

# Sacramento County Employees' Retirement System

Actuarial Valuation and Review as of June 30, 2015

This report has been prepared at the request of the Board of Retirement to assist in administering the Fund. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Board of Retirement and may only be provided to other parties in its entirety. The measurements shown in the actuarial valuation may not be applicable for other purposes.

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November 3, 2015

Board of Retirement Sacramento County Employees' Retirement System 980 9<sup>th</sup> Street, Suite 1900 Sacramento, CA 95814

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of June 30, 2015. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2016-2017 and analyzes the preceding year's experience.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Retirement System. The census information and financial information on which our calculations were based was prepared by the Retirement System. That assistance is gratefully acknowledged. The actuarial calculations were completed under the supervision of Andy Yeung, ASA, MAAA, Enrolled Actuary.

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

We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Retirement System.

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

Sincerely,

Segal Consulting, a Member of The Segal Group, Inc.

By

Paul Angelo, FSA, EA, MAAA, FCA Senior Vice President and Actuary Andy Yeung, ASA, EA, MAAA, FCA

Vice President and Actuary

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#### **Purpose**

This report has been prepared by Segal Consulting to present a valuation of the Sacramento County Employees' Retirement System as of June 30, 2015. The valuation was performed to determine whether the asset and contribution levels will be sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- > The benefit provisions of the Retirement System, as administered by the Board of Retirement;
- > The characteristics of covered active members, inactive vested members, and retired members and beneficiaries as of June 30, 2015, provided by the Retirement System;
- > The assets of the plan as of June 30, 2015, provided by the Retirement System;
- > Economic assumptions regarding future salary increases and investment earnings; and
- > Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

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

In preparing this valuation, we have employed generally accepted actuarial methods and assumptions to evaluate the System's assets, liabilities and future contribution requirements. Our calculations are based upon member data and financial information provided to us by the System's staff. This information has not been audited by us, but it has been reviewed and found to be consistent, both internally and with prior year's information.

The contribution requirements are determined as a percentage of payroll. The System's employer rates provide for both normal cost and a contribution to amortize any unfunded or overfunded actuarial accrued liabilities. In this valuation, we have applied the funding policy adopted by the Board on June 19, 2013 to continue (1) to amortize the unfunded actuarial accrued liability (UAAL) established as a result of the 2010 Early Retirement Incentive Program for the Sacramento County Law Enforcement Managers Association (LEMA) members over a 10-year period beginning June 30, 2010 and (2) to amortize the System's remaining outstanding balance of the June 30, 2012 UAAL over a declining 23-year period (20 years as of June 30, 2015). Effective with the June 30, 2013 valuation, the Board of Retirement's funding policy is to amortize any change in UAAL that arises due to actuarial gains or losses or from changes in actuarial assumptions or methods at each valuation over its own declining 20-year period. Any change in UAAL that arises due to plan amendments will be amortized over its own declining 15-year period and any change in UAAL due to retirement incentive programs will be amortized over its own declining period



of up to 5 years. The rates calculated in this report may be adopted by the Board for the fiscal year that extends from July 1, 2016 through June 30, 2017.

next six years. That means if the System earns the assumed rate of investment return of 7.50% per year on a market value basis, there will be investment gains on the actuarial value of assets in the next few years. Therefore, if the actual market

#### **Significant Issues in Valuation Year**

Reference: Reference:	Pg. 24 Pg. 51	of assets basis, the fidecreased from \$1,2 mainly due to invest 30, 2014 valuation a	arial value of assets to actuarial accrued liabilities increased from 85.2% to 86.8%. On a market value unded ratio decreased from 91.0% to 87.3%. The System's unfunded actuarial accrued liability 168 million as of June 30, 2014 to \$1,190 million as of June 30, 2015. The change in the UAAL is ament returns (after "smoothing") higher than the 7.50% investment return assumption used in the June and lower than expected salary increases during 2014/2015. A reconciliation of the System's unfunded bility is provided in Section 3, Exhibit H.
Reference:	Pg. 16	amount to reflect the	ne 30, 2015 valuation, we have added to the Miscellaneous employer UAAL rate for the County and enet withdrawal liability for the Library Authority and Air Quality Districts when they terminated their County and became special districts.
Reference:	Pg. 21	contribution rate are during 2014/2015, R members agreeing to legacy tiers continui to some degree by an	oyer rate decreased from 24.15% of payroll to 22.54% of payroll. The reasons for this change in higher than expected returns on investments (after "smoothing"), lower than expected salary increases Rep Unit 19 Safety members paying full rate starting in 2014/2015, Rep Unit 26 Miscellaneous o pick up an additional portion of the Normal Cost starting in 2015/2016, most County members in the ng to pick up an additional portion of the Normal Cost in 2016/2017, and other experience gains offset in increase in UAAL rate due to lower than expected increase in payroll. A reconciliation of the employer rate is provided in Section 2, Subsection D, Chart 14.
Reference:	Pg. 22	increase in member Miscellaneous members in	ber rate calculated in this valuation has increased from 7.93% of payroll to 8.84% of payroll. The rate is due to Rep Unit 19 Safety members paying full rate starting in 2014/2015, Rep Unit 26 bers agreeing to pick up an additional portion of the Normal Cost starting in 2015/2016 and most the legacy tiers continuing to pick up an additional portion of the Normal Cost in 2016/2017 offset to nges in demographics. A reconciliation of the System's aggregate member rate is provided in Section art 15.
Reference:	Pg. 6	June 30, 2015 is \$40	ion 2, Subsection B, Chart 7 of this report, the total net unrecognized investment gain as of 0.0 million (as compared to a net unrecognized investment gain of \$497.0 million as of June 30, 2014). In will be recognized in the determination of the actuarial value of assets for funding purposes over the



return is equal to the assumed rate of 7.50% and all the other actuarial assumptions are met, the employer contribution requirements would decrease in the next few years.

- > The unrecognized investment gains represent about 0.5% of the market value of assets. Unless offset by future investment losses or other unfavorable experience, the recognition of the \$40.0 million in past market gains is expected to have an impact on the System's future funded ratio and the aggregate employer contributions. This potential impact may be illustrated as follows:
  - If the deferred gains were recognized immediately in the actuarial value of assets, the funded percentage would increase from 86.8% to 87.3%.
  - If the deferred gains were recognized immediately in the actuarial value of assets, the aggregate employer contribution rate would decrease from 22.5% of payroll to 22.2% of payroll.
- > The actuarial valuation report as of June 30, 2015 is based on financial information as of that date. Changes in the value of assets subsequent to that date are not reflected. Declines in asset values will increase the actuarial cost of the plan, while increases will decrease the actuarial cost of the plan.
- > The actuarial valuation report as of June 30, 2015 only reflects the sharing of the total Normal Cost rate between the employer and most County members in the legacy tiers through 2016/2017. Any additional Normal Cost that most County members in the legacy tiers have agreed to pick up beyond 2016/2017 will be reflected in future actuarial valuations.

#### Impact of Future Experience on Contribution Rates

Future contribution requirements may differ from those determined in the valuation because of:

- > difference between actual experience and anticipated experience;
- > changes in actuarial assumptions or methods;
- > changes in statutory provisions; and
- > difference between the contribution rates determined by the valuation and those adopted by the Board.



	June	30, 2015	June 30, 2014	
Employer Contribution Rates (Dollar amounts in thousands):	Estimated			Estimated
	Total Rate	Annual Amount <sup>(1)</sup>	Total Rate	Annual Amount <sup>(1)</sup>
Miscellaneous Tier 1	16.77%	\$1,374	17.96%	\$1,472
Miscellaneous Tier 2	15.31%	716	16.75%	783
Miscellaneous Tier 3	18.04%	106,389	19.73%	116,398
Miscellaneous Tier 4	15.25%	3,113	15.96%	3,258
Miscellaneous Tier 5	14.47%	9,990	15.19%	10,492
Safety Tier 1	42.11%	13,597	42.59%	13,752
Safety Tier 2	39.42%	57,533	41.56%	60,657
Safety Tier 3	37.73%	3,286	39.92%	3,476
Safety Tier 4	34.40%	6,280	35.13%	6,414
All Categories Combined	22.54%	\$202,278	24.15%	\$216,702
Aggregate Member Contribution Rates (Dollar amounts in		Estimated		Estimated
thousands):	Total Rate	Annual Amount <sup>(1)</sup>	Total Rate	Annual Amount <sup>(1</sup>
All Categories Combined	8.84%	\$79,325	7.93%	\$71,159
Individual Member Contribution Rates:		Per Member		Per Member
(Before additional pick-up of total Normal Cost)	Total Rate(2)	Annual Amount <sup>(3)</sup>	Total Rate <sup>(2)</sup>	Annual Amount(3)
Miscellaneous Tier 1	4.75%	\$3,673	4.75%	\$3,679
Miscellaneous Tier 2	3.54%	2,385	3.54%	2,385
Miscellaneous Tier 3	4.76%	3,341	4.78%	3,357
Miscellaneous Tier 4	7.19%	4,698	7.20%	4,703
Miscellaneous Tier 5	8.02%	4,022	8.12%	4,072
Safety Tier 1	15.39%	19,346	15.25%	19,173
Safety Tier 2	12.37%	13,009	12.29%	12,923
Safety Tier 3	12.06%	10,656	12.10%	10,698
Safety Tier 4	13.11%	9,276	13.11%	9,276

<sup>(1)</sup> Based on June 30, 2015 projected annual compensation.



Based on single full-rates payable by members who enter on or after January 1, 1975. Note that effective with the June 30, 2015 valuation, all members are reported as paying at least full-rate.

Based on average projected annual compensation for members in each respective tier.

Summary of Key Valuation Results – continued		
	June 30, 2015	June 30, 2014
Funded Status (Dollar Amounts in thousands):		
Actuarial accrued liability <sup>(1)</sup>	\$9,028,679	\$8,580,928
Actuarial value of assets (AVA) <sup>(1)</sup>	7,838,825	7,312,993
Market value of assets (MVA)	7,878,814	7,810,001
Funded percentage on an AVA basis	86.8%	85.2%
Funded percentage on a MVA basis	87.3%	91.0%
Unfunded actuarial accrued liability on an AVA basis	\$1,189,854	\$1,267,935
Unfunded actuarial accrued liability on a MVA basis	1,149,865	770,927
Key Assumptions:		
Interest rate	7.50%	7.50%
Inflation rate	3.25%	3.25%
Across-the-board real salary increase	0.25%	0.25%

<sup>(1)</sup> Includes non-valuation reserves and designations.



SECTION 1: Valuation Summary for the Sacramento County Employees' Retirement System

	June 30, 2015	June 30, 2014	Percentage Change
Active Members:			
Number of members	12,072	12,049	0.2%
Average age	46.7	46.9	N/A
Average service	12.7	12.8	N/A
Projected total compensation	\$897,340,379	\$879,998,011	2.0%
Average projected compensation	\$74,332	\$73,035	1.8%
Retired Member and Beneficiaries:			
Number of members:			
Service retired	8,333	7,913	5.3%
Disability retired	729	725	0.6%
Beneficiaries	1,479	1,411	4.8%
Total	10,541	10,049	4.9%
Average age	69.2	69.1	N/A
Average monthly benefit	\$3,072	\$2,950	4.1%
Vested Terminated Members:			
Number of terminated vested members <sup>(1)</sup>	3,261	3,201	1.9%
Average age	47.4	47.3	N/A
Summary of Financial Data (dollar amounts in thousands):			
Market value of assets	\$7,878,814	\$7,810,001	0.9%
Return on market value of assets	1.94%	16.13%	N/A
Actuarial value of assets	\$7,838,825	\$7,312,993	7.2%
Return on actuarial value of assets	8.28%	8.70%	N/A
Valuation value of assets	\$7,767,116	\$7,277,721	6.7%
Return on valuation value of assets	7.82%	8.06%	N/A

<sup>(1)</sup> Includes terminated members due a refund of member contributions.



#### **Important Information about Actuarial Valuations**

In order to prepare an actuarial valuation, Segal Consulting ("Segal") relies on a number of input items. These include:

- > <u>Plan of benefits</u> Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan description in this report to confirm that Segal has correctly interpreted the plan of benefits.
- > <u>Participant data</u> An actuarial valuation for a plan is based on data provided to the actuary by SCERS. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
- > Assets This valuation is based on the market value of assets as of the valuation date, as provided by SCERS.
- > Actuarial assumptions In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan's assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.

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

- > The valuation is prepared at the request of the Board to assist the sponsors of the Fund in preparing items related to the pension plan in their financial reports. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.



- > If SCERS is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- > Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Board should look to their other advisors for expertise in these areas.

As Segal Consulting has no discretionary authority with respect to the management or assets of SCERS, it is not a fiduciary in its capacity as actuaries and consultants with respect to SCERS.



#### A. MEMBER DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, vested terminated members, retired members and beneficiaries. This section presents a summary of significant statistical data on these member groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A, B, and C.

A historical perspective of how the member population has changed over the past ten valuations can be seen in this chart.

CHART 1
Member Population: 2006 – 2015

Year Ended June 30	Active Members	Vested Terminated Members <sup>(1)</sup>	Retired Members and Beneficiaries	Ratio of Non-Actives to Actives
2006	14,412	2,192	7,108	0.65
2007	14,716	2,437	7,464	0.67
2008	15,180	2,661	7,709	0.68
2009	14,796	2,818	7,968	0.73
2010	13,340	2,740	8,346	0.83
2011	12,434	2,710	8,821	0.93
2012	12,155	2,851	9,239	0.99
2013	12,026	3,249	9,634	1.07
2014	12,049	3,201	10,049	1.10
2015	12,072	3,261	10,541	1.14

<sup>(1)</sup> Includes terminated members due a refund of member contributions



#### **Active Members**

Plan costs are affected by the age, years of service and compensation of active members. In this year's valuation, there were 12,072 active members with an average age of 46.7, average years of service of 12.7 years and average compensation of \$74,332. The 12,049 active members in the prior valuation had an average age of 46.9, average service of 12.8 years and average compensation of \$73,035.

#### **Inactive Members**

In this year's valuation, there were 3,261 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their member contributions versus 3,201 in the prior valuation.

These graphs show a distribution of active members by age and by years of service.

CHART 2
Distribution of Active Members by Age as of June 30, 2015

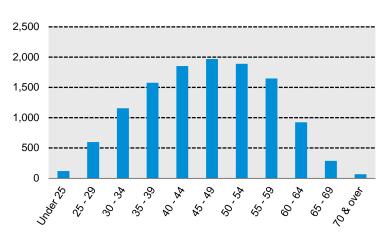
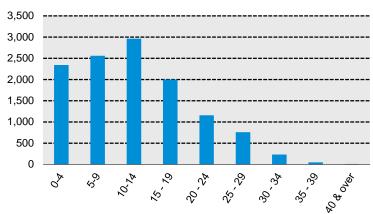


CHART 3
Distribution of Active Members by Years of Service as of June 30, 2015





#### **Retired Members and Beneficiaries**

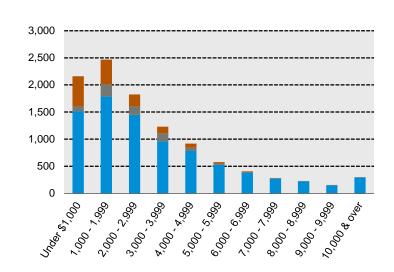
As of June 30, 2015, 9,062 retired members and 1,479 beneficiaries were receiving total monthly benefits of \$32,379,365. For comparison, in the previous valuation, there were 8,638 retired members and 1,411 beneficiaries receiving monthly benefits of \$29,647,061.

These graphs show a distribution of the current retired members and beneficiaries based on their monthly amount and age, by type of pension.

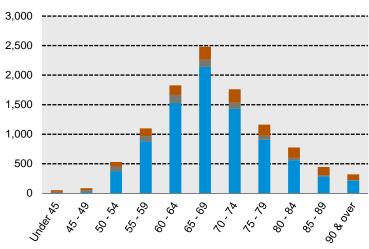
■ Beneficiaries
■ Disability

Service

CHART 4
Distribution of Retired Members and Beneficiaries by Type and by Monthly Amount as of June 30, 2015



## CHART 5 Distribution of Retired Members and Beneficiaries by Type and by Age as of June 30, 2015



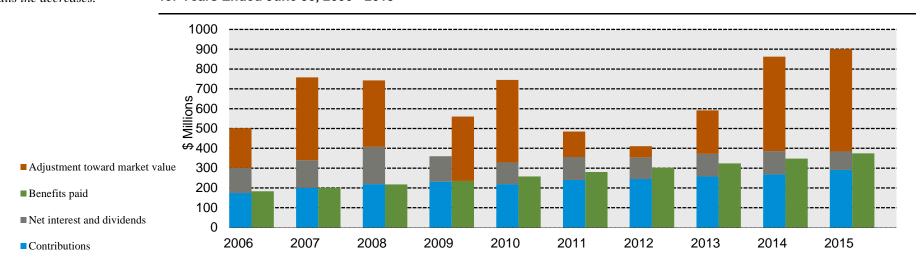


#### **B. FINANCIAL INFORMATION**

Retirement plan funding anticipates that, over the long term, both contributions and net investment earnings (less investment fees and administrative expenses) will be needed to cover benefit payments. Retirement plan assets change as a result of the net impact of these income and expense components. The adjustment toward market value shown in the chart is the "non-cash" earnings on investments implicitly included in the actuarial value of assets. Additional financial information, including a summary of these transactions for the valuation year, is presented in Section 3, Exhibits D and E.

The chart depicts the components of changes in the actuarial value of assets over the last ten years. Note: The first bar represents increases in assets during each year while the second bar details the decreases.

CHART 6
Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended June 30, 2006 - 2015





It is generally considered desirable to have level and predictable plan costs from one year to the next. For this reason, the Board of Retirement has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable.

The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets does not have an impact on the actuarial value of assets.

The determination of the Actuarial and Valuation Value of Assets is provided on the following page.

In developing the actuarial value of assets as of June 30, 2015, we have used the investment gains/losses from the prior seven years. The investment loss for the year ending June 30, 2015 was calculated by comparing the actual market return against an expected market return of 7.50% per annum used in the June 30, 2014 valuation. As adopted by the Board, any investment gains/losses established after July 1, 2008 will be recognized over a seven-year period and the deferred return will be further adjusted, if necessary, so that the actuarial value of assets will stay within 30% of the market value of assets. Deferred gains and losses as of June 30, 2013 have been combined and will be recognized in equal amounts over a period of six years starting July 1, 2013.



CHART 7 - Determination of Actuarial and Valuation Value of Assets for Year Ended June 30, 2015

From	То	Contributions	Benefits	Market Value	Average Market Value	
7/2008	6/2009	\$231,634,350	\$235,677,778	\$4,407,858,000	\$5,807,291,027	
7/2009	6/2010	219,555,464	258,023,786	4,980,962,000	4,462,064,342	
7/2010	6/2011	240,071,877	280,594,039	6,140,644,000	5,040,052,530	
7/2011	6/2012	244,788,721	301,803,914	6,073,926,000	6,187,197,677	
7/2012	6/2013	257,906,339	323,566,930	6,787,995,000	6,124,682,749	
7/2013	6/2014	268,138,220	347,619,527	7,810,001,000	6,828,714,719	
7/2014	6/2015	291,101,995	374,657,240	7,878,814,000	7,856,443,766	
		Total Actual Market	Expected Market	Investment Gain		
From	To	Return (net)	Return (net)	(Loss)	Deferred Factor	Deferred Retur
7/2008	6/2009	(\$1,324,427,572)	\$457,324,168	(\$1,781,751,740)	•	•
7/2009	6/2010	611,572,322	351,387,567	260,184,755		
7/2010	6/2011	1,200,204,162	390,604,071	809,600,091	See footnote	(1) below

The chart shows the determination of the actuarial and the valuation value of assets as of the valuation date.

	7/2014	6/2015	291,101,995	374,657,240	7,878,814,000	7,856,443,766	
			Total Actual Market	Expected Market	Investment Gain		
	From	To	Return (net)	Return (net)	(Loss)	Deferred Factor	Deferred Return
	7/2008	6/2009	(\$1,324,427,572)	\$457,324,168	(\$1,781,751,740)		
	7/2009	6/2010	611,572,322	351,387,567	260,184,755		
	7/2010	6/2011	1,200,204,162	390,604,071	809,600,091	See footnote	(1) below
	7/2011	6/2012	(9,702,807)	479,507,820	(489,210,627)		
	7/2012	6/2013	779,729,591	459,351,206	320,378,385	0.667	(\$6,507,779)
	7/2013	6/2014	1,101,487,307	512,153,604	589,333,703	0.714	420,952,645
	7/2014	6/2015	152,368,245	589,233,282	(436,865,037)	0.857	(374,455,746)
1.	Total Deferred Retu	ırn <sup>(2)</sup>					\$39,989,120
2.	Net Market Value						7,878,814,000
3.	Actuarial Value of	Assets (Item 2 – Item	1)				7,838,824,880
4.	Actuarial Value as	a Percentage of Marke	t Value (Before Corridor: Ite	m 3 / Item 2)			99.49%
5.	Actuarial Value of	Assets – Corridor Lim	its:				
	a. Lower Limit -	- 70% of Net Market V	/alue				5,515,169,800
	b. Upper Limit -	- 130% of Net Market	Value				10,242,458,200
6.	Actuarial Value of	Assets (within corrido	r)				7,838,824,880
7.	Non-valuation reser	ves and designations:					
	a. Contingency l	-					81,139,092
	b. Other Non-Va	luation Reserves					0
	c. Subtotal						\$81,139,092
8.	Preliminary Valuati	on Value of Assets (It	em 6 – Item 7c)				7,757,685,788
9.	Adjustment to Preli	minary Valuation Val	ue of Assets				
	a. Balance of tra	nsfer to offset membe	r COLA rate				21,383,000
	b. Surplus/(defic	it) for withdrawn emp	loyer (preliminary)(3)				(30,813,439)
	c. Subtotal		• •				(\$9,430,439)
10.	Final Valuation Val	lue of Assets (Item 8 -	Item 9c)				\$7,767,116,227
(1)	Pasad on action tal	on by the Peard then	at deformed loss of \$0.761.66	O through June 30 2013	as of that valuation has be	on recognized in six level	l amounts with four

The amounts of deferred return that will be recognized in each subsequent valuation are as follows:

6/30/2016	\$20,154,293	6/30/2019	\$20,154,294
6/30/2017	\$20,154,293	6/30/2020	\$21,781,238
6/30/2018	\$20,154,293	6/30/2021	(\$62,409,291)

<sup>&</sup>lt;sup>(3)</sup> Based on the latest estimate available as of June 30, 2014 for Florin Fire adjusted with interest at the assumed rate of investment return to June 30, 2015.

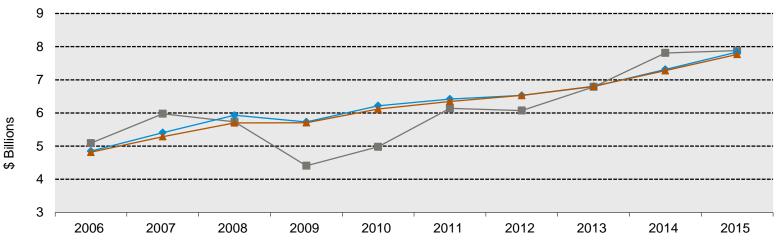


Based on action taken by the Board, the net deferred loss of \$9,761,669 through June 30, 2013 as of that valuation has been recognized in six level amounts with four periods of recognition remaining after the June 30, 2015 valuation.

The market value, actuarial value, and valuation value of assets are representations of SCERS' financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets, but with less volatility. The valuation value of assets is the actuarial value, excluding any non-valuation reserves. The valuation asset value is significant because SCERS' liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

This chart shows the change in market value, actuarial value and valuation value over the past ten years.

### CHART 8 Market Value, Actuarial Value and Valuation Value of Assets as of June 30, 2006 – 2015





→ Valuation Value

── Market Value
Actuarial Value

#### C. ACTUARIAL EXPERIENCE

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

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term

development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The net experience gain was \$82.2 million, \$23.6 million gain from investments and \$58.6 million gain from all other sources. The net experience variation from individual sources other than investments was 0.6% of the actuarial accrued liability. An explanation of the experience variation is provided on page 12 and in Section 3, Exhibit H. A discussion of the major components of the actuarial experience is on the following pages.

This chart provides a summary of the actuarial experience during the past year.

### CHART 9 Actuarial Experience for Year Ended June 30, 2015

1.	Net gain from investments <sup>(1)</sup>	\$23,638,000
2.	Net gain from other experience <sup>(2)</sup>	<u>58,599,000</u>
3.	Net experience gain: $(1) + (2)$	\$82,237,000

<sup>(1)</sup> Details in Chart 10.



<sup>(2)</sup> Details in Section 3, Exhibit H. Does not include the effect of plan or assumption changes, if any.

#### **Investment Rate of Return**

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on SCERS' investment policy. For valuation purposes, the assumed rate of return on the valuation value of assets was 7.50% in the June 30, 2014 valuation. The actual rate of return on a valuation basis for the 2014/2015 plan year was 7.82%.

Since the actual return on the valuation value of assets for the year was greater than the assumed return, SCERS experienced an actuarial gain during the year ended June 30, 2015 with regard to its investments.

This chart shows the gain/(loss) due to investment experience.

CHART 10
Investment Experience for Year Ended June 30, 2015 – Market, Actuarial and Valuation Value of Assets

		Market Value	<b>Actuarial Value</b>	Valuation Value
1. A	ctual return	\$152,368,000	\$609,387,000	\$572,950,000
2. A	verage value of assets	7,856,444,000	7,359,436,000	7,324,164,000
3. A	ctual rate of return: $(1) \div (2)$	1.94%	8.28%	7.82%
4. A	ssumed rate of return	7.50%	7.50%	7.50%
5. E	xpected return:	<u>589,233,000</u>	<u>551,958,000</u>	<u>549,312,000</u>
6. A	ctuarial gain/(loss): (1) – (5)	(\$436,865,000)	<u>\$57,429,000</u>	\$23,638,000



Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on an actuarial, valuation, and market basis for the last ten years.

CHART 11
Investment Return – Market Value, Actuarial Value and Valuation Value: 2006 – 2015

		ket Value Actuarial Value Valuation Value ment Return Investment Return Investment Return		1 10 10 10 10 10 10 10 10 10 10 10 10 10		
Year Ended June 30	Amount	Percent	Amount	Percent	Amount	Percent
2006	\$522,803,000	11.30%	\$326,688,000	7.13%	\$329,339,000	7.24%
2007	885,687,000	17.19%	558,262,000	11.37%	470,717,000	9.65%
2008	(240,661,000)	(3.98%)	523,169,000	9.56%	413,272,000	7.72%
2009	(1,324,428,000)	(22.81%)	(196,500,000)	(3.27%)	9,241,000	0.16%
2010	611,573,000	13.71%	525,248,000	9.08%	450,949,000	7.83%
2011	1,200,204,000	23.81%	244,352,000	3.89%	269,937,000	4.37%
2012	(9,702,000)	(0.16%)	166,087,000	2.57%	238,467,000	3.73%
2013	779,729,000	12.73%	333,523,000	5.07%	341,373,000	5.19%
2014	1,101,488,000	16.13%	594,718,000	8.70%	551,884,000	8.06%
2015	152,368,000	1.94%	609,387,000	8.28%	572,950,000	7.82%
Five-Year Average Return		10.53%		5.67%		5.82%
Ten-Year Average Return		6.13%		6.16%		6.14%

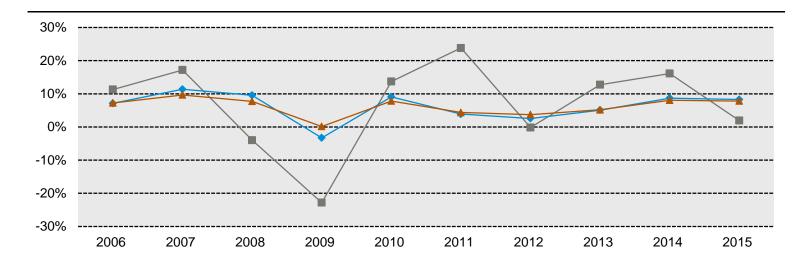


Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.

This chart illustrates how this leveling effect has actually worked over the years 2006 - 2015.

CHART 12

Market, Actuarial and Valuation Rates of Return for Years Ended June 30, 2006 – 2015





#### **Other Experience**

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

#### These include:

- > actual turnover among the participants,
- > retirement experience (earlier or later than expected),
- > mortality (more or fewer deaths than expected),
- > the number of disability retirements, and
- > salary increases different than assumed.

The net gain from this other experience for the year ended June 30, 2015 amounted to \$58.6 million which is 0.6% of the actuarial accrued liability. See Section 3, Exhibit H for a detailed development of the Unfunded Actuarial Accrued Liability, and the breakdown of the actuarial gain/loss from other experience.



#### D. EMPLOYER AND MEMBER CONTRIBUTIONS

Employer contributions consist of two components:

Normal Cost

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

Contribution to the Unfunded Actuarial Accrued Liability (UAAL)

The annual contribution rate that, if paid annually over the UAAL amortization period, would accumulate to the amount necessary to fully fund the UAAL. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution (or rate credit in the case of a negative unfunded actuarial accrued liability) is calculated to remain as a level percentage of future active member payroll (including payroll for new members as they enter the System) assuming a constant number of active members. In order to remain as a level percentage of payroll, amortization payments (credits) are scheduled to increase at the annual inflation rate of 3.50% (i.e., 3.25%) inflation plus 0.25% real across-the-board salary increase). The UAAL established as a result of the Early Retirement Incentive Program for LEMA members is amortized over a 10-year period beginning June 30, 2010. Effective with the June 30, 2013 valuation, the System's remaining outstanding balance of the June 30, 2012 UAAL is being amortized over a declining 23-year period (20 years as of June 30, 2015). The change in UAAL that arises due to actuarial gains or losses or from changes in actuarial assumptions or methods at each valuation is amortized over its own declining 20-year period. Any change in UAAL that arises due to plan amendments will be amortized over its own declining 15-year period and any change in UAAL due to retirement incentive programs will be amortized over its own declining period of up to 5 years.

Starting with the June 30, 2015 valuation, we have added to the Miscellaneous employer UAAL rate for the County an amount to reflect the net withdrawal liability for the Library Authority and Air Quality Districts when they terminated their affiliation with the County and became special districts.

The recommended employer contributions are provided on Chart 13.

Employer normal cost and UAAL contribution rates are calculated assuming payments made at the end of every pay period.



#### Member Contributions

Miscellaneous Tiers 1, 2, 3 & 4 Safety Tiers 1, 2, & 3

Articles 6 and 6.8 of the 1937 Act define the methodology to be used in the calculation of member basic contribution rates for Miscellaneous members and Safety members, respectively, in the legacy tiers. The basic contribution rate is determined as that percentage of compensation which if paid annually from a member's first year of membership through the prescribed retirement age would accumulate to the amount necessary to fund a prescribed annuity.

The annuity is equal to:

- ➤ 1/240 of Final Average Salary per year of service at age 55 for current Miscellaneous Tier 1, Tier 2 and Tier 3 members
- ➤ 1/120 of Final Average Salary per year of service at age 60 for current Miscellaneous Tier 4 members
- ➤ 1/100 of Final Average Salary per year of service at age 50 for current Safety Tier 1, Tier 2 and Tier 3 members

In addition to their basic contributions, members in the legacy tiers pay one-half of the total normal cost necessary to fund their cost-of-living benefits. The cost to provide the cost-of-living benefits is offset somewhat by the balance available in an account maintained in the valuation to offset member's COLA rates in the legacy tiers. Accumulation includes semi-annual crediting of interest at the assumed investment earning rate. For members paying half rates, their rates should be exactly one-half of the rates described above. Note that effective with the June 30, 2015 valuation, all members are reported as paying at least full-rate.

After we completed the June 30, 2013 valuation, we were informed by SCERS that starting in 2014/2015, most County members in the legacy tiers have agreed to pick up either 1/3, 1/4, or 1/5 of the difference between the employee's then current Normal Cost and 50% of the total normal cost rate. The adjustments required for the employer and employee rates were subsequently provided to the System.

As those members have agreed to pick up an additional 1/3, 1/4, or 1/5 of the difference in the Normal Cost rate in 2015/2016 and 2016/2017, we have reflected these



adjustments in preparing the recommended rates for the June 30, 2014 and June 30, 2015 valuations, respectively.

For Rep Unit 26 Miscellaneous members, the member rates they have started to pay in 2015/2016 are 1% of payroll higher than the rates they paid in 2014/2015. In developing their rates for 2016/2017, we have added an additional 2% of payroll to the rates for 2015/2016.

Miscellaneous Tier 5 & Safety Tier 4

Pursuant to Section 7522.30(a) of the Government Code, Miscellaneous Tier 5 and Safety Tier 4 members are required to contribute at least 50% of the Normal Cost rate. In addition, there are certain additional requirements that would have to be met such as requiring the new employees to pay the contribution rate of "similarly situated employees", if it is greater. (reference: Section 7522.30(c)). We further understand that different rules may have to be applied for collectively bargained employees, non-represented, managerial or other supervisory employees. (reference: Section 7522.30(e)). In preparing the Normal Cost rates in this report, we have assumed that exactly 50% of the Normal Cost would be paid by the new members and we have taken into account in this valuation only the requirements of Section 7522.30(e), but not requirements of Section 7522.30(e).

The member contribution rates are provided in Appendix A.

Member contributions are assumed to be made at the end of every pay period.



**CHART 13 Recommended Employer Contribution Rates (Dollar Amounts in Thousands)** 

County Only <sup>(1)</sup>	June 30 Actuarial V			30, 2014 al Valuation	
county only	Tietdariai	Estimated Annual	7 Tetuari	Estimated Annual	
Miscellaneous – Tier 1 Members	Rate	Amount <sup>(2)</sup>	Rate	Amount <sup>(2)</sup>	
Normal Cost	10.15%	\$731	10.83%	\$780	
UAAL <sup>(3)</sup>	6.11%	440	6.75%	486	
Total Contribution	16.26%	\$1,171	17.58%	\$1,266	
Miscellaneous – Tier 2 Members					
Normal Cost	8.90%	\$338	9.80%	\$372	
UAAL <sup>(3)</sup>	6.11%	232	6.75%	257	
Γotal Contribution	15.01%	\$570	16.55%	\$629	
Miscellaneous – Tier 3 Members					
Normal Cost	11.30%	\$59,123	12.49%	\$65,349	
UAAL <sup>(3)</sup>	6.11%	31,994	6.75%	35,317	
Γotal Contribution	17.41%	\$91,117	19.24%	\$100,666	
Miscellaneous – Tier 4 Members					
Normal Cost	9.14%	\$1,865	9.21%	\$1,880	
UAAL <sup>(3)</sup>	6.11%	1,248	6.75%	1,378	
Total Contribution	15.25%	\$3,113	15.96%	\$3,258	
Miscellaneous – Tier 5 Members					
Normal Cost	8.02%	\$5,124	8.12%	\$5,188	
UAAL <sup>(3)</sup>	6.11%	3,907	6.75%	4,313	
Total Contribution	14.13%	\$9,031	14.87%	\$9,501	



 <sup>(1)</sup> Includes elected officials (Board of Supervisors, Sheriff, District Attorney and Assessor).
 (2) Based on June 30, 2015 projected annual payroll, see page 20.
 (3) Includes a 0.04% UAAL rate for the County effective June 30, 2015 for withdrawn employers.

#### **Recommended Employer Contribution Rates (Dollar Amounts in Thousands)**

County Only <sup>(1)</sup>	June 30, Actuarial V		June 30, 2014 Actuarial Valuation	
		Estimated Annual		Estimated Annual
Safety – Tier 1 Members	Rate	Amount <sup>(2)</sup>	Rate	Amount <sup>(2)</sup>
Normal Cost	20.82%	\$6,723	21.30%	\$6,878
UAAL	21.29%	6,874	21.29%	6,874
Total Contribution	42.11%	\$13,597	42.59%	\$13,752
Safety – Tier 2 Members				
Normal Cost	18.13%	\$26,460	20.27%	\$29,584
UAAL	21.29%	31,073	21.29%	31,073
Total Contribution	39.42%	\$57,533	41.56%	\$60,657
Safety – Tier 3 Members				
Normal Cost	16.44%	\$1,432	18.63%	\$1,622
UAAL	21.29%	1,854	21.29%	1,854
Total Contribution	37.73%	\$3,286	39.92%	\$3,476
Safety – Tier 4 Members				
Normal Cost	13.11%	\$2,393	13.84%	\$2,527
UAAL	21.29%	3,887	21.29%	3,887
Total Contribution	34.40%	\$6,280	35.13%	\$6,414
All County Categories Combined				
Normal Cost	12.64%	\$104,189	13.86%	\$114,180
UAAL	9.90%	81,509	10.37%	85,439
Total Contribution	22.54%	\$185,698	24.23%	\$199,619

<sup>(1)</sup> Includes elected officials (Board of Supervisors, Sheriff, District Attorney and Assessor).
(2) Based on June 30, 2015 projected annual payroll, see page 20.



#### **Recommended Employer Contribution Rates (Dollar Amounts in Thousands)**

Superior Court Only	June 30 Actuarial V	ž	June 30, 2014 Actuarial Valuation		
	Estimated Annual			Estimated Annual	
Miscellaneous – Tier 1 Members	Rate	Amount <sup>(1)</sup>	Rate	Amount <sup>(1)</sup>	
Normal Cost	11.92%	\$84	11.80%	\$83	
UAAL	6.07%	43	6.75%	47	
Total Contribution	17.99%	\$127	18.55%	\$130	
Miscellaneous – Tier 2 Members					
Normal Cost	10.59%	\$93	10.79%	\$95	
UAAL	6.07%	53	6.75%	59	
Total Contribution	16.66%	\$146	17.54%	\$154	
Miscellaneous – Tier 3 Members					
Normal Cost	13.76%	\$5,584	13.90%	\$5,641	
UAAL	6.07%	2,465	6.75%	2,739	
Total Contribution	19.83%	\$8,049	20.65%	\$8,380	
Miscellaneous – Tier 5 Members					
Normal Cost	8.02%	\$177	8.12%	\$180	
UAAL	6.07%	134	6.75%	149	
Total Contribution	14.09%	\$311	14.87%	\$329	
All Superior Court Categories Combined					
Normal Cost	13.38%	\$5,938	13.71%	\$5,999	
UAAL	6.07%	2,695	6.75%	2,994	
Total Contribution	19.45%	\$8,633	20.46%	\$8,993	

<sup>(1)</sup> Based on June 30, 2015 projected annual payroll, see page 20.

Note: Superior Court members have not agreed to pick up any additional portion of the total Normal Cost.



#### **Recommended Employer Contribution Rates (Dollar Amounts in Thousands)**

District Only	June 30 Actuarial		June 30, 2014 Actuarial Valuation		
		Estimated Annual		Estimated Annual	
Miscellaneous – Tier 1 Members	Rate	Amount <sup>(1)</sup>	Rate	Amount <sup>(1)</sup>	
Normal Cost	11.92%	\$35	11.80%	\$34	
UAAL	14.00%	41	14.36%	42	
Total Contribution	25.92%	\$76	26.16%	\$76	
Miscellaneous – Tier 3 Members					
Normal Cost	13.76%	\$3,580	13.90%	\$3,616	
UAAL	14.00%	3,643	14.36%	3,736	
Total Contribution	27.76%	\$7,223	28.26%	\$7,352	
Miscellaneous – Tier 5 Members					
Normal Cost	8.02%	\$236	8.12%	\$239	
UAAL	14.00%	412	14.36%	423	
Total Contribution	22.02%	\$648	22.48%	\$662	
All District Categories Combined					
Normal Cost	13.17%	\$3,851	13.30%	\$3,889	
UAAL	14.00%	4,096	14.36%	4,201	
Total Contribution	27.17%	\$7,947	27.66%	\$8,090	
All County and District Categories					
Combined					
Normal Cost	12.70%	\$113,978	13.83%	\$124,068	
UAAL	9.84%	88,300	10.32%	92,634	
Total Contribution	22.54%	\$202,278	24.15%	\$216,702	

<sup>(1)</sup> Based on June 30, 2015 projected annual payroll, see page 20.

Note: District members have not agreed to pick up any additional portion of the total Normal Cost.



**Recommended Employer Contribution Rates (Dollar Amounts in Thousands)** 

June 30, 2015 projected annual payroll used in developing employer contribution rates on the four previous pages

	County <sup>(1)</sup>	Superior Court	<b>District</b>	<u>Total</u>
Miscellaneous Tier 1	\$7,202	\$702	\$290	\$8,194
Miscellaneous Tier 2	3,800	876	0	4,676
Miscellaneous Tier 3	523,210	40,584	26,014	589,808
Miscellaneous Tier 4	20,410	0	0	20,410
Miscellaneous Tier 5	<u>63,894</u>	<u>2,211</u>	<u>2,945</u>	<u>69,050</u>
Subtotal	\$618,516	\$44,373	\$29,249	\$692,138
Safety Tier 1	\$32,288	\$0	\$0	\$32,288
Safety Tier 2	145,950	0	0	145,950
Safety Tier 3	8,709	0	0	8,709
Safety Tier 4	<u>18,256</u>	<u>0</u>	<u>0</u>	<u>18,256</u>
Subtotal	\$205,203	\$0	\$0	\$205,203
Total	\$823,719	\$44,373	\$29,249	\$897,341

<sup>(1)</sup> Includes elected officials (Board of Supervisors, Sheriff, District Attorney and Assessor).



The contribution rates as of June 30, 2015 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting

future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

# Reconciliation of Recommended Contribution Rate The chart below details the changes in the recommended contribution from the prior valuation to the current year's valuation.

The chart reconciles the contribution rate from the prior valuation to the amount determined in this valuation.

## CHART 14 Reconciliation of Average Recommended Employer Contribution Rate from June 30, 2014 to June 30, 2015 (Dollar Amounts in Thousands)

	Contribution Rate	Estimated Annual Dollar Cost <sup>(1)</sup>
Average Recommended Contribution Rate as of June 30, 2014, After Reflecting Members Paying Half and Full Rates and Member Pick Up of Additional Normal Cost	24.15%	\$216,702
Effect of investment gains	-0.19%	(1,705)
Effect of actual contributions greater than expected	-0.12%	(1,077)
Effect of actual individual salary increases less than expected	-0.32%	(2,871)
Effect of increase in UAAL rate from lower than expected increase in total payroll	0.15%	1,346
Effect of actual COLA increases less than expected	-0.07%	(628)
Effect of Rep Unit 19 Safety members paying full rate starting in 2014/2015 and Rep Unit 26 Miscellaneous members paying additional Normal Cost starting in 2015/2016	-0.28%	(2,513)
Effect of member pick up of additional Normal Cost in 2016/2017	-0.64%	(5,743)
Effect of demographic changes and other actuarial (gains)/losses	<u>-0.14%</u>	(1,233)
Subtotal	-1.61%	(14,424)
Average Recommended Contribution Rate as of June 30, 2015, After Reflecting Member Pick Up of Additional Normal Cost <sup>(2)</sup>	22.54%	\$202,278

<sup>(1)</sup> Based on June 30, 2015 projected annual payroll of \$897,341,000.



<sup>(2)</sup> Effective with the June 30, 2015 valuation, all members are reported as paying at least full-rate.

The member contribution rates as of June 30, 2015 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

# Reconciliation of Recommended Contribution Rate The chart below details the changes in the recommended member contribution rate from the prior valuation to the current year's valuation.

The chart reconciles the member contribution rate from the prior valuation to the amount determined in this valuation.

## CHART 15 Reconciliation of Average Recommended Member Contribution Rate from June 30, 2014 to June 30, 2015 (Dollar Amounts in Thousands)

	Contribution Rate	Estimated Amount <sup>(1)</sup>
Average Recommended Contribution Rate as of June 30, 2014, After Reflecting Members Paying Half and Full Rates and Member Pick Up of Additional Normal Cost	7.93% <sup>(2)</sup>	\$71,159
Effect of reduction in COLA offset reserve	0.03%	269
Effect of Rep Unit 19 Safety members paying full rate starting in 2014/2015 and Rep Unit 26 Miscellaneous members paying additional Normal Cost starting in 2015/2016	0.28%	2,513
Effect of member pick up of additional Normal Cost in 2016/2017	0.66%	5,922
Effect of demographic changes	<u>-0.06%</u>	<u>(538)</u>
Subtotal	0.91%	8,166
Average Recommended Contribution Rate as of June 30, 2015, After Reflecting Member Pick Up of Additional Normal Cost <sup>(3)</sup>	8.84% <sup>(2)</sup>	\$79,325

<sup>(1)</sup> Based on June 30, 2015 projected annual payroll of \$897,341,000.



<sup>(2)</sup> Rates have been adjusted to reflect a reserve available to reduce part of the COLA contributions.

<sup>(3)</sup> Effective with the June 30, 2015 valuation, all members are reported as paying at least full-rate.

#### E. FUNDED RATIO

A critical piece of information regarding the Plan's financial status is the funded ratio. This ratio compares the actuarial value of assets and market value of assets to the actuarial accrued liabilities of the plan. High ratios indicate a well-funded plan that is well positioned to pay benefits when they are due. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other changes.

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

CHART 16
Funded Ratio for Plan Years Ending June 30, 2006 – 2015

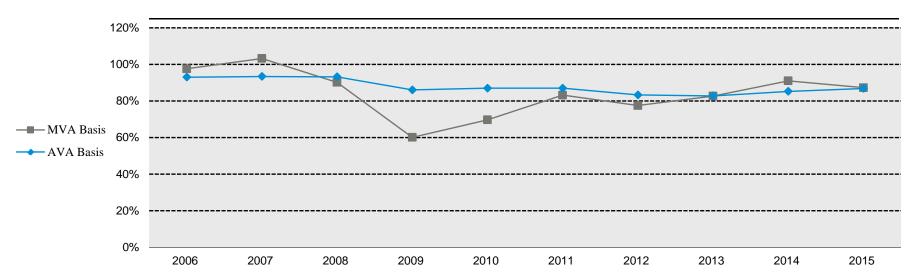




CHART 17 Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets <sup>(1)</sup> (a)	Actuarial Accrued Liability (AAL) <sup>(1)</sup> (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (%) (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll (%) [(b) - (a)] / (c)
6/30/2006	\$4,848,953,000	\$5,214,915,000	\$365,962,000	93.0	\$782,572,000	46.8
6/30/2007	5,406,461,000	5,788,336,000	381,875,000	93.4	832,484,000	45.9
6/30/2008	5,930,758,000	6,363,355,000	432,597,000	93.2	902,971,000	47.9
6/30/2009	5,730,215,000	6,661,993,000	931,778,000	86.0	968,130,000	96.2
6/30/2010	6,216,994,000	7,090,497,000	873,503,000	87.7	912,644,000	95.7
6/30/2011	6,420,824,000	7,382,897,000	962,073,000	87.0	880,766,000	109.2
6/30/2012	6,529,895,000	7,838,223,000	1,308,328,000	83.3	875,672,000	149.4
6/30/2013	6,797,757,000	8,210,980,000	1,413,223,000	82.8	877,657,000	161.0
6/30/2014	7,312,993,000	8,580,928,000	1,267,935,000	85.2	879,999,000	144.1
6/30/2015	7,838,825,000	9,028,679,000	1,189,854,000	86.8	897,341,000	132.6

<sup>(1)</sup> Includes contingency reserve and retiree health benefit reserve.



#### F. VOLATILITY RATIOS

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

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

For SCERS, the current AVR is 8.8. This means that a 1% asset gain/(loss) (relative to the assumed investment return) translates to 8.8% of one-year's payroll. Since SCERS amortizes actuarial gains and losses over a period of 20 years as of June 30, 2015, there would be a 0.6% of payroll decrease/(increase) in the required contribution for each 1% asset gain/(loss).

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

The LVR also indicates how volatile contributions will be in response to changes in the Actuarial Accrued Liability due to actual experience or to changes in actuarial assumptions.

For SCERS, the current LVR is 10.1. This is about 15% higher than the AVR. Therefore, we would expect that contribution volatility will increase over the long-term.

CHART 19
Volatility Ratios for Years Ended June 30, 2008 – 2015

This chart shows how the asset and liability volatility ratios have varied over time.

	<b>Asset Volatility Ratios</b>			<b>Liability Volatility Ratios</b>		
Year Ended June 30	Miscellaneous	Safety	Total	Miscellaneous	Safety	Total
2008	5.3	10.0	6.4	5.9	11.3	7.0
2009	3.8	7.4	4.6	5.7	11.3	6.9
2010	4.5	9.1	5.5	6.4	13.4	7.8
2011	5.8	11.6	7.0	6.9	14.0	8.4
2012	5.8	11.0	6.9	7.5	14.5	9.0
2013	6.6	11.7	7.7	7.9	14.6	9.4
2014	7.6	13.2	8.9	8.1	15.2	9.8
2015	7.5	13.0	8.8	8.4	15.8	10.1



SECTION 3: Supplemental Information for the Sacramento County Employees' Retirement System

# EXHIBIT A Table of Plan Coverage i. Miscellaneous Tier 1

	Year Ende	Year Ended June 30		
Category	2015	2014	Change From Prior Year	
Active members in valuation				
Number	104	149	-30.2%	
Average age	59.8	59.4	N/A	
Average service	33.9	33.3	N/A	
Projected total compensation <sup>(1)</sup>	\$8,193,946	\$11,576,136	-29.2%	
Projected average compensation	\$78,788	\$77,692	1.4%	
Account balances	\$16,664,391	\$23,246,783	-28.3%	
Total active vested members	104	149	-30.2%	
Vested terminated members				
Number <sup>(2)</sup>	63	74	-14.9%	
Average age	63.1	62.1	N/A	
Retired members				
Number in pay status	2,988	3,053	-2.1%	
Average age	74.3	73.9	N/A	
Average monthly benefit	\$3,339	\$3,194	4.5%	
Disabled members				
Number in pay status	191	209	-8.6%	
Average age	75.3	74.6	N/A	
Average monthly benefit	\$2,127	\$2,061	3.2%	
Beneficiaries				
Number in pay status	768	759	1.2%	
Average age	77.2	76.9	N/A	
Average monthly benefit	\$1,666	\$1,568	6.3%	

<sup>(1)</sup> Projected compensation for the June 30, 2015 valuation was calculated by increasing the annualized compensation earned during 2014-2015 by 3.50%.



<sup>(2)</sup> Includes terminated members due a refund of contributions.

SECTION 3: Supplemental Information for the Sacramento County Employees' Retirement System

EXHIBIT A

Table of Plan Coverage
ii. Miscellaneous Tier 2

	Year Ende	Year Ended June 30				
Category	2015	2014	– Change From Prior Year			
Active members in valuation						
Number	68	74	-8.1%			
Average age	54.8	54.2	N/A			
Average service	24.7	23.8	N/A			
Projected total compensation <sup>(1)</sup>	\$4,676,113	\$5,059,515	-7.6%			
Projected average compensation	\$68,766	\$68,372	0.6%			
Account balances	\$5,322,023	\$5,591,845	-4.8%			
Total active vested members	68	74	-8.1%			
Vested terminated members						
Number <sup>(2)</sup>	185	205	-9.8%			
Average age	56.1	55.6	N/A			
Retired members						
Number in pay status	317	299	6.0%			
Average age	67.7	67.4	N/A			
Average monthly benefit	\$1,029	\$995	3.4%			
Disabled members						
Number in pay status	33	33	0.0%			
Average age	65.4	64.8	N/A			
Average monthly benefit	\$895	\$871	2.8%			
Beneficiaries						
Number in pay status	46	43	7.0%			
Average age	69.2	68.6	N/A			
Average monthly benefit	\$684	\$692	-1.2%			

<sup>(1)</sup> Projected compensation for the June 30, 2015 valuation was calculated by increasing the annualized compensation earned during 2014-2015 by 3.50%.



<sup>(2)</sup> Includes terminated members due a refund of contributions.

SECTION 3: Supplemental Information for the Sacramento County Employees' Retirement System

EXHIBIT A

Table of Plan Coverage
iii. Miscellaneous Tier 3

	Year End	Year Ended June 30			
Category	2015	2014	– Change From Prior Year		
Active members in valuation					
Number	8,238	8,782	-6.2%		
Average age	49.4	48.8	N/A		
Average service	14.5	13.6	N/A		
Projected total compensation <sup>(1),(2)</sup>	\$589,808,360	\$607,156,789	-2.9%		
Projected average compensation	\$71,596	\$69,137	3.6%		
Account balances	\$436,990,756	\$429,857,893	1.7%		
Total active vested members	7,922	8,343	-5.0%		
Vested terminated members					
Number <sup>(3)</sup>	2,357	2,343	0.6%		
Average age	47.9	47.5	N/A		
Retired members					
Number in pay status	3,528	3,166	11.4%		
Average age	66.6	66.3	N/A		
Average monthly benefit	\$2,306	\$2,207	4.5%		
Disabled members					
Number in pay status	253	235	7.7%		
Average age	62.2	61.9	N/A		
Average monthly benefit	\$1,747	\$1,735	0.7%		
Beneficiaries					
Number in pay status	324	287	12.9%		
Average age	64.6	64.1	N/A		
Average monthly benefit	\$981	\$932	5.3%		

<sup>(1)</sup> Projected compensation for the June 30, 2015 valuation was calculated by increasing the annualized compensation earned during 2014-2015 by 3.50%.



<sup>(2)</sup> For members without a salary reported for the June 30, 2015 valuation, we have assigned them an annual salary of \$71,415.

<sup>(3)</sup> Includes terminated members due a refund of contributions.

SECTION 3: Supplemental Information for the Sacramento County Employees' Retirement System

EXHIBIT A

Table of Plan Coverage
iv. Miscellaneous Tier 4

	Year Ende	Year Ended June 30		
Category	2015	2014	– Change From Prior Year	
Active members in valuation				
Number	306	296	3.4%	
Average age	40.6	39.1	N/A	
Average service	2.7	1.8	N/A	
Projected total compensation <sup>(1)</sup>	\$20,409,812	\$17,857,160	14.3%	
Projected average compensation	\$66,699	\$60,328	10.6%	
Account balances	\$3,777,051	\$2,302,207	64.1%	
Total active vested members	8	7	14.3%	
Vested terminated members				
Number <sup>(2)</sup>	51	46	10.9%	
Average age	36.3	38.7	N/A	
Retired members				
Number in pay status			N/A	
Average age			N/A	
Average monthly benefit			N/A	
Disabled members				
Number in pay status			N/A	
Average age			N/A	
Average monthly benefit			N/A	
Beneficiaries				
Number in pay status			N/A	
Average age			N/A	
Average monthly benefit			N/A	

<sup>(1)</sup> Projected compensation for the June 30, 2015 valuation was calculated by increasing the annualized compensation earned during 2014-2015 by 3.50%.



<sup>(2)</sup> Includes terminated members due a refund of contributions.

SECTION 3: Supplemental Information for the Sacramento County Employees' Retirement System

# EXHIBIT A Table of Plan Coverage v. Miscellaneous Tier 5

	Year Ende	Year Ended June 30		
Category	2015	2014	– Change From Prior Year	
Active members in valuation				
Number	1,377	784	75.6%	
Average age	37.3	37.1	N/A	
Average service	1.1	0.7	N/A	
Projected total compensation <sup>(1)</sup>	\$69,050,148	\$37,428,672	84.5%	
Projected average compensation	\$50,145	\$47,741	5.0%	
Account balances	\$5,816,818	\$1,886,595	208.3%	
Total active vested members	5	2	150.0%	
Vested terminated members				
Number <sup>(2)</sup>	129	56	130.4%	
Average age	39.1	41.1	N/A	
Retired members				
Number in pay status			N/A	
Average age			N/A	
Average monthly benefit			N/A	
Disabled members				
Number in pay status			N/A	
Average age			N/A	
Average monthly benefit			N/A	
Beneficiaries				
Number in pay status			N/A	
Average age			N/A	
Average monthly benefit			N/A	

<sup>(1)</sup> Projected compensation for the June 30, 2015 valuation was calculated by increasing the annualized compensation earned during 2014-2015 by 3.50%.



<sup>(2)</sup> Includes terminated members due a refund of contributions.

SECTION 3: Supplemental Information for the Sacramento County Employees' Retirement System

EXHIBIT A

Table of Plan Coverage
vi. Safety Tier 1

	Year Ende	Year Ended June 30			
Category	2015	2014	– Change From Prior Year		
Active members in valuation					
Number	254	338	-24.9%		
Average age	49.9	49.7	N/A		
Average service	23.1	23.1	N/A		
Projected total compensation <sup>(1)</sup>	\$32,288,171	\$41,995,513	-23.1%		
Projected average compensation	\$127,119	\$124,247	2.3%		
Account balances	\$46,182,258	\$56,732,469	-18.6%		
Total active vested members	254	338	-24.9%		
Vested terminated members					
Number <sup>(2)</sup>	93	102	-8.8%		
Average age	50.9	50.0	N/A		
Retired members					
Number in pay status	1,222	1,149	6.4%		
Average age	64.8	64.9	N/A		
Average monthly benefit	\$6,676	\$6,353	5.1%		
Disabled members					
Number in pay status	200	200	0.0%		
Average age	64.7	64.3	N/A		
Average monthly benefit	\$4,375	\$4,152	5.4%		
Beneficiaries					
Number in pay status	311	296	5.1%		
Average age	67.0	66.4	N/A		
Average monthly benefit	\$2,849	\$2,750	3.6%		

<sup>(1)</sup> Projected compensation for the June 30, 2015 valuation was calculated by increasing the annualized compensation earned during 2014-2015 by 3.50%.



<sup>(2)</sup> Includes terminated members due a refund of contributions.

SECTION 3: Supplemental Information for the Sacramento County Employees' Retirement System

EXHIBIT A

Table of Plan Coverage
vii. Safety Tier 2

	Year End	Year Ended June 30			
Category	2015	2014	– Change From Prior Year		
Active members in valuation					
Number	1,370	1,407	-2.6%		
Average age	42.6	41.9	N/A		
Average service	14.3	13.5	N/A		
Projected total compensation <sup>(1),(2)</sup>	\$145,949,556	\$143,189,025	1.9%		
Projected average compensation	\$106,533	\$101,769	4.7%		
Account balances	\$125,287,345	\$110,921,100	13.0%		
Total active vested members	1,345	1,378	-2.4%		
Vested terminated members					
Number <sup>(3)</sup>	368	366	0.5%		
Average age	41.4	40.3	N/A		
Retired members					
Number in pay status	278	246	13.0%		
Average age	64.5	64.8	N/A		
Average monthly benefit	\$4,639	\$4,523	2.6%		
Disabled members					
Number in pay status	52	48	8.3%		
Average age	52.3	52.9	N/A		
Average monthly benefit	\$3,108	\$3,019	2.9%		
Beneficiaries					
Number in pay status	30	26	15.4%		
Average age	56.7	53.9	N/A		
Average monthly benefit	\$2,240	\$2,138	4.8%		

<sup>(1)</sup> Projected compensation for the June 30, 2015 valuation was calculated by increasing the annualized compensation earned during 2014-2015 by 3.50%.



<sup>(2)</sup> For members without a salary reported for the June 30, 2015 valuation, we have assigned them an annual salary of \$106,605.

<sup>(3)</sup> Includes terminated members due a refund of contributions.

SECTION 3: Supplemental Information for the Sacramento County Employees' Retirement System

EXHIBIT A

Table of Plan Coverage
viii. Safety Tier 3

	Year Ende	Year Ended June 30			
Category	2015	2014	– Change From Prior Year		
Active members in valuation					
Number	97	74	31.1%		
Average age	35.6	34.6	N/A		
Average service	4.2	2.6	N/A		
Projected total compensation <sup>(1), (2)</sup>	\$8,708,725	\$6,201,324	40.4%		
Projected average compensation	\$89,781	\$83,802	7.1%		
Account balances	\$2,663,306	\$1,367,190	94.8%		
Total active vested members	18	4	350.0%		
Vested terminated members					
Number <sup>(3)</sup>	5	4	25.0%		
Average age	40.4	34.2	N/A		
Retired members					
Number in pay status			N/A		
Average age			N/A		
Average monthly benefit			N/A		
Disabled members					
Number in pay status			N/A		
Average age			N/A		
Average monthly benefit			N/A		
Beneficiaries					
Number in pay status			N/A		
Average age			N/A		
Average monthly benefit			N/A		

<sup>(1)</sup> Projected compensation for the June 30, 2015 valuation was calculated by increasing the annualized compensation earned during 2014-2015 by 3.50%.



<sup>(2)</sup> For members without a salary reported for the June 30, 2015 valuation, we have assigned them an assumed salary of \$89,010.

<sup>(3)</sup> Includes terminated members due a refund of contributions.

SECTION 3: Supplemental Information for the Sacramento County Employees' Retirement System

EXHIBIT A

Table of Plan Coverage
ix. Safety Tier 4

	Year Ende	Year Ended June 30		
Category	2015	2014	– Change From Prior Year	
Active members in valuation				
Number	258	145	77.9%	
Average age	31.8	32.0	N/A	
Average service	1.4	1.4	N/A	
Projected total compensation <sup>(1)</sup>	\$18,255,550	\$9,533,877	91.5%	
Projected average compensation	\$70,758	\$65,751	7.6%	
Account balances	\$2,887,306	\$1,063,328	171.5%	
Total active vested members	10	10	0.0%	
Vested terminated members				
Number <sup>(2)</sup>	10	5	100.0%	
Average age	33.5	30.4	N/A	
Retired members				
Number in pay status			N/A	
Average age			N/A	
Average monthly benefit			N/A	
Disabled members				
Number in pay status			N/A	
Average age			N/A	
Average monthly benefit			N/A	
Beneficiaries				
Number in pay status			N/A	
Average age			N/A	
Average monthly benefit			N/A	

<sup>(1)</sup> Projected compensation for the June, 30, 2015 valuation was calculated by increasing the annualized compensation earned during 2014-2015 by 3.50%.



<sup>(2)</sup> Includes terminated members due a refund of contributions.

**EXHIBIT B** 

### i. Miscellaneous Tier 1

	Years of Service									
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39 4	0 & over
Under 25										-
										_
25 - 29										_
										_
30 - 34										-
35 - 39										-
										-
40 - 44										-
										-
45 - 49										-
										-
50 - 54	13			1		1		10	1	-
	\$72,619			\$46,928		\$30,507		\$82,855	\$38,062	-
55 - 59	44					3	4	22	15	-
	74,693					51,314	\$79,885	72,658	80,968	-
60 - 64	33					2	3	7	16	
	82,837					95,621	146,582	69,950	78,775	\$70,518
65 - 69	13		1			1	1	3	4	3
	91,272		\$155,062			45,993	172,177	77,018	105,236	53,768
70 & over	1									
	43,261									43,26
Total	104		1	1		7	8	42	36	Ģ
	\$78,788		\$155,062	\$46,928		\$60,240	\$116,433	\$74,946	\$81,498	\$61,90



**EXHIBIT B** 

### ii. Miscellaneous Tier 2

	Years of Service									
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25										-
25 - 29										-
30 - 34										-
35 - 39										-
										-
40 - 44	1					1				-
	\$58,879					\$58,879				
45 - 49	13				1	10	2			-
	67,914				\$82,652	69,142	\$54,406			-
50 - 54	22			1	2	8	8	3		-
	66,168			\$24,735	65,537	80,353	61,703	\$54,483		-
55 - 59	23			1		7	13	2		-
	75,296			55,412		71,228	79,497	72,169		-
60 - 64	6			1		2	1	2		-
	54,521			26,763		58,062	80,603	51,817		-
65 - 69	2					2				-
	78,688					78,688				-
70 & over	1					1				-
	62,352					62,352				-
Total	68			3	3	31	24	7		-
	\$68,766			\$35,637	\$71,242	\$71,857	\$71,521	\$58,774		_



**EXHIBIT B** 

iii. Miscellaneous Tier 3

	Years of Service									
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25										
25 - 29	88	27	60	1						
	\$48,888	\$44,994	\$50,742	\$42,813						
30 - 34	529	64	363	100	2					
	61,309	64,639	60,635	61,419	\$71,537					
35 - 39	964	61	455	372	74	2				
	65,630	64,412	65,698	64,930	69,263	\$83,223				
40 - 44	1,173	36	366	482	251	36	2			
	72,664	62,614	69,950	72,571	77,065	81,168	\$67,289			
45 - 49	1,401	47	316	465	325	185	60	2	1	
	73,825	58,020	66,737	71,634	79,900	81,726	82,351	\$90,732	\$93,442	
50 - 54	1,516	32	279	373	319	257	212	41	3	
	75,007	64,899	67,579	68,867	77,875	79,728	85,078	84,109	91,501	
55 - 59	1,432	32	226	335	285	244	214	90	5	1
	75,218	68,224	65,821	65,909	72,358	81,222	89,854	92,563	96,898	\$89,965
60 - 64	811	13	150	208	186	117	100	35	2	
	70,736	73,683	63,490	65,298	70,277	75,676	78,343	91,264	174,795	
65 - 69	263	4	60	66	63	38	21	10	1	
	69,832	62,818	70,799	63,187	70,753	79,386	65,374	67,824	170,963	
70 & over	61	4	10	17	16	8	5	1		
	65,367	52,727	58,051	71,621	55,186	76,878	80,578	77,500		
Total	8,238	320	2,285	2,419	1,521	887	614	179	12	1
	\$71,596	\$62,318	\$65,523	\$68,361	\$75,250	\$80,047	\$84,611	\$88,886	\$114,416	\$89,965



**EXHIBIT B** 

iv. Miscellaneous Tier 4

					Ye	ars of Ser	vice			
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	2	2								
	\$40,774	\$40,774								-
25 - 29	45	45								-
	60,986	60,986								
30 - 34	71	68	3							
	66,404	66,572	\$62,602							
35 - 39	50	49	1							
	64,814	65,070	52,237							
40 - 44	39	39								
	59,683	59,683								
45 - 49	33	32	1							
	69,587	69,763	63,977							
50 - 54	30	29		1						
	71,938	72,520		\$55,080						
55 - 59	22	21	1							
	60,847	59,626	86,474							
60 - 64	13	13								
	96,387	96,387								
65 - 69										
70 & over	1	1								
	254,686	254,686								
Total	306	299	6	1						
	\$66,699	\$66,770	\$65,083	\$55,080						_



**EXHIBIT B** 

### v. Miscellaneous Tier 5

					Ye	ars of Serv	vice			
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	79	79								-
	\$39,843	\$39,843								-
25 - 29	326	325	1							-
	48,663	48,596	\$70,413							-
30 - 34	306	306								-
	51,611	51,611								
35 - 39	182	182								
	50,280	50,280								
40 - 44	171	171								
	50,653	50,653								
45 - 49	121	119	2							
	49,807	50,135	30,265							
50 - 54	101	101								
	54,075	54,075								
55 - 59	55	54	1							
	48,939	49,098	40,348							
60 - 64	30	29		1						
	61,820	61,489		\$71,407						
65 - 69	6	6								
	66,403	66,403								-
70 & over										
Total	1,377	1,372	4	1						
	\$50,145	\$50,151	\$42,823	\$71,407						-



**EXHIBIT B** 

vi. Safety Tier 1

					Yea	ars of Serv	vice			
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25									-	
									-	
25 - 29									-	
									-	
30 - 34									-	
									-	
35 - 39									-	
									-	
40 - 44	31		1		9	21			-	
	\$125,119		\$112,268		\$96,009	\$138,207			-	
45 - 49	116			2	11	60	43		-	
	133,646			\$129,822	107,527	132,526	\$142,067		-	
50 - 54	74			3	9	22	37	3	-	
	125,959			161,579	122,007	117,701	127,052	\$149,273	-	
55 - 59	27		1	1	8	6	9	2	-	
	109,608		39,464	104,093	107,012	106,903	113,550	148,197	-	
60 - 64	6				2	1	2		1	-
	104,371				93,684	116,842	90,696		\$140,624	1 -
65 - 69									-	
									-	
70 & over									-	
									-	
Total	254		2	6	39	110	91	5		_
	\$127,119		\$75,866	\$141,413	\$107,395	\$129,105	\$132,012	\$148,842	\$140,624	



**EXHIBIT B** 

vii. Safety Tier 2

					Yea	ars of Serv	vice			
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25									-	
									-	
25 - 29	14	3	9	2					-	
	\$96,397	\$74,871	\$100,256	\$111,319					-	
30 - 34	154	8	79	65	2				-	
	100,262	83,872	97,991	104,388	\$121,405				-	
35 - 39	345	5	81	218	38	3			-	
	99,723	81,095	95,350	98,520	116,638	\$121,992			-	
40 - 44	413	5	28	149	208	23			-	
	110,105	87,279	95,295	102,917	115,604	129,935			-	
45 - 49	268	1	13	58	127	63	6		-	
	112,559	34,543	107,090	107,144	113,300	118,050	\$116,436		-	
50 - 54	114	1	10	25	42	25	11		-	
	111,443	120,683	109,333	99,626	115,952	116,073	111,637		-	
55 - 59	39	2	10	4	14	5	4		-	
	105,888	118,028	113,657	108,411	108,645	88,171	90,373		-	
60 - 64	22		8	6	3	3	1	1	-	
	99,816		111,392	98,065	91,655	94,297	66,007	\$92,567	-	
65 - 69	1			1					-	
	86,038			86,038					-	
70 & over									_	
									-	
Total	1,370	25	238	528	434	122	22	1	-	
	\$106,533	\$85,150	\$98,943	\$101,577	\$114,690	\$118,174	\$107,005	\$92,567	_	



**EXHIBIT B** 

viii. Safety Tier 3

					Yea	ars of Serv	vice			
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	1	1								-
	\$100,377	\$100,377								-
25 - 29	22	21	1							-
	83,385	83,267	\$85,852							-
30 - 34	34	27	6	1						-
	88,114	90,511	74,049	\$107,797						-
35 - 39	16	13	2		1					-
	86,959	89,765	80,616		\$63,157					-
40 - 44	11	9	1		1					-
	107,703	110,124	85,860		107,764					-
45 - 49	6	2	2	1		1				-
	83,003	94,904	85,656	85,307		\$51,591				-
50 - 54	4	3	1							-
	88,301	86,216	94,556							-
55 - 59	2	2								-
	117,253	117,253								-
60 - 64	1	1								-
	116,193	116,193								-
65 - 69										-
										-
70 & over										-
										_
Total	97	79	13	2	2	1				-
	\$89,781	\$91,772	\$80,239	\$96,553	\$85,461	\$51,591				-



**EXHIBIT B** 

ix. Safety Tier 4

					Ye	ars of Ser	vice			
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	37	37								-
	\$72,189	\$72,189								-
25 - 29	103	103								-
	68,574	68,574								-
30 - 34	60	55	5							-
	67,696	68,967	\$53,713							-
35 - 39	19	17	2							-
	70,276	68,798	82,840							-
40 - 44	12	11	1							-
	71,702	72,785	59,785							-
45 - 49	10	8	2							-
	71,460	72,748	66,311							-
50 - 54	14	14								-
	90,503	90,503								-
55 - 59	2	2								-
	94,279	94,279								-
60 - 64	1	1								-
	93,837	93,837								-
65 - 69										-
										-
70 & over										-
										-
Total	258	248	10							-
	\$70,758	\$71,084	\$62,665							-



# SECTION 3: Supplemental Information for the Sacramento County Employees' Retirement System

EXHIBIT C

Reconciliation of Member Data – June 30, 2014 to June 30, 2015

	Active Members	Vested Terminated Members <sup>(1)</sup>	Pensioners	Disableds	Beneficiaries	Total
Number as of June 30, 2014	12,049	3,201	7,913	725	1,411	25,299
New members	887	71	0	0	118	1,076
Terminations – with vested rights	-286	286	0	0	0	0
Contributions refunds	-118	-80	0	0	0	-198
Retirements	-467	-160	627	0	0	0
New disabilities	-14	-8	-16	38	0	0
Return to work	30	-30	0	0	0	0
Deaths	-9	-10	-191	-34	-59	-303
Data adjustments	0	-9	0	0	9	0
Number as of June 30, 2015	12,072	3,261	8,333	729	1,479	25,874

<sup>(1)</sup> Includes terminated members due a refund of member contributions.



# SECTION 3: Supplemental Information for the Sacramento County Employees' Retirement System

EXHIBIT D
Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended J	une 30, 2015	Year Ended J	une 30, 2014
Contribution income:				
Employer contributions	\$222,959,000		\$210,503,000	
Employee contributions	68,143,000		57,635,000	
Net contribution income		\$291,102,000		\$268,138,000
Investment income:				
Interest, dividends and other income	\$157,110,000		\$172,339,000	
Recognition of capital appreciation	519,569,000		477,209,000	
Less investment and administrative fees	<u>-67,292,000</u>		<u>-54,831,000</u>	
Net investment income		609,387,000		594,718,000
Total income available for benefits		\$900,489,000		\$862,855,000
Less benefit payments:				
Benefits paid	-\$372,369,000		-\$344,890,000	
Withdrawal of contributions	<u>-2,288,000</u>		-2,729,000	
Net benefit payments		-\$374,657,000		-\$347,619,000
Change in reserve for future benefits		\$525,832,000		\$515,236,000

Note: Results may be slightly off due to rounding.



SECTION 3: Supplemental Information for the Sacramento County Employees' Retirement System

**EXHIBIT E**Summary Statement of Assets

	Year Ended J	June 30, 2015	Year Ended .	June 30, 2014
Cash equivalents		\$658,971,000		\$430,776,000
Accounts receivable:				
Securities sold	\$51,263,000		\$74,836,000	
Accrued investment income	33,230,000		29,410,000	
Employee and employer contributions	<u>7,892,000</u>		<u>7,923,000</u>	
Total accounts receivable		92,385,000		112,169,000
Investments:				
Equities	\$3,815,035,000		\$4,080,864,000	
Absolute return	773,662,000		759,869,000	
Opportunities	134,137,000		76,290,000	
Fixed income investments	1,470,797,000		1,485,471,000	
Real assets	1,210,739,000		1,244,761,000	
Securities lending collateral	320,650,000		313,536,000	
Total investments at market value		7,725,020,000		7,960,791,000
Other assets		1,199,000		2,739,000
Total assets		\$8,477,575,000		\$8,506,475,000
Less accounts payable:				
Accounts payable and other liabilities	-\$37,112,000		-\$39,347,000	
Investment trades, mortgages, and warrants payable	-240,999,000		-343,591,000	
Securities lending liability	-320,650,000		<u>-313,536,000</u>	
Total accounts payable		-\$598,761,000		-\$696,474,000
Net assets at market value		<u>\$7,878,814,000</u>		<u>\$7,810,001,000</u>
Net assets at actuarial value		<u>\$7,838,825,000</u>		<u>\$7,312,993,000</u>
Net assets at valuation value		<u>\$7,767,116,000</u>		<u>\$7,277,721,000</u>

Note: Results may be slightly off due to rounding.



### **EXHIBIT F**

#### **Actuarial Balance Sheet**

An overview of the Plan's funding is given by an Actuarial Balance Sheet. In this approach, we first determine the amount and timing of all future payments that will be made by the Plan for current participants. We then discount these payments at the valuation interest rate to the date of the valuation, thereby determining their present value. We refer to this present value as the "liability" of the Plan.

Second, we determine how this liability will be met. These actuarial "assets" include the net amount of assets already accumulated by the Plan, the present value of future member contributions, the present value of future employer normal cost contributions, and the present value of future employer amortization payments.

### **Actuarial Balance Sheet (Dollar Amounts in Thousands)**

Assets	<u>Basic</u>	<u>Cola</u>	<u>Total</u>
1. Total valuation assets			
a. Valuation value assets	\$5,280,995	\$2,486,121	\$7,767,116
b. Balance of transfer to offset member COLA rate	0	21,383	21,383
c. Retiree health benefit reserve	0	0	0
d. Adjustment to 1a. for surplus/(deficit) for withdrawn employer (preliminary) <sup>(1)</sup>	-30,813	0	-30,813
e. Contingency Reserve	81,139	0	81,139
2. Present value of future contributions by members	366,170	111,580	477,750
3. Present value of future employer contributions for:			
a. Entry age normal cost	796,372	132,515	928,887
b. Unfunded actuarial accrued liability	<u>1,071,639</u>	118,215	<u>1,189,854</u>
4. Total current and future assets	\$7,565,502	\$2,869,814	\$10,435,316
Liabilities			
5. Present value of retirement allowances payable to present retired members	\$3,167,067	\$1,850,646	\$5,017,713
6. Present value of retirement allowances to be granted			
a. Active members	4,073,297	955,465	5,028,762
b. Inactive members with vested rights	274,812	63,703	338,515
7. Retiree health benefit reserve	0	0	0
8. Surplus/(deficit) for withdrawn employer (preliminary) <sup>(1)</sup>	-30,813	0	-30,813
9. Contingency Reserve	81,139	0	81,139
10. Total liabilities	\$7,565,502	\$2,869,814	\$10,435,316

<sup>(1)</sup> Based on the latest estimate available as of June 30, 2014 for Florin Fire adjusted with interest at the assumed rate of investment return to June 30, 2015. Note: Results may be slightly off due to rounding.



### **EXHIBIT G**

Summary of Reported Asset Information as of June 30, 2015

### Reserves

### **Included in Valuation Value of Assets**

Employee reserve	\$726,980,210
Employer reserve	2,621,588,317
Retiree reserve	4,393,326,559
Retiree death benefit reserve	<u>15,790,702</u>
Subtotal: Preliminary Valuation Value of Assets <sup>(1)</sup>	\$7,757,685,788

## **Not Included in Valuation Value of Assets**

Retiree health benefit reserve

Contingency Reserve

Subtotal: Actuarial Value of Assets

Market stabilization reserve

Total Market Value of Assets

\$ 39,989,120

\$ 7,878,814,000



<sup>(1)</sup> Please note that the final Valuation Value of Assets (i.e. \$7,767,116,227) is calculated by taking the preliminary Valuation Value of Assets and adjusting for the balance of transfer to offset member COLA rate and for the surplus/(deficit) for the withdrawn employer.

EXHIBIT G
Summary of Reported Asset Information as of June 30, 2015 (Continued) – Change in Reserves

	Balance at 06/30/2014	Interest Credited	Contributions	Benefits	Transfers	Balance at 06/30/2015
Employee Reserve	\$713,612,615	\$11,021,663	\$68,142,630	\$(2,288,267)	\$(63,508,431)	\$726,980,210
Employer Reserve	2,564,792,426	208,826,537	222,959,365	(411,109)	(374,578,902)	2,621,588,317
Retiree Reserve	3,973,777,830	352,652,760	0	(371,191,364)	438,087,333	4,393,236,559
Death Benefit Reserve	15,260,018	1,297,184	0	(766,500)	0	15,790,702
Subtotal	\$7,267,442,889	\$573,798,144	\$291,101,995	\$(374,657,240)	\$0	\$7,757,685,788
Contingency Reserve	\$45,549,661	\$35,589,431	\$0	\$0	\$0	\$81,139,092
Retiree Health Benefit Reserve	0	0	0	<u>\$0</u>	0	0
Subtotal	\$45,549,661	\$35,589,431	\$0	\$0	\$0	\$81,139,092
Total Allocated Reserves	\$7,312,992,550	\$609,387,575	\$291,101,995	\$(374,657,240)	\$0	\$7,838,824,880
Market Stabilization Reserve	\$497,008,450	\$(457,019,330)	<u>\$0</u>	\$0	\$0	\$39,989,120
Net Market Value of Assets	<u>\$7,810,001,000</u>	<u>\$152,368,245</u>	<u>\$291,101,995</u>	<u>\$(374,657,240)</u>	<u>\$0</u>	\$7,878,814,000

Note: Results may be slightly off due to rounding.



**EXHIBIT G** 

## Summary of Reported Asset Information as of June 30, 2015 (Continued) - Summary of Earnings

	Per Excess
	Earnings Policy
Earnings from July 1, 2014 to June 30, 2015	\$152,368,245
Contingency Reserve <sup>(1)</sup>	0
Subtotal:	\$152,368,245
Amounts Credited for:	
Market Stabilization Reserve	\$457,019,330
Regular Interest Crediting	(538,208,712)
Subtotal	\$(81,189,382)
Net Earnings	\$71,178,863
Amount Credited Under Excess Earnings Policy for:	
Contingency Reserve <sup>(1)</sup>	\$35,589,431
Board Provided Supplemental Benefits	0
Amount Over Reserved Benefits	35,589,432
Employer Reserves	0
Member Future COLA Contribution Offset	0
Subtotal	\$71,178,863
Remaining Excess Earnings	<u>\$0</u>

As there was a balance of \$45,549,661 in the Contingency Reserve as of June 30, 2014, the total balance in that reserve as of June 30, 2015 after adding the excess earnings from 2014/2015 is \$81,139,092.



# EXHIBIT H Development of Unfunded/(Overfunded) Actuarial Accrued Liability for Year Ended June 30, 2015

1.	Unfunded actuarial accrued liability at beginning of year	\$1,267,935,000
2.	Total normal cost	192,256,000
3.	Expected employer and member contributions	-283,108,000
4.	Interest	<u>92,019,000</u>
5.	Expected unfunded actuarial accrued liability	\$1,269,102,000
6.	Actuarial (gain)/loss due to all changes:	
	(a) Investment return	-\$23,638,000
	(b) Actual contributions greater than expected <sup>(1),(2)</sup>	-14,910,000
	(c) Salary increases less than expected <sup>(2)</sup>	-39,670,000
	(d) COLA increases less than expected <sup>(2)</sup>	-8,381,000
	(e) Other experience loss <sup>(2)</sup>	4,362,000
	(f) Withdrawn employers: Library Authority and Air Quality	2,989,000
	(g) Total changes	<u>-\$79,248,000</u>
7.	Unfunded actuarial accrued liability at end of year	<u>\$1,189,854,000</u>

<sup>(1)</sup> Due to the one-year lag in implementation of the contribution rates determined in the June 30, 2014 valuation.



The sum of 6(b) through 6(e) is equal to the net gain of \$58.6 million shown in Section 2, Chart 9.

### **EXHIBIT I**

### **Section 415 Limitations**

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

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

In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar amount indexed for inflation. That limit is \$210,000 for 2014 and 2015. Normal Retirement Age for these purposes is age 62. These are the limits in simplified terms. They must be adjusted based on each participant's circumstances, for such things as age at retirement, form of benefits chosen and after tax contributions.

Benefits for members in non-CalPEPRA tiers in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m).

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

Contributions rates determined in this valuation have not been reduced for the Section 415 limitations. Actual limitations will result in gains as they occur.



### **EXHIBIT J**

### **Definitions of Pension Terms**

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

# Assumptions or Actuarial Assumptions:

The estimates on which the cost of the Plan is calculated including:

- (a) <u>Investment return</u> the rate of investment yield that the Plan will earn over the long-term future;
- (b) <u>Mortality rates</u> the death rates of employees and pensioners; life expectancy is based on these rates;
- (c) <u>Retirement rates</u> the rate or probability of retirement at a given age; and
- (d) <u>Turnover rates</u> the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

#### Normal Cost:

The amount of contributions required to fund the level cost allocated to the current year of service.

# Actuarial Accrued Liability For Actives:

The equivalent of the accumulated normal costs allocated to the years before the valuation date.

# Actuarial Accrued Liability For Pensioners:

The single sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

# **Unfunded Actuarial Accrued Liability:**

The extent to which the actuarial accrued liability of the Plan exceeds (or is exceeded by) the assets of the Plan. There is a wide range of approaches to recognizing the unfunded or overfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.



### SECTION 3: Supplemental Information for the Sacramento County Employees' Retirement System

Amortization of the Unfunded (Overfunded) Actuarial Accrued Liability:

Payments made over a period of years equal in value to the Plan's unfunded or

overfunded actuarial accrued liability.

**Investment Return:** The rate of earnings of the Plan from its investments, including interest, dividends and

capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the market value gains and losses to avoid significant swings in the value of assets

from one year to the next.



EXHIBIT I		
Summary of Actuarial Valuation Results		
The valuation was made with respect to the following data supplied to us:		
1. Retired members as of the valuation date (including 1,479 beneficiaries in pay status)		10,541
2. Members inactive during year ended June 30, 2015 with vested rights		3,261
3. Members active during the year ended June 30, 2015		12,072
The actuarial factors as of the valuation date are as follows (amounts in 000s):		
1. Normal cost		\$193,303
2. Present value of future benefits		10,384,990
3. Present value of future normal costs		1,428,019
4. Actuarial accrued liability <sup>(1)</sup>		8,956,971
Retired members and beneficiaries	\$5,017,713	
Inactive members with vested rights	338,515	
Active members	3,600,743	
5. Valuation value of assets <sup>(1)</sup> (\$7,878,814 at market value as reported by Retirement System)		7,767,116
6. Unfunded actuarial accrued liability		\$1,189,854

<sup>(1)</sup> Excludes non-valuation reserves and designations.



# **EXHIBIT I (continued)**

# **Summary of Actuarial Valuation Results**

The determination of the recommended average employer contribution is as follows (amounts in 000s):  Dollar Amount			
1.	Total normal cost	\$193,303	% of Payroll 21.54%
2.	Expected employee contributions	-79,32 <u>5</u>	<u>-8.84%</u>
3.	Employer normal cost: $(1) + (2)$	\$113,978	12.70%
4.	Amortization of unfunded actuarial accrued liability	<u>88,300</u>	<u>9.84%</u>
5.	Total recommended average employer contribution: (3) + (4)	\$202,278	22.54%
6.	Projected compensation	\$897,341	



EXHIBIT II
Schedule of Employer Contributions

Plan Year Ended June 30	Annual Required Contributions	Actual Contributions	Percentage Contributed
2006	\$154,052,000	\$132,708,000	86.1%*
2007	156,804,528	156,804,528	100.0%
2008	167,054,356	167,054,356	100.0%
2009	177,011,005	177,011,005	100.0%
2010	167,141,893	167,141,893	100.0%
2011	182,920,751	182,920,751	100.0%
2012	179,098,469	179,098,469	100.0%
2013	189,663,720	189,663,720	100.0%
2014	210,503,324	210,503,324	100.0%
2015	222,959,365	222,959,365	100.0%

<sup>\*</sup> Caused by the phase-in of the employer rates adopted by the Board in the June 30, 2004 actuarial valuation.



#### **EXHIBIT III**

### **Actuarial Assumptions/Methods**

### Rationale for Assumptions:

The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the July 1, 2010 through June 30, 2013 Actuarial Experience Study and June 30, 2014 Economic Actuarial Assumptions Reports both dated June 12, 2014.

### **Actuarial Assumptions**

### **Post – Retirement Mortality Rates:**

Healthy: For Miscel

For Miscellaneous Members and Beneficiaries: RP-2000 Combined Healthy Mortality

Table projected with Scale BB to 2022.

For Safety Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2022 set back one year for males and set forward two years for females.

Disabled: For Miscellaneous Members: RP-2000 Disabled Retiree Mortality Table projected

with Scale BB to 2022 with no age adjustment for males and set forward three years

for females.

For Safety members: RP-2000 Combined Healthy Mortality Table projected with

Scale BB to 2022 set forward two years.

The mortality tables shown above were determined to contain sufficient provision appropriate to reasonably reflect future mortality improvement, based on a review of

the mortality experience in the June 30, 2013 Actuarial Experience Study.

Member Contribution Rates: For Miscellaneous members: RP-2000 Combined Healthy Mortality Table projected

with Scale BB to 2022 weighted 40% male and 60% female.

For Safety members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2022 set back one year for males and set forward two years for females

weighted 70% male and 30% female.



### **Termination Rates Before Retirement:**

Rate (%)
Mortality

	Miscel	laneous	Sa	fety
Age	Male	Female	Male	Female
25	0.04	0.02	0.04	0.02
30	0.04	0.02	0.04	0.03
35	0.07	0.04	0.07	0.05
40	0.10	0.07	0.10	0.08
45	0.14	0.11	0.13	0.12
50	0.20	0.16	0.19	0.19
55	0.34	0.24	0.30	0.30
60	0.58	0.41	0.52	0.51
65	0.98	0.74	0.88	0.93

All Miscellaneous pre-retirement deaths are assumed to be non-duty. For Safety, 50% of pre-retirement deaths are assumed to be non-duty and the rest are assumed to be duty.



# **Termination Rates Before Retirement (continued):**

Rate (%)
Disability

Disability				
Age	Miscellaneous <sup>(1)</sup>	Safety <sup>(2)</sup>		
20	0.00	0.10		
25	0.01	0.10		
30	0.03	0.16		
35	0.05	0.26		
40	0.08	0.45		
45	0.16	0.61		
50	0.26	0.80		
55	0.36	1.26		
60	0.52	2.10		

<sup>&</sup>lt;sup>(1)</sup> 25% of Miscellaneous disabilities are assumed to be duty disabilities. The other 75% are assumed to be non-duty disabilities.



<sup>&</sup>lt;sup>(2)</sup> 90% of Safety disabilities are assumed to be duty disabilities. The other 10% are assumed to be non-duty disabilities.

### **Termination Rates Before Retirement (continued):**

Rate (%)
Withdrawal (< 5 Years of Service)<sup>(1)</sup>

Years of Service	Miscellaneous	Safety
0	13.00	8.00
1	8.00	6.00
2	7.00	5.00
3	6.00	4.00
4	5.50	3.00

# Withdrawal (5+ Years of Service)(2)

Age	Miscellaneous	Safety	
20	5.00	2.50	
25	5.00	2.50	
30	4.70	2.50	
35	4.20	2.20	
40	3.40	1.85	
45	2.70	1.60	
50	2.20	1.50	
55	1.85	1.50	
60	1.30	1.50	
65	1.00	0.00	

<sup>(1) 75%</sup> of the Miscellaneous members and 50% of the Safety members are assumed to elect a refund of contribution balance while the remaining 25% and 50% of Miscellaneous and Safety members, respectively, are assumed to elect a deferred retirement benefit. No withdrawal is assumed after a member is assumed to retire.



<sup>&</sup>lt;sup>(2)</sup> 50% of the Miscellaneous members and 20% of the Safety members are assumed to elect a refund of contribution balance while the remaining 50% and 80% of Miscellaneous and Safety members, respectively, are assumed to elect a deferred retirement benefit. No withdrawal is assumed after a member is assumed to retire.

SECTION 4: Reporting Information for the Sacramento County Employees' Retirement System

# **Retirement Rates:**

Rate (%)

				11410 (70)			
Age	Miscellaneous Tier 1	Miscellaneous Tiers 2 & 3	Miscellaneous Tier 4	Miscellaneous Tier 5	Safety Tiers 1 & 2	Safety Tier 3	Safety Tier 4
45	0.00	0.00	0.00	0.00	2.00	1.50	0.00
46	0.00	0.00	0.00	0.00	2.00	1.50	0.00
47	0.00	0.00	0.00	0.00	2.00	1.50	0.00
48	0.00	0.00	0.00	0.00	2.00	1.50	0.00
49	0.00	0.00	0.00	0.00	5.00	4.00	0.00
50	6.00	2.00	2.00	0.00	25.00	10.00	15.00
51	4.00	2.00	2.00	0.00	18.00	12.00	10.50
52	4.00	2.00	2.00	4.00	18.00	14.00	12.00
53	4.00	3.00	2.00	1.50	22.00	16.00	14.00
54	7.00	4.00	3.00	2.50	22.00	18.00	15.50
55	10.00	6.00	4.00	3.50	22.00	50.00	40.00
56	15.00	6.00	5.00	4.50	25.00	25.00	25.00
57	16.00	8.00	6.00	5.50	25.00	25.00	25.00
58	18.00	12.00	7.00	6.50	25.00	25.00	25.00
59	22.00	14.00	8.00	7.50	30.00	30.00	25.00
60	28.00	14.00	9.00	8.50	45.00	45.00	45.00
61	30.00	14.00	10.00	9.50	55.00	55.00	55.00
62	35.00	25.00	18.00	17.00	70.00	70.00	70.00
63	35.00	30.00	16.00	15.00	70.00	70.00	70.00
64	40.00	35.00	20.00	19.00	70.00	70.00	70.00
65	50.00	40.00	25.00	24.00	100.00	100.00	100.00
66	45.00	45.00	20.00	20.00	100.00	100.00	100.00
67	45.00	45.00	20.00	20.00	100.00	100.00	100.00
68	50.00	50.00	30.00	30.00	100.00	100.00	100.00
69	60.00	60.00	40.00	40.00	100.00	100.00	100.00
70	100.00	100.00	100.00	100.00	100.00	100.00	100.00



**Retirement Age and Benefit for Deferred Vested Members:** 

For deferred vested members, we make the following retirement assumption:

Miscellaneous Age: 59

53 Safety Age:

We assume that 40% of future Miscellaneous and 50% of future Safety deferred vested members will continue to work for a reciprocal employer. For reciprocals, we

assume 4.50% and 5.25% compensation increases per annum, respectively.

**Future Benefit Accruals:** 

1.0 year of service per year for the full-time employees. Continuation of current

partial service accrual for part-time employees.

**Unknown Data for Members:** 

Same as those exhibited by members with similar known characteristics. If not

specified, members are assumed to be male.

**Percent Married:** 

80% of male members; 55% of female members.

Age of Spouse:

Female (or male) spouses are 3 years younger (or older) than their spouses.

**Service From Unused Sick Leave Conversion:** 

The following assumptions for service converted from unused sick leave as a

percentage of service at retirement are used:

Service Retirements:

Miscellaneous: 1.50% Safety: 2.25%

**Disability Retirements:** 

Miscellaneous: 0.00% Safety: 0.25%

Pursuant to Section 31641.01, the cost of this benefit will be charged only to

employers and will not affect member contribution rates.



**Net Investment Return:** 

7.50%; net of administration and investment expenses.

**Employee Contribution** Crediting Rate<sup>1</sup>:

3.25% (assumed rate of inflation); compounded semi-annually.

**Cost-of-Living Adjustment** for Retirees:

Miscellaneous and Safety Tier 1 benefits are assumed to increase at 3.25% per year. Miscellaneous Tier 3, Tier 4 and Tier 5 and Safety Tier 2, Tier 3 and Tier 4 benefits are assumed to increase at 2.0% per year. Miscellaneous Tier 2 receive no COLA increases.

**Salary Increases:** 

Annual Rate of Compensation Increase (%)

Inflation: 3.25%, plus "across the board" salary increases of 0.25% per year; plus the following merit and promotional increases.

Years of Service	Miscellaneous	Safety	
0-1	5.00	8.00	
1-2	4.50	7.00	
2-3	3.75	6.00	
3-4	3.50	5.00	
4-5	3.00	4.00	
5-6	2.50	3.50	
6-7	2.25	3.25	
7-8	2.00	3.00	
8-9	1.75	2.75	
9-10	1.00	2.00	
10 or more	1.00	1.75	

Increase in Section 7522.10 Compensation Limit

Increase of 3.25% per year from the valuation date.

<sup>&</sup>lt;sup>1</sup> Current policy is to credit the member contribution account with interest up to the current 5-year Treasury rate, if such earnings are available. However, the difference in earnings between the 5-year Treasury rate and the target crediting rate will be applied to the other valuation reserves so that the overall valuation reserve target crediting rate is maintained at 7.50%.



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### **Actuarial Methods**

**Actuarial Value of Assets:** The market value of assets less unrecognized returns in each of the last seven years.

Unrecognized return is equal to the difference between actual and expected returns on a market value basis and is recognized over a seven-year period. The deferred return is further adjusted, if necessary, so that the actuarial value of assets will stay within 30% of the market value of assets. Deferred gains and losses as of June 30, 2013 have been combined and will be recognized in equal amounts over a six-year period starting

July 1, 2013.

**Valuation Value of Assets:** Actuarial value of assets reduced by the value of the non-valuation reserves and

designations.

**Actuarial Cost Method:** Entry Age Actuarial Cost Method. Entry Age is the age at the member's hire date.

Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and

are based on costs allocated as a level percentage of compensation.

**Amortization Policy:** The UAAL established as a result of the Early Retirement Incentive Program for

LEMA members is amortized over a 10-year period beginning June 30, 2010. The balance of the UAAL as of June 30, 2012 shall be amortized separately from any

future changes in UAAL over a period of 23 years from June 30, 2012.

Any new UAAL as a result of actuarial gains or losses identified in the annual

valuation as of June 30 will be amortized over a period of 20 years.

Any new UAAL as a result of change in actuarial assumptions or methods will be

amortized over a period of 20 years.

The change in UAAL as a result of any plan amendments will be amortized over a period of 15 years and the change in UAAL resulting from retirement incentive

programs will be amortized over a period of up to 5 years.

**Changes in Actuarial** 

**Assumptions and Methods:** There have been no changes in actuarial assumptions or methods since the previous

valuation.



# **EXHIBIT IV**

# **Summary of Plan Provisions**

This exhibit summarizes the major provisions of the SCERS included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Membership with SCERS usually begins with the employment by the County or member District as a permanent full-time or part-time employee as provided in the County Salary Resolution or the District's Salary Resolution.
All Miscellaneous members hired prior to September 27, 1981.
All Miscellaneous members hired on or after September 27, 1981. Membership into Tier 2 or Tier 3 is determined by date of hire and by bargaining unit.
All Miscellaneous members hired on or after January 1, 2012 as adopted by the County. Membership into Tier 4 is determined by date of hire.
All Miscellaneous members hired on or after January 1, 2013.
Membership into Tier 1 or Tier 2 for Safety employee is determined by date of hire and by bargaining unit.
All Safety members hired on or after January 1, 2012 as adopted by the County. Membership into Tier 3 is determined by date of hire.
All Safety members hired on or after January 1, 2013.
Highest consecutive 1 year (12 months) of compensation earnable (§31462.1) (FAS1)
Highest consecutive 3 years (36 months) of compensation earnable. (§31462) (FAS3)
Highest consecutive 3 years (36 months) of pensionable compensation. (§7522.10(c), §7522.32 and §7522.34) (FAS3)



SECTION 4: Reporting Information for the Sacramento County Employees' Retirement System

Service:	Years of service. (Yrs)
Service Retirement Eligibility:	
Miscellaneous	
Tiers 1, 2, 3 and 4	Age 50 with 10 years of service, or age 70 regardless of service, or after 30 years of service, regardless of age (§31672).
Tier 5	Age 52 with 5 years of service (§7522.20(a)).
Safety	
<i>Tiers 1, 2 and 3</i>	Age 50 with 10 years of service, or after 20 years of Safety service, regardless of age (§31663.25).
Tier 4	Age 50 with 5 years of service (§7522.25(d)).

# **Benefit Formula:**

Miscellaneous Plans	Retirement Age	Benefit Formula
Miscellaneous Tier 1 (§31676.14)	50	(1.48% x FAS1 - 1/3x 1.48% x \$350x 12)x Yrs
	55	(1.95% x FAS1 - 1/3x 1.95% x \$350x 12) x Yrs
	60	(2.44% x FAS1 - 1/3x2.44% x \$350x12) x Yrs
	62	(2.61% x FAS1 - 1/3 x 2.61% x \$350 x 12) x Yrs
	65 or later	(2.61% xFAS1 - 1/3x2.61% x\$350x12)xYrs
Miscellaneous Tier 2 and Tier 3	50	(1.48%xFAS3 – 1/3x1.48%x\$350x12)xYrs
(§31676.14)	55	(1.95%  xFAS3 - 1/3x1.95%  x\$350x12)xYrs
	60	(2.44%  xFAS3 - 1/3x2.44%  x\$350x12)xYrs
	62	(2.61% xFAS3 - 1/3x2.61% x\$350x12)xYrs
	65 or later	(2.61% xFAS3 - 1/3x2.61% x\$350x12)xYrs



SECTION 4: Reporting Information for the Sacramento County Employees' Retirement System

	Retirement Age	Benefit Formula
Miscellaneous Tier 4 (§31676.1)	50	(1.18%  xFAS3 - 1/3x1.18%  x\$350x12)xYrs
	55	(1.49%  xFAS3 - 1/3x1.49%  x\$350x12)xYrs
	60	(1.92%  xFAS3 - 1/3x1.92%  x\$350x12)xYrs
	62	(2.09% xFAS3 - 1/3x2.09% x\$350x12)xYrs
	65 or later	(2.43% xFAS3 - 1/3x2.43% x\$350x12)xYrs
Miscellaneous Tier 5	52	1.00%xFAS3xYrs
(§7522.20(a))	55	1.30%xFAS3xYrs
	60	1.80%xFAS3xYrs
	62	2.00%xFAS3xYrs
	65	2.30%xFAS3xYrs
	67 or later	2.50%xFAS3xYrs
Safety Plans	Retirement Age	Benefit Formula
Safety Tier 1 (§31664.1)	50	(3.00%xFAS1 - 1/3x3.00%x\$350x12)xYrs
Safety Tier 1 (§31664.1)		(3.00% xFAS1 - 1/3x3.00% x\$350x12)xYrs (3.00% xFAS1 - 1/3x3.00% x\$350x12)xYrs
Safety Tier 1 (§31664.1)	50	
Safety Tier 1 (§31664.1)  Safety Tier 2 (§31664.1)	50 55	(3.00%xFAS1 - 1/3x3.00%.x\$350x12)xYrs
	50 55 60 or later	(3.00%xFAS1 - 1/3x3.00%.x\$350x12)xYrs (3.00%xFAS1 - 1/3x3.00%x.\$350x12)xYrs
	50 55 60 or later	(3.00%xFAS1 - 1/3x3.00%.x\$350x12)xYrs (3.00%xFAS1 - 1/3x3.00%x.\$350x12)xYrs (3.00%xFAS3 - 1/3x3.00%x\$350x12)xYrs
	50 55 60 or later 50 55	(3.00%xFAS1 - 1/3x3.00%.x\$350x12)xYrs (3.00%xFAS1 - 1/3x3.00%x.\$350x12)xYrs (3.00%xFAS3 - 1/3x3.00%x\$350x12)xYrs (3.00%xFAS3 - 1/3x3.00%x\$350x12)xYrs
Safety Tier 2 (§31664.1)	50 55 60 or later 50 55 60 or later	(3.00%xFAS1 - 1/3x3.00%.x\$350x12)xYrs (3.00%xFAS1 - 1/3x3.00%x.\$350x12)xYrs (3.00%xFAS3 - 1/3x3.00%x\$350x12)xYrs (3.00%xFAS3 - 1/3x3.00%x\$350x12)xYrs (3.00%xFAS3 - 1/3x3.00%x\$350x12)xYrs (3.00%xFAS3 - 1/3x3.00%x\$350x12)xYrs



	Retirement Age		Benefit Formula
Safety Tier 4 (§7522.25(d))	50	2.00%xFAS3xYrs	
	55	2.50%xFAS3xYrs	
	57 or later	2.70%xFAS3xYrs	

### **Maximum Benefit:**

Miscellaneous Tier 1, Tier 2,
Tier 3 and Tier 4 and Safety
Tier 1, Tier 2 and Tier 3

Miscellaneous Tier 5 and
Safety Tier 4

None

# Additional Benefit Information:

- > For Miscellaneous members of the following Districts, benefits accrued before June 29, 2003 will continue to be calculated using §31676.1.
  - 1. Fair Oaks Cemetery District
  - 2. Galt Arno Cemetery District



### **Non-duty Disability:**

Miscellaneous and Safety Tier 1

Eligibility Five years of service (§31720).

Benefit Formula 1.5% per year of service for Miscellaneous Tier 1 and 1.8% per year of service for

Safety Tier 1. If the benefit does not exceed one-third of Final Compensation, the service is projected to 65 for Miscellaneous Tier 1 and 55 for Safety Tier 1, but the total benefit cannot be more than one-third of Final Compensation (§31727 and

§31727.2). The Service Retirement benefit is payable, if greater.

Miscellaneous Tier 2, Tier 3, Tier 4, and Tier 5 and Safety Tier 2, Tier 3

and Tier 4

Eligibility Five years of service (§31720).

Benefit Formula 20% of Final Compensation for the first five years of service plus 2% for each year of

additional service for a maximum of 40% of Final Compensation (§31727.7). The

Service Retirement benefit is payable, if greater.

# **Line-of-Duty Disability:**

All Members

Eligibility No age or service requirements (§31720).

Benefit Formula 50% of the Final Compensation or 100% of Service Retirement benefit, if greater

(§31727.4).



#### **Pre-Retirement Death:**

All Members

Eligibility No age or service requirements.

Benefit Refund of employee contributions with interest plus one month's compensation for

each year of service to a maximum of six month's compensation (§31781).

Death in Line-of-Duty 50% of Final Compensation or 100% of Service Retirement benefit, if greater,

payable to spouse or minor children (§31787).

OR

Vested Members

Eligibility Five years of service.

Benefit 60% of the greater of Service or Non-duty Disability Retirement benefit payable to

surviving eligible spouse (§31765.1, §31781.1), in lieu of above.

Death in Line-of-Duty 50% of Final compensation or 100% of Service Retirement benefit, if greater, payable

to spouse or minor children (§31787).

#### **Death After Retirement:**

All Members

Service Retirement or

Non-Duty Disability 60% of member's unmodified allowance continued to eligible spouse (§31760.1). An

additional \$4,000 lump sum benefit is payable to member's beneficiary (§31789.3). An eligible spouse is a surviving spouse who was married to the member at least one

year prior to the date of retirement (§31760.1).

Line-of-Duty Disability 100% of member's allowance continued to eligible spouse (§31786). An additional

\$4,000 lump sum benefit is payable to member's beneficiary (§31789.3). An eligible spouse is a surviving spouse who was married to the member at least one year prior to

the date of retirement (§31760.1).



Withdrawal Benefits:	
Less than Five Years of Service	Refund of accumulated employee contributions with interest, or earned benefit at age 70 (§31628). Effective January 1, 2003, a member may also elect to leave their contributions on deposit in the retirement fund (§31629.5).
Five or More Years of Service	If contributions left on deposit, entitled to earned benefits commencing at any time after eligible to retire (§31700).

# Post-retirement Cost-of-Living Benefits:

Miscellaneous and Safety Tier 1 Future changes based on Consumer Price Index to a maximum of 4% per year, excess

"banked." (§31870.3)

Miscellaneous Tier 3, Tier 4 and Tier 5 and Safety Tier 2, Tier 3 and Tier 4 Future changes based on Consumer Price Index to a maximum of 2% per year, excess

"banked." (§31870)

Note: There is no cost-of-living benefit for Miscellaneous Tier 2.



**Member Contributions:** Please refer to Appendix A for the specific rates.

Miscellaneous Tier 1

Basic Provide for an average annuity at age 55 equal to 1/240 of FAS1. (§31621.3)

Cost-of-Living Provide for one-half of future Cost-of-Living costs.

Miscellaneous Tier 2

Basic Provide for an average annuity at age 55 equal to 1/240 of FAS3. (§31621.3)

Cost-of-Living None.

Miscellaneous Tier 3

Basic Provide for an average annuity at age 55 equal to 1/240 of FAS3. (§31621.3)

Cost-of-Living Provide for one-half of future Cost-of-Living costs.

Miscellaneous Tier 4

Basic Provide for an average annuity at age 60 equal to 1/120 of FAS3. (§31621)

Cost-of-Living Provide for one-half of future Cost-of-Living costs.

Miscellaneous Tier 5 50% of the total Normal Cost rate.

Safety Tier 1, Tier 2 and Tier 3

Basic Provide for an average annuity at age 50 equal to 1/100 of FAS1 (FAS3 for Tier 2 and

Tier 3). (§31639.25)

Cost-of-Living Provide for one-half of future Cost-of-Living costs.

Safety Tier 4 50% of the total Normal Cost rate.

Notes: The above rates are known as full rates. For members paying half rates, their rates should be one-half of the rates provided in this report. Note that effective with the June 30, 2015 valuation, all members are reported as paying at least full-rate. In addition, for members entering the plan on or after January 1, 1975, they pay a rate based on a single entry age (§31621.11 and §31639.26).

After we completed the June 30, 2013 valuation, we were informed by SCERS that starting in 2014/2015, most County members in the legacy tiers have agreed to pick up either 1/3, 1/4, or 1/5 of the difference between the employee's then current Normal Cost and 50% of the total normal cost rate. The adjustments required for the employer and employee rates were subsequently provided to the System and the impact of those adjustments are identified in this report.



As those members have agreed to pick up an additional 1/3, 1/4, or 1/5 of the difference in the Normal Cost rate in 2015/2016 and 2016/2017, we have reflected these adjustments in preparing the recommended rates for the June 30, 2014 and June 30, 2015 valuations, respectively.

**Other Information:** 

Safety Tier 1, Tier 2 and Tier 3 members with 30 or more years of service are exempt from paying member contributions. The same applies for Miscellaneous Tier 1, Tier 2, Tier 3 and Tier 4 members hired on or before March 7, 1973.

**NOTE:** 

The summary of major plan provisions is designed to outline principal plan benefits as interpreted for purposes of the actuarial valuation. If the System should find the plan summary not in accordance with the actual provisions, the System should alert the actuary so they can both be sure the proper provisions are valued.



Appendix A

Member Contribution Rates

Comparison of Member Rate<sup>(1)</sup> from June 30, 2014 and June 30, 2015 Valuation

		June 30, 201	15		June 30, 2014			
Miscellaneous	Basic	COLA	Total	Basic	COLA	Total	Increase/(Decrease) in Rate	
Tier 1	3.70%	1.05%	4.75%	3.70%	1.05%	4.75%	0.00%	
Tier 2	3.54%	0.00%	3.54%	3.54%	0.00%	3.54%	0.00%	
Tier 3	3.54%	1.22%	4.76%	3.54%	1.24%	4.78%	-0.02%	
Tier 4	6.12%	1.07%	7.19%	6.12%	1.08%	7.20%	-0.01%	
Tier 5	6.75%	1.27%	8.02%	7.04%	1.08%	-0.10%		
Safety	Basic	COLA	Total	Basic	COLA	Total	Increase/(Decrease) in Rate	
Tier 1 Tier 2 Tier 3 Tier 4	9.92% 9.43% 9.43% 10.59%	5.47% 2.94% 2.63% 2.52%	15.39% 12.37% 12.06% 13.11%	9.92% 9.43% 9.43% 10.54%	5.33% 2.86% 2.67% 2.57%	15.25% 12.29% 12.10% 13.11%	0.14% 0.08% -0.04% 0.00%	

<sup>(1)</sup> Members who enter on or after 1/1/1975 contribute as indicated above and all others contribute the rate at their respective entry ages.

Note: Contribution rates for most County members in the legacy tiers who have agreed to pick up an additional Normal Cost can be found in Appendix C.



Appendix A
Member Contribution Rates (Continued)

# Miscellaneous Members' Contribution Rates from the June 30, 2015 Actuarial Valuation

	Basic Only						COLA Only					Total						
	First \$350 of Monthly Salary		Salary in Excess of \$350				First \$350 of Monthly Salary		Salary in Excess of \$350		First \$350 of Monthly Salary			Salary in Excess of \$350		of \$350		
Entry Age	Tier 1	Tier 2 & Tier 3	Tier 4	Tier 1	Tier 2 & Tier 3	Tier 4	Tier 1	Tier 3	Tier 4	Tier 1	Tier 3	Tier 4	Tier 1	Tier 3	Tier 4	Tier 1	Tier 3	Tier 4
16	1.79%			2.68%			0.51%			0.76%			2.30%			3.44%		-
17	1.82%			2.73%			0.51%			0.77%			2.33%			3.50%		
18	1.85%			2.78%			0.53%			0.79%			2.38%			3.57%		
19	1.89%			2.83%			0.53%			0.80%			2.42%			3.63%		
20	1.91%			2.87%			0.54%			0.81%			2.45%			3.68%		
21	1.95%			2.92%			0.55%			0.83%			2.50%			3.75%		
22	1.98%			2.97%			0.56%			0.84%			2.54%			3.81%		
23	2.01%			3.02%			0.57%			0.85%			2.58%			3.87%		
24	2.05%			3.07%			0.58%			0.87%			2.63%			3.94%		
25	2.09%			3.13%			0.59%			0.88%			2.68%			4.01%		
26	2.12%			3.18%			0.60%			0.90%			2.72%			4.08%		
27	2.15%			3.23%			0.61%			0.91%			2.76%			4.14%		
28	2.19%			3.29%			0.62%			0.93%			2.81%			4.22%		
29	2.23%			3.34%			0.63%			0.94%			2.86%			4.28%		
30	2.27%			3.40%			0.64%			0.96%			2.91%			4.36%		
31	2.31%			3.46%			0.65%			0.98%			2.96%			4.44%		
32	2.34%			3.51%			0.66%			0.99%			3.00%			4.50%		
33	2.38%			3.57%			0.67%			1.01%			3.05%			4.58%		
34	2.43%			3.64%			0.69%			1.03%			3.12%			4.67%		
35	2.47%	2.36%	4.08%	3.70%	3.54%	6.12%	0.70%	0.81%	0.72%	1.05%	1.22%	1.07%	3.17%	3.17%	4.80%	4.75%	4.76%	7.19%
36	2.51%			3.76%			0.71%			1.06%			3.22%			4.82%		
37	2.55%			3.83%			0.72%			1.08%			3.27%			4.91%		
38	2.59%			3.89%			0.73%			1.10%			3.32%			4.99%		
39	2.64%			3.96%			0.75%			1.12%			3.39%			5.08%		
40	2.69%			4.03%			0.76%			1.14%			3.45%			5.17%		
41	2.74%			4.11%			0.77%			1.16%			3.51%			5.27%		
42	2.79%			4.18%			0.79%			1.18%			3.58%			5.36%		
43	2.84%			4.26%			0.80%			1.20%			3.64%			5.46%		
44	2.90%			4.35%			0.82%			1.23%			3.72%			5.58%		
45	2.96%			4.44%			0.84%			1.26%			3.80%			5.70%		
46	3.00%			4.50%			0.85%			1.27%			3.85%			5.77%		
47	3.04%			4.56%			0.86%			1.29%			3.90%			5.85%		
48	3.08%			4.62%			0.87%			1.31%			3.95%			5.93%		
49	3.11%			4.67%			0.88%			1.32%			3.99%			5.99%		
50	3.13%			4.70%			0.89%			1.33%			4.02%			6.03%		
51	3.15%			4.73%			0.89%			1.34%			4.04%			6.07%		



# Appendix A Member Contribution Rates (Continued)

# Miscellaneous Members' Contribution Rates from the June 30, 2015 Actuarial Valuation

	Basic Only						COLA Only						Total					
		First \$350 of Ionthly Salar		Salary	in Excess of	\$350		First \$350 of Ionthly Salar		Salary	in Excess o	of \$350		First \$350 of Ionthly Sala		Salary	in Excess o	of \$350
Entry Age	Tier 1	Tier 2 & Tier 3	Tier 4	Tier 1	Tier 2 & Tier 3	Tier 4	Tier 1	Tier 3	Tier 4	Tier 1	Tier 3	Tier 4	Tier 1	Tier 3	Tier 4	Tier 1	Tier 3	Tier 4
52	3.16%			4.74%			0.89%			1.34%			4.05%			6.08%		
53	3.15%			4.73%			0.89%			1.34%			4.04%			6.07%		
54	3.14%			4.71%			0.89%			1.33%			4.03%			6.04%		
55	3.14%			4.71%			0.89%			1.33%			4.03%			6.04%		
56	3.14%			4.71%			0.89%			1.33%			4.03%			6.04%		
57	3.14%			4.71%			0.89%			1.33%			4.03%			6.04%		
58	3.14%			4.71%			0.89%			1.33%			4.03%			6.04%		
59 &																		
Over	3.14%			4.71%			0.89%			1.33%			4.03%			6.04%		

Members who enter prior to 1/1/1975 contribute on the basis of their actual entry age and all others contribute on the basis of a single entry age of 35.

		Tier 5		
		All Eligible Pay <sup>(1)</sup>		
	Basic Only	COLA Only	Total	
All members	6.75%	1.27%	8.02%	

<sup>(1)</sup> It is our understanding that in the determination of pension benefits under the CalPEPRA formulas, the compensation that can be taken into account for 2015 is equal to \$117,020 (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2015 (reference: Section 7522.10(d)).



### Appendix A

### **Member Contribution Rates (Continued)**

# Miscellaneous Members' Contribution Rates from the June 30, 2015 Actuarial Valuation

Interest: 7.50% per annum

COLA: Tier 1: 3.25%

Tier 2: 0.00%

Tier 3: 2.00%

Tier 4: 2.00%

Tier 5: 2.00%

Mortality: RP-2000 Combined Healthy Mortality Table projected with scale BB to 2022 weighted 40% male

and 60% female

Salary increase: Inflation (3.25%) + Across-the-Board Increase (0.25%) + Merit (See Exhibit III).

COLA Loading Factor: Tier 1<sup>(2)</sup>: 28.27%

Tier 3<sup>(2)</sup>: 34.45% Tier 4<sup>(2)</sup>: 17.55% Tier 5: 18.81%

### Non-Refundability factor:

Tier 1: 100.00% Tier 2: 99.89% Tier 3: 97.82% Tier 4: 94.20% Tier 5: 91.32%



<sup>(2)</sup> Factors have been adjusted to reflect a reserve carried by the Board to reduce part of the COLA contributions.

Appendix A

Member Contribution Rates (Continued)

# Safety Members' Contribution Rates from the June 30, 2015 Actuarial Valuation

		Basic	Only				COLA	Only					To	otal		
	F	irst \$350 of	-			First \$350 o	f	-			]	First \$350 o	f			
	Mo	onthly Salary	Salary ir	Excess of \$350	M	Ionthly Sala	ry	Salary	in Excess of	of \$350	M	onthly Sala	ry	Salary	in Excess of	of \$350
Entry Age	Tier 1	Tier 2 & Tier 3	Tier 1	Tier 2 & Tier 3	Tier 1	Tier 2	Tier 3	Tier 1	Tier 2	Tier 3	Tier 1	Tier 2	Tier 3	Tier 1	Tier 2	Tier 3
18	5.75%		8.62%		3.17%			4.75%			8.92%			13.37%		_
19	5.82%		8.73%		3.21%			4.81%			9.03%			13.54%		
20	5.89%		8.84%		3.25%			4.87%			9.14%			13.71%		
21	5.97%		8.95%		3.29%			4.93%			9.26%			13.88%		
22	6.04%		9.06%		3.33%			4.99%			9.37%			14.05%		
23	6.12%		9.18%		3.37%			5.06%			9.49%			14.24%		
24	6.20%		9.30%		3.42%			5.13%			9.62%			14.43%		
25	6.27%		9.41%		3.46%			5.19%			9.73%			14.60%		
26	6.36%		9.54%		3.51%			5.26%			9.87%			14.80%		
27	6.44%		9.66%		3.55%			5.32%			9.99%			14.98%		
28	6.53%		9.79%		3.60%			5.40%			10.13%			15.19%		
29	6.61%	6.29%	9.92%	9.43%	3.65%	1.96%	1.75%	5.47%	2.94%	2.63%	10.26%	8.25%	8.04%	15.39%	12.37%	12.06%
30	6.70%		10.05%		3.69%			5.54%			10.39%			15.59%		
31	6.79%		10.18%		3.74%			5.61%			10.53%			15.79%		
32	6.88%		10.32%		3.79%			5.69%			10.67%			16.01%		
33	6.98%		10.47%		3.85%			5.77%			10.83%			16.24%		
34	7.08%		10.62%		3.90%			5.85%			10.98%			16.47%		
35	7.19%		10.78%		3.96%			5.94%			11.15%			16.72%		
36	7.29%		10.94%		4.02%			6.03%			11.31%			16.97%		
37	7.41%		11.11%		4.08%			6.12%			11.49%			17.23%		
38	7.53%		11.30%		4.15%			6.23%			11.68%			17.53%		
39	7.67%		11.50%		4.23%			6.34%			11.90%			17.84%		
40	7.79%		11.69%		4.29%			6.44%			12.08%			18.13%		
41	7.87%		11.81%		4.34%			6.51%			12.21%			18.32%		
42	7.95%		11.93%		4.39%			6.58%			12.34%			18.51%		
43	8.03%		12.04%		4.43%			6.64%			12.46%			18.68%		
44	8.09%		12.14%		4.46%			6.69%			12.55%			18.83%		
45	8.14%		12.21%		4.49%			6.73%			12.63%			18.94%		
46	8.14%		12.21%		4.49%			6.73%			12.63%			18.94%		
47	8.09%		12.14%		4.46%			6.69%			12.55%			18.83%		
48	7.99%		11.99%		4.41%			6.61%			12.40%			18.60%		
49 &																
Over	7.85%		11.78%		4.33%			6.49%			12.18%			18.27%		

Members who enter prior to 1/1/1975 contribute on the basis of their actual entry age and all others contribute on the basis of a single entry age of 29.



### Appendix A

**Member Contribution Rates (Continued)** 

### Safety Members' Contribution Rates from the June 30, 2015 Actuarial Valuation

 $\frac{\text{Tier 4}}{\text{All Eligible Pay}^{(1)}}$   $\frac{\text{Basic Only}}{10.59\%} \frac{\text{COLA Only}}{2.52\%} \frac{\text{Total}}{13.11\%}$  All members

Interest: 7.50% per annum

COLA: Tier 1: 3.25%

Tier 2: 2.00% Tier 3: 2.00% Tier 4: 2.00%

Mortality: RP-2000 Combined Healthy Mortality Table projected with scale BB to 2022 set back one year for

males and set forward two years for females weighted 70% male and 30% female

Salary increase: Inflation (3.25%) + Across-the-Board Increase (0.25%) + Merit (See Exhibit III).

COLA Loading Factor: Tier 1<sup>(2)</sup>: 55.12%

Tier 2<sup>(2)</sup>: 31.22% Tier 3<sup>(2)</sup>: 27.86% Tier 4: 23.80%

### Non-Refundability factor:

 Tier 1:
 99.98%

 Tier 2:
 99.33%

 Tier 3:
 98.20%

 Tier 4:
 96.93%



<sup>(1)</sup> It is our understanding that in the determination of pension benefits under the CalPEPRA formulas, the compensation that can be taken into account for 2015 is equal to \$117,020 (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2015 (reference: Section 7522.10(d)).

<sup>(2)</sup> Factors have been adjusted to reflect a reserve carried by the Board to reduce part of the COLA contributions.

Appendix B
UAAL Amortization Schedule as of June 30, 2015 (Dollar Amounts in Thousands)

	Date Established	Source	Initial Amount	Outstanding Balance	Years Remaining	Annual Payment
Miscellaneous	June 30, 2012	Restart amortization	\$814,400	\$824,790	20	\$60,036
	June 30, 2013	Actuarial loss	34,060	33,953	18	2,656
	June 30, 2014	Actuarial gain	(125, 182)	(125,151)	19	(9,431)
	June 30, 2014	Assumption changes	(46,607)	(46,595)	19	(3,511)
	June 30, 2015	Actuarial gain	(73,919)	(73,919)	20	(5,381)
	June 30, 2015	Withdrawn employers	2,989	2,989	20	218
Subtotal				\$616,067		\$44,587
Safety	June 30, 2010	LEMA	\$4,047	\$2,643	5	\$592
·	June 30, 2012	Restart amortization	493,928	500,229	20	36,412
	June 30, 2013	Actuarial loss	53,174	53,007	18	4,146
	June 30, 2013	DSA Retirement Incentive	6,134	4,091	3	1,472
	June 30, 2014	Actuarial gain	(40,247)	(40,237)	19	(3,032)
	June 30, 2014	Assumption changes	62,388	62,373	19	4,700
	June 30, 2015	Actuarial gain	(8,318)	(8,318)	20	(605)
Subtotal		-		\$573,788		\$43,685
<b>Grand Total</b>				<u>\$1,189,855</u>		<u>\$88,272</u>



# Appendix C

### **Normal Cost Rates with Additional Member Pick-ups**

#### **Total Normal Cost Contribution Rates**

(For the County and Elected Officials Only) Employer and Member Normal Cost Rates

(A) Normal Cost (Prior to any Pick Up of Additional Normal Cost by the Member)

#### Miscellaneous

		Percent of Payroll Member Paying Half Rate			
	Tier 1*	Tier 2	Tier 3	Tier 4	
Employer	11.92%	10.59%	13.76%	9.75%	Not Applicable
Member	4.75%	3.54%	4.76%	7.19%	
Member COLA Buydown	1.39%	0.00%	0.34%	0.35%	
Total	18.06%	14.13%	18.86%	17.29%	
			S	afety	

		ercent of Payroll ber Paying Full F	
	Tier 1*	Tier 2	Tier 3
Employer	22.27%	20.09%	18.45%
Member	15.39%	12.37%	12.06%
Member COLA Buydown	1.97%	0.36%	0.35%
Total	39.63%	32.82%	30.86%

Percent of Payroll Member Paying Half Rate

Not Applicable



<sup>\*</sup> These are the single entry age rates at age 35 and 29 for Miscellaneous and Safety, respectively.

# Appendix C

# Normal Cost Rates with Additional Member Pick-ups (continued)

#### **Total Normal Cost Contribution Rates**

(For the County and Elected Officials Only) Employer and Member Normal Cost Rates

(B) Normal Cost (Assuming Exactly 50:50 Payment by the Employer and the Member)

#### Miscellaneous

		Percent of Payroll Member Paying Half Rate			
	Tier 1	Tier 2	Tier 3	Tier 4	, ,
Employer	9.03%	7.07%	9.48%	8.69%	Not Applicable
Member	7.74%	7.07%	9.16%	8.37%	
Member COLA Buydown	1.29%	0.00%	0.32%	0.32%	
Total	18.06%	14.14%	18.96%	17.38%	

### Safety

	Percent of Payroll Member Paying Full Rate			Percent of Payroll Member Paying Half Rate
	Tier 1	Tier 2	Memoer Laying Han Rate	
Employer	19.82%	16.43%	15.46%	Not Applicable
Member	18.31%	16.10%	15.13%	
Member COLA Buydown	1.51%	0.33%	0.33%	
Total	39.64%	32.86%	30.92%	•



# Appendix C

# Normal Cost Rates with Additional Member Pick-ups (continued) – REVISED

#### **Total Normal Cost Contribution Rates**

(For the County and Elected Officials Only) Employer and Member Normal Cost Rates

(C) Normal Cost (Assuming Phase-in to 50:50 Payment by the Employer and the Member)

G15A – Assuming Member Picks Up a Total of 4/5 of the Difference between (A) and (B) for 2016/2017

#### Miscellaneous

		Percent of Payroll Member Paying Half Rate			
	Tier 1	Tier 2	Tier 3	Tier 4	
Employer	9.61%	7.77%	10.34%	8.90%	Not Applicable
Member	7.14%	6.36%	8.28%	8.13%	
Member COLA Buydown	1.31%	0.00%	0.32%	0.33%	
Total	18.06%	14.13%	18.94%	17.36%	

#### Safety

	р	ercent of Payroll		Percent of Payroll
		ber Paying Full F	Member Paying Half Rate	
	Tier 1	Tier 2	Tier 3	, ,
Employer	20.31%	17.16%	16.06%	Not Applicable
Member	17.73%	15.35%	14.52%	
Member COLA Buydown	1.60%	0.34%	0.33%	
Total	39.64%	32.85%	30.91%	



# Appendix C

# Normal Cost Rates with Additional Member Pick-ups (continued)

#### **Total Normal Cost Contribution Rates**

(For the County and Elected Officials Only) Employer and Member Normal Cost Rates

G14A – Assuming Member Picks Up a Total of 3/4 of the Difference between (A) and (B) for 2016/2017

#### Miscellaneous

		Percent of Payroll Member Paying Half Rate			
	Tier 1	Tier 2	Tier 3	Tier 4	
Employer	9.75%	7.95%	10.55%	8.96%	Not Applicable
Member	6.99%	6.19%	8.06%	8.08%	
Member COLA Buydown	1.32%	0.00%	0.33%	0.33%	
Total	18.06%	14.14%	18.94%	17.37%	
			S	afety	

	Percent of Payroll Member Paying Full Rate			Percent of Payroll Member Paying Half Rate
	Tier 1	, ,		
Employer	20.43%	17.35%	16.21%	Not Applicable
Member	17.58%	15.17%	14.36%	
Member COLA Buydown	1.63%	0.34%	0.34%	
Total	39.64%	32.86%	30.91%	•



# Appendix C

# Normal Cost Rates with Additional Member Pick-ups (continued)

#### **Total Normal Cost Contribution Rates**

(For the County and Elected Officials Only) Employer and Member Normal Cost Rates

G13A – Assuming Member Picks Up a Total of 3/3 of the Difference between (A) and (B) for 2016/2017

#### Miscellaneous

		Percent of Payroll Member Paying Half Rate			
	<u>Tier 1</u>	Tier 2	Tier 3	Tier 4	
Employer	9.03%	7.07%	9.48%	8.69%	Not Applicable
Member	7.74%	7.07%	9.16%	8.37%	
Member COLA Buydown	1.29%	0.00%	0.32%	0.32%	
Total	18.06%	14.14%	18.96%	17.38%	

### Safety

	Percent of Payroll Member Paying Full Rate			Percent of Payroll Member Paying Half Rate
	Tier 1	Tier 2	Memoer Laying Han Rate	
Employer	19.82%	16.43%	15.46%	Not Applicable
Member	18.31%	16.10%	15.13%	
Member COLA Buydown	1.51%	0.33%	0.33%	
Total	39.64%	32.86%	30.92%	•



# Appendix C

# Normal Cost Rates with Additional Member Pick-ups (continued)

#### **Total Normal Cost Contribution Rates**

(For the County and Elected Officials Only) Employer and Member Normal Cost Rates

G13B – Assuming Member Picks Up a Total of 2/3 of the Difference between (A) and (B) for 2016/2017

#### Miscellaneous

	Percent of Payroll Member Paying Full Rate			Percent of Payroll Member Paying Half Rate	
	Tier 1	Tier 2	Tier 3	Tier 4	
Employer	9.99%	8.24%	10.91%	9.04%	Not Applicable
Member	6.74%	5.89%	7.69%	7.98%	
Member COLA Buydown	1.32%	0.00%	0.33%	0.33%	
Total	18.05%	14.13%	18.93%	17.35%	
			S	afety	

	Percent of Payroll Member Paying Full Rate			Percent of Payroll
				Member Paying Half Rate
	Tier 1	Tier 2	Tier 3	
Employer	20.64%	17.65%	16.46%	Not Applicable
Member	17.34%	14.86%	14.11%	
Member COLA Buydown	1.66%	0.34%	0.34%	
Total	39.64%	32.85%	30.91%	-



# Appendix C

### Normal Cost Rates with Additional Member Pick-ups (continued)

#### **Total Normal Cost Contribution Rates**

(For the County and Elected Officials Only) Employer and Member Normal Cost Rates

Rep Unit #26 – Assuming Member Picks Up a Total of 3%<sup>(1)</sup> for 2016/2017

#### Miscellaneous

		Percent of Payroll Member Paying Full Rate			
	Tier 1	Tier 2	Tier 3	Tier 4	
Employer	9.03%	7.59%	10.83%	8.69%	Not Applicable
Member	7.74%	6.54%	7.76%	8.37%	
Member COLA Buydown	1.29%	0.00%	0.34%	0.32%	
Total	18.06%	14.13%	18.93%	17.38%	

### Safety

Percent of Payroll Member Paying Full Rate	Percent of Payroll Member Paying Half Rate
Not Applicable	Not Applicable

Note: Member rates shown are for annual salary in excess of \$4,200 (or monthly salary of \$350). For annual salary less than \$4,200 (or monthly salary of \$350), the member rates are equal to 2/3 of the rates shown. Also, the member COLA buydown is a non-cash contribution item.

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Employer Member

Member COLA Buydown



<sup>(1)</sup> For members in Miscellaneous Tiers 1 and 4, we have limited the increase in the employee rates to be no greater than what they would have to pay assuming exactly 50:50 payment of the Normal Cost by the employer and the member.