

1959 Survivor Benefit Program

Actuarial Valuation as of June 30, 2023

Required Contributions for Fiscal Year

July 1, 2024, through June 30, 2025

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Actuarial Certification



April 2024

To the best of our knowledge, this report is complete and accurate and contains sufficient information to fully and fairly disclose 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. This valuation is based on the survivor and membership data provided to the Actuarial Office, the statement of assets provided by the CalPERS Financial Office, and the benefits provided under this program. It is our opinion that this valuation has been performed in accordance with generally accepted actuarial principles, in accordance with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods are internally consistent and reasonable for this program, as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

The undersigned are actuaries for CalPERS, who are members of the American Academy of Actuaries and the Society of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

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Highlights and Executive Summary

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 1st, 2nd, 3rd, 4th, and Indexed Level pools, and the State and Schools 5th Level pools within the California Public Employees' Retirement System (CalPERS) was performed by CalPERS staff actuaries as of June 30, 2023 in order to:

- Set forth the funded status of the program, reflecting the assets and funding liabilities of this program as of June 30, 2023.
- Establish the actuarially required premiums for all levels and employee premiums for the Indexed Level, and State and Schools 5th Levels for the fiscal year July 1, 2024 through June 30, 2025; and
- Provide actuarial information as of June 30, 2023 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, 2023.

Plan	Accrued Liability ¹	Market Value of Assets	Funded Ratio
State 5 th Level Pool	\$152,615,077	\$120,264,494	78.8%
Schools 5 th Level Pool	14,282,181	102,193,009	715.5%
PA 1 st Level Pool	2,708,326	68,946,830	2,545.7%
PA 2 nd Level Pool	2,160,126	15,679,218	725.8%
PA 3 rd Level Pool	31,365,075	148,164,721	472.4%
PA 4 th Level Pool	149,612,700	154,622,524	103.3%
PA Indexed Level Pool	21,497,855	29,793,115	138.6%
Total	\$374,241,340	\$639,663,911	170.9%

(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.

Highlights and Executive Summary

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, 2024 through June 30, 2025. The premiums for fiscal year July 1, 2023 through June 30, 2024 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	2023-24 Premiums			2024-25 Premiums		
	Employer	Employee	Total	Employer	Employee	Total
State 5 th Level Pool ¹	\$6.35	\$6.35	\$12.70	\$6.60	\$6.60	\$13.20
Schools 5 th Level Pool ¹	\$0.00	\$2.00	\$2.00	\$0.00	\$2.00	\$2.00
PA 1 st Level Pool ²	\$0.00	\$2.00	\$2.00	\$0.00	\$2.00	\$2.00
PA 2 nd Level Pool ²	\$0.00	\$2.00	\$2.00	\$0.00	\$2.00	\$2.00
PA 3 rd Level Pool ²	\$0.00	\$2.00	\$2.00	\$0.00	\$2.00	\$2.00
PA 4 th Level Pool ²	\$5.20	\$2.00	\$7.20	\$5.80	\$2.00	\$7.80
PA Indexed Level Pool ¹	\$2.75	\$2.75	\$5.50	\$2.95	\$2.95	\$5.90

(1) For the Indexed Level and State and Schools 5th 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 5th Level pool will change from \$6.35 to \$6.60 per member, per month (or from \$2.94 to \$3.05 for biweekly paid members) for fiscal year 2024-25. This is in accordance with Section 21581(c), which specifies that for State and Schools 5th 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 \$2.75 to \$2.95 per member, per month (or from \$1.27 to \$1.37 for biweekly paid members) for fiscal year 2024-25. Employer premiums will change from \$2.75 to \$2.95 per member, per month. This increase is due to unfavorable investment experience in the past year.

Employee required premiums for Public Agency 1st, 2nd, and 3rd Level pools shall remain the same as in the prior year: \$2.00 per member, per month. There are no employer required premiums for these pools.

Employee required premiums for Public Agency 4th Level pool shall remain the same as in the prior year: \$2.00 per member, per month. Employer premiums will change from \$5.20 to \$5.80 per member, per month. This increase is due to unfavorable investment experience in the past year.

Highlights and Executive Summary

Changes Since the Prior Year's Valuation

Actuarial Methods and Assumptions

There are no significant changes to the actuarial methods and assumptions for the June 30, 2023 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, 2023 valuation may be found in Appendix B of this report.

Subsequent Changes

The required monthly premiums determined in this actuarial valuation report are based on demographic and financial information as of June 30, 2023. Changes subsequent to that date are not reflected. Investment returns below the assumed rate of return may increase future required monthly premiums while investment returns above the assumed rate of return may decrease future required monthly premiums.

This actuarial valuation report reflects statutory changes, regulatory changes, and board actions through January 2024. Any subsequent changes or actions are not reflected.

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Assets

Reconciliation of the Market Value of Assets

State 5 th Level	June 30, 2022	June 30, 2023
Beginning Balance	\$132,599,565	\$118,493,561
Contributions (Employer and Employee) Received During Fiscal Year	10,503,801	10,267,000
Benefit Payments During Fiscal Year	(14,705,250)	(15,066,329)
Net Transfer of Assets Into and Out of this Pool	—	—
Investment Earnings Credited	(9,904,555)	6,570,262
Ending Balance	\$118,493,561	\$120,264,494

Schools 5 th Level	June 30, 2022	June 30, 2023
Beginning Balance	\$107,430,815	\$98,145,312
Contributions (Employer and Employee) Received During Fiscal Year	210,204	218,747
Benefit Payments During Fiscal Year	(1,401,969)	(1,667,152)
Net Transfer of Assets Into and Out of this Pool	—	—
Investment Earnings Credited	(8,093,739)	5,496,102
Ending Balance	\$98,145,312	\$102,193,009

Public Agency 1 st Level	June 30, 2022	June 30, 2023
Beginning Balance	\$70,811,352	\$65,355,742
Contributions (Employer and Employee) Received During Fiscal Year	161,086	159,607
Benefit Payments During Fiscal Year	(252,836)	(252,838)
Net Transfer of Assets Into and Out of this Pool	—	—
Investment Earnings Credited	(5,363,860)	3,684,319
Ending Balance	\$65,355,742	\$68,946,830

Public Agency 2 nd Level	June 30, 2022	June 30, 2023
Beginning Balance	\$16,284,692	\$14,938,427
Contributions (Employer and Employee) Received During Fiscal Year	99,214	104,363
Benefit Payments During Fiscal Year	(217,551)	(201,857)
Net Transfer of Assets Into and Out of this Pool	—	—
Investment Earnings Credited	(1,227,930)	838,285
Ending Balance	\$14,938,427	\$15,679,218

Public Agency 3 rd Level	June 30, 2022	June 30, 2023
Beginning Balance	\$155,368,176	\$141,922,852
Contributions (Employer and Employee) Received During Fiscal Year	1,073,440	1,134,703
Benefit Payments During Fiscal Year	(2,795,327)	(2,856,647)
Net Transfer of Assets Into and Out of this Pool	—	—
Investment Earnings Credited	(11,723,437)	7,963,813
Ending Balance	\$141,922,852	\$148,164,721

Assets

Reconciliation of the Market Value of Assets (continued)

Public Agency 4 th Level	June 30, 2022	June 30, 2023
Beginning Balance	\$176,677,180	\$157,027,464
Contributions (Employer and Employee) Received During Fiscal Year	5,775,480	3,921,869
Benefit Payments During Fiscal Year	(13,755,031)	(13,678,612)
Net Transfer of Assets Into and Out of this Pool	—	—
Investment Earnings Credited	(11,670,165)	7,351,803
Ending Balance	\$157,027,464	\$154,622,524

Public Agency Indexed Level	June 30, 2022	June 30, 2023
Beginning Balance	\$32,409,114	\$29,314,086
Contributions (Employer and Employee) Received During Fiscal Year	633,482	362,698
Benefit Payments During Fiscal Year	(1,416,150)	(1,409,264)
Net Transfer of Assets Into and Out of this Pool	—	—
Investment Earnings Credited	(2,312,360)	1,525,595
Ending Balance	\$29,314,086	\$29,793,115

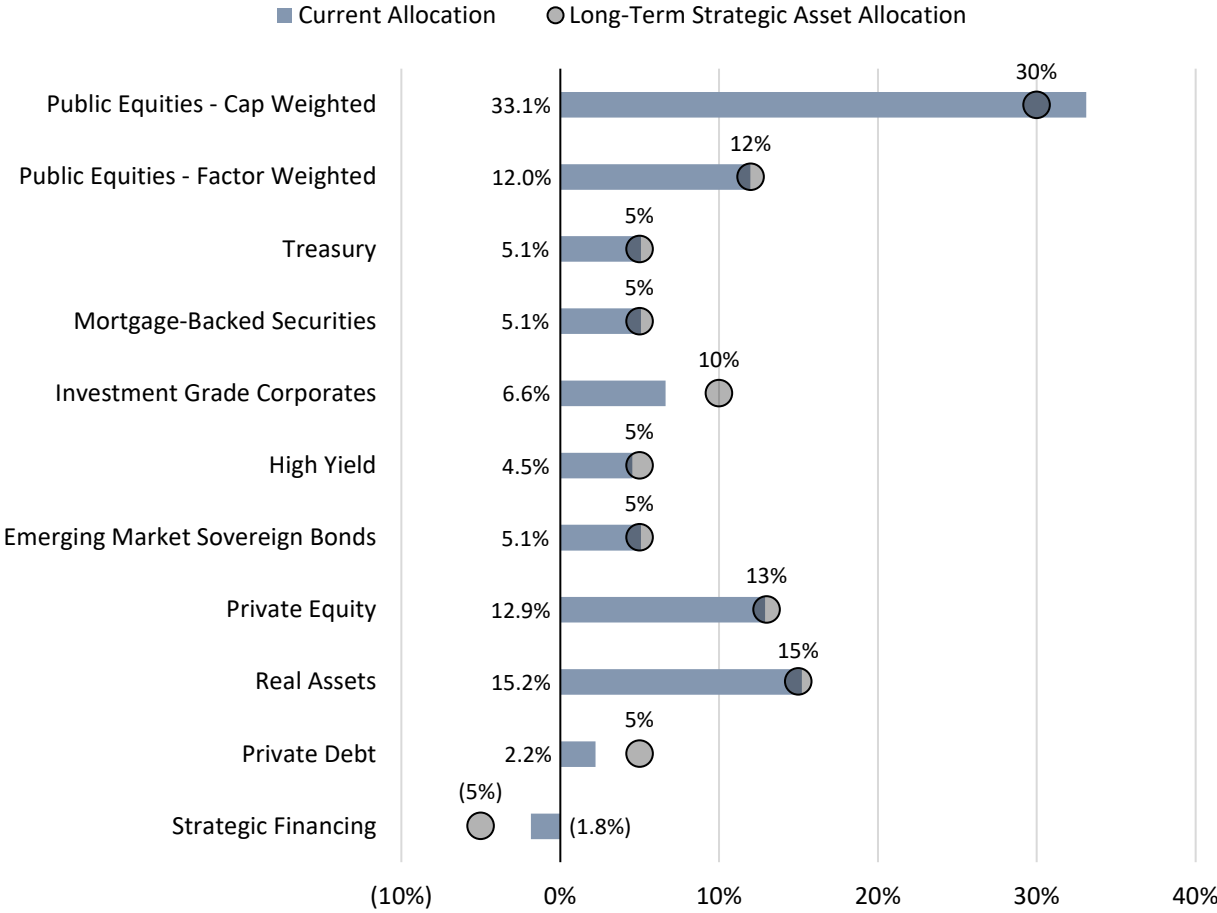
Assets

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.

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 November 17, 2021, the board adopted changes to the strategic asset allocation. The new allocation was effective July 1, 2022. The asset allocation as of June 30, 2023, is shown below, along with the long-term strategic asset allocations.



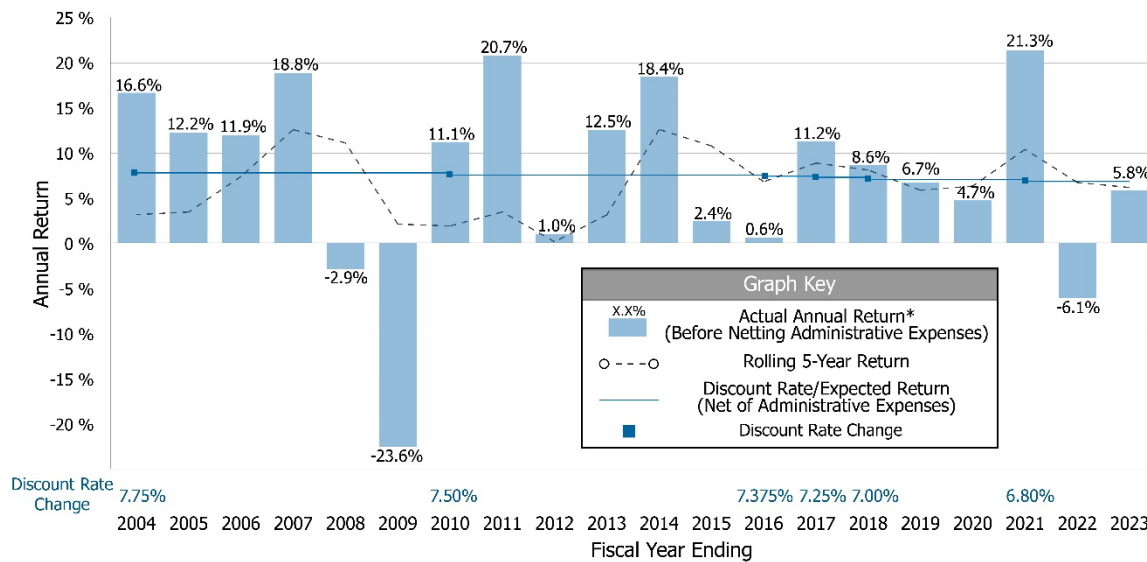
For more information see the [Trust Level Review as of June 30, 2023](#), which is available on the CalPERS website.

Assets

CalPERS History of Investment Returns

The following is a chart with the 20-year 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 a three-month lag on private equity and real assets for investment performance reporting purposes. This can lead to a timing difference 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 (2004 - 2023)



* As reported by the Investment Office with a 3-month lag on private equity and real assets 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, 2023 (figures reported are net of investment expenses but without reduction for administrative expenses). 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 in any given year the rate of return is volatile. The portfolio has an expected volatility of 12.0% per year based on the most recent Asset Liability Management study. The realized volatility is a measure of the risk of the portfolio expressed as the standard deviation of the fund's total monthly return distribution, expressed as an annual percentage. Due to their volatile nature, when looking at investment returns, it is more instructive to look at returns over longer time horizons.

History of CalPERS Compound Annual Rates of Return and Volatilities					
	1 year	5 year	10 year	20 year	30 year
Compound Annual Return	5.8%	6.1%	7.1%	7.0%	7.5%
Realized Volatility	—	9.5%	7.8%	8.4%	8.8%

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Liabilities and Funding Requirements

Key Results

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

State 5 th Level	June 30, 2022	June 30, 2023
Covered Active Members	75,812	74,885
Survivors Included in the Valuation		
Deferred (eligible, but not currently receiving benefits)	275	281
Receiving Benefits	1,420	1,406
Total	1,695	1,687
Accrued Liabilities	\$154,319,353	\$152,615,077
Market Value of Assets (MVA)	118,493,561	120,264,494
Unfunded Liability/(Excess Assets)	35,825,792	32,350,583
Required Employer Monthly Premium Per Member		
Before Amortization of Unfunded Liability/(Excess Assets)	\$8.30	\$9.10
After Amortization of Unfunded Liability/(Excess Assets)	\$12.70	\$13.20
After Employer/Employee Premium Sharing	\$6.35	\$6.60
Funded Ratio	76.8%	78.8%

Schools 5 th Level	June 30, 2022	June 30, 2023
Covered Active Members	10,390	10,815
Survivors Included in the Valuation		
Deferred (eligible, but not currently receiving benefits)	18	17
Receiving Benefits	145	147
Total	163	164
Accrued Liabilities	\$14,198,856	\$14,282,181
Market Value of Assets (MVA)	98,145,312	102,193,009
Unfunded Liability/(Excess Assets)	(83,946,456)	(87,910,828)
Required Employer Monthly Premium Per Member		
Before Amortization of Unfunded Liability/(Excess Assets)	\$5.70	\$6.30
After Amortization of Unfunded Liability/(Excess Assets)	\$0.00	\$0.00
After Employer/Employee Premium Sharing	\$0.00	\$0.00
Funded Ratio	691.2%	715.5%

Liabilities and Funding Requirements

Key Results (continued)

Public Agency 1 st Level	June 30, 2022	June 30, 2023
Covered Active Members	6,716	6,797
Survivors Included in the Valuation		
Deferred (eligible, but not currently receiving benefits)	24	23
Receiving Benefits	102	103
Total	126	126
Accrued Liabilities	\$2,731,767	\$2,708,326
Market Value of Assets (MVA)	65,355,742	68,946,830
Unfunded Liability/(Excess Assets)	(62,623,975)	(66,238,504)
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	2,392.4%	2,545.7%
Public Agency 2 nd Level	June 30, 2022	June 30, 2023
Covered Active Members	4,231	4,399
Survivors Included in the Valuation		
Deferred (eligible, but not currently receiving benefits)	16	15
Receiving Benefits	70	69
Total	86	84
Accrued Liabilities	\$2,217,975	\$2,160,126
Market Value of Assets (MVA)	14,938,427	15,679,218
Unfunded Liability/(Excess Assets)	(12,720,452)	(13,519,092)
Required Employer Monthly Premium Per Member		
Total Premium Required	\$1.70	\$1.80
Premium Required After Employee Contributions	\$0.00	\$0.00
Employer Premium After Amortization of Unfunded Liability/(Excess Assets)	\$0.00	\$0.00
Funded Ratio	673.5%	725.8%
Public Agency 3 rd Level	June 30, 2022	June 30, 2023
Covered Active Members	46,284	49,081
Survivors Included in the Valuation		
Deferred (eligible, but not currently receiving benefits)	166	159
Receiving Benefits	600	628
Total	766	787
Accrued Liabilities	\$30,753,269	\$31,365,075
Market Value of Assets (MVA)	141,922,852	148,164,721
Unfunded Liability/(Excess Assets)	(111,169,583)	(116,799,646)
Required Employer Monthly Premium Per Member		
Total Premium Required	\$2.70	\$2.80
Premium Required After Employee Contributions	\$0.70	\$0.80
Employer Premium After Amortization of Unfunded Liability/(Excess Assets)	\$0.00	\$0.00
Funded Ratio	461.5%	472.4%

Liabilities and Funding Requirements

Key Results (continued)

Public Agency 4 th Level	June 30, 2022	June 30, 2023
Covered Active Members	73,322	75,949
Survivors Included in the Valuation		
Deferred (eligible, but not currently receiving benefits)	181	176
Receiving Benefits	1,058	1,076
Total	1,239	1,252
Accrued Liabilities	\$148,619,003	\$149,612,700
Market Value of Assets (MVA)	157,027,464	154,622,524
Unfunded Liability/(Excess Assets)	(8,408,461)	(5,009,824)
Required Employer Monthly Premium Per Member		
Total Premium Required	\$7.50	\$7.90
Premium Required After Employee Contributions	\$5.50	\$5.90
Employer Premium After Amortization of Unfunded Liability/(Excess Assets)	\$5.20	\$5.80
Funded Ratio	105.7%	103.3%

Public Agency Indexed Level	June 30, 2022	June 30, 2023
Covered Active Members		
Counts	11,811	12,312
Average Attained Age	41.40	41.15
Average Years of Credited Service	9.32	9.01
Survivors Included in the Valuation		
Deferred (eligible, but not currently receiving benefits)	21	22
Receiving Benefits	112	115
Total	133	137
Accrued Liabilities	\$20,822,002	\$21,497,855
Market Value of Assets (MVA)	29,314,086	29,793,115
Unfunded Liability/(Excess Assets)	(8,492,084)	(8,295,260)
Required Employer Monthly Premium Per Member		
Before Amortization of Unfunded Liability/(Excess Assets)	\$9.50	\$9.80
After Amortization of Unfunded Liability/(Excess Assets)	\$5.50	\$5.90
After Employer/Employee Premium Sharing	\$2.75	\$2.95
Funded Ratio	140.8%	138.6%

Liabilities and Funding Requirements

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 5th Level Pool

Year	Present Value of Future Benefits (PVB)	Members	Weight	Normal Cost (PVB / Members / 12)
2013	\$7,001,469	71,180	1%	\$8.20
2014	6,781,756	72,848	3%	7.76
2015	6,557,793	74,372	5%	7.35
2016	7,552,847	75,782	7%	8.31
2017	5,775,398	76,638	9%	6.28
2018	4,066,199	77,362	11%	4.38
2019	6,957,696	78,011	13%	7.43
2020	8,477,509	78,713	15%	8.98
2021	11,408,099	76,995	17%	12.35
2022	11,513,065	75,812	19%	12.66
Final Weighted Average Normal Cost				\$9.10

Schools 5th Level Pool

Year	Present Value of Future Benefits (PVB)	Members	Weight	Normal Cost (PVB / Members / 12)
2013	\$434,475	9,944	1%	\$3.64
2014	356,592	10,287	3%	2.89
2015	693,955	10,490	5%	5.51
2016	200,586	10,259	7%	1.63
2017	874,049	10,557	9%	6.90
2018	979,346	10,894	11%	7.49
2019	1,207,583	11,190	13%	8.99
2020	207,932	11,219	15%	1.54
2021	995,922	10,413	17%	7.97
2022	1,054,050	10,390	19%	8.45
Final Weighted Average Normal Cost				\$6.30

Public Agencies 1st Level Pool

Year	Present Value of Future Benefits (PVB)	Members	Weight	Normal Cost (PVB / Members / 12)
2013	\$2,437,847	129,796	1%	\$1.57
2014	1,771,714	132,024	3%	1.12
2015	1,870,607	134,879	5%	1.16
2016	2,177,004	139,581	7%	1.30
2017	2,300,250	141,063	9%	1.36
2018	2,227,491	140,339	11%	1.32
2019	1,935,702	141,374	13%	1.14
2020	2,013,700	141,081	15%	1.19
2021	2,971,972	139,036	17%	1.78
2022	2,998,583	142,364	19%	1.76
Final Weighted Average Normal Cost				\$1.40

Liabilities and Funding Requirements

Development of Normal Costs (continued)

Public Agencies 2nd Level Pool

Year	Present Value of Future Benefits (PVB)	Members	Weight	Normal Cost (PVB / Members / 12)
2013	\$3,047,799	129,796	1%	\$1.96
2014	2,215,157	132,024	3%	1.40
2015	2,338,658	134,879	5%	1.44
2016	2,721,826	139,581	7%	1.62
2017	2,875,981	141,063	9%	1.70
2018	2,785,289	140,339	11%	1.65
2019	2,420,043	141,374	13%	1.43
2020	2,517,925	141,081	15%	1.49
2021	3,715,847	139,036	17%	2.23
2022	3,748,954	142,364	19%	2.19

Final Weighted Average Normal Cost \$1.80

Public Agencies 3rd Level Pool

Year	Present Value of Future Benefits (PVB)	Members	Weight	Normal Cost (PVB / Members / 12)
2013	\$4,744,073	129,796	1%	\$3.05
2014	3,448,999	132,024	3%	2.18
2015	3,640,399	134,879	5%	2.25
2016	4,237,503	139,581	7%	2.53
2017	4,477,909	141,063	9%	2.65
2018	4,338,427	140,339	11%	2.58
2019	3,767,093	141,374	13%	2.22
2020	3,921,749	141,081	15%	2.32
2021	5,785,697	139,036	17%	3.47
2022	5,836,218	142,364	19%	3.42

Final Weighted Average Normal Cost \$2.80

Public Agencies 4th Level Pool

Year	Present Value of Future Benefits (PVB)	Members	Weight	Normal Cost (PVB / Members / 12)
2013	\$13,510,031	129,796	1%	\$8.67
2014	9,687,436	132,024	3%	6.11
2015	10,319,088	134,879	5%	6.38
2016	12,032,521	139,581	7%	7.18
2017	12,656,392	141,063	9%	7.48
2018	12,191,609	140,339	11%	7.24
2019	10,773,476	141,374	13%	6.35
2020	11,045,570	141,081	15%	6.52
2021	16,443,707	139,036	17%	9.86
2022	16,429,251	142,364	19%	9.62

Final Weighted Average Normal Cost \$7.90

Liabilities and Funding Requirements

Development of Funding Requirements

The following table develops the annual premiums required for fiscal year 2024-25 for the State 5th and Schools 5th Level pools.

June 30, 2023	State 5 th Level	Schools 5 th Level
1) Development of Unfunded Liability		
a) Present Value of Future Benefits for Current Survivors as of 6/30/2023	\$150,761,077	\$13,868,181
b) Reserve for Unclaimed Benefits as of 6/30/2023	1,854,000	414,000
c) Total Accrued Liabilities as of 6/30/2023 [(1a) + (1b)]	152,615,077	14,282,181
d) Market Value of Assets as of 6/30/2023	120,264,494	102,193,009
e) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2023 [(1c) - (1d)]	\$32,350,583	(\$87,910,828)
2) Development of Normal Cost		
a) Total Per Member, Per Month 2023-24 Term Insurance Normal Cost rounded to the nearest \$0.10	\$9.10	\$6.30
3) 2024 Projected Unfunded Liability		
a) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2023 [(1e)]	\$32,350,583	(\$87,910,828)
b) Projected Normal Cost Contributions with Interest 7/1/2023 – 6/30/2024	7,802,148	735,148
c) Projected UAL Payment 7/1/2023 – 6/30/2024	3,750,109	(735,148)
d) Projected Required Contributions 7/1/2023 – 6/30/2024 [(3b) + (3c)]	11,552,257	—
e) Projected Employee Contributions 7/1/2023 – 6/30/2024	5,775,960	249,600
f) Changes in Contributions due to Contribution (Gain)/Loss ¹	(767,208)	(106,254)
g) Excess Assets due to Employee Contributions [maximum, (\$0, (3e) - (3d))]	—	249,600
h) Projected UAL/(Excess Assets) as of 6/30/2024 [(3a) * 1.068 - ((3c) + (3f) + (3g)) * 1.068^{1/2}]	\$31,467,771	(\$93,277,172)
4) Required Contribution		
a) Required Normal Cost Per Member, Per Month [(2a)]	\$9.10	\$6.30
b) Projected Active Members as of 6/30/2024	74,900	10,800
c) Required Normal Cost Contribution [(4a) * (4b) * 12 * (1.068) ^{1/2}]	\$8,452,595	\$843,784
d) Amortization of the UAL/(Excess Assets) ²	3,398,147	(843,784)
e) Total Required Contributions [(4c) + (4d)]	11,850,742	0.00
f) Required Contributions Per Member, Per Month [(4e) / (4b) / 12], rounded to the nearest \$0.10	\$13.20	\$0.00
g) Amortization Period	See Table on Pg. 20	30-year
5) 2024-25 Required Employer and Employee Premiums with Cost Sharing Provision		
a) Required Employee Premium Per Member, Per Month [maximum, (\$2, (4f) / 2)]	\$6.60	\$2.00
b) Required Employer Premium Per Member, Per Month [maximum, (\$0, (4f) - (5a))]	\$6.60	\$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.

Liabilities and Funding Requirements

Development of Funding Requirements (continued)

The following table develops the annual premiums required for fiscal year 2024-25 for the Public Agency 1st, 2nd, 3rd, and 4th Level pools.

June 30, 2023	Public Agency 1 st Level	Public Agency 2 nd Level	Public Agency 3 rd Level	Public Agency 4 th Level
1) Development of Unfunded Liability				
a) Present Value of Future Benefits for Current Survivors as of 6/30/2023	\$2,652,166	\$2,052,126	\$30,814,875	\$147,560,700
b) Reserve for Unclaimed Benefits as of 6/30/2023	56,160	108,000	550,200	2,052,000
c) Total Accrued Liabilities as of 6/30/2023 [(1a) + (1b)]	2,708,326	2,160,126	31,365,075	149,612,700
d) Market Value of Assets as of 6/30/2023	68,946,830	15,679,218	148,164,721	154,622,524
e) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2023 [(1c) - (1d)]	(\$66,238,504)	(\$13,519,092)	(\$116,799,646)	(\$5,009,824)
2) Development of Normal Cost				
a) Total Per Member, Per Month 2023-24 Term Insurance Normal Cost rounded to the nearest \$0.10	\$1.40	\$1.80	\$2.80	\$7.90
3) 2024 Projected Unfunded Liability				
a) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2023 [(1e)]	(\$66,238,504)	(\$13,519,092)	(\$116,799,646)	(\$5,009,824)
b) Projected Normal Cost Contributions with Interest 7/1/2023 – 6/30/2024	116,324	88,545	1,550,285	6,817,609
c) Projected UAL Payment 7/1/2023 – 6/30/2024	(116,324)	(88,545)	(1,550,285)	(451,529)
d) Projected Required Contributions 7/1/2023 – 6/30/2024 [(3b) + (3c)]	—	—	—	6,366,080
e) Projected Employee Contributions 7/1/2023 – 6/30/2024	160,800	100,800	1,111,200	1,759,200
f) Changes in Contributions due to Contribution (Gain)/Loss ¹	(1,630)	(9,338)	(149,002)	(374,092)
g) Excess Assets due to Employee Contributions [maximum, (\$0, (3e) - (3d))]	160,800	100,800	1,111,200	—
h) Projected UAL/(Excess Assets) as of 6/30/2024 [(3a) * 1.068 - ((3c) + (3f) + (3g)) * 1.068^{1/2}]	(\$70,787,002)	(\$14,441,404)	(\$124,134,269)	(\$4,497,262)
4) Required Contribution				
a) Required Normal Cost Per Member, Per Month [(2c)]	\$1.40	\$1.80	\$2.80	\$7.90
b) Projected Active Members as of 6/30/2024	6,800	4,400	49,100	75,900
c) Required Normal Cost Contribution [(4a) * (4b) * 12 * (1.068) ^{1/2}]	\$118,060	\$98,218	\$1,704,929	\$7,435,938
d) Amortization of the UAL/(Excess Assets)	(118,060)	(98,218)	(1,704,929)	(343,672)
e) Total Required Contributions [(4c) + (4d)]	0.00	0.00	0.00	7,092,266
f) Required Contributions Per Member, Per Month [(4e) / (4b) / 12], rounded to the nearest \$0.10	\$0.00	\$0.00	\$0.00	\$7.80
g) Amortization Period	30-year	30-year	30-year	30-year
5) 2024-25 Required Employer/Employee Premiums				
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	\$5.80

(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.

Liabilities and Funding Requirements

Development of Funding Requirements (continued)

The following table develops the annual premiums required for fiscal year 2024-25 for the Public Agency Indexed Level pool.

June 30, 2023	Public Agency Indexed Level
1) Development of Unfunded Liability	
a) Present Value of Future Benefits for Current Survivors as of 6/30/2023	\$17,313,464
b) Present Value of Future Benefits for Active Members as of 6/30/2023	14,900,619
c) Reserve for Unclaimed Benefits as of 6/30/2023	—
d) Total Present Value of Future Benefits as of 6/30/2023 [(1a) + (1b)]	32,214,083
e) Present Value of Future Normal Costs as of 6/30/2023	10,716,228
f) Total Accrued Liabilities as of 6/30/2023 [(1c) + (1d) - (1e)]	21,497,855
g) Market Value of Assets as of 6/30/2023	29,793,115
h) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2023 [(1f) - (1g)]	(\$8,295,260)
2) Development of Normal Cost	
a) Required Entry Age Normal Cost	\$1,443,089
b) Active Members as of 6/30/2023	12,312
c) Total Per Member, Per Month 2023-24 Entry Age Normal Cost [(2a) / (2b) / 12], rounded to the nearest \$0.10	\$9.80
3) 2024 Projected Unfunded Liability	
a) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2023 [(1h)]	(\$8,295,260)
b) Projected Normal Cost Contributions with Interest 7/1/2023 – 6/30/2024	1,390,185
c) Projected UAL Payment 7/1/2023 – 6/30/2024	(611,793)
d) Projected Required Contributions 7/1/2023 – 6/30/2024 [(3b) + (3c)]	778,392
e) Projected Employee Contributions 7/1/2023 – 6/30/2024	389,400
f) Changes in Contributions due to Contribution (Gain)/Loss ¹	(68,899)
g) Excess Assets due to Employee Contributions [maximum, (\$0, (3e) - (3d))]	—
h) Projected UAL/(Excess Assets) as of 6/30/2024 [(3a) * 1.068 - ((3c) + (3f) + (3g)) * 1.068^{1/2}]	(\$8,155,883)
4) Required Contribution	
a) Required Normal Cost Per Member, Per Month [(2c)]	\$9.80
b) Projected Active Members as of 6/30/2024	12,300
c) Required Normal Cost Contribution [(4a) * (4b) * 12 * (1.068) ^{1/2}]	\$1,494,852
d) Amortization of the UAL/(Excess Assets)	(623,256)
e) Total Required Contributions [(4c) + (4d)]	871,596
f) Required Contributions Per Member, Per Month [(4e) / (4b) / 12], rounded to the nearest \$0.10	\$5.90
g) Amortization Period	30-year
5) 2024-25 Required Employer and Employee Premiums with Cost Sharing Provision	
a) Required Employee Premium Per Member, Per Month [maximum (\$2, (4f) / 2)]	\$2.95
b) Required Employer Premium Per Member, Per Month [maximum (\$0, (4f) - (5a))]	\$2.95

(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.

Liabilities and Funding Requirements

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 mitigate contribution volatility, a Fresh Start of the total UAL over a 15-year period was established in the June 30, 2022 actuarial valuation.

State 5th Level Pool

	Date Established	Ramp Level 2024-25	Ramp Shape	Remaining Period	Original Period	Balance 6/30/2023	Payment 2023-24	Projected Balance 6/30/2024	Payment 2024-25
Fresh Start	6/30/2022		No Ramp	14	15	\$35,748,118	\$3,750,109	\$34,303,474	\$3,750,109
Investment (Gain)/Loss	6/30/2023	20%	Up Only	20	20	1,326,807	0	1,417,030	30,459
Non-Investment (Gain)/Loss	6/30/2023		No Ramp	20	20	(4,724,342)	(767,208)	(4,252,733)	(382,421)
Total						\$32,350,583	\$2,982,901	\$31,467,771	\$3,398,147

(Gain)/Loss Analysis 6/30/2022 – 6/30/2023

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 th Level	Schools 5 th Level
1) Prior Year Unfunded Accrued Liability/(Excess Assets) Development		
a) Accrued Liability as of 6/30/2022	\$154,319,353	\$14,198,856
b) Market Value of Assets as of 6/30/2022	118,493,561	98,145,312
c) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2022 [(1a) - (1b)]	\$35,825,792	(\$83,946,456)
2) Development of Projected Unfunded Accrued Liability/(Excess Assets) for 6/30/2023		
a) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2022 [(1c)]	\$35,825,792	(\$83,946,456)
b) Projected Unfunded Accrued Liability/(Excess Assets) Payment with Interest 7/1/2022 – 6/30/2023 ¹	2,432,484	(483,195)
c) Projected Unfunded Accrued Liability/(Excess Assets) as of 6/30/2023 [(2a) * 1.068 - (2b) * 1.068 ^{1/2}]	35,748,118	(89,155,462)
3) Development of Projected Assets		
a) Market Value of Assets as of 6/30/2022	\$118,493,561	\$98,145,312
b) Net Cash Flows 7/1/2022 – 6/30/2023	(4,799,329)	(1,448,405)
c) Net Transfer of Assets Into and Out of this Pool	—	—
d) Expected Assets as of 6/30/2023 [(3a) * 1.068 + (3b) + (3c)] * 1.068^{1/2}	\$121,591,301	\$103,322,352
4) Current Year Unfunded 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
c) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2023 [(4a) - (4b)]	\$32,350,583	(\$87,910,828)
5) Development of (Gain)/Loss due to changes in Reserve for Unclaimed Benefits		
a) Reserve for Unclaimed Benefits as of 6/30/2022	\$2,277,000	\$378,000
b) Reserve for Unclaimed Benefits as of 6/30/2023	1,854,000	414,000
c) (Gain)/Loss due to changes in Reserve for Unclaimed Benefits [(5b) - (5a)]	(423,000)	36,000
6) (Gain)/Loss for the Period of 6/30/2022 – 6/30/2023		
a) Total (Gain)/Loss [(4c) - (2c)]	(\$3,397,535)	\$1,244,634
b) Investment (Gain)/Loss [(3d) - (4b)]	1,326,807	1,129,343
c) (Gain)/Loss due to changes in Reserve for Unclaimed Benefits [(5c)]	(423,000)	36,000
d) Non-Investment (Gain)/Loss [(6a) - (6b) - (6c)]	(4,301,342)	79,291

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

Liabilities and Funding Requirements

(Gain)/Loss Analysis 6/30/2022 – 6/30/2023 (continued)

	Public Agency 1 st Level	Public Agency 2 nd Level	Public Agency 3 rd Level	Public Agency 4 th Level
1) Prior Year Unfunded Accrued Liability/(Excess Assets) Development				
a) Accrued Liability as of 6/30/2022	\$2,731,767	\$2,217,975	\$30,753,269	\$148,619,003
b) Market Value of Assets as of 6/30/2022	65,355,742	14,938,427	141,922,852	157,027,464
c) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2022 [(1a) - (1b)]	(\$62,623,975)	(\$12,720,452)	(\$111,169,583)	(\$8,408,461)
2) Development of Projected Unfunded Accrued Liability/(Excess Assets) for 6/30/2023				
a) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2022 [(1c)]	(\$62,623,975)	(\$12,720,452)	(\$111,169,583)	(\$8,408,461)
b) Projected Unfunded Accrued Liability/(Excess Assets) Payment with Interest 7/1/2022 – 6/30/2023 ¹	49,172	9,455	(473,945)	(2,972,171)
c) Projected Unfunded Accrued Liability/(Excess Assets) as of 6/30/2023 [(2a) * 1.068 - (2b) * 1.068 ^{1/2}]	(66,933,222)	(13,595,214)	(118,239,320)	(5,908,673)
3) Development of Projected Assets				
a) Market Value of Assets as of 6/30/2022	\$65,355,742	\$14,938,427	\$141,922,852	\$157,027,464
b) Net Cash Flows 7/1/2022 – 6/30/2023	(93,321)	(97,493)	(1,721,944)	(9,756,743)
c) Net Transfer of Assets Into and Out of this Pool	—	—	—	—
d) Expected Assets as of 6/30/2023 [(3a) * 1.068 + ((3b) + (3c)) * 1.068^{1/2}]	\$69,703,584	\$15,853,486	\$149,794,078	\$157,622,315
4) Current Year Unfunded 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
c) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2023 [(4a) - (4b)]	(\$66,238,504)	(\$13,519,092)	(\$116,799,646)	(\$5,009,824)
5) Development of (Gain)/Loss due to changes in the Reserve for Unclaimed Benefits				
a) Reserve for Unclaimed Benefits as of 6/30/2022	\$54,000	\$99,900	\$583,800	\$2,359,800
b) Reserve for Unclaimed Benefits as of 6/30/2023	56,160	108,000	550,200	2,052,000
c) (Gain)/Loss due to changes in Reserve for Unclaimed Benefits [(5b) - (5a)]	2,160	8,100	(33,600)	(307,800)
6) (Gain)/Loss for the Period of 6/30/2022 – 6/30/2023				
a) Total (Gain)/Loss [(4c) - (2c)]	\$694,718	\$76,122	\$1,439,674	\$898,849
b) Investment (Gain)/Loss [(3d) - (4b)]	756,754	174,268	1,629,357	2,999,791
c) (Gain)/Loss due to changes in Reserve for Unclaimed Benefits [(5c)]	2,160	8,100	(33,600)	(307,800)
d) Non-Investment (Gain)/Loss [(6a) - (6b) - (6c)]	(64,196)	(106,246)	(156,083)	(1,793,142)

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

Liabilities and Funding Requirements

(Gain)/Loss Analysis 6/30/2022 – 6/30/2023 (continued)

	Public Agency Indexed Level
1) Prior Year Unfunded Accrued Liability/(Excess Assets) Development	
a) Accrued Liability as of 6/30/2022	\$20,822,002
b) Market Value of Assets as of 6/30/2022	29,314,086
c) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2022 [(1a) - (1b)]	(\$8,492,084)
2) Development of Projected Unfunded Accrued Liability/(Excess Assets) for 6/30/2023	
a) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2022 [(1c)]	(\$8,492,084)
b) Projected Unfunded Accrued Liability/(Excess Assets) Payment with Interest 7/1/2022 – 6/30/2023 ¹	(1,029,241)
c) Projected Unfunded Accrued Liability/(Excess Assets) as of 6/30/2023 [(2a) * 1.068 - (2b) * 1.068 ^{1/2}]	(8,005,886)
3) Development of Projected Assets	
a) Market Value of Assets as of 6/30/2022	\$29,314,086
b) Net Cash Flows 7/1/2022 – 6/30/2023	(1,046,566)
c) Net Transfer of Assets Into and Out of this Pool	—
d) Expected Assets as of 6/30/2023 [(3a) * 1.068 + ((3b) + (3c)) * 1.068^{1/2}]	\$30,225,880
4) Current Year Unfunded 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
c) Unfunded Accrued Liability/(Excess Assets) as of 6/30/2023 [(4a) - (4b)]	(\$8,295,260)
5) Development of (Gain)/Loss due to changes in the Reserve for Unclaimed Benefits	
a) Reserve for Unclaimed Benefits as of 6/30/2022	\$18,552
b) Reserve for Unclaimed Benefits as of 6/30/2023	0
c) (Gain)/Loss due to changes in Reserve for Unclaimed Benefits [(5b) - (5a)]	(18,552)
6) (Gain)/Loss for the Period of 6/30/2022 – 6/30/2023	
a) Total (Gain)/Loss [(4c) - (2c)]	(\$289,374)
b) Investment (Gain)/Loss [(3d) - (4b)]	432,765
c) (Gain)/Loss due to changes in Reserve for Unclaimed Benefits [(5c)]	(18,552)
d) Non-Investment (Gain)/Loss [(6a) - (6b) - (6c)]	(703,587)

(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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Risk Analysis

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 following tables show the effect of a two standard deviation investment gain/loss in fiscal year 2023-24 on the fiscal year 2025-26 employer and employee contributions. Note that for the State 5th 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 2025-26.

- -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 2025-26 projected employee and employer contributions under the investment return scenarios mentioned above.

-17.2% Return

	2025-26 Employer Monthly Premium	2025-26 Employee Monthly Premium
State 5 th Level	\$6.95	\$6.95
Schools 5 th Level	0.00	2.00
PA 1 st Level	0.00	2.00
PA 2 nd Level	0.00	2.00
PA 3 rd Level	0.00	2.00
PA 4 th Level	6.90	2.00
PA Indexed Level	4.85	4.85

6.8% Return

	2025-26 Employer Monthly Premium	2025-26 Employee Monthly Premium
State 5 th Level	\$6.60	\$6.60
Schools 5 th Level	0.00	2.00
PA 1 st Level	0.00	2.00
PA 2 nd Level	0.00	2.00
PA 3 rd Level	0.00	2.00
PA 4 th Level	5.80	2.00
PA Indexed Level	3.00	3.00

30.8% Return

	2025-26 Employer Monthly Premium	2025-26 Employee Monthly Premium
State 5 th Level	\$6.50	\$6.50
Schools 5 th Level	0.00	2.00
PA 1 st Level	0.00	2.00
PA 2 nd Level	0.00	2.00
PA 3 rd Level	0.00	2.00
PA 4 th Level	3.30	2.00
PA Indexed Level	1.10	2.00

Risk Analysis

Discount Rate Sensitivity

The following tables illustrate the sensitivity of the valuation results to the discount rate assumption. Shown below are fiscal year 2024-25 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%)

	2024-25 Employer Monthly Premium	2024-25 Employee Monthly Premium
State 5 th Level	\$7.65	\$7.65
Schools 5 th Level	0.00	2.00
PA 1 st Level	0.00	2.00
PA 2 nd Level	0.00	2.00
PA 3 rd Level	0.00	2.00
PA 4 th Level	7.90	2.00
PA Indexed Level	4.55	4.55

Increase in Contribution

	2024-25 Employer Monthly Premium	2024-25 Employee Monthly Premium
State 5 th Level	\$1.05	\$1.05
Schools 5 th Level	0.00	0.00
PA 1 st Level	0.00	0.00
PA 2 nd Level	0.00	0.00
PA 3 rd Level	0.00	0.00
PA 4 th Level	2.10	0.00
PA Indexed Level	1.60	1.60

7.8% Discount Rate (+1%)

	2024-25 Employer Monthly Premium	2024-25 Employee Monthly Premium
State 5 th Level	\$5.65	\$5.65
Schools 5 th Level	0.00	2.00
PA 1 st Level	0.00	2.00
PA 2 nd Level	0.00	2.00
PA 3 rd Level	0.00	2.00
PA 4 th Level	3.90	2.00
PA Indexed Level	0.80	2.00

Decrease in Contribution

	2024-25 Employer Monthly Premium	2024-25 Employee Monthly Premium
State 5 th Level	(\$0.95)	(\$0.95)
Schools 5 th Level	0.00	0.00
PA 1 st Level	0.00	0.00
PA 2 nd Level	0.00	0.00
PA 3 rd Level	0.00	0.00
PA 4 th Level	(1.90)	0.00
PA Indexed Level	(2.15)	(0.95)

Risk Analysis

Mortality Rate Sensitivity

The following tables illustrate the sensitivity of the valuation results to the mortality rate assumption. Shown below are fiscal year 2024-25 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%)

	2024-25 Employer Monthly Premium	2024-25 Employee Monthly Premium
State 5 th Level	\$6.80	\$6.80
Schools 5 th Level	0.00	2.00
PA 1 st Level	0.00	2.00
PA 2 nd Level	0.00	2.00
PA 3 rd Level	0.00	2.00
PA 4 th Level	6.00	2.00
PA Indexed Level	3.05	3.05

Increase in Contribution

	2024-25 Employer Monthly Premium	2024-25 Employee Monthly Premium
State 5 th Level	\$0.20	\$0.20
Schools 5 th Level	0.00	0.00
PA 1 st Level	0.00	0.00
PA 2 nd Level	0.00	0.00
PA 3 rd Level	0.00	0.00
PA 4 th Level	0.20	0.00
PA Indexed Level	0.10	0.10

Higher Mortality Rate (+10%)

	2024-25 Employer Monthly Premium	2024-25 Employee Monthly Premium
State 5 th Level	\$6.45	\$6.45
Schools 5 th Level	0.00	2.00
PA 1 st Level	0.00	2.00
PA 2 nd Level	0.00	2.00
PA 3 rd Level	0.00	2.00
PA 4 th Level	5.50	2.00
PA Indexed Level	2.80	2.80

Decrease in Contribution

	2024-25 Employer Monthly Premium	2024-25 Employee Monthly Premium
State 5 th Level	(\$0.15)	(\$0.15)
Schools 5 th Level	0.00	0.00
PA 1 st Level	0.00	0.00
PA 2 nd Level	0.00	0.00
PA 3 rd Level	0.00	0.00
PA 4 th Level	(0.30)	0.00
PA Indexed Level	(0.15)	(0.15)

Risk Analysis

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 4.82%, which is the Standard FTSE Pension Liability Index¹ discount rate as of June 30, 2023, net of assumed administrative expenses.

June 30, 2023	State 5 th Level	Schools 5 th Level	Public Agency 1 st Level	Public Agency 2 nd Level
Discount Rate	4.82%	4.82%	4.82%	4.82%
Selected Measures on a Low-Default-Risk Basis				
1) Accrued Liability – Low-Default-Risk Basis (LDROM)	\$182,846,313	\$16,900,043	\$3,236,318	\$2,544,801
2) Market Value of Assets (MVA)	120,264,494	102,193,009	68,946,830	15,679,218
3) Unfunded Accrued Liability – Low-Default-Risk Basis [(1) – (2)]	\$62,581,819	(\$85,292,966)	(\$65,710,512)	(\$13,134,417)
4) Unfunded Accrued Liability – Funding Policy Basis	32,350,583	(87,910,828)	(66,238,504)	(13,519,092)
5) Present Value of Unearned Investment Risk Premium [(3) – (4)]	\$30,231,236	\$2,617,862	\$527,992	\$384,675

June 30, 2023	Public Agency 3 rd Level	Public Agency 4 th Level	Public Agency Indexed Level
Discount Rate	4.82%	4.82%	4.82%
Selected Measures on a Low-Default-Risk Basis			
1) Accrued Liability – Low-Default-Risk Basis (LDROM)	\$37,506,556	\$178,519,954	\$27,285,556
2) Market Value of Assets (MVA)	148,164,721	154,622,524	29,793,115
3) Unfunded Accrued Liability – Low-Default-Risk Basis [(1) – (2)]	(\$110,658,165)	\$23,897,430	(\$2,507,559)
4) Unfunded Accrued Liability – Funding Policy Basis	(116,799,646)	(5,009,824)	(8,295,260)
5) Present Value of Unearned Investment Risk Premium [(3) – (4)]	\$6,141,481	\$28,907,254	\$5,787,702

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.

Appendices

A-1 Appendix A – Actuarial Methods and Assumptions

B-1 Appendix B – Principal Plan Provisions

C-1 Appendix C – Demographic and Experience Information

D-1 Appendix D – 1959 Survivor Deaths Per Year

E-1 Appendix E – List of Contracting Agencies

F-1 Appendix F – Glossary

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 1st, 2nd, 3rd, and 4th Level, and State and Schools 5th Level Pools

The actuarial funding method used, as provided in State statute for Public Agencies 1st, 2nd, 3rd, and 4th Level pools, and State and Schools 5th 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.

Appendix A - Actuarial Methods and Assumptions

Actuarial Funding Method for Public Agency 1st, 2nd, 3rd and 4th Level, and State and Schools 5th 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 5th 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 5th Level pool, and Public Agency 1st, 2nd, and 3rd Level pools were sufficient to offset required employer contributions, based on June 30, 2023 data and assumptions. Excess assets for the Public Agency 4th 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 4th Level is \$5.80 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 \$2.95 per covered member, per month.

Appendix A - Actuarial Methods and Assumptions

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, 2023. 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.

Appendix A - Actuarial Methods and Assumptions

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.

Appendix A - Actuarial Methods and Assumptions

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 ¹ at the Time of Death ²
Age 20 and Under	\$32,572
25	103,760
30	143,736
35	137,788
40	129,879
45	111,247
50	89,123
55	72,691
60	66,119
65	64,007
70	64,397
75	63,822
Age 80 and Above	57,314

(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.

Appendix A - Actuarial Methods and Assumptions

Additional Actuarial Assumptions Applicable to the PA Indexed Level

Pre-Retirement Mortality

See sample rates in the table below. The non-industrial death rates are used for all plans. The industrial death rates are used for Safety plans (except for Local Prosecutor Safety members where the corresponding Miscellaneous plan does not have the Industrial Death Benefit).

Non-Industrial (Not Job-Related) and Industrial (Job-Related) Death

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

Age	Pre-Retirement Mortality					
	Miscellaneous		Safety			
	Non-Industrial Death		Non-Industrial Death		Industrial Death	
	Male	Female	Male	Female	Male	Female
20	0.00039	0.00014	0.00038	0.00014	0.00004	0.00002
25	0.00033	0.00013	0.00034	0.00018	0.00004	0.00002
30	0.00044	0.00019	0.00042	0.00025	0.00005	0.00003
35	0.00058	0.00029	0.00048	0.00034	0.00005	0.00004
40	0.00075	0.00039	0.00055	0.00042	0.00006	0.00005
45	0.00093	0.00054	0.00066	0.00053	0.00007	0.00006
50	0.00134	0.00081	0.00092	0.00073	0.00010	0.00008
55	0.00198	0.00123	0.00138	0.00106	0.00015	0.00012
60	0.00287	0.00179	0.00221	0.00151	0.00025	0.00017

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

Miscellaneous plans usually have industrial death rates set to zero unless the agency has specifically contracted for Industrial Death Benefits. If so, each non-industrial death rate shown above will be split into two components; 99% will become the non-industrial death rate and 1% will become the industrial death rate.

Termination with Refund

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		Entry Age 45	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
0	0.1851	0.1944	0.1769	0.1899	0.1631	0.1824	0.1493	0.1749	0.1490	0.1731	0.1487	0.1713
1	0.1531	0.1673	0.1432	0.1602	0.1266	0.1484	0.1101	0.1366	0.1069	0.1323	0.1037	0.1280
2	0.1218	0.1381	0.1125	0.1307	0.0970	0.1183	0.0815	0.1058	0.0771	0.0998	0.0726	0.0938
3	0.0927	0.1085	0.0852	0.1020	0.0727	0.0912	0.0601	0.0804	0.0556	0.0737	0.0511	0.0669
4	0.0672	0.0801	0.0616	0.0752	0.0524	0.0670	0.0431	0.0587	0.0392	0.0523	0.0352	0.0459
5	0.0463	0.0551	0.0423	0.0517	0.0358	0.0461	0.0292	0.0404	0.0261	0.0350	0.0230	0.0296
10	0.0112	0.0140	0.0101	0.0129	0.0083	0.0112	0.0064	0.0094	0.0048	0.0071	0.0033	0.0049
15	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	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	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Appendix A - Actuarial Methods and Assumptions

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.

Appendix A - Actuarial Methods and Assumptions

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.

Appendix A - Actuarial Methods and Assumptions

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

Appendix A - Actuarial Methods and Assumptions

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

Appendix A - Actuarial Methods and Assumptions

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

Appendix A - Actuarial Methods and Assumptions

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

Appendix A - Actuarial Methods and Assumptions

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

Appendix A - Actuarial Methods and Assumptions

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

Appendix A - Actuarial Methods and Assumptions

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

Appendix A - Actuarial Methods and Assumptions

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

Appendix A - Actuarial Methods and Assumptions

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

Appendix A - Actuarial Methods and Assumptions

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	1.000	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 1st, 2nd, 3rd, 4th, or Indexed Levels of the program are eligible for the benefits valued in this report. The Public Agency 1st and 2nd Levels have been closed since January 1, 1994 and the 3rd Level has been closed since July 1, 2001. For State and Schools members, the 5th 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 1st, 2nd, and 3rd 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 3rd 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 st Child Turns 22	\$700
2 nd Child Turns 22 ¹	\$0
Spouse Turns 62 ²	\$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 1st, 2nd, and 3rd Levels and over age 60 for all other Levels.

Appendix B - Principal Plan Provisions

Monthly Benefit Amounts

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

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

	1 st Level	2 nd Level	3 rd 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

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

	4 th Level	Indexed Level	State and Schools 5 th Level
Spouse or Domestic Partner with Two or More Eligible Children; or Three or More Eligible Children	\$2,280	\$2,413 ¹	\$1,800
Spouse or Domestic Partner with One Eligible Child; or Two Eligible Children Only	1,900	1,608 ¹	1,500
Spouse or Domestic Partner Age 60 or Older; or One Eligible Child Only; or Eligible Dependent parents	950	804 ¹	750

(1) These figures indicate calendar year benefit amounts for the Indexed Level in effect for calendar year 2024. 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	\$1,794	\$2,823	\$4,555
Two Survivors	1,792	2,564	3,800
One Survivor	896	1,282	1,900

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 2023 salary of \$25,000, "Average" is \$50,000, and "High" is \$90,000.

CalPERS 1959 Survivor Benefit

Survivor Group	1 st Level	2 nd Level	3 rd Level	4 th Level	Indexed Level ¹	State and Schools 5 th Level
Three Survivors	\$430	\$538	\$840	\$2,280	\$2,413	\$1,800
Two Survivors	360	450	700	1,900	1,608	1,500
One Survivor	180	225	350	950	804	750

(1) Amounts effective January 1, 2024

Summary of Plan Changes

Existing public agency employers joining the Public Agency 4th or Indexed Level pools during the 2024-25 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 4,237 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 6/30/2023	Number	Percent
Surviving Spouse or Domestic Partner Deferred	693	16.4%
Surviving Spouse or Domestic Partner Only Receiving	2,580	60.9%
Surviving Spouse or Domestic Partner with One Child	322	7.6%
Surviving Spouse or Domestic Partner with Two or More Children	303	7.2%
One Child	180	4.2%
Two Children	92	2.2%
Three or More Children	29	0.7%
One Parent	31	0.7%
Two Parents	7	0.2%
Totals	4,237	100.0%¹

(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 8,746 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	2,441	27.9%
Surviving Spouse or Domestic Partner Only Receiving	1,116	12.8%
Surviving Spouse or Domestic Partner with One Child	1,410	16.1%
Surviving Spouse or Domestic Partner with Two or More Children	2,320	26.5%
One Child	622	7.1%
Two Children	492	5.6%
Three or More Children	286	3.3%
One Parent	49	0.6%
Two Parents	10	0.1%
Totals	8,746	100.0%¹

(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 calendar year basis and may change from previous valuations due mainly to reclassification of the benefit that ultimately gets paid to the survivor. Counts represent mid-year active exposure. 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.

Calendar Year	Public Agency			State			Schools		
	Deaths	Mid-Year Active Counts	Death Rate	Deaths	Mid-Year Active Counts	Death Rate	Deaths	Mid-Year Active Counts	Death Rate
2022	93	142,364	0.07%	67	75,812	0.09%	9	10,390	0.09%
2021	118	139,036	0.08%	105	76,995	0.14%	9	10,413	0.09%
2020	98	141,081	0.07%	86	78,713	0.11%	9	11,219	0.08%
2019	83	141,374	0.06%	60	78,011	0.08%	7	11,190	0.06%
2018	75	140,339	0.05%	55	77,362	0.07%	7	10,894	0.06%
2017	83	141,063	0.06%	55	76,638	0.07%	4	10,557	0.04%
2016	79	139,581	0.06%	61	75,782	0.08%	7	10,259	0.07%
2015	76	134,879	0.06%	63	74,372	0.08%	5	10,490	0.05%
2014	67	132,024	0.05%	52	72,848	0.07%	3	10,287	0.03%
2013	77	129,796	0.06%	54	71,180	0.08%	4	9,944	0.04%
2012	94	132,754	0.07%	52	71,759	0.07%	7	10,123	0.07%
2011	107	134,255	0.08%	58	77,714	0.07%	5	9,811	0.05%
2010	86	138,470	0.06%	57	79,587	0.07%	7	10,203	0.07%
2009	98	143,207	0.07%	62	82,434	0.08%	4	10,562	0.04%
2008	107	144,828	0.07%	50	81,369	0.06%	8	10,550	0.08%
2007	102	140,012	0.07%	71	76,902	0.09%	5	10,131	0.05%
2006	88	137,095	0.06%	69	71,742	0.10%	13	9,469	0.14%
2005	105	133,510	0.08%	68	70,193	0.10%	7	9,402	0.07%
2004	91	131,633	0.07%	61	64,252	0.09%	5	9,325	0.05%
2003	93	129,620	0.07%	69	68,791	0.10%	6	9,390	0.06%
2002	87	129,355	0.07%	50	65,558	0.08%	4	9,195	0.04%
2001	83	116,161	0.07%	58	64,309	0.09%	5	7,884	0.06%
2000	78	121,538	0.06%	56	60,349	0.09%	7	8,338	0.08%
1999	92	118,850	0.08%	62	59,406	0.10%	2	7,444	0.03%
1998	87	112,389	0.08%	58	55,435	0.10%	6	6,956	0.09%
1997	68	102,475	0.07%	64	55,084	0.12%	4	6,794	0.06%
1996	82	100,494	0.08%	54	51,746	0.10%	6	6,726	0.09%
1995	74	99,235	0.07%	53	47,689	0.11%	9	6,751	0.13%
1994	68	98,088	0.07%	58	47,323	0.12%	10	6,653	0.15%
1993	74	97,752	0.08%	53	46,872	0.11%	4	6,776	0.06%
1992	88	95,840	0.09%	45	48,872	0.09%	8	6,823	0.12%
1991	96	91,574	0.10%	41	47,708	0.09%	7	7,752	0.09%
1990	88	86,196	0.10%	61	45,502	0.13%	7	7,942	0.09%
1989	65	82,046	0.08%	60	44,069	0.14%	6	6,899	0.09%
1988	74	84,808	0.09%	52	41,980	0.12%	9	7,100	0.13%

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

Appendix E – List of Contracting Agencies

Level 1 (continued)

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| <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 |
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Level 2

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|---|---|
| <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 |
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Appendix E – List of Contracting Agencies

Level 2 (continued)

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| 63. San Francisco County Transportation Authority, Miscellaneous | 64. Sonoma County Library, Miscellaneous |
| | 65. Tahoe Transportation District, Miscellaneous |

Level 3

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

Appendix E – List of Contracting Agencies

Level 3 (continued)

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|---|---|
| 76. City of Clayton, Miscellaneous | 120. City of Hermosa Beach, Miscellaneous |
| 77. City of Compton, Miscellaneous | 121. City of Hermosa Beach, Safety - Fire |
| 78. City of Compton, Safety - Police | 122. City of Hermosa Beach, Safety - Police |
| 79. City of Corona, Safety - Police | 123. City of Highland, Miscellaneous |
| 80. City of Costa Mesa, Miscellaneous | 124. City of Inglewood, Miscellaneous |
| 81. City of Costa Mesa, Safety - Fire | 125. City of Inglewood, Safety - Fire |
| 82. City of Costa Mesa, Safety - Police | 126. City of La Mesa, Safety - Fire |
| 83. City of Cypress, Miscellaneous | 127. City of La Mesa, Safety - Police |
| 84. City of Daly City, Miscellaneous | 128. City of La Quinta, Miscellaneous |
| 85. City of Daly City, Safety - Police | 129. City of Laguna Hills, Miscellaneous |
| 86. City of Dana Point, Miscellaneous | 130. City of Laguna Niguel, Miscellaneous |
| 87. City of Del Mar, Miscellaneous | 131. City of Lake Forest, Miscellaneous |
| 88. City of Dinuba, Miscellaneous | 132. City of Lancaster, Miscellaneous |
| 89. City of Dinuba, Safety - Fire | 133. City of Larkspur, Miscellaneous |
| 90. City of Dinuba, Safety - Police | 134. City of Lathrop, Miscellaneous |
| 91. City of Downey, Safety - Fire | 135. City of Lodi, Miscellaneous |
| 92. City of Downey, Safety - Police | 136. City of Lodi, Safety - Fire |
| 93. City of Duarte, Miscellaneous | 137. City of Lodi, Safety - Police |
| 94. City of Dublin, Miscellaneous | 138. City of Lompoc, Miscellaneous |
| 95. City of East Palo Alto, Miscellaneous | 139. City of Los Altos, Miscellaneous |
| 96. City of East Palo Alto, Safety - Police | 140. City of Los Altos, Safety - Police |
| 97. City of El Cajon, Safety - Fire | 141. City of Lynwood, Safety - Fire |
| 98. City of El Cajon, Safety - Police | 142. City of Manhattan Beach, Miscellaneous |
| 99. City of El Centro, Miscellaneous | 143. City of Marysville, Miscellaneous |
| 100. City of Encinitas, Miscellaneous | 144. City of Menlo Park, Safety - Police |
| 101. City of Encinitas, Safety - Fire | 145. City of Mill Valley, Miscellaneous |
| 102. City of Encinitas, Safety - Other Safety | 146. City of Milpitas, Miscellaneous |
| 103. City of Eureka, Miscellaneous | 147. City of Milpitas, Safety - Fire |
| 104. City of Exeter, Safety - Police | 148. City of Mission Viejo, Miscellaneous |
| 105. City of Fortuna, Safety - Police | 149. City of Modesto, Miscellaneous |
| 106. City of Gardena, Miscellaneous | 150. City of Montclair, Safety - Police |
| 107. City of Gardena, Safety - Fire | 151. City of Montebello, Safety - Fire |
| 108. City of Gardena, Safety - Police | 152. City of Montebello, Safety - Police |
| 109. City of Gilroy, Miscellaneous | 153. City of Mountain View, Miscellaneous |
| 110. City of Gridley, Miscellaneous | 154. City of National City, Miscellaneous |
| 111. City of Gridley, Safety - Fire | 155. City of National City, Safety - Fire |
| 112. City of Gridley, Safety - Police | 156. City of National City, Safety - Police |
| 113. City of Half Moon Bay, Miscellaneous | 157. City of Norwalk, Miscellaneous |
| 114. City of Hanford, Miscellaneous | 158. City of Oakdale, Miscellaneous |
| 115. City of Hayward, Safety - Fire | 159. City of Oakdale, Safety - Police |
| 116. City of Hayward, Safety - Police | 160. City of Oakland, Safety - Fire |
| 117. City of Hemet, Safety - Fire | 161. City of Oceanside, Miscellaneous |
| 118. City of Hercules, Miscellaneous | 162. City of Oceanside, Safety - Fire |
| 119. City of Hercules, Safety - Police | 163. City of Oceanside, Safety - Police |

Appendix E – List of Contracting Agencies

Level 3 (continued)

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| 164. City of Oxnard, Safety - Police | 209. City of South San Francisco, Safety - Police |
| 165. City of Palmdale, Miscellaneous | 210. City of Suisun City, Miscellaneous |
| 166. City of Palos Verdes Estates, Miscellaneous | 211. City of Suisun City, Safety - Fire |
| 167. City of Patterson, Miscellaneous | 212. City of Sunnyvale, Miscellaneous |
| 168. City of Petaluma, Miscellaneous | 213. City of Sunnyvale, Safety - Police |
| 169. City of Pinole, Miscellaneous | 214. City of Turlock, Miscellaneous |
| 170. City of Pinole, Safety - Fire | 215. City of Tustin, Miscellaneous |
| 171. City of Pinole, Safety - Police | 216. City of Twentynine Palms, Miscellaneous |
| 172. City of Pleasant Hill, Miscellaneous | 217. City of Ukiah, Miscellaneous |
| 173. City of Pleasant Hill, Safety - Police | 218. City of Ukiah, Safety - Fire |
| 174. City of Pleasanton, Miscellaneous | 219. City of Union City, Miscellaneous |
| 175. City of Redwood City, Miscellaneous | 220. City of Upland, Miscellaneous |
| 176. City of Riverside, Miscellaneous | 221. City of Upland, Safety - Fire |
| 177. City of Riverside, Safety - Fire | 222. City of Upland, Safety - Police |
| 178. City of Riverside, Safety - Police | 223. City of Vernon, Miscellaneous |
| 179. City of Rohnert Park, Miscellaneous | 224. City of Vernon, Safety - Prosecutor |
| 180. City of Rohnert Park, Safety - Fire | 225. City of Victorville, Safety - Police |
| 181. City of Rohnert Park, Safety - Police | 226. City of West Sacramento, Miscellaneous |
| 182. City of Roseville, Miscellaneous | 227. City of West Sacramento, Safety - Police |
| 183. City of Roseville, Safety - Fire | 228. City of Whittier, Miscellaneous |
| 184. City of San Buenaventura, Safety - Fire | 229. City of Whittier, Safety - Police |
| 185. City of San Carlos, Safety - Police | 230. City of Woodlake, Miscellaneous |
| 186. City of San Dimas, Miscellaneous | 231. City of Woodlake, Safety - Police |
| 187. City of San Joaquin, Miscellaneous | 232. City of Yucaipa, Miscellaneous |
| 188. City of San Jose, Miscellaneous | 233. Coachella Valley Association of Governments,
Miscellaneous |
| 189. City of San Luis Obispo, Safety - Fire | 234. Coast Life Support District, Miscellaneous |
| 190. City of San Marino, Safety - Police | 235. Coast Life Support District, Safety - Fire |
| 191. City of San Pablo, Miscellaneous | 236. Coastal Developmental Services Fdn DBA Westside
Regional Center, Miscellaneous |
| 192. City of San Pablo, Safety - Police | 237. Compton Unified School District, Safety - Police |
| 193. City of Santa Cruz, Miscellaneous | 238. Contra Costa County Schools Insurance Group,
Miscellaneous |
| 194. City of Santa Cruz, Safety - Fire | 239. Cooperative Personnel Services, Miscellaneous |
| 195. City of Santa Cruz, Safety - Police | 240. Cottonwood Fire Protection District, Safety - Fire |
| 196. City of Santa Paula, Miscellaneous | 241. County of Amador, Safety - County Peace Officer |
| 197. City of Santa Paula, Safety - Police | 242. County of Amador, Safety - Fire |
| 198. City of Santee, Miscellaneous | 243. County of Amador, Safety - Prosecutor |
| 199. City of Saratoga, Miscellaneous | 244. County of El Dorado, Miscellaneous |
| 200. City of Seal Beach, Miscellaneous | 245. County of Inyo, Safety - County Peace Officer |
| 201. City of Seal Beach, Safety - Other Safety | 246. County of Lassen, Safety - County Peace Officer |
| 202. City of Seal Beach, Safety - Police | 247. County of Plumas, Miscellaneous |
| 203. City of Sebastopol, Miscellaneous | 248. County of Santa Cruz, Safety - County Peace Officer |
| 204. City of Sebastopol, Safety - Fire | 249. County of Santa Cruz, Safety - Sheriff |
| 205. City of Sebastopol, Safety - Police | 250. County of Yuba, Miscellaneous |
| 206. City of Sonoma, Miscellaneous | 251. County of Yuba, Safety - County Peace Officer |
| 207. City of Sonoma, Safety - Fire | |
| 208. City of South San Francisco, Safety - Fire | |

Appendix E – List of Contracting Agencies

Level 3 (continued)

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|---|---|
| 252. Crestline Lake Arrowhead Water Agency, Miscellaneous | 292. Leucadia Wastewater District, Miscellaneous |
| 253. Dairy Council of California, Miscellaneous | 293. Los Angeles County Area 'E' Civil Defense and Disaster Board, Miscellaneous |
| 254. Del Norte County Library District, Miscellaneous | 294. Los Angeles County Sanitation District No. 2, Miscellaneous |
| 255. Dougherty Regional Fire Authority, Miscellaneous | 295. Los Angeles County West Vector Control District, Miscellaneous |
| 256. Dougherty Regional Fire Authority, Safety - Fire | 296. Los Angeles Regionalized Insurance Services Authority, Miscellaneous |
| 257. El Dorado County Fire Protection District, Miscellaneous | 297. Los Gatos-Saratoga Department of Community Education and Recreation, Miscellaneous |
| 258. El Dorado County Fire Protection District, Safety - Fire | 298. Los Osos Community Services District, Miscellaneous |
| 259. El Dorado County Transit Authority, Miscellaneous | 299. Los Osos Community Services District, Safety - Fire |
| 260. El Dorado Hills County Water District, Miscellaneous | 300. Majestic Pines Community Services District, Miscellaneous |
| 261. Encina Wastewater Authority, Miscellaneous | 301. Management of Emeryville Services Authority, Miscellaneous |
| 262. Encinitas Fire Protection District, Miscellaneous | 302. Meeks Bay Fire Protection District, Miscellaneous |
| 263. Encinitas Fire Protection District, Safety - Fire | 303. Mendocino Transit Authority, Miscellaneous |
| 264. Feather River Air Quality Management District, Miscellaneous | 304. Metropolitan Transportation Commission, Miscellaneous |
| 265. Fontana Unified School District, Safety - Police | 305. Mid City Development Corporation, Miscellaneous |
| 266. Fort Ord Reuse Authority, Miscellaneous | 306. Minter Field Airport District, Miscellaneous |
| 267. Georgetown Fire Protection District, Miscellaneous | 307. Mojave Air and Space Port, Safety - Fire |
| 268. Georgetown Fire Protection District, Safety - Fire | 308. Mojave Water Agency, Miscellaneous |
| 269. Greater Anaheim Special Education Local Plan Area, Miscellaneous | 309. Montecito Fire Protection District, Miscellaneous |
| 270. Greater Vallejo Recreation District, Miscellaneous | 310. Montecito Fire Protection District, Safety - Fire |
| 271. Green Valley County Water District, Miscellaneous | 311. Monterey County Regional Fire Protection District, Miscellaneous |
| 272. Grossmont Healthcare District, Miscellaneous | 312. Monterey County Regional Fire Protection District, Safety - Fire |
| 273. Gualala Community Services District, Miscellaneous | 313. Monterey One Water, Miscellaneous |
| 274. Henry Miller Reclamation District No. 2131, Miscellaneous | 314. Monterey Regional Waste Management District, Miscellaneous |
| 275. Higgins Area Fire Protection District, Miscellaneous | 315. Mountains Recreation and Conservation Authority, Miscellaneous |
| 276. Higgins Area Fire Protection District, Safety - Fire | 316. Murrieta Fire Protection District, Miscellaneous |
| 277. Hilton Creek Community Services District, Miscellaneous | 317. Nevada Irrigation District, Miscellaneous |
| 278. Housing Authority of the City of Madera, Miscellaneous | 318. North Bay Schools Insurance Authority, Miscellaneous |
| 279. Human Rights/Fair Housing Commission of the City and County of Sacramento, Miscellaneous | 319. North County Fire Protection District of Monterey County, Safety - Fire |
| 280. Humboldt Bay Harbor Recreation and Conservation District, Miscellaneous | 320. North Tahoe Fire Protection District, Miscellaneous |
| 281. Humboldt No. 1 Fire Protection District of Humboldt County, Safety - Fire | 321. North Tahoe Fire Protection District, Safety - Fire |
| 282. Independent Cities Association, Inc., Miscellaneous | 322. Northern Sierra Air Quality Management District, Miscellaneous |
| 283. Indian Wells Valley Water District, Miscellaneous | 323. Novato Sanitary District, Miscellaneous |
| 284. Inland Counties Regional Center, Inc., Miscellaneous | 324. Oakdale Rural Fire Protection District, Miscellaneous |
| 285. Inland Empire Health Plan, Miscellaneous | 325. Oakdale Rural Fire Protection District, Safety - Fire |
| 286. Isla Vista Recreation and Park District, Miscellaneous | 326. Oakland Unified School District, Safety - Police |
| 287. June Lake Public Utility District, Miscellaneous | |
| 288. Kern Health Systems, Miscellaneous | |
| 289. Kings Mosquito Abatement District, Miscellaneous | |
| 290. Laguna Beach County Water District, Miscellaneous | |
| 291. Lake Don Pedro Community Services District, Miscellaneous | |

Appendix E – List of Contracting Agencies

Level 3 (continued)

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|---|---|
| 327. Ojai Valley Sanitary District, Miscellaneous | 366. San Diego Rural Fire Protection District, Miscellaneous |
| 328. Ophir Hill Fire Protection District, Miscellaneous | 367. San Diego Rural Fire Protection District, Safety - Fire |
| 329. Ophir Hill Fire Protection District, Safety - Fire | 368. San Dieguito Water District, Miscellaneous |
| 330. Orange County Health Authority, Miscellaneous | 369. San Francisco Health Authority, Miscellaneous |
| 331. Orange County Transportation Authority, Miscellaneous | 370. San Joaquin Delta Community College District, Safety - Police |
| 332. Pajaro Valley Fire Protection Agency, Safety - Fire | 371. San Luis Obispo Regional Transit Authority, Miscellaneous |
| 333. Peardale Chicago Park Fire Protection District, Safety - Fire | 372. San Mateo County Harbor District, Miscellaneous |
| 334. Peninsula Fire Protection District, Miscellaneous | 373. San Mateo County In-Home Supportive Services Public Authority, Miscellaneous |
| 335. Penn Valley Fire Protection District, Miscellaneous | 374. Santa Barbara Regional Health Authority, Miscellaneous |
| 336. Personal Assistance Services Council, Miscellaneous | 375. Santa Clara County Central Fire Protection District, Miscellaneous |
| 337. Placer Hills Fire Protection District, Miscellaneous | 376. Santa Clara County Central Fire Protection District, Safety - Fire |
| 338. Pleasant Hill - Martinez Joint Facilities Agency, Miscellaneous | 377. Santa Clara County Health Authority, Miscellaneous |
| 339. Pomona Valley Transportation Authority, Miscellaneous | 378. Santa Clarita Valley School Food Services Agency, Miscellaneous |
| 340. Public Entity Risk Management Authority, Miscellaneous | 379. Santa Cruz Metropolitan Transit District, Miscellaneous |
| 341. Public Transportation Services Corporation, Miscellaneous | 380. Santa Cruz Regional 9-1-1, Miscellaneous |
| 342. Quincy Community Services District, Miscellaneous | 381. Santa Fe Irrigation District, Miscellaneous |
| 343. Rancho Murieta Community Services District, Miscellaneous | 382. Santa Maria Public Airport District, Miscellaneous |
| 344. Redwood Empire School Insurance Group, Miscellaneous | 383. School Risk And Insurance Management Group, Miscellaneous |
| 345. Rescue Fire Protection District, Miscellaneous | 384. Schools Excess Liability Fund, Miscellaneous |
| 346. Rincon Del Diablo Municipal Water District, Safety - Fire | 385. Scotts Valley Water District, Miscellaneous |
| 347. Riverbank City Housing Authority, Miscellaneous | 386. Sewer Authority Mid-Coastside, Miscellaneous |
| 348. Riverside County Department of Waste Resources, Miscellaneous | 387. Shasta Lake Fire Protection District, Safety - Fire |
| 349. Riverside County Transportation Commission, Miscellaneous | 388. Solano Cemetery District, Miscellaneous |
| 350. Roseville Public Cemetery District, Miscellaneous | 389. Solano County Water Agency, Miscellaneous |
| 351. Ross Valley Fire Department, Safety - Fire | 390. Solano Transportation Authority, Miscellaneous |
| 352. Rural County Representatives of California, Miscellaneous | 391. Southern California Regional Rail Authority, Miscellaneous |
| 353. Russian River Fire Protection District, Miscellaneous | 392. Stockton Unified School District, Safety - Police |
| 354. Russian River Fire Protection District, Safety - Fire | 393. Sunnyslope County Water District, Miscellaneous |
| 355. Sacramento Area Council of Governments, Miscellaneous | 394. Sweetwater Springs Water District, Miscellaneous |
| 356. Sacramento Metropolitan Air Quality Management District, Miscellaneous | 395. Tahoe-Truckee Sanitation Agency, Miscellaneous |
| 357. Sacramento Public Library Authority, Miscellaneous | 396. Tehama County Mosquito Abatement District, Miscellaneous |
| 358. Sacramento Regional Fire/EMS Communications Center, Miscellaneous | 397. Town of Atherton, Miscellaneous |
| 359. Sacramento Transportation Authority, Miscellaneous | 398. Town of Atherton, Safety - Police |
| 360. Sacramento-Yolo Mosquito and Vector Control District, Miscellaneous | 399. Town of Fairfax, Miscellaneous |
| 361. Salida Fire Protection District, Miscellaneous | 400. Town of Fairfax, Safety - Police |
| 362. Salida Fire Protection District, Safety - Fire | 401. Town of Loomis, Miscellaneous |
| 363. Samoa Peninsula Fire Protection District, Safety - Fire | 402. Town of Truckee, Miscellaneous |
| 364. San Andreas Regional Center, Inc., Miscellaneous | 403. Town of Yucca Valley, Miscellaneous |
| 365. San Diego County Law Library, Miscellaneous | 404. Transportation Agency for Monterey County, Miscellaneous |

Appendix E – List of Contracting Agencies

Level 3 (continued)

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|---|---|
| 405. Tri-City Mental Health Center, Miscellaneous | 414. West Almanor Community Services District, Safety - Fire |
| 406. Tri-Counties Association for the Developmentally Disabled, Miscellaneous | 415. West Cities Communication Center, Miscellaneous |
| 407. Tuolumne Utilities District, Miscellaneous | 416. West End Communications Authority, Miscellaneous |
| 408. Valley Mountain Regional Center, Inc., Miscellaneous | 417. West Valley-Mission Community College District, Safety - Police |
| 409. Valley-Wide Recreation and Park District, Miscellaneous | 418. Westlands Water District, Miscellaneous |
| 410. Ventura County Schools Business Services Authority, Miscellaneous | 419. Yolo County Public Agency Risk Management Insurance Authority, Miscellaneous |
| 411. Victor Valley Wastewater Reclamation Authority, Miscellaneous | 420. Yolo County Transportation District, Miscellaneous |
| 412. Water Facilities Authority, Miscellaneous | 421. Yuba County Water Agency, Miscellaneous |
| 413. Weaverville Community Services District, Miscellaneous | 422. Yuba Sutter Transit Authority, Miscellaneous |

Level 4

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

Appendix E – List of Contracting Agencies

Level 4 (continued)

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|---|--|
| 50. Chino Valley Independent Fire District, Safety - Fire | 95. City of Campbell, Safety - Police |
| 51. City of Adelanto, Miscellaneous | 96. City of Carlsbad, Safety - Fire |
| 52. City of Albany, Safety - Fire | 97. City of Carmel-By-The-Sea, Miscellaneous |
| 53. City of Albany, Safety - Police | 98. City of Carmel-By-The-Sea, Safety - Fire |
| 54. City of Anaheim, Miscellaneous | 99. City of Carmel-By-The-Sea, Safety - Police |
| 55. City of Anaheim, Safety - Fire | 100. City of Carson, Miscellaneous |
| 56. City of Anaheim, Safety - Police | 101. City of Cathedral City, Miscellaneous |
| 57. City of Arcadia, Safety - Fire | 102. City of Cathedral City, Safety - Fire |
| 58. City of Atascadero, Safety - Fire | 103. City of Cathedral City, Safety - Police |
| 59. City of Atascadero, Safety - Police | 104. City of Cerritos, Miscellaneous |
| 60. City of Auburn, Safety - Fire | 105. City of Chico, Miscellaneous |
| 61. City of Auburn, Safety - Police | 106. City of Chico, Safety - Fire |
| 62. City of Azusa, Miscellaneous | 107. City of Chico, Safety - Police |
| 63. City of Azusa, Safety - Police | 108. City of Chino, Miscellaneous |
| 64. City of Bakersfield, Miscellaneous | 109. City of Chino, Safety - Police |
| 65. City of Bakersfield, Safety - Fire | 110. City of Chowchilla, Miscellaneous |
| 66. City of Bakersfield, Safety - Police | 111. City of Chowchilla, Safety - Fire |
| 67. City of Barstow, Miscellaneous | 112. City of Chowchilla, Safety - Police |
| 68. City of Barstow, Safety - Police | 113. City of Chula Vista, Miscellaneous |
| 69. City of Beaumont, Safety - Police | 114. City of Chula Vista, Safety - Fire |
| 70. City of Bell Gardens, Miscellaneous | 115. City of Chula Vista, Safety - Police |
| 71. City of Bell Gardens, Safety - Police | 116. City of Citrus Heights, Miscellaneous |
| 72. City of Belmont, Miscellaneous | 117. City of Citrus Heights, Safety - Police |
| 73. City of Belmont, Safety - Police | 118. City of Clayton, Safety - Police |
| 74. City of Benicia, Safety - Fire | 119. City of Cloverdale, Miscellaneous |
| 75. City of Benicia, Safety - Police | 120. City of Cloverdale, Safety - Fire |
| 76. City of Berkeley, Safety - Police | 121. City of Cloverdale, Safety - Police |
| 77. City of Beverly Hills, Miscellaneous | 122. City of Clovis, Miscellaneous |
| 78. City of Beverly Hills, Safety - Fire | 123. City of Clovis, Safety - Fire |
| 79. City of Beverly Hills, Safety - Police | 124. City of Clovis, Safety - Police |
| 80. City of Bishop, Safety - Fire | 125. City of Colton, Miscellaneous |
| 81. City of Brea, Miscellaneous | 126. City of Colton, Safety - Fire |
| 82. City of Brea, Safety - Fire | 127. City of Colton, Safety - Police |
| 83. City of Brea, Safety - Police | 128. City of Corona, Miscellaneous |
| 84. City of Buena Park, Miscellaneous | 129. City of Corona, Safety - Fire |
| 85. City of Buena Park, Safety - Fire | 130. City of Coronado, Safety - Fire |
| 86. City of Buena Park, Safety - Police | 131. City of Coronado, Safety - Police |
| 87. City of Burbank, Miscellaneous | 132. City of Cotati, Miscellaneous |
| 88. City of Burbank, Safety - Fire | 133. City of Covina, Miscellaneous |
| 89. City of Burbank, Safety - Police | 134. City of Covina, Safety - Fire |
| 90. City of Burlingame, Safety - Police | 135. City of Covina, Safety - Police |
| 91. City of California City, Miscellaneous | 136. City of Culver City, Safety - Fire |
| 92. City of California City, Safety - Fire | 137. City of Culver City, Safety - Police |
| 93. City of California City, Safety - Police | 138. City of Cupertino, Miscellaneous |
| 94. City of Camarillo, Miscellaneous | 139. City of Cypress, Safety - Police |

Appendix E – List of Contracting Agencies

Level 4 (continued)

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|---|--|
| 140. City of Daly City, Safety - Fire | 185. City of Goleta, Miscellaneous |
| 141. City of Davis, Miscellaneous | 186. City of Grand Terrace, Miscellaneous |
| 142. City of Davis, Safety - Fire | 187. City of Half Moon Bay, Safety - Police |
| 143. City of Davis, Safety - Police | 188. City of Hanford, Safety - Police |
| 144. City of Diamond Bar, Miscellaneous | 189. City of Hayward, Miscellaneous |
| 145. City of Dixon, Safety - Fire | 190. City of Healdsburg, Miscellaneous |
| 146. City of Dixon, Safety - Police | 191. City of Healdsburg, Safety - Fire |
| 147. City of Downey, Miscellaneous | 192. City of Healdsburg, Safety - Police |
| 148. City of El Cajon, Miscellaneous | 193. City of Hemet, Miscellaneous |
| 149. City of El Centro, Safety - Fire | 194. City of Hesperia, Miscellaneous |
| 150. City of El Centro, Safety - Police | 195. City of Hollister, Miscellaneous |
| 151. City of El Cerrito, Safety - Fire | 196. City of Hollister, Safety - Fire |
| 152. City of El Cerrito, Safety - Police | 197. City of Hollister, Safety - Police |
| 153. City of El Monte, Miscellaneous | 198. City of Hughson, Miscellaneous |
| 154. City of El Monte, Safety - Fire | 199. City of Huntington Beach, Miscellaneous |
| 155. City of El Monte, Safety - Police | 200. City of Huntington Beach, Safety - Fire |
| 156. City of El Segundo, Safety - Fire | 201. City of Huntington Beach, Safety - Other Safety |
| 157. City of El Segundo, Safety - Police | 202. City of Huntington Beach, Safety - Police |
| 158. City of Elk Grove, Miscellaneous | 203. City of Huntington Park, Miscellaneous |
| 159. City of Elk Grove, Safety - Police | 204. City of Huntington Park, Safety - Fire |
| 160. City of Escondido, Miscellaneous | 205. City of Huntington Park, Safety - Police |
| 161. City of Escondido, Safety - Fire | 206. City of Industry, Miscellaneous |
| 162. City of Escondido, Safety - Police | 207. City of Irvine, Miscellaneous |
| 163. City of Exeter, Miscellaneous | 208. City of Irvine, Safety - Police |
| 164. City of Fairfield, Miscellaneous | 209. City of Irwindale, Miscellaneous |
| 165. City of Fairfield, Safety - Fire | 210. City of Irwindale, Safety - Fire |
| 166. City of Fairfield, Safety - Police | 211. City of Irwindale, Safety - Police |
| 167. City of Fontana, Miscellaneous | 212. City of La Canada Flintridge, Miscellaneous |
| 168. City of Fontana, Safety - Police | 213. City of La Habra, Miscellaneous |
| 169. City of Foster City, Miscellaneous | 214. City of La Habra, Safety - Fire |
| 170. City of Foster City, Safety - Fire | 215. City of La Habra, Safety - Police |
| 171. City of Foster City, Safety - Police | 216. City of La Mirada, Miscellaneous |
| 172. City of Fountain Valley, Miscellaneous | 217. City of La Palma, Miscellaneous |
| 173. City of Fremont, Miscellaneous | 218. City of La Palma, Safety - Police |
| 174. City of Fremont, Safety - Fire | 219. City of La Verne, Miscellaneous |
| 175. City of Fremont, Safety - Police | 220. City of La Verne, Safety - Fire |
| 176. City of Fullerton, Miscellaneous | 221. City of La Verne, Safety - Police |
| 177. City of Fullerton, Safety - Fire | 222. City of Laguna Beach, Miscellaneous |
| 178. City of Fullerton, Safety - Police | 223. City of Laguna Beach, Safety - Fire |
| 179. City of Gilroy, Safety - Fire | 224. City of Laguna Beach, Safety - Other Safety |
| 180. City of Gilroy, Safety - Police | 225. City of Laguna Beach, Safety - Police |
| 181. City of Glendale, Miscellaneous | 226. City of Larkspur, Safety - Fire |
| 182. City of Glendale, Safety - Fire | 227. City of Lathrop, Safety - Police |
| 183. City of Glendale, Safety - Police | 228. City of Lawndale, Miscellaneous |
| 184. City of Glendora, Safety - Police | 229. City of Lemon Grove, Miscellaneous |

Appendix E – List of Contracting Agencies

Level 4 (continued)

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|---|---|
| 230. City of Lemon Grove, Safety - Fire | 275. City of Newport Beach, Miscellaneous |
| 231. City of Livermore, Miscellaneous | 276. City of Newport Beach, Safety - Fire |
| 232. City of Livermore, Safety - Police | 277. City of Newport Beach, Safety - Other Safety |
| 233. City of Loma Linda, Safety - Fire | 278. City of Newport Beach, Safety - Police |
| 234. City of Lomita, Miscellaneous | 279. City of Norco, Miscellaneous |
| 235. City of Lompoc, Safety - Fire | 280. City of Norco, Safety - Fire |
| 236. City of Lompoc, Safety - Police | 281. City of Novato, Miscellaneous |
| 237. City of Long Beach, Safety - Fire | 282. City of Novato, Safety - Police |
| 238. City of Long Beach, Safety - Police | 283. City of Oakdale, Safety - Fire |
| 239. City of Los Alamitos, Miscellaneous | 284. City of Oakley, Miscellaneous |
| 240. City of Los Alamitos, Safety - Police | 285. City of Oakley, Safety - Police |
| 241. City of Lynwood, Miscellaneous | 286. City of Ontario, Safety - Fire |
| 242. City of Manhattan Beach, Safety - Fire | 287. City of Ontario, Safety - Police |
| 243. City of Manteca, Miscellaneous | 288. City of Orange, Miscellaneous |
| 244. City of Manteca, Safety - Fire | 289. City of Orange, Safety - Fire |
| 245. City of Manteca, Safety - Police | 290. City of Orange, Safety - Police |
| 246. City of Marina, Miscellaneous | 291. City of Oroville, Miscellaneous |
| 247. City of Marina, Safety - Fire | 292. City of Oroville, Safety - Fire |
| 248. City of Marina, Safety - Police | 293. City of Oroville, Safety - Police |
| 249. City of Martinez, Safety - Police | 294. City of Oxnard, Miscellaneous |
| 250. City of Marysville, Safety - Fire | 295. City of Oxnard, Safety - Fire |
| 251. City of Marysville, Safety - Police | 296. City of Pacific Grove, Miscellaneous |
| 252. City of Menifee, Miscellaneous | 297. City of Pacific Grove, Safety - Fire |
| 253. City of Menifee, Safety - Police | 298. City of Pacific Grove, Safety - Police |
| 254. City of Millbrae, Miscellaneous | 299. City of Pacifica, Miscellaneous |
| 255. City of Milpitas, Safety - Police | 300. City of Pacifica, Safety - Fire |
| 256. City of Monrovia, Miscellaneous | 301. City of Pacifica, Safety - Police |
| 257. City of Monrovia, Safety - Fire | 302. City of Palm Springs, Miscellaneous |
| 258. City of Monrovia, Safety - Police | 303. City of Palm Springs, Safety - Fire |
| 259. City of Monterey, Miscellaneous | 304. City of Palm Springs, Safety - Police |
| 260. City of Monterey Park, Miscellaneous | 305. City of Paramount, Miscellaneous |
| 261. City of Monterey Park, Safety - Fire | 306. City of Pasadena, Miscellaneous |
| 262. City of Monterey Park, Safety - Police | 307. City of Pasadena, Safety - Fire |
| 263. City of Moorpark, Miscellaneous | 308. City of Pasadena, Safety - Police |
| 264. City of Moreno Valley, Miscellaneous | 309. City of Petaluma, Safety - Fire |
| 265. City of Morgan Hill, Miscellaneous | 310. City of Petaluma, Safety - Police |
| 266. City of Morgan Hill, Safety - Police | 311. City of Pico Rivera, Miscellaneous |
| 267. City of Morro Bay, Miscellaneous | 312. City of Piedmont, Safety - Fire |
| 268. City of Morro Bay, Safety - Fire | 313. City of Pittsburg, Safety - Police |
| 269. City of Morro Bay, Safety - Police | 314. City of Placentia, Miscellaneous |
| 270. City of Mountain View, Safety - Fire | 315. City of Placentia, Safety - Police |
| 271. City of Mountain View, Safety - Police | 316. City of Pleasanton, Safety - Fire |
| 272. City of Murrieta, Miscellaneous | 317. City of Porterville, Miscellaneous |
| 273. City of Murrieta, Safety - Police | 318. City of Porterville, Safety - Fire |
| 274. City of Napa, Safety - Police | 319. City of Porterville, Safety - Police |

Appendix E – List of Contracting Agencies

Level 4 (continued)

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|---|--|
| 320. City of Rancho Cucamonga, Miscellaneous | 365. City of Santa Barbara, Miscellaneous |
| 321. City of Rancho Mirage, Miscellaneous | 366. City of Santa Clara, Safety - Fire |
| 322. City of Rancho Palos Verdes, Miscellaneous | 367. City of Santa Clara, Safety - Police |
| 323. City of Redding, Safety - Fire | 368. City of Santa Fe Springs, Miscellaneous |
| 324. City of Redding, Safety - Police | 369. City of Santa Fe Springs, Safety - Fire |
| 325. City of Redondo Beach, Safety - Fire | 370. City of Santa Maria, Miscellaneous |
| 326. City of Redondo Beach, Safety - Police | 371. City of Santa Maria, Safety - Fire |
| 327. City of Redwood City, Safety - Fire | 372. City of Santa Maria, Safety - Police |
| 328. City of Redwood City, Safety - Police | 373. City of Santa Monica, Miscellaneous |
| 329. City of Rialto, Miscellaneous | 374. City of Santa Monica, Safety - Fire |
| 330. City of Rialto, Safety - Fire | 375. City of Santa Monica, Safety - Police |
| 331. City of Rocklin, Miscellaneous | 376. City of Santa Rosa, Miscellaneous |
| 332. City of Rocklin, Safety - Fire | 377. City of Santa Rosa, Safety - Fire |
| 333. City of Rocklin, Safety - Police | 378. City of Santa Rosa, Safety - Police |
| 334. City of Roseville, Safety - Police | 379. City of Sausalito, Safety - Fire |
| 335. City of San Bernardino, Miscellaneous | 380. City of Sausalito, Safety - Police |
| 336. City of San Bernardino, Safety - Fire | 381. City of Seaside, Miscellaneous |
| 337. City of San Bruno, Miscellaneous | 382. City of Seaside, Safety - Fire |
| 338. City of San Bruno, Safety - Fire | 383. City of Seaside, Safety - Police |
| 339. City of San Bruno, Safety - Police | 384. City of Sierra Madre, Miscellaneous |
| 340. City of San Buenaventura, Miscellaneous | 385. City of Sierra Madre, Safety - Fire |
| 341. City of San Buenaventura, Safety - Police | 386. City of Signal Hill, Safety - Fire |
| 342. City of San Clemente, Miscellaneous | 387. City of Signal Hill, Safety - Police |
| 343. City of San Fernando, Miscellaneous | 388. City of Simi Valley, Miscellaneous |
| 344. City of San Fernando, Safety - Police | 389. City of Simi Valley, Safety - Police |
| 345. City of San Gabriel, Miscellaneous | 390. City of Sonoma, Safety - Police |
| 346. City of San Gabriel, Safety - Fire | 391. City of South Gate, Miscellaneous |
| 347. City of San Gabriel, Safety - Police | 392. City of Stockton, Miscellaneous |
| 348. City of San Jacinto, Miscellaneous | 393. City of Stockton, Safety - Fire |
| 349. City of San Jacinto, Safety - Fire | 394. City of Stockton, Safety - Police |
| 350. City of San Jacinto, Safety - Police | 395. City of Suisun City, Safety - Police |
| 351. City of San Leandro, Safety - Police | 396. City of Temecula, Miscellaneous |
| 352. City of San Luis Obispo, Miscellaneous | 397. City of Temple City, Miscellaneous |
| 353. City of San Luis Obispo, Safety - Police | 398. City of Thousand Oaks, Miscellaneous |
| 354. City of San Marino, Miscellaneous | 399. City of Torrance, Safety - Fire |
| 355. City of San Marino, Safety - Fire | 400. City of Torrance, Safety - Police |
| 356. City of San Mateo, Safety - Fire | 401. City of Tracy, Safety - Fire |
| 357. City of San Mateo, Safety - Police | 402. City of Tracy, Safety - Police |
| 358. City of San Ramon, Miscellaneous | 403. City of Tulare, Miscellaneous |
| 359. City of San Ramon, Safety - Police | 404. City of Tulare, Safety - Fire |
| 360. City of Sand City, Miscellaneous | 405. City of Tulare, Safety - Police |
| 361. City of Sand City, Safety - Police | 406. City of Turlock, Safety - Fire |
| 362. City of Santa Ana, Miscellaneous | 407. City of Turlock, Safety - Police |
| 363. City of Santa Ana, Safety - Fire | 408. City of Tustin, Safety - Police |
| 364. City of Santa Ana, Safety - Police | 409. City of Ukiah, Safety - Police |

Appendix E – List of Contracting Agencies

Level 4 (continued)

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| 410. City of Vacaville, Miscellaneous | 454. County of Mono, Miscellaneous |
| 411. City of Vacaville, Safety - Fire | 455. County of Mono, Safety - County Peace Officer |
| 412. City of Vacaville, Safety - Police | 456. County of Mono, Safety - Fire |
| 413. City of Vallejo, Safety - Fire | 457. County of Mono, Safety - Sheriff |
| 414. City of Vallejo, Safety - Police | 458. County of Monterey, Safety - County Peace Officer |
| 415. City of Vernon, Safety - Fire | 459. County of Monterey, Safety - Fire |
| 416. City of Victorville, Miscellaneous | 460. County of Napa, Miscellaneous |
| 417. City of Victorville, Safety - Fire | 461. County of Napa, Safety - County Peace Officer |
| 418. City of Villa Park, Miscellaneous | 462. County of Plumas, Safety - County Peace Officer |
| 419. City of Visalia, Safety - Fire | 463. County of Plumas, Safety - Sheriff |
| 420. City of Visalia, Safety - Police | 464. County of Shasta, Safety - Sheriff |
| 421. City of Vista, Safety - Fire | 465. County of Siskiyou, Safety - County Peace Officer |
| 422. City of Walnut, Miscellaneous | 466. County of Solano, Safety - County Peace Officer |
| 423. City of Walnut Creek, Miscellaneous | 467. County of Solano, Safety - Sheriff |
| 424. City of Walnut Creek, Safety - Police | 468. Crestline Village Water District, Miscellaneous |
| 425. City of West Covina, Miscellaneous | 469. Crockett - Valona Sanitary District, Miscellaneous |
| 426. City of West Covina, Safety - Fire | 470. Crockett Community Services District, Miscellaneous |
| 427. City of West Covina, Safety - Police | 471. Cucamonga Valley Water District, Miscellaneous |
| 428. City of West Hollywood, Miscellaneous | 472. Del Puerto Water District, Miscellaneous |
| 429. City of West Sacramento, Safety - Fire | 473. East County Fire Protection District, Miscellaneous |
| 430. City of Westminster, Miscellaneous | 474. East County Fire Protection District, Safety - Fire |
| 431. City of Westminster, Safety - Police | 475. East Valley Water District, Miscellaneous |
| 432. City of Wildomar, Miscellaneous | 476. Eastern Municipal Water District, Miscellaneous |
| 433. City of Woodland, Miscellaneous | 477. Eastern Sierra Transit Authority, Miscellaneous |
| 434. City of Woodland, Safety - Fire | 478. El Dorado County Transportation Commission,
Miscellaneous |
| 435. City of Woodland, Safety - Police | 479. El Dorado County Water Agency, Miscellaneous |
| 436. City of Yorba Linda, Miscellaneous | 480. El Dorado Hills County Water District, Safety - Fire |
| 437. City/County Association of Governments of San Mateo
County, Miscellaneous | 481. El Dorado Local Agency Formation Commission,
Miscellaneous |
| 438. Cloverdale Fire Protection District, Miscellaneous | 482. Esparto Fire Protection District, Miscellaneous |
| 439. Cloverdale Fire Protection District, Safety - Fire | 483. Esparto Fire Protection District, Safety - Fire |
| 440. Coastside Fire Protection District, Miscellaneous | 484. Estero Municipal Improvement District, Miscellaneous |
| 441. Coastside Fire Protection District, Safety - Fire | 485. Estero Municipal Improvement District, Safety - Fire |
| 442. Colusa County One-Stop Partnership, Miscellaneous | 486. Estero Municipal Improvement District, Safety - Police |
| 443. Conejo Recreation and Park District, Miscellaneous | 487. Exeter District Ambulance, Miscellaneous |
| 444. Contra Costa Transportation Authority, Miscellaneous | 488. Far Northern Coordinating Council on Developmental
Disabilities, Miscellaneous |
| 445. Costa Mesa Sanitary District, Miscellaneous | 489. Florin Resource Conservation District Elk Grove Water
District, Miscellaneous |
| 446. Cosumnes Community Services District, Miscellaneous | 490. Foothill-De Anza Community College District, Safety -
Police |
| 447. Cosumnes Community Services District, Safety - Fire | 491. Georgetown Divide Resource Conservation District,
Miscellaneous |
| 448. County of El Dorado, Safety - County Peace Officer | 492. Glen Ellen Fire Protection District, Safety - Fire |
| 449. County of Humboldt, Miscellaneous | 493. Glendale Community College District, Safety - Police |
| 450. County of Humboldt, Safety - County Peace Officer | |
| 451. County of Humboldt, Safety - Fire | |
| 452. County of Kings, Safety - County Peace Officer | |
| 453. County of Kings, Safety - Fire | |

Appendix E – List of Contracting Agencies

Level 4 (continued)

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| 494. Gold Coast Transit, Miscellaneous | 534. Lake Shastina Community Services District, Safety - Police |
| 495. Gold Ridge Fire Protection District, Miscellaneous | 535. Lake Valley Fire Protection District, Miscellaneous |
| 496. Graton Community Services District, Miscellaneous | 536. Lake Valley Fire Protection District, Safety - Fire |
| 497. Graton Fire Protection District, Safety - Fire | 537. Lakeport County Fire Protection District, Miscellaneous |
| 498. Hacienda La Puente Unified School District, Safety - Police | 538. Lakeport County Fire Protection District, Safety - Fire |
| 499. Hamilton Branch Fire Protection District, Safety - Fire | 539. Lakeside Fire Protection District, Safety - Fire |
| 500. Health Plan of San Joaquin, Miscellaneous | 540. Lassen County Waterworks District No. 1, Miscellaneous |
| 501. Heartland Communications Facility Authority,
Miscellaneous | 541. Linda Fire Protection District, Miscellaneous |
| 502. Helendale Community Services District, Miscellaneous | 542. Linda Fire Protection District, Safety - Fire |
| 503. Heritage Ranch Community Services District,
Miscellaneous | 543. Livermore/Amador Valley Transit Authority, Miscellaneous |
| 504. Herlong Public Utility District, Miscellaneous | 544. Local Agency Formation Commission of Monterey County,
Miscellaneous |
| 505. Hesperia Fire Protection District, Miscellaneous | 545. Local Agency Formation Commission of Solano County,
Miscellaneous |
| 506. Hesperia Fire Protection District, Safety - Fire | 546. Local Government Services Authority, a Joint Powers
Authority, Miscellaneous |
| 507. Hesperia Water District, Miscellaneous | 547. Los Angeles County Development Authority, Miscellaneous |
| 508. Hidden Valley Lake Community Services District,
Miscellaneous | 548. Los Angeles Unified School District, Safety - Police |
| 509. Hopland Public Utility District, Miscellaneous | 549. Mammoth Lakes Fire District, Safety - Fire |
| 510. Housing Authority of the City of Alameda, Miscellaneous | 550. Mammoth Lakes Mosquito Abatement District,
Miscellaneous |
| 511. Housing Authority of the City of San Buenaventura,
Miscellaneous | 551. March Joint Powers Authority, Miscellaneous |
| 512. Hub Cities Consortium, Miscellaneous | 552. Marin Community College District, Safety - Police |
| 513. Humboldt Bay Fire Joint Powers Authority, Miscellaneous | 553. Mendocino County Russian River Flood Control & Water
Conservation Improvement Dt, Miscellaneous |
| 514. Humboldt Bay Fire Joint Powers Authority, Safety - Fire | 554. Metropolitan Water District of Southern California,
Miscellaneous |
| 515. Humboldt Transit Authority, Miscellaneous | 555. Midway Heights County Water District, Miscellaneous |
| 516. Humboldt Waste Management Authority, Miscellaneous | 556. Monterey Bay Unified Air Pollution Control District,
Miscellaneous |
| 517. Idyllwild Fire Protection District, Safety - Fire | 557. Monterey Peninsula Regional Park District, Miscellaneous |
| 518. Intelcom Intelligent Telecommunications, Miscellaneous | 558. Monterey Peninsula Water Management District,
Miscellaneous |
| 519. Intergovernmental Training and Development Center,
Miscellaneous | 559. Municipal Pooling Authority, Miscellaneous |
| 520. Ironhouse Sanitary District, Miscellaneous | 560. Municipal Water District of Orange County, Miscellaneous |
| 521. Irvine Ranch Water District, Miscellaneous | 561. Murrieta Fire Protection District, Safety - Fire |
| 522. Kaweah Delta Water Conservation District, Miscellaneous | 562. Murrieta Valley Cemetery District, Miscellaneous |
| 523. Kensington Community Services District, Safety - Police | 563. Napa County Mosquito Abatement District, Miscellaneous |
| 524. Kentfield Fire Protection District, Miscellaneous | 564. Napa County Resource Conservation District,
Miscellaneous |
| 525. Kentfield Fire Protection District, Safety - Fire | 565. Napa Sanitation District, Miscellaneous |
| 526. Kern-Tulare Water District, Miscellaneous | 566. Napa Valley Transportation Authority, Miscellaneous |
| 527. Kings County Area Public Transit Agency, Miscellaneous | 567. Nevada County Consolidated Fire District, Miscellaneous |
| 528. Kings County Association of Governments, Miscellaneous | 568. Nevada County Consolidated Fire District, Safety - Fire |
| 529. Kings County In-Home Supportive Services Public
Authority, Miscellaneous | 569. Nipomo Community Services District, Miscellaneous |
| 530. Lake County Fire Protection District, Miscellaneous | 570. North Bay Regional Center, Miscellaneous |
| 531. Lake County Fire Protection District, Safety - Fire | 571. North Coast Railroad Authority, Miscellaneous |
| 532. Lake Shastina Community Services District, Miscellaneous | |
| 533. Lake Shastina Community Services District, Safety - Fire | |

Appendix E – List of Contracting Agencies

Level 4 (continued)

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| <p>572. North County Dispatch Joint Powers Authority, Miscellaneous</p> <p>573. North County Fire Protection District of San Diego County, Miscellaneous</p> <p>574. North County Fire Protection District of San Diego County, Safety - Fire</p> <p>575. Northshore Fire Protection District, Miscellaneous</p> <p>576. Northshore Fire Protection District, Safety - Fire</p> <p>577. Orange County Vector Control District, Miscellaneous</p> <p>578. Pasadena Unified School District, Safety - Police</p> <p>579. Pebble Beach Community Services District, Miscellaneous</p> <p>580. Peninsula Traffic Congestion Relief Alliance, Miscellaneous</p> <p>581. Penn Valley Fire Protection District, Safety - Fire</p> <p>582. Phelan Pinon Hills Community Services District, Miscellaneous</p> <p>583. Pixley Irrigation District, Miscellaneous</p> <p>584. Placer Mosquito and Vector Control District, Miscellaneous</p> <p>585. Plumas Eureka Community Services District, Miscellaneous</p> <p>586. Point Montara Fire Protection District, Safety - Fire</p> <p>587. Rancho Cucamonga Fire Protection District, Miscellaneous</p> <p>588. Rancho Cucamonga Fire Protection District, Safety - Fire</p> <p>589. Rancho Santa Fe Fire Protection District, Miscellaneous</p> <p>590. Rancho Santa Fe Fire Protection District, Safety - Fire</p> <p>591. Redwood Empire Municipal Insurance Fund, Miscellaneous</p> <p>592. Regional Center of Orange County, Miscellaneous</p> <p>593. Rescue Fire Protection District, Safety - Fire</p> <p>594. Rincon Del Diablo Municipal Water District, Miscellaneous</p> <p>595. Rincon Valley Fire Protection District, Miscellaneous</p> <p>596. Rincon Valley Fire Protection District, Safety - Fire</p> <p>597. Rose Bowl Operating Company, Miscellaneous</p> <p>598. Rosedale-Rio Bravo Water Storage District, Miscellaneous</p> <p>599. Sacramento Groundwater Authority, Miscellaneous</p> <p>600. Sacramento Metropolitan Fire District, Miscellaneous</p> <p>601. Sacramento Metropolitan Fire District, Safety - Fire</p> <p>602. Sacramento Suburban Water District, Miscellaneous</p> <p>603. Salinas Valley Solid Waste Authority, Miscellaneous</p> <p>604. San Bernardino City Unified School District, Safety - Police</p> <p>605. San Diego Association of Governments, Miscellaneous</p> <p>606. San Diego Pooled Insurance Program Authority, Miscellaneous</p> <p>607. San Diego Unified School District, Safety - Police</p> <p>608. San Francisco Bay Area Rapid Transit District, Safety - Police</p> <p>609. San Francisco Bay Area Water Emergency Transportation Authority, Miscellaneous</p> | <p>610. San Gabriel Valley Council of Governments, Miscellaneous</p> <p>611. San Joaquin County IHSS Public Authority, Miscellaneous</p> <p>612. San Luis Obispo Council of Governments, Miscellaneous</p> <p>613. San Mateo Consolidated Fire Department, Miscellaneous</p> <p>614. San Mateo Consolidated Fire Department, Safety - Fire</p> <p>615. San Miguel Community Services District, Miscellaneous</p> <p>616. San Miguel Community Services District, Safety - Fire</p> <p>617. San Miguel Consolidated Fire Protection District, Miscellaneous</p> <p>618. San Miguel Consolidated Fire Protection District, Safety - Fire</p> <p>619. San Simeon Community Services District, Miscellaneous</p> <p>620. Santa Ana Unified School District, Safety - Police</p> <p>621. Santa Clara Valley Water District, Miscellaneous</p> <p>622. Santa Clarita Valley Water Agency, Miscellaneous</p> <p>623. Santa Cruz County Regional Transportation Commission, Miscellaneous</p> <p>624. Santa Margarita Water District, Miscellaneous</p> <p>625. Santos Manuel Student Union of California State University, San Bernardino, Miscellaneous</p> <p>626. Schell Vista Fire Protection District, Safety - Fire</p> <p>627. Selma-Kingsburg-Fowler County Sanitation District, Miscellaneous</p> <p>628. Shasta Lake Fire Protection District, Miscellaneous</p> <p>629. Shasta Regional Transportation Agency, Miscellaneous</p> <p>630. Sierra-Sacramento Valley Emergency Medical Services Agency, Miscellaneous</p> <p>631. Silicon Valley Animal Control Authority, Miscellaneous</p> <p>632. Silicon Valley Clean Water, Miscellaneous</p> <p>633. Sonoma County Fire District, Miscellaneous</p> <p>634. Sonoma County Fire District, Safety - Fire</p> <p>635. Sonoma Marin Area Rail Transit District, Safety - Other Safety</p> <p>636. Soquel Creek Water District, Miscellaneous</p> <p>637. South Central Los Angeles Regional Center for Developmentally Disabled Persons, Miscellaneous</p> <p>638. South Coast Water District, Miscellaneous</p> <p>639. South County Support Services Agency, Miscellaneous</p> <p>640. South Orange County Wastewater Authority, Miscellaneous</p> <p>641. South Placer Fire District, Miscellaneous</p> <p>642. South Placer Fire District, Safety - Fire</p> <p>643. South San Joaquin County Fire Authority, Miscellaneous</p> <p>644. South San Joaquin County Fire Authority, Safety - Fire</p> <p>645. Southeast Area Social Services Funding Authority, Miscellaneous</p> |
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Appendix E – List of Contracting Agencies

Level 4 (continued)

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| 646. Stanislaus Consolidated Fire Protection District, Miscellaneous | 679. Truckee Fire Protection District, Miscellaneous |
| 647. Stanislaus Consolidated Fire Protection District, Safety - Fire | 680. Truckee Fire Protection District, Safety - Fire |
| 648. Stinson Beach County Water District, Miscellaneous | 681. Truckee Tahoe Airport District, Miscellaneous |
| 649. Stinson Beach Fire Protection District, Miscellaneous | 682. Tuolumne Fire District, Safety - Fire |
| 650. Stinson Beach Fire Protection District, Safety - Fire | 683. Twain Harte Community Services District, Miscellaneous |
| 651. Stockton East Water District, Miscellaneous | 684. Twain Harte Community Services District, Safety - Fire |
| 652. Successor Agency to the Redevelopment Agency of the City of San Bernardino, Miscellaneous | 685. Twin Rivers Unified School District, Safety - Police |
| 653. Summit Cemetery District, Miscellaneous | 686. Ukiah Valley Fire District, Safety - Fire |
| 654. Susanville Sanitary District, Miscellaneous | 687. Union Sanitary District, Miscellaneous |
| 655. Temescal Valley Water District, Miscellaneous | 688. Upper San Gabriel Valley Municipal Water District, Miscellaneous |
| 656. Three Rivers Community Services District, Miscellaneous | 689. Val Verde Unified School District, Safety - Police |
| 657. Three Valleys Municipal Water District, Miscellaneous | 690. Valley Center Municipal Water District, Miscellaneous |
| 658. Tiburon Fire Protection District, Miscellaneous | 691. Ventura County Schools Self-Funding Authority, Miscellaneous |
| 659. Tiburon Fire Protection District, Safety - Fire | 692. Ventura Port District, Miscellaneous |
| 660. Town of Corte Madera, Miscellaneous | 693. Ventura Port District, Safety - Police |
| 661. Town of Corte Madera, Safety - Fire | 694. Victor Valley Transit Authority, Miscellaneous |
| 662. Town of Hillsborough, Safety - Police | 695. Water Employee Services Authority, Miscellaneous |
| 663. Town of Los Altos Hills, Miscellaneous | 696. West Bay Sanitary District, Miscellaneous |
| 664. Town of Los Gatos, Miscellaneous | 697. West Contra Costa Integrated Waste Management Authority, Miscellaneous |
| 665. Town of Los Gatos, Safety - Police | 698. West Contra Costa Transportation Advisory Committee, Miscellaneous |
| 666. Town of Mammoth Lakes, Miscellaneous | 699. West County Wastewater District, Miscellaneous |
| 667. Town of Mammoth Lakes, Safety - Police | 700. West Valley Mosquito and Vector Control District, Miscellaneous |
| 668. Town of Moraga, Miscellaneous | 701. Western Contra Costa Transit Authority, Miscellaneous |
| 669. Town of Moraga, Safety - Police | 702. Winton Water and Sanitary District, Miscellaneous |
| 670. Town of Paradise, Miscellaneous | 703. Woodbridge Rural County Fire Protection District, Miscellaneous |
| 671. Town of Paradise, Safety - Fire | 704. Woodbridge Rural County Fire Protection District, Safety - Fire |
| 672. Town of Paradise, Safety - Police | 705. Woodside Fire Protection District, Safety - Fire |
| 673. Town of Tiburon, Miscellaneous | 706. Yorba Linda Water District, Miscellaneous |
| 674. Town of Windsor, Miscellaneous | 707. Yuima Municipal Water District, Miscellaneous |
| 675. Transbay Joint Powers Authority, Miscellaneous | |
| 676. Transportation Authority of Marin, Miscellaneous | |
| 677. Treasure Island Development Authority, Miscellaneous | |
| 678. Trindel Insurance Fund, Miscellaneous | |

Indexed Level

- | | |
|---|---|
| 1. Alpine Springs County Water District, Miscellaneous | 6. Central Fire Protection District of Santa Cruz County, Miscellaneous |
| 2. Alta California Regional Center, Inc., Miscellaneous | 7. Central Fire Protection District of Santa Cruz County, Safety - Fire |
| 3. BETA Healthcare Group Risk Management Authority, Miscellaneous | 8. Central Sierra Child Support Agency, Miscellaneous |
| 4. California Central Valley Flood Control Association, Miscellaneous | 9. Channel Islands Beach Community Services District, Miscellaneous |
| 5. California Special Districts Association, Miscellaneous | 10. City of Aliso Viejo, Miscellaneous |

Appendix E – List of Contracting Agencies

Indexed Level (continued)

11. City of American Canyon, Miscellaneous
12. City of Berkeley, Safety - Fire
13. City of Crescent City, Safety - Fire
14. City of Del Mar, Safety - Fire
15. City of Eastvale, Miscellaneous
16. City of Emeryville, Safety - Fire
17. City of Garden Grove, Miscellaneous
18. City of Garden Grove, Safety - Fire
19. City of Garden Grove, Safety - Police
20. City of Greenfield, Safety - Fire
21. City of Hanford, Safety - Fire
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. Contra Costa Community College District, Safety - Police
57. Cooperative Organization for the Development of Employee Selection Procedures, Miscellaneous
58. County of Riverside, Miscellaneous
59. County of Riverside, Safety - County Peace Officer
60. County of Riverside, Safety - Fire
61. Foothill Municipal Water District, Miscellaneous
62. Foundation for California Community Colleges, Miscellaneous
63. Greater Los Angeles County Vector Control District, Miscellaneous
64. Greenfield Fire Protection District, Safety - Fire
65. Hesperia Unified School District, Safety - Police
66. Housing Authority of the County of Santa Cruz, Miscellaneous
67. Inland Empire Resource Conservation District, Miscellaneous
68. Jurupa Area Recreation and Park District, Miscellaneous
69. Loomis Fire Protection District, Miscellaneous
70. Loomis Fire Protection District, Safety - Fire
71. Marin Children and Families Commission, Miscellaneous
72. Marin County In-Home Supportive Services Public Authority, Miscellaneous
73. Menlo Park Fire Protection District, Miscellaneous
74. Menlo Park Fire Protection District, Safety - Fire
75. Midpeninsula Regional Open Space District, Miscellaneous
76. Mojave Air and Space Port, Miscellaneous
77. North Bay Cooperative Library System, Miscellaneous
78. North Delta Water Agency, Miscellaneous
79. Oceano Community Services District, Safety - Fire
80. Penryn Fire Protection District, Safety - Fire
81. Plumas Local Agency Formation Commission, Miscellaneous
82. Redwood Coast Regional Center, Miscellaneous
83. Regional Center of the East Bay, Miscellaneous
84. Sacramento Area Flood Control Agency, Miscellaneous
85. San Diego County Office Of Education, Miscellaneous
86. San Elijo Joint Powers Authority, Miscellaneous
87. San Francisquito Creek Joint Powers Authority, Miscellaneous
88. Santa Clara Valley Open Space Authority, Miscellaneous
89. Santa Monica Community College District, Safety - Police
90. Schools Insurance Authority, Miscellaneous
91. Scotts Valley Fire Protection District, Miscellaneous
92. Scotts Valley Fire Protection District, Safety - Fire

Appendix E – List of Contracting Agencies

Indexed Level (continued)

- 93. Shasta Local Agency Formation Commission, Miscellaneous
- 94. Sonoma Marin Area Rail Transit District, Miscellaneous
- 95. State and Federal Contractors Water Agency, Miscellaneous
- 96. Stege Sanitary District, Miscellaneous
- 97. Town of Truckee, Safety - Police
- 98. Utica Water and Power Authority, Miscellaneous
- 99. Vallejo Flood and Wastewater District, Miscellaneous
- 100. Williams Fire Protection Authority, Miscellaneous
- 101. Williams Fire Protection Authority, Safety - Fire
- 102. Yolo County In-Home Supportive Services Public Authority, Miscellaneous
- 103. Yuba Community College District, Safety – Police

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.

Appendix F – Glossary

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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