b) Projected Normal Cost Contributions with Interest 7/1/2024 – 6/30/2025	1,494,852
c) Projected UAL Payment 7/1/2024 – 6/30/2025	(623,256)
d) Projected Required Contributions 7/1/2024 – 6/30/2025 [(3b) + (3c)]	871,596
e) Projected Employee Contributions 7/1/2024 – 6/30/2025	435,420
f) Changes in Contributions due to Contribution (Gain)/Loss <sup>1</sup>	(51,463)
g) Excess Assets due to Employee Contributions [maximum, (\$0, (3e) - (3d))]	0
<b>h) Projected UAL/(Excess Assets) as of 6/30/2025 [(3a) * 1.068 - ((3c) + (3f) + (3g)) * 1.068<sup>1/2</sup>]</b>	<b>(\$8,701,200)</b>
<b>4) Required Contribution</b>	
a) Required Normal Cost Per Member, Per Month [(2c)]	\$10.00
b) Projected Active Members as of 6/30/2025	12,700
c) Required Normal Cost Contribution [(4a) * (4b) * 12 * (1.068) <sup>1/2</sup> ]	\$1,574,964
d) Amortization of the UAL/(Excess Assets)	(664,928)
e) Total Required Contributions [(4c) + (4d)]	910,036
f) Required Contributions Per Member, Per Month [(4e) / (4b) / 12], rounded to the nearest \$0.10	\$6.00
g) Amortization Period	30-year
<b>5) 2025-26 Required Employer and Employee Premiums with Cost Sharing Provision</b>	
a) Required Employee Premium Per Member, Per Month [maximum (\$2, (4f) / 2)]	\$3.00
b) Required Employer Premium Per Member, Per Month [maximum (\$0, (4f) - (5a))]	3.00

(1) This reflects differences in calculated Normal Costs from the prior year and the current year, as well as differences in actual and estimated member counts.

## Schedule of Amortization Bases

The schedule below shows the development of the required payments on the amortization bases in accordance with the Amortization Policy. In order to better achieve the objectives of the Amortization Policy, such as mitigating contribution volatility, a Fresh Start of the total UAL over a 15-year period was established in the June 30, 2022 actuarial valuation.

### State 5<sup>th</sup> Level Pool

	Date Established	Ramp Level 2025-26	Ramp Shape	Remaining Period	Original Period	Balance 6/30/2024	Payment 2024-25	Projected Balance 6/30/2025	Payment 2025-26
Fresh Start	06/30/2022		No Ramp	13	15	\$34,303,474	\$3,750,109	\$32,760,594	\$3,750,109
Investment (Gain)/Loss	06/20/2023	40%	Up Only	19	20	1,417,030	30,459	1,481,910	60,917
Non-Investment (Gain)/Loss	06/20/2023		No Ramp	19	20	(4,252,733)	(382,421)	(4,146,709)	(382,421)
Investment (Gain)/Loss	06/20/2024	20%	Up Only	20	20	(3,150,015)	0	(3,364,216)	(72,313)
Non-Investment (Gain)/Loss	06/20/2024		No Ramp	20	20	(1,703,273)	428,424	(2,261,846)	(203,393)
<b>Total</b>						<b>\$26,614,483</b>	<b>\$3,826,571</b>	<b>\$24,469,733</b>	<b>\$3,152,899</b>

### (Gain)/Loss Analysis 6/30/2023 – 6/30/2024

To calculate the funding requirements of the plan, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year, actual experience is compared to the expected experience based on the actuarial assumptions. This results in actual gains or losses, as shown below.

	State 5 <sup>th</sup> Level	Schools 5 <sup>th</sup> Level
1) Prior Year Unfunded Accrued Liability/(Excess Assets) Development		
a) Accrued Liability as of 6/30/2023	\$152,615,077	\$14,282,181
b) Market Value of Assets as of 6/30/2023	120,264,494	102,193,009
<b>c) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2023 [(1a) - (1b)]</b>	<b>\$32,350,583</b>	<b>(\$87,910,828)</b>
2) Development of Projected Unfunded Accrued Liability/(Excess Assets) for 6/30/2024		
a) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2023 [(1c)]	\$32,350,583	(\$87,910,828)
b) Projected Unfunded Accrued Liability/(Excess Assets) Payment with Interest 7/1/2023 – 6/30/2024 <sup>1</sup>	2,982,901	(591,802)
c) Projected Unfunded Accrued Liability/(Excess Assets) as of 6/30/2024 [(2a) * 1.068 - (2b) * 1.068 <sup>1/2</sup> ]	31,467,771	(93,277,172)
3) Development of Projected Assets		
a) Market Value of Assets as of 6/30/2023	\$120,264,494	\$102,193,009
b) Net Cash Flows 7/1/2023 – 6/30/2024	(4,278,018)	(1,184,665)
c) Net Transfer of Assets Into and Out of this Pool	0	0
<b>d) Expected Assets as of 6/30/2024 [(3a) * 1.068 + ((3b) + (3c)) * 1.068<sup>1/2</sup>]</b>	<b>\$124,021,401</b>	<b>\$107,917,852</b>
4) Current Year Unfunded Liability/(Excess Assets) Development		
a) Accrued Liability as of 6/30/2024	\$153,785,899	\$14,059,937
b) Market Value of Assets as of 6/30/2024	127,171,416	110,559,351
<b>c) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2024 [(4a) - (4b)]</b>	<b>\$26,614,483</b>	<b>(\$96,499,414)</b>
5) Development of (Gain)/Loss due to changes in Reserve for Unclaimed Benefits		
a) Reserve for Unclaimed Benefits as of 6/30/2023	\$1,854,000	\$414,000
b) Reserve for Unclaimed Benefits as of 6/30/2024	2,034,000	450,000
c) (Gain)/Loss due to changes in Reserve for Unclaimed Benefits [(5b) - (5a)]	180,000	36,000
6) (Gain)/Loss for the Period of 6/30/2023 – 6/30/2024		
a) Total (Gain)/Loss [(4c) - (2c)]	(\$4,853,288)	(\$3,222,242)
b) Investment (Gain)/Loss [(3d) - (4b)]	(3,150,015)	(2,641,499)
c) (Gain)/Loss due to changes in Reserve for Unclaimed Benefits [(5c)]	180,000	36,000
<b>d) Non-Investment (Gain)/Loss [(6a) - (6b) - (6c)]</b>	<b>(1,883,273)</b>	<b>(616,743)</b>

(1) Includes payment gain/loss due to changes in Normal Costs, as well as differences in actual and estimated member counts.

## (Gain)/Loss Analysis 6/30/2023 – 6/30/2024 (continued)

	Public Agency 1 <sup>st</sup> Level	Public Agency 2 <sup>nd</sup> Level	Public Agency 3 <sup>rd</sup> Level	Public Agency 4 <sup>th</sup> Level
1) Prior Year Unfunded Accrued Liability/(Excess Assets) Development				
a) Accrued Liability as of 6/30/2023	\$2,708,326	\$2,160,126	\$31,365,075	\$149,612,700
b) Market Value of Assets as of 6/30/2023	68,946,830	15,679,218	148,164,721	154,622,524
<b>c) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2023 [(1a) - (1b)]</b>	<b>(\$66,238,504)</b>	<b>(\$13,519,092)</b>	<b>(\$116,799,646)</b>	<b>(\$5,009,824)</b>
2) Development of Projected Unfunded Accrued Liability/(Excess Assets) for 6/30/2024				
a) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2023 [(1c)]	(\$66,238,504)	(\$13,519,092)	(\$116,799,646)	(\$5,009,824)
b) Projected Unfunded Accrued Liability/(Excess Assets) Payment with Interest 7/1/2023 – 6/30/2024 <sup>1</sup>	42,846	2,916	(588,087)	(825,621)
c) Projected Unfunded Accrued Liability/(Excess Assets) as of 6/30/2024 [(2a) * 1.068 - (2b) * 1.068 <sup>1/2</sup> ]	(70,787,002)	(14,441,404)	(124,134,269)	(4,497,262)
3) Development of Projected Assets				
a) Market Value of Assets as of 6/30/2023	\$68,946,830	\$15,679,218	\$148,164,721	\$154,622,524
b) Net Cash Flows 7/1/2023 – 6/30/2024	(96,340)	(109,270)	(1,547,026)	(7,550,069)
c) Net Transfer of Assets Into and Out of this Pool	0	(252,595)	0	252,595
<b>d) Expected Assets as of 6/30/2024 [(3a) * 1.068 + ((3b) + (3c)) * 1.068<sup>1/2</sup>]</b>	<b>\$73,535,653</b>	<b>\$16,371,439</b>	<b>\$156,641,162</b>	<b>\$157,595,347</b>
4) Current Year Unfunded Liability/(Excess Assets) Development				
a) Accrued Liability as of 6/30/2024	\$2,552,168	\$2,200,586	\$32,729,893	\$150,896,962
b) Market Value of Assets as of 6/30/2024	75,315,322	16,771,258	160,454,199	159,315,252
<b>c) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2024 [(4a) - (4b)]</b>	<b>(\$72,763,154)</b>	<b>(\$14,570,672)</b>	<b>(\$127,724,306)</b>	<b>(\$8,418,290)</b>
5) Development of (Gain)/Loss due to changes in the Reserve for Unclaimed Benefits				
a) Reserve for Unclaimed Benefits as of 6/30/2023	\$56,160	\$108,000	\$550,200	\$2,052,000
b) Reserve for Unclaimed Benefits as of 6/30/2024	69,120	116,100	592,200	2,929,800
c) (Gain)/Loss due to changes in Reserve for Unclaimed Benefits [(5b) - (5a)]	12,960	8,100	42,000	877,800
6) (Gain)/Loss for the Period of 6/30/2023 – 6/30/2024				
a) Total (Gain)/Loss [(4c) - (2c)]	(\$1,976,152)	(\$129,268)	(\$3,590,037)	(\$3,921,028)
b) Investment (Gain)/Loss [(3d) - (4b)]	(1,779,669)	(399,819)	(3,813,037)	(1,719,905)
c) (Gain)/Loss due to changes in Reserve for Unclaimed Benefits [(5c)]	12,960	8,100	42,000	877,800
d) Non-Investment (Gain)/Loss [(6a) - (6b) - (6c)]	(209,443)	262,451	181,000	(3,078,923)

(1) Includes payment gain/loss due to changes in Normal Costs, as well as differences in actual and estimated member counts.



## (Gain)/Loss Analysis 6/30/2023 – 6/30/2024 (continued)

	Public Agency Indexed Level
1) Prior Year Unfunded Accrued Liability/(Excess Assets) Development	
a) Accrued Liability as of 6/30/2023	\$21,497,855
b) Market Value of Assets as of 6/30/2023	29,793,115
<b>c) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2023 [(1a) - (1b)]</b>	<b>(\$8,295,260)</b>
2) Development of Projected Unfunded Accrued Liability/(Excess Assets) for 6/30/2024	
a) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2023 [(1c)]	(\$8,295,260)
b) Projected Unfunded Accrued Liability/(Excess Assets) Payment with Interest 7/1/2023 – 6/30/2024 <sup>1</sup>	(680,692)
c) Projected Unfunded Accrued Liability/(Excess Assets) as of 6/30/2024 [(2a) * 1.068 - (2b) * 1.068 <sup>1/2</sup> ]	(8,155,883)
3) Development of Projected Assets	
a) Market Value of Assets as of 6/30/2023	\$29,793,115
b) Net Cash Flows 7/1/2023 – 6/30/2024	(901,803)
c) Net Transfer of Assets Into and Out of this Pool	0
<b>d) Expected Assets as of 6/30/2024 [(3a) * 1.068 + ((3b) + (3c)) * 1.068<sup>1/2</sup>]</b>	<b>\$30,887,087</b>
4) Current Year Unfunded Liability/(Excess Assets) Development	
a) Accrued Liability as of 6/30/2024	\$22,659,024
b) Market Value of Assets as of 6/30/2024	31,459,101
<b>c) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2024 [(4a) - (4b)]</b>	<b>(\$8,800,077)</b>
5) Development of (Gain)/Loss due to changes in the Reserve for Unclaimed Benefits	
a) Reserve for Unclaimed Benefits as of 6/30/2023	\$0
b) Reserve for Unclaimed Benefits as of 6/30/2024	0
c) (Gain)/Loss due to changes in Reserve for Unclaimed Benefits [(5b) - (5a)]	0
6) (Gain)/Loss for the Period of 6/30/2023 – 6/30/2024	
a) Total (Gain)/Loss [(4c) - (2c)]	(\$644,194)
b) Investment (Gain)/Loss [(3d) - (4b)]	(572,014)
c) (Gain)/Loss due to changes in Reserve for Unclaimed Benefits [(5c)]	0
d) Non-Investment (Gain)/Loss [(6a) - (6b) - (6c)]	(72,180)

(1) Includes payment gain/loss due to changes in Normal Costs, as well as differences in actual and estimated member counts.

# Risk Analysis

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## Future Investment Return Scenarios

Analysis using the investment return scenarios from the Asset Liability Management process completed in 2021 was performed to determine the effects of various future investment returns on required employer contributions. The CalPERS [Funding Risk Mitigation Policy](#) stipulates that when the investment return exceeds the discount rate by at least 2% the board will consider adjustments to the discount rate. The projections below use a discount rate of 6.8% for all scenarios even though an annual return of 30.8% is high enough to trigger a board discussion on the discount rate. The projections also assume that all other actuarial assumptions will be realized and that no further changes in assumptions, contributions, benefits or funding will occur.

The portfolio has an expected volatility (or standard deviation) of 12.0% per year. Accordingly, in any given year there is a 2.5% probability that the annual return will be -17.2% or less, or 30.8% or more. These returns represent two standard deviations below and above the expected return of 6.8%.

The following tables show the effect of an annual return of -17.2% and 30.8% in fiscal year 2024-25 on the fiscal year 2026-27 employer and employee contributions. Note that for the State 5<sup>th</sup> Level, a single-year investment gain or loss decreases or increases the required UAL contribution amount incrementally for each of the next five years, not just one, due to the 5-year ramp in the amortization policy. However, the contribution requirements beyond the first year are also impacted by investment returns beyond the first year. Historically, significant downturns in the market are often followed by higher than average returns. Such investment gains would offset the impact of these single year negative returns in years beyond fiscal year 2026-27.

- -17.2% investment return (2 standard deviation loss)
- 6.8% investment return
- 30.8% investment return (2 standard deviation gain)

The tables below show fiscal year 2026-27 projected employee and employer contributions under the investment return scenarios mentioned above.

### -17.2% Return

	2026-27 Employer Monthly Premium	2026-27 Employee Monthly Premium
State 5 <sup>th</sup> Level	\$6.55	\$6.55
Schools 5 <sup>th</sup> Level	0.00	2.00
PA 1 <sup>st</sup> Level	0.00	2.00
PA 2 <sup>nd</sup> Level	0.00	2.00
PA 3 <sup>rd</sup> Level	0.00	2.00
PA 4 <sup>th</sup> Level	6.60	2.00
PA Indexed Level	4.90	4.90

### 6.8% Return

	2026-27 Employer Monthly Premium	2026-27 Employee Monthly Premium
State 5 <sup>th</sup> Level	\$6.20	\$6.20
Schools 5 <sup>th</sup> Level	0.00	2.00
PA 1 <sup>st</sup> Level	0.00	2.00
PA 2 <sup>nd</sup> Level	0.00	2.00
PA 3 <sup>rd</sup> Level	0.00	2.00
PA 4 <sup>th</sup> Level	5.30	2.00
PA Indexed Level	3.00	3.00

### 30.8% Return

	2026-27 Employer Monthly Premium	2026-27 Employee Monthly Premium
State 5 <sup>th</sup> Level	\$5.85	\$5.85
Schools 5 <sup>th</sup> Level	0.00	2.00
PA 1 <sup>st</sup> Level	0.00	2.00
PA 2 <sup>nd</sup> Level	0.00	2.00
PA 3 <sup>rd</sup> Level	0.00	2.00
PA 4 <sup>th</sup> Level	2.20	2.00
PA Indexed Level	0.20	2.00

## Discount Rate Sensitivity

The following tables illustrate the sensitivity of the valuation results to the discount rate assumption. Shown below are fiscal year 2025-26 contributions assuming alternate discount rates of 5.8% and 7.8%. Those rates were selected since they illustrate the impact of a 1.0% increase or decrease to the current discount rate assumption of 6.8%.

### 5.8% Discount Rate (-1%)

	2025-26 Employer Monthly Premium	2025-26 Employee Monthly Premium
State 5 <sup>th</sup> Level	\$7.25	\$7.25
Schools 5 <sup>th</sup> Level	0.00	2.00
PA 1 <sup>st</sup> Level	0.00	2.00
PA 2 <sup>nd</sup> Level	0.00	2.00
PA 3 <sup>rd</sup> Level	0.00	2.00
PA 4 <sup>th</sup> Level	7.30	2.00
PA Indexed Level	4.60	4.60

### Increase in Contribution

	2025-26 Employer Monthly Premium	2025-26 Employee Monthly Premium
State 5 <sup>th</sup> Level	\$1.05	\$1.05
Schools 5 <sup>th</sup> Level	0.00	0.00
PA 1 <sup>st</sup> Level	0.00	0.00
PA 2 <sup>nd</sup> Level	0.00	0.00
PA 3 <sup>rd</sup> Level	0.00	0.00
PA 4 <sup>th</sup> Level	2.10	0.00
PA Indexed Level	1.60	1.60

### 7.8% Discount Rate (+1%)

	2025-26 Employer Monthly Premium	2025-26 Employee Monthly Premium
State 5 <sup>th</sup> Level	\$5.25	\$5.25
Schools 5 <sup>th</sup> Level	0.00	2.00
PA 1 <sup>st</sup> Level	0.00	2.00
PA 2 <sup>nd</sup> Level	0.00	2.00
PA 3 <sup>rd</sup> Level	0.00	2.00
PA 4 <sup>th</sup> Level	3.40	2.00
PA Indexed Level	0.90	2.00

### Decrease in Contribution

	2025-26 Employer Monthly Premium	2025-26 Employee Monthly Premium
State 5 <sup>th</sup> Level	(\$0.95)	(\$0.95)
Schools 5 <sup>th</sup> Level	0.00	0.00
PA 1 <sup>st</sup> Level	0.00	0.00
PA 2 <sup>nd</sup> Level	0.00	0.00
PA 3 <sup>rd</sup> Level	0.00	0.00
PA 4 <sup>th</sup> Level	(1.80)	0.00
PA Indexed Level	(2.10)	(1.00)

## Mortality Rate Sensitivity

The following tables illustrate the sensitivity of the valuation results to the mortality rate assumption. Shown below are fiscal year 2025-26 contributions assuming mortality rates that are 10% lower and 10% higher than the mortality tables used in the valuation. These mortality rates were only applied to individuals who were receiving a benefit or in a deferral status as of the valuation date. This analysis will give an indication of the potential required contributions if recipient mortality were to be 10% lower or 10% higher than expected over the long term.

### Lower Mortality Rates (-10%)

	2025-26 Employer Monthly Premium	2025-26 Employee Monthly Premium
State 5 <sup>th</sup> Level	\$6.40	\$6.40
Schools 5 <sup>th</sup> Level	0.00	2.00
PA 1 <sup>st</sup> Level	0.00	2.00
PA 2 <sup>nd</sup> Level	0.00	2.00
PA 3 <sup>rd</sup> Level	0.00	2.00
PA 4 <sup>th</sup> Level	5.60	2.00
PA Indexed Level	3.10	3.10

### Increase in Contribution

	2025-26 Employer Monthly Premium	2025-26 Employee Monthly Premium
State 5 <sup>th</sup> Level	\$0.20	\$0.20
Schools 5 <sup>th</sup> Level	0.00	0.00
PA 1 <sup>st</sup> Level	0.00	0.00
PA 2 <sup>nd</sup> Level	0.00	0.00
PA 3 <sup>rd</sup> Level	0.00	0.00
PA 4 <sup>th</sup> Level	0.40	0.00
PA Indexed Level	0.10	0.10

### Higher Mortality Rate (+10%)

	2025-26 Employer Monthly Premium	2025-26 Employee Monthly Premium
State 5 <sup>th</sup> Level	\$6.10	\$6.10
Schools 5 <sup>th</sup> Level	0.00	2.00
PA 1 <sup>st</sup> Level	0.00	2.00
PA 2 <sup>nd</sup> Level	0.00	2.00
PA 3 <sup>rd</sup> Level	0.00	2.00
PA 4 <sup>th</sup> Level	4.90	2.00
PA Indexed Level	2.85	2.85

### Decrease in Contribution

	2025-26 Employer Monthly Premium	2025-26 Employee Monthly Premium
State 5 <sup>th</sup> Level	(\$0.10)	(\$0.10)
Schools 5 <sup>th</sup> Level	0.00	0.00
PA 1 <sup>st</sup> Level	0.00	0.00
PA 2 <sup>nd</sup> Level	0.00	0.00
PA 3 <sup>rd</sup> Level	0.00	0.00
PA 4 <sup>th</sup> Level	(0.30)	0.00
PA Indexed Level	(0.15)	(0.15)

## Funded Status – Low-Default-Risk Basis

Actuarial Standard of Practice (ASOP) No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*, requires the disclosure of a low-default-risk obligation measure (LDROM) of benefit costs accrued as of the valuation date using a discount rate based on the yields of high-quality fixed income securities with cash flows that replicate expected benefit payments. Conceptually, this measure represents the level at which financial markets would value the accrued plan costs and would be approximately equal to the cost of a portfolio of low-default-risk bonds with similar financial characteristics to accrued plan costs.

As permitted in ASOP No. 4, the Actuarial Office uses the Term Insurance Method and the Entry Age Actuarial Cost Method to calculate the LDROM. As shown below, the discount rate used for the LDROM is 5.35%, which is the Standard FTSE Pension Liability Index<sup>1</sup> discount rate as of .

June 30, 2024	State 5 <sup>th</sup> Level	Schools 5 <sup>th</sup> Level	Public Agency 1 <sup>st</sup> Level	Public Agency 2 <sup>nd</sup> Level
Discount Rate	5.35%	5.35%	5.35%	5.35%
<b>Selected Measures on a Low-Default-Risk Basis</b>				
1) Accrued Liability – Low-Default-Risk Basis (LDROM)	\$174,930,279	\$15,831,421	\$2,902,742	\$2,473,054
2) Market Value of Assets (MVA)	127,171,416	110,559,351	75,315,322	16,771,258
3) Unfunded Accrued Liability – Low-Default-Risk Basis [(1) – (2)]	\$47,758,863	(\$94,727,930)	(\$72,412,580)	(\$14,298,204)
4) Unfunded Accrued Liability – Funding Policy Basis	26,614,483	(96,499,414)	(72,763,154)	(14,570,672)
5) Present Value of Unearned Investment Risk Premium [(3) – (4)]	\$21,144,380	\$1,771,484	\$350,574	\$272,468

June 30, 2024	Public Agency 3 <sup>rd</sup> Level	Public Agency 4 <sup>th</sup> Level	Public Agency Indexed Level
Discount Rate	5.35%	5.35%	5.35%
<b>Selected Measures on a Low-Default-Risk Basis</b>			
1) Accrued Liability – Low-Default-Risk Basis (LDROM)	\$37,138,710	\$171,011,946	\$26,858,159
2) Market Value of Assets (MVA)	160,454,199	159,315,252	31,459,101
3) Unfunded Accrued Liability – Low-Default-Risk Basis [(1) – (2)]	(\$123,315,489)	\$11,696,694	(\$4,600,942)
4) Unfunded Accrued Liability – Funding Policy Basis	(127,724,306)	(8,418,290)	(8,800,077)
5) Present Value of Unearned Investment Risk Premium [(3) – (4)]	\$4,408,817	\$20,114,984	\$4,199,135

The difference between the unfunded liabilities on a low-default-risk basis and on the funding policy basis represents the present value of the investment risk premium that must be earned in future years to keep future contributions for currently accrued plan costs at the levels anticipated by the funding policy.

Benefit security for members of the plan relies on a combination of the assets in the plan, the investment income generated from those assets, and the ability of the plan sponsor to make necessary future contributions. If future returns fall short of 6.8%, benefit security could be at risk for some plans without higher than currently anticipated future contributions.

The funded status on a low-default-risk basis is not appropriate for assessing the need for future contributions.

- (1) This index is based on a yield curve of hypothetical AA-rated zero-coupon corporate bonds whose maturities range from 6 months to 30 years. The index represents the single discount rate that would produce the same present value as discounting a standardized set of liability cash flows for a fully open pension plan using the yield curve. The liability cash flows are reasonably consistent with the pattern of benefits expected to be paid from the entire Public Employees' Retirement Fund for current and former plan members. A different index, hence a different discount rate, may be needed to measure the LDROM for a subset of the fund, such as a single rate plan or a group of retirees.

# Appendix A – Actuarial Methods and Assumptions

## Actuarial Data

As stated in the Actuarial Certification, the data which serves as the basis of this valuation has been obtained from the various CalPERS databases. We have reviewed the valuation data and believe that it is reasonable and appropriate in aggregate. We are unaware of any potential data issues that would have a material effect on the results of this valuation.

## Actuarial Funding Method for Public Agency 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Level, and State and Schools 5<sup>th</sup> Level Pools

The actuarial funding method used, as provided in State statute for Public Agencies 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Level pools, and State and Schools 5<sup>th</sup> Level pools, is called the Term Insurance Method. This is a terminal funding arrangement with no pre-funding of the survivor benefits payable on account of deaths expected to occur beyond those in the coming year.

The Normal Cost for the year is equal to the Expected Claims (present value of benefits arising from deaths) that will occur in the coming fiscal year. The Expected Claims for the coming fiscal year are determined as the expected claim value divided by the expected member months for the coming fiscal year. The Normal Cost (or Expected Claims) per member, per month for the coming fiscal year is equal to a weighted average of ten years of Normal Costs. The Normal Cost (or Actual Claims divided by Actual Members) for each of the previous years are calculated as the Present Value of Benefits divided by the member counts. The ten years used in this calculation end one year before the valuation date. The most recent year is excluded, and the chart below shows the weights given to the years prior to and including the valuation year. This method attempts to mitigate Normal Cost volatility from year to year by phasing in the experience over a ten-year period. The Present Value of Benefits for current Survivors are recalculated each year, using the current assumptions. The reason for excluding the claims from the most recent year is that when new deaths occur each year, it is often unknown which benefit will ultimately apply (i.e., 1957 Survivor, Industrial Death, Pre-Retirement Option 2, or 1959 Survivor). Many times, new deaths are initially placed under the 1959 Survivor roll, but ultimately are reclassified to another roll sometime later. This can create extreme volatility in the Normal Cost calculation between valuation years, especially for smaller pools.

### Weights for Historical Data to Calculate Expected Claims

The table below displays the weights applied to historical Present Value of Benefits and member counts to develop the expected claims per member, per month.

Data 't' Years Ago	Weights
0	0.0%
1	19.0%
2	17.0%
3	15.0%
4	13.0%
5	11.0%
6	9.0%
7	7.0%
8	5.0%
9	3.0%
10	1.0%

A Reserve for Unclaimed Benefits is included in the Accrued Liability. This is done by finding all survivors that are eligible to receive a benefit but are not currently being paid the benefit. This population is assumed to be spouses that were in deferral but have not received a benefit yet due to unforeseen reasons. The amount of this reserve is calculated as the difference between each individual's age as of the valuation date rounded to the nearest whole year minus the age for which their deferral ends, multiplied by their monthly benefit amount. Based on expected lifetimes, the maximum assumed age for receiving benefits is 87.

## **Actuarial Funding Method for Public Agency 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> Level, and State and Schools 5<sup>th</sup> Level Pools (continued)**

Based upon current mortality tables, an individual who starts receiving a benefit at age 62 is expected to continue receiving until age 87.2, while an individual who starts receiving a benefit at age 60 is expected to continue receiving until age 87.0.

The Accrued Liability is equal to the Present Value of Benefits payable to current survivors, plus the Reserve for Unclaimed Benefits. If the Accrued Liability exceeds the Market Value of Assets, the difference is called the Unfunded Liability. On the other hand, if the Market Value of Assets exceeds the Accrued Liability, the difference is called Excess Assets.

The required employer monthly premium is the total required monthly premium less the \$2.00 per month member contributions as required by State Statute Section 21581. For all Levels, existing excess assets in the pool will be amortized and directly used to offset required employer contributions. However, for the State and Schools 5<sup>th</sup> Level pools, if the total required monthly premium after amortization of excess assets exceeds \$4.00, the member and the employer shall evenly share the required monthly premium. Excess assets for the Schools 5<sup>th</sup> Level pool, and Public Agency 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> Level pools were sufficient to offset required employer contributions, based on June 30, 2024 data and assumptions. Excess assets for the Public Agency 4<sup>th</sup> Level were amortized over a 30-year period and are not sufficient to fully offset the required employer contribution. The resulting employer contribution for the 4<sup>th</sup> Level is \$5.20 per covered member, per month.

## **Actuarial Funding Method for Public Agency Indexed Level Pool**

The funding method used for the Public Agency Indexed Level pool is the Entry Age Actuarial Cost Method. Under this method, projected benefits are determined for all members and the associated liabilities are spread in a manner that produces an annual cost that increases by approximately 2% in each year.

The Normal Cost for the Public Agency Indexed Level pool is the portion of the total Entry Age Normal Cost, as described in the preceding paragraph that is allocated to the current fiscal year. Since there is no cost allocated to the current fiscal year for those already receiving benefits or are in a deferred status, only active members have a Normal Cost. The population demographics, excluding population growth, are assumed to remain stable for purposes of projecting the Normal Cost to the year for which the contribution requirement is being determined.

A Reserve for Unclaimed Benefits is included in the Accrued Liability. This is done by finding all survivors that are eligible to receive a benefit but are not currently being paid the benefit. This population is assumed to be spouses that were in deferral but have not received a benefit yet due to unforeseen reasons. The amount of this reserve is calculated as the difference between each individual's age as of the valuation date rounded to the nearest whole year minus the age for which their deferral ends, multiplied by their monthly benefit amount. Based on expected lifetimes, the maximum assumed age for receiving benefits is 87. Based upon current mortality tables, an individual who starts receiving a benefit at age 62 is expected to continue receiving until age 87.2, while an individual who starts receiving a benefit at age 60 is expected to continue receiving until age 87.0.

The Accrued Liability is equal to the Present Value of Future Benefits for both current survivors and active members, less the Present Value of Future Normal Costs.

The total required monthly premium is the sum of the individual Normal Costs divided by the number of member months. The required employer monthly premium is the total required monthly premium less the \$2.00 per month member contributions as required by State Statute Section 21581. Existing excess assets in the pool will be amortized and directly used to offset required employer contributions. However, if the total required monthly premium after amortization of excess assets exceeds \$4.00, the member and the employer shall evenly share the required monthly premium. Excess assets for the Public Agency Indexed Level are amortized over a 30-year period. The employer contribution for the Indexed Level is \$3.00 per covered member, per month.



## Models

The valuation results are based on proprietary actuarial valuation models. The models are centralized and maintained by a specialized team to achieve a high degree of accuracy and consistency. The Actuarial Office is responsible for confirming the appropriateness of the inputs (such as participant data, actuarial methods and assumptions, and plan provisions) as well as performing tests and validating the reasonableness of the output. The results of our models are independently confirmed by parallel valuations performed by outside actuaries on a periodic basis using their models. In our professional judgment, our actuarial valuation models produce comprehensive funding information consistent with the purposes of the valuation and have no material limitations or known weaknesses.

## Asset Valuation Method

Commencing with the June 30, 2013 valuation, assets were and continue to be valued on a Market Value basis.

## Method for Projecting Active Counts

The projected counts this year assume a stable population. Projected counts are necessary to determine employer premiums.

## Actuarial Assumptions

In 2021, CalPERS completed its most recent asset liability management study incorporating actuarial assumptions and strategic asset allocation. In November 2021, the board adopted changes to the asset allocation that increased the expected volatility of returns. The adopted asset allocation was expected to have a long-term blended return that continued to support a discount rate assumption of 6.80%. The board also approved several changes to the demographic assumptions that more closely aligned with actual experience.

For more details and additional rationale for the selection of the actuarial assumptions, please refer to the [2021 CalPERS Experience Study and Review of Actuarial Assumptions](#) that can be found on the CalPERS website under: Forms and Publications. Click on "View All" and search for Experience Study.

All actuarial assumptions represent an estimate of future experience rather than observations of the estimates inherent in market data.

## Economic Assumptions

The prescribed discount rate assumption, adopted by the board on November 17, 2021, is 6.80% compounded annually (net of investment and administrative expenses) as of June 30, 2024. The discount rate is based on the long-term expected rate of return on assets using a building-block method in which expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. The current assumption, originally based on capital market assumptions developed by the Investment Office in 2021, has been reviewed for this valuation based on capital market assumptions developed by the Investment Office in 2023.

**Demographic Assumptions:**

The mortality assumptions are based on mortality rates resulting from the most recent CalPERS Experience Study adopted by the CalPERS Board in November 2021. For purposes of the mortality rates, the rates incorporate generational mortality to capture on-going mortality improvement. Generational mortality explicitly assumes that members born more recently will live longer than the members born before them thereby capturing the mortality improvement seen in the past and expected continued improvement.

Sample mortality rates for those who are receiving are shown in the following table:

Age	Healthy Recipients	
	Male	Female
35	0.00058	0.00029
40	0.00075	0.00039
45	0.00093	0.00054
50	0.00267	0.00199
55	0.00390	0.00325
60	0.00578	0.00455
65	0.00857	0.00612
70	0.01333	0.00996
75	0.02391	0.01783
80	0.04371	0.03403
85	0.08274	0.06166
90	0.14539	0.11086
95	0.24665	0.20364
100	0.36198	0.31582
105	0.52229	0.44679
110	1.00000	1.00000

The post-retirement mortality rates above are for 2017 and are projected generationally for future years using 80% of the Society of Actuaries' Scale MP-2020.

## Indexed Level Claims Assumptions

The Public Agency Indexed Level pool's Accrued Liability and Entry Age Normal Cost for active members are calculated based on the actuarial assumptions for the plan that the members are currently in. For instance, if a member is currently working for an employer that provides a pension in a Miscellaneous 2% @ 55 plan, then the corresponding assumptions from the Miscellaneous 2% @ 55 plan would be used. Likewise, if the member is working in a Safety Police 2.7% @ 57 plan, then all the assumptions from the 2.7% @ 57 would be used. This is done to reflect the trends in the retirement based on the retirement formula and member category that an individual is working in.

The actuarial assumptions for each of these plans are as follows:

### Eligible Survivor Status

For active members of both the Miscellaneous and Safety plans, the probability of having eligible survivor(s) at the date of death is assumed according to the following table:

Age at Death	Percent Having Eligible Survivor(s)
Age 20 and Under	30%
Between Ages 21 and 24	50%
Between Ages 25 and 29	70%
Between Ages 30 and 39	90%
Between Ages 40 and 49	95%
Between Ages 50 and 54	90%
Age 55 and Above	85%

Average claims are developed at every age using actual experience from the program. These average claims are then multiplied by the percentages in the above table. The results are used to estimate expected claims in the active population.

Benefit amounts and Present Value of Benefits were based on average claim experience. A sample of the average claim experience is shown in the table below:

Age at Death	Present Value of Average Claim <sup>1</sup> at the Time of Death <sup>2</sup>
Age 20 and Under	\$32,678
25	103,399
30	142,995
35	137,085
40	129,348
45	110,975
50	89,081
55	72,757
60	66,207
65	64,047
70	64,371
75	63,803
Age 80 and Above	57,493

(1) Average claims were calculated using actual experience from the 1959 Survivor program and smoothed using a polynomial regression model.

(2) Values are based on an initial benefit of \$500/\$1,000/\$1,500 for one, two, or three survivors, respectively. This was the benefit level on June 30, 2000, when the Indexed Level first became effective. The valuation program increases these amounts by 2% per year up to the current valuation year.

[illegible]

## Additional Actuarial Assumptions Applicable to the PA Indexed Level (continued)

### Termination with Refund (continued)

Duration of Service	Public Agency Safety					
	Fire		Police		County Peace Officer	
	Male	Female	Male	Female	Male	Female
0	0.1022	0.1317	0.1298	0.1389	0.1086	0.1284
1	0.0686	0.1007	0.0789	0.0904	0.0777	0.0998
2	0.0441	0.0743	0.0464	0.0566	0.0549	0.0759
3	0.0272	0.0524	0.0274	0.0343	0.0385	0.0562
4	0.0161	0.0349	0.0170	0.0206	0.0268	0.0402
5	0.0092	0.0214	0.0113	0.0128	0.0186	0.0276
10	0.0015	0.0000	0.0032	0.0047	0.0046	0.0038
15	0.0000	0.0000	0.0000	0.0000	0.0023	0.0036
20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
25	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

The Police termination and refund rates are also used for Public Agency Local Prosecutors, Other Safety, Local Sheriff, and School Police.

### Termination with Vested Benefits

Rates vary by entry age and service for Miscellaneous plans. Rates vary by service for Safety plans. See sample rates in the tables below.

Duration of Service	Public Agency Miscellaneous									
	Entry Age 20		Entry Age 25		Entry Age 30		Entry Age 35		Entry Age 40	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
5	0.0381	0.0524	0.0381	0.0524	0.0358	0.0464	0.0334	0.0405	0.0301	0.0380
10	0.0265	0.0362	0.0265	0.0362	0.0254	0.0334	0.0244	0.0307	0.0197	0.0236
15	0.0180	0.0252	0.0180	0.0252	0.0166	0.0213	0.0152	0.0174	0.0119	0.0132
20	0.0141	0.0175	0.0141	0.0175	0.0110	0.0131	0.0079	0.0087	0.0000	0.0000
25	0.0084	0.0108	0.0084	0.0108	0.0064	0.0076	0.0000	0.0000	0.0000	0.0000
30	0.0047	0.0056	0.0047	0.0056	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.0038	0.0041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

The Miscellaneous termination with vested benefits rates are also used for Local Prosecutors.

Duration of Service	Public Agency Safety					
	Fire		Police		County Peace Officer	
	Male	Female	Male	Female	Male	Female
5	0.0089	0.0224	0.0156	0.0272	0.0177	0.0266
10	0.0066	0.0164	0.0113	0.0198	0.0126	0.0189
15	0.0048	0.0120	0.0083	0.0144	0.0089	0.0134
20	0.0035	0.0088	0.0060	0.0105	0.0063	0.0095
25	0.0024	0.0061	0.0042	0.0073	0.0042	0.0063
30	0.0012	0.0031	0.0021	0.0037	0.0021	0.0031
35	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

The Police termination with vested benefits rates are also used for Public Agency Local Prosecutors, Other Safety, Local Sheriff, and School Police.

## Additional Actuarial Assumptions Applicable to the PA Indexed Level (continued)

### Non-Industrial (Not Job-Related) and Industrial (Job-Related) Disability

Rates vary by age and gender. See sample rates in the table below.

Age	Public Agency Miscellaneous	
	Non-Industrial Disability	
	Male	Female
20	0.0001	0.0000
25	0.0001	0.0001
30	0.0002	0.0003
35	0.0004	0.0007
40	0.0009	0.0012
45	0.0015	0.0019
50	0.0015	0.0019
55	0.0014	0.0013
60	0.0012	0.0009

The Miscellaneous non-industrial disability rates are used for Local Prosecutors. Normally, rates are zero for Miscellaneous plans unless the agency has specifically contracted for Industrial Disability Benefits. If so, each Miscellaneous non-industrial disability rate will be split into two components: 50% will become the non-industrial disability rate and 50% will become the industrial disability rate.

Age	Public Agency Safety					
	Non-Industrial Disability			Industrial Disability		
	Fire	Police	County Peace Officer	Fire	Police	County Peace Officer
20	0.0001	0.0001	0.0001	0.0001	0.0000	0.0004
25	0.0001	0.0001	0.0001	0.0002	0.0017	0.0013
30	0.0001	0.0001	0.0001	0.0006	0.0048	0.0025
35	0.0001	0.0002	0.0003	0.0012	0.0079	0.0037
40	0.0001	0.0002	0.0006	0.0023	0.0110	0.0051
45	0.0002	0.0003	0.0011	0.0040	0.0141	0.0067
50	0.0004	0.0005	0.0016	0.0208	0.0185	0.0092
55	0.0006	0.0007	0.0009	0.0307	0.0479	0.0151
60	0.0006	0.0011	0.0005	0.0438	0.0602	0.0174

The Police non-industrial disability rates are also used for Other Safety, Local Sheriff, and School Police. The Police industrial disability rates are used for Local Sheriff and Other Safety. 50% of the Police industrial disability rates are used for School Police. 1% of the Police industrial disability rates are used for Local Prosecutors.

## Additional Actuarial Assumptions Applicable to the PA Indexed Level (continued)

### Service Retirement

Rates vary by age, service, and formula, except for the Safety Half Pay at 55 and 2% at 55 formulas, where retirement rates vary by age only. See sample rates in the tables below.

Age	Public Agency Miscellaneous 1.5% @ 65					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.008	0.011	0.013	0.015	0.017	0.019
51	0.007	0.010	0.012	0.013	0.015	0.017
52	0.010	0.014	0.017	0.019	0.021	0.024
53	0.008	0.012	0.015	0.017	0.019	0.022
54	0.012	0.016	0.019	0.022	0.025	0.028
55	0.018	0.025	0.031	0.035	0.038	0.043
56	0.015	0.021	0.025	0.029	0.032	0.036
57	0.020	0.028	0.033	0.038	0.043	0.048
58	0.024	0.033	0.040	0.046	0.052	0.058
59	0.028	0.039	0.048	0.054	0.060	0.067
60	0.049	0.069	0.083	0.094	0.105	0.118
61	0.062	0.087	0.106	0.120	0.133	0.150
62	0.104	0.146	0.177	0.200	0.223	0.251
63	0.099	0.139	0.169	0.191	0.213	0.239
64	0.097	0.136	0.165	0.186	0.209	0.233
65	0.140	0.197	0.240	0.271	0.302	0.339
66	0.092	0.130	0.157	0.177	0.198	0.222
67	0.129	0.181	0.220	0.249	0.277	0.311
68	0.092	0.129	0.156	0.177	0.197	0.221
69	0.092	0.130	0.158	0.178	0.199	0.224
70	0.103	0.144	0.175	0.198	0.221	0.248

Age	Public Agency Miscellaneous 2% @ 60					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.010	0.011	0.014	0.014	0.017	0.017
51	0.017	0.013	0.014	0.010	0.010	0.010
52	0.014	0.014	0.018	0.015	0.016	0.016
53	0.015	0.012	0.013	0.010	0.011	0.011
54	0.006	0.010	0.017	0.016	0.018	0.018
55	0.012	0.016	0.024	0.032	0.036	0.036
56	0.010	0.014	0.023	0.030	0.034	0.034
57	0.006	0.018	0.030	0.040	0.044	0.044
58	0.022	0.023	0.033	0.042	0.046	0.046
59	0.039	0.033	0.040	0.047	0.050	0.050
60	0.063	0.069	0.074	0.090	0.137	0.116
61	0.044	0.058	0.066	0.083	0.131	0.113
62	0.084	0.107	0.121	0.153	0.238	0.205
63	0.173	0.166	0.165	0.191	0.283	0.235
64	0.120	0.145	0.164	0.147	0.160	0.172
65	0.138	0.160	0.214	0.216	0.237	0.283
66	0.198	0.228	0.249	0.216	0.228	0.239
67	0.207	0.242	0.230	0.233	0.233	0.233
68	0.201	0.234	0.225	0.231	0.231	0.231
69	0.152	0.173	0.164	0.166	0.166	0.166
70	0.200	0.200	0.200	0.200	0.200	0.200

## Additional Actuarial Assumptions Applicable to the PA Indexed Level (continued)

### Service Retirement (continued)

Age	Public Agency Miscellaneous 2% @ 55					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.014	0.014	0.017	0.021	0.023	0.024
51	0.013	0.017	0.017	0.018	0.018	0.019
52	0.013	0.018	0.018	0.020	0.020	0.021
53	0.013	0.019	0.021	0.024	0.025	0.026
54	0.017	0.025	0.028	0.032	0.033	0.035
55	0.045	0.042	0.053	0.086	0.098	0.123
56	0.018	0.036	0.056	0.086	0.102	0.119
57	0.041	0.046	0.056	0.076	0.094	0.120
58	0.052	0.044	0.048	0.074	0.106	0.123
59	0.043	0.058	0.073	0.092	0.105	0.126
60	0.059	0.064	0.083	0.115	0.154	0.170
61	0.087	0.074	0.087	0.107	0.147	0.168
62	0.115	0.123	0.151	0.180	0.227	0.237
63	0.116	0.127	0.164	0.202	0.252	0.261
64	0.084	0.138	0.153	0.190	0.227	0.228
65	0.167	0.187	0.210	0.262	0.288	0.291
66	0.187	0.258	0.280	0.308	0.318	0.319
67	0.195	0.235	0.244	0.277	0.269	0.280
68	0.228	0.248	0.250	0.241	0.245	0.245
69	0.188	0.201	0.209	0.219	0.231	0.231
70	0.229	0.229	0.229	0.229	0.229	0.229

Age	Public Agency Miscellaneous 2.5% @ 55					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.014	0.017	0.027	0.035	0.046	0.050
51	0.019	0.021	0.025	0.030	0.038	0.040
52	0.018	0.020	0.026	0.034	0.038	0.037
53	0.013	0.021	0.031	0.045	0.052	0.053
54	0.025	0.025	0.030	0.046	0.057	0.068
55	0.029	0.042	0.064	0.109	0.150	0.225
56	0.036	0.047	0.068	0.106	0.134	0.194
57	0.051	0.047	0.060	0.092	0.116	0.166
58	0.035	0.046	0.062	0.093	0.119	0.170
59	0.029	0.053	0.072	0.112	0.139	0.165
60	0.039	0.069	0.094	0.157	0.177	0.221
61	0.080	0.077	0.086	0.140	0.167	0.205
62	0.086	0.131	0.149	0.220	0.244	0.284
63	0.135	0.135	0.147	0.214	0.222	0.262
64	0.114	0.128	0.158	0.177	0.233	0.229
65	0.112	0.174	0.222	0.209	0.268	0.273
66	0.235	0.254	0.297	0.289	0.321	0.337
67	0.237	0.240	0.267	0.249	0.267	0.277
68	0.258	0.271	0.275	0.207	0.210	0.212
69	0.117	0.208	0.266	0.219	0.250	0.270
70	0.229	0.229	0.229	0.229	0.229	0.229



## Additional Actuarial Assumptions Applicable to the PA Indexed Level (continued)

### Service Retirement (continued)

Age	Public Agency Miscellaneous 2.7% @ 55					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.011	0.016	0.022	0.033	0.034	0.038
51	0.018	0.019	0.023	0.032	0.031	0.031
52	0.019	0.020	0.026	0.035	0.034	0.037
53	0.020	0.020	0.025	0.043	0.048	0.053
54	0.018	0.030	0.040	0.052	0.053	0.070
55	0.045	0.058	0.082	0.138	0.208	0.278
56	0.057	0.062	0.080	0.121	0.178	0.222
57	0.045	0.052	0.071	0.106	0.147	0.182
58	0.074	0.060	0.074	0.118	0.163	0.182
59	0.058	0.067	0.086	0.123	0.158	0.187
60	0.087	0.084	0.096	0.142	0.165	0.198
61	0.073	0.084	0.101	0.138	0.173	0.218
62	0.130	0.133	0.146	0.187	0.214	0.249
63	0.122	0.140	0.160	0.204	0.209	0.243
64	0.104	0.124	0.154	0.202	0.214	0.230
65	0.182	0.201	0.242	0.264	0.293	0.293
66	0.272	0.249	0.273	0.285	0.312	0.312
67	0.182	0.217	0.254	0.249	0.264	0.264
68	0.223	0.197	0.218	0.242	0.273	0.273
69	0.217	0.217	0.217	0.217	0.217	0.217
70	0.227	0.227	0.227	0.227	0.227	0.227

Age	Public Agency Miscellaneous 3% @ 60					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.015	0.020	0.025	0.039	0.040	0.044
51	0.041	0.034	0.032	0.041	0.036	0.037
52	0.024	0.020	0.022	0.039	0.040	0.041
53	0.018	0.024	0.032	0.047	0.048	0.057
54	0.033	0.033	0.035	0.051	0.049	0.052
55	0.137	0.043	0.051	0.065	0.076	0.108
56	0.173	0.038	0.054	0.075	0.085	0.117
57	0.019	0.035	0.059	0.088	0.111	0.134
58	0.011	0.040	0.070	0.105	0.133	0.162
59	0.194	0.056	0.064	0.081	0.113	0.163
60	0.081	0.085	0.133	0.215	0.280	0.333
61	0.080	0.090	0.134	0.170	0.223	0.292
62	0.137	0.153	0.201	0.250	0.278	0.288
63	0.128	0.140	0.183	0.227	0.251	0.260
64	0.174	0.147	0.173	0.224	0.239	0.264
65	0.152	0.201	0.262	0.299	0.323	0.323
66	0.272	0.273	0.317	0.355	0.380	0.380
67	0.218	0.237	0.268	0.274	0.284	0.284
68	0.200	0.228	0.269	0.285	0.299	0.299
69	0.250	0.250	0.250	0.250	0.250	0.250
70	0.245	0.245	0.245	0.245	0.245	0.245

## Additional Actuarial Assumptions Applicable to the PA Indexed Level (continued)

### Service Retirement (continued)

Age	Public Agency Miscellaneous 2% @ 62					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.000	0.000	0.000	0.000	0.000	0.000
51	0.000	0.000	0.000	0.000	0.000	0.000
52	0.005	0.008	0.012	0.015	0.019	0.031
53	0.007	0.011	0.014	0.018	0.021	0.032
54	0.007	0.011	0.015	0.019	0.023	0.034
55	0.010	0.019	0.028	0.036	0.061	0.096
56	0.014	0.026	0.038	0.050	0.075	0.108
57	0.018	0.029	0.039	0.050	0.074	0.107
58	0.023	0.035	0.048	0.060	0.073	0.099
59	0.025	0.038	0.051	0.065	0.092	0.128
60	0.031	0.051	0.071	0.091	0.111	0.138
61	0.038	0.058	0.079	0.100	0.121	0.167
62	0.044	0.074	0.104	0.134	0.164	0.214
63	0.077	0.105	0.134	0.163	0.192	0.237
64	0.072	0.101	0.129	0.158	0.187	0.242
65	0.108	0.141	0.173	0.206	0.239	0.300
66	0.132	0.172	0.212	0.252	0.292	0.366
67	0.132	0.172	0.212	0.252	0.292	0.366
68	0.120	0.156	0.193	0.229	0.265	0.333
69	0.120	0.156	0.193	0.229	0.265	0.333
70	0.120	0.156	0.193	0.229	0.265	0.333

Public Agency Police ½ @ 55 and 2% @ 55	
Age	Rate
50	0.026
51	0.000
52	0.016
53	0.027
54	0.010
55	0.167
56	0.069
57	0.051
58	0.072
59	0.070
60	0.300

Public Agency Fire ½ @ 55 and 2% @ 55	
Age	Rate
50	0.016
51	0.000
52	0.034
53	0.020
54	0.041
55	0.075
56	0.111
57	0.000
58	0.095
59	0.044
60	1.000

## Additional Actuarial Assumptions Applicable to the PA Indexed Level (continued)

### Service Retirement (continued)

Age	Public Agency Police 2% @ 50					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.018	0.077	0.056	0.046	0.043	0.046
51	0.022	0.087	0.060	0.048	0.044	0.047
52	0.020	0.102	0.081	0.071	0.069	0.075
53	0.016	0.072	0.053	0.045	0.042	0.046
54	0.006	0.071	0.071	0.069	0.072	0.080
55	0.009	0.040	0.099	0.157	0.186	0.186
56	0.020	0.051	0.108	0.165	0.194	0.194
57	0.036	0.072	0.106	0.139	0.156	0.156
58	0.001	0.046	0.089	0.130	0.152	0.152
59	0.066	0.094	0.119	0.143	0.155	0.155
60	0.177	0.177	0.177	0.177	0.177	0.177
61	0.134	0.134	0.134	0.134	0.134	0.134
62	0.184	0.184	0.184	0.184	0.184	0.184
63	0.250	0.250	0.250	0.250	0.250	0.250
64	0.177	0.177	0.177	0.177	0.177	0.177
65	1.000	1.000	1.000	1.000	1.000	1.000

These rates also apply to County Peace Officers, Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Age	Public Agency Fire 2% @ 50					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.054	0.054	0.056	0.080	0.064	0.066
51	0.020	0.020	0.021	0.030	0.024	0.024
52	0.037	0.037	0.038	0.054	0.043	0.045
53	0.051	0.051	0.053	0.076	0.061	0.063
54	0.082	0.082	0.085	0.121	0.097	0.100
55	0.139	0.139	0.139	0.139	0.139	0.139
56	0.129	0.129	0.129	0.129	0.129	0.129
57	0.085	0.085	0.085	0.085	0.085	0.085
58	0.119	0.119	0.119	0.119	0.119	0.119
59	0.167	0.167	0.167	0.167	0.167	0.167
60	0.152	0.152	0.152	0.152	0.152	0.152
61	0.179	0.179	0.179	0.179	0.179	0.179
62	0.179	0.179	0.179	0.179	0.179	0.179
63	0.179	0.179	0.179	0.179	0.179	0.179
64	0.179	0.179	0.179	0.179	0.179	0.179
65	1.000	1.000	1.000	1.000	1.000	1.000

## Additional Actuarial Assumptions Applicable to the PA Indexed Level (continued)

### Service Retirement (continued)

Age	Public Agency Police 3% @ 55					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.019	0.053	0.045	0.054	0.057	0.061
51	0.002	0.017	0.028	0.044	0.053	0.060
52	0.002	0.031	0.037	0.051	0.059	0.066
53	0.026	0.049	0.049	0.080	0.099	0.114
54	0.019	0.034	0.047	0.091	0.121	0.142
55	0.006	0.115	0.141	0.199	0.231	0.259
56	0.017	0.188	0.121	0.173	0.199	0.199
57	0.008	0.137	0.093	0.136	0.157	0.157
58	0.017	0.126	0.105	0.164	0.194	0.194
59	0.026	0.146	0.110	0.167	0.195	0.195
60	0.155	0.155	0.155	0.155	0.155	0.155
61	0.210	0.210	0.210	0.210	0.210	0.210
62	0.262	0.262	0.262	0.262	0.262	0.262
63	0.172	0.172	0.172	0.172	0.172	0.172
64	0.227	0.227	0.227	0.227	0.227	0.227
65	1.000	1.000	1.000	1.000	1.000	1.000

These rates also apply to County Peace Officers, Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Age	Public Agency Fire 3% @ 55					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.003	0.006	0.013	0.019	0.025	0.028
51	0.004	0.008	0.017	0.026	0.034	0.038
52	0.005	0.011	0.022	0.033	0.044	0.049
53	0.005	0.034	0.024	0.038	0.069	0.138
54	0.007	0.047	0.032	0.051	0.094	0.187
55	0.010	0.067	0.046	0.073	0.134	0.266
56	0.010	0.063	0.044	0.069	0.127	0.253
57	0.135	0.100	0.148	0.196	0.220	0.220
58	0.083	0.062	0.091	0.120	0.135	0.135
59	0.137	0.053	0.084	0.146	0.177	0.177
60	0.162	0.063	0.099	0.172	0.208	0.208
61	0.598	0.231	0.231	0.231	0.231	0.231
62	0.621	0.240	0.240	0.240	0.240	0.240
63	0.236	0.236	0.236	0.236	0.236	0.236
64	0.236	0.236	0.236	0.236	0.236	0.236
65	1.000	1.000	1.000	1.000	1.000	1.000

## Additional Actuarial Assumptions Applicable to the PA Indexed Level (continued)

### Service Retirement (continued)

Age	Public Agency Police 3% @ 50					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.124	0.103	0.113	0.143	0.244	0.376
51	0.060	0.081	0.087	0.125	0.207	0.294
52	0.016	0.055	0.111	0.148	0.192	0.235
53	0.072	0.074	0.098	0.142	0.189	0.237
54	0.018	0.049	0.105	0.123	0.187	0.271
55	0.069	0.074	0.081	0.113	0.209	0.305
56	0.064	0.108	0.113	0.125	0.190	0.288
57	0.056	0.109	0.160	0.182	0.210	0.210
58	0.108	0.129	0.173	0.189	0.214	0.214
59	0.093	0.144	0.204	0.229	0.262	0.262
60	0.343	0.180	0.159	0.188	0.247	0.247
61	0.221	0.221	0.221	0.221	0.221	0.221
62	0.213	0.213	0.213	0.213	0.213	0.213
63	0.233	0.233	0.233	0.233	0.233	0.233
64	0.234	0.234	0.234	0.234	0.234	0.234
65	1.000	1.000	1.000	1.000	1.000	1.000

These rates also apply to County Peace Officers, Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Age	Public Agency Fire 3% @ 50					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.095	0.048	0.053	0.093	0.134	0.175
51	0.016	0.032	0.053	0.085	0.117	0.149
52	0.013	0.032	0.054	0.087	0.120	0.154
53	0.085	0.044	0.049	0.089	0.129	0.170
54	0.038	0.065	0.074	0.105	0.136	0.167
55	0.042	0.043	0.049	0.085	0.132	0.215
56	0.133	0.103	0.075	0.113	0.151	0.209
57	0.062	0.048	0.060	0.124	0.172	0.213
58	0.124	0.097	0.092	0.153	0.194	0.227
59	0.092	0.071	0.078	0.144	0.192	0.233
60	0.056	0.044	0.061	0.131	0.186	0.233
61	0.282	0.219	0.158	0.198	0.233	0.260
62	0.292	0.227	0.164	0.205	0.241	0.269
63	0.196	0.196	0.196	0.196	0.196	0.196
64	0.197	0.197	0.197	0.197	0.197	0.197
65	1.000	1.000	1.000	1.000	1.000	1.000

## Additional Actuarial Assumptions Applicable to the PA Indexed Level (continued)

### Service Retirement (continued)

Age	Public Agency Police 2% @ 57					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.040	0.040	0.040	0.040	0.040	0.080
51	0.028	0.028	0.028	0.028	0.040	0.066
52	0.028	0.028	0.028	0.028	0.043	0.061
53	0.028	0.028	0.028	0.028	0.057	0.086
54	0.028	0.028	0.028	0.032	0.069	0.110
55	0.050	0.050	0.050	0.067	0.099	0.179
56	0.046	0.046	0.046	0.062	0.090	0.160
57	0.054	0.054	0.054	0.072	0.106	0.191
58	0.060	0.060	0.060	0.066	0.103	0.171
59	0.060	0.060	0.060	0.069	0.105	0.171
60	0.113	0.113	0.113	0.113	0.113	0.171
61	0.108	0.108	0.108	0.108	0.108	0.128
62	0.113	0.113	0.113	0.113	0.113	0.159
63	0.113	0.113	0.113	0.113	0.113	0.159
64	0.113	0.113	0.113	0.113	0.113	0.239
65	1.000	1.000	1.000	1.000	1.000	1.000

These rates also apply to County Peace Officers, Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Age	Public Agency Fire 2% @ 57					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.005	0.005	0.005	0.005	0.008	0.012
51	0.006	0.006	0.006	0.006	0.009	0.013
52	0.012	0.012	0.012	0.012	0.019	0.028
53	0.033	0.033	0.033	0.033	0.050	0.075
54	0.045	0.045	0.045	0.045	0.069	0.103
55	0.061	0.061	0.061	0.061	0.094	0.140
56	0.055	0.055	0.055	0.055	0.084	0.126
57	0.081	0.081	0.081	0.081	0.125	0.187
58	0.059	0.059	0.059	0.059	0.091	0.137
59	0.055	0.055	0.055	0.055	0.084	0.126
60	0.085	0.085	0.085	0.085	0.131	0.196
61	0.085	0.085	0.085	0.085	0.131	0.196
62	0.085	0.085	0.085	0.085	0.131	0.196
63	0.085	0.085	0.085	0.085	0.131	0.196
64	0.085	0.085	0.085	0.085	0.131	0.196
65	1.000	1.000	1.000	1.000	1.000	1.000

## Additional Actuarial Assumptions Applicable to the PA Indexed Level (continued)

### Service Retirement (continued)

Age	Public Agency Police 2.5% @ 57					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.050	0.050	0.050	0.050	0.050	0.100
51	0.038	0.038	0.038	0.038	0.055	0.089
52	0.038	0.038	0.038	0.038	0.058	0.082
53	0.036	0.036	0.036	0.036	0.073	0.111
54	0.036	0.036	0.036	0.041	0.088	0.142
55	0.061	0.061	0.061	0.082	0.120	0.217
56	0.056	0.056	0.056	0.075	0.110	0.194
57	0.060	0.060	0.060	0.080	0.118	0.213
58	0.072	0.072	0.072	0.079	0.124	0.205
59	0.072	0.072	0.072	0.083	0.126	0.205
60	0.135	0.135	0.135	0.135	0.135	0.205
61	0.130	0.130	0.130	0.130	0.130	0.153
62	0.135	0.135	0.135	0.135	0.135	0.191
63	0.135	0.135	0.135	0.135	0.135	0.191
64	0.135	0.135	0.135	0.135	0.135	0.287
65	1.000	1.000	1.000	1.000	1.000	1.000

These rates also apply to County Peace Officers, Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Age	Public Agency Fire 2.5% @ 57					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.007	0.007	0.007	0.007	0.010	0.015
51	0.008	0.008	0.008	0.008	0.012	0.018
52	0.016	0.016	0.016	0.016	0.025	0.038
53	0.042	0.042	0.042	0.042	0.064	0.096
54	0.057	0.057	0.057	0.057	0.088	0.132
55	0.074	0.074	0.074	0.074	0.114	0.170
56	0.066	0.066	0.066	0.066	0.102	0.153
57	0.090	0.090	0.090	0.090	0.139	0.208
58	0.071	0.071	0.071	0.071	0.110	0.164
59	0.066	0.066	0.066	0.066	0.101	0.151
60	0.102	0.102	0.102	0.102	0.157	0.235
61	0.102	0.102	0.102	0.102	0.157	0.236
62	0.102	0.102	0.102	0.102	0.157	0.236
63	0.102	0.102	0.102	0.102	0.157	0.236
64	0.102	0.102	0.102	0.102	0.157	0.236
65	1.000	1.000	1.000	1.000	1.000	1.000

## Additional Actuarial Assumptions Applicable to the PA Indexed Level (continued)

### Service Retirement (continued)

Age	Public Agency Police 2.7% @ 57					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.050	0.050	0.050	0.050	0.050	0.100
51	0.040	0.040	0.040	0.040	0.058	0.094
52	0.038	0.038	0.038	0.038	0.058	0.083
53	0.038	0.038	0.038	0.038	0.077	0.117
54	0.038	0.038	0.038	0.044	0.093	0.150
55	0.068	0.068	0.068	0.091	0.134	0.242
56	0.063	0.063	0.063	0.084	0.123	0.217
57	0.060	0.060	0.060	0.080	0.118	0.213
58	0.080	0.080	0.080	0.088	0.138	0.228
59	0.080	0.080	0.080	0.092	0.140	0.228
60	0.150	0.150	0.150	0.150	0.150	0.228
61	0.144	0.144	0.144	0.144	0.144	0.170
62	0.150	0.150	0.150	0.150	0.150	0.213
63	0.150	0.150	0.150	0.150	0.150	0.213
64	0.150	0.150	0.150	0.150	0.150	0.319
65	1.000	1.000	1.000	1.000	1.000	1.000

These rates also apply to County Peace Officers, Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Age	Public Agency Fire 2.7% @ 57					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.007	0.007	0.007	0.007	0.010	0.015
51	0.008	0.008	0.008	0.008	0.013	0.019
52	0.016	0.016	0.016	0.016	0.025	0.038
53	0.044	0.044	0.044	0.044	0.068	0.102
54	0.061	0.061	0.061	0.061	0.093	0.140
55	0.083	0.083	0.083	0.083	0.127	0.190
56	0.074	0.074	0.074	0.074	0.114	0.171
57	0.090	0.090	0.090	0.090	0.139	0.208
58	0.079	0.079	0.079	0.079	0.122	0.182
59	0.073	0.073	0.073	0.073	0.112	0.168
60	0.114	0.114	0.114	0.114	0.175	0.262
61	0.114	0.114	0.114	0.114	0.175	0.262
62	0.114	0.114	0.114	0.114	0.175	0.262
63	0.114	0.114	0.114	0.114	0.175	0.262
64	0.114	0.114	0.114	0.114	0.175	0.262
65	1.000	1.000	1.000	1.000	1.0000	1.000



# Appendix B – Principal Plan Provisions

The 1959 Survivor program was designed to provide pre-retirement death benefits comparable to those provided by Social Security, formally the Federal Old Age and Survivor Insurance (OASI) program, to CalPERS' members not covered by Social Security.

## Eligibility

The benefit is available only to those members not covered by Social Security OASI benefits. For public agencies, this benefit is provided by contract with CalPERS. Only those public agencies that contract for the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, or Indexed Levels of the program are eligible for the benefits valued in this report. The Public Agency 1<sup>st</sup> and 2<sup>nd</sup> Levels have been closed since January 1, 1994 and the 3<sup>rd</sup> Level has been closed since July 1, 2001. For State and Schools members, the 5<sup>th</sup> Level benefit is provided by State statute to certain groups of employees. Members who are eligible for the benefit are given a one-time option to join at the time of the 1959 Survivor contract. Members hired subsequent to the time of contract are automatically enrolled in the program.

## Spousal or Domestic Partner Benefit

The benefit is a monthly payment to eligible surviving spouses or domestic partners age 62 or older for the Public Agency 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> Levels and age 60 or older for all other Levels. The benefit is also payable under these deferred ages for spouses or partners that have care of children under the age of 22. As an example, assume an agency contracts for the 3<sup>rd</sup> Level benefit and an active member dies and leaves behind a 35-year-old spouse and 2 children, ages 5 and 15. The following table describes how the benefit would be paid over the course of time.

Event	Monthly Benefit Paid
Member Death	\$840
1 <sup>st</sup> Child Turns 22	\$700
2 <sup>nd</sup> Child Turns 22 <sup>1</sup>	\$0
Spouse Turns 62 <sup>2</sup>	\$350

(1) At this time, the spouse would be 52 years old and would not receive any benefit until age 62.

(2) Spouse would continue to receive this benefit until his/her death.

## Child Benefit

Children are eligible if they are not married or in a registered domestic partnership and are under the age of 22 whether or not a spouse or domestic partner exists. For 3 or more children, the 3-survivor benefit is paid; for 2 children, the 2-survivor benefit is paid and so forth (see tables below). In all cases, unless a child is disabled, the benefit stops at age 22. If a child is disabled, the benefit is paid until the disability ceases.

## Parental Benefits

If there is no eligible spouse or domestic partner or children, parent(s) dependent for at least half of their support from the deceased member may be eligible for benefits. The parent(s) must be over age 62 for the Public Agency 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> Levels and over age 60 for all other Levels.

## Monthly Benefit Amounts

The monthly benefit amount depends upon the coverage Level within the program.

1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> Levels (For Members of Public Agencies who Contract)

	1 <sup>st</sup> Level	2 <sup>nd</sup> Level	3 <sup>rd</sup> Level
Spouse or Domestic Partner with Two or More Eligible Children; or Three or More Eligible Children	\$430	\$538	\$840
Spouse or Domestic Partner with One Eligible Child; or Two Eligible Children Only	360	450	700
Spouse or Domestic Partner Age 62 or Older; or One Eligible Child Only; or Eligible Dependent parents	180	225	350

4<sup>th</sup> Level and Indexed Level (For Members of Public Agencies who Contract) and 5<sup>th</sup> Level (State and Schools Members)

	4 <sup>th</sup> Level	Indexed Level	State and Schools 5 <sup>th</sup> Level
Spouse or Domestic Partner with Two or More Eligible Children; or Three or More Eligible Children	\$2,280	\$2,461 <sup>1</sup>	\$1,800
Spouse or Domestic Partner with One Eligible Child; or Two Eligible Children Only	1,900	1,641 <sup>1</sup>	1,500
Spouse or Domestic Partner Age 60 or Older; or One Eligible Child Only; or Eligible Dependent parents	950	820 <sup>1</sup>	750

(1) These figures indicate calendar year benefit amounts for the Indexed Level in effect for calendar year 2025. Benefit amounts will increase by 2% each January 1.

## Comparison of Social Security and CalPERS 1959 Survivor Benefits

The following tables compare current Social Security survivor benefits with current benefit levels paid under the 1959 Survivor Program.

### Social Security

Survivor Group	Low	Average	High
Three Survivors	\$1,843	\$2,837	\$4,660
Two Survivors	1,842	2,618	3,860
One Survivor	921	1,309	1,930

Unlike the 1959 Survivor Benefit (with the exception of the Indexed Level), Federal Social Security benefits normally receive an automatic cost-of-living adjustment every year. Also, unlike the 1959 Survivor Benefit, Social Security benefits are based on a worker's actual earnings up to the maximum covered. The values shown assume death at age 45 (benefits slightly higher at lower ages, lower at higher ages), and steady earnings. "Low" is a 2024 salary of \$25,000, "Average" is \$50,000, and "High" is \$90,000.

### CalPERS 1959 Survivor Benefit

Survivor Group	1 <sup>st</sup> Level	2 <sup>nd</sup> Level	3 <sup>rd</sup> Level	4 <sup>th</sup> Level	Indexed Level <sup>1</sup>	State and Schools 5 <sup>th</sup> Level
Three Survivors	\$430	\$538	\$840	\$2,280	\$2,461	\$1,800
Two Survivors	360	450	700	1,900	1,641	1,500
One Survivor	180	225	350	950	820	750

(1) Amounts effective January 1, 2025

## Summary of Plan Changes

Existing public agency employers joining the Public Agency 4<sup>th</sup> or Indexed Level pools during the 2025-26 fiscal year are required to pay only the Unfunded Liability based on their own membership (amortized over a period of five years) which exists at the time they join plus the agency's normal cost for all members at the new benefit level for the first five years. If they have excess assets, the excess assets will be amortized over five years and used to offset the agency's normal cost for each year.

# Appendix C – Demographic and Experience Information

## Current and Deferred Survivors – All Levels of the 1959 Survivor Program for Public Agencies, State and Schools

Currently, there are 4,291 cases where liability exists. These cases include surviving spouses or domestic partners in deferred status even though presently there are no benefits being paid. There are 9 possible survivor combinations that can be associated with each case. The combinations presented below are given as of the date of the valuation, for all Levels of the 1959 Survivor program.

Status as of 6/30/2024	Number	Percent
Surviving Spouse or Domestic Partner Deferred	679	15.8%
Surviving Spouse or Domestic Partner Only Receiving	2,623	61.1%
Surviving Spouse or Domestic Partner with One Child	330	7.7%
Surviving Spouse or Domestic Partner with Two or More Children	305	7.1%
One Child	191	4.5%
Two Children	103	2.4%
Three or More Children	23	0.5%
One Parent	29	0.7%
Two Parents	8	0.2%
<b>Totals</b>	<b>4,291</b>	<b>100.0%<sup>1</sup></b>

(1) Percentages may not sum to 100% due to rounding.

## Survivor Combinations as of the Member's Date of Death – All Levels of the 1959 Survivor Program for Public Agencies, State and Schools

There exist 8,901 cases of death associated with the 1959 Survivor program since its inception where 1959 Survivor benefits became payable. With this data, a historical account of each combination can be made. Further, probabilities can be approximated with respect to these combinations when a member dies. Below is a list of all combinations on record, numbers and associated percentages as of the time of death, for all Levels of the 1959 Survivor program.

Status as of the Member's Date of Death	Number	Percent
Surviving Spouse or Domestic Partner Deferred	2,469	27.7%
Surviving Spouse or Domestic Partner Only Receiving	1,144	12.9%
Surviving Spouse or Domestic Partner with One Child	1,430	16.1%
Surviving Spouse or Domestic Partner with Two or More Children	2,358	26.5%
One Child	643	7.2%
Two Children	510	5.7%
Three or More Children	288	3.2%
One Parent	48	0.5%
Two Parents	11	0.1%
<b>Totals</b>	<b>8,901</b>	<b>100.0%<sup>1</sup></b>

(1) Percentages may not sum to 100% due to rounding.

# Appendix D – 1959 Survivor Deaths Per Year

## 1959 Survivor Deaths Per Year

Displayed below is a year-by-year account of the number of deaths under the program and the death rate each year for the last 35 years for public agencies, State, and Schools. Deaths given in the exhibit are on a fiscal year basis (changed from a calendar year basis in previous years) and may change from previous valuations due mainly to reclassification of the benefit that ultimately gets paid to the survivor. The historic covered active counts may not match those reported in the prior year's valuation. This is due to the fact that in some cases there is a time gap between the time of the member's death and the determination of which type of death benefit that the survivor will receive. In addition, since the basis was changed this year most of the death counts will not match those of the previous year.

Fiscal Year Ending On	Public Agency			State			Schools		
	Deaths	Active Counts	Death Rate	Deaths	Active Counts	Death Rate	Deaths	Active Counts	Death Rate
6/30/2024	98	154,632	0.06%	60	76,176	0.08%	4	11,148	0.04%
6/30/2023	86	148,538	0.06%	61	74,885	0.08%	7	10,815	0.06%
6/30/2022	110	142,364	0.08%	92	75,812	0.12%	9	10,390	0.09%
6/30/2021	115	139,036	0.08%	92	76,995	0.12%	11	10,413	0.11%
6/30/2020	81	141,081	0.06%	72	78,713	0.09%	3	11,219	0.03%
6/30/2019	86	141,374	0.06%	62	78,011	0.08%	9	11,190	0.08%
6/30/2018	74	140,339	0.05%	47	77,362	0.06%	6	10,894	0.06%
6/30/2017	88	141,063	0.06%	51	76,638	0.07%	7	10,557	0.07%
6/30/2016	78	139,581	0.06%	67	75,782	0.09%	4	10,259	0.04%
6/30/2015	75	134,879	0.06%	55	74,372	0.07%	5	10,490	0.05%
6/30/2014	60	132,024	0.05%	56	72,848	0.08%	4	10,287	0.04%
6/30/2013	93	129,796	0.07%	57	71,180	0.08%	4	9,944	0.04%
6/30/2012	106	132,754	0.08%	53	71,759	0.07%	7	10,123	0.07%
6/30/2011	93	134,255	0.07%	55	77,714	0.07%	6	9,811	0.06%
6/30/2010	86	138,470	0.06%	71	79,587	0.09%	5	10,203	0.05%
6/30/2009	98	143,207	0.07%	47	82,434	0.06%	9	10,562	0.09%
6/30/2008	111	144,828	0.08%	56	81,369	0.07%	4	10,550	0.04%
6/30/2007	96	140,012	0.07%	68	76,902	0.09%	6	10,131	0.06%
6/30/2006	94	137,095	0.07%	74	71,742	0.10%	15	9,469	0.16%
6/30/2005	105	133,510	0.08%	61	70,193	0.09%	4	9,402	0.04%
6/30/2004	93	131,633	0.07%	71	64,252	0.11%	5	9,325	0.05%
6/30/2003	81	129,620	0.06%	57	68,791	0.08%	6	9,390	0.06%
6/30/2002	83	129,355	0.06%	51	65,558	0.08%	7	9,195	0.08%
6/30/2001	90	116,161	0.08%	61	64,309	0.09%	5	7,884	0.06%
6/30/2000	83	121,538	0.07%	61	60,349	0.10%	2	8,338	0.02%
6/30/1999	90	118,850	0.08%	55	59,406	0.09%	7	7,444	0.09%
6/30/1998	78	112,389	0.07%	61	55,435	0.11%	3	6,956	0.04%
6/30/1997	74	102,475	0.07%	67	55,084	0.12%	5	6,794	0.07%
6/30/1996	73	100,494	0.07%	51	51,746	0.10%	7	6,726	0.10%
6/30/1995	74	99,235	0.07%	60	47,689	0.13%	9	6,751	0.13%
6/30/1994	68	98,088	0.07%	55	47,323	0.12%	8	6,653	0.12%
6/30/1993	86	97,752	0.09%	42	46,872	0.09%	9	6,776	0.13%
6/30/1992	91	95,840	0.09%	47	48,872	0.10%	5	6,823	0.07%
6/30/1991	100	91,574	0.11%	47	47,708	0.10%	6	7,752	0.08%
6/30/1990	73	86,196	0.08%	63	45,502	0.14%	8	7,942	0.10%

# Appendix E – List of Contracting Agencies

## Level 1

1. Belmont Fire Protection District, Miscellaneous
2. Central Basin Municipal Water District, Miscellaneous
3. City and County of San Francisco, Safety - County Peace Officer
4. City and County of San Francisco, Safety - Sheriff
5. City of Baldwin Park, Miscellaneous
6. City of Baldwin Park, Safety - Police
7. City of Bishop, Miscellaneous
8. City of Bishop, Safety - Police
9. City of Calexico, Safety - Fire
10. City of Calexico, Safety - Police
11. City of Camarillo, Safety - Fire
12. City of Camarillo, Safety - Police
13. City of Coachella City, Miscellaneous
14. City of Coachella City, Safety - Fire
15. City of Coachella City, Safety - Police
16. City of Compton, Safety - Fire
17. City of Culver City, Miscellaneous
18. City of Dixon, Miscellaneous
19. City of El Segundo, Miscellaneous
20. City of Glendora, Safety - Fire
21. City of Hawthorne, Miscellaneous
22. City of Hawthorne, Safety - Fire
23. City of Hawthorne, Safety - Police
24. City of Hemet, Safety - Police
25. City of Indio, Safety - Fire
26. City of Indio, Safety - Police
27. City of Lynwood, Safety - Police
28. City of Madera, Safety - Fire
29. City of Manhattan Beach, Safety - Police
30. City of Maywood, Safety - Police
31. City of Menlo Park, Miscellaneous
32. City of Palo Alto, Miscellaneous
33. City of Palo Alto, Safety - Fire
34. City of Palo Alto, Safety - Police
35. City of Placentia, Safety - Fire
36. City of Pleasanton, Safety - Police
37. City of Pomona, Miscellaneous
38. City of Pomona, Safety - Fire
39. City of Pomona, Safety - Police
40. City of Redondo Beach, Miscellaneous
41. City of Richmond, Miscellaneous
42. City of Richmond, Safety - Fire
43. City of Richmond, Safety - Police
44. City of Rolling Hills Estates, Miscellaneous
45. City of Salinas, Safety - Fire
46. City of San Fernando, Safety - Fire
47. City of San Mateo, Miscellaneous
48. City of San Pablo, Safety - Fire
49. City of Santa Clara, Miscellaneous
50. City of Santa Monica, Safety - Other Safety
51. City of Santa Paula, Safety - Fire
52. City of Sausalito, Miscellaneous
53. City of Seal Beach, Safety - Fire
54. City of South Lake Tahoe, Safety - Police
55. City of South Pasadena, Miscellaneous
56. City of South Pasadena, Safety - Fire
57. City of South Pasadena, Safety - Police
58. City of South San Francisco, Miscellaneous
59. City of Sunnyvale, Safety - Fire
60. City of Tustin, Safety - Fire
61. City of Union City, Safety - Fire
62. City of Union City, Safety - Police
63. City of Vallejo, Miscellaneous
64. City of Vernon, Safety - Police
65. City of Vista, Safety - Police
66. City of Watsonville, Miscellaneous
67. City of Westminster, Safety - Fire
68. City of Whittier, Safety - Fire
69. County of Glenn, Miscellaneous
70. County of Inyo, Miscellaneous
71. County of Madera, Miscellaneous
72. County of Monterey, Miscellaneous
73. County of Plumas, Safety - Fire
74. County of Santa Clara, Miscellaneous
75. County of Santa Clara, Safety - County Peace Officer
76. County of Santa Clara, Safety - Fire
77. County of Santa Cruz, Safety - Fire

78. County of Siskiyou, Safety - Fire
79. County of Solano, Safety - Fire
80. East Contra Costa Irrigation District, Miscellaneous
81. Fruitridge Fire Protection District, Miscellaneous
82. Fruitridge Fire Protection District, Safety - Fire
83. Lakeside Fire Protection District, Miscellaneous
84. Los Angeles Community College District, Safety - Police
85. Monterey County Water Resources Agency, Miscellaneous
86. Monterey-Salinas Transit District, Miscellaneous
87. Moulton-Niguel Water District, Miscellaneous
88. Northern California Special Districts Insurance Authority,  
Miscellaneous
89. Pomona, Calif State Polytechnic University, Associated  
Students, Inc., Miscellaneous
90. Riverside County Air Pollution Control District, Miscellaneous
91. Riverside County Flood Control and Water Conservation  
District, Miscellaneous
92. Riverside County Regional Park and Open Space District,  
Miscellaneous
93. San Luis Obispo Cal Poly Associated Students, Inc.,  
Miscellaneous
94. Town of Hillsborough, Miscellaneous
95. Town of Tiburon, Safety - Police
96. Town of Yountville, Miscellaneous

## Level 2

1. Belmont-San Carlos Fire Department, Miscellaneous
2. Brooktrails Township Community Services District, Miscellaneous
3. California Interscholastic Federation, Southern Section, Miscellaneous
4. California Interscholastic Federation, State Office, Miscellaneous
5. Capitol Area Development Authority, Miscellaneous
6. City and County of San Francisco, Safety - Police
7. City of Antioch, Miscellaneous
8. City of Capitola, Miscellaneous
9. City of Capitola, Safety - Fire
10. City of Capitola, Safety - Police
11. City of Corcoran, Miscellaneous
12. City of Corcoran, Safety - Fire
13. City of Corcoran, Safety - Police
14. City of Cotati, Safety - Police
15. City of Crescent City, Miscellaneous
16. City of Crescent City, Safety - Police
17. City of Del Mar, Safety - Other Safety
18. City of Emeryville, Safety - Police
19. City of Eureka, Safety - Fire
20. City of Eureka, Safety - Police
21. City of Glendora, Miscellaneous
22. City of Inglewood, Safety - Police
23. City of La Puente, Miscellaneous
24. City of Lakeport, Miscellaneous
25. City of Lakeport, Safety - Police
26. City of Martinez, Safety - Fire
27. City of Montclair, Miscellaneous
28. City of Montclair, Safety - Fire
29. City of Palm Desert, Miscellaneous
30. City of Palos Verdes Estates, Safety - Fire
31. City of Palos Verdes Estates, Safety - Police
32. City of Patterson, Safety - Fire
33. City of Patterson, Safety - Police
34. City of Santa Barbara, Safety - Fire
35. City of Santa Barbara, Safety - Police
36. City of Sierra Madre, Safety - Police
37. City of Solana Beach, Miscellaneous
38. City of Solana Beach, Safety - Other Safety
39. City of Stanton, Miscellaneous
40. City of Stanton, Safety - Fire
41. City of Stanton, Safety - Police
42. City of Susanville, Safety - Police
43. City of Visalia, Miscellaneous
44. City of Vista, Miscellaneous
45. City of Watsonville, Safety - Fire
46. City of Watsonville, Safety - Police
47. County of Alpine, Miscellaneous
48. County of Alpine, Safety - County Peace Officer
49. County of Alpine, Safety - Fire
50. County of Calaveras, Miscellaneous
51. County of Calaveras, Safety - County Peace Officer
52. County of Calaveras, Safety - Fire
53. Los Angeles County Office of Education, Miscellaneous
54. Main San Gabriel Basin Watermaster, Miscellaneous
55. North Coast Unified Air Quality Management District, Miscellaneous
56. Pacific Fire Protection District, Miscellaneous
57. Public Risk Innovation, Solutions and Management, Miscellaneous
58. Pupil Transportation Cooperative, Miscellaneous
59. Rancho California Water District, Miscellaneous
60. Running Springs Water District, Miscellaneous
61. Running Springs Water District, Safety - Fire
62. San Diego Trolley, Inc., Miscellaneous
63. San Francisco County Transportation Authority, Miscellaneous
64. Sonoma County Library, Miscellaneous
65. Tahoe Transportation District, Miscellaneous

## Level 3

1. Access Services Incorporated, Miscellaneous
2. Agoura Hills and Calabasas Community Center, Miscellaneous
3. Alameda Alliance for Health, Miscellaneous
4. Alameda Corridor Transportation Authority, Miscellaneous
5. Alameda County Fire Department, Miscellaneous
6. Alameda County Fire Department, Safety - Fire
7. Alameda County Mosquito Abatement District, Miscellaneous
8. Alameda County Transportation Authority, Miscellaneous
9. American Canyon Fire Protection District, Safety - Fire
10. Apple Valley Fire Protection District, Miscellaneous
11. Apple Valley Fire Protection District, Safety - Fire
12. Arcata Fire Protection District, Miscellaneous
13. Arcata Fire Protection District, Safety - Fire
14. Association of California Water Agencies, Miscellaneous
15. Avila Beach Community Services District, Miscellaneous
16. Baldwin Park Unified School District, Safety - Police
17. Beaumont-Cherry Valley Recreation and Park District, Miscellaneous
18. Belmont-San Carlos Fire Department, Safety - Fire
19. Belvedere-Tiburon Library Agency, Miscellaneous
20. Big Bear City Community Services District, Miscellaneous
21. Bighorn-Desert View Water Agency, Miscellaneous
22. Bodega Bay Fire Protection District, Miscellaneous
23. Bodega Bay Fire Protection District, Safety - Fire
24. Borrego Springs Fire Protection District, Miscellaneous
25. Borrego Water District, Miscellaneous
26. Broadmoor Police Protection District, Miscellaneous
27. Broadmoor Police Protection District, Safety - Police
28. Brooktrails Township Community Services District, Safety - Fire
29. Buena Park Library District, Miscellaneous
30. Butte County Air Quality Management District, Miscellaneous
31. Butte Schools Self-Funded Programs, Miscellaneous
32. California Firefighter's Joint Apprenticeship Committee, Safety - Fire
33. California Intergovernmental Risk Authority, Miscellaneous
34. California Pines Community Services District, Miscellaneous
35. Cambria Community Healthcare District, Miscellaneous
36. Cambria Community Healthcare District, Safety - Fire
37. Cameron Park Community Services District, Miscellaneous
38. Cameron Park Community Services District, Safety - Fire
39. Camrosa Water District, Miscellaneous
40. Casitas Municipal Water District, Miscellaneous
41. Castaic Lake Water Agency, Miscellaneous
42. Castro Valley Sanitary District, Miscellaneous
43. Central Calaveras Fire and Rescue Protection District, Safety - Fire
44. Central Coast Water Authority, Miscellaneous
45. Central Valley Regional Center, Inc., Miscellaneous
46. City and County of San Francisco, Miscellaneous
47. City of Adelanto, Safety - Police
48. City of Agoura Hills, Miscellaneous
49. City of Alameda, Miscellaneous
50. City of Alameda, Safety - Fire
51. City of Alameda, Safety - Police
52. City of Alhambra, Miscellaneous
53. City of Alhambra, Safety - Fire
54. City of Alhambra, Safety - Police
55. City of Arcadia, Miscellaneous
56. City of Arcadia, Safety - Police
57. City of Bell, Safety - Fire
58. City of Bell, Safety - Police
59. City of Belvedere, Miscellaneous
60. City of Belvedere, Safety - Police
61. City of Benicia, Miscellaneous
62. City of Berkeley, Miscellaneous
63. City of Brentwood, Miscellaneous
64. City of Brentwood, Safety - Fire
65. City of Brentwood, Safety - Police
66. City of Brisbane, Miscellaneous
67. City of Brisbane, Safety - Fire
68. City of Brisbane, Safety - Police
69. City of Burlingame, Miscellaneous
70. City of Calabasas, Miscellaneous
71. City of Campbell, Miscellaneous
72. City of Carlsbad, Miscellaneous
73. City of Carlsbad, Safety - Police
74. City of Claremont, Miscellaneous
75. City of Claremont, Safety - Police
76. City of Clayton, Miscellaneous
77. City of Compton, Miscellaneous
78. City of Compton, Safety - Police
79. City of Corona, Safety - Police



80. City of Costa Mesa, Miscellaneous
81. City of Costa Mesa, Safety - Fire
82. City of Costa Mesa, Safety - Police
83. City of Cypress, Miscellaneous
84. City of Daly City, Miscellaneous
85. City of Daly City, Safety - Police
86. City of Dana Point, Miscellaneous
87. City of Del Mar, Miscellaneous
88. City of Dinuba, Miscellaneous
89. City of Dinuba, Safety - Fire
90. City of Dinuba, Safety - Police
91. City of Downey, Safety - Fire
92. City of Downey, Safety - Police
93. City of Duarte, Miscellaneous
94. City of Dublin, Miscellaneous
95. City of East Palo Alto, Miscellaneous
96. City of East Palo Alto, Safety - Police
97. City of El Cajon, Safety - Fire
98. City of El Cajon, Safety - Police
99. City of El Centro, Miscellaneous
100. City of Emeryville, Miscellaneous
101. City of Encinitas, Miscellaneous
102. City of Encinitas, Safety - Fire
103. City of Encinitas, Safety - Other Safety
104. City of Eureka, Miscellaneous
105. City of Exeter, Safety - Police
106. City of Fortuna, Safety - Police
107. City of Gardena, Miscellaneous
108. City of Gardena, Safety - Fire
109. City of Gardena, Safety - Police
110. City of Gilroy, Miscellaneous
111. City of Gridley, Miscellaneous
112. City of Gridley, Safety - Fire
113. City of Gridley, Safety - Police
114. City of Half Moon Bay, Miscellaneous
115. City of Hanford, Miscellaneous
116. City of Hayward, Safety - Fire
117. City of Hayward, Safety - Police
118. City of Hemet, Safety - Fire
119. City of Hercules, Miscellaneous
120. City of Hercules, Safety - Police
121. City of Hermosa Beach, Miscellaneous
122. City of Hermosa Beach, Safety - Fire
123. City of Hermosa Beach, Safety - Police
124. City of Highland, Miscellaneous
125. City of Inglewood, Miscellaneous
126. City of Inglewood, Safety - Fire
127. City of La Mesa, Safety - Fire
128. City of La Mesa, Safety - Police
129. City of La Quinta, Miscellaneous
130. City of Laguna Hills, Miscellaneous
131. City of Laguna Niguel, Miscellaneous
132. City of Lake Forest, Miscellaneous
133. City of Lancaster, Miscellaneous
134. City of Larkspur, Miscellaneous
135. City of Lathrop, Miscellaneous
136. City of Lodi, Miscellaneous
137. City of Lodi, Safety - Fire
138. City of Lodi, Safety - Police
139. City of Lompoc, Miscellaneous
140. City of Los Altos, Miscellaneous
141. City of Los Altos, Safety - Police
142. City of Lynwood, Safety - Fire
143. City of Manhattan Beach, Miscellaneous
144. City of Marysville, Miscellaneous
145. City of Menlo Park, Safety - Police
146. City of Mill Valley, Miscellaneous
147. City of Milpitas, Miscellaneous
148. City of Milpitas, Safety - Fire
149. City of Mission Viejo, Miscellaneous
150. City of Modesto, Miscellaneous
151. City of Montclair, Safety - Police
152. City of Montebello, Safety - Fire
153. City of Montebello, Safety - Police
154. City of Mountain View, Miscellaneous
155. City of National City, Miscellaneous
156. City of National City, Safety - Fire
157. City of National City, Safety - Police
158. City of Norwalk, Miscellaneous
159. City of Oakdale, Miscellaneous
160. City of Oakdale, Safety - Police
161. City of Oakland, Safety - Fire
162. City of Oceanside, Miscellaneous
163. City of Oceanside, Safety - Fire

164. City of Oceanside, Safety - Police
165. City of Oxnard, Safety - Police
166. City of Palmdale, Miscellaneous
167. City of Palos Verdes Estates, Miscellaneous
168. City of Patterson, Miscellaneous
169. City of Petaluma, Miscellaneous
170. City of Pinole, Miscellaneous
171. City of Pinole, Safety - Fire
172. City of Pinole, Safety - Police
173. City of Pleasant Hill, Miscellaneous
174. City of Pleasant Hill, Safety - Police
175. City of Pleasanton, Miscellaneous
176. City of Redwood City, Miscellaneous
177. City of Riverside, Miscellaneous
178. City of Riverside, Safety - Fire
179. City of Riverside, Safety - Police
180. City of Rohnert Park, Miscellaneous
181. City of Rohnert Park, Safety - Fire
182. City of Rohnert Park, Safety - Police
183. City of Roseville, Miscellaneous
184. City of Roseville, Safety - Fire
185. City of San Buenaventura, Safety - Fire
186. City of San Carlos, Safety - Police
187. City of San Dimas, Miscellaneous
188. City of San Joaquin, Miscellaneous
189. City of San Jose, Miscellaneous
190. City of San Luis Obispo, Safety - Fire
191. City of San Marino, Safety - Police
192. City of San Pablo, Miscellaneous
193. City of San Pablo, Safety - Police
194. City of Santa Cruz, Miscellaneous
195. City of Santa Cruz, Safety - Fire
196. City of Santa Cruz, Safety - Police
197. City of Santa Paula, Miscellaneous
198. City of Santa Paula, Safety - Police
199. City of Santee, Miscellaneous
200. City of Saratoga, Miscellaneous
201. City of Seal Beach, Miscellaneous
202. City of Seal Beach, Safety - Other Safety
203. City of Seal Beach, Safety - Police
204. City of Sebastopol, Miscellaneous
205. City of Sebastopol, Safety - Fire
206. City of Sebastopol, Safety - Police
207. City of Sonoma, Miscellaneous
208. City of Sonoma, Safety - Fire
209. City of South San Francisco, Safety - Fire
210. City of South San Francisco, Safety - Police
211. City of Suisun City, Miscellaneous
212. City of Suisun City, Safety - Fire
213. City of Sunnyvale, Miscellaneous
214. City of Sunnyvale, Safety - Police
215. City of Turlock, Miscellaneous
216. City of Tustin, Miscellaneous
217. City of Twentynine Palms, Miscellaneous
218. City of Ukiah, Miscellaneous
219. City of Ukiah, Safety - Fire
220. City of Union City, Miscellaneous
221. City of Upland, Miscellaneous
222. City of Upland, Safety - Fire
223. City of Upland, Safety - Police
224. City of Vernon, Miscellaneous
225. City of Vernon, Safety - Prosecutor
226. City of Victorville, Safety - Police
227. City of West Sacramento, Miscellaneous
228. City of West Sacramento, Safety - Police
229. City of Whittier, Miscellaneous
230. City of Whittier, Safety - Police
231. City of Woodlake, Miscellaneous
232. City of Woodlake, Safety - Police
233. City of Yucaipa, Miscellaneous
234. Coachella Valley Association of Governments, Miscellaneous
235. Coast Life Support District, Miscellaneous
236. Coast Life Support District, Safety - Fire
237. Coastal Developmental Services Fdn DBA Westside Regional Center, Miscellaneous
238. Compton Unified School District, Safety - Police
239. Contra Costa County Schools Insurance Group, Miscellaneous
240. Cooperative Personnel Services, Miscellaneous
241. Cottonwood Fire Protection District, Safety - Fire
242. County of Amador, Safety - County Peace Officer
243. County of Amador, Safety - Fire
244. County of Amador, Safety - Prosecutor
245. County of El Dorado, Miscellaneous
246. County of Inyo, Safety - County Peace Officer

247. County of Lassen, Safety - County Peace Officer
248. County of Plumas, Miscellaneous
249. County of Santa Cruz, Safety - County Peace Officer
250. County of Santa Cruz, Safety - Sheriff
251. County of Yuba, Miscellaneous
252. County of Yuba, Safety - County Peace Officer
253. Crestline Lake Arrowhead Water Agency, Miscellaneous
254. Dairy Council of California, Miscellaneous
255. Del Norte County Library District, Miscellaneous
256. Dougherty Regional Fire Authority, Miscellaneous
257. Dougherty Regional Fire Authority, Safety - Fire
258. El Dorado County Fire Protection District, Miscellaneous
259. El Dorado County Fire Protection District, Safety - Fire
260. El Dorado County Transit Authority, Miscellaneous
261. El Dorado Hills County Water District, Miscellaneous
262. Encina Wastewater Authority, Miscellaneous
263. Encinitas Fire Protection District, Miscellaneous
264. Encinitas Fire Protection District, Safety - Fire
265. Feather River Air Quality Management District, Miscellaneous
266. Fontana Unified School District, Safety - Police
267. Fort Ord Reuse Authority, Miscellaneous
268. Georgetown Fire Protection District, Miscellaneous
269. Georgetown Fire Protection District, Safety - Fire
270. Greater Anaheim Special Education Local Plan Area, Miscellaneous
271. Greater Vallejo Recreation District, Miscellaneous
272. Green Valley County Water District, Miscellaneous
273. Grossmont Healthcare District, Miscellaneous
274. Gualala Community Services District, Miscellaneous
275. Henry Miller Reclamation District No. 2131, Miscellaneous
276. Higgins Area Fire Protection District, Miscellaneous
277. Higgins Area Fire Protection District, Safety - Fire
278. Hilton Creek Community Services District, Miscellaneous
279. Housing Authority of the City of Madera, Miscellaneous
280. Human Rights/Fair Housing Commission of the City and County of Sacramento, Miscellaneous
281. Humboldt Bay Harbor Recreation and Conservation District, Miscellaneous
282. Humboldt No. 1 Fire Protection District of Humboldt County, Safety - Fire
283. Independent Cities Association, Inc., Miscellaneous
284. Indian Wells Valley Water District, Miscellaneous
285. Inland Counties Regional Center, Inc., Miscellaneous
286. Inland Empire Health Plan, Miscellaneous
287. Isla Vista Recreation and Park District, Miscellaneous
288. June Lake Public Utility District, Miscellaneous
289. Kern Health Systems, Miscellaneous
290. Kings Mosquito Abatement District, Miscellaneous
291. Laguna Beach County Water District, Miscellaneous
292. Lake Don Pedro Community Services District, Miscellaneous
293. Leucadia Wastewater District, Miscellaneous
294. Los Angeles County Area 'E' Civil Defense and Disaster Board, Miscellaneous
295. Los Angeles County Sanitation District No. 2, Miscellaneous
296. Los Angeles County West Vector Control District, Miscellaneous
297. Los Angeles Regionalized Insurance Services Authority, Miscellaneous
298. Los Gatos-Saratoga Department of Community Education and Recreation, Miscellaneous
299. Los Osos Community Services District, Miscellaneous
300. Los Osos Community Services District, Safety - Fire
301. Majestic Pines Community Services District, Miscellaneous
302. Management of Emeryville Services Authority, Miscellaneous
303. Meeks Bay Fire Protection District, Miscellaneous
304. Mendocino Transit Authority, Miscellaneous
305. Metropolitan Transportation Commission, Miscellaneous
306. Mid City Development Corporation, Miscellaneous
307. Minter Field Airport District, Miscellaneous
308. Mojave Air and Space Port, Safety - Fire
309. Mojave Water Agency, Miscellaneous
310. Montecito Fire Protection District, Miscellaneous
311. Montecito Fire Protection District, Safety - Fire
312. Monterey County Regional Fire Protection District, Miscellaneous
313. Monterey County Regional Fire Protection District, Safety - Fire
314. Monterey One Water, Miscellaneous
315. Monterey Regional Waste Management District, Miscellaneous
316. Mountains Recreation and Conservation Authority, Miscellaneous
317. Murrieta Fire Protection District, Miscellaneous
318. Nevada Irrigation District, Miscellaneous
319. North Bay Schools Insurance Authority, Miscellaneous

320. North County Fire Protection District of Monterey County, Safety - Fire
321. North Tahoe Fire Protection District, Miscellaneous
322. North Tahoe Fire Protection District, Safety - Fire
323. Northern Sierra Air Quality Management District, Miscellaneous
324. Novato Sanitary District, Miscellaneous
325. Oakdale Rural Fire Protection District, Miscellaneous
326. Oakdale Rural Fire Protection District, Safety - Fire
327. Oakland Unified School District, Safety - Police
328. Ojai Valley Sanitary District, Miscellaneous
329. Ophir Hill Fire Protection District, Miscellaneous
330. Ophir Hill Fire Protection District, Safety - Fire
331. Orange County Health Authority, Miscellaneous
332. Orange County Transportation Authority, Miscellaneous
333. Pajaro Valley Fire Protection Agency, Safety - Fire
334. Peardale Chicago Park Fire Protection District, Safety - Fire
335. Peninsula Fire Protection District, Miscellaneous
336. Penn Valley Fire Protection District, Miscellaneous
337. Personal Assistance Services Council, Miscellaneous
338. Placer Hills Fire Protection District, Miscellaneous
339. Pleasant Hill - Martinez Joint Facilities Agency, Miscellaneous
340. Pomona Valley Transportation Authority, Miscellaneous
341. Public Entity Risk Management Authority, Miscellaneous
342. Public Transportation Services Corporation, Miscellaneous
343. Quincy Community Services District, Miscellaneous
344. Rancho Murieta Community Services District, Miscellaneous
345. Redwood Empire School Insurance Group, Miscellaneous
346. Rescue Fire Protection District, Miscellaneous
347. Rincon Del Diablo Municipal Water District, Safety - Fire
348. Riverbank City Housing Authority, Miscellaneous
349. Riverside County Department of Waste Resources, Miscellaneous
350. Riverside County Transportation Commission, Miscellaneous
351. Roseville Public Cemetery District, Miscellaneous
352. Ross Valley Fire Department, Safety - Fire
353. Rural County Representatives of California, Miscellaneous
354. Russian River Fire Protection District, Miscellaneous
355. Russian River Fire Protection District, Safety - Fire
356. Sacramento Area Council of Governments, Miscellaneous
357. Sacramento Metropolitan Air Quality Management District, Miscellaneous
358. Sacramento Public Library Authority, Miscellaneous
359. Sacramento Regional Fire/EMS Communications Center, Miscellaneous
360. Sacramento Transportation Authority, Miscellaneous
361. Sacramento-Yolo Mosquito and Vector Control District, Miscellaneous
362. Salida Fire Protection District, Miscellaneous
363. Salida Fire Protection District, Safety - Fire
364. Samoa Peninsula Fire Protection District, Safety - Fire
365. San Andreas Regional Center, Inc., Miscellaneous
366. San Diego County Law Library, Miscellaneous
367. San Diego Rural Fire Protection District, Miscellaneous
368. San Diego Rural Fire Protection District, Safety - Fire
369. San Dieguito Water District, Miscellaneous
370. San Francisco Health Authority, Miscellaneous
371. San Joaquin Delta Community College District, Safety - Police
372. San Luis Obispo Regional Transit Authority, Miscellaneous
373. San Mateo County Harbor District, Miscellaneous
374. San Mateo County In-Home Supportive Services Public Authority, Miscellaneous
375. Santa Barbara Regional Health Authority, Miscellaneous
376. Santa Clara County Central Fire Protection District, Miscellaneous
377. Santa Clara County Central Fire Protection District, Safety - Fire
378. Santa Clara County Health Authority, Miscellaneous
379. Santa Clarita Valley School Food Services Agency, Miscellaneous
380. Santa Cruz Metropolitan Transit District, Miscellaneous
381. Santa Cruz Regional 9-1-1, Miscellaneous
382. Santa Fe Irrigation District, Miscellaneous
383. Santa Maria Public Airport District, Miscellaneous
384. School Risk And Insurance Management Group, Miscellaneous
385. Schools Excess Liability Fund, Miscellaneous
386. Scotts Valley Water District, Miscellaneous
387. Sewer Authority Mid-Coastside, Miscellaneous
388. Shasta Lake Fire Protection District, Safety - Fire
389. Solano Cemetery District, Miscellaneous
390. Solano County Water Agency, Miscellaneous
391. Solano Transportation Authority, Miscellaneous
392. Southern California Regional Rail Authority, Miscellaneous
393. Stockton Unified School District, Safety - Police
394. Sunnyslope County Water District, Miscellaneous

- 395. Sweetwater Springs Water District, Miscellaneous
- 396. Tahoe-Truckee Sanitation Agency, Miscellaneous
- 397. Tehama County Mosquito Abatement District, Miscellaneous
- 398. Town of Atherton, Miscellaneous
- 399. Town of Atherton, Safety - Police
- 400. Town of Fairfax, Miscellaneous
- 401. Town of Fairfax, Safety - Police
- 402. Town of Loomis, Miscellaneous
- 403. Town of Truckee, Miscellaneous
- 404. Town of Yucca Valley, Miscellaneous
- 405. Transportation Agency for Monterey County, Miscellaneous
- 406. Tri-City Mental Health Center, Miscellaneous
- 407. Tri-Counties Association for the Developmentally Disabled,  
Miscellaneous
- 408. Tuolumne Utilities District, Miscellaneous
- 409. Valley Mountain Regional Center, Inc., Miscellaneous
- 410. Valley-Wide Recreation and Park District, Miscellaneous
- 411. Ventura County Schools Business Services Authority,  
Miscellaneous
- 412. Victor Valley Wastewater Reclamation Authority,  
Miscellaneous
- 413. Water Facilities Authority, Miscellaneous
- 414. Weaverville Community Services District, Miscellaneous
- 415. West Almanor Community Services District, Safety - Fire
- 416. West Cities Communication Center, Miscellaneous
- 417. West End Communications Authority, Miscellaneous
- 418. West Valley-Mission Community College District, Safety -  
Police
- 419. Westlands Water District, Miscellaneous
- 420. Yolo County Public Agency Risk Management Insurance  
Authority, Miscellaneous
- 421. Yolo County Transportation District, Miscellaneous
- 422. Yuba County Water Agency, Miscellaneous
- 423. Yuba Sutter Transit Authority, Miscellaneous

## Level 4

1. Academic Senate for California Community Colleges, Miscellaneous
2. Alameda County Congestion Management Agency, Miscellaneous
3. Alameda County Schools Insurance Group, Miscellaneous
4. Alameda County Transportation Commission, Miscellaneous
5. Alameda County Transportation Improvement Authority, Miscellaneous
6. Alameda County Waste Management Authority, Miscellaneous
7. Alameda County Water District, Miscellaneous
8. Albany Municipal Services Joint Powers Authority, Miscellaneous
9. Alliance of Schools for Cooperative Insurance Programs, Miscellaneous
10. Alpine Fire Protection District, Miscellaneous
11. Alpine Fire Protection District, Safety - Fire
12. Amador County Transportation Commission, Miscellaneous
13. Aptos/La Selva Fire Protection Agency, Safety - Fire
14. Association of California Water Agencies - Joint Powers Insurance Authority, Miscellaneous
15. Bay Area Water Supply and Conservation Agency, Miscellaneous
16. Belmont Fire Protection District, Safety - Fire
17. Berkeley Housing Authority, Miscellaneous
18. Big Bear Area Regional Wastewater Agency, Miscellaneous
19. Big Bear City Airport District, Miscellaneous
20. Black Gold Cooperative Library System, Miscellaneous
21. Blue Lake Fire Protection District, Safety - Fire
22. Bolinas Community Public Utility District, Miscellaneous
23. Bonita-Sunnyside Fire Protection District, Safety - Fire
24. Borrego Springs Fire Protection District, Safety - Fire
25. Boulder Creek Fire Protection District, Safety - Fire
26. Butte County Association of Governments, Miscellaneous
27. Butte County Fair Association, Miscellaneous
28. Butte County In-Home Supportive Services Public Authority, Miscellaneous
29. Butte Local Agency Formation Commission, Miscellaneous
30. Butte-Glenn Community College District, Safety - Police
31. Calaveras Council of Governments, Miscellaneous
32. California Firefighter's Joint Apprenticeship Committee, Miscellaneous
33. California Interscholastic Federation, Northern Section, Miscellaneous
34. California Joint Powers Risk Management Authority, Miscellaneous
35. California Pines Community Services District, Safety - Fire
36. California Redevelopment Association Foundation, Miscellaneous
37. Carmel Regional Fire Ambulance Authority, Safety - Fire
38. Central Calaveras Fire and Rescue Protection District, Miscellaneous
39. Central Contra Costa Solid Waste Authority, Miscellaneous
40. Central County Fire Department, Miscellaneous
41. Central County Fire Department, Safety - Fire
42. Central Fire Protection District of Santa Cruz County, Safety - Fire
43. Central Marin Fire Authority, Miscellaneous
44. Central Marin Fire Authority, Safety - Fire
45. Central Marin Police Authority, Miscellaneous
46. Central Marin Police Authority, Safety - Police
47. Central Marin Sanitation Agency, Miscellaneous
48. Children and Families Commission of San Luis Obispo County, Miscellaneous
49. Chino Basin Watermaster, Miscellaneous
50. Chino Valley Independent Fire District, Miscellaneous
51. Chino Valley Independent Fire District, Safety - Fire
52. City of Adelanto, Miscellaneous
53. City of Albany, Safety - Fire
54. City of Albany, Safety - Police
55. City of Anaheim, Miscellaneous
56. City of Anaheim, Safety - Fire
57. City of Anaheim, Safety - Police
58. City of Arcadia, Safety - Fire
59. City of Atascadero, Safety - Fire
60. City of Atascadero, Safety - Police
61. City of Auburn, Safety - Fire
62. City of Auburn, Safety - Police
63. City of Azusa, Miscellaneous
64. City of Azusa, Safety - Police
65. City of Bakersfield, Miscellaneous
66. City of Bakersfield, Safety - Fire
67. City of Bakersfield, Safety - Police
68. City of Barstow, Miscellaneous
69. City of Barstow, Safety - Police
70. City of Beaumont, Safety - Police
71. City of Bell Gardens, Miscellaneous

72. City of Bell Gardens, Safety - Police  
73. City of Belmont, Miscellaneous  
74. City of Belmont, Safety - Police  
75. City of Benicia, Safety - Fire  
76. City of Benicia, Safety - Police  
77. City of Berkeley, Safety - Police  
78. City of Beverly Hills, Miscellaneous  
79. City of Beverly Hills, Safety - Fire  
80. City of Beverly Hills, Safety - Police  
81. City of Bishop, Safety - Fire  
82. City of Brea, Miscellaneous  
83. City of Brea, Safety - Fire  
84. City of Brea, Safety - Police  
85. City of Buena Park, Miscellaneous  
86. City of Buena Park, Safety - Fire  
87. City of Buena Park, Safety - Police  
88. City of Burbank, Miscellaneous  
89. City of Burbank, Safety - Fire  
90. City of Burbank, Safety - Police  
91. City of Burlingame, Safety - Police  
92. City of California City, Miscellaneous  
93. City of California City, Safety - Fire  
94. City of California City, Safety - Police  
95. City of Camarillo, Miscellaneous  
96. City of Campbell, Safety - Police  
97. City of Carlsbad, Safety - Fire  
98. City of Carmel-By-The-Sea, Miscellaneous  
99. City of Carmel-By-The-Sea, Safety - Fire  
100. City of Carmel-By-The-Sea, Safety - Police  
101. City of Carson, Miscellaneous  
102. City of Cathedral City, Miscellaneous  
103. City of Cathedral City, Safety - Fire  
104. City of Cathedral City, Safety - Police  
105. City of Cerritos, Miscellaneous  
106. City of Chico, Miscellaneous  
107. City of Chico, Safety - Fire  
108. City of Chico, Safety - Police  
109. City of Chino, Miscellaneous  
110. City of Chino, Safety - Police  
111. City of Chowchilla, Miscellaneous  
112. City of Chowchilla, Safety - Fire  
113. City of Chowchilla, Safety - Police

114. City of Chula Vista, Miscellaneous  
115. City of Chula Vista, Safety - Fire  
116. City of Chula Vista, Safety - Police  
117. City of Citrus Heights, Miscellaneous  
118. City of Citrus Heights, Safety - Police  
119. City of Clayton, Safety - Police  
120. City of Cloverdale, Miscellaneous  
121. City of Cloverdale, Safety - Fire  
122. City of Cloverdale, Safety - Police  
123. City of Clovis, Miscellaneous  
124. City of Clovis, Safety - Fire  
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22. City of Madera, Miscellaneous
23. City of Madera, Safety - Police
24. City of Maywood, Miscellaneous
25. City of Mill Valley, Safety - Fire
26. City of Mill Valley, Safety - Police
27. City of Modesto, Safety - Fire
28. City of Modesto, Safety - Police
29. City of Monterey, Safety - Fire
30. City of Monterey, Safety - Police
31. City of Napa, Miscellaneous
32. City of Napa, Safety - Fire
33. City of Newark, Miscellaneous
34. City of Newark, Safety - Fire
35. City of Newark, Safety - Police
36. City of Oceanside, Safety - Other Safety
37. City of Poway, Miscellaneous
38. City of Poway, Safety - Fire
39. City of Rancho Cordova, Miscellaneous
40. City of Rancho Santa Margarita, Miscellaneous
41. City of Redding, Miscellaneous
42. City of Sacramento, Safety - Police
43. City of Salinas, Safety - Police
44. City of San Carlos, Safety - Fire
45. City of San Marcos, Safety - Fire
46. City of Santa Clarita, Miscellaneous
47. City of Santee, Safety - Fire
48. City of Shasta Lake, Miscellaneous
49. City of Solana Beach, Safety - Fire
50. City of South Lake Tahoe, Miscellaneous
51. City of South Lake Tahoe, Safety - Fire
52. City of Yuba City, Miscellaneous
53. City of Yuba City, Safety - Fire
54. City of Yuba City, Safety - Police
55. Coalinga/Huron Unified School District Library District, Miscellaneous
56. Coastal Animal Services Authority, Miscellaneous
57. Contra Costa Community College District, Safety - Police
58. Cooperative Organization for the Development of Employee Selection Procedures, Miscellaneous
59. County of Riverside, Miscellaneous
60. County of Riverside, Safety - County Peace Officer
61. County of Riverside, Safety - Fire
62. Foothill Municipal Water District, Miscellaneous
63. Foundation for California Community Colleges, Miscellaneous
64. Greater Los Angeles County Vector Control District, Miscellaneous
65. Greenfield Fire Protection District, Safety - Fire
66. Hesperia Unified School District, Safety - Police
67. Housing Authority of the County of Santa Cruz, Miscellaneous
68. Inland Empire Resource Conservation District, Miscellaneous
69. Jurupa Area Recreation and Park District, Miscellaneous
70. Loomis Fire Protection District, Miscellaneous
71. Loomis Fire Protection District, Safety - Fire
72. Marin Children and Families Commission, Miscellaneous
73. Marin County In-Home Supportive Services Public Authority, Miscellaneous
74. Menlo Park Fire Protection District, Miscellaneous
75. Menlo Park Fire Protection District, Safety - Fire
76. Midpeninsula Regional Open Space District, Miscellaneous

77. Mojave Air and Space Port, Miscellaneous
78. North Bay Cooperative Library System, Miscellaneous
79. North Delta Water Agency, Miscellaneous
80. Oceano Community Services District, Safety - Fire
81. Penryn Fire Protection District, Safety - Fire
82. Plumas Local Agency Formation Commission, Miscellaneous
83. Redwood Coast Regional Center, Miscellaneous
84. Regional Center of the East Bay, Miscellaneous
85. Sacramento Area Flood Control Agency, Miscellaneous
86. San Diego County Office Of Education, Miscellaneous
87. San Elijo Joint Powers Authority, Miscellaneous
88. San Francisquito Creek Joint Powers Authority, Miscellaneous
89. Santa Clara Valley Open Space Authority, Miscellaneous
90. Santa Monica Community College District, Safety - Police
91. Schools Insurance Authority, Miscellaneous
92. Scotts Valley Fire Protection District, Miscellaneous
93. Scotts Valley Fire Protection District, Safety - Fire
94. Shasta Local Agency Formation Commission, Miscellaneous
95. Sonoma Marin Area Rail Transit District, Miscellaneous
96. State and Federal Contractors Water Agency, Miscellaneous
97. Stege Sanitary District, Miscellaneous
98. Town of Truckee, Safety - Police
99. Utica Water and Power Authority, Miscellaneous
100. Vallejo Flood and Wastewater District, Miscellaneous
101. Williams Fire Protection Authority, Miscellaneous
102. Williams Fire Protection Authority, Safety - Fire
103. Yolo County In-Home Supportive Services Public Authority,  
Miscellaneous
104. Yuba Community College District, Safety - Polices



# Appendix F – Glossary

## **Accrued Liability (Actuarial Accrued Liability)**

The portion of the Present Value of Benefits allocated to prior years. It can also be expressed as the Present Value of Benefits minus the present value of future Normal Cost. Different actuarial cost methods and different assumptions will lead to different measures of Accrued Liability.

## **Actuarial Assumptions**

Assumptions made about certain events that will affect pension costs. Assumptions generally can be broken down into two categories: demographic and economic. Demographic assumptions include such things as mortality, disability, and retirement rates. Economic assumptions include discount rate, wage inflation, and price inflation.

## **Actuarial Methods**

Procedures employed by actuaries to achieve certain funding goals of a pension plan. Actuarial methods include an actuarial cost method, an amortization policy, and an asset valuation method.

## **Actuarial Valuation**

The determination as of a valuation date of the Normal Cost, Accrued Liability, and related actuarial present values for a pension plan. These valuations are performed annually or when an employer is contemplating a change in plan provisions.

## **Actuary**

A business professional proficient in mathematics and statistics who performs the calculations necessary to properly fund a pension plan and allow the plan sponsor to disclose its liabilities. An actuary performing an actuarial valuation for a public retirement system in California must satisfy the qualification standards for actuaries issuing statements of actuarial opinion in the United States with regard to pensions.

## **Amortization Bases**

Separate payment schedules for different portions of the Unfunded Accrued Liability (UAL). The total UAL of a rate plan can be segregated by cause. The impact of such individual causes on the UAL are quantified at the time of their occurrence, resulting in new amortization bases. Each base is separately amortized and paid for over a specific period of time. Generally, in an actuarial valuation, the separate bases consist of changes in UAL due to contract amendments, actuarial assumption changes, method changes, and/or experience gains and losses.

## **Amortization Period**

The number of years required to pay off an Amortization Base.

## **Discount Rate**

This is the rate used to discount the expected future benefit payments to the valuation date to determine the Projected Value of Benefits. Different discount rates will produce different measures of the Projected Value of Benefits. The discount rate for funding purposes is based on the assumed long-term rate of return on plan assets, net of investment and administrative expenses. This rate is called the “actuarial interest rate” in Section 20014 of the California Public Employees’ Retirement Law.

## **Entry Age**

The earliest age at which a plan member begins to accrue benefits under a defined benefit pension plan. In most cases, this is the age of the member on their date of hire.

## **Entry Age Actuarial Cost Method**

An actuarial cost method that allocates the cost of the projected benefits on an individual basis as a level percent of earnings for the individual between entry age and retirement age. This method yields a total normal cost rate, expressed as a percentage of payroll, which is designed to remain level throughout the member’s career.

## **Fresh Start**

A Fresh Start is when multiple amortization bases are combined into a single base and amortized over a new Amortization Period.

## **Funded Ratio**

Defined as the Market Value of Assets divided by the Accrued Liability. Different actuarial cost methods and different assumptions will lead to different measures of Funded Ratio. The Funded Ratio with the Accrued Liability equal to the funding target is a measure of how well funded a rate plan is. A ratio greater than 100% means the rate plan has more assets than the funding target and the employer need only contribute the Normal Cost. A ratio less than 100% means assets are less than the funding target and contributions in addition to Normal Cost are required.

## Glossary (continued)

### **Funded Status**

Any comparison of a particular measure of plan assets to a particular measure of pension obligations. The methods and assumptions used to calculate a funded status should be consistent with the purpose of the measurement.

### **Funding Target**

The Accrued Liability measure upon which the funding requirements are based. The funding target is the Accrued Liability under the Entry Age Actuarial Cost Method using the assumptions adopted by the board.

### **Normal Cost**

The portion of the Present Value of Benefits allocated to the upcoming fiscal year for active employees. Different actuarial cost methods and different assumptions will lead to different measures of Normal Cost. The Normal Cost under the Entry Age Actuarial Cost Method, using the assumptions adopted by the board, plus the required amortization of the UAL, if any, make up the required contributions.

### **Present Value of Benefits (PVB)**

The total dollars needed as of the valuation date to fund all benefits earned in the past or expected to be earned in the future for *current* members.

### **Term Insurance Method**

An actuarial cost method designed such that contributions are made to the plan to meet benefit payments expected to fall due within the year for which the contribution is made.

### **Unfunded Accrued Liability (UAL)**

The Accrued Liability minus the Market Value of Assets. If the UAL for a rate plan is positive, the employer is required to make contributions in excess of the Normal Cost.

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