Actuarial Valuation June 30, 2014

Ву

Nick J. Collier

Associate, Society of Actuaries Enrolled Actuary Member, American Academy of Actuaries

and

Craig J. Glyde

Associate, Society of Actuaries Enrolled Actuary Member, American Academy of Actuaries





1301 Fifth Avenue Suite 3800 Seattle, WA 98101-2605

Tel +1 206 624 7940 Fax +1 206 623 3485

milliman.com

September 24, 2014

Board of Retirement San Mateo County Employees' Retirement Association 100 Marine Parkway, Suite 125 Redwood City, CA 94065-5208

Dear Members of the Board:

As requested, we have completed an actuarial valuation for the San Mateo County Employees' Retirement Association (SamCERA). The purpose of the valuation is to recommend the employer and member contribution rates for the fiscal year beginning July 1, 2015.

#### **Actuarial Certification – Per SamCERA Consulting Contract**

This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices, including Actuarial Standards of Practice (ASOPs) Nos. 4, 27, and 35. In particular, it reflects the actuary's responsibility under Section 5.8 of ASOP No. 4 for assessing the implications of overall results, in terms of short- and long-range benefit security and expected cost progression.

To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our best professional judgment, the assumptions and methodologies as adopted by the Board of Retirement, individually and in combination, are reasonably related to the experience of and the expectations for SamCERA, and will not, in and of themselves, expose the retirement system to "unsound financial risk." In this regard, we consider "unsound financial risk" to mean the following:

- A substantial likelihood that future required contribution rates as a percentage of payroll
  will be dramatically higher than the rates shown in this report, given the uncertainties of
  actuarial projections and assuming the full payment of all recommended contributions; or
- A substantial likelihood that SamCERA's assets will be insufficient to pay benefit
  payments when due, given the uncertainties of actuarial projections and assuming the
  full payment of all recommended contributions.

In preparing this report, we have complied with all quality assurance procedures detailed on page 14 of our November 28, 2005 proposal titled "Response for Request for Actuarial Services."

#### **Actuarial Certification – Milliman**

The major findings of the valuation are contained in this report. This report reflects the benefit provisions and contribution rates in effect as of June 30, 2014. In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by SamCERA's staff. This information includes, but is not limited to, statutory provisions, employee data, and financial information. We found this information to be reasonably consistent and comparable

This work product was prepared solely for SamCERA for the purposes described herein and may not be appropriate to use for other purposes.

Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.



with information used for other purposes. The valuation results depend on the integrity of this information. If any data of this information is inaccurate or incomplete, our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for SamCERA have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of SamCERA and reasonable expectations) and which, in combination, offer a reasonable estimate of anticipated experience affecting SamCERA. We will next be reviewing the assumptions in 2017 as part of our triennial investigation.

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 or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements. The Board of Retirement has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix A.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for SamCERA. The calculations in this report have been made on a basis consistent with our understanding of SamCERA's current funding requirements. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman's work is prepared solely for the internal business use of SamCERA. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exceptions:

- (a) The System may provide a copy of Milliman's work, in its entirety, to the System's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit the System.
- (b) The System may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law.

No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.



The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the plan sponsors. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

We would like to express our appreciation to Mr. David Bailey, Chief Executive Officer of SamCERA, and to members of his staff, who gave substantial assistance in supplying the data on which this report is based.

We respectfully submit the following report, and we look forward to discussing it with you.

Sincerely,

Nick Collier, ASA, EA, MAAA

Vid Celli

Consulting Actuary

NJC/CJG/nlo

Craig Glyde, A\$A, EA, MAAA Consulting Actuary

#### **Table of Contents**

		age
Section 1:	Summary of the Findings	1
Exhibit 1a	Summary of Recommendations	3
Exhibit 1b	Summary of Recommendations (continued)	4
Exhibit 2:	Summary of Significant Valuation Results	12
Section 2:	Scope of the Report	13
Section 3:	Assets	15
Exhibit 3:	Statement of Plan Net Assets	18
Exhibit 4:	Statement of Changes in Plan Net Assets	19
Exhibit 5:	Allocation of Assets by Accounting Reserve Amounts	20
Exhibit 6a:	Five-Year Smoothing of Gains and Losses on Market Value (Total Assets)	
	- History	21
Exhibit 6b:	Five-Year Smoothing of Gains and Losses on Market Value	
	(excluding CSCA) – History	22
Exhibit 6c:	Five-Year Smoothing of Gains and Losses on Market Value of CSCA  – History	23
Exhibit 7a:	Five-Year Smoothing – Development of Valuation Assets (Total Assets)	
Exhibit 7b:	Five-Year Smoothing - Development of Valuation Assets (excluding CSCA	) . 25
Exhibit 7c:	Five-Year Smoothing – Development of CSCA Assets	26
Exhibit 8a:	Allocation of Valuation Assets	27
Section 4:	Actuarial Liabilities	29
Exhibit 9a:	Actuarial Balance Sheet (Total Assets)	30
Exhibit 9b:	Actuarial Balance Sheet (excluding CSCA)	31
Section 5:	Member Contributions	35
Section 6:	Employer Contributions	39
Exhibit 10a:	Employer Statutory Contribution Rates – All Plans	
	Employer Statutory Contribution Rates – General Members	
	Employer Statutory Contribution Rates – SMCM & VCD Members	
	Employer Statutory Contribution Rates – Safety Members	
Exhibit 10e:	Employer Statutory Contribution Rates – Probation Members	46
	Employer Adjusted Contribution Rates – All Plans	
	Employer Adjusted Contribution Rates – General Members	
	Employer Adjusted Contribution Rates – SMCM & VCD Members	
	Employer Adjusted Contribution Rates – Safety Members	
	Employer Adjusted Contribution Rates – Probation Members	
	Calculated Gross Normal Cost Rates	
Exhibit 12b:	Unfunded Actuarial Accrued Liability Detail	53



## Table of Contents (continued)

Section 7:	Information for Comprehensive Annual Financial Report (CAFR)	55
Exhibit 13:	Schedule of Funding Progress	57
Exhibit 14:	Solvency Test	
Exhibit 15:	History of Employer Statutory Contribution Rates	59
Exhibit 16:	Actuarial Analysis of Financial Experience	60
Exhibit 17:	Summary of Significant Actuarial Statistics and Measures	61
Exhibit 18:	Summary of SamCERA Membership	62
Exhibit 19:	Summary of Active Member Valuation Data	63
Exhibit 20:	Summary of Demographic Activity of Retirees and Beneficiaries	64
Exhibit 21:	Average Salary and Active Counts by Employer	65
Exhibit 22:	Summary of Retired and Inactive Benefits	66
Appendices		
Appendix A:	Actuarial Procedures and Assumptions	A-1
Appendix B:	Summary of Benefit Provisions	B-1
Appendix C:	Valuation Data and Schedules	
Appendix D:	Member Contribution Rates	
Appendix 5:	Glossary	5 . F <sub>-</sub> 1



### **Section 1: Summary of the Findings**



### 2014 Valuation Results

	June 30, 2014	June 30, 2013
Employer Statutory Contribution Rate*	35.56%	37.47%
Funded Ratio	78.8%	73.3%

<sup>\*</sup> Weighted average contribution rate for only the County is 35.78% of pay.

#### Overview

This report presents the results of the June 30, 2014 actuarial valuation. Several key points are summarized as follows:

- Funding: The Funded Ratio increased from 73.3% to 78.8%. This increase was primarily due to contributions in excess of the value of benefits earned and investment earnings significantly in excess of the assumed rate. Note that the assets used in the calculation of the Funded Ratio include the value of the County Supplementary Contribution Account (CSCA).
- Contribution Rates: The Employer Normal Cost rate of 11.62% increased from 11.19% reported in the prior year. This rate was influenced by the changes in actuarial assumptions adopted as a result of the 2014 Investigation of Experience study. Rates will vary slightly from year to year as the average entry age of the membership changes and as a greater proportion of members enter the less expensive plans.

The employer's Statutory Contribution Rate to finance the Unfunded Actuarial Accrued Liability (UAAL) over 15 years decreased from 26.28% to 23.94%. This decrease is largely driven by the recognition of asset gains from the current and prior years under the smoothing method. Additionally, a decrease of 1.06% occurred due to the amortization of the \$50 million lump-sum contribution made by the County that is allocated to the CSCA. The assumption changes adopted as a result of the 2014 Investigation of Experience resulted in a partially offsetting increase in the UAAL rate. The overall result is a decrease in the Statutory Contribution Rate from the prior valuation of 1.91% (from 37.47% to 35.56% of payroll).

■ Investment Returns: SamCERA's investment return on the market value of assets for the prior year of 17.3% (as provided by SamCERA) was greater than the actuarial assumed rate of 7.50% (effective for the prior year). Combined with the recognition of net investment gains from prior years, the net result was a return on the actuarial value of valuation assets of 10.8%, which is higher than the assumed return. This actuarial gain on valuation assets caused a decrease in the Statutory Contribution Rate.



## Overview (continued)

Note that currently a net asset gain of \$268.3 million is being deferred. This is because the asset-smoothing method has not yet recognized a portion of the net asset gains from the current and prior four years. These deferred gains will be reflected in future valuations.

New Member Rates: Due to assumption changes adopted by the Board based on the 2014 Investigation of Experience, there are changes to the member rates. For most employees, there will be relatively small increases of about 2%, although some of the smaller groups had greater variability due to yearto-year changes in the population. See Exhibit 1b for details. A complete list of all member rates is shown in Appendix D.

### Comparison with Prior Year

Note that for comparison purposes, the prior year employer Statutory Contribution Rates shown in this report are those calculated in the June 30, 2013 actuarial valuation and reflect the subsequent revisions to that report to reflect changes in Plan 7 member rates caused by legislation modifying some provisions of PEPRA.

#### Summary of Recommendations

The following exhibits summarize our recommendations to the Board.

### Exhibit 1a Summary of Recommendations

#### Recommendation #1: Adopt new Statutory Contribution Rates for fiscal year beginning July 1, 2015

	Fiscal Year	Increase /	
	July 1, 2015	July 1, 2014	(Decrease)
Gross Normal Cost	22.22%	21.74%	0.48%
Member Contributions	(10.60)%	(10.55)%	(0.05)%
Employer Normal Cost	11.62%	11.19%	0.43%
UAAL Amortization	23.94%	26.28%	(2.34)%
Total Employer Rate	35.56%	37.47%	(1.91)%

#### Note:



<sup>1)</sup> Detailed contribution rates by plan are shown in Section 6.

Exhibit 1b Summary of Recommendations (continued)

Recommendation #2: Adopt new member contribution rates for fiscal year beginning July 1, 2015

			Recomme	nded Rates		Current	
	Entry Age	Basic	50% COLA Sharing <sup>(1)</sup>	Cost Sharing <sup>(3)</sup>	Total as a % of Pay <sup>(2)</sup>	Total as a % of Pay <sup>(2)</sup>	Ratio (New/Curr)
General Members (including	SMCM&V	CD, where a	applicable)				
Plan 1	25	6.34%	2.48%	3.00%	9.34%	9.19%	101.6%
	35	7.60%	2.98%	3.00%	10.60%	10.42%	101.7%
	45	9.13%	3.58%	3.00%	12.13%	11.91%	101.8%
Plan 2	25	6.34%	2.13%	3.00%	9.34%	9.19%	101.6%
	35	7.60%	2.56%	3.00%	10.60%	10.42%	101.7%
	45	9.13%	3.07%	3.00%	12.13%	11.91%	101.8%
Plan 4	25	6.10%	1.40%	3.00%	9.10%	8.94%	101.8%
	35	7.31%	1.68%	3.00%	10.31%	10.12%	101.9%
	45	8.74%	2.01%	3.00%	11.74%	11.51%	102.0%
Plan 5	25	5.24%	1.16%	0.00%	6.40%	6.21%	103.1%
	35	6.29%	1.39%	0.00%	7.68%	7.45%	103.1%
	45	7.55%	1.67%	0.00%	9.22%	8.94%	103.1%
Plan 7 (General)	All	6.68%	1.24%	0.00%	7.92%	7.58%	104.5%
Plan 7 (SMCM&VCD)	All	5.49%	1.02%	0.00%	6.51%	7.58%	85.9%
PDA Members (Reflects Em	ployer Pic	k-up)					
Plans 1 & 2	25	6.90%	4.66%	3.50%	10.40%	10.23%	101.7%
	35	8.28%	5.59%	3.50%	11.78%	11.58%	101.7%
	45	9.75%	6.58%	3.50%	13.25%	13.01%	101.8%
Plan 4	25	6.63%	2.76%	3.50%	10.13%	9.96%	101.7%
	35	7.96%	3.31%	3.50%	11.46%	11.25%	101.9%
	45	9.21%	3.83%	3.50%	12.71%	12.46%	102.0%
Plan 5	25	6.63%	2.56%	3.50%	12.69%	12.35%	102.8%
	35	7.96%	3.08%	3.50%	14.54%	14.12%	103.0%
	45	9.21%	3.56%	3.50%	16.27%	15.78%	103.1%
Plan 6	25	6.63%	2.21%	0.00%	8.84%	8.62%	102.6%
	35	7.96%	2.65%	0.00%	10.61%	10.34%	102.6%
	45	9.21%	3.07%	0.00%	12.28%	11.95%	102.8%
Plan 7	All	10.95%	2.47%	0.00%	13.42%	13.78%	97.4%

<sup>(1)</sup> Only certain rehired members of plans 1, 2 and 4 pay 50% COLA share. All members of plans 5 and 6 pay 50% COLA share. Plan 1, 2 and 4 members of the California Nurses Assocation, the Union of American Physicians and Dentists, and the Probation Detention Association all pay 25% COLA share. Plan 7 COLA share represents one-half of the normal cost of the COLA. See Appendix B of this report for a full description of members COLA share. See Appendix D of this report for a full schedule of rates.



<sup>(2)</sup> For plans 1, 2 and 4 the total cost does not include COLA share as not all members pay COLA share.

<sup>(3)</sup> Cost Sharing varies for Deputy Sheriffs as follows:

<sup>3.0%</sup> if employee is less than 45 and has less than 5 years of service.

<sup>3.5%</sup> if employee is less than 45 and has between 5 and 15 years of service.

<sup>4.5%</sup> if employee is older than 45 or has at least 15 years of service.

Exhibit 1b Summary of Recommendations (continued)

Recommendation #2: Adopt new member contribution rates for fiscal year beginning July 1, 2015

			Recomme	nded Rates		Current	
	Entry Age	Basic	50% COLA Sharing <sup>(1)</sup>	Cost Sharing <sup>(3)</sup>	Total as a % of Pay <sup>(2)</sup>	Total as a % of Pay <sup>(2)</sup>	Ratio (New/Curr)
Probation Managers							
Plans 1 & 2	25	8.62%	5.00%	3.50%	12.12%	11.91%	101.8%
	35	10.35%	6.00%	3.50%	13.85%	13.59%	101.9%
	45	12.19%	7.07%	3.50%	15.69%	15.39%	101.9%
Plan 4	25	8.29%	2.82%	3.50%	11.79%	11.57%	101.9%
	35	9.95%	3.38%	3.50%	13.45%	13.18%	102.0%
	45	11.52%	3.91%	3.50%	15.02%	14.70%	102.2%
Plan 5	25	8.29%	2.55%	3.50%	14.34%	14.00%	102.4%
	35	9.95%	3.06%	3.50%	16.51%	16.09%	102.6%
	45	11.52%	3.54%	3.50%	18.56%	18.07%	102.7%
Plan 6	25	8.29%	2.33%	0.00%	10.62%	10.24%	103.7%
	35	9.95%	2.80%	0.00%	12.75%	12.28%	103.8%
	45	11.52%	3.24%	0.00%	14.76%	14.21%	103.9%
Plan 7	All	10.95%	2.47%	0.00%	13.42%	13.78%	97.4%
Safety Members (3)							
Plans 1 & 2	25	8.62%	5.00%	5.00%	13.62%	13.41%	101.6%
	35	10.35%	6.00%	5.00%	15.35%	15.09%	101.7%
	45	12.19%	7.07%	5.00%	17.19%	16.89%	101.8%
Plan 4	25	8.29%	2.82%	5.00%	13.29%	13.07%	101.7%
	35	9.95%	3.38%	5.00%	14.95%	14.68%	101.8%
	45	11.52%	3.91%	5.00%	16.52%	16.20%	102.0%
Plan 5	25	8.29%	2.55%	4.00%	14.84%	14.50%	102.3%
	35	9.95%	3.06%	4.00%	17.01%	16.59%	102.5%
	45	11.52%	3.54%	4.00%	19.06%	18.57%	102.6%
Plan 6	25	8.29%	2.33%	0.00%	10.62%	10.24%	103.7%
	35	9.95%	2.80%	0.00%	12.75%	12.28%	103.8%
	45	11.52%	3.24%	0.00%	14.76%	14.21%	103.9%
Plan 7	All	12.08%	2.56%	0.00%	14.64%	14.28%	102.5%

<sup>(1)</sup> Only certain rehired members of plans 1, 2 and 4 pay 50% COLA share. All members of plans 5 and 6 pay 50% COLA share. Plan 1, 2 and 4 members of the California Nurses Association, the Union of American Physicians and Dentists, and the Probation Detention Association all pay 25% COLA share. Plan 7 COLA share represents one-half of the normal cost of the COLA. See Appendix B of this report for a full description of members COLA share. See Appendix D of this report for a full schedule of rates.



<sup>(2)</sup> For plans 1, 2 and 4 the total cost does not include COLA share as not all members pay COLA share.

<sup>(3)</sup> Cost Sharing varies for Deputy Sheriffs as follows:

<sup>3.0%</sup> if employee is less than 45 and has less than 5 years of service.

<sup>3.5%</sup> if employee is less than 45 and has between 5 and 15 years of service.

<sup>4.5%</sup> if employee is older than 45 or has at least 15 years of service.

### **Employer Contribution Rate**

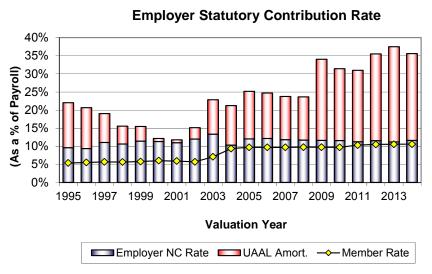
The Statutory Contribution Rate is equal to the payment of the Employer Normal Cost rate plus a 15-year layered amortization of the UAAL (excluding the CSCA) for each year beginning with the UAAL as of June 30, 2008. The UAAL rate for the County is reduced to reflect the CSCA. The Statutory Contribution Rate (blended average for all employers) for the fiscal year beginning July 1, 2015 is 35.56%. The Statutory Contribution Rate for the County only is 35.78%.

We have calculated Adjusted Contribution Rates consistent with the Memorandum of Understanding (MOU) adopted by the County in 2013. Under the MOU, the County's intent is to pay a total contribution rate of 38.00% of pay. The Adjusted Contribution Rates vary by plan and are expected to be equivalent to 38.00% of pay for the County. Note that no adjustments are made to the Statutory Contribution Rates for the Courts or the San Mateo County Mosquito and Vector Control District (SMCM&VCD). In total, the Adjusted Contribution Rates are equivalent to 37.67% of payroll for all employers for the fiscal year 2015-2016.

It should be noted that these rates are a weighted average for all SamCERA plans. The actual percent of payroll to be contributed by each employer varies by plan. See Exhibits 10a through 10e for the Statutory Contribution Rates by plan. Exhibits 11a through 11e show the Adjusted Contribution Rates by plan reflecting the MOU provisions.

In our opinion, the contribution rates calculated are adequate to maintain the funding of the retirement system benefits based on the actuarial methods and assumptions shown in Appendix A of this report.

A historical perspective of the total Statutory Contribution Rate is shown in the following graph.





#### Comparison with Last Year

A detailed analysis of the sources of the changes in both the employer contribution rates and the Funded Ratio was performed. There were several factors that influenced the Funded Ratio and the employer contribution rate, with the overall impact of these additional factors being an increase in the Funded Ratio and a decrease in the employer rates from the last valuation.

The following chart shows how the various factors affected the overall funding of SamCERA, as compared to the last valuation.

Sources of Change	Statutory Contribution Rate	Funded Ratio
June 30, 2013 Actuarial Valuation	37.47%	73.3%
Assumption Changes	2.05%	-1.2%
Expected Year-to-Year Change	0.00%	2.5%
Recognized Asset Gain/Loss		
From Current Year	-1.01%	1.2%
From Prior Years	-0.92%	1.1%
Retiree COLAs Less than Expected	-0.34%	0.3%
Salary Increase < Assumed	-0.35%	0.3%
CSCA Contribution Funding	-1.06%	1.4%
Increase in Plan 7 Membership	-0.20%	0.0%
Other Experience Changes	-0.08%	-0.1%
Total Change	-1.91%	5.5%
June 30, 2014 Actuarial Valuation	35.56%	78.8%

#### **Funding Progress**

Based on the 2013 valuation, the expected UAAL as of June 30, 2014 was \$916 million. The actual UAAL for the fiscal year ending June 30, 2014 is \$804 million. This difference was primarily caused by the recognition of asset gains (\$88 million) and CSCA contributions (\$50 million). Other factors, such as salary increases and CPI increases less than assumed also contribute to the reduction in the UAAL. The assumption changes adopted by the Board based on the 2014 Investigation of Experience resulted in an increase of \$59 million which partially offsets the gains experienced. These factors are shown in detail at the end of Section 4.

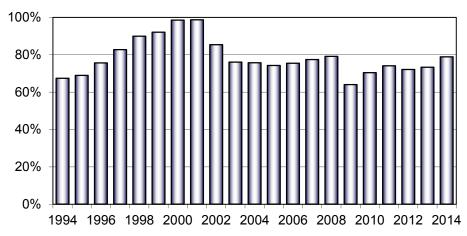
## Funding Progress (continued)

One measure of the funding adequacy of the system is the Funded Ratio, which compares the value of the Actuarial Value of Assets (net of certain non-valuation reserves) to the Actuarial Accrued Liability (AAL) for all SamCERA plans combined. SamCERA's funded ratio increased rapidly in the last half of the 1990s, reaching almost 100% in 2001. However, due primarily to asset losses from that time through 2009, the funded ratio decreased significantly in the following years. In recent years, the funded ratio has improved, due primarily to strong investment performance, and also to strong funding. Currently, the Funded Ratio is 78.8%; that is, the valuation assets of \$2,993 million are about 21% less than the actuarial accrued liabilities of \$3,797 million. Note that if the market value of assets was used, the Funded Ratio would be 86.7%.

#### (All dollar amounts in millions)

	Market	Actuaria	al Value		
	Value of Total Assets	Valuation	Non- Valuation	Actuarial Accrued Liability	Funded Ratio
2005	1,599	1,616	0	2,178	74.2
2006	1,790	1,769	0	2,345	75.4
2007	2,132	1,977	0	2,555	77.4
2008	2,011	2,219	0	2,806	79.1
2009	1,591	1,910	0	2,988	63.9
2010	1,816	2,179	0	3,098	70.3
2011	2,318	2,405	0	3,247	74.1
2012	2,360	2,480	0	3,443	72.0
2013	2,728	2,619	0	3,573	73.3
2014	3,292	2,993	30	3,797	78.8

#### **Historical Funded Ratios**





#### **Assets**

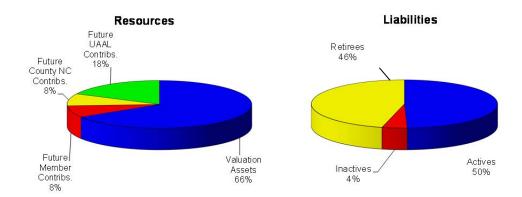
For the fiscal year ending June 30, 2014, SamCERA earned 17.3% net of investment expenses, on its market assets. This figure was provided by SamCERA and will be shown in the 2014 CAFR.

SamCERA uses an asset-smoothing method in the calculation of the UAAL contribution. Under this method, the market value returns are smoothed over a five-year period (10 six-month periods). Due to the recognition of deferred prior year asset gains, the return on actuarial valuation assets, at 10.8% net of expenses, was higher than the assumed return of 7.50% for the prior year.

### Actuarial Balance Sheet

The first step in the valuation process is to compare the total valuation assets of SamCERA with its total liabilities for all plans. In this analysis, SamCERA's resources equal the actuarial assets plus the expected future contributions by both the employers and members. Liabilities reflect benefits already earned in the past and those expected to be earned in the future by current members. This relationship is shown in the following chart. The AAL is the total of these liabilities less expected future Normal Cost contributions.

Comparing the current and future resources to the current and future liabilities, we then determine the annual contribution amount for the coming fiscal year.

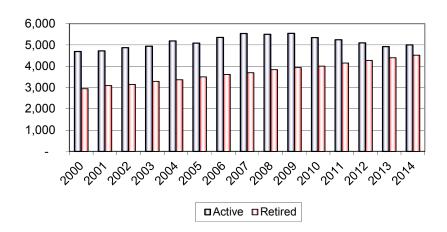


#### **Member Information**

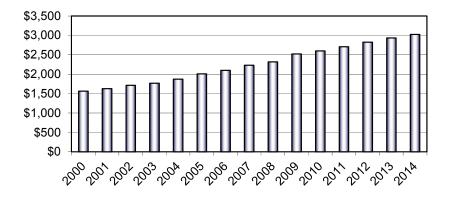
The number of active members included in the valuation increased by 1.8% from 4,917 in 2013 to 5,004 in 2014.

Retired member counts and average retirement benefit amounts continue to increase steadily. For 2014, there were 4,518 retired members and beneficiaries with an average benefit of \$3,021 per month. This represents a 2.7% increase in count (up from 4,398 in 2013), and a 3.0% increase in the average monthly benefit (up from \$2,933 over the period).

#### **Membership Count**



### **Average Monthly Retirement Benefit**





# Analysis of Change in Member Population

The following table summarizes the year-to-year change in member population.

	Active Members	Vested Terminated Members	Service Retired Members	Disabled Retired Members	Beneficiaries in Pay	Total
As of June 30, 2013	4,917	1,306	3,446	393	559	10,621
New Members	455	24	5	1	34	519
Return to active	81	(80)	(1)	0	0	0
Terminations with vested benefits	(206)	206	0	0	0	0
Terminations with refund	(106)	(50)	0	0	0	(156)
Service Retirements	(125)	(75)	200	0	0	0
Disabled Retirements	(9)	(21)	(16)	46	0	0
Deaths	(3)	(6)	(108)	(12)	(27)	(156)
Data adjustments	0	0	(1)	0	(1)	(2)
As of June 30, 2014	5,004	1,304	3,525	428	565	10,826

## Summary Valuation Results

The following Exhibit 2 presents a comparison of the key results from the June 30, 2014 and June 30, 2013 valuations. More detail on each of these elements can be found in the following sections and exhibits of this report.

Exhibit 2: **Summary of Significant Valuation Results** 

			June 30, 2014	J	June 30, 2013	Relative Change
1.	Total Membership					
	A. Active Members		5,004		4,917	1.8 %
	B. Retired Members & Beneficiaries		4,518		4,398	2.7%
	C. Vested Terminated Members		1,304		1,306	(0.2)%
	D. Total		10,826		10,621	1.9 %
2.	Pay Rate					
	A. Annual Total (\$thousands)	\$	429,407	\$	414,551	3.6%
	B. Monthly Average	\$	7,151	\$	7,026	1.8%
3.	Average Monthly Benefit to Current Retirees and Beneficiaries					
	A. Service Retirement	\$	3,158	\$	3,071	2.8%
	B. Disability Retirement	\$	3,175	\$	3,032	4.7%
	C. Surviving Spouse and Dependents	\$	2,047	\$	2,008	1.9%
	D. Total	\$	3,021	\$	2,933	3.0%
4.	Actuarial Accrued Liability (\$thousands)					
	A. Active Members	\$	1,511,714	\$	1,415,160	6.8%
	B. Retired Members	\$ \$ \$	2,088,527	\$	1,964,840	6.3%
	C. Vested Terminated Members		196,801	\$	192,750	2.1%
	D. Total	\$	3,797,042	\$	3,572,750	6.3%
5.	Assets					
	A. Market Value of Fund (\$thousands)	\$	3,291,694	\$	2,727,825	20.7%
	B. Return on Market Value C. Actuarial Value (\$thousands)	\$	17.3% 2,993,187	\$	13.6% 2,618,639	14.3%
	D. Return on Actuarial Value	Ψ	10.8%	Ψ	3.7%	11.070
6.	Unfunded Actuarial Accrued Liability					
	or Surplus Funding (\$thousands)	\$	803,855	\$	954,111	(15.7)%
7.	Statutory Employer Contribution Rate for all plans combined as a percent of total payroll					
	A. Gross Normal Cost		22.22%		21.74%	2.2%
	B. Member Contributions		(10.60)%		(10.55)%	0.5%
	C. Employer Normal Cost		11.62%		11.19%	3.8%
	D. UAAL Amortization		23.94%		26.28%	(8.9)%
	E. Total Employer Rate		35.56%		37.47%	(5.1)%
8.	Funded Ratio (5C / 4D)		78.8%		73.3%	7.6%
9.	Results Based on Market Value (No Asset Smoothi	ng)	For Informational	Purpos	ses Only	
	A. Total Employer Rate		29.00%	•	34.99%	(17.1)%
	B. Funded Ratio (5A / 4D)		86.7%		76.4%	13.5%



### Section 2: Scope of the Report



This report presents the actuarial valuation of the San Mateo County Employees' Retirement Association as of June 30, 2014. This valuation was requested by the Board. Section 31453 of the County Employees Retirement Law of 1937 (the '37 Act) requires an actuarial valuation to be performed at least every three years for the purposes of setting contribution rates.

In reading our cover letter, please pay particular attention to the guidelines employed in the preparation of this report. We also comment on the sources and reliability of both the data and the actuarial assumptions upon which our findings depend. Those comments are the basis for our certification that this report is complete and accurate to the best of our knowledge and belief.

A summary of the findings resulting from this valuation is presented in the previous section. Section 3 describes the assets and investment experience of SamCERA. The assets and investment income are presented in Exhibits 3-5. Exhibits 6-8 develop the Actuarial Value of Assets as of June 30, 2014.

Section 4 describes the benefit obligations of SamCERA. Exhibit 9 is the Actuarial Balance Sheet. Additional analysis on the change in UAAL is also provided in this section.

Section 5 discusses the Member contribution rates.

Section 6 discusses the employer contributions needed to fund the benefits under the actuarial cost method in use.

Section 7 discloses information to be included in SamCERA's CAFR.

This report includes several appendices:

Appendix A	A summary of the actuarial procedures and
	assumptions used to estimate liabilities and
	contributions.

Appendix B	A summary of the current benefit structure, as
	determined by the provisions of governing law
	on June 30, 2014.

Appendix C	Schedules of valuation data classified by
	various categories of members by plan.

- Appendix D Member contribution rates by plan.
- Appendix E A glossary of actuarial terms used in this report.



This page intentionally left blank.



#### Section 3: Assets



In many respects, an actuarial valuation can be thought of as an inventory process. The inventory is taken as of the actuarial valuation date which, for this valuation, is June 30, 2014. On that date, the assets available for the payment of retirement benefits are appraised. These assets are compared with the accrued and future actuarial liabilities, which are generally well in excess of the actuarial assets. The purpose of the valuation is to determine what future contributions by the members and employer are needed to pay all expected future benefits.

This section of the report deals with the determination of assets used for funding purposes. In the next section, the actuarial liabilities will be discussed. Sections 5 and 6 deal with the process for determining required contributions based on the relationship between the actuarial assets and the actuarial liabilities.

A historical summary of SamCERA's assets is presented below:

All dollar amounts in millions

		Actuari	al Value
	Market Value of Total Assets	Non- Valuation Reserves	Valuation <u>Assets</u>
2000 2001 2002 2003 2004	\$ 1,381 1,308 1,207 1,233 1,435	\$ 49 51 32 34 31	\$ 1,271 1,385 1,417 1,354 1,453
2005 2006 2007 2008 2009	1,599 1,790 2,132 2,011 1,591	0 0 0 0	1,616 1,769 1,977 2,219 1,910
2010 2011 2012 2013 2014	1,816 2,318 2,360 2,728 3,292	0 0 0 0 30	2,179 2,405 2,480 2,619 2,993

On June 30, 2014, the total market value of the fund was about \$3.29 billion. The actuarial value of the fund was determined to be \$3.02 billion, including the non-valuation reserves.



#### **Financial Exhibits**

Exhibit 3 presents a Statement of Plan Net Assets and Exhibit 4 presents a Statement of Changes in Plan Net Assets. Exhibit 5 describes the allocation of SamCERA's assets by the various reserve values determined for accounting purposes.

Exhibits 3-5 are taken from data furnished to us by SamCERA for its annual financial report. We have accepted these tables for use in this report without audit, but we have reviewed them for reasonableness and consistency with previous reports.

### Actuarial Asset Method

The actuarial asset method computes the expected market value of assets based on the prior year's market value of assets, the actual cash flow of contributions and benefit payments, and the assumed investment rate of return. For the current valuation, the assumed rate of return on the prior year's assets is 7.50%, net of all expenses. The difference between the actual market value and the computed expected market value is smoothed or recognized over a five-year period.

Beginning with the June 30, 2014 valuation, assets used to calculate the preliminary UAAL contribution rates exclude the value of the CSCA. The CSCA is used to adjust the County's Statutory Contribution Rate, for this purpose we track CSCA and all other assets separately.

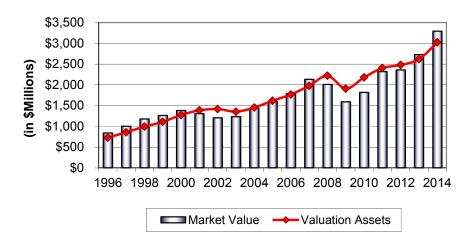
## Actuarial Value of Assets

The development of the June 30, 2014 actuarial value of assets is shown in Exhibits 6 and 7. Exhibits 6a and 7a show the development of the total actuarial value of assets. Exhibits 6b and 7b show the development excluding the CSCA. Exhibits 6c and 7c show the development of the actuarial value of assets for the CSCA.

### Actuarial Value of Assets (continued)

Note that the smoothing process has recognized all of the investment gains and losses from 2009 and earlier over the last few years. However, there are still portions of investment gains and losses that have not yet been recognized by the asset smoothing method, including the current year gain. The result is a market value of assets that is higher than the actuarial value. The following graph shows a historical comparison of the total actuarial and market assets used for valuation purposes on a system-wide basis.

### **Applicable Valuation Assets**



#### **Valuation Assets**

Valuation Assets are the actuarial value of the fund, less the value of any reserves which have been set aside for current liabilities and special benefits (if any) that are to be funded outside of the actuarially determined contribution rates.

#### **Allocation of Assets**

Valuation assets are allocated by classification (general, safety, and probation) as shown in exhibits 8a and 8b. This is because UAAL contribution rates are determined separately by class and plan.

In the calculation of the Statutory Contribution Rate, the Normal Cost is determined separately for each plan. The UAAL portion of the rate is allocated proportionately to each classification. To determine the UAAL amount by classification, the valuation assets are allocated in proportion to the expected UAAL after reflecting expected contributions from the prior year to pay down the UAAL. The allocation is done without consideration of the CSCA. These calculations are shown in Exhibit 8b. The same allocation proportions are applied to total assets to show the asset allocations to each class in aggregate.

Note that we do not separately allocate assets by class for the CSCA as this is not necessary for our calculations.



**Statement of Plan Net Assets** Exhibit 3: for the Years Ended June 30, 2013 and 2014

	2014	2013
Assets		
Cash and Cash Equivalents	78,671,477	39,405,154
Cash Management Overlay	21,446,466	39,403,134
Securities Lending Cash Collateral	21,440,400	136,413,481
Total Cash	\$ 100,117,943 \$	175,818,636
Receivables		
Contributions	4,648,233	3,611,259
Due from broker for investments sold	12,596,153	139,326,538
Investment Income	3,483,030	4,998,825
Other receivables	39,953	113,812
Securities Lending Income	113,410_	60,596
Total Receivables	20,880,779	148,111,030
Prepaid Expense	7,669	7,669
Investments at Fair Value		
Domestic fixed income securities	493,024,480	428,578,645
International fixed income securities	100,023,249	112,393,585
Domestic equities	1,229,039,423	1,135,856,342
International equities	653,569,353	494,939,553
Real estate	183,566,990	166,154,482
Private Equities	138,490,534	64,325,070
Risk Parity	197,597,402	157,444,012
Hedge Funds	117,896,816	73,717,734
Commodities	90,480,043	69,083,062
Total Investments	3,203,688,289	2,702,492,485
Capital Assets Net of Depreciation	-	-
Total Assets	3,324,694,680	3,026,429,819
Liabilities		
Payables		
Investment management fees	2,787,598	2,519,194
Due to broker for investments purchased	27,187,225	154,293,081
Collateral Payable for Securities Lending	, , , <u>-</u>	136,413,481
Mortgage Note Payable		, -,
Due within one year	-	_
Due in more than one year	_	-
Other	3,025,903	5,378,731
Total Liabilities	33,000,727	298,604,487
Net Assets Held in Trust for Pension Benefits	\$ 3,291,693,954 \$	2,727,825,332
HOLAGOGG HOM III HAGE IOI I GHGIOH DGHGHLG	Ψ 5,201,000,007 Ψ	_,,,,,,,,,,,,



**Statement of Changes in Plan Net Assets** Exhibit 4: for the Years Ended June 30, 2013 and 2014

		2014		2013
Additions		2017		
Contributions				
Employer	\$	202,877,362	\$	144,308,171
Employee	Ψ	46,593,698	Ψ	55,407,941
Total Contributions		249,471,060		199,716,112
Investment Income/(Loss)				
Interest and dividends		54,492,076		55,101,945
Net appreciation/(depreciation) in Fair Value		454,082,350		293,808,144
		508,574,426		348,910,089
Less investment expense		26,524,556		21,926,630
Net Investment Income/(Loss)		482,049,870		326,983,459
Securities Lending Income				
Earnings		253,687		402,803
Less securities lending expense		(181,772)		(219,089)
Net Securities Lending Income		435,459		621,892
Other Additions		178,637		159,510
Total Additions/(Declines)		732,135,025		527,480,973
Deductions				
Association Benefits				
Service retirement allowances		139,036,410		131,638,612
Disability retirement allowances		19,266,623		16,705,247
Medical Benefits		-		-
Death and other death benefits		1,038,945		921,788
Total Association Benefits	-	159,341,978		149,265,647
Defined a formula and a substitution		0.044.400		F 740 770
Refunds of members' contributions Administrative Expense		3,214,129 5,645,004		5,749,776 4,914,187
Other Expense		65,292		29,685
Total Deductions		<u>,                                      </u>		
Total Deductions		168,266,403		159,959,295
Net Increase/(Decrease)		563,868,622		367,521,678
Net Assets Held in Trust for Pension Benefits:				
Beginning of Year		2,727,825,332		2,360,303,654
End of Year		3,291,693,954		2,727,825,332
Estimated Return, Net of Investment Expenses		17.3%		13.6%

Exhibit 5: **Allocation of Assets by Accounting Reserve Amounts** for the Years Ended June 30, 2013 and 2014

	2014	2013
A. Valuation Reserves		
1. Member Reserve	\$ 584,079,609	\$ 534,275,685
2. County Advance Reserve	570,829,244	422,581,774
3. Retiree Reserves	877,161,874	918,589,967
4. Cost of Living Adjustment Reserve	1,019,232,798	930,358,295
5. County Supplemental Contributions Account Reserve	50,842,556	 -
Total Valuation Reserves	\$ 3,102,146,081	\$ 2,805,805,721
B. Non-Valuation Reserves		
1. Contingency Reserve	\$ 30,234,213	\$ -
2. Undistributed Losses / Earnings Reserve	(108,622,522)	(187,166,322)
3. Other Specified Reserves		
Total Non-Valuation Reserves	\$ (78,388,309)	\$ (187,166,322)
C. Financial Statement Reserve	\$ -	\$ -
D. Market Stabilization Account	\$ 267,936,182	\$ 109,185,933
Total Reserves (Market Value of Assets)	\$ 3,291,693,954	\$ 2,727,825,332

Note: These amounts were determined by SamCERA for accounting purposes. We have made minor rounding adjustments to these numbers.



Exhibit 6a: Five-Year Smoothing of Gains and Losses on Market Value (Total Assets) – History

			History of Une	kpected Asset Ga	ins and Losse	es		
Six-Month Period Ended	Market Value at Beginning of Period	Contributions	Benefit Payments	Market Value at End of Period	Assumed Rate of Return	Expected Return	Actual Return	Unexpected Gain / (Loss)
6/30/2014 \$	3,049,944,702	\$ 153,384,050	\$ 82,787,545	3,291,693,954	3.750%	\$ 116,347,099	\$ 171,152,747	\$ 54,805,648
12/31/2013	2,727,825,332	96,087,010	79,768,567	3,049,944,702	3.750%	103,671,361	305,800,927	202,129,566
6/30/2013	2,558,508,635	99,631,258	78,520,689	2,727,825,332	3.750%	97,496,612	148,206,128	50,709,516
12/31/2012	2,360,303,654	100,084,854	76,494,734	2,558,508,635	3.750%	89,983,040	174,614,861	84,631,821
6/30/2012	2,280,940,966	28,676,113	73,157,072	2,360,303,654	3.875%	87,461,531	123,843,647	36,382,116
12/31/2011	2,317,775,829	171,960,784	69,678,010	2,280,940,966	3.875%	91,600,467	(139,117,637)	(230,718,104)
6/30/2011 *	2,167,939,516	96,998,690	67,484,144	2,317,775,829	3.875%	85,497,449	120,321,766	34,824,317
12/31/2010	1,815,896,455	102,489,209	64,824,842	2,167,939,516	3.875%	72,262,382	314,378,695	242,116,313
6/30/2010	1,863,720,265	80,266,609	63,207,613	1,815,896,455	3.875%	73,179,765	(64,882,806)	(138,062,571)
12/31/2009	1,591,399,558	76,317,198	61,669,503	1,863,720,265	3.875%	61,835,437	257,673,013	195,837,576

<sup>\*2011 &</sup>quot;Market Value at End of Period" reflects revisions to assets by SamCERA following publication of the June 30, 2011 actuarial valuation.



Exhibit 6b: Five-Year Smoothing of Gains and Losses on Market Value (excluding CSCA) – History

			History of Unex	pected Asset Ga	ins and Losse	es		
Six-Month Period Ended	Market Value at Beginning of Period	Contributions	Benefit Payments	Market Value at End of Period	Assumed Rate of Return	Expected Return	Actual Return	Unexpected Gain / (Loss)
6/30/2014 \$	3,049,944,702	\$ 103,384,050	\$ 82,787,545	3,240,851,398	3.750%	\$ 115,878,349	\$ 170,310,191	\$ 54,431,842
12/31/2013	2,727,825,332	96,087,010	79,768,567	3,049,944,702	3.750%	103,671,361	305,800,927	202,129,566
6/30/2013	2,558,508,635	99,631,258	78,520,689	2,727,825,332	3.750%	97,496,612	148,206,128	50,709,516
12/31/2012	2,360,303,654	100,084,854	76,494,734	2,558,508,635	3.750%	89,983,040	174,614,861	84,631,821
6/30/2012	2,280,940,966	28,676,113	73,157,072	2,360,303,654	3.875%	87,461,531	123,843,647	36,382,116
12/31/2011	2,317,775,829	171,960,784	69,678,010	2,280,940,966	3.875%	91,600,467	(139,117,637)	(230,718,104)
6/30/2011 *	2,167,939,516	96,998,690	67,484,144	2,317,775,829	3.875%	85,497,449	120,321,766	34,824,317
12/31/2010	1,815,896,455	102,489,209	64,824,842	2,167,939,516	3.875%	72,262,382	314,378,695	242,116,313
6/30/2010	1,863,720,265	80,266,609	63,207,613	1,815,896,455	3.875%	73,179,765	(64,882,806)	(138,062,571)
12/31/2009	1,591,399,558	76,317,198	61,669,503	1,863,720,265	3.875%	61,835,437	257,673,013	195,837,576

<sup>\*2011 &</sup>quot;Market Value at End of Period" reflects revisions to assets by SamCERA following publication of the June 30, 2011 actuarial valuation.



Exhibit 6c: Five-Year Smoothing of Gains and Losses on Market Value of CSCA – History

			History of Une	xpected Asset Ga	ains and Loss	es		
Six-Month Period Ended	Market Value at Beginning of Period	Contributions	Benefit Payments	Market Value at End of Period	Assumed Rate of Return	Expected Return	Actual Return	Unexpected Gain / (Loss)
6/30/2014	\$ 0	\$ 50,000,000	\$ -	50,842,556	3.750%	\$ 468,750	\$ 842,556	\$ 373,806
12/31/2013	0	0	0	0	3.750%	0	0	0
6/30/2013	0	0	0	0	3.750%	0	0	0
12/31/2012	0	0	0	0	3.750%	0	0	0
6/30/2012	0	0	0	0	3.875%	0	0	0
12/31/2011	0	0	0	0	3.875%	0	0	0
6/30/2011	0	0	0	0	3.875%	0	0	0
12/31/2010	0	0	0	0	3.875%	0	0	0
6/30/2010	0	0	0	0	3.875%	0	0	0
12/31/2009	0	0	0	0	3.875%	0	0	0



Exhibit 7a: Five-Year Smoothing – Development of Valuation Assets (Total Assets)

### **Development of Market Stabilization Reserve**

	Phase-Out of Gain / (Loss)							
Six-Month	Percent	Unexpected					Gain / (Loss)	
Period Ended	Excluded	_	(	Gain / (Loss)			Excluded	
6/30/2014	90%	Х	\$	54,805,648	=	\$	49,325,083	
12/31/2013	80%	Х		202,129,566	=		161,703,653	
6/30/2013	70%	Х		50,709,516	=		35,496,661	
12/31/2012	60%	Х		84,631,821	=		50,779,092	
6/30/2012	50%	Х		36,382,116	=		18,191,058	
12/31/2011	40%	Х		(230,718,104)	=		(92,287,241)	
6/30/2011	30%	Х		34,824,317	=		10,447,295	
12/31/2010	20%	Х		242,116,313	=		48,423,263	
6/30/2010	10%	Х		(138,062,571)	=		(13,806,257)	
12/31/2009	0%	Х		195,837,576	=		0	
Total Gain / (Loss	) Excluded = Ma	rket S	Stabil	ization Reserve	=	\$	268,272,607	

	Development of Valuation	n Assets	
1.	Market Value of Assets as of June 30, 2014	\$	3,291,693,954
2.	Preliminary Market Stabilization Reserve		268,272,607
3.	Preliminary Actuarial Value of Assets (1) - (2)		3,023,421,347
4.	,	,633,355,163 ,950,032,745	0
5.	Market Stabilization Reserve	268,272,607	
6.	Gross Actuarial Valuation of Assets (3) - (4c)	\$	3,023,421,347
7.	Non-Valuation Reserves a) Contingency Reserve b) Undistributed Earnings / Losses Reserve c) Other Specified Reserves d) Total	30,234,213 0 0	30,234,213
8.	Valuation Assets (6) - (7d)	\$	2,993,187,134



Exhibit 7b: Five-Year Smoothing – Development of Valuation Assets (excluding CSCA)

### **Development of Market Stabilization Reserve**

	Phase-Out of Gain / (Loss)							
Six-Month	Percent			Unexpected			Gain / (Loss)	
Period Ended	Excluded	_		Gain / (Loss)			Excluded	
6/30/2014	90%	Х	\$	54,431,842	=	\$	48,988,658	
12/31/2013	80%	Х		202,129,566	=		161,703,653	
6/30/2013	70%	Х		50,709,516	=		35,496,661	
12/31/2012	60%	Х		84,631,821	=		50,779,092	
6/30/2012	50%	Х		36,382,116	=		18,191,058	
12/31/2011	40%	Х		(230,718,104)	=		(92,287,241)	
6/30/2011	30%	Х		34,824,317	=		10,447,295	
12/31/2010	20%	Х		242,116,313	=		48,423,263	
6/30/2010	10%	Х		(138,062,571)	=		(13,806,257)	
12/31/2009	0%	Х		195,837,576	=		0	
Total Gain / (Loss	) Excluded = Ma	rket S	Stabil	ization Reserve	=	\$	267,936,182	

	Development of Val	uation Assets	
1.	Market Value of Assets as of June 30, 2014		\$ 3,240,851,398
2.	Preliminary Market Stabilization Reserve		267,936,182
3.	Preliminary Actuarial Value of Assets (1) - (2)		2,972,915,216
4.	Corridor Around Market Value a) Minimum = 80% of Market b) Maximum = 120% of Market c) Corridor Adjustment	2,592,681,118 3,889,021,678	0
5.	Market Stabilization Reserve	267,936,182	
6.	Gross Actuarial Valuation of Assets (3) - (4c)		\$ 2,972,915,216
7.	Non-Valuation Reserves a) Contingency Reserve b) Undistributed Earnings / Losses Reserve c) Other Specified Reserves d) Total	30,234,213 0 0	30,234,213
8.	Valuation Assets (6) - (7d)		\$ 2,942,681,003



Exhibit 7c: Five-Year Smoothing – Development of CSCA Assets

### **Development of Market Stabilization Reserve**

	Phase-Out of Gain / (Loss)							
Six-Month	Percent	Unexpected				Gain / (Loss)		
Period Ended	Excluded	Gain / (Loss)				Excluded		
6/30/2014	90%	х	\$	373,806	=	\$	336,425.40	
12/31/2013	80%	х		0	=		0	
6/30/2013	70%	Х		0	=		0	
12/31/2012	60%	Х		0	=		0	
6/30/2012	50%	Х		0	=		0	
12/31/2011	40%	Х		0	=		0	
6/30/2011	30%	Х		0	=		0	
12/31/2010	20%	Х		0	=		0	
6/30/2010	10%	Х		0	=		0	
12/31/2009	0%	Х		0	=		0	
Total Gain / (Loss	) Excluded = Ma	rket S	Stabilizati	ion Reserve	=	\$	336,425	

	Development of Valuation Assets										
1.	Market Value of Assets as of June 30, 2014		\$	50,842,556							
2.	Preliminary Market Stabilization Reserve			336,425							
3.	Preliminary Actuarial Value of Assets (1) - (2)			50,506,131							
4.	Corridor Around Market Value a) Minimum = 80% of Market b) Maximum = 120% of Market c) Corridor Adjustment	40,674,045 61,011,067		0							
5.	Market Stabilization Reserve	336,425									
6.	Gross Actuarial Valuation of Assets (3) - (4c)		\$	50,506,131							
7.	Non-Valuation Reserves a) Contingency Reserve b) Undistributed Earnings / Losses Reserve c) Other Specified Reserves d) Total	0 0 0		0							
8.	Valuation Assets (6) - (7d)		\$	50,506,131							



Exhibit 8: **Allocation of Valuation Assets** 

(Dollars in Thousands)

	General	Safety	Р	Probation	Total
Prior Year UAAL	\$ 662,866	\$ 229,836	\$	61,409	\$ 954,111
2. Expected UAAL Contribution for Preceding Year	(69,407)	(25,809)		(6,445)	(101,661)
3. Expected Interest at 7.50%	 47,159	16,287		4,368	67,814
4 Expected UAAL Based on Prior Year Assumptions	640,618	220,314		59,332	920,264
5. Percentage of Total Expected UAAL	69.61%	23.94%		6.45%	100.00%
6. Actual UAAL Based on Prior Year Assumptions					796,448
7. Actual AAL Based on Prior Year Assumptions	\$ 2,749,599	\$ 751,893	\$	237,637	\$ 3,739,129
8. Allocated UAAL Based on Prior Year Assumptions	 554,427	190,672		51,349	796,448
9. Valuation Assets (excluding CSCA)	 2,195,172	\$ 561,221	\$	186,288	\$ 2,942,681
10. Actual UAAL excluding CSCA Valuation Assets	\$ 597,013	\$ 202,319	\$	55,029	\$ 854,361
11. Allocation of UAAL	 69.88%	23.68%		6.44%	100.00%
12. Valuation Assets (CSCA)	 35,293	\$ 11,960	\$	3,253	\$ 50,506
13. Valuation Assets (Total)	\$ 2,230,465	\$ 573,181	\$	189,541	\$ 2,993,187



This page intentionally left blank.



#### Section 4: Actuarial Liabilities



In the previous section, an actuarial valuation was compared with an inventory process, and an analysis was given of the inventory of SamCERA's assets as of the valuation date, June 30, 2014. In this section, the discussion will focus on the commitments of SamCERA for retirement benefits, which are referred to as its actuarial liabilities.

In an active system, the combined current and future actuarial liabilities will almost always exceed the actuarial assets. This is usually expected in all but a fully closed down fund, where no further contributions of any sort are anticipated. This deficiency has to be provided by future contributions. An actuarial valuation method sets out a schedule of future contributions that will deal with this deficiency in an orderly fashion. The determination of the level of future contributions needed is discussed in the next section.

#### Actuarial Balance Sheet – Liabilities

First, we need to determine the amount of the deficiency. We compare the Actuarial Value of the Valuation Assets to the Actuarial Liabilities. The difference is the amount that needs to be funded by the member and employer contributions in the future. Both the current and future assets (contributions) are compared to the actuarial liabilities in the Actuarial Balance Sheet.

Exhibit 9a contains an analysis of the actuarial present value of all future benefits for retired, deferred vested and active members and compares these with the total valuation assets. Exhibit 9b contains an analysis using the valuation assets excluding the CSCA. These analyses are displayed by class of membership and by type of benefit.

The actuarial liabilities include the actuarial present value of all future benefits expected to be paid with respect to each member. For an active member, this value includes measures of both benefits already earned and future benefits to be earned. For all members, active and inactive, the value extends over the rest of their lives and for the lives of any surviving beneficiaries. All liabilities reflect the benefits effective through June 30, 2014.

The actuarial assumptions used to determine the liabilities are based on the results of our Investigation of Experience study for the period ending April 30, 2014. These assumptions were adopted by the Board at their July 2014 meeting and are shown in Appendix A. The assumptions will next be reviewed in detail in 2017 as part of the triennial investigation.



**Exhibit 9a:** Actuarial Balance Sheet (Total Assets)

June 30, 2014

(Dollars in Thousands)

Resources									
	General			Safety	Probation			Total	
Valuation Assets (Actuarial)	\$	2,230,331	\$	573,312	\$	189,544	\$	2,993,187	
Present Value of Future Member Contributions	\$	278,715	\$	56,549	\$	24,519	\$	359,783	
Present Value of Future Employer Contributions to Fund:									
a) Normal Cost	\$	261,737	\$	71,761	\$	37,133	\$	370,631	
b) Unfunded Actuarial Accrued Liability	\$	561,854	\$	190,228	\$	51,773	\$	803,855	
Total Resources	\$	3,332,637	\$	891,850	\$	302,969	\$	4,527,456	

		Liabilities					
	General		Safety		ı	Probation	Total
Present Value of Future Benefits							
1. Present Retired Members	\$	1,495,617	\$	485,182	\$	107,728	\$ 2,088,527
2. Current Inactive Members		157,045		24,596		15,160	196,801
3. Current Active Members							
- Service Retirement		1,492,630		345,080		161,949	1,999,659
- Disability Retirement		87,870		20,795		10,161	118,826
- Death Benefits		24,053		7,054		3,233	34,340
- Deferred Vested Benefit		52,967		7,580		4,311	64,858
- Refund of Member Contributions		22,455		1,563		427	24,445
- Total Active		1,679,975		382,072		180,081	2,242,128
Total Actuarial Liabilities	\$	3,332,637	\$	891,850	\$	302,969	\$ 4,527,456



Exhibit 9b: Actuarial Balance Sheet (excluding CSCA)

June 30, 2014 (Dollars in Thousands)

		Resources							
	General Safety Probation						Total		
Valuation Assets (Actuarial)	\$	2,195,172	\$	561,221	\$	186,288	\$	2,942,681	
Present Value of Future Member Contributions	\$	278,715	\$	56,549	\$	24,519	\$	359,783	
Present Value of Future Employer Contributions to Fund:									
a) Normal Cost	\$	261,737	\$	71,761	\$	37,133	\$	370,631	
b) Unfunded Actuarial Accrued Liability	\$	597,013	\$	202,319	\$	55,029	\$	854,361	
Total Resources	\$	3,332,637	\$	891,850	\$	302,969	\$	4,527,456	

		Liabilities						
	General			Safety Probation			Total	
Present Value of Future Benefits								
1. Present Retired Members	\$	1,495,617	\$	485,182	\$	107,728	\$	2,088,527
2. Current Inactive Members		157,045		24,596		15,160		196,801
3. Current Active Members								
- Service Retirement		1,492,630		345,080		161,949		1,999,659
- Disability Retirement		87,870		20,795		10,161		118,826
- Death Benefits		24,053		7,054		3,233		34,340
- Deferred Vested Benefit		52,967		7,580		4,311		64,858
- Refund of Member Contributions		22,455		1,563		427		24,445
- Total Active		1,679,975		382,072		180,081		2,242,128
Total Actuarial Liabilities	\$	3,332,637	\$	891,850	\$	302,969	\$	4,527,456



#### Actuarial Balance Sheet – Resources

For the purpose of the Actuarial Balance Sheet, SamCERA's resources are equal to the sum of:

- (a) Assets currently available to pay benefits and considered for funding purposes, the Valuation Assets,
- (b) The present value of future contributions expected to be made by current active members, and
- (c) The present value of future contributions expected to be made by the employer.

### Actuarial Cost Method

The Actuarial Balance sheet determines the amount of future contributions that are needed, but the method used to determine the incidence of when those future contributions are yet to be made in future years is called the "actuarial cost method." For this valuation, the entry age actuarial cost method has been used. Under this method – or essentially any actuarial cost method – the contributions required to meet the difference between current assets and current actuarial liabilities are allocated each year between two elements:

- A Normal Cost amount; and
- Whatever amount is left over, which is used to amortize what is called the UAAL.

#### **Normal Cost**

The two items described above, the Normal Cost and UAAL, are the keys to understanding the actuarial cost method.

The Normal Cost is the theoretical contribution rate that will meet the ongoing costs of a group of average new employees. Suppose that a group of new employees was covered under a separate fund from which all benefits and to which all contributions and associated investment returns were paid.

Under the entry age actuarial cost method, the Normal Cost contribution rate maintains the funding of benefits as a level percentage of pay. If experience follows the actuarial assumptions precisely, the fund would be completely liquidated when the last payment to the last survivor of the group was made.

### Normal Cost (continued)

By applying the Normal Cost contribution rate to the present value of salaries expected to be paid in the future, we determine the present value of future Normal Cost contributions. Future contributions are expected to be made by both the members and the employer. The basic member contribution rates are determined based upon requirements established in the '37 Act and the actuarial assumptions. Members may also make additional contributions as part of a cost sharing or COLA cost sharing arrangements. Based on these member contribution rates, we determine the present value of future member contributions. We subtract that value from the total future Normal Cost contributions expected, based on the entry age cost method. The remaining difference is the employer's portion of the future Normal Cost contributions.

### Actuarial Accrued Liability

The difference between the present value of all future obligations and the present value of the future Normal Cost contributions is referred to as the "Actuarial Accrued Liability." The AAL is then compared to the value of assets available to fund benefits, and the difference is referred to as the UAAL. The results for SamCERA for all plans (and including all valuation assets) are summarized below:

(Dollars in millions)	2014	2013	Percent Change
A. Actuarial present value of all future benefits for contributing members, former contributing members, and their survivors	\$ 4,527	\$ 4,280	5.8%
B. Actuarial present value of total future Normal Costs for current members	<u>730</u>	<u>707</u>	3.3%
C. Actuarial accrued liability [A-B]	\$ 3,797	\$ 3,573	6.3%
D. Valuation Assets	<u>2,993</u>	<u>2,619</u>	14.3%
E. UAAL or Surplus Funding [C-D]	\$ 804	\$ 954	(15.7)%
F. Funded Ratio [D/C]	78.8%	73.3%	7.5 %

# Unfunded Actuarial Accrued Liability/ Surplus Funding

The portion allocated to service already rendered or accrued is called the Actuarial Accrued Liability. The difference between the Actuarial Accrued Liability and the Valuation Assets is called the Unfunded Actuarial Accrued Liability (UAAL). If a UAAL amount exists, it usually results from prior years' benefit or assumption changes and the net effect of accumulated gains and losses. If the employer had always contributed the current Normal Cost, if there were no prior benefit or assumption changes and if actual experience exactly matched the actuarial assumptions, the present value of all future Normal Cost contributions would be sufficient to fund all benefits and there would be no UAAL.



Unfunded Actuarial Accrued Liability/ Surplus Funding (continued) Exhibits 9a and 9b show how the UAAL was derived for each classification. Exhibit 9a includes all valuation assets, and exhibit 9b excludes the CSCA. In the Actuarial Balance sheet, the total actuarial accrued liability for all future benefits must be equal to the current and future assets.

#### **Funding Adequacy**

A key consideration in determining the adequacy of the funding of SamCERA is how the UAAL is being funded. Under the current funding method, the June 30, 2008 UAAL is amortized over a fixed period ending June 30, 2023. Changes in the UAAL in years following June 30, 2008 are being amortized separately over new 15-year periods from the valuation date at which the difference is calculated, including the change in UAAL as of June 30, 2014.

### Analysis of Change in UAAL

The UAAL, at any date after establishment of a system, is affected by any actuarial gains or losses arising when the actual experience of the system varies from the experience anticipated by the actuarial assumptions used in the valuations. To the extent actual experience, as it develops, differs from that expected according to the assumptions used, so also will the emerging costs differ from the estimated costs.

The 2014 actuarial valuation reflects a decrease in the systemwide UAAL of \$150.2 million for the fiscal year just ended.

Unfunded Actuarial Accrued Liability - June 30, 2013	\$ 954.1
Expected Increase / (Decrease) *	(88.5)
Expected UAAL - June 30, 2014	\$ 865.6
Asset (Gains) and Losses	(88.0)
Retiree COLA Less than Expected	(15.6)
Salary Increases Less than Expected	(15.9)
Assumption Changes	59.3
Other Liability (Gain)/Loss	 (1.5)
Total Changes	 (61.7)
Actual UAAL - June 30, 2014	\$ 803.9

<sup>\*</sup> Based on actual contributions.

#### **Section 5: Member Contributions**



Basic Contributions (Plans 1-6)

For SamCERA members in Plans 1-6, contributions are of three types: Basic contributions, Cost Sharing contributions, and COLA Cost Sharing contributions. SamCERA members in Plan 7 pay contributions equal to one-half of the total Normal Cost rate for all members.

Basic contributions for Plans 1-6 are defined in the following sections of the County Employees' Retirement Law:

Plan	Code Section	Contribution Provides Average Annuity of
General Plans 1, 2 & 4	31621.9	1/120 <sup>th</sup> of FAC at age 55
General Plan 5	31621	1/120 <sup>th</sup> of FAC at age 60
Probation & Safety	31639.25	1/100 <sup>th</sup> of FAC at age 50

FAC = Final Average Compensation

There are no member contributions under General Plan 3.

Basic member contributions are determined using the Entry Age Normal Cost Method and the following actuarial assumptions:

- 1. Expected rate of return on assets
- 2. Individual salary increase rate (wage growth + merit)
- 3. Mortality for members based on service retirement
- 4. No COLAs are assumed

The basic member contribution rates for Plans 1-6 were recalculated as of the June 30, 2014 valuation to reflect the investment return and wage growth assumptions adopted with the 2014 Investigation of Experience study. The rates are shown in Appendix D.

Cost-Sharing Contributions (Plans 1-5) In addition to the basic rate, Plan 1, 2 and 4 General employees (excluding SMCM&VCD), as well as Plan 5 Safety and Probation employees, make additional cost-sharing contributions as shown in Appendix B. Plan 6 employees do not participate in cost-sharing. For valuation purposes, cost-sharing contributions are assumed to be permanent. The cost-sharing contributions are fixed and not impacted by changes in assumptions.



# Cost-of-Living Contributions (Plans 1-6)

Members of the California Nurses Association, members of the Union of American Physicians and Dentists, and members of the Probation and Detention Association in Plans 1, 2, and 4 contribute 25% of the cost of COLA, in addition to all basic and cost-sharing rates applicable.

All members of General Plan 5 contribute 50% of the cost of COLA. Additionally, General members (Plans 1, 2 and 4) rehired on or after August 7, 2011 contribute 50% of the cost of COLA for their current Plan.

Members of Safety and Probation Plan 5 and 6 contribute 50% of the cost of COLA. Additionally, Probation members (Plans 1, 2 and 4) rehired on or after July 10, 2011 and Safety members (Plans 1, 2 and 4) rehired on or after January 8, 2012 contribute 50% of the cost of COLA for their current Plan.

Other current members do not contribute towards the COLA benefit.

COLA member rates are determined by calculating and applying a load factor to the basic member rates. COLA load factors are determined for each class and plan of member separately, as shown in the following table:

Plan	COLA Share	COLA Load
General 1 (County & Courts) <sup>(1)</sup>	50%	39.19%
General 2 (County & Courts) <sup>(1)</sup>	50%	33.64%
General 4 (County & Courts) <sup>(1)</sup>	50%	23.02%
General 1 (CNA and UAPD)	25%	19.60%
General 2 (CNA and UAPD)	25%	16.82%
General 4 (CNA and UAPD)	25%	11.51%
General 5	50%	22.14%
Safety 1 <sup>(1)(2)</sup>	50%	57.96%
Safety 2 <sup>(1)(2)</sup>	50%	57.96%
Safety 4 <sup>(1)(2)</sup>	50%	33.97%
Safety 5 <sup>(2)</sup>	50%	30.74%
Safety 6 <sup>(2)</sup>	50%	28.12%
Probation 1 (PDA)	25%	33.75%
Probation 2 (PDA)	25%	33.75%
Probation 4 (PDA)	25%	20.78%
Probation 1 (PDA) <sup>(1)</sup>	50%	67.50%
Probation 2 (PDA) <sup>(1)</sup>	50%	67.50%
Probation 4 (PDA) <sup>(1)</sup>	50%	41.56%
Probation 5 (PDA)	50%	38.66%
Probation 6 (PDA)	50%	33.34%

<sup>(1)</sup> Only applicable in cases where member rehires or transfers (if eligible).

#### Example:

A member who enters General Plan 5 at age 35 has a basic member contribution rate of 6.29% (Exhibit D-1). The General Plan 5 COLA load is 22.14% for a member COLA contribution of 1.39% (6.29% x 22.14%) of pay. The basic plus COLA member contribution rate is 7.68% (6.29% + 1.39%).



<sup>&</sup>lt;sup>(2)</sup> Probation Manager COLA loads are based on corresponding Safety loads.

Cost-of-Living Contributions (Plans 1-6) (continued) The COLA factor is determined as the present value of future normal cost contributions for the applicable plan COLA divided by the present value of future basic member contributions. This ratio is then multiplied by the applicable COLA share percentage (0%, 25%, or 50%)

Member Contribution Rates – Pickup (Plans 1-6) Note that a portion of some of the member contribution rates is paid for ("picked up") by the employer and may or may not be considered part of the member's contribution account for refund purposes. Consistent with past practice, we have reflected the pickup for Probation members (excluding managers), but not other classes, due to the differing treatment of contributions for refund purposes.

Full disclosure of the member rates can be found in Appendix D.

Member Contribution Rates (Plan 7) Contributions for Plan 7 are defined in Section 7522.30 of the Government Code.

All employees of the same class who are members of Plan 7 shall contribute the same percentage of payroll. Such percentage will be 50% of the total Normal Cost rate for that class. The rates are recalculated annually.

Effective July 1, 2014, Plan 7 member rates are as follows:

General members: 7.92% (increased from 7.58%)
SMCM&VCD members: 6.51% (decreased from 7.58%)
Safety members: 14.64% (increased from 14.28%)
Probation members: 13.42% (decreased from 13.78%)



This page intentionally left blank.



#### **Section 6: Employer Contributions**



Contributions to SamCERA are determined using the Entry Age Normal Cost Method. The portion of the actuarial present value of retirement benefits allocated to a valuation year by the Actuarial Cost Method is called the Normal Cost. These amounts are usually expressed as a percentage of payroll and called the Normal Cost Contribution Rate. Exhibit 12a shows the Normal Cost Rates by type of benefit and for each plan based on this valuation.

It should be noted that when we use the term "Gross Normal Cost rate," we are referring to the value of benefits earned by active members allocated to the valuation year. The Employer Normal Cost rate is the portion of the annual benefit that the employer is responsible for. This is simply the Gross Normal Cost rate less the contributions made by the members.

Note that in the following exhibits "SMCM&VCD" refers to the San Mateo County Mosquito and Vector Control District.

### Statutory Contribution Rate

The total Statutory Contribution Rate for each plan, along with a comparison to the prior year's rates, can be found in Exhibits 10a through 10e. These results are expressed as a percentage of payroll. Note that SamCERA's UAAL is determined separately for each class. Thus, the employer funds the UAAL evenly as a percentage of pay over salaries for all members within a class.

The UAAL rate reflects a layered 15-year amortization beginning with the June 30, 2008 valuation. Gains and losses after that date are reflected over new 15-year periods starting with the valuation date. A one-year deferral in the implementation of the new rate is reflected. Therefore, the new employer contribution rate calculated in the 2014 valuation is paid over the remaining 14 years and is effective July 1, 2015.

Exhibit 12b shows detailed information on how the UAAL contribution rate is calculated using the layered method. These UAAL contribution rates are calculated excluding the CSCA. An adjustment to the County's Statutory Contribution Rate for the CSCA, equivalent to a 15-year amortization of the CSCA, is made separately.

# Statutory Contribution Rate (continued)

The total Statutory Contribution Rate was 37.47% for the fiscal year beginning July 1, 2014. For the fiscal year beginning in 2015, the Statutory Contribution Rate based on this report decreased to 35.56%. This is equal to the aggregate Employer Normal Cost contribution rate of 11.62% based on Milliman's 2014 valuation, plus appropriate amounts to amortize the UAAL according to the funding policy, over layered 15-year closed periods.

#### **Statutory Contribution Rate**

(all values as a % of Payroll)

Employer Normal Cost	11.62%
Total Amortization of UAAL	<u>23.94%</u>
Total Employer Contribution	35.56%

### Adjusted Contribution Rate (Reflecting MOU)

The total Adjusted Contribution Rate for each plan, along with a comparison to the prior year's rates, can be found in Exhibits 11a through 11e. These results are expressed as a percentage of payroll and reflect the County's intent to contribute 38.00% of payroll, as specified in the MOU.

The Adjusted Contribution Rates are based on the Statutory Contribution Rates with the County UAAL contribution rate adjusted proportionately so that the County's aggregate contribution rate is 38.00% of County payroll.

The total Adjusted Contribution Rate was 37.71% for the fiscal year beginning July 1, 2014. For the fiscal year beginning in 2015, the calculated Adjusted Contribution Rate based on this report is also 37.67%.

### **Adjusted Contribution Rate**

(all values as a % of Payroll)

Employer Normal Cost	11.62%
Total Amortization of UAAL	<u>26.05%</u>
Total Employer Contribution	37.67%

### Changes in the Normal Cost Rate

The change in the calculated Normal Cost contribution rates from year-to-year is generally due to two factors. The two factors are:

1. Experience: Normal experience from year-to-year, reflecting differences in both the weighting between membership groups and in their characteristics, as well as on what was assumed to occur during the past fiscal year and what actually occurred, particularly with respect to salary increases and turnover experience. Based on current system benefit provisions, the aggregate Normal Cost rate is expected to decrease as a greater number of members are covered by Plans 5, 6 and 7, instead of the more expensive previous plans. However, the change will be fairly gradual.



# Changes in the Normal Cost Rate (continued)

2. Contribution Shut-Off: For general members hired prior to March 7, 1973 and all Safety and Probation members, basic member contributions are not collected after the member has 30 years of service. Thereafter, the member contributions towards the total annual Normal Cost are equal to the cost sharing, resulting in a sizable increase in the employer's share of the Normal Cost contributions for the years when the member has more than 30 years of service. The employer's share of the Normal Cost rates for those groups can be expected to increase rather than remain level, as otherwise expected under the entry age cost method.

Exhibit 10a: Employer Statutory Contribution Rates – All Plans June 30, 2014

### All Plans

			Employer Rates						
	Gross Normal Cost	Member Contributions	Basic Normal Cost	COLA Normal Cost	Total Normal Cost	UAAL Contribution Rate <sup>1</sup>	Total Contribution Rate	Prior Year Total Contribution Rate	
General Members									
County	19.99%	(9.83)%	6.41%	3.75%	10.16%	20.21%	30.37%	32.09%	
Courts	19.99%	(10.42)%	6.04%	3.53%	9.57%	21.16%	30.73%	32.09%	
CNA	19.99%	(10.85)%	5.77%	3.37%	9.14%	20.21%	29.35%	31.27%	
UAPD	19.99%	(10.85)%	5.77%	3.37%	9.14%	20.21%	29.35%	31.27%	
Total	19.99%	(9.98)%	6.32%	3.69%	10.01%	20.26%	30.27%	31.96%	
SMCM&VCD Members									
Total	18.97%	(7.25)%	8.30%	3.42%	11.72%	21.16%	32.88%	34.05%	
Safety Members Total	32.06%	(42.07)0/	11.96%	7.03%	18.99%	46.48%	65.47%	68.84%	
ıotai	32.96%	(13.97)%	11.96%	7.03%	18.99%	40.48%	05.47%	08.84%	
Probation Members									
PDA	31.38%	(12.46)%	12.20%	6.72%	18.92%	28.09%	47.01%	47.65%	
Managers	31.38%	(12.59)%	12.12%	6.67%	18.79%	28.09%	46.88%	47.17%	
Total	31.38%	(12.48)%	12.19%	6.71%	18.90%	28.09%	46.99%	47.58%	
All Plans									
Total	22.22%	(10.60)%	7.36%	4.26%	11.62%	23.94%	35.56%	37.47%	
County Only Total	22.33%	(10.62)%	7.42%	4.29%	11.71%	24.07%	35.78%	37.80%	

County UAAL Contribution Rate includes an aggregate offset of 1.11% of payroll to reflect the County Supplemental Contribution Account. Offsets vary by class of member as follows:



<sup>-</sup> General member UAAL offset is 0.95% of payroll

<sup>-</sup> Safety member UAAL offset is 2.02% of payroll

<sup>-</sup> Probation member UAAL offset is 1.24% of payroll

Exhibit 10b: Employer Statutory Contribution Rates – General Members June 30, 2014

			Gen	eral Membe	ers					
Employer Rates										
	Gross Normal Cost	Member Contributions	Basic Normal Cost	COLA Normal Cost	Total Normal Cost	UAAL Contribution Rate <sup>1</sup>	Total Contribution Rate	Prior Year Total Contribution Rate		
Plan 1										
County	21.53%	(9.80)%	5.88%	5.85%	11.73%	20.21%	31.94%	33.60%		
Courts	21.53%	(9.96)%	5.80%	5.77%	11.57%	21.16%	32.73%	33.60%		
CNA	21.53%	(14.39)%	3.58%	3.56%	7.14%	20.21%	27.35%	32.16%		
UAPD	21.53%	(14.39)%	3.58%	3.56%	7.14%	20.21%	27.35%	32.16%		
Total	21.53%	(10.24)%	5.66%	5.63%	11.29%	20.25%	31.54%	33.44%		
Plan 2										
County	21.27%	(10.34)%	5.86%	5.07%	10.93%	20.21%	31.14%	32.87%		
Courts	21.27%	(10.14)%	5.96%	5.17%	11.13%	21.16%	32.29%	32.87%		
CNA	21.27%	(11.88)%	5.03%	4.36%	9.39%	20.21%	29.60%	31.70%		
UAPD	21.27%	(11.88)%	5.03%	4.36%	9.39%	20.21%	29.60%	31.70%		
Total	21.27%	(10.52)%	5.76%	4.99%	10.75%	20.26%	31.01%	32.70%		
Plan 3										
County	8.08%	0.00%	8.08%	0.00%	8.08%	20.21%	28.29%	30.18%		
Courts	8.08%	0.00%	8.08%	0.00%	8.08%	21.16%	29.24%	30.18%		
CNA	8.08%	0.00%	8.08%	0.00%	8.08%	20.21%	28.29%	30.18%		
UAPD	8.08%	0.00%	8.08%	0.00%	8.08%	20.21%	28.29%	30.18%		
Total	8.08%	0.00%	8.08%	0.00%	8.08%	20.23%	28.31%	30.18%		
Plan 4										
County	20.85%	(10.55)%	6.76%	3.54%	10.30%	20.21%	30.51%	32.08%		
Courts	20.85%	(10.69)%	6.67%	3.49%	10.16%	21.16%	31.32%	32.08%		
CNA	20.85%	(11.84)%	5.92%	3.09%	9.01%	20.21%	29.22%	31.26%		
UAPD	20.85%	(11.84)%	5.92%	3.09%	9.01%	20.21%	29.22%	31.26%		
Total	20.85%	(10.69)%	6.67%	3.49%	10.16%	20.27%	30.43%	31.95%		
Plan 5										
County	18.02%	(8.22)%	6.78%	3.00%	9.80%	20.21%	30.01%	31.43%		
Courts	18.02%	(9.26)%	6.06%	3.00%	8.76%	21.16%	29.92%	31.43%		
CNA	18.02%	(8.48)%	6.60%	3.00%	9.54%	20.21%	29.75%	31.43%		
UAPD	18.02%	(8.48)%	6.60%	3.00%	9.54%	20.21%	29.75%	31.43%		
Total	18.02%	(8.28)%	6.74%	3.00%	9.74%	20.23%	29.97%	31.43%		
Plan 7										
County	15.83%	(7.92)%	5.28%	2.63%	7.91%	20.21%	28.12%	29.92%		
Courts	15.83%	(7.92)%	5.28%	2.63%	7.91%	21.16%	29.07%	29.92%		
CNA	15.83%	(7.92)%	5.28%	2.63%	7.91%	20.21%	28.12%	29.92%		
UAPD	15.83%	(7.92)%	5.28%	2.63%	7.91%	20.21%	28.12%	29.92%		
Total	15.83%	(7.92)%	5.28%	2.63%	7.91%	20.21%	28.12%	29.92%		
All Plans										
County	19.99%	(9.83)%	6.41%	3.75%	10.16%	20.21%	30.37%	32.09%		
Courts	19.99%	(10.42)%	6.04%	3.53%	9.57%	21.16%	30.73%	32.09%		
CNA	19.99%	(10.85)%	5.77%	3.37%	9.14%	20.21%	29.35%	31.27%		
UAPD	19.99%	(10.85)%	5.77%	3.37%	9.14%	20.21%	29.35%	31.27%		
Total	19.99%	(9.98)%	6.32%	3.69%	10.01%	20.26%	30.27%	31.96%		

<sup>&</sup>lt;sup>1</sup> UAAL Contribution Rate includes an offset of 0.95% of payroll to reflect the County Supplemental Contribution Account, except for Courts.



Exhibit 10c: Employer Statutory Contribution Rates – SMCM & VCD Members June 30, 2014

SMCM&VCD Members											
			Employer Rates								
	Gross Normal Cost	Member Contributions	Basic Normal Cost	COLA Normal Cost	Total Normal Cost	UAAL Contribution Rate	Total Contribution Rate	Prior Year Total Contribution Rate			
<u>Plan 1</u>											
Total	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
<u>Plan 2</u> Total	27.23%	(8.99)%	11.75%	6.49%	18.24%	21.16%	39.40%	40.04%			
Dian 4		, ,									
<u>Plan 4</u> Total	18.94%	(7.18)%	8.50%	3.26%	11.76%	21.16%	32.92%	33.40%			
Plan 7											
Total	13.01%	(6.51)%	4.29%	2.21%	6.50%	21.16%	27.66%	30.25%			
All Plans Total	18.97%	(7.25)%	8.30%	3.42%	11.72%	21.16%	32.88%	34.05%			



Exhibit 10d: Employer Statutory Contribution Rates – Safety Members June 30, 2014

			Sa	afety Memb	ers			
					Em	ployer Rates		
	Gross Normal Cost	Member Contributions	Basic Normal Cost	COLA Normal Cost	Total Normal Cost	UAAL Contribution Rate <sup>1</sup>	Total Contribution Rate	Prior Year Total Contribution Rate
<u>Plan 1</u> Total	42.35%	(16.01)%	12.56%	13.78%	26.34%	46.48%	72.82%	75.49%
<u>Plan 2</u> Total	34.16%	(13.55)%	11.36%	9.25%	20.61%	46.48%	67.09%	69.99%
<u>Plan 4</u> Total	32.71%	(13.67)%	12.67%	6.37%	19.04%	46.48%	65.52%	68.83%
<u>Plan 5</u> Total	33.07%	(16.61)%	10.21%	6.25%	16.46%	46.48%	62.94%	66.40%
<u>Plan 6</u> Total	33.45%	(14.51)%	12.58%	6.36%	18.94%	46.48%	65.42%	68.59%
<u>Plan 7</u> Total	29.28%	(14.64)%	9.12%	5.52%	14.64%	46.48%	61.12%	64.64%
All Plans								

7.03%

18.99%

46.48%

65.47%

11.96%

(13.97)%



Total

32.96%

68.84%

<sup>&</sup>lt;sup>1</sup> UAAL Contribution Rate includes an offset of 2.02% of payroll to reflect the County Supplemental Contribution Account.

Exhibit 10e: Employer Statutory Contribution Rates – Probation Members June 30, 2014

			Probat	ion Membe	ers			
					Em	ployer Rates		
	Gross Normal Cost	Member Contributions	Basic Normal Cost	COLA Normal Cost	Total Normal Cost	UAAL Contribution Rate <sup>1</sup>	Total Contribution Rate	Prior Year Total Contribution Rate
Plan 1								
PDA Members	34.55%	(3.50)%	15.00%	16.05%	31.05%	28.09%	59.14%	59.52%
Managers	34.55%	(11.71)%	11.03%	11.81%	22.84%	28.09%	50.93%	50.91%
Total	34.55%	(3.50)%	15.00%	16.05%	31.05%	28.09%	59.14%	59.52%
Plan 2								
PDA Members	33.65%	(13.17)%	11.58%	8.90%	20.48%	28.09%	48.57%	49.18%
Managers	33.65%	(11.71)%	12.40%	9.54%	21.94%	28.09%	50.03%	49.84%
Total	33.65%	(12.76)%	11.81%	9.08%	20.89%	28.09%	48.98%	49.38%
Plan 4								
PDA Members	30.98%	(12.23)%	12.64%	6.11%	18.75%	28.09%	46.84%	47.30%
Managers	30.98%	(13.17)%	12.01%	5.80%	17.81%	28.09%	45.90%	46.19%
Total	30.98%	(12.34)%	12.57%	6.07%	18.64%	28.09%	46.73%	47.20%
Plan 5								
PDA Members	29.45%	(13.79)%	10.01%	5.65%	15.66%	28.09%	43.75%	43.11%
Managers	29.45%	(16.36)%	8.37%	4.72%	13.09%	28.09%	41.18%	40.64%
Total	29.45%	(13.79)%	10.01%	5.65%	15.66%	28.09%	43.75%	43.11%
Plan 6								
PDA Members	25.26%	(9.78)%	10.61%	4.87%	15.48%	28.09%	43.57%	44.04%
Managers	25.26%	(11.35)%	9.53%	4.87%	13.91%	28.09%	42.00%	41.44%
Total	25.26%	(9.78)%	10.61%	4.87%	15.48%	28.09%	43.57%	44.04%
Plan 7								
PDA Members	26.84%	(13.42)%	8.29%	5.13%	13.42%	28.09%	41.51%	43.12%
Managers	26.84%	(13.42)%	8.29%	5.13%	13.42%	28.09%	41.51%	43.12%
Total	26.84%	(13.42)%	8.29%	5.13%	13.42%	28.09%	41.51%	43.12%
All Plans								
PDA Members	31.38%	(12.46)%	12.20%	6.72%	18.92%	28.09%	47.01%	47.65%
Managers	31.38%	(12.59)%	12.12%	6.67%	18.79%	28.09%	46.88%	47.17%
Total	31.38%	(12.48)%	12.19%	6.71%	18.90%	28.09%	46.99%	47.58%

<sup>&</sup>lt;sup>1</sup> UAAL Contribution Rate includes an offset of 1.24% of payroll to reflect the County Supplemental Contribution Account.



Exhibit 11a: Employer Adjusted Contribution Rates – All Plans June 30, 2014

#### **All Plans**

		_	Employer Rates									
	Gross Normal Cost	Member Contributions	Basic Normal Cost	COLA Normal Cost	Total Normal Cost	UAAL Contribution Rate	Total Contribution Rate	Prior Year Total Contribution Rate				
General Members												
County	19.99%	(9.83)%	6.41%	3.75%	10.16%	22.07%	32.23%	32.26%				
Courts	19.99%	(10.42)%	6.04%	3.53%	9.57%	21.16%	30.73%	32.09%				
CNA	19.99%	(10.85)%	5.77%	3.37%	9.14%	22.07%	31.21%	31.44%				
UAPD	19.99%	(10.85)%	5.77%	3.37%	9.14%	22.07%	31.21%	31.44%				
Total	19.99%	(9.98)%	6.32%	3.69%	10.01%	22.02%	32.03%	32.12%				
SMCM&VCD Members												
Total	18.97%	(7.25)%	8.30%	3.42%	11.72%	21.16%	32.88%	34.05%				
Safety Members												
Total	32.96%	(13.97)%	11.96%	7.03%	18.99%	50.76%	69.75%	69.20%				
Probation Members												
PDA	31.38%	(12.46)%	12.20%	6.72%	18.92%	30.68%	49.60%	47.91%				
Managers	31.38%	(12.59)%	12.12%	6.67%	18.79%	30.68%	49.47%	47.43%				
Total	31.38%	(12.48)%	12.19%	6.71%	18.90%	30.68%	49.58%	47.84%				
All Plans												
Total	22.22%	(10.60)%	7.36%	4.26%	11.62%	26.05%	37.67%	37.71%				
County Only												
Total	22.33%	(10.62)%	7.42%	4.29%	11.71%	26.29%	38.00%	38.00%				

Exhibit 11b: Employer Adjusted Contribution Rates – General Members June 30, 2014

			Gen	eral Membe	ers			
					Em	ployer Rates		
	Gross Normal Cost	Member Contributions	Basic Normal Cost	COLA Normal Cost	Total Normal Cost	UAAL Contribution Rate	Total Contribution Rate	Prior Year Total Contributior Rate
Plan 1								
County	21.53%	(9.80)%	5.88%	5.85%	11.73%	22.07%	33.80%	33.77%
Courts	21.53%	(9.96)%	5.80%	5.77%	11.57%	21.16%	32.73%	33.60%
CNA	21.53%	(14.39)%	3.58%	3.56%	7.14%	22.07%	29.21%	32.33%
UAPD	21.53%	(14.39)%	3.58%	3.56%	7.14%	22.07%	29.21%	32.33%
Total	21.53%	(10.24)%	5.66%	5.63%	11.29%	22.03%	33.32%	33.60%
Plan 2								
County	21.27%	(10.34)%	5.86%	5.07%	10.93%	22.07%	33.00%	33.04%
Courts	21.27%	(10.14)%	5.96%	5.17%	11.13%	21.16%	32.29%	32.87%
CNA	21.27%	(11.88)%	5.03%	4.36%	9.39%	22.07%	31.46%	31.87%
UAPD	21.27%	(11.88)%	5.03%	4.36%	9.39%	22.07%	31.46%	31.87%
Total	21.27%	(10.52)%	5.76%	4.99%	10.75%	22.02%	32.77%	32.86%
Plan 3								
County	8.08%	0.00%	8.08%	0.00%	8.08%	22.07%	30.15%	30.35%
Courts	8.08%	0.00%	8.08%	0.00%	8.08%	21.16%	29.24%	30.189
CNA	8.08%	0.00%	8.08%	0.00%	8.08%	22.07%	30.15%	30.35%
UAPD	8.08%	0.00%	8.08%	0.00%	8.08%	22.07%	30.15%	30.35%
Total	8.08%	0.00%	8.08%	0.00%	8.08%	22.05%	30.13%	30.34%
Plan 4								
County	20.85%	(10.55)%	6.76%	3.54%	10.30%	22.07%	32.37%	32.25%
Courts	20.85%	(10.69)%	6.67%	3.49%	10.16%	21.16%	31.32%	32.08%
CNA	20.85%	(11.84)%	5.92%	3.09%	9.01%	22.07%	31.08%	31.43%
UAPD	20.85%	(11.84)%	5.92%	3.09%	9.01%	22.07%	31.08%	31.43%
Total	20.85%	(10.69)%	6.67%	3.49%	10.16%	22.01%	32.17%	32.119
Plan 5								
County	18.02%	(8.22)%	6.78%	3.00%	9.80%	22.07%	31.87%	31.60%
Courts	18.02%	(9.26)%	6.06%	3.00%	8.76%	21.16%	29.92%	31.439
CNA	18.02%	(8.48)%	6.60%	3.00%	9.54%	22.07%	31.61%	31.60%
UAPD <b>Total</b>	18.02% 18.02%	(8.48)% (8.28)%	6.60% 6.74%	3.00% 3.00%	9.54% 9.74%	22.07% 22.05%	31.61% 31.79%	31.60% 31.59%
	10.02 /0	(0.20)70	0.7 170	0.0070	0.7 170	22.0070	01.7070	01.007
Plan 7	45.000/	(7.00)()	E 000/	0.000/	7.040/	00.070/	20.000/	20.000
County	15.83%	(7.92)%	5.28%	2.63%	7.91%	22.07%	29.98%	30.099
Courts	15.83%	(7.92)%	5.28%	2.63%	7.91%	21.16%	29.07%	29.929
CNA	15.83%	(7.92)%	5.28%	2.63%	7.91%	22.07%	29.98%	30.099
UAPD <b>Total</b>	15.83% 15.83%	(7.92)% (7.92)%	5.28% 5.28%	2.63% 2.63%	7.91% 7.91%	22.07% 22.07%	29.98% 29.98%	30.09% 30.08%
All Plans								
County	19.99%	(9.83)%	6.41%	3.75%	10.16%	22.07%	32.23%	32.269
Courts	19.99%	(10.42)%	6.04%	3.53%	9.57%	21.16%	30.73%	32.09%
CNA	19.99%	(10.42)%	5.77%	3.37%	9.14%	22.07%	31.21%	31.449
UAPD	19.99%	(10.85)%	5.77%	3.37%	9.14%	22.07%	31.21%	31.449
Total	19.99%	(9.98)%	6.32%	3.69%	10.01%	22.07 %	32.03%	32.129



Exhibit 11c: Employer Adjusted Contribution Rates – SMCM & VCD Members June 30, 2014

			SMC	M&VCD Me	mbers			
					Em	ployer Rates		
	Gross Normal Cost	Member Contributions	Basic Normal Cost	COLA Normal Cost	Total Normal Cost	UAAL Contribution Rate	Total Contribution Rate	Prior Year Total Contribution Rate
Plan 1								
Total	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<u>Plan 2</u> Total	27.23%	(8.99)%	11.75%	6.49%	18.24%	21.16%	39.40%	40.04%
<u>Plan 4</u> Total	18.94%	(7.18)%	8.50%	3.26%	11.76%	21.16%	32.92%	33.40%
<u>Plan 7</u> Total	13.01%	(6.51)%	4.29%	2.21%	6.50%	21.16%	27.66%	30.42%
All Plans Total	18.97%	(7.25)%	8.30%	3.42%	11.72%	21.16%	32.88%	34.05%

Exhibit 11d: Employer Adjusted Contribution Rates – Safety Members June 30, 2014

#### **Safety Members Employer Rates Prior Year** Gross **Basic COLA** Total UAAL Total Total Normal Member Normal Normal Normal Contribution Contribution Contribution Cost Contributions Cost Cost Cost Rate Rate Rate Plan 1 Total 42.35% (16.01)% 12.56% 13.78% 26.34% 50.76% 77.10% 75.86% Plan 2 70.36% Total 34.16% (13.55)% 11.36% 9.25% 20.61% 50.76% 71.37% Plan 4 Total 32.71% (13.67)% 12.67% 6.37% 19.04% 50.76% 69.80% 69.20% Plan 5 Total 33.07% 6.25% 16.46% 50.76% 67.22% 66.77% (16.61)% 10.21% Plan 6 Total 33.45% (14.51)% 12.58% 6.36% 18.94% 50.76% 69.70% 68.96% Plan 7 Total 29.28% (14.64)% 9.12% 5.52% 14.64% 50.76% 65.40% 64.98% All Plans Total 32.96% 7.03% 50.76% 69.75% 69.20% (13.97)% 11.96% 18.99%

Exhibit 11e: Employer Adjusted Contribution Rates – Probation Members June 30, 2014

			Probati	on Membe	rs			
					Em	ployer Rates		
	Gross Normal Cost	Member Contributions	Basic Normal Cost	COLA Normal Cost	Total Normal Cost	UAAL Contribution Rate	Total Contribution Rate	Prior Year Total Contribution Rate
<u>Plan 1</u>								
PDA Members	34.55%	(3.50)%	15.00%	16.05%	31.05%	30.68%	61.73%	59.78%
Managers	34.55%	(11.71)%	11.03%	11.81%	22.84%	30.68%	53.52%	51.17%
Total	34.55%	(3.50)%	15.00%	16.05%	31.05%	30.68%	61.73%	59.78%
Plan 2								
PDA Members	33.65%	(13.17)%	11.58%	8.90%	20.48%	30.68%	51.16%	49.44%
Managers	33.65%	(11.71)%	12.40%	9.54%	21.94%	30.68%	52.62%	50.10%
Total	33.65%	(12.76)%	11.81%	9.08%	20.89%	30.68%	51.57%	49.64%
Plan 4								
PDA Members	30.98%	(12.23)%	12.64%	6.11%	18.75%	30.68%	49.43%	47.56%
Managers	30.98%	(13.17)%	12.01%	5.80%	17.81%	30.68%	48.49%	46.45%
Total	30.98%	(12.34)%	12.57%	6.07%	18.64%	30.68%	49.32%	47.45%
Plan 5								
PDA Members	29.45%	(13.79)%	10.01%	5.65%	15.66%	30.68%	46.34%	43.37%
Managers	29.45%	(16.36)%	8.37%	4.72%	13.09%	30.68%	43.77%	40.90%
Total	29.45%	(13.79)%	10.01%	5.65%	15.66%	30.68%	46.34%	43.37%
Plan 6								
PDA Members	25.26%	(9.78)%	10.61%	4.87%	15.48%	30.68%	46.16%	44.30%
Managers	25.26%	(11.35)%	9.53%	4.87%	13.91%	30.68%	44.59%	41.70%
Total	25.26%	(9.78)%	10.61%	4.87%	15.48%	30.68%	46.16%	44.30%
<u>Plan 7</u>								
PDA Members	26.84%	(13.42)%	8.29%	5.13%	13.42%	30.68%	44.10%	43.35%
Managers	26.84%	(13.42)%	8.29%	5.13%	13.42%	30.68%	44.10%	43.35%
Total	26.84%	(13.42)%	8.29%	5.13%	13.42%	30.68%	44.10%	43.35%
All Plans								
PDA Members	31.38%	(12.46)%	12.20%	6.72%	18.92%	30.68%	49.60%	49.71%
Managers	31.38%	(12.59)%	12.12%	6.67%	18.79%	30.68%	49.47%	47.43%
Total	31.38%	(12.48)%	12.19%	6.71%	18.90%	30.68%	49.58%	47.84%



**Exhibit 12a: Calculated Gross Normal Cost Rates** 

### **All Plans**

	Normal Cost											
Plan	Service Retirement	Disability Retirement	Death while Active	Termination (No Refund)	Termination (Refund)	Total Gross Normal Cost						
General Plan 1	15.55%	1.80%	0.43%	2.12%	1.63%	21.53%						
General Plan 2	15.55%	1.83%	0.41%	1.88%	1.60%	21.27%						
General Plan 3	7.56%	0.00%	0.00%	0.52%	0.00%	8.08%						
General Plan 4	15.33%	1.90%	0.38%	1.62%	1.62%	20.85%						
General Plan 5	13.20%	1.91%	0.36%	1.26%	1.29%	18.02%						
General Plan 7	11.58%	1.81%	0.31%	0.90%	1.23%	15.83%						
General Total	14.71%	1.83%	0.37%	1.56%	1.52%	19.99%						
SMCM&VCD Plan 1	N/A	N/A	N/A	N/A	N/A	N/A						
SMCM&VCD Plan 2	21.65%	2.06%	0.63%	1.63%	1.26%	27.23%						
SMCM&VCD Plan 4	14.17%	1.67%	0.38%	1.60%	1.12%	18.94%						
SMCM&VCD Plan 7	9.06%	1.25%	0.35%	1.27%	1.08%	13.01%						
SMCM&VCD Total	14.23%	1.65%	0.40%	1.56%	1.13%	18.97%						
Safety Plan 1	33.40%	4.22%	1.51%	2.20%	1.02%	42.35%						
Safety Plan 2	26.76%	3.40%	1.38%	1.93%	0.69%	34.16%						
Safety Plan 4	25.59%	3.54%	1.17%	1.66%	0.75%	32.71%						
Safety Plan 5	25.63%	4.04%	1.17%	1.25%	0.98%	33.07%						
Safety Plan 6	26.34%	4.40%	1.11%	0.80%	0.80%	33.45%						
Safety Plan 7	22.19%	4.42%	1.07%	0.73%	0.87%	29.28%						
Safety Total	25.72%	3.60%	1.22%	1.65%	0.77%	32.96%						
Probation Plan 1	29.30%	2.18%	1.06%	1.51%	0.50%	34.55%						
Probation Plan 2	26.47%	3.33%	1.24%	1.95%	0.66%	33.65%						
Probation Plan 4	24.38%	3.08%	1.07%	1.78%	0.67%	30.98%						
Probation Plan 5	23.15%	3.20%	1.09%	1.29%	0.72%	29.45%						
Probation Plan 6	19.29%	3.06%	1.05%	1.34%	0.52%	25.26%						
Probation Plan 7	20.73%	3.47%	1.01%	0.93%	0.70%	26.84%						
Probation Total	24.67%	3.15%	1.11%	1.78%	0.67%	31.38%						
All Plans	16.62%	2.12%	0.52%	1.58%	1.38%	22.22%						



### **Exhibit 12b: Unfunded Actuarial Accrued Liability Detail**

(Dollars in Thousands)

					Gene	ral					
Date Established	Description <sup>(4)</sup>	Balance as of June 30, 2014		 terest on Balance	Amort. Payment on June 30, 2015 <sup>1</sup>		Balance as of June 30, 2015 <sup>2</sup>		Remaining Period as of June 30, 2015	July 1, 2015 Amortization Payment	
June 30, 2008	Initial UAAL	\$	335,973	\$ 24,358	\$	46,061	\$	314,270	8 Years	\$	45,208
June 30, 2009	(Gain) / Loss	\$	327,127	\$ 23,717	\$	41,045	\$	309,799	9 Years	\$	40,289
June 30, 2010	(Gain) / Loss	\$	(122,357)	\$ (8,871)	\$	(14,190)	\$	(117,038)	10 Years	\$	(13,930)
June 30, 2011	(Gain) / Loss	\$	(36,914)	\$ (2,676)	\$	(3,991)	\$	(35,599)	11 Years	\$	(3,917)
June 30, 2012	(Gain) / Loss	\$	114,541	\$ 8,304	\$	11,617	\$	111,228	12 Years	\$	11,406
June 30, 2013	(Gain) / Loss	\$	21,601	\$ 1,566	\$	2,068	\$	21,099	13 Years	\$	2,030
June 30, 2014	(Gain) / Loss	\$	(42,958)	\$ (3,114)	\$	(1,236) <sup>3</sup>	\$	(44,836)	14 Years	\$	(4,072)
							Total	Amortization Pay	ment July 1, 2015:	\$	77,013
								Projected F	ayroll July 1, 2015:	\$	363,896
UAAL as	of June 30, 2014:	\$	597,013		UAAL	Contribution R	ate (as	a % of Payroll)	FYB July 1, 2015:		21.16%

					Safet	у					
Date Established	Description <sup>(4)</sup>	Balance as of June 30, 2014		 erest on Salance	Amort. Payment on June 30, 2015 <sup>1</sup>		Balance as of June 30, 2015 <sup>2</sup>		Remaining Period as of June 30, 2015	July 1, 2015 Amortization Payment	
June 30, 2008	Initial UAAL	\$	122,603	\$ 8,889	\$	16,808	\$	114,684	8 Years	\$	16,498
June 30, 2009	(Gain) / Loss	\$	119,970	\$ 8,698	\$	15,053	\$	113,615	9 Years	\$	14,775
June 30, 2010	(Gain) / Loss	\$	(45,770)	\$ (3,318)	\$	(5,308)	\$	(43,780)	10 Years	\$	(5,211)
June 30, 2011	(Gain) / Loss	\$	(17,121)	\$ (1,241)	\$	(1,851)	\$	(16,511)	11 Years	\$	(1,817)
June 30, 2012	(Gain) / Loss	\$	34,055	\$ 2,469	\$	3,454	\$	33,070	12 Years	\$	3,391
June 30, 2013	(Gain) / Loss	\$	6,316	\$ 458	\$	604	\$	6,170	13 Years	\$	594
June 30, 2014	(Gain) / Loss	\$	(17,734)	\$ (1,286)	\$	(979) <sup>3</sup>	\$	(18,041)	14 Years	\$	(1,639)
							Total	Amortization Pay	ment July 1, 2015:	\$	26,591
								Projected F	ayroll July 1, 2015:	\$	54,829
UAAL as	of June 30, 2014:	\$	202,319		UAAL (	Contribution R	ate (as	a % of Payroll)	FYB July 1, 2015:		48.50%

						Probati	on					
Date Established	Description <sup>(4)</sup>	Balance as of June 30, 2014		Interest on Balance		Amort. Payment on June 30, 2015 <sup>1</sup>		Balance as of June 30, 2015 <sup>2</sup>		Remaining Period as of June 30, 2015	July 1, 2015 Amortization Payment	
June 30, 2008	Initial UAAL	\$	30,718	\$	2,227	\$	4,211	\$	28,734	8 Years	\$	4,133
June 30, 2009	(Gain) / Loss	\$	30,195	\$	2,189	\$	3,789	\$	28,595	9 Years	\$	3,719
June 30, 2010	(Gain) / Loss	\$	(11,171)	\$	(810)	\$	(1,295)	\$	(10,686)	10 Years	\$	(1,272)
June 30, 2011	(Gain) / Loss	\$	(3,928)	\$	(285)	\$	(425)	\$	(3,788)	11 Years	\$	(417)
June 30, 2012	(Gain) / Loss	\$	11,484	\$	833	\$	1,165	\$	11,152	12 Years	\$	1,143
June 30, 2013	(Gain) / Loss	\$	1,612	\$	117	\$	154	\$	1,575	13 Years	\$	152
June 30, 2014	(Gain) / Loss	\$	(3,881)	\$	(281)	\$	(516) <sup>3</sup>	\$	(3,646)	14 Years	\$	(331)
								Total A	Amortization Pay	ment July 1, 2015:	\$	7,127
									Projected P	ayroll July 1, 2015:	\$	24,300
UAAL as	of June 30, 2014:	\$	55,029			UAAL (	Contribution R	ate (as	a % of Payroll)	FYB July 1, 2015:		29.33%

#### Explanatory Notes:

- <sup>1</sup> Amortization Payments are based on a fixed schedule that increases by the payroll assumption each year.
- <sup>2</sup> The calculation of assets and liabilities used in the calculation of UAAL are as of June 30, 2014; whereas, the contribution rates are not effective until July 1, 2015. Therefore, the UAAL is adjusted to June 30, 2015 in the calculation of contribution rates.
- <sup>3</sup> The 15-year amortization of UAAL does not begin until July 1, 2015; however, the UAAL amount is adjusted based on the July 1, 2014 contribution rate.
- <sup>4</sup> (Gain)/Loss includes the following:
  - new assumptions adopted effective June 30, 2011 based on the Investigation of Experience report
  - new economic assumptions effective June 30, 2012
  - new assumptions adopted effective June 30, 2014 based on the Investigation of Experience report



This page intentionally left blank.



### Section 7: Information for Comprehensive Annual Financial Report (CAFR)



The Governmental Accounting Standards Board (GASB) sets standards for defined benefit pension plan reporting and disclosures (Statement No. 67). The reporting requirements for GASB 67 include certain supplementary information that must be added to the financial statements and will be provided in a separate report.

GASB Statement No. 68 specifies financial reporting for pension accounting by state and local governmental employers and will also be provided separately next year.

The methods and assumptions used for GASB reporting will be described in detail in those separate reports. The effective date for GASB 67 is for periods beginning after June 15, 2013 and the effective date for GASB 68 is for periods beginning after June 15, 2014.

We are providing several exhibits in this report for consistency with prior reports and as supporting information for inclusion in SamCERA's CAFR.

- Exhibit 13 Schedule of Funding Progress
- Exhibit 14 Solvency Test
- Exhibit 15 History of employer contribution rates.
- Exhibit 16 Actuarial analysis of financial experience.
- Exhibit 17 Summary of significant actuarial statistics and measurements.
- Exhibit 18 Summary of SamCERA membership. For more detailed information on the valuation data, see Appendix C.
- Exhibit 19 Summary of active member valuation data.
- Exhibit 20 Summary of demographic activity of retirees and beneficiaries.
- Exhibit 21 Average salary and active counts by employer.
- Exhibit 22 Summary of retired and inactive benefits.



### Additional CAAP Disclosure

The California Actuarial Advisory Panel (CAAP) has adopted a set of model disclosure elements for actuarial valuation reports of public retirement systems in California. Most of these elements are included in other areas of this report. The remaining CAAP-recommended disclosures are as follows:

Disclosure Element	Description	Value
Gross Normal Cost \$	Normal Cost allocated to valuation year, paid at mid-year.	\$ 96,761,149
Statutory Contribution \$	Expected Statutory Contribution paid at mid-year.	\$ 154,852,676
Asset Smoothing Ratio	Actuarial Value of Assets divided by Market Value of Assets	90.9%
Asset Volatility Ratio	Market Value of Assets divided by Payroll	7.6
Liability Volatility Ratio	Actuarial Accrued Liability divided by Payroll	8.7

Exhibit 13: **Schedule of Funding Progress** 

(Dollars in Thousands)

Actuarial Valuation Date	(a) Actuarial Value of Valuation Assets	(b) Actuarial Accrued Liabilities	(b-a) Jnfunded Actuarial Accrued ilities (UAAL)	(a/b) Funded Ratio	Cove	(c) ered Payroll	[(b-a)/c] UAAL as a Percentage of Covered Payroll
June 30, 2005	\$ 1,615,58	5 \$ 2,177,759	\$ 562,174	74.2%	\$	334,315	168.16%
June 30, 2006	1,769,02	1 2,345,149	576,128	75.4%		368,972	156.14%
June 30, 2007	1,976,73	1 2,555,504	578,773	77.4%		407,912	141.92%
June 30, 2008	2,218,93	7 2,806,222	587,285	79.1%		416,243	141.09%
June 30, 2009	1,909,67	9 2,987,712	1,078,033	63.9%		436,424	247.02%
June 30, 2010	2,179,07	6 3,098,453	919,377	70.3%		428,559	214.53%
June 30, 2011	2,405,14	0 3,246,727	841,587	74.1%		424,061	198.46%
June 30, 2012	2,480,27	1 3,442,553	926,282	72.0%		419,779	229.24%
June 30, 2013	2,618,63	9 3,572,750	954,111	73.3%		406,921	234.47%
June 30, 2014	2,993,18	7 3,797,042	803,855	78.8%		422,022	190.48%



Exhibit 14: **Solvency Test** 

(Dollars in Thousands)

	or									
M 1 - 41	Active Member			Retirees and		Employer Financed	Portion of Actuarial Accrued Liabilities Covered by Assets			
	Cor		Bei			•	(4)	(B)	(C)	
Assets		(A)		(D)		(6)	(A)	<u>(B)</u>	(C)	
\$ 1,615,585	\$	281,231	\$	1,133,351	\$	763,177	100%	100%	26%	
1,769,021		317,521		1,234,005		793,623	100%	100%	27%	
1,976,731		359,484		1,348,013		848,007	100%	100%	32%	
2,218,937		385,300		1,550,875		870,047	100%	100%	32%	
1,909,679		412,147		1,670,547		905,018	100%	90%	0%	
2,179,076		449,355		1,745,146		903,952	100%	99%	0%	
2,405,140		485,126		1,866,219		895,382	100%	100%	6%	
2,480,271		498,569		2,022,791		921,193	100%	98%	0%	
2,618,639		534,276		2,157,590		880,884	100%	97%	0%	
2,993,187		584,080		2,285,328		927,634	100%	100%	13%	
	1,769,021 1,976,731 2,218,937 1,909,679 2,179,076 2,405,140 2,480,271 2,618,639	Valuation Assets  \$ 1,615,585 \$ 1,769,021	Valuation Assets         Active Member Contributions (A)           \$ 1,615,585         \$ 281,231           1,769,021         317,521           1,976,731         359,484           2,218,937         385,300           1,909,679         412,147           2,179,076         449,355           2,405,140         485,126           2,480,271         498,569           2,618,639         534,276	Valuation Assets         Active Member Contributions (A)         Reserve Bereion           \$ 1,615,585         \$ 281,231         \$ 1,769,021         \$ 317,521           \$ 1,976,731         \$ 359,484         \$ 2,218,937         \$ 385,300           \$ 1,909,679         \$ 412,147         \$ 449,355         \$ 485,126           \$ 2,405,140         \$ 498,569         \$ 2,618,639         \$ 534,276	Valuation Assets         Active Member Contributions (A)         Retirees and Beneficiaries <sup>(1)</sup> (B)           \$ 1,615,585         \$ 281,231         \$ 1,133,351           1,769,021         317,521         1,234,005           1,976,731         359,484         1,348,013           2,218,937         385,300         1,550,875           1,909,679         412,147         1,670,547           2,179,076         449,355         1,745,146           2,405,140         485,126         1,866,219           2,480,271         498,569         2,022,791           2,618,639         534,276         2,157,590	Valuation Assets         Active Member Contributions (A)         Retirees and Beneficiaries(1) (B)         Retirees and Beneficiaries(1) (B)           \$ 1,615,585         \$ 281,231         \$ 1,133,351         \$ 1,769,021         \$ 317,521         1,234,005         \$ 1,976,731         359,484         1,348,013         \$ 2,218,937         385,300         1,550,875         \$ 1,909,679         412,147         1,670,547         \$ 2,179,076         449,355         1,745,146         \$ 2,405,140         485,126         1,866,219         \$ 2,480,271         498,569         2,022,791         \$ 2,618,639         534,276         2,157,590	Valuation Assets         Contributions (A)         Beneficiaries <sup>(1)</sup> (B)         Portion) (C)           \$ 1,615,585         \$ 281,231         \$ 1,133,351         \$ 763,177           1,769,021         317,521         1,234,005         793,623           1,976,731         359,484         1,348,013         848,007           2,218,937         385,300         1,550,875         870,047           1,909,679         412,147         1,670,547         905,018           2,179,076         449,355         1,745,146         903,952           2,405,140         485,126         1,866,219         895,382           2,480,271         498,569         2,022,791         921,193           2,618,639         534,276         2,157,590         880,884	Valuation Assets         Active Member Contributions (A)         Retirees and Beneficiaries <sup>(1)</sup> (B)         Portion (C)         Portion (A)           \$ 1,615,585         \$ 281,231         \$ 1,133,351         \$ 763,177         100%           \$ 1,769,021         317,521         1,234,005         793,623         100%           \$ 1,976,731         359,484         1,348,013         848,007         100%           \$ 2,218,937         385,300         1,550,875         870,047         100%           \$ 1,909,679         412,147         1,670,547         905,018         100%           \$ 2,405,140         485,126         1,866,219         895,382         100%           \$ 2,480,271         498,569         2,022,791         921,193         100%           \$ 2,618,639         534,276         2,157,590         880,884         100%	Valuation Assets         Active Member Contributions (A)         Retirees and Beneficiaries(1) (B)         Active Member Financed Portion) (C)         Portion of Actuarial Active Members (Employer Financed Assets)           \$ 1,615,585         \$ 281,231         \$ 1,133,351         \$ 763,177         100%         100%           1,769,021         317,521         1,234,005         793,623         100%         100%           1,976,731         359,484         1,348,013         848,007         100%         100%           2,218,937         385,300         1,550,875         870,047         100%         100%           1,909,679         412,147         1,670,547         905,018         100%         90%           2,179,076         449,355         1,745,146         903,952         100%         99%           2,405,140         485,126         1,866,219         895,382         100%         100%           2,480,271         498,569         2,022,791         921,193         100%         98%           2,618,639         534,276         2,157,590         880,884         100%         97%	

<sup>(1)</sup> Includes deferred vested



### Exhibit 15: History of Employer Statutory Contribution Rates

(Dollars in Thousands)

Statutory Contribution Rates <sup>(4)</sup>										
Valuation		eneral Members county & Courts		General Members (Nurses & UAPD) <sup>(2)</sup>			General Members (SMCM&VCD) <sup>(1)</sup>			
Year	Normal	UAAL	Total	Normal	UAAL	Total	Normal	UAAL	Total	
2005	10.36%	10.38%	20.74%	Same	as County Ge	eneral	Same as County General			
2006	10.49%	9.97%	20.46%	Same	as County Ge	eneral	Same as County General		eneral	
2007	10.19%	9.46%	19.65%	Same as County General			8.50%	7.76%	16.26%	
2008	10.16%	9.81%	19.97%	Same as County General			8.55%	8.04%	16.59%	
2009	10.11%	18.40%	28.51%	Same	as County Ge	eneral	8.25%	15.09%	23.34%	
2010	10.05%	16.35%	26.40%	Same	as County Ge	eneral	11.70%	16.35%	28.05%	
2011	9.71%	16.41%	26.12%	8.70%	16.41%	25.11%	11.97%	16.41%	28.38%	
2012	9.98%	20.17%	30.15%	8.96%	20.17%	29.13%	11.68%	20.17%	31.85%	
2013	9.74%	22.35%	32.09%	8.92%	22.35%	31.27%	11.70%	22.35%	34.05%	
2014	10.12%	20.27%	30.39%	9.14%	20.21%	29.35%	11.72%	21.16%	32.88%	

Statutory Contribution Rates <sup>(4)</sup>										
Valuation	Safety Member				bation Memb uding Manage		Probation Members (Managers)			
Year	Normal	UAAL	Total	Normal	UAAL	Total	Normal	UAAL	Total	
2005	20.43%	32.02%	52.45%	21.10%	16.43%	37.53%	Same as I	Probation (ex l	Managers)	
2006	20.18%	30.52%	50.70%	21.59%	14.85%	36.44%	Same as I	Probation (ex l	Managers)	
2007	19.94%	29.32%	49.26%	20.83%	14.06%	34.89%	Same as I	Probation (ex l	Managers)	
2008	19.32%	27.31%	46.63%	20.05%	12.81%	32.86%	Same as I	Probation (ex l	Managers)	
2009	19.21%	51.83%	71.04%	19.92%	23.84%	43.76%	Same as I	Probation (ex l	Managers)	
2010	19.01%	44.50%	63.51%	19.85%	21.62%	41.47%	Same as I	Probation (ex l	Managers)	
2011	18.87%	41.75%	60.62%	19.50%	22.30%	41.80%	Same as I	Probation (ex l	Managers)	
2012	19.05%	48.51%	67.56%	19.99%	26.71%	46.70%	Same as I	Probation (ex l	Managers)	
2013	18.51%	50.33%	68.84%	18.33%	29.32%	47.65%	17.85%	29.32%	47.17%	
2014	18.99%	46.48%	65.47%	18.92%	28.09%	47.01%	18.79%	28.09%	46.88%	

<sup>(1)</sup> Beginning with the 2010 actuarial valuation, the Mosquito and Vector Control District adopted the same benefit formula and member contribution rates as Plan 1, 2 & 4 General County members (excluding cost sharing on member rates).

- (3) Beginning with the 2012 actuarial valuation, Plan 1, 2, and 4 Probation members (excluding Managers) contribute 25% of the cost of COLA, in addition to current member rates and cost sharing.
- (4) Contribution rates shown are those calculated in the corresponding actuarial valuation. In some cases, actual contributions were higher.



<sup>(2)</sup> Beginning with the 2011 actuarial valuation, Plan 1, 2, and 4 members of the California Nurses Association contribute 25% of the cost of COLA, in addition to current member rates and cost sharing.

Beginning with the 2013 actuarial valuation, Plan 1, 2, and 4 members of the Union of American Physicians and Dentists contribute 25% of the cost of COLA, in addition to current member rates and cost sharing. In 2011 and 2012 these members contributed the same as County General members.

**Actuarial Analysis of Financial Experience** Exhibit 16:

Summary of (Gains) / Losses Change In Liability 2014 2013 2012 2011 2010 Unfunded Liability as of July 1 \$ 954,111,000 962,282,000 \$ 841,587,000 \$ 919,377,000 \$ 1,078,033,000 **Expected Change in UAAL** (88,525,000)(34,535,000)(39,621,000)(31,508,000)27,388,000 Salary (Gain) / Loss (15,884,000)(59,411,000)(45,526,000)(51,831,000)(43,598,000)Fewer Withdrawals than expected 0 0 0 0 0 Retiree COLA more / (less) than expected (15,603,000)(8,606,000)(11,756,000)(27,561,000)(41,258,000)Asset (Gain) / Loss (88,035,000)93,999,000 171,268,000 12,548,000 (88,485,000) Change due to Assumption Changes 59,345,000 0 36,443,000 19,402,000 0 Miscellaneous Experience 382,000 9,887,000 1,160,000 (12,703,000)(1,554,000)Change Due to New Formula Unfunded Liability as of June 30 \$ 803,855,000 954,111,000 962,282,000 841,587,000 \$ 919,377,000



**Exhibit 17:** Summary of Significant Actuarial Statistics and Measures

			June	30th	of	Relative
			2014		2013	Change
1.	Active Members					
	Number of Members		5,004		4,917	1.8 %
	Average Age		45.8		46.0	(0.4)%
	Average Credited Service		11.2		11.2	-
	Total Active Payroll (\$thousands)	\$	429,407	\$	414,551	3.6 %
	Average Monthly Salary	\$	7,151	\$	7,026	1.8 %
2.	Retired Members					
	Number of Members Service Retirement		3,525		2 446	2.3 %
	Disability Retirement		3,525 428		3,446 393	2.5 % 8.9 %
	Beneficiaries		565		559	1.1 %
	Average Age		71.3		71.3	-
	Actual Retiree Benefits Paid (\$thousands)	\$	159,342	\$	149,266	6.8 %
	Average Monthly Pension	\$	3,021	\$	2,933	3.0 %
3.	Number of Inactive Vested Members		1,304		1,306	(0.2)%
4.	Assets					
	Market Value of Fund (\$thousands)	\$	3,291,694	\$	2,727,825	20.7 %
	Return on Market Value	*	17.3%	•	13.6%	
	Valuation Assets (\$thousands)	\$	2,993,187	\$	2,618,639	14.3 %
	Return on Valuation Assets	Ψ	10.8%	Ψ	3.7%	14.0 /0
5.	Liability Values (\$thousands)					
	Actuarial Accrued Liability	\$	3,797,042	\$	3,572,750	6.3 %
	Unfunded Actuarial Accrued Liability	\$	803,855	\$	954,111	(15.7)%
	Deferred Asset (Gains) / Losses	\$	(298,507)	\$	(109,187)	
6.	Funded Ratio		70.00/		70.007	<b>-</b> • • ·
	(based on valuation assets)		78.8%		73.3%	7.6 %

Exhibit 18: **Summary of SamCERA Membership** 

Plan	One	Two	Three	Four	Five	Six	Seven	Total
Retirees and beneficiaries curre	ently receiving	benefits:						
General	1,780	1,629	125	393	-	-	_	3,927
Safety	277	146	_	27	-	-	_	450
Probation	71	56	_	14	-	_	_	141
Subotal	2,128	1,831	125	434	-	-	-	4,518
Terminated employees entitled	to but not curr	ently receivi	ng benefits (D	eferred):				
General	16	411	96	639	11	-	8	1,181
Safety	1	28	_	44	3	-	_	76
Probation	-	13	_	32	2	_	_	47
Subotal	17	452	96	715	16	-	8	1,304
Current employees:								
Vested:								
General	30	861	86	2,260	2	-	2	3,241
Safety	3	98	_	231	-	-	_	332
Probation	1	57	_	199	-	_	_	257
Non-Vested:								
General	-	2	31	249	264	-	485	1,031
Safety	_	_	_	49	45	1	25	120
Probation	_	_	_	3	6	2	12	23
Subotal	34	1,018	117	2,991	317	3	524	5,004
Total SamCERA Membership	2,179	3,301	338	4,140	333	3	532	10,826



**Exhibit 19:** Summary of Active Member Valuation Data

Valua	tion Date	Members	Annual Salary	Average	% Change
				Annual Salary	Average Salary
2005	General	4,411	\$304,289,437	\$68,984	1.8%
	Safety	409	\$39,999,593	\$97,799	-1.4%
	Probation	278	\$20,123,863	\$72,388	0.2%
	Total	5,098	\$364,412,893	\$71,482	1.4%
2006*	General	4,614	\$312,934,324	\$67,823	-1.7%
	Safety	428	\$41,407,772	\$96,747	-1.1%
	Probation	313	\$22,009,210	\$70,317	-1.6%
	Total	5,355	\$376,351,306	\$70,280	-1.7%
2007	General	4,767	\$346,319,017	\$72,649	7.1%
	Safety	443	\$45,386,411	\$102,452	5.9%
	Probation	329	\$24,364,268	\$74,056	5.3%
	Total	5,539	\$416,069,696	\$75,116	6.9%
2008	General	4,743	\$353,518,525	\$74,535	2.6%
	Safety	432	\$46,326,906	\$107,238	4.7%
	Probation	325	\$24,741,003	\$76,126	2.8%
	Total	5,500	\$424,586,434	\$77,198	2.8%
2009	General	4,777	\$370,760,830	\$77,614	4.1%
	Safety	436	\$48,120,081	\$110,367	2.9%
	Probation	330	\$26,270,802	\$79,608	4.6%
	Total	5,543	\$445,151,713	\$80,309	4.0%
2010	General	4,609	\$363,305,740	\$78,825	1.6%
	Safety	425	\$48,576,912	\$114,299	3.6%
	Probation	313	\$25,247,595	\$80,663	1.3%
	Total	5,347	\$437,130,248	\$81,752	1.8%
2011	General	4,494	\$355,876,715	\$79,189	0.5%
	Safety	446	\$52,073,940	\$116,758	2.2%
	Probation	305	\$24,591,392	\$80,628	0.0%
	Total	5,245	\$432,542,046	\$82,468	0.9%
2012	General	4,361	\$351,965,689	\$80,708	1.9%
	Safety	435	\$51,129,267	\$117,539	0.7%
	Probation	299	\$24,554,583	\$82,122	1.9%
	Total	5,095	\$427,649,539	\$83,935	1.8%
2013	General	4,173	\$338,595,633	\$81,140	2.5%
	Safety	452	\$52,233,510	\$115,561	-1.0%
	Probation	292	\$23,722,165	\$81,240	0.8%
	Total	4,917	\$414,551,308	\$84,310	2.2%
2014	General	4,272	\$352,918,558	\$82,612	1.8%
	Safety	452	\$52,974,475	\$117,200	1.4%
	Probation	280	\$23,514,343	\$83,980	3.4%
	Total	5,004	\$429,407,375	\$85,813	1.8%

<sup>\*</sup>Numbers prior to 2006 were reported on a different basis.



**Summary of Demographic Activity of Retirees and Beneficiaries** Exhibit 20:

	Add	ed to Rolls <sup>(1)</sup>	Remo	ved from Rolls	Rolls	s end of year		
	No.	Annual Allowances in Thousands	No.	Annual Allowances in Thousands	No. <sup>(2)</sup>	Total Retiree Payroll in Thousands	% Increase in Payroll	Average Monthly Allowances
	238	N/A	95	N/A	3,682	84,183	11.5	1,905
	206	N/A	112	N/A	3,613	91,006	8.1	2,099
	155	N/A	74	N/A	3,694	98,790	8.6	2,229
	218	N/A	70	N/A	3,842	109,616	11.0	2,378
	159	12,717	66	3,281	3,935	119,052	8.6	2,521
	163	9,076	96	3,240	4,002	124,888	4.9	2,601
(3)	209	12,703	64	2,916	4,147	134,675	7.8	2,706
	218	14,379	90	4,209	4,275	144,845	7.6	2,823
	186	13,024	63	3,095	4,398	154,774	6.9	2,933
	203	12,474	83	3,479	4,518	163,769	5.8	3,021
	(3)	No.  238 206 155 218 159 163 (3) 209 218 186	Allowances in Thousands  238 N/A 206 N/A 155 N/A 218 N/A 159 12,717  163 9,076 (3) 209 12,703 218 14,379 186 13,024	Annual Allowances in Thousands No.  238 N/A 95 206 N/A 112 155 N/A 74 218 N/A 70 159 12,717 66  163 9,076 96 (3) 209 12,703 64 218 14,379 90 186 13,024 63	Annual Allowances in Thousands         No.         Annual Allowances in Thousands           238         N/A         95         N/A           206         N/A         112         N/A           155         N/A         74         N/A           218         N/A         70         N/A           159         12,717         66         3,281           163         9,076         96         3,240           (3)         209         12,703         64         2,916           218         14,379         90         4,209           186         13,024         63         3,095	Annual Allowances In Thousands         Annual Allowances In Thousands         Annual Allowances In Thousands         No.           238         N/A         95         N/A         3,682           206         N/A         112         N/A         3,613           155         N/A         74         N/A         3,694           218         N/A         70         N/A         3,842           159         12,717         66         3,281         3,935           163         9,076         96         3,240         4,002           (3)         209         12,703         64         2,916         4,147           218         14,379         90         4,209         4,275           186         13,024         63         3,095         4,398	Annual Allowances No.         Annual Allowances in Thousands         Annual Allowances in Thousands         Total Retiree Payroll in Thousands           238         N/A         95         N/A         3,682         84,183           206         N/A         112         N/A         3,613         91,006           155         N/A         74         N/A         3,694         98,790           218         N/A         70         N/A         3,842         109,616           159         12,717         66         3,281         3,935         119,052           163         9,076         96         3,240         4,002         124,888           (3)         209         12,703         64         2,916         4,147         134,675           218         14,379         90         4,209         4,275         144,845           186         13,024         63         3,095         4,398         154,774	Annual Allowances   Annual Allowances   No.   In Thousands   No.   No.   In Thousands   In Thousands   In Thousands   In Thousands   In Payroll

<sup>&</sup>lt;sup>(1)</sup> Amount added to rolls includes COLAs granted in year to continuing retirees and beneficiaries.



<sup>&</sup>lt;sup>(2)</sup> For 6/30/2005, retirees/beneficiaries who are entitled to multiple benefits are counted more than once. Starting 6/30/2006, the counts reflect only one benefit per retiree.

<sup>(3)</sup> Revised from June 30, 2011 valuation for corrections.

**Exhibit 21:** Average Salary and Active Counts by Employer

## Schedule of Average Monthly Salary of Active Members (By Plan and Membership Type)

	2014	2013	2012	2011	2010
General Plan 1	\$8,617	\$8,104	\$7,843	\$7,630	\$7,543
General Plan 2	\$7,584	\$7,355	\$7,340	\$7,208	\$7,193
General Plan 3	\$6,300	\$6,254	\$6,138	\$5,968	\$5,818
General Plan 4	\$6,873	\$6,662	\$6,580	\$6,398	\$6,348
General Plan 5	\$6,912	\$6,418	\$5,799	N/A	N/A
General Plan 7	\$5,721	\$5,433	N/A	N/A	N/A
General Plan Total	\$6,884	\$6,762	\$6,726	\$6,599	\$6,569
Safety Plan 1	\$14,091	\$13,185	\$12,624	\$12,073	\$11,578
Safety Plan 2	\$11,191	\$10,935	\$10,892	\$10,789	\$10,548
Safety Plan 4	\$9,581	\$9,402	\$9,351	\$9,230	\$8,931
Safety Plan 5	\$8,958	\$8,699	\$9,667	N/A	N/A
Safety Plan 6	\$14,381	\$12,374	N/A	N/A	N/A
Safety Plan 7	\$7,011	\$6,695	N/A	N/A	N/A
Safety Plan Total	\$9,767	\$9,630	\$9,795	\$9,730	\$9,525
Probation Plan 1	\$6,874	\$6,618	\$6,618	\$7,533	\$8,922
Probation Plan 2	\$7,699	\$7,445	\$7,454	\$7,349	\$7,393
Probation Plan 4	\$6,922	\$6,622	\$6,686	\$6,505	\$6,456
Probation Plan 5	\$5,916	\$5,242	\$4,949	N/A	N/A
Probation Plan 6	\$5,216	\$4,808	\$5,239	N/A	N/A
Probation Plan 7	\$5,807	\$7,742	\$5,239	N/A	N/A
Probation Plan Total	\$6,998	\$6,770	\$6,844	\$6,719	\$6,722
Grand Total	\$7,151	\$7,026	\$6,995	\$6,872	\$6,813

#### **Participating Employers and Active Members**

	2014	2013	2012	2011	2010
County of San Mateo*					
General Members	4,014	3,906	4,078	4,476	4,589
Safety Members	452	452	435	446	425
Probation Members	280	292	299	305	313
Total	4,746	4,650	4,812	5,227	5,327
Mosquito and Vector					
General Members Total	19	18	15	18	20
Courts*					
General Members Total	239	249	268	N/A	N/A
Total Active Membership	5,004	4,917	5,095	5,245	5,347

<sup>\*</sup> Courts not split out for years prior to 2012. County of San Mateo counts exclude Courts in 2012 and later years.



**Exhibit 22:** Summary of Retired and Inactive Benefits

Retired Members	2014	2013	2012	2011	2010
Service Retirement					
Number	3,525	3,446	3,355	3,242	3,108
Annual Allowance	¢ 405 550 000	£ 400 444 000	¢ 04 004 000	Ф 07.0E4.000	¢ 70.007.000
Basic Only	\$ 105,556,000	\$ 100,411,000	\$ 94,234,000	\$ 87,254,000	\$ 79,007,000
COLA	\$ 28,027,000	\$ 26,594,000	\$ 24,748,000	\$ 23,212,000	\$ 22,542,000
Total	\$ 133,583,000	\$ 127,005,000	\$ 118,982,000	\$ 110,466,000	\$ 101,549,000
Average Monthly Payment	\$ 3,158	\$ 3,071	\$ 2,955	\$ 2,839	\$ 2,723
Disability Retirement					
Number	428	393	374	370	365
Annual Allowance					
Basic Only	\$ 12,508,000	\$ 10,733,000	\$ 9,909,000	\$ 9,414,000	\$ 8,988,000
COLA	\$ 3,800,000	\$ 3,564,000	\$ 3,225,000	\$ 3,005,000	\$ 2,926,000
Total	\$ 16,308,000	\$ 14,297,000	\$ 13,134,000	\$ 12,419,000	\$ 11,914,000
Average Monthly Payment	\$ 3,175	\$ 3,032	\$ 2,927	\$ 2,797	\$ 2,720
Beneficiaries					
Number	565	559	546	535	529
Annual Allowance		000	0.0		020
Basic Only	\$ 7,986,000	\$ 7,668,000	\$ 7,235,000	\$ 6,672,000	\$ 6,309,000
COLA	\$ 5,892,000	\$ 5,804,000	\$ 5,494,000	\$ 5,118,000	\$ 5,116,000
Total	\$ 13,878,000	\$ 13,472,000	\$ 12,729,000	\$ 11,790,000	\$ 11,425,000
Average Monthly Payment	\$ 2,047	\$ 2,008	\$ 1,943	\$ 1,836	\$ 1,800
Total Retired Members					
Number	4,518	4,398	4,275	4,147	4,002
Annual Allowance	·	•	•	•	•
Basic Only	\$ 126,050,000	\$ 118,812,000	\$ 111,378,000	\$ 103,340,000	\$ 94,304,000
COLA	\$ 37,719,000	\$ 35,962,000	\$ 33,467,000	\$ 31,335,000	\$ 30,584,000
Total	\$ 163,769,000	\$ 154,774,000	\$ 144,845,000	\$ 134,675,000	\$ 124,888,000
Average Monthly Payment	\$ 3,021	\$ 2,933	\$ 2,823	\$ 2,706	\$ 2,601
Inactive Members	1,304	1,306	1,212	1,190	1,207

The data in the table above originates from PensionGold, SamCERA's retirement benefit administration system.



## Appendix A: Actuarial Procedures and Assumptions



The actuarial procedures and assumptions to be used in the valuation are described in this section. The assumptions were reviewed and changed as a result of the 2014 Investigation of Experience Study. New assumptions were adopted for use in the 2014 valuation.

The actuarial assumptions used in the valuations are intended to estimate the future experience of the members of SamCERA and of SamCERA itself in areas that affect the projected benefit flow and anticipated investment earnings. Any variations in future experience from that expected from these assumptions will result in corresponding changes in the estimated costs of SamCERA's benefits.

Table A-1 summarizes the assumptions. The mortality rates are taken from the sources listed.

Tables A-2 and A-3 show how members are expected to leave retired status due to death.

Table A-4 presents the probability of refund of contributions upon termination of employment while vested.

Table A-5 presents the expected annual percentage increase in salaries.

Tables A-6 to A-11 present the probabilities a member will leave the system for various reasons.

NOTE: Assumptions for Probation members are assumed to be the same as Safety members unless otherwise noted.



## Actuarial Cost Method

The actuarial valuation is prepared using the entry age actuarial cost method (CERL 31453.5). Under the principles of this method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated as a level percentage of the individual's projected compensation between entry age and assumed exit (until maximum retirement age).

For members who transferred from Plan 3 to another General plan, entry age is based on the transfer date.

The portion of this actuarial present value allocated to a valuation year is called the normal cost. The portion of this actuarial present value not provided for at a valuation date by the sum of (a) the actuarial value of the assets, and (b) the actuarial present value of future normal costs is called the Unfunded Actuarial Accrued Liability (UAAL). The UAAL as of June 30, 2008 is amortized as a level percentage of the projected salaries of present and future members of SamCERA over the remaining period from the valuation date to June 30, 2023. This is commonly referred to as a "closed amortization method". Actuarial gains and losses after the June 30, 2008 valuation are amortized over new closed 15-year periods from their respective valuation dates.

Beginning with the June 30, 2010 actuarial valuation, the San Mateo County Mosquito and Vector Control District adopted the same "enhanced" benefit formula that applies to Plan 1, 2 & 4 County General members and the same member rates currently being paid by County General members from those plans. However, because the Mosquito and Vector Control District does not participate in cost sharing on the member rates, it will have a separate normal cost rate and expected member contribution rate from the County General group.

The normal cost rate is calculated separately for County General and for the Mosquito and Vector Control District. These normal cost rates will differ from each other for two reasons:

- 1) The demographics within the two groups will vary (specifically, the groups will have different average entry ages), and
- 2) The expected refund of contributions, which is a component of the normal cost, will differ between the County and the Mosquito and Vector Control District, since the District does not participate in cost sharing on the member rates.



#### **Records and Data**

The data used in this valuation consist of financial information and the age, service, and income records for active and inactive members and their survivors. All of the data were supplied by SamCERA and are accepted for valuation purposes without audit.

### Replacement of Terminated Members

The ages and relative salaries at entry of future members are assumed to follow a new entrant distribution based on the pattern of current members. Under this assumption, the normal cost rates for active members will remain fairly stable in future years unless there are changes in the governing law, the actuarial assumptions or the pattern of the new entrants.

# Growth in Membership

For benefit determination purposes, no growth in the membership of SamCERA is assumed. For funding purposes, if amortization is required, the total payroll of covered members is assumed to grow due to the combined effects of future wage increases of current active members and the replacement of the current active members by new employees. No growth in the total number of active members is assumed.

### Internal Revenue Code Section 415 Limit

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

## Internal Revenue Code Section 401(a)(17)

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

# **Employer Contributions**

The employer contribution rate is set by the Retirement Board based on actuarial valuations.

### Member Contributions

The member contribution rates vary by entry age (except for Plan 7) and are described in the law. Code references are shown in Appendix B of the valuation report. The methods and assumptions used are detailed later in this section.

The individual member rates by entry age, plan, and class are illustrated in Appendix D of the valuation report.

#### Valuation of Assets

The assets are valued using a five-year smoothed method based on the difference between the expected market value and the actual market value of the assets as of the valuation date. The expected market value is the prior year's market value increased with the net increase in the cash flow of funds, all increased with interest during the past fiscal year at the expected investment return rate assumption.



# Investment Earnings and Expenses

The future investment earnings of the assets of SamCERA are assumed to accrue at an annual rate of 7.25% compounded annually, net of both investment and administrative expenses. This rate was adopted effective June 30, 2014.

### Postretirement Benefit Increases

Postretirement increases are described in Appendix B. Assumed increases for valuation purposes are:

	General	Safety	Probation	
Plan 1	3.00%	3.00%	2.90%	
Plan 2	2.65%	2.65%	2.65%	
Plan 3	0.00%	N/A	N/A	
Plans 4, 5 & 7	1.90%	1.90%	1.90%	
Plan 6	N/A	1.90%	1.90%	

Assumed Plan 1 General and Safety COLAs are set at the inflation (CPI) assumption of 3.00% per year. Since Plan 2 does not have a COLA bank, it is expected that increases will be limited in some years. This reduces the overall expected rate and is reflected in a lower assumed increase.

## Interest on Member Contributions

The annual credited interest rate on member contributions is assumed to be 7.25% compounded semi-annually for an annualized rate of 7.38%. This rate was adopted effective June 30, 2014 for valuation purposes, although the change in the member crediting rate is not effective until July 1, 2015.

#### **Future Salaries**

The rates of annual salary increase assumed for the purpose of the valuation are illustrated in Table A-5. In addition to increases in salary due to promotions and longevity, this scale includes an assumed 3.50% per annum rate of increase in the general wage level of the membership.

Increases are assumed to occur mid-year. The mid-year timing reflects that salary increases occur throughout the year, or on average mid-year.

SamCERA supplied two types of compensation data:

1) pensionable pay from the most recent bi-weekly pay period; and 2) pensionable pay from the prior year. We annualized bi-weekly pay (by multiplying by 26) and then used the greater of the two amounts.

# Social Security Wage Base

Plan 3 members have their benefits offset by an assumed Social Security Benefit. For valuation funding purposes, we need to project the Social Security Benefit. We assume the current Social Security provisions will continue and the annual Wage Base will increase at the rate of 3.00% per year. Note, statutory provisions describe how to compute a member's offset amount at time of termination or retirement.



#### Retirement

The retirement rates vary by age and are shown by plan in Tables A-6 through A-11.

All General members who attain or who have attained age 70 and all Safety members who have attained age 60 are assumed to retire immediately. Additionally, if a member's benefit is equal to or greater than the 100% of compensation limit, the member is assumed to retire immediately. For purposes of the valuation, immediate retirement is assumed at:

- Age 62 with 38 years of service (General, except Plan 3, Plan 5, and Plan 7)
- Age 65 with 41 years of service (General Plan 5)
- Age 67 with 40 years of service (General Plan 7)
- Any age with 33 years of service (Safety & Probation, except Plans 5, 6, and 7)
- Age 55 with 33 years of service (Safety & Probation Plan 5)
- Age 55 with 38 years of service (Safety & Probation Plan 6)
- Age 57 with 38 years of service (Safety & Probation Plan 7)

Deferred vested members are assumed to retire at the later of current age and:

- Age 55 (General Members, except Plan 3 and Plan 7)
- Age 65 (General Plan 3 Members)
- Age 62 (General Plan 7 Members)
- Age 50 (Probation and Safety members)

The retirement rates were adopted June 30, 2014.

### **Disability**

The rates of disability used in the valuation are also illustrated in Tables A-6 through A-11.

The disability rates were adopted June 30, 2014.

### Mortality – Other Than Disabled Members

The same postretirement mortality rates are used in the valuation for active members, members retired for service, and beneficiaries. These rates are illustrated in Table A-2. Beneficiary mortality is assumed to be the same as for healthy members. Beneficiaries are assumed to be of the opposite sex and have the same mortality as General members.

General Males RP-2000 Healthy Combined Mortality Table

for Males with adjustment for White Collar workers. Ages are set back three years.

Safety Males Same as General.

General Females RP-2000 Healthy Combined Mortality Table

for Females with adjustment for White Collar workers. Ages are set back three years.

Safety Females Same as General.

The rates of retired mortality were adopted June 30, 2011 and re-adopted June 30, 2014.



## Mortality – Disabled Members

For disabled members, the mortality rates used in the valuation are illustrated in Table A-3.

General Males Average of RP-2000 Healthy Combined

Mortality Table for Males with adjustment for White Collar workers and the RP-2000 Disabled Annuitant Mortality Table for Males,

both set back three years.

Safety Males RP-2000 Healthy Combined Mortality Table

for Males with adjustment for White Collar

workers (minimum is 1.0%).

General Females Average of RP-2000 Healthy Combined

Mortality Table for Females with adjustment for White Collar workers and the RP-2000 Disabled Annuitant Mortality Table for Females, both set back three years.

Safety Females RP-2000 Healthy Combined Mortality Table

for Females with adjustment for White Collar

workers (minimum is 0.4%).

The rates of mortality were adopted June 30, 2011 and readopted June 30, 2014.

## Other Employment Terminations

Tables A-6 to A-11 show, for all ages, the rates assumed in this valuation for future termination from active service other than for death, disability or retirement. These rates do not apply to members eligible for service retirement.

Terminating employees may withdraw their contributions immediately upon termination of employment and forfeit the right to further benefits, or they may leave their contributions with SamCERA. Former contributing members whose contributions are on deposit may later elect to receive a refund, may return to work or may remain inactive until becoming eligible to receive a retirement benefit under either SamCERA or a reciprocal retirement system. All terminating members who are not eligible for vested benefits are assumed to withdraw their contributions immediately.

The rates of termination were adopted June 30, 2011 and readopted June 30, 2014.



### **Probability of Refund**

Table A-4 gives the assumed probabilities that vested members will withdraw their contributions and elect a refund immediately upon termination and the probability the remaining members will elect a deferred vested benefit. For Plan 3, 100% of members are assumed to elect a vested benefit. All non-vested members are assumed to elect a refund and withdraw their contributions.

The probability of refund assumptions were adopted June 30, 2011 and re-adopted June 30, 2014.

## Probability of Eligible Survivor

For members not currently in pay status, 75% of all males and 55% of all females are assumed to have eligible survivors (spouses or qualified domestic partners). Survivors are assumed to be three years younger than male members and two years older than female members. Survivors are assumed to be of the opposite sex as the member. There is no explicit assumption for children's benefits. We believe the survivor benefits based on this assumption are sufficient to cover children's benefits as they occur.

# Valuation of Current Deferred Members

Current non-vested members who have terminated active employment are assumed to take a refund of their contributions.

Current vested members who have terminated active employment are assumed to keep their accounts with SamCERA and retire as specified in this section. An adjustment is made to the salary data provided for these individuals, as it is our understanding that the salary data may not be complete in many cases. The adjustment is based on the average pay for all members of the active group divided by average pay for the deferred group. The average pay for the active group is based on the average pay over the last five-year period using the information supplied in the CAFR.

#### **Reciprocal Benefits**

35% of future deferred vested General members and 45% of future deferred vested Safety members are assumed to immediately join a reciprocal agency. For future reciprocal members, salaries are assumed to increase at the same rate as if they had remained in active employment with SamCERA. For current deferred vested members, eligibility is based on the data supplied by SamCERA and future salaries are assumed to increase at 4.02% annually.

### **Part-Time Employees**

For valuation purposes, part-time employees are assumed to continue working the same number of hours in the future.

# Adjustment to Plan 3 Normal Cost Rate

Plan 3 members are eligible to transfer to Plan 2 or Plan 4 (depending on entry date) after five years of service. We have adjusted the Plan 3 Normal Cost to account for this. The adjusted Plan 3 Normal Cost rate is 50% of the unadjusted Plan 3 Normal Cost rate and 50% of the Plan 4 Normal Cost rate.



# Member Contribution Rate Assumptions

The following assumptions summarize the procedures used to compute member contribution rates based on entry age:

In general, the member rate is determined by the present value of the future benefit (PVFB) payable at retirement age, divided by the present value of all future salaries payable between age at entry and retirement age. For these purposes, per the CERL:

- A. The annuity factor used for General members is based on a 33% / 67% blend of the male and female annuity factors using current valuation assumptions and no COLA. For Safety members it is based on an 83% / 17% blend of the male and female annuity factors using current valuation assumptions.
- B. The annuity factor used in determining the present value of future benefits (PVFB) at entry age is equal to the life only annuity factor at 7.25%.
- C. The Final Compensation is based on the salary paid in the year prior to attaining the retirement age.

Example: For a Plan 4 Member who enters at age 54 or earlier, the Final Compensation at retirement (age 55) will be the monthly average of the annual salary for age 54.

- D. For purposes of calculating the value of the member's future contribution, interest is assumed to be credited at 7.25% semiannually (7.38% annual rate).
- E. Member Rates are assumed to increase with entry age, except in Plan 7. There are a few exceptions at the higher entry ages where the calculated rate is less than the previous entry age. In these cases the member contribution rate is adjusted so that it is no less than the value for the previous entry age.
- F. Member Rates for members of the California Nurses Association, members of the Union of American Physicians and Dentists and members of the Probation and Detention Association in Plans 1, 2, and 4 are loaded to account for a 25% COLA share. The COLA loads are applied to the otherwise applicable basic member rates, prior to the addition of cost-sharing. The loads were determined based on 2014 information and were applied as follows:

Plan 1 General members: 19.60% load

Plan 2 General members: 16.82% load

Plan 4 General members: 11.51% load

Plan 1 Probation members: 33.75% load

Plan 2 Probation members: 33.75% load

Plan 4 Probation members: 20.78% load



## Member Contribution Rate Assumptions (continued)

G. General members rehired on or after August 7, 2011, Safety members rehired on or after January 8, 2012 and Probation members rehired on or after July 10, 2011 in Plans 1, 2, and 4 are loaded to account for a 50% COLA share. The COLA loads are applied to the otherwise applicable basic member rates, prior to the addition of cost-sharing. The loads were determined based on 2014 information and were applied as follows:

Plan 1 General members: 39.19% load Plan 2 General members: 33.64% load Plan 4 General members: 23.02% load Plan 1 Safety members: 57.96% load Plan 2 Safety members: 57.96% load Plan 4 Safety members: 33.97% load

Plan 1 Probation members: 67.50% load Plan 2 Probation members: 67.50% load Plan 4 Probation members: 41.56% load

H. Member rates for members in Plans 5 and 6 are loaded to account for 50% COLA share. The COLA loads are applied to the otherwise applicable basic member rates, prior to the addition of cost-sharing where applicable. The loads were determined based on 2014 information and were applied as follows:

Plan 5 General members: 22.14% load Plan 5 Safety members: 30.74% load Plan 6 Safety members: 28.12% load Plan 5 Probation members: 38.66% load

Plan 6 Probation members: 33.34% load



### Table A-1: Summary of Valuation Assumptions as of June 30, 2014

l.	Economic	assumptions
----	----------	-------------

A.	General wage increases	3.50%
B.	Investment earnings	7.25%
C.	Growth in active membership	0.00%
D.	CPI inflation assumption	3.00%

### II. Demographic assumptions

A. Salary increases due to service Table A-5

B. Retirement
 C. Disablement
 D. Mortality for active members prior to termination\*
 Tables A-6 to A-11
 Tables A-6 to A-11

### Basis-- RP-2000 Employees Table with age adjustments:

Age

Class of Members	<u>Adjustment</u>	
General – Males General – Females	-3 years -3 years	
Safety – Males Safety – Females	-3 years -3 years	

E. Mortality for active members after termination and service retired members\*

Table A-2

Basis – RP-2000 Healthy Combined Mortality Table with adjustment for White Collar workers:

Class of Members	Age <u>Adjustment</u>
General – Males	-3 years
General – Females	-3 years
Safety – Males	-3 years
Safety – Females	-3 years

<sup>\*</sup> The current mortality assumptions contain a margin to account for expected future mortality improvement. Refer to the 2014Investigation of Experience report for details.



# Table A-1: Summary of Valuation Assumptions as of June 30, 2014 (continued)

F. Mortality among disabled members\*

Table A-3

Basis – Average of RP-2000 Healthy Combined Mortality Table with adjustment for White Collar workers and RP-2000 Disabled Annuitant Mortality Table:

Class of Members	Age <u>Adjustment</u>	Minimum <u>Rate</u>
General – Males	-3 years	None
General – Females	-3 years	None

Basis – RP-2000 Healthy Combined Mortality Table with adjustment for White Collar workers:

Class of Members	Age <u>Adjustment</u>	Minimum <u>Rate</u>
Safety – Males	none	1.00%
Safety – Females	none	0.40%

G. Mortality for beneficiaries\*

Table A-2

Basis – Beneficiaries are assumed to be of the opposite sex and have the same mortality as General members.

H. Other terminations of employment

Tables A-6 to A-11

I. Refund of contributions on vested termination

Table A-4



<sup>\*</sup> The current mortality assumptions contain a margin to account for expected future mortality improvement. Refer to the 2014Investigation of Experience report for details.

Table A-2: Mortality for Members Retired for Service

	General	General	Safety	Safety
Age	Male	Female	Male	Female
20	0.030%	0.018%	0.030%	0.018%
25	0.037%	0.019%	0.037%	0.019%
30	0.038%	0.022%	0.038%	0.022%
35	0.043%	0.036%	0.043%	0.036%
40	0.071%	0.053%	0.071%	0.053%
45	0.103%	0.076%	0.103%	0.076%
50	0.158%	0.123%	0.158%	0.123%
55	0.250%	0.192%	0.250%	0.192%
60	0.409%	0.332%	0.409%	0.332%
65	0.731%	0.599%	0.731%	0.599%
70	1.404%	1.094%	1.404%	1.094%
75	2.387%	1.878%	2.387%	1.878%
80	4.236%	3.155%	4.236%	3.155%
85	7.493%	5.337%	7.493%	5.337%
90	13.019%	9.248%	13.019%	9.248%

Table A-3: Mortality for Members Retired for Disability

	General	General	Safety	Safety
Age	Male	<u>Female</u>	Male	Female
20	1.144%	0.382%	1.000%	0.400%
25	1.147%	0.382%	1.000%	0.400%
30	1.148%	0.384%	1.000%	0.400%
35	1.150%	0.391%	1.000%	0.400%
40	1.164%	0.399%	1.000%	0.400%
45	1.180%	0.411%	1.000%	0.400%
50	1.335%	0.509%	1.000%	0.400%
55	1.703%	0.769%	1.000%	0.400%
60	2.106%	1.099%	1.000%	0.468%
65	2.615%	1.503%	1.106%	0.865%
70	3.424%	2.114%	1.928%	1.519%
75	4.664%	3.082%	3.363%	2.572%
80	6.725%	4.555%	5.941%	4.308%
85	9.840%	6.783%	10.467%	7.419%
90	14.271%	10.350%	17.827%	12.615%

Table A-4: Immediate Refund of Contributions Upon Termination of Employment (Excludes Plan 3)

Years of		
Service	General	Safety
0	100%	100%
1	100%	100%
2	100%	100%
3	100%	100%
4	100%	100%
5	45%	35%
6	45%	35%
7	45%	35%
8	44%	34%
9	43%	33%
10	42%	32%
11	41%	31%
12	40%	30%
13	38%	25%
14	36%	20%
15	34%	15%
16	32%	10%
17	30%	5%
18	27%	4%
19	24%	3%
20	21%	0%
21	18%	0%
22	15%	0%
23	12%	0%
24	9%	0%
25	6%	0%
26	3%	0%
27	0%	0%
28	0%	0%
29	0%	0%
30 & Up	0%	0%



Table A-5: Annual Increase in Salary

Years of Service	Due to Promotion and Longevity	Total Annual Increase*
<1	6.00%	9.71%
1	4.00%	7.64%
2	3.00%	6.61%
3	2.50%	6.09%
4	2.00%	5.57%
5	1.75%	5.31%
6	1.50%	5.05%
7	1.25%	4.79%
8	1.05%	4.59%
9	0.90%	4.43%
10	0.80%	4.33%
11	0.70%	4.22%
12	0.60%	4.12%
13	0.50%	4.02%
14	0.50%	4.02%
15	0.50%	4.02%
16	0.50%	4.02%
17	0.50%	4.02%
18	0.50%	4.02%
19	0.50%	4.02%
20 or More	0.50%	4.02%

<sup>\*</sup> The total expected increase in salary is the increase due to promotions and longevity, adjusted for an assumed 3.50% per annum increase in the general wage level of the membership. The total result is compounded rather than additive.

## Appendix A: Rates of Separation From Active Service Tables A-6 to A-11

A schedule of the probabilities of termination of employment due to the following causes can be found on the following pages:

Service Retirement: Member retires after meeting age and service

requirements for reasons other than disability.

Withdrawal: Member terminates and elects a refund of member

contributions, or a deferred vested retirement

benefit.

Service Disability: Member receives disability retirement; disability is

service related.

Ordinary Disability: Member receives disability retirement; disability is

not service related.

Service Death: Member dies before retirement; death is service

related.

Ordinary Death: Member dies before retirement; death is not

service related.

Each rate represents the probability that a member will separate from service at each age due to the particular cause. For example, a rate of 0.0300 for a member's service retirement at age 50 means we assume that 30 out of 1,000 members who are age 50 will retire at that age.

Each table represents the detailed rates needed for each SamCERA plan by sex:

Table A-6: General Plan 1, 2, 4, 5 & 7 Males A-10: Safety and Probation Plans 1, 2,

A-7: General Plan 1, 2, 4, 5 & 7 Females 4, 5, 6 & 7 Males

A-8: General Plan 3 Males A-11: Safety and Probation Plans 1, 2,

A-9: General Plan 3 Females 4, 5, 6 & 7 Females



Table A-6: Rate of Separation From Active Service General Plans 1, 2, 4, 5 & 7 – Male

Age	Service Retirement*	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	0.0004	0.0003	N/A	0.0003	0	0.1300
19	0.0000	0.0004	0.0003	N/A	0.0003	1	0.1100
20	0.0000	0.0004	0.0003	N/A	0.0003	2	0.0900
21	0.0000	0.0004	0.0003	N/A	0.0003	3	0.0800
22	0.0000	0.0004	0.0003	N/A	0.0003	4	0.0700
23	0.0000	0.0004	0.0003	N/A	0.0003	5	0.0633
24	0.0000	0.0004	0.0003	N/A	0.0004	6	0.0567
25	0.0000	0.0004	0.0003	N/A	0.0004	7	0.0500
26	0.0000	0.0004	0.0003	N/A	0.0004	8	0.0470
27	0.0000	0.0004	0.0003	N/A	0.0004	9	0.0440
28	0.0000	0.0004	0.0003	N/A	0.0004	10	0.0410
29	0.0000	0.0005	0.0003	N/A	0.0004	11	0.0380
30	0.0000	0.0005	0.0004	N/A	0.0004	12	0.0350
31	0.0000	0.0005	0.0004	N/A	0.0004	13	0.0330
32	0.0000	0.0006	0.0004	N/A	0.0004	14	0.0310
33	0.0000	0.0007	0.0004	N/A	0.0004	15	0.0290
34	0.0000	0.0007	0.0005	N/A	0.0005	16	0.0270
35	0.0000	0.0007	0.0005	N/A	0.0006	17	0.0250
36	0.0000	0.0008	0.0005	N/A	0.0006	18	0.0230
37	0.0000	0.0009	0.0006	N/A	0.0007	19	0.0210
38	0.0000	0.0010	0.0006	N/A	0.0008	20	0.0190
39	0.0000	0.0010	0.0007	N/A	0.0008	21	0.0170
40	0.0000	0.0011	0.0008	N/A	0.0009	22	0.0150
41	0.0000	0.0012	0.0008	N/A	0.0010	23	0.0140
42	0.0000	0.0013	0.0009	N/A	0.0010	24	0.0130
43	0.0000	0.0014	0.0009	N/A	0.0011	25	0.0120
44	0.0000	0.0014	0.0010	N/A	0.0011	26	0.0110
45	0.0000	0.0016	0.0010	N/A	0.0012	27	0.0100
46	0.0000	0.0016	0.0011	N/A	0.0013	28	0.0100
47	0.0000	0.0017	0.0012	N/A	0.0014	29	0.0100
48	0.0000	0.0018	0.0012	N/A	0.0015	30 & Above	0.0000
49	0.0000	0.0019	0.0012	N/A	0.0016		
50	0.0500	0.0019	0.0013	N/A	0.0017		
51	0.0450	0.0020	0.0013	N/A	0.0019		
52	0.0450	0.0020	0.0013	N/A	0.0020		
53	0.0500	0.0021	0.0014	N/A	0.0021		
54	0.0500	0.0022	0.0014	N/A	0.0023		
55	0.0600	0.0022	0.0014	N/A	0.0024		
56	0.0600	0.0022	0.0015	N/A	0.0026		
57	0.0800	0.0023	0.0015	N/A	0.0028		
58	0.1200	0.0025	0.0016	N/A	0.0030		
59	0.1200	0.0026	0.0017	N/A	0.0033		
60	0.1500	0.0027	0.0018	N/A	0.0036		
61	0.2250	0.0029	0.0019	N/A	0.0040		
62	0.2750	0.0030	0.0020	N/A	0.0044		
63	0.2500	0.0030	0.0020	N/A	0.0049		
64	0.2500	0.0030	0.0020	N/A	0.0054		
65 66	0.2500	0.0030	0.0020	N/A	0.0059		
66	0.3750	0.0030	0.0020	N/A	0.0065		
67	0.3500	0.0030	0.0020	N/A	0.0070		
68 60	0.2750	0.0030	0.0020	N/A	0.0076		
69 70	0.3250	0.0030	0.0020	N/A	0.0081		
70	1.0000	0.0000	0.0000	N/A	0.0000		

<sup>\* 100%</sup> probability of retirement is assumed at ages 62 and above with 38 or more years of service (65/41 for Plan 5; 67/40 for Plan 7).



Table A-7: Rate of Separation From Active Service General Plans 1, 2, 4, 5 & 7 – Female

Age	Service Retirement*	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	0.0004	0.0003	N/A	0.0002	0	0.1200
19	0.0000	0.0004	0.0003	N/A	0.0002	1	0.1000
20	0.0000	0.0004	0.0003	N/A	0.0002	2	0.0850
21	0.0000	0.0004	0.0003	N/A	0.0002	3	0.0750
22	0.0000	0.0004	0.0003	N/A	0.0002	4	0.0700
23	0.0000	0.0004	0.0003	N/A	0.0002	5	0.0633
24	0.0000	0.0004	0.0003	N/A	0.0002	6	0.0567
25	0.0000	0.0004	0.0003	N/A	0.0002	7	0.0500
26	0.0000	0.0004	0.0003	N/A	0.0002	8	0.0455
27	0.0000	0.0004	0.0003	N/A	0.0002	9	0.0410
28	0.0000	0.0004	0.0003	N/A	0.0002	10	0.0365
29	0.0000	0.0004	0.0003	N/A	0.0002	11	0.0320
30	0.0000	0.0004	0.0003	N/A	0.0002	12	0.0275
31	0.0000	0.0004	0.0003	N/A	0.0002	13	0.0270
32	0.0000	0.0005	0.0003	N/A	0.0002	14	0.0265
33	0.0000	0.0005	0.0003	N/A	0.0003	15	0.0260
34	0.0000	0.0005	0.0004	N/A	0.0003	16	0.0255
35	0.0000	0.0006	0.0004	N/A	0.0003	17	0.0250
36	0.0000	0.0007	0.0004	N/A	0.0004	18	0.0230
37	0.0000	0.0007	0.0005	N/A	0.0004	19	0.0210
38	0.0000	0.0007	0.0005	N/A	0.0005	20	0.0190
39	0.0000	0.0008	0.0005	N/A	0.0005	21	0.0170
40	0.0000	0.0008	0.0006	N/A	0.0006	22	0.0150
41	0.0000	0.0009	0.0006	N/A	0.0006	23	0.0140
42	0.0000	0.0009	0.0006	N/A	0.0006	24	0.0130
43	0.0000	0.0011	0.0007	N/A	0.0007	25	0.0120
44	0.0000	0.0011	0.0008	N/A	0.0008	26	0.0110
45	0.0000	0.0013	0.0008	N/A	0.0009	27	0.0100
46	0.0000	0.0014	0.0009	N/A	0.0009	28	0.0100
47	0.0000	0.0015	0.0010	N/A	0.0010	29	0.0100
48	0.0000	0.0020	0.0013	N/A	0.0011	30 & Above	0.0000
49	0.0000	0.0025	0.0016	N/A	0.0012		
50	0.0400	0.0029	0.0020	N/A	0.0013		
51	0.0400	0.0034	0.0023	N/A	0.0014		
52	0.0400	0.0039	0.0026	N/A	0.0016		
53	0.0400	0.0041	0.0027	N/A	0.0017		
54	0.0500	0.0043	0.0028	N/A	0.0018		
55	0.0600	0.0044	0.0030	N/A	0.0020		
56	0.0600	0.0046	0.0031	N/A	0.0021		
57	0.0800	0.0048	0.0032	N/A	0.0023		
58	0.1200	0.0048	0.0032	N/A	0.0025		
59	0.1200	0.0048	0.0032	N/A	0.0028		
60	0.1500	0.0048	0.0032	N/A	0.0030		
61	0.2000	0.0048	0.0032	N/A	0.0033		
62	0.2750	0.0048	0.0032	N/A	0.0036		
63	0.2250	0.0048	0.0032	N/A	0.0039		
64	0.3000	0.0048	0.0032	N/A	0.0043		
65	0.3000	0.0048	0.0032	N/A	0.0047		
66	0.4000	0.0048	0.0032	N/A	0.0050		
67	0.4000	0.0048	0.0032	N/A	0.0054		
68	0.3000	0.0048	0.0032	N/A	0.0058		
69	0.3500	0.0048	0.0032	N/A	0.0062		
70	1.0000	0.0000	0.0000	N/A	0.0000		

<sup>\* 100%</sup> probability of retirement is assumed at ages 62 and above with 38 or more years of service (65/41 for Plan 5; 67/40 for Plan 7).



Table A-8: Rate of Separation From Active Service General Plan 3 – Male

18	Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
19	18	0.0000	N/A	N/A	N/A	0.0003	0	0.1300
20								
21 0.0000 N/A N/A N/A N/A 0.0003 3 0.0800 22 0.0000 N/A N/A N/A N/A 0.0003 4 0.0700 23 0.0000 N/A N/A N/A N/A 0.0003 5 0.0633 24 0.0000 N/A N/A N/A N/A 0.0003 5 0.0633 24 0.0000 N/A N/A N/A N/A 0.0004 6 0.0567 25 0.0000 N/A N/A N/A N/A 0.0004 7 0.0500 26 0.0000 N/A N/A N/A N/A 0.0004 8 0.0470 27 0.0000 N/A N/A N/A N/A 0.0004 9 0.0440 28 0.0000 N/A N/A N/A N/A 0.0004 10 0.0410 29 0.0000 N/A N/A N/A N/A 0.0004 11 0.0380 30 0.0000 N/A N/A N/A N/A 0.0004 11 0.0380 31 0.0000 N/A N/A N/A N/A 0.0004 13 0.0333 31 0.0000 N/A N/A N/A N/A 0.0004 13 0.03330 32 0.0000 N/A N/A N/A N/A 0.0004 15 0.0350 33 0.0000 N/A N/A N/A N/A 0.0004 15 0.0350 34 0.0000 N/A N/A N/A N/A 0.0004 15 0.0350 34 0.0000 N/A N/A N/A N/A 0.0004 17 0.0250 34 0.0000 N/A N/A N/A N/A 0.0005 16 0.0270 35 0.0000 N/A N/A N/A N/A 0.0005 16 0.0270 36 0.0000 N/A N/A N/A N/A 0.0006 17 0.0250 36 0.0000 N/A N/A N/A N/A 0.0006 17 0.0250 36 0.0000 N/A N/A N/A N/A 0.0006 17 0.0250 36 0.0000 N/A N/A N/A N/A N/A 0.0006 17 0.0250 36 0.0000 N/A N/A N/A N/A 0.0006 17 0.0250 37 0.0000 N/A N/A N/A N/A 0.0006 17 0.0250 38 0.0000 N/A N/A N/A N/A 0.0006 18 0.0230 39 0.0000 N/A N/A N/A N/A 0.0006 18 0.0230 39 0.0000 N/A N/A N/A N/A 0.0006 20 0.0190 39 0.0000 N/A N/A N/A N/A 0.0006 21 0.0190 39 0.0000 N/A N/A N/A N/A 0.0006 22 0.0190 39 0.0000 N/A N/A N/A N/A 0.0009 22 0.0150 40 0.0000 N/A N/A N/A N/A 0.0001 23 0.0140 41 0.0000 N/A N/A N/A N/A 0.0011 25 0.0120 44 0.0000 N/A N/A N/A N/A 0.0012 27 0.0100 45 0.0000 N/A N/A N/A N/A 0.0011 25 0.0120 46 0.0000 N/A N/A N/A N/A N/A 0.0011 25 0.0120 50 0.0000 N/A N/A N/A N/A N/A 0.0011 25 0.0120 51 0.0000 N/A N/A N/A N/A 0.0001 52 0.0000 N/A N/A N/A N/A 0.0001 53 0.0000 N/A N/A N/A N/A 0.0001 54 0.0000 N/A N/A N/A N/A 0.0001 55 0.0000 N/A N/A N/A N/A 0.0001 56 0.0000 N/A N/A N/A N/A 0.0001 57 0.0000 N/A N/A N/A N/A 0.0001 58 0.0000 N/A N/A N/A N/A 0.0001 59 0.0000 N/A N/A N/A N/A 0.0001 50 0.0000 N/A N/A N/A							2	
22								
23								
24								
25								
266 0.0000 N/A N/A N/A N/A 0.0004 8 0.0470   27 0.0000 N/A N/A N/A N/A 0.0004 9 0.0440   28 0.0000 N/A N/A N/A N/A 0.0004 11 0.0410   29 0.0000 N/A N/A N/A N/A 0.0004 11 0.0380   30 0.0000 N/A N/A N/A N/A 0.0004 11 0.0380   31 0.0000 N/A N/A N/A N/A 0.0004 12 0.0350   31 0.0000 N/A N/A N/A N/A 0.0004 13 0.0330   32 0.0000 N/A N/A N/A N/A 0.0004 14 0.0310   33 0.0000 N/A N/A N/A N/A 0.0004 15 0.0290   34 0.0000 N/A N/A N/A N/A 0.0005 16 0.0270   35 0.0000 N/A N/A N/A N/A 0.0006 17 0.0250   36 0.0000 N/A N/A N/A N/A 0.0006 17 0.0250   36 0.0000 N/A N/A N/A N/A 0.0006 18 0.0230   37 0.0000 N/A N/A N/A N/A 0.0007 19 0.0210   38 0.0000 N/A N/A N/A N/A 0.0008 20 0.0190   39 0.0000 N/A N/A N/A N/A 0.0008 20 0.0190   40 0.0000 N/A N/A N/A N/A 0.0008 21 0.0170   40 0.0000 N/A N/A N/A N/A 0.0009 22 0.0150   41 0.0000 N/A N/A N/A N/A 0.0010 22 0.0150   42 0.0000 N/A N/A N/A N/A 0.0011 25 0.0150   43 0.0000 N/A N/A N/A N/A 0.0011 25 0.0140   44 0.0000 N/A N/A N/A N/A 0.0011 25 0.0140   45 0.0000 N/A N/A N/A N/A 0.0011 25 0.0140   46 0.0000 N/A N/A N/A N/A 0.0011 25 0.0140   47 0.0000 N/A N/A N/A N/A N/A 0.0011 25 0.0140   48 0.0000 N/A N/A N/A N/A N/A 0.0011 25 0.0140   49 0.0000 N/A N/A N/A N/A N/A 0.0011 25 0.0110   46 0.0000 N/A N/A N/A N/A N/A 0.0011 25 0.0110   47 0.0000 N/A N/A N/A N/A N/A 0.0011 25 0.0110   48 0.0000 N/A N/A N/A N/A N/A 0.0011 25 0.0110   49 0.0000 N/A N/A N/A N/A N/A 0.0011 25 0.0110   50 0.0000 N/A N/A N/A N/A N/A 0.0013 28 0.0100   51 0.0000 N/A N/A N/A N/A N/A 0.0013 28 0.0100   52 0.0000 N/A N/A N/A N/A N/A 0.0015 30 & Above   55 0.0300 N/A N/A N/A N/A N/A 0.0026   57 0.0300 N/A N/A N/A N/A N/A 0.0030   58 0.0300 N/A N/A N/A N/A N/A 0.0030   59 0.0300 N/A N/A N/A N/A N/A 0.0006   60 0.0300 N/A N/A N/A N/A N/A 0.0006   61 0.0600 N/A N/A N/A N/A N/A 0.0006   62 0.1500 N/A N/A N/A N/A N/A 0.0006   63 0.3000 N/A N/A N/A N/A N/A 0.0006   64 0.3000 N/A N/A N/A N/A N/A 0.0006   65 0.3000 N/A N/A N/A N/A N/A 0.0006   66 0.3000 N/A N/A N/A N/A N/A N/A 0.0006   67 0.3000 N/A N/A N/A N/A N/A N/A 0.0006								
27								
28								
299								
30								
31								
322 0.0000 N/A N/A N/A N/A 0.0004 14 0.0310 33 0.0000 N/A N/A N/A N/A 0.0004 15 0.0290 34 0.0000 N/A N/A N/A N/A 0.0005 16 0.0270 35 0.0000 N/A N/A N/A N/A 0.0006 17 0.0250 36 0.0000 N/A N/A N/A N/A 0.0006 18 0.0230 37 0.0000 N/A N/A N/A N/A 0.0007 19 0.0230 38 0.0000 N/A N/A N/A N/A 0.0007 19 0.0210 38 0.0000 N/A N/A N/A N/A 0.0008 20 0.0190 39 0.0000 N/A N/A N/A N/A 0.0008 21 0.0170 40 0.0000 N/A N/A N/A N/A 0.0009 22 0.0150 41 0.0000 N/A N/A N/A N/A 0.0009 22 0.0150 41 0.0000 N/A N/A N/A N/A 0.0010 23 0.0140 42 0.0000 N/A N/A N/A N/A 0.0010 23 0.0140 43 0.0000 N/A N/A N/A N/A 0.0011 25 0.0120 44 0.0000 N/A N/A N/A N/A 0.0011 25 0.0120 44 0.0000 N/A N/A N/A N/A 0.0011 25 0.0120 45 0.0000 N/A N/A N/A N/A 0.0011 25 0.0120 46 0.0000 N/A N/A N/A N/A 0.0012 27 0.0100 47 0.0000 N/A N/A N/A N/A 0.0012 27 0.0100 48 0.0000 N/A N/A N/A N/A 0.0012 27 0.0100 49 0.0000 N/A N/A N/A N/A 0.0015 30 & Above 0.0100 49 0.0000 N/A N/A N/A N/A 0.0015 30 & Above 0.0100 50 0.0000 N/A N/A N/A N/A 0.0015 50 0.0000 N/A N/A N/A N/A 0.0015 50 0.0000 N/A N/A N/A N/A 0.0015 51 0.0000 N/A N/A N/A N/A 0.0015 52 0.0000 N/A N/A N/A N/A 0.0015 53 0.0000 N/A N/A N/A N/A 0.0016 50 0.0000 N/A N/A N/A N/A 0.0026 53 0.0000 N/A N/A N/A N/A 0.0026 56 0.0300 N/A N/A N/A N/A 0.0026 57 0.0300 N/A N/A N/A N/A 0.0026 58 0.0300 N/A N/A N/A N/A 0.0026 59 0.0300 N/A N/A N/A N/A 0.0026 66 0.0300 N/A N/A N/A N/A 0.0044 62 0.1500 N/A N/A N/A N/A 0.0044 63 0.1500 N/A N/A N/A N/A 0.0046 64 0.1500 N/A N/A N/A N/A 0.0046 65 0.3000 N/A N/A N/A N/A 0.0059 66 0.3000 N/A N/A N/A N/A N/A 0.0059 66 0.3000 N/A N/A N/A N/A N/A 0.0066								
33								
34 0.0000 N/A N/A N/A N/A 0.0005 16 0.0270 35 0.0000 N/A N/A N/A N/A 0.0006 17 0.0250 36 0.0000 N/A N/A N/A N/A 0.0006 18 0.0230 37 0.0000 N/A N/A N/A N/A 0.0007 19 0.0210 38 0.0000 N/A N/A N/A N/A 0.0007 19 0.0210 38 0.0000 N/A N/A N/A N/A 0.0008 20 0.0190 39 0.0000 N/A N/A N/A N/A 0.0008 21 0.0170 40 0.0000 N/A N/A N/A N/A 0.0009 22 0.0150 41 0.0000 N/A N/A N/A N/A 0.0010 23 0.0140 42 0.0000 N/A N/A N/A N/A 0.0010 23 0.0140 43 0.0000 N/A N/A N/A N/A 0.0011 25 0.0120 44 0.0000 N/A N/A N/A N/A 0.0011 26 0.0110 45 0.0000 N/A N/A N/A N/A 0.0011 26 0.0110 46 0.0000 N/A N/A N/A N/A 0.0011 26 0.0110 46 0.0000 N/A N/A N/A N/A 0.0012 27 0.0100 46 0.0000 N/A N/A N/A N/A 0.0012 27 0.0100 47 0.0000 N/A N/A N/A N/A 0.0013 28 0.0100 47 0.0000 N/A N/A N/A N/A 0.0015 30 & Above 0.0100 48 0.0000 N/A N/A N/A N/A 0.0015 30 & Above 0.0100 49 0.0000 N/A N/A N/A N/A 0.0015 50 0.0000 N/A N/A N/A N/A 0.0015 51 0.0000 N/A N/A N/A N/A 0.0015 52 0.0000 N/A N/A N/A N/A 0.0015 53 0.0000 N/A N/A N/A N/A 0.0015 54 0.0000 N/A N/A N/A N/A 0.0015 55 0.0300 N/A N/A N/A N/A 0.0021 56 0.0300 N/A N/A N/A N/A 0.0021 57 0.0300 N/A N/A N/A N/A 0.0026 57 0.0300 N/A N/A N/A N/A 0.0026 57 0.0300 N/A N/A N/A N/A 0.0033 60 0.0300 N/A N/A N/A N/A N/A 0.0036 61 0.0600 N/A N/A N/A N/A N/A 0.0036 61 0.0600 N/A N/A N/A N/A N/A 0.0044 62 0.1500 N/A N/A N/A N/A N/A 0.0056 65 0.3300 N/A N/A N/A N/A N/A 0.0056 66 0.33000 N/A N/A N/A N/A N/A 0.0056 67 0.3300 N/A N/A N/A N/A N/A 0.0056 66 0.33000 N/A N/A N/A N/A N/A N/A 0.0056 67 0.33000 N/A N/A N/A N/A N/A N/A 0.0056								
35								
36								
37 0.0000 N/A N/A N/A N/A 0.0007 19 0.0210 38 0.0000 N/A N/A N/A N/A 0.0008 20 0.0190 39 0.0000 N/A N/A N/A N/A 0.0008 21 0.0170 40 0.0000 N/A N/A N/A N/A 0.0009 22 0.0150 41 0.0000 N/A N/A N/A N/A 0.0010 23 0.0140 42 0.0000 N/A N/A N/A N/A 0.0010 24 0.0130 43 0.0000 N/A N/A N/A N/A 0.0011 25 0.0120 44 0.0000 N/A N/A N/A N/A 0.0011 25 0.0120 44 0.0000 N/A N/A N/A N/A 0.0011 26 0.0110 45 0.0000 N/A N/A N/A N/A 0.0012 27 0.0100 46 0.0000 N/A N/A N/A N/A 0.0012 27 0.0100 47 0.0000 N/A N/A N/A N/A 0.0013 28 0.0100 48 0.0000 N/A N/A N/A N/A 0.0014 29 0.0100 48 0.0000 N/A N/A N/A N/A 0.0015 30 & Above 0.0100 49 0.0000 N/A N/A N/A N/A 0.0015 30 & Above 0.0100 50 0.0000 N/A N/A N/A N/A 0.0016 50 0.0000 N/A N/A N/A N/A 0.0017 51 0.0000 N/A N/A N/A N/A 0.0017 51 0.0000 N/A N/A N/A N/A 0.0020 53 0.0000 N/A N/A N/A N/A 0.0020 53 0.0000 N/A N/A N/A N/A 0.0021 54 0.0000 N/A N/A N/A N/A 0.0021 55 0.0300 N/A N/A N/A N/A 0.0023 56 0.0300 N/A N/A N/A N/A 0.0023 57 0.0300 N/A N/A N/A N/A 0.0023 58 0.0300 N/A N/A N/A N/A 0.0023 59 0.0300 N/A N/A N/A N/A 0.0028 58 0.0300 N/A N/A N/A N/A 0.0028 59 0.0300 N/A N/A N/A N/A 0.0028 58 0.0300 N/A N/A N/A N/A 0.0028 59 0.0300 N/A N/A N/A N/A 0.0036 61 0.0600 N/A N/A N/A N/A 0.0044 63 0.1000 N/A N/A N/A N/A 0.0044 64 0.1500 N/A N/A N/A N/A 0.0044 65 0.3000 N/A N/A N/A N/A 0.0059 66 0.3000 N/A N/A N/A N/A N/A 0.0059 67 0.3000 N/A N/A N/A N/A N/A 0.0065								
38								
39								
40 0.0000 N/A N/A N/A N/A 0.0009 22 0.0150 41 0.0000 N/A N/A N/A N/A 0.0010 23 0.0140 42 0.0000 N/A N/A N/A N/A 0.0010 24 0.0130 43 0.0000 N/A N/A N/A N/A 0.0011 25 0.0120 44 0.0000 N/A N/A N/A N/A 0.0011 26 0.0110 45 0.0000 N/A N/A N/A N/A 0.0012 27 0.0100 46 0.0000 N/A N/A N/A N/A 0.0013 28 0.0100 47 0.0000 N/A N/A N/A N/A 0.0013 28 0.0100 48 0.0000 N/A N/A N/A N/A 0.0014 29 0.0100 48 0.0000 N/A N/A N/A N/A 0.0015 30 & Above 0.0100 49 0.0000 N/A N/A N/A N/A 0.0016 50 0.0000 N/A N/A N/A N/A 0.0016 50 0.0000 N/A N/A N/A N/A 0.0017 51 0.0000 N/A N/A N/A N/A 0.0017 51 0.0000 N/A N/A N/A N/A 0.0019 52 0.0000 N/A N/A N/A N/A 0.0019 52 0.0000 N/A N/A N/A N/A 0.0020 53 0.0000 N/A N/A N/A N/A 0.0020 53 0.0000 N/A N/A N/A N/A 0.0021 54 0.0000 N/A N/A N/A N/A 0.0021 55 0.0300 N/A N/A N/A N/A 0.0023 56 0.0300 N/A N/A N/A N/A 0.0023 57 0.0300 N/A N/A N/A N/A 0.0028 58 0.0300 N/A N/A N/A N/A 0.0028 58 0.0300 N/A N/A N/A N/A 0.0036 60 0.0300 N/A N/A N/A N/A 0.0036 61 0.0600 N/A N/A N/A N/A 0.0036 61 0.0600 N/A N/A N/A N/A 0.0044 63 0.1000 N/A N/A N/A N/A 0.0044 64 0.1500 N/A N/A N/A N/A 0.0049 64 0.1500 N/A N/A N/A N/A 0.0059 66 0.3000 N/A N/A N/A N/A 0.0059 66 0.3000 N/A N/A N/A N/A 0.0059 66 0.3000 N/A N/A N/A N/A N/A 0.0059 66 0.3000 N/A N/A N/A N/A N/A 0.0059 66 0.3000 N/A N/A N/A N/A N/A 0.0059 67 0.3000 N/A N/A N/A N/A N/A 0.0059 68 0.3000 N/A N/A N/A N/A N/A 0.0059								
41         0.0000         N/A         N/A         N/A         0.0010         23         0.0140           42         0.0000         N/A         N/A         N/A         0.0001         24         0.0130           43         0.0000         N/A         N/A         N/A         0.0011         25         0.0120           44         0.0000         N/A         N/A         N/A         0.0011         26         0.0110           45         0.0000         N/A         N/A         N/A         N/A         0.0013         28         0.0100           46         0.0000         N/A         N/A         N/A         N/A         0.0013         28         0.0100           47         0.0000         N/A         N/A         N/A         0.0014         29         0.0100           48         0.0000         N/A         N/A         N/A         0.0015         30 & Above         0.0100           49         0.0000         N/A         N/A         N/A         0.0015         30 & Above         0.0100           49         0.0000         N/A         N/A         N/A         0.0015         30 & Above         0.0100           50         <								
42         0.0000         N/A         N/A         N/A         0.0010         24         0.0130           43         0.0000         N/A         N/A         N/A         0.0011         25         0.0120           44         0.0000         N/A         N/A         N/A         0.0011         26         0.0110           45         0.0000         N/A         N/A         N/A         0.0012         27         0.0100           46         0.0000         N/A         N/A         N/A         0.0013         28         0.0100           47         0.0000         N/A         N/A         N/A         0.0014         29         0.0100           48         0.0000         N/A         N/A         N/A         0.0015         30 & Above         0.0100           49         0.0000         N/A         N/A         N/A         0.0016         50         0.0000         N/A         N/A         N/A         0.0016         50         0.0000         N/A         N/A         N/A         0.0017         51         0.0000         N/A         N/A         N/A         0.0019         52         0.0000         N/A         N/A         N/A         N/A         0.002								
43         0.0000         N/A         N/A         N/A         0.0011         25         0.0120           44         0.0000         N/A         N/A         N/A         0.0011         26         0.0110           45         0.0000         N/A         N/A         N/A         0.0012         27         0.0100           46         0.0000         N/A         N/A         N/A         N/A         0.0013         28         0.0100           47         0.0000         N/A         N/A         N/A         0.0014         29         0.0100           48         0.0000         N/A         N/A         N/A         0.0015         30 & Above         0.0100           49         0.0000         N/A         N/A         N/A         0.0016         30 & Above         0.0100           50         0.0000         N/A         N/A         N/A         0.0016         0.0100         0.0100         0.0010         0.0010         0.0010         0.0010         0.0010         0.0010         0.0010         0.0010         0.0010         0.0010         0.0010         0.0010         0.0010         0.0010         0.0010         0.0010         0.0010         0.0010         0.0010								
44         0.0000         N/A         N/A         N/A         0.0011         26         0.0110           45         0.0000         N/A         N/A         N/A         0.0012         27         0.0100           46         0.0000         N/A         N/A         N/A         0.0013         28         0.0100           47         0.0000         N/A         N/A         N/A         0.0014         29         0.0100           48         0.0000         N/A         N/A         N/A         0.0015         30 & Above         0.0100           49         0.0000         N/A         N/A         N/A         0.0017         N/A         0.0100           50         0.0000         N/A         N/A         N/A         0.0017         N/A         0.0100         N/A         N/A         0.0017         N/A         0.0017         N/A         0.0017         N/A         0.0017         N/A         0.0017         N/A         0.0017         N/A         0.0019         0.0017         N/A         0.0019         0.0019         0.0019         0.0019         0.0019         0.0019         0.0019         0.0019         0.0019         0.0019         0.0019         0.0019         0.001								
45         0.0000         N/A         N/A         N/A         0.0012         27         0.0100           46         0.0000         N/A         N/A         N/A         0.0013         28         0.0100           47         0.0000         N/A         N/A         N/A         N/A         0.0014         29         0.0100           48         0.0000         N/A         N/A         N/A         0.0015         30 & Above         0.0100           49         0.0000         N/A         N/A         N/A         0.0016         0.0100           50         0.0000         N/A         N/A         N/A         0.0017         0.0100           51         0.0000         N/A         N/A         N/A         0.0019         0.0100           52         0.0000         N/A         N/A         N/A         0.0019         0.021           53         0.0000         N/A         N/A         N/A         0.0021         0.021           54         0.0000         N/A         N/A         N/A         0.0023         0.0024           55         0.0300         N/A         N/A         N/A         0.0024         0.0024           56								
46       0.0000       N/A       N/A       N/A       0.0013       28       0.0100         47       0.0000       N/A       N/A       N/A       0.0014       29       0.0100         48       0.0000       N/A       N/A       N/A       0.0015       30 & Above       0.0100         49       0.0000       N/A       N/A       N/A       0.0017       N/A       0.0017         50       0.0000       N/A       N/A       N/A       0.0017       N/A       0.0017         51       0.0000       N/A       N/A       N/A       0.0019       N/A       N/A       0.0021         52       0.0000       N/A       N/A       N/A       0.0021       N/A       N/A       0.0021         54       0.0000       N/A       N/A       N/A       0.0023       N/A       N/A       N/A       0.0024         56       0.0300       N/A       N/A       N/A       N/A       0.0026       N/A       N/A       N/A       N/A       0.0026       N/A       N/A       N/A       0.0026       N/A       N/A       N/A       0.0026       N/A       N/A       N/A       N/A       0.0030       N/A								
47         0.0000         N/A         N/A         N/A         0.0014         29         0.0100           48         0.0000         N/A         N/A         N/A         N/A         0.0015         30 & Above         0.0100           49         0.0000         N/A         N/A         N/A         N/A         0.0016         0.0016         0.0000         N/A         N/A         N/A         0.0017 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>								
48							20	
49         0.0000         N/A         N/A         N/A         0.0016           50         0.0000         N/A         N/A         N/A         0.0017           51         0.0000         N/A         N/A         N/A         0.0019           52         0.0000         N/A         N/A         N/A         0.0020           53         0.0000         N/A         N/A         N/A         0.0021           54         0.0000         N/A         N/A         N/A         0.0023           55         0.0300         N/A         N/A         N/A         0.0024           56         0.0300         N/A         N/A         N/A         0.0026           57         0.0300         N/A         N/A         N/A         0.0028           58         0.0300         N/A         N/A         N/A         0.0030           59         0.0300         N/A         N/A         N/A         0.0033           60         0.0300         N/A         N/A         N/A         0.0036           61         0.0600         N/A         N/A         N/A         0.0044           62         0.1500         N/A         N/A								
50         0.0000         N/A         N/A         N/A         0.0017           51         0.0000         N/A         N/A         N/A         0.0019           52         0.0000         N/A         N/A         N/A         0.0020           53         0.0000         N/A         N/A         N/A         0.0021           54         0.0000         N/A         N/A         N/A         0.0023           55         0.0300         N/A         N/A         N/A         0.0024           56         0.0300         N/A         N/A         N/A         0.0026           57         0.0300         N/A         N/A         N/A         0.0028           58         0.0300         N/A         N/A         N/A         0.0030           59         0.0300         N/A         N/A         N/A         0.0033           60         0.0300         N/A         N/A         N/A         0.0036           61         0.0600         N/A         N/A         N/A         0.0040           62         0.1500         N/A         N/A         N/A         0.0044           63         0.1000         N/A         N/A							30 & ADOVE	0.0100
51         0.0000         N/A         N/A         N/A         0.0019           52         0.0000         N/A         N/A         N/A         0.0020           53         0.0000         N/A         N/A         N/A         0.0021           54         0.0000         N/A         N/A         N/A         0.0023           55         0.0300         N/A         N/A         N/A         0.0024           56         0.0300         N/A         N/A         N/A         0.0026           57         0.0300         N/A         N/A         N/A         0.0028           58         0.0300         N/A         N/A         N/A         0.0030           59         0.0300         N/A         N/A         N/A         0.0033           60         0.0300         N/A         N/A         N/A         0.0036           61         0.0600         N/A         N/A         N/A         N/A         0.0040           62         0.1500         N/A         N/A         N/A         N/A         0.0044           63         0.1000         N/A         N/A         N/A         N/A         0.0054           65								
52         0.0000         N/A         N/A         N/A         0.0020           53         0.0000         N/A         N/A         N/A         0.0021           54         0.0000         N/A         N/A         N/A         0.0023           55         0.0300         N/A         N/A         N/A         0.0024           56         0.0300         N/A         N/A         N/A         0.0026           57         0.0300         N/A         N/A         N/A         0.0028           58         0.0300         N/A         N/A         N/A         0.0030           59         0.0300         N/A         N/A         N/A         0.0036           61         0.0600         N/A         N/A         N/A         0.0040           62         0.1500         N/A         N/A         N/A         0.0044           63         0.1000         N/A         N/A         N/A         0.0049           64         0.1500         N/A         N/A         N/A         0.0059           66         0.3000         N/A         N/A         N/A         0.0065           67         0.3000         N/A         N/A								
53         0.0000         N/A         N/A         N/A         0.0021           54         0.0000         N/A         N/A         N/A         0.0023           55         0.0300         N/A         N/A         N/A         0.0024           56         0.0300         N/A         N/A         N/A         0.0026           57         0.0300         N/A         N/A         N/A         0.0028           58         0.0300         N/A         N/A         N/A         0.0030           59         0.0300         N/A         N/A         N/A         0.0033           60         0.0300         N/A         N/A         N/A         0.0036           61         0.0600         N/A         N/A         N/A         0.0040           62         0.1500         N/A         N/A         N/A         0.0044           63         0.1000         N/A         N/A         N/A         0.0049           64         0.1500         N/A         N/A         N/A         0.0054           65         0.3000         N/A         N/A         N/A         0.0065           67         0.3000         N/A         N/A								
54         0.0000         N/A         N/A         N/A         0.0023           55         0.0300         N/A         N/A         N/A         0.0024           56         0.0300         N/A         N/A         N/A         0.0026           57         0.0300         N/A         N/A         N/A         0.0030           58         0.0300         N/A         N/A         N/A         0.0033           59         0.0300         N/A         N/A         N/A         0.0033           60         0.0300         N/A         N/A         N/A         0.0036           61         0.0600         N/A         N/A         N/A         0.0040           62         0.1500         N/A         N/A         N/A         0.0044           63         0.1000         N/A         N/A         N/A         0.0049           64         0.1500         N/A         N/A         N/A         0.0054           65         0.3000         N/A         N/A         N/A         0.0065           67         0.3000         N/A         N/A         N/A         N/A         0.0076           69         0.3000         N/A								
55         0.0300         N/A         N/A         N/A         0.0024           56         0.0300         N/A         N/A         N/A         0.0026           57         0.0300         N/A         N/A         N/A         0.0028           58         0.0300         N/A         N/A         N/A         0.0030           59         0.0300         N/A         N/A         N/A         0.0033           60         0.0300         N/A         N/A         N/A         0.0036           61         0.0600         N/A         N/A         N/A         0.0040           62         0.1500         N/A         N/A         N/A         0.0044           63         0.1000         N/A         N/A         N/A         0.0049           64         0.1500         N/A         N/A         N/A         0.0054           65         0.3000         N/A         N/A         N/A         0.0059           66         0.3000         N/A         N/A         N/A         0.0070           68         0.3000         N/A         N/A         N/A         N/A         0.0081								
56         0.0300         N/A         N/A         N/A         0.0026           57         0.0300         N/A         N/A         N/A         0.0028           58         0.0300         N/A         N/A         N/A         0.0030           59         0.0300         N/A         N/A         N/A         0.0033           60         0.0300         N/A         N/A         N/A         0.0036           61         0.0600         N/A         N/A         N/A         0.0040           62         0.1500         N/A         N/A         N/A         0.0044           63         0.1000         N/A         N/A         N/A         0.0049           64         0.1500         N/A         N/A         N/A         0.0054           65         0.3000         N/A         N/A         N/A         0.0059           66         0.3000         N/A         N/A         N/A         0.0070           68         0.3000         N/A         N/A         N/A         0.0076           69         0.3000         N/A         N/A         N/A         0.0081								
57         0.0300         N/A         N/A         N/A         0.0028           58         0.0300         N/A         N/A         N/A         0.0030           59         0.0300         N/A         N/A         N/A         0.0033           60         0.0300         N/A         N/A         N/A         0.0036           61         0.0600         N/A         N/A         N/A         0.0040           62         0.1500         N/A         N/A         N/A         0.0044           63         0.1000         N/A         N/A         N/A         0.0049           64         0.1500         N/A         N/A         N/A         0.0054           65         0.3000         N/A         N/A         N/A         0.0059           66         0.3000         N/A         N/A         N/A         0.0065           67         0.3000         N/A         N/A         N/A         0.0070           68         0.3000         N/A         N/A         N/A         0.0081								
58         0.0300         N/A         N/A         N/A         0.0030           59         0.0300         N/A         N/A         N/A         0.0033           60         0.0300         N/A         N/A         N/A         0.0036           61         0.0600         N/A         N/A         N/A         0.0040           62         0.1500         N/A         N/A         N/A         0.0044           63         0.1000         N/A         N/A         N/A         0.0049           64         0.1500         N/A         N/A         N/A         0.0054           65         0.3000         N/A         N/A         N/A         0.0059           66         0.3000         N/A         N/A         N/A         0.0065           67         0.3000         N/A         N/A         N/A         0.0070           68         0.3000         N/A         N/A         N/A         N/A         0.0081								
59         0.0300         N/A         N/A         N/A         0.0033           60         0.0300         N/A         N/A         N/A         0.0036           61         0.0600         N/A         N/A         N/A         0.0040           62         0.1500         N/A         N/A         N/A         0.0044           63         0.1000         N/A         N/A         N/A         0.0049           64         0.1500         N/A         N/A         N/A         0.0054           65         0.3000         N/A         N/A         N/A         0.0059           66         0.3000         N/A         N/A         N/A         0.0065           67         0.3000         N/A         N/A         N/A         0.0070           68         0.3000         N/A         N/A         N/A         0.0076           69         0.3000         N/A         N/A         N/A         N/A         0.0081								
60       0.0300       N/A       N/A       N/A       0.0036         61       0.0600       N/A       N/A       N/A       0.0040         62       0.1500       N/A       N/A       N/A       0.0044         63       0.1000       N/A       N/A       N/A       0.0049         64       0.1500       N/A       N/A       N/A       0.0054         65       0.3000       N/A       N/A       N/A       0.0059         66       0.3000       N/A       N/A       N/A       0.0065         67       0.3000       N/A       N/A       N/A       0.0070         68       0.3000       N/A       N/A       N/A       0.0076         69       0.3000       N/A       N/A       N/A       0.0081								
61 0.0600 N/A N/A N/A 0.0040 62 0.1500 N/A N/A N/A 0.0044 63 0.1000 N/A N/A N/A 0.0049 64 0.1500 N/A N/A N/A 0.0054 65 0.3000 N/A N/A N/A 0.0059 66 0.3000 N/A N/A N/A 0.0065 67 0.3000 N/A N/A N/A 0.0070 68 0.3000 N/A N/A N/A 0.0076 69 0.3000 N/A N/A N/A 0.0076								
62       0.1500       N/A       N/A       N/A       0.0044         63       0.1000       N/A       N/A       N/A       0.0049         64       0.1500       N/A       N/A       N/A       0.0054         65       0.3000       N/A       N/A       N/A       0.0059         66       0.3000       N/A       N/A       N/A       0.0065         67       0.3000       N/A       N/A       N/A       0.0070         68       0.3000       N/A       N/A       N/A       0.0076         69       0.3000       N/A       N/A       N/A       0.0081								
63       0.1000       N/A       N/A       N/A       0.0049         64       0.1500       N/A       N/A       N/A       0.0054         65       0.3000       N/A       N/A       N/A       0.0059         66       0.3000       N/A       N/A       N/A       0.0065         67       0.3000       N/A       N/A       N/A       0.0070         68       0.3000       N/A       N/A       N/A       0.0076         69       0.3000       N/A       N/A       N/A       0.0081								
64 0.1500 N/A N/A N/A 0.0054 65 0.3000 N/A N/A N/A 0.0059 66 0.3000 N/A N/A N/A 0.0065 67 0.3000 N/A N/A N/A 0.0070 68 0.3000 N/A N/A N/A 0.0076 69 0.3000 N/A N/A N/A 0.0081								
65 0.3000 N/A N/A N/A 0.0059 66 0.3000 N/A N/A N/A 0.0065 67 0.3000 N/A N/A N/A 0.0070 68 0.3000 N/A N/A N/A 0.0076 69 0.3000 N/A N/A N/A 0.0081								
66 0.3000 N/A N/A N/A 0.0065 67 0.3000 N/A N/A N/A 0.0070 68 0.3000 N/A N/A N/A 0.0076 69 0.3000 N/A N/A N/A 0.0081								
67 0.3000 N/A N/A N/A 0.0070 68 0.3000 N/A N/A N/A 0.0076 69 0.3000 N/A N/A N/A 0.0081								
68 0.3000 N/A N/A N/A 0.0076 69 0.3000 N/A N/A N/A 0.0081								
69 0.3000 N/A N/A N/A 0.0081								
70 1.0000 N/A N/A N/A 0.0000								
	70	1.0000	N/A	N/A	N/A	0.0000		



Table A-9: Rate of Separation From Active Service General Plan 3 – Female

Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	N/A	N/A	N/A	0.0002	0	0.1200
19	0.0000	N/A	N/A	N/A	0.0002	1	0.1000
20	0.0000	N/A	N/A	N/A	0.0002	2	0.0850
21	0.0000	N/A	N/A	N/A	0.0002	3	0.0750
22	0.0000	N/A	N/A	N/A	0.0002	4	0.0700
23	0.0000	N/A	N/A	N/A	0.0002	5	0.0633
24	0.0000	N/A	N/A	N/A	0.0002	6	0.0567
25	0.0000	N/A	N/A	N/A	0.0002	7	0.0500
26	0.0000	N/A	N/A	N/A	0.0002	8	0.0455
27	0.0000	N/A	N/A	N/A	0.0002	9	0.0410
28	0.0000	N/A	N/A	N/A	0.0002	10	0.0365
29	0.0000	N/A	N/A	N/A	0.0002	11	0.0320
30	0.0000	N/A	N/A	N/A	0.0002	12	0.0275
31	0.0000	N/A	N/A	N/A	0.0002	13	0.0270
32	0.0000	N/A	N/A	N/A	0.0002	14	0.0265
33	0.0000	N/A	N/A	N/A	0.0003	15	0.0260
34	0.0000	N/A	N/A	N/A	0.0003	16	0.0255
35	0.0000	N/A	N/A	N/A	0.0003	17	0.0250
36	0.0000	N/A	N/A	N/A	0.0004	18	0.0230
37	0.0000	N/A	N/A	N/A	0.0004	19	0.0210
38	0.0000	N/A	N/A	N/A	0.0005	20	0.0190
39	0.0000	N/A	N/A	N/A	0.0005	21	0.0170
40	0.0000	N/A	N/A	N/A	0.0006	22	0.0170
41	0.0000	N/A	N/A	N/A	0.0006	23	0.0140
42	0.0000	N/A	N/A	N/A	0.0006	24	0.0130
43	0.0000	N/A	N/A	N/A	0.0007	25	0.0120
44	0.0000	N/A	N/A	N/A	0.0007	26	0.0110
45	0.0000	N/A	N/A	N/A	0.0009	27	0.0110
46	0.0000	N/A	N/A	N/A	0.0009	28	0.0100
47	0.0000	N/A	N/A	N/A	0.0009	29	0.0100
48	0.0000	N/A	N/A	N/A	0.0010	30 & Above	0.0100
49	0.0000	N/A	N/A	N/A	0.0011	30 & Above	0.0100
50	0.0000	N/A	N/A	N/A	0.0012		
51	0.0000	N/A	N/A	N/A	0.0013		
52	0.0000	N/A	N/A	N/A	0.0014		
53	0.0000	N/A	N/A	N/A	0.0017		
54	0.0000	N/A	N/A	N/A	0.0017		
55	0.0400	N/A	N/A	N/A	0.0010		
56	0.0400	N/A	N/A	N/A	0.0020		
57	0.0400	N/A	N/A	N/A	0.0021		
58	0.0400	N/A	N/A	N/A	0.0025		
59	0.0400	N/A	N/A	N/A	0.0028		
60	0.0400	N/A	N/A	N/A N/A	0.0028		
61	0.0600	N/A	N/A	N/A	0.0033		
62	0.1500	N/A	N/A	N/A N/A	0.0036		
63	0.1000	N/A	N/A	N/A	0.0039		
64	0.1500	N/A N/A	N/A	N/A N/A	0.0039		
65	0.3000	N/A N/A	N/A N/A	N/A N/A	0.0043		
66	0.3000	N/A N/A	N/A N/A	N/A N/A	0.0047		
67	0.3000	N/A N/A	N/A N/A		0.0054		
68	0.3000	N/A N/A	N/A N/A	N/A N/A	0.0054		
	0.3000	N/A N/A	N/A N/A	N/A N/A	0.0058		
69 70	1.0000		N/A N/A	N/A N/A	0.0062		
70	1.0000	N/A	IN/A	IN/A	0.0000		



Table A-10: Rate of Separation From Active Service Safety & Probation Plans – Male

A	Plans 1, 2, 4 Service Retirement*	Plans 5, 6, 7 Service Retirement**	Service Disability	Ordinary	Service Death	Ordinary Death	Years of Service	Other Terminations
Age	Retirement	Ketirement	Disability	Disability	Death	Death	Service	reminations
18	0.0000	0.0000	0.0017	0.0000	0.0010	0.0003	0	0.0700
19	0.0000	0.0000	0.0017	0.0000	0.0010	0.0003	1	0.0650
20	0.0000	0.0000	0.0017	0.0000	0.0010	0.0003	2	0.0450
21	0.0000	0.0000	0.0017	0.0000	0.0010	0.0003	3	0.0300
22	0.0000	0.0000	0.0017	0.0000	0.0010	0.0003	4	0.0250
23	0.0000	0.0000	0.0017	0.0000	0.0010	0.0003	5	0.0233
24	0.0000	0.0000	0.0017	0.0000	0.0010	0.0004	6	0.0217
25	0.0000	0.0000	0.0017	0.0000	0.0010	0.0004	7	0.0200
26	0.0000	0.0000	0.0017	0.0000	0.0010	0.0004	8	0.0185
27	0.0000	0.0000	0.0017	0.0000	0.0010	0.0004	9	0.0170
28	0.0000	0.0000	0.0018	0.0000	0.0010	0.0004	10	0.0155
29	0.0000	0.0000	0.0019	0.0000	0.0010	0.0004	11	0.0140
30	0.0000	0.0000	0.0020	0.0000	0.0010	0.0004	12	0.0125
31	0.0000	0.0000	0.0021	0.0000	0.0010	0.0004	13	0.0120
32	0.0000	0.0000	0.0022	0.0000	0.0010	0.0004	14	0.0115
33	0.0000	0.0000	0.0023	0.0000	0.0010	0.0004	15	0.0110
34	0.0000	0.0000	0.0024	0.0000	0.0010	0.0005	16	0.0105
35	0.0000	0.0000	0.0025	0.0000	0.0010	0.0006	17	0.0100
36	0.0000	0.0000	0.0026	0.0000	0.0010	0.0006	18	0.0080
37	0.0000	0.0000	0.0028	0.0000	0.0010	0.0007	19	0.0060
38	0.0000	0.0000	0.0029	0.0000	0.0010	0.0008	20 & Above	0.0000
39	0.0000	0.0000	0.0030	0.0000	0.0010	0.0008		
40	0.0000	0.0000	0.0031	0.0000	0.0010	0.0009		
41	0.0000	0.0000	0.0032	0.0000	0.0010	0.0010		
42	0.0000	0.0000	0.0033	0.0000	0.0010	0.0010		
43	0.0000	0.0000	0.0034	0.0000	0.0010	0.0011		
44	0.0000	0.0000	0.0036	0.0000	0.0010	0.0011		
45	0.0000	0.0000	0.0037	0.0000	0.0010	0.0012		
46	0.0000	0.0000	0.0039	0.0000	0.0010	0.0013		
47	0.0000	0.0000	0.0040	0.0000	0.0010	0.0014		
48	0.0000	0.0000	0.0046	0.0000	0.0010	0.0015		
49	0.0000	0.0000	0.0052	0.0000	0.0010	0.0016		
50	0.1500	0.0500	0.0058	0.0000	0.0010	0.0017		
51	0.1250	0.0500	0.0064	0.0000	0.0010	0.0019		
52	0.1500	0.0500	0.0070	0.0000	0.0010	0.0020		
53	0.2000	0.0500	0.0082	0.0000	0.0010	0.0021		
54	0.1300	0.1000	0.0095	0.0000	0.0010	0.0023		
55	0.2750	0.2750	0.0107	0.0000	0.0010	0.0024		
56	0.2500	0.2750	0.0120	0.0000	0.0010	0.0026		
57	0.1700	0.2750	0.0132	0.0000	0.0010	0.0028		
58	0.2000	0.2750	0.0119	0.0000	0.0010	0.0030		
59	0.2500	0.2750	0.0106	0.0000	0.0010	0.0033		
60	1.0000	1.0000	0.0000	0.0000	0.0000	0.0000		

<sup>\* 100%</sup> probability of retirement is assumed at ages 50 and above with 33 or more years of service for Safety and Probation Plans 1, 2, and 4.



<sup>\*\* 100%</sup> probability of retirement is assumed at ages 55 and above with 33 or more years of service for Safety and Probation Plan 5, ages 55 and above with 38 or more years of service for Safety and Probation Plan 6, and ages 57 and above with 38 or more years of service for Safety and Probation Plan 7.

Table A-11: Rate of Separation From Active Service Safety & Probation Plans – Female

Age	Plans 1, 2, 4 Service Retirement*	Plans 5, 6, 7 Service Retirement**	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	0.0000	0.0017	0.0000	0.0010	0.0002	0	0.0700
19	0.0000	0.0000	0.0017	0.0000	0.0010	0.0002	1	0.0650
20	0.0000	0.0000	0.0017	0.0000	0.0010	0.0002	2	0.0450
21	0.0000	0.0000	0.0017	0.0000	0.0010	0.0002	2 3	0.0300
22	0.0000	0.0000	0.0017	0.0000	0.0010	0.0002	4	0.0250
23	0.0000	0.0000	0.0017	0.0000	0.0010	0.0002	5	0.0233
24	0.0000	0.0000	0.0017	0.0000	0.0010	0.0002	6	0.0217
25	0.0000	0.0000	0.0017	0.0000	0.0010	0.0002	7	0.0200
26	0.0000	0.0000	0.0017	0.0000	0.0010	0.0002	8	0.0185
27	0.0000	0.0000	0.0017	0.0000	0.0010	0.0002	9	0.0170
28	0.0000	0.0000	0.0018	0.0000	0.0010	0.0002	10	0.0155
29	0.0000	0.0000	0.0019	0.0000	0.0010	0.0002	11	0.0140
30	0.0000	0.0000	0.0020	0.0000	0.0010	0.0002	12	0.0125
31	0.0000	0.0000	0.0021	0.0000	0.0010	0.0002	13	0.0120
32	0.0000	0.0000	0.0022	0.0000	0.0010	0.0002	14	0.0115
33	0.0000	0.0000	0.0023	0.0000	0.0010	0.0003	15	0.0110
34	0.0000	0.0000	0.0024	0.0000	0.0010	0.0003	16	0.0105
35	0.0000	0.0000	0.0025	0.0000	0.0010	0.0003	17	0.0100
36	0.0000	0.0000	0.0026	0.0000	0.0010	0.0004	18	0.0080
37	0.0000	0.0000	0.0028	0.0000	0.0010	0.0004	19	0.0060
38	0.0000	0.0000	0.0029	0.0000	0.0010	0.0005	20 & Above	0.0000
39	0.0000	0.0000	0.0030	0.0000	0.0010	0.0005		
40	0.0000	0.0000	0.0031	0.0000	0.0010	0.0006		
41	0.0000	0.0000	0.0032	0.0000	0.0010	0.0006		
42	0.0000	0.0000	0.0033	0.0000	0.0010	0.0006		
43	0.0000	0.0000	0.0034	0.0000	0.0010	0.0007		
44	0.0000	0.0000	0.0036	0.0000	0.0010	0.0008		
45	0.0000	0.0000	0.0037	0.0000	0.0010	0.0009		
46	0.0000	0.0000	0.0039	0.0000	0.0010	0.0009		
47	0.0000	0.0000	0.0040	0.0000	0.0010	0.0010		
48	0.0000	0.0000	0.0046	0.0000	0.0010	0.0011		
49	0.0000	0.0000	0.0052	0.0000	0.0010	0.0012		
50	0.1500	0.0500	0.0058	0.0000	0.0010	0.0013		
51	0.1250	0.0500	0.0064	0.0000	0.0010	0.0014		
52	0.1500	0.0500	0.0070	0.0000	0.0010	0.0016		
53	0.2000	0.0500	0.0082	0.0000	0.0010	0.0017		
54	0.1300	0.1000	0.0095	0.0000	0.0010	0.0018		
55	0.2750	0.2750	0.0107	0.0000	0.0010	0.0020		
56	0.2500	0.2750	0.0120	0.0000	0.0010	0.0021		
57	0.1700	0.2750	0.0132	0.0000	0.0010	0.0023		
58	0.2000	0.2750	0.0119	0.0000	0.0010	0.0025		
59	0.2500	0.2750	0.0106	0.0000	0.0010	0.0028		
60	1.0000	1.0000	0.0000	0.0000	0.0000	0.0000		

<sup>\* 100%</sup> probability of retirement is assumed at ages 50 and above with 33 or more years of service.



<sup>\*\* 100%</sup> probability of retirement is assumed at ages 55 and above with 33 or more years of service for Safety and Probation Plan 5, ages 55 and above with 38 or more years of service for Safety and Probation Plan 6, and ages 57 and above with 38 or more years of service for Safety and Probation Plan 7.

## Appendix B: Summary of Benefit Provisions



All actuarial calculations are based on our understanding of the statutes governing the SamCERA as contained in the County Employees Retirement Law (CERL) of 1937, with provisions adopted by the SamCERA Board, effective through June 30, 2014. The benefit and contribution provisions of this law are summarized briefly below, along with corresponding references to the Code Section. This summary does not attempt to cover all the detailed provisions of the law.

### **MEMBERSHIP IN RETIREMENT PLANS**

The County has established 12 defined benefit plans based on a member's date of entry into SamCERA. Plans 1, 2, 4, 5, 6, and 7 are open to all members depending on their date of entry. Only General members are eligible for Plan 3.

Government Code Section

Employees of the Mosquito and Vector Control District are eligible for participation in all General retirement plans, except for Plan 3.

- **Plan 1:** Employees hired on or before July 6, 1980.
- **Plan 2:** Employees hired after July 6, 1980 but on or before July 12, 1997.
- Plan 3: General members hired on or before December 22, 2012 may elect to participate in Plan 3. After five years of service, Plan 3 members can elect membership under the open contributory plan. Members currently working in a contributory plan with Plan 3 service may purchase an upgrade of their Plan 3 service.

(31496)

- Plan 4: Employees hired after July 12, 1997 and before August 7, 2011 (General members, except Plan 5 transfers; see below); before July 10, 2011 (Probation members); and before January 8, 2012 (Safety members).
- Plan 5: General members hired on or after August 7, 2011, and Deputy Sheriffs hired on or after January 8, 2012. Probation members hired on or after July 10, 2011 and Safety members (except Deputy Sheriffs) hired on or after January 8, 2012 may elect this Plan. Members must be first hired before January 1, 2013 to be eligible to elect this Plan.

After 10 years of service, General Plan 5 members can elect to transfer to Plan 4 and must pay the total actuarial equivalent cost of the increase in past service benefits at the date of transfer.

- Plan 6: Probation members hired on or after July 10, 2011 and Safety members (except Deputy Sheriffs) hired on or after January 8, 2012 may elect this Plan. Members must be first hired before January 1, 2013 to be eligible to elect this Plan.
- **Plan 7:** Employees first hired on or after January 1, 2013.



(31625.2.

31664.1)

### **MEMBER CONTRIBUTIONS**

#### Basic:

Plans 1, 2, 4, 5, & 6:

Contributions are based on the entry age and class of each member and are required of all members. See section 5 for details on this calculation. Current member rates are shown in Appendix D.

Contributions cease when general members are credited with 30 years of service in a contributory plan provided they were members of SamCERA or a reciprocal system on March 7, 1973, and continuously thereafter. All safety members are eligible for the 30-year cessation of contributions. This provision does not apply to cost-sharing contributions.

Plan 7: Members contribute 50% of the aggregate Normal Cost

rate for their Plan.

Plan 3: No member contributions are required under Plan 3.

**Cost-of-Living:** 

Plans 1, 2, & 4: Members of the California Nurses Association (CNA), the

Union of American Physicians and Dentists (UAPD), and

the Probation and Detention Association (PDA) in Plans 1, 2, and 4 contribute 25% of the cost of the COLA.

in addition to other current member rates and cost

sharing.

General members (County and Courts) who rehire on or after August 7, 2011, Probation members who rehire on or after July 10, 2011, and Safety members who rehire on or after January 8, 2012 into Plans 1, 2, and 4 contribute 50% of the cost of COLA, in addition to other current member rates and cost sharing.

...e....g.

COLA benefit.

Plans 5 & 6: All members of Plans 5 and 6 contribute 50% of the cost

of the COLA, in addition to other current member rates

No other Plan 1, 2 & 4 members contribute towards the

and cost sharing.

Plan 7: Members contribute 50% of the aggregate Normal Cost

rate for their Plan.



## **MEMBER CONTRIBUTIONS** (Continued)

**Cost Sharing:** 

**General Members:** All members of Plans 1, 2, and 4 (except SMCM&VCD)

(31678.2)

contribute an additional 3.0% for cost sharing.

All other General members do not participate in cost

sharing.

**Safety Members:** Deputy Sheriffs in Plans 1, 2, 4, and 5 contribute the

following additional cost sharing rates based on age and

service:

If age 45 or older 4.5%

If age is less than 45

Service is less than 5 years: 3.0%
Service between 5 & 15 years: 3.5%
Service is more than 15 years 4.5%

Safety members (except Deputy Sheriffs) in Plans 1, 2, and 4 contribute an additional 5.0% cost sharing.

Safety members (except Deputy Sheriffs) in Plan 5 contribute an additional 4.0% cost sharing.

Safety members in Plan 6 and 7 do not participate in cost

sharing.

**Probation Members:** Members of Plans 1, 2, 4, and 5 contribute an additional

3.5% for cost sharing.

Members of Plans 6 and 7 do not participate in cost

sharing.

**Interest Crediting:** Interest is credited to contributions semiannually on

June 30 and December 31 at an interest rate set by the

Board of Retirement on amounts that have been on

deposit for at least six months.



(31591, 31700)

(31581.2)

(31678.2)

(31639.85)

### **MEMBER CONTRIBUTIONS** (Continued)

### **Employer Pick-Up:**

General members: The County provides a variety of refundable service-

based employer pick-up of contribution programs for

members in several of its unions.

Employer rates have not been adjusted to reflect the payment of the refundable employer pick-up of member contributions programs because the county payroll system captures these costs on a pay-as-you-go basis while processing each individual's biweekly pay.

Safety members: The County provides a variety of refundable service-

based employer pick-up of contribution programs for

members in several of its unions.

Employer rates have not been adjusted to reflect the payment of the refundable employer pick-up of member contributions programs because the county payroll system captures these costs on a pay-as-you-go basis while processing each individual's biweekly pay.

Probation members: The County provides a variety of refundable service-

based employer pick-up of contribution programs for

members in several of its unions.

Employer rates have been adjusted to reflect the 20% non-refundable County pick-up, effective April 2006.

### **EMPLOYER CONTRIBUTIONS**

The employer (County or district) contributes to the retirement fund a percent of the total compensation provided for all members based on an actuarial investigation, valuation and recommendation of the actuary.

(31453, 31453.5, 31453.6, 31454 31581)



(31672)

(31496)

(31663.25)

### **SERVICE RETIREMENT ALLOWANCE**

: -	.: .	31	1:4-	
IIC	ШО	Ш	lity	/:

**General Members:** All members of Plans 1, 2, 4, and 5 are eligible to retire

after meeting one of the following age and service

requirements:

Age 50 with 10 years of service\*;

Any age with 30 years of service; or

Age 70 regardless of service.

Plan 3 members are eligible to retire at age 65 with 10

years of service. A reduced benefit is also payable at

age 55 with 10 years of service.

Plan 7 members are eligible to retire at age 52 with 5

years of service.

Safety and **Probation** Members:

Members of all plans except Plan 7 are eligible to retire

after meeting one of the following age and service

requirements:

Age 50 with 10 years of service;

Any age with 20 years of service.

Plan 7 members are eligible to retire at age 50 with 5

years of service.

\* For part-time employees, age 50 is replaced with age 55. (31672.1)

**Final** 

Compensation:

Plans 1 & 2: Monthly average of a member's highest 12 consecutive (31462.1)

months of compensation.

All other Plans: Monthly average of a member's highest compensation

during any three years. Years do not have to be

consecutive, except for Plan 7.

[31462,

(31671)

31496.3(d)]

Compensation

Limit:

All Plans, except

Plan 7:

The amount of compensation that is taken into account in

computing benefits payable to any person who first

becomes a member on or after July 1, 1996, shall not exceed the dollar limitations in Section 401(a)(17) of Title

26 of the US Code.



### **SERVICE RETIREMENT ALLOWANCE** (Continued)

#### Plan 7:

The amount of compensation taken into account shall not exceed the following applicable percentage of the Social Security Taxable Wage Base:

- 100% for a member covered by Social Security (County and Courts General members);
- 120% for a member not covered by Social Security (all other members).

The amount of compensation taken into account shall be adjusted based on changes in the Consumer Price Index for All Urban Consumers. Adjustments shall be effective annually on January 1.

### Monthly

## Allowance:

Plans 1, 2, 4, & 5: General members: (31676.14)

1/60 x Final Compensation x General age factor x years

(31676.1)

of service.

Safety & Probation members:

(31664.1)

3% x Final Compensation x Safety age factor x years of (31664.2)

service.

Plan 6: Safety & Probation members: (31664)

2% x Final Compensation x Safety age factor x years of

service.

Plan 7: General members:

2% x Final Compensation x General age factor x years of

service.

Safety and Probation members:

2% x Final Compensation x Safety age factor x years of

service.



### **SERVICE RETIREMENT ALLOWANCE** (Continued)

### Plan 3: General members: (a)+(b)-(c) where:

(31496)

- (a) 2% x Final Compensation x (Years of Service, (up to 35 years), plus
- (b) 1% x Final Compensation x Years of Service in excess of 35 (up to 10)
- (c) Estimated Primary Insurance Amount (PIA) x Years of Covered Service (up to 35) divided by 35.

The PIA is calculated based on certain assumptions specified by statute, and an assumed Social Security retirement age of 65.

If retirement occurs prior to age 65, benefit amount is adjusted by an actuarial equivalent factor (see Sample Plan Age Factors).

## Percentage of Final Average Compensation at Sample Ages:

Plan	Age 50	Age 55	Age 60	Age 65	
County General 1,2&4	1.475%	1.948%	2.440%	2.611%	(31676.14)
SMCM&VCD*	1.475%	1.948%	2.440%	2.611%	(31676.14)
General Plan 3**	N/A	0.780%	1.220%	2.000%	(31496)
General Plan 5	1.182%	1.492%	1.917%	2.432%	(31676.1)
General Plan 7	N/A	1.300%	1.800%	2.300%	
Safety/Probation 1,2,&4	3.000%	3.000%	3.000%	3.000%	(31664.1)
Safety/Probation Plan 5	2.290%	3.000%	3.000%	3.000%	(31664.2)
Safety/Probation Plan 6	2.000%	2.620%	2.620%	2.620%	(31664)
Safety/Probation Plan 7	2.000%	2.500%	2.700%	2.700%	

<sup>\*</sup> As of the June 30, 2010 actuarial valuation, SMCM&VCD has adopted the same benefit structure as County General.



<sup>\*\*</sup> Prior to reduction for PIA benefit. Actual percentage will be less.

### **SERVICE RETIREMENT ALLOWANCE** (Continued)

<u>Maximum</u>

Allowance:

**All Plans Except 3:** Allowance may not exceed 100% of final compensation.

**Plan 3:** The sum of the normal retirement allowance and the

(31496)

estimated PIA cannot exceed 70% of Final Compensation for a member with 35 or less years of service, and cannot exceed 80% of Final Compensation if service exceeds 35

years.

**Unmodified Retirement Allowance (Normal Form):** 

All Plans Except 3: Life Annuity payable to retired member with 60%

(31760.1)

Plan 3: Life Annuity payable to retired member with 50%

continuance to an eligible survivor (or eligible children).

continuance to an eligible survivor (or eligible children).

(31497.71)

Eligible survivor includes certain domestic partners.

(31780.2)

**Optional Retirement Allowance:** 

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

**Option 1:** Member's allowance is reduced to pay a cash refund of

(31761)

any unpaid annuity payments (up to the amount of the member's contributions at retirement) to the member's estate or to a beneficiary having an insurable interest in

the life of the member.

**Option 2:** 100% of member's reduced allowance is payable to an

(31762)

eligible survivor or beneficiary having an insurable

interest in the life of the member.

**Option 3:** 50% of member's reduced allowance is payable to an

(31763)

eligible survivor or beneficiary having an insurable

interest in the life of the member.

**Option 4:** Other % of member's reduced allowance is payable to an

(31764)

eligible survivor or beneficiary(ies) having an insurable

interest in the life of the member.

For Options 2, 3 or 4, the continuance will not be paid if the member revokes their election and names another beneficiary after retirement.

(31782)

(31600)

All Allowances: All allowances are made on a pro rata basis (based on

the number of days in that month) if not in effect for the entire month of retirement. For deaths that occur mid-

month, the full month's payment is made.



### SERVICE-CONNECTED DISABILITY RETIREMENT ALLOWANCE

**Eligibility:** 

**All Plans Except 3:** Any age or years of service; disability must result from

occupational injury or disease, and member must be permanently incapacitated for the performance of duty.

31720.6. 31720.7, 31720.9)

(31720,

31720.5,

Plan 3: Not available under Plan 3. (31487)

Monthly Allowance: Greater of (1) 50% of final compensation, and (2) the

service retirement allowance, if eligible to retire.

(31727.4)

**Normal Form Of** Payment:

Life Annuity with 100% continuance to a surviving spouse (or eligible children).

(31760, 31786)

### RECIPROCAL SERVICE-CONNECTED DISABILITY ALLOWANCE

**Eligibility:** 

All Plans Except 3: Any member regardless of age or years of service who (31837)

> leaves their accumulated contributions on deposit and receives a disability retirement allowance from CalPERS or another '37 Act system. The member must be eligible for a reciprocal benefit and the disability must be service-

connected.

Plan 3: Not available under Plan 3.

**Monthly Allowance:** Same as nonservice-connected disability, but in no case (31837,

shall the allowance be greater than if all service was with 31838.5)

one entity.

**Normal Form of** 

Payment: (or eligible children).

Life Annuity with 100% continuance to a surviving spouse (31760, 31786)



### NONSERVICE-CONNECTED DISABILITY RETIREMENT ALLOWANCE

**Eligibility:** 

**All Plans Except 3:** Any age with five years of service and permanently

incapacitated for the performance of duty.

(31720, 31836)

Plan 3: Not available under Plan 3.

(31487)

(31726,

**Monthly Allowance:** The monthly allowance is equal to a service retirement

SE

allowance if the member is eligible to retire, otherwise

allowance equals (a) or (b) where:

31726.5)

**General Members:** 

(a) 90% of 1/60th of Final Compensation x years of service, if member must rely on service in another retirement system in order to be eligible to retire, or (31727(a))

allowance exceeds 1/3 of final compensation.

(b) 90% of 1/60th of Final Compensation x years of

service projected to age 65, not to exceed 1/3 of Final

(31727(b))

Compensation.

**Safety Members:** 1/60 is replaced by 1/50 and age 65 is replaced by age

(31727.2)

55 in (a) and (b) above.

**Normal Form Of** 

Payment:

Life Annuity with 60% continuance to a surviving spouse

(or eligible children).

(31760.1)

### **SERVICE-CONNECTED DEATH BENEFITS**

**Eligibility** 

All Plans Except 3: Active members who die in service as a result of injury or

(31787)

disease arising out of and in the course of employment.

Plan 3: Not available under Plan 3.

(31487)

(31787)

**Monthly Allowance**: An annual death allowance is payable monthly to an

eligible survivor (or eligible children) equal to 50% of the

member's Final Compensation.



## **SERVICE-CONNECTED DEATH BENEFITS (Continued)**

### **Optional Combined Benefit:**

(31781.3)

In lieu of the monthly allowance above, an eligible survivor may elect:

- (a) A lump sum equal to 1/12 of the compensation earned in the preceding 12 months x years of service (benefit not to exceed 50% of the 12 months' compensation), plus
- (b) A monthly payment equal to 50% of the member's Final Compensation, reduced by a monthly amount, which is the actuarial equivalent of (a) above based on the age of eligible survivor.

## Death Benefit (Lump Sum):

(31781)

The member's normal contributions and interest, plus 1/12 of the compensation earned in the preceding 12 months x years of service (benefit not to exceed 50% of the 12 months' compensation).

#### Additional Allowance for Children:

(31787.5)

25% of death allowance (whether or not the monthly allowance or combined benefit is chosen) for one child, 40% for two children, and 50% for three or more children.

### **Additional Amount for Spouse of Safety Member:**

(31787.6)

An eligible survivor of a safety member is also entitled to receive a lump-sum death benefit equal to 12 x monthly rate of compensation at the time of member's death in addition to all other benefits.

**Note:** For valuation purposes, an unmarried member is assumed to take the lump sum benefit. A married member is assumed to take the monthly allowance or the lump sum, whichever is more valuable.



### **NONSERVICE-CONNECTED DEATH BENEFITS**

**Eligibility:** 

All Plans Except 3: Active members who die while in service or while

(31780)

physically or mentally incapacitated for the performance of

duty.

Plan 3: Not available under Plan 3.

### **Death Benefit (Lump Sum):**

(31781)

The member's normal contributions and interest, plus 1/12 of the Compensation earned in preceding 12 months x the number of completed years of service (benefit not to exceed 50% of the 12 months' compensation).

### **Optional Death Benefit:**

In lieu of the lump-sum death benefit, several optional death benefits are available to provide flexibility to survivors, as follows.

### **First Optional Death Benefit:**

(31781.1)

If a member who would have been entitled to a nonservice-connected disability retirement allowance dies prior to retirement as a result of such disability, the eligible survivor (or eligible children) may elect to receive an optional death allowance equal to 60% of the monthly retirement allowance to which the member would have been entitled as of the date of death.

#### **Second Optional Death Benefit:**

(31781.2, 31765.2)

If a member dies prior to reaching the minimum retirement age but has 10 or more years of service, an eligible survivor (or eligible children) may elect to leave the amount of the death benefit on deposit until the earliest date the member could have retired and at that time receive the allowance provided for in 31765.2 (a 60% continuance).

### **Third Optional Death Benefit:**

An eligible survivor of a member who dies after five years of service may elect a combined benefit equal to:

- (a) A lump sum equal to 1/12 of the compensation earnable in the preceding 12 months x the number of completed years of service (benefit not to exceed 50% of the 12 months' compensation), plus
- (b) A monthly payment equal to 60% of the monthly retirement allowance to which the member would have been entitled if the member retired or had been retired for a nonservice-connected disability as of the date of death, reduced by a monthly amount which is the actuarial equivalent of (a) above based on the age of the eligible survivor.



## NONSERVICE-CONNECTED DEATH BENEFITS (Continued)

### **Fourth Optional Death Benefit:**

If a member dies while eligible for a service retirement and the eligible survivor is designated as beneficiary, the spouse (or eligible children) may elect to receive 60% of the monthly retirement allowance to which the member would have been entitled as of the date of death.

(31765.1)

Note for Third and Fourth Optional Death Benefits: In order to leave the eligible survivor the greatest benefit, the member is assumed to have retired for nonservice-connected disability, elected the Option 2 retirement allowance, and then died the next day.

### Fifth Optional Death Benefit:

If a member dies while eligible for a service retirement and the eligible survivor is designated as beneficiary and survives the member by not less than 30 days the spouse (or eligible children) may elect to receive the same retirement allowance as the spouse would have received had the member retired on the date of death and selected Option 3.

(31765)

**Note:** For valuation purposes, an unmarried member is assumed to take the lump sum benefit. A married member is assumed to receive an annuity or a lump-sum, whichever is more valuable. The annuity is equal to the Option 2-100% Continuance calculation for the larger of either (1) a non-service connected disability benefit or (2) the member's earned service retirement benefit (if eligible).



### **DEFERRED VESTED BENEFITS**

**Eligibility:** 

All Plans, except Plans 3 and 7:

Age 50 with 10 years of membership.

(31700)

Member contributions must be left on deposit and the member must have terminated with five years of service or entered a reciprocal agency. Members are eligible for service retirement when they would have reached

eligibility if they would have remained in an active position.

Plan 3: Age 55 with 10 years of service.

(31496)

Plan 7: General members:

Age 52 with 5 years of service.

**Safety and Probation members:** Age 50 with 5 years of service.

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

member must have terminated with five years of service or entered a reciprocal agency. Members (except for Plan 7) are eligible for service retirement when they would have reached eligibility if they would have remained in an

active position.

**Monthly Allowance:** 

All Plans Except 3: Same as service retirement allowance; payable anytime

(31703, 31704,

31705)

(31702)

(31496)

after the member would have been eligible for service

retirement.

If a terminated member dies before the effective date of

the deferred retirement allowance, the member's

accumulated contributions are paid to the estate or to the

named beneficiary.

Plan 3: Same as service retirement allowance at normal

retirement age 65 or in an actuarially equivalent reduced

amount at early retirement, after age 55.

No benefit is paid for death while deferred.



(31870.1,

31870.2)

### **COST-OF-LIVING INCREASES**

(31870, Cost-of-living increases (or decreases) are applied to all retirement allowances (service and disability), optional death allowances, and annual death allowances 31870.1, effective April 1, based on changes in the Consumer Price Index (CPI) from the 31870.2. previous January 1 to the current January 1, to the nearest ½ of 1%. 31874.4) Plan 1: **General & Safety** (31870.2)Members (and their beneficiaries) are limited to a maximum 5% cost-of-living increase. **Probation** (31870.1)Members (and their beneficiaries) are limited to a maximum 3% cost-of-living increase. Plan 2: All members (31870.1)Members (and their beneficiaries) are limited to a maximum 3% cost-of-living increase. Plan 3: Plan 3 does not have a COLA. (31487)Other Plans: All members (31870)Members (and their beneficiaries) are limited to a maximum 2% cost-of-living increase.

#### **COLA Bank**

**Plan 1:** When the CPI exceeds the applicable percentage (3% or

5%), the difference between the actual CPI and the maximum cost-of-living increase given in any year is credited to the COLA Accumulation (COLA Bank). It may be used in future years to provide cost-of-living increases when the CPI falls below the applicable percentage.

Other Plans: All other Plans do not have a COLA bank. (31874.4)



### Appendix C: Valuation Data and Schedules



Data on SamCERA membership as of June 30, 2014 was supplied to us by the system staff. On the following table, Exhibit C-1, we present a summary of SamCERA membership at June 30, 2014 for active members. Similar information is shown in Exhibit C-2 for deferred vested members and Exhibits C-3a and C-3b for retired members.

Note that salary amounts shown are annualized amounts based on the biweekly pay for the period prior to the valuation date. If the annualized amount was less than the total prior earnings, total prior year earnings were used.

Additional statistical data on both active and retired members is shown in the following tables.

Exhibit C-4: Age, Service, Compensation Distribution of Active

Members

Exhibit C-5: Age, Retirement Year, Benefit Amount and Plan

Distribution of Retired Members

Exhibits C-4 and C-5 are shown for all plans combined as well as for classification separately.



Exhibit C-1: SamCERA Membership – Active Members as of June 30, 2014

	Total Number	Average Age	V	verage Ionthly Salary	Average Credited Service		
General Mem	bers						
Plan 1	30	\$	3,102,060	62.1	\$	8,617	32.8
Plan 2	863		78,537,755	54.3		7,584	23.1
Plan 3	117		8,845,803	46.9		6,300	11.1
Plan 4	2,509		206,938,609	45.9		6,873	9.7
Plan 5	266		22,062,988	39.2		6,912	1.9
Plan 7	487		33,431,343	35.8		5,721	0.7
Total	4,272	\$	352,918,558	46.2	\$	6,884	11.1
Safety Membe	ers						
Plan 1	3	\$	507,291	61.0	\$	14,091	32.7
Plan 2	98		13,160,856	51.0		11,191	22.6
Plan 4	280		32,192,987	43.6		9,581	9.8
Plan 5	45		4,837,504	37.5		8,958	1.5
Plan 6	1		172,577	44.0		14,381	1.6
Plan 7	25		2,103,260	34.5		7,011	1.0
Total	452	\$	52,974,475	44.2	\$	9,767	11.4
Probation Me	mbers						
Plan 1	1	\$	82,490	63.0	\$	6,874	31.8
Plan 2	57		5,266,282	48.2		7,699	21.2
Plan 4	202		16,778,253	41.4		6,922	11.4
Plan 5	6		425,987	31.8		5,916	1.5
Plan 6	2		125,177	32.0		5,216	1.6
Plan 7	12	•	836,154	31.9	<b>.</b>	5,807	0.6
Total	280	\$	23,514,343	42.2	\$	6,998	12.7
Grand Total	5,004	\$	429,407,375	45.8	\$	7,151	11.2



Exhibit C-2: SamCERA Membership – Deferred Vested Members as of June 30, 2014

-	Number	Average Age
General Memb	pers	
Plan 1	16	61.4
Plan 2	411	52.2
Plan 3	96	53.9
Plan 4	639	45.4
Plan 5	11	41.1
Plan 7	8	33.3
Total	1,181	48.6
Safety Membe	ers	
Plan 1	1	63.0
Plan 2	28	49.5
Plan 4	44	44.9
Plan 5	3	37.7
Total	76	46.6
Probation Mer	mbers	
Plan 1	-	-
Plan 2	13	45.2
Plan 4	32	40.7
Plan 5	2	31.0
Plan 6	-	-
Total	47	41.5
Grand Total	1,304	48.2



Exhibit C-3a: SamCERA Membership – Retired Members as of June 30, 2014

_	Number	Average Age	Monthly Allowance	verage hly Benefit
General Memb	ers			
Plan 1 Plan 2 Plan 3 Plan 4	1,780 1,629 125 393	78.2 67.5 70.0 63.3	\$ 5,330,280 4,027,118 120,036 705,002	\$ 2,995 2,472 960 1,794
Total	3,927	72.0	\$ 10,182,435	\$ 2,593
Safety Member	rs			
Plan 1 Plan 2 Plan 4	277 146 27	71.6 59.7 55.0	\$ 1,760,915 960,718 98,611	\$ 6,357 6,580 3,652
Total	450	66.7	\$ 2,820,244	\$ 6,267
Probation Men	nbers			
Plan 1 Plan 2 Plan 4	71 56 14	70.6 61.4 65.6	\$ 362,783 248,526 33,406	\$ 5,110 4,438 2,386
Total	141	66.4	\$ 644,715	\$ 4,572
Grand Total	4,518	71.3	\$ 13,647,395	\$ 3,021

Exhibit C-3b: SamCERA Membership – Retired Members as of June 30, 2014 Subtotaled by Class and Retirement Type

Plan	Retirement Type	Number		Monthly Benefit		Average Monthly Benefit
General Plans:					_	
	Healthy	3,116	\$	8,525,097	\$	2,736
	Disabled	322		799,348		2,482
	Beneficiaries	489		857,990		1,755
	Total	3,927	\$	10,182,435	\$	2,593
Safety Plans:						
	Healthy	281	\$	2,018,849	\$	7,185
	Disabled	100		537,054		5,371
	Beneficiaries	69	_	264,341	_	3,831
	Total	450	\$	2,820,244	\$	6,267
Probation Plans:						
	Healthy	128	\$	587,923	\$	4,593
	Disabled	6		22,634		3,772
	Beneficiaries	7		34,158	_	4,880
	Total	141	\$	644,715	\$	4,572
Grand Totals						
	Healthy	3,525	\$	11,131,869	\$	3,158
	Disabled	428		1,359,036		3,175
	Beneficiaries	565	_	1,156,490	_	2,047
	Total	4,518	\$	13,647,395	\$	3,021

Exhibit C-4: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2014 All Members

Count										
					ars of Servic					Total
Age	0-1	1-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	20	16	0	0	0	0	0	0	0	36
25-29	122	120	46	1	0	0	0	0	0	289
30-34	104	184	234	41	0	0	0	0	0	563
35-39	70	118	286	179	29	0	0	0	0	682
40-44	44	84	234	251	130	17	0	0	0	760
45-49	33	53	173	204	160	90	28	0	0	741
50-54	22	60	135	156	129	98	98	19	0	717
55-59	21	53	140	126	92	87	86	43	7	655
60-64	12	24	83	96	54	50	39	26	7	391
65 & Over	2	12	39	40	24	18	14	12	9	170
Total Count	450	724	1,370	1,094	618	360	265	100	23	5,004
Compensation										
<u>-</u>	Years of Service								Average	
Age	0-1	1-2	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	54,235	59,797	-	-	-	-	-	-	-	56,707
25-29	62,736	69,687	71,087	64,160	-	-	-	-	-	66,956
30-34	63,830	77,860	79,843	66,410	-	-	-	-	-	75,258
35-39	77,831	81,245	84,013	85,043	86,270	-	-	-	-	83,266
40-44	84,736	96,716	87,987	86,239	92,290	85,260	-	-	-	88,861
45-49	75,244	99,180	90,943	90,629	93,219	92,724	104,695	-	-	91,974
50-54	84,454	92,185	88,862	86,385	96,184	88,652	104,725	85,561	-	91,835
55-59	86,103	91,751	86,932	79,288	92,457	90,985	93,810	95,845	102,405	88,793
60-64	73,453	86,034	83,971	84,228	92,630	96,686	87,681	93,440	105,122	88,038
65 & Over	89,164	93,568	82,239	82,225	91,569	81,082	95,914	85,137	102,573	86,719
Avg. Annual Compensation	70,583	83,142	85,144	84,996	93,087	90,811	98,206	91,981	103,298	85,813



Exhibit C-4a: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2014 General Members

Count												
	Years of Service											
Age	0-1	1-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count		
Under 25	17	10	0	0	0	0	0	0	0	27		
25-29	111	103	38	1	0	0	0	0	0	253		
30-34	99	166	183	38	0	0	0	0	0	486		
35-39	64	101	247	134	17	0	0	0	0	563		
40-44	41	64	198	196	86	15	0	0	0	600		
45-49	32	44	161	165	101	67	18	0	0	588		
50-54	20	46	130	139	109	87	73	17	0	621		
55-59	20	45	124	119	83	81	79	39	7	597		
60-64	12	22	77	92	52	47	39	24	7	372		
65 & Over	2	12	38	37	24	18	14	12	8	165		
Total Count	418	613	1,196	921	472	315	223	92	22	4,272		

Compensation
--------------

	Years of Service										
Age	0-1	1-2	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.	
Under 25	50,735	52,321								51,322	
	,	•			-	-	-	-	-	,	
25-29	61,825	67,456	67,822	64,160	-	-	-	-	-	65,028	
30-34	63,441	75,442	76,042	63,104	-	-	-	-	-	72,259	
35-39	79,207	76,452	82,513	81,688	71,806	-	-	-	-	80,530	
40-44	83,767	89,966	85,185	82,911	85,261	79,555	-	-	-	84,725	
45-49	74,254	94,313	89,874	89,189	84,124	84,021	85,449	-	-	87,374	
50-54	83,461	84,266	88,914	84,105	94,864	84,916	95,696	79,495	-	88,341	
55-59	86,774	85,726	82,868	78,008	88,421	89,717	89,702	92,544	102,405	85,712	
60-64	73,453	82,942	81,048	83,840	92,192	92,974	87,681	92,728	105,122	86,572	
65 & Over	89,164	93,568	81,570	80,521	91,569	81,082	95,914	85,137	97,123	85,931	
Avg. Annual Compensation	70,215	78,801	83,098	82,564	88,391	86,688	91,357	89,215	101,349	82,612	



Exhibit C-4b: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2014 Safety Members

Count	7									
	_			Υe	ears of Service	e				Total
Age	0-1	1-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	3	4	0	0	0	0	0	0	0	7
25-29	4	15	4	0	0	0	0	0	0	23
30-34	3	15	28	3	0	0	0	0	0	49
35-39	4	15	17	18	7	0	0	0	0	61
40-44	2	20	20	24	24	1	0	0	0	91
45-49	1	8	9	16	32	14	7	0	0	87
50-54	1	14	2	11	9	8	17	2	0	64
55-59	1	8	15	3	8	4	6	4	0	49
60-64	0	2	6	2	2	3	0	1	0	16
65 & Over	0	0	1	3	0	0	0	0	1	5
Total Count	19	101	102	80	82	30	30	7	1	452

Com	nens	ation	

	Years of Service									
Age	0-1	1-2	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	74,072	77,011	-	-	-	-	-	-	-	75,751
25-29	90,097	85,795	94,053	-	-	-	-	-	-	87,980
30-34	79,762	106,818	108,387	108,280	-	-	-	-	-	106,148
35-39	80,241	117,034	112,282	111,651	119,841	-	-	-	-	112,030
40-44	108,294	118,317	120,540	118,785	119,292	168,496	-	-	-	119,517
45-49	106,916	116,399	112,791	116,225	123,556	134,562	156,946	-	-	124,702
50-54	125,282	118,207	102,955	112,204	115,735	125,947	141,329	137,125	-	124,162
55-59	72,684	125,641	119,647	113,423	134,564	118,994	148,451	128,029	-	125,879
60-64	-	120,056	121,475	109,721	104,010	154,826	-	121,465	-	123,898
65 & Over	-	-	107,683	103,236	-	-	-	-	146,169	112,712
Avg. Annual Compensation	87,596	110,400	113,558	114,358	121,730	133,346	146,397	129,690	146,169	117,200



Exhibit C-4c: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2014 Probation Members

Count	1									
				Υe	ears of Service	e				Total
Age	0-1	1-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	0	2	0	0	0	0	0	0	0	2
25-29	7	2	4	0	0	0	0	0	0	13
30-34	2	3	23	0	0	0	0	0	0	28
35-39	2	2	22	27	5	0	0	0	0	58
40-44	1	0	16	31	20	1	0	0	0	69
45-49	0	1	3	23	27	9	3	0	0	66
50-54	1	0	3	6	11	3	8	0	0	32
55-59	0	0	1	4	1	2	1	0	0	9
60-64	0	0	0	2	0	0	0	1	0	3
65 & Over	0	0	0	0	0	0	0	0	0	0
Total Count	13	10	72	93	64	15	12	1	0	280

Compe	nsation
-------	---------

	Years of Service										
Age	0-1	1-2	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.	
Under 25		62,746	_	_	_		_	_	_	62,746	
25-29	61,542	63,751	79,141	-	-	-	-	-	-	67,297	
30-34	59,196	66,858	75,329	-	-	-	-	-	-	73,269	
35-39	28,991	54,898	79,016	83,955	88,450	-	-	-	-	79,572	
40-44	77,333	-	81,968	82,083	90,111	87,596	-	-	-	84,394	
45-49	-	175,573	82,772	83,157	91,282	92,439	98,251	-	-	89,815	
50-54	63,487	-	77,182	91,867	93,267	97,543	109,336	-	-	94,984	
55-59	-	-	100,217	91,771	90,542	86,351	90,542	-	-	91,232	
60-64	-	-	-	76,596	-	-	-	82,490	-	78,561	
65 & Over	-	-	-	-	-	-	-	-	-	-	
Avg. Annual Compensation	57,538	73,894	78,876	83,822	91,024	92,325	104,999	82,490	-	83,980	



Exhibit C-5: Distribution of Retired Members by Age and Retirement Year as of June 30, 2014 All Plans Combined

				Retire	ment Year				Total	verage Ionthly
Age	Pre-1979	1980-84	1985-89	1990-94	1995-99	2000-04	2005-09	2010-14	Count	Benefit
Under 35	-	1	-	-	3	2	1	2	9	\$ 2,044
35-39	-	-	-	-	-	1	1	2	4	1,406
40-44	-	-	-	1	-	1	6	5	13	3,347
45-49	-	-	2	1	1	7	10	12	33	2,703
50-54	1	-	-	1	12	11	17	105	147	2,803
55-59	-	-	-	3	8	25	105	171	312	3,400
60-64	-	-	3	13	23	104	242	308	693	3,484
65-69	2	5	8	29	93	186	322	268	913	3,626
70-74	1	5	22	85	164	220	243	95	835	3,271
75-79	9	14	52	122	135	133	47	15	527	2,695
80-84	16	44	65	112	123	31	16	3	410	2,196
85-89	36	68	96	97	21	4	3	1	326	2,059
90-94	47	74	79	18	6	-	-	-	224	1,967
95-99	25	24	12	2	1	-	-	-	64	1,686
100 & Over	5	3	-	-	-	-	-	-	8	1,666
Total Count	142	238	339	484	590	725	1,013	987	4,518	
Avg Monthly Benefit	\$ 1,731	\$ 1,635	\$ 2,160	\$ 2,193	\$ 2,407	\$ 3,111	\$ 3,982	\$ 3,555		\$ 3,021



Exhibit C-5a: Distribution of Retired Members by Age and Retirement Year as of June 30, 2014 General Plans Combined

				Retire	ment Year				Total	verage Nonthly
Age	Pre-1979	1980-84	1985-89	1990-94	1995-99	2000-04	2005-09	2010-14	Count	Benefit
Under 35	_	1	-	-	3	2	1	2	9	\$ 2,044
35-39	-	-	-	-	-	1	-	1	2	2,812
40-44	-	-	-	1	-	1	4	4	10	2,548
45-49	-	-	2	1	-	4	7	9	23	2,034
50-54	1	-	-	-	10	7	11	76	105	1,576
55-59	-	-	-	1	6	17	77	136	237	2,314
60-64	-	-	2	10	19	97	201	274	603	2,930
65-69	2	3	4	16	83	122	295	258	783	3,202
70-74	-	3	12	67	102	181	233	89	687	2,880
75-79	4	14	42	106	123	124	46	14	473	2,395
80-84	12	41	58	111	121	29	16	3	391	2,093
85-89	33	62	95	97	21	4	3	1	316	2,005
90-94	41	74	79	18	6	-	-	-	218	1,905
95-99	24	24	11	2	1	-	-	-	62	1,708
100 & Over	5	3	-	-	-	-	-	-	8	1,666
Total Count	122	225	305	430	495	589	894	867	3,927	
Avg Monthly Benefit	\$ 1,450	\$ 1,538	\$ 1,984	\$ 1,893	\$ 1,896	\$ 2,510	\$ 3,529	\$ 3,078		\$ 2,593



A . . . . . . . . .

Exhibit C-5b: Distribution of Retired Members by Age and Retirement Year as of June 30, 2014 Safety Plans Combined

				Retire	ment Year				Total	Average Monthly
Age	Pre-1979	1980-84	1985-89	1990-94	1995-99	2000-04	2005-09	2010-14	Count	Benefit
Under 35	-	-	-	-	_	-	-	-	-	\$ -
35-39	-	-	-	-	-	-	1	1	2	-
40-44	-	-	-	-	-	-	2	1	3	6,010
45-49	-	-	-	-	1	2	3	3	9	3,837
50-54	-	-	-	1	2	4	6	21	34	6,208
55-59	-	-	-	2	2	5	22	22	53	7,802
60-64	-	-	1	3	4	6	31	22	67	7,907
65-69	-	2	4	13	8	55	16	4	102	6,519
70-74	1	2	10	17	45	24	3	4	106	5,429
75-79	5	-	10	15	9	1	1	-	41	5,652
80-84	4	3	7	1	-	-	-	-	15	4,575
85-89	3	6	1	-	-	-	-	-	10	3,767
90-94	6	-	-	-	-	-	-	-	6	4,190
95-99	1	-	1	-	-	-	-	-	2	998
100 & Over	-	-	-	-	-	-	-	-	-	-
Total Count	20	13	34	52	71	97	85	78	450	
Avg Monthly Benefit	\$ 3,440	\$ 3,309	\$ 3,743	\$ 4,443	\$ 5,190	\$ 6,592	\$ 8,499	\$ 7,947		\$ 6,267



Exhibit C-5c: Distribution of Retired Members by Age and Retirement Year as of June 30, 2014 Probation Plans Combined

				Retire	ment Year				Total	Average Monthly
Age	Pre-1979	1980-84	1985-89	1990-94	1995-99	2000-04	2005-09	2010-14	Count	Benefit
Under 35	-	-	-	-	-	-	-	-	-	\$ -
35-39	-	-	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	-	-	-	-	-
45-49	-	-	-	-	-	1	-	-	1	7,883
50-54	-	-	-	-	-	-	-	8	8	4,445
55-59	-	-	-	-	-	3	6	13	22	4,489
60-64	-	-	-	-	-	1	10	12	23	5,139
65-69	-	-	-	-	2	9	11	6	28	4,943
70-74	-	-	-	1	17	15	7	2	42	4,212
75-79	-	-	-	1	3	8	-	1	13	4,294
80-84	-	-	-	-	2	2	-	-	4	3,288
85-89	-	-	-	-	-	-	-	-	-	-
90-94	-	-	-	-	-	-	-	-	-	-
95-99	-	-	-	-	-	-	-	-	-	-
100 & Over	-	-	-	-	-	-	-	-	-	-
Total Count	-	-	-	2	24	39	34	42	141	
Avg Monthly Benefit	\$ -	\$ -	\$ -	\$ 8,121	\$ 4,715	\$ 3,526	\$ 4,608	\$ 5,265		\$ 4,572



### **Appendix D: Member Contribution Rates**



This section illustrates the member basic contribution rates and 50% COLA sharing contribution rates by entry age for Plans 1 through 6. For different COLA sharing percentages, the 50% COLA contribution rates may be adjusted ratably, and should be rounded to two decimal places.

Member contribution rates for Plan 7 are not defined by entry age. Plan 7 members contribute 50% of the total Normal Cost rate. For the 2015-2016 fiscal year, Plan 7 member contribution rates are:

General Plan 7 members: 7.92%
SMCM & VCD Plan 7 members: 6.51%
Safety Plan 7 members: 14.64%
Probation Plan 7 members: 13.42%

Please refer to Appendix B for a detailed description of member contribution rates.

Exhibit D-1: General Member Contribution Rates (including SMCM&VCD)

	Bas	ic Member R	Rates - Genera	Basic	Basic Member Rates - SMCM&VCD				
Entry Age (1)	Plans 1&2	Plan 4	Plan 5	Plan 7	Plans 1&2	Plan 4	Plan 5	Plan 7	
16	5.37%	5.17%	4.43%	7.92%	5.37%	5.17%	4.43%	6.51%	
17	5.47%	5.27%	4.52%	7.92%	5.47%	5.27%	4.52%	6.51%	
18	5.58%	5.36%	4.60%	7.92%	5.58%	5.36%	4.60%	6.51%	
19	5.68%	5.46%	4.69%	7.92%	5.68%	5.46%	4.69%	6.51%	
20	5.79%	5.56%	4.78%	7.92%	5.79%	5.56%	4.78%	6.51%	
21	5.89%	5.67%	4.87%	7.92%	5.89%	5.67%	4.87%	6.51%	
22	6.00%	5.77%	4.96%	7.92%	6.00%	5.77%	4.96%	6.51%	
23	6.11%	5.88%	5.05%	7.92%	6.11%	5.88%	5.05%	6.51%	
23 24	6.22%	5.99%	5.05%	7.92%	6.22%	5.99%	5.05%	6.51%	
25	6.34%	6.10%	5.24%	7.92%	6.34%	6.10%	5.24%	6.51%	
26	6.46%	6.21%	5.34%	7.92%	6.46%	6.21%	5.34%	6.51%	
27	6.57%	6.32%	5.44%	7.92%	6.57%	6.32%	5.44%	6.51%	
28	6.69%	6.44%	5.54%	7.92%	6.69%	6.44%	5.54%	6.51%	
29	6.82%	6.56%	5.64%	7.92%	6.82%	6.56%	5.64%	6.51%	
30	6.94%	6.68%	5.75%	7.92%	6.94%	6.68%	5.75%	6.51%	
31	7.07%	6.80%	5.85%	7.92%	7.07%	6.80%	5.85%	6.51%	
32	7.20%	6.92%	5.96%	7.92%	7.20%	6.92%	5.96%	6.51%	
33	7.33%	7.05%	6.07%	7.92%	7.33%	7.05%	6.07%	6.51%	
34	7.46%	7.18%	6.18%	7.92%	7.46%	7.18%	6.18%	6.51%	
35	7.60%	7.31%	6.29%	7.92%	7.60%	7.31%	6.29%	6.51%	
36	7.74%	7.44%	6.41%	7.92%	7.74%	7.44%	6.41%	6.51%	
37	7.88%	7.58%	6.52%	7.92%	7.88%	7.58%	6.52%	6.51%	
38	8.03%	7.72%	6.64%	7.92%	8.03%	7.72%	6.64%	6.51%	
39	8.18%	7.87%	6.76%	7.92%	8.18%	7.87%	6.76%	6.51%	
40	8.33%	8.01%	6.89%	7.92%	8.33%	8.01%	6.89%	6.51%	
41	8.49%	8.16%	7.01%	7.92%	8.49%	8.16%	7.01%	6.51%	
42	8.66%	8.31%	7.14%	7.92%	8.66%	8.31%	7.14%	6.51%	
43	8.82%	8.46%	7.28%	7.92%	8.82%	8.46%	7.28%	6.51%	
44	8.97%	8.60%	7.41%	7.92%	8.97%	8.60%	7.41%	6.51%	
45	9.13%	8.74%	7.55%	7.92%	9.13%	8.74%	7.55%	6.51%	
46	9.29%	8.87%	7.69%	7.92%	9.29%	8.87%	7.69%	6.51%	
47	9.43%	8.99%	7.83%	7.92%	9.43%	8.99%	7.83%	6.51%	
48	9.57%	9.10%	7.97%	7.92%	9.57%	9.10%	7.97%	6.51%	
49	9.70%	9.20%	8.10%	7.92%	9.70%	9.20%	8.10%	6.51%	
50	9.82%	9.27%	8.23%	7.92%	9.82%	9.27%	8.23%	6.51%	
51	9.92%	9.32%	8.36%	7.92%	9.92%	9.32%	8.36%	6.51%	
52	9.99%	9.32%	8.47%	7.92%	9.99%	9.32%	8.47%	6.51%	
53	10.02%	9.62%	8.58%	7.92%	10.02%	9.62%	8.58%	6.51%	
54	10.02%	9.96%	8.67%	7.92%	10.02%	9.96%	8.67%	6.51%	
55	10.02%	9.96%	8.74%	7.92%	10.02%	9.96%	8.74%	6.51%	
56	10.02%	9.96%	8.78%	7.92%	10.02%	9.96%	8.78%	6.51%	
50 57	10.02%	9.96%	8.78%	7.92%	10.02%	9.96%	8.78%	6.51%	
57 58	10.02%	9.96%	9.07%	7.92% 7.92%	10.02%	9.96%	9.07%	6.51%	
56 59			9.07%	7.92% 7.92%				6.51%	
	10.02%	9.96%			10.02%	9.96%	9.38%		
60	10.02%	9.96%	9.38%	7.92%	10.02%	9.96%	9.38%	6.51%	

<sup>(1)</sup> For General and SMCM&VCD members (except plan 5 members) entering after age 55, the rate equals the rate at age 55. For General and SMCM&VCD plan 5 members entering after age 60, the rate equals the rate at age 60.



**Exhibit D-2: Safety Member Contribution Rates** 

<b>D</b> -	-:-	B4		D-4
ва	SIC	IVIE	nner	Rates

	Ba	sic Member Rates	
Entry Age <sup>(1)</sup>	Plans 1&2	Plans 4&5&6	Plan 7
16	7.32%	7.04%	14.64%
17	7.45%	7.17%	14.64%
18	7.59%	7.30%	14.64%
19	7.73%	7.44%	14.64%
20	7.87%	7.57%	14.64%
21	8.02%	7.71%	14.64%
22	8.16%	7.85%	14.64%
23	8.31%	8.00%	14.64%
24	8.47%	8.14%	14.64%
25	8.62%	8.29%	14.64%
26	8.78%	8.44%	14.64%
27	8.94%	8.60%	14.64%
28	9.10%	8.75%	14.64%
29	9.27%	8.91%	14.64%
30	9.44%	9.08%	14.64%
31	9.61%	9.24%	14.64%
32	9.79%	9.42%	14.64%
33	9.97%	9.59%	14.64%
34	10.16%	9.77%	14.64%
35	10.35%	9.95%	14.64%
36	10.55%	10.14%	14.64%
37	10.75%	10.32%	14.64%
38	10.95%	10.50%	14.64%
39	11.15%	10.68%	14.64%
40	11.34%	10.85%	14.64%
41	11.53%	11.02%	14.64%
42	11.72%	11.17%	14.64%
43	11.89%	11.31%	14.64%
44	12.05%	11.42%	14.64%
45	12.19%	11.52%	14.64%
46	12.32%	11.57%	14.64%
47	12.41%	11.57%	14.64%
48	12.44%	11.95%	14.64%
49	12.44%	12.37%	14.64%
50	12.44%	12.37%	14.64%

<sup>(1)</sup> For Safety members entering after age 50, the rate equals the rate at age 50.



**Exhibit D-3: Probation Member Contribution Rates** 

	Basi	c Member Rates - Pl	OA <sup>(2)</sup>	Basic Membe	er Rates - Probation	Managers (3)
Entry Age <sup>(1)</sup>	Plans 1&2	Plans 4&5&6	Plan 7	Plans 1&2	Plans 4&5&6	Plan 7
16	5.86%	5.63%	13.42%	7.32%	7.04%	13.42%
17	5.96%	5.74%	13.42%	7.45%	7.17%	13.42%
18	6.07%	5.84%	13.42%	7.59%	7.30%	13.42%
19	6.19%	5.95%	13.42%	7.73%	7.44%	13.42%
20	6.30%	6.06%	13.42%	7.87%	7.57%	13.42%
21	6.41%	6.17%	13.42%	8.02%	7.71%	13.42%
22	6.53%	6.28%	13.42%	8.16%	7.85%	13.42%
23	6.65%	6.40%	13.42%	8.31%	8.00%	13.42%
24	6.77%	6.51%	13.42%	8.47%	8.14%	13.42%
25	6.90%	6.63%	13.42%	8.62%	8.29%	13.42%
26	7.02%	6.75%	13.42%	8.78%	8.44%	13.42%
27	7.15%	6.88%	13.42%	8.94%	8.60%	13.42%
28	7.28%	7.00%	13.42%	9.10%	8.75%	13.42%
29	7.41%	7.13%	13.42%	9.27%	8.91%	13.42%
30	7.55%	7.26%	13.42%	9.44%	9.08%	13.42%
31	7.69%	7.40%	13.42%	9.61%	9.24%	13.42%
32	7.83%	7.53%	13.42%	9.79%	9.42%	13.42%
33	7.98%	7.67%	13.42%	9.97%	9.59%	13.42%
34	8.13%	7.82%	13.42%	10.16%	9.77%	13.42%
35	8.28%	7.96%	13.42%	10.35%	9.95%	13.42%
36	8.44%	8.11%	13.42%	10.55%	10.14%	13.42%
37	8.60%	8.26%	13.42%	10.75%	10.32%	13.42%
38	8.76%	8.40%	13.42%	10.95%	10.50%	13.42%
39	8.92%	8.54%	13.42%	11.15%	10.68%	13.42%
40	9.07%	8.68%	13.42%	11.34%	10.85%	13.42%
41	9.23%	8.81%	13.42%	11.53%	11.02%	13.42%
42	9.37%	8.93%	13.42%	11.72%	11.17%	13.42%
43	9.51%	9.04%	13.42%	11.89%	11.31%	13.42%
44	9.64%	9.14%	13.42%	12.05%	11.42%	13.42%
45	9.75%	9.21%	13.42%	12.19%	11.52%	13.42%
46	9.85%	9.26%	13.42%	12.32%	11.57%	13.42%
47	9.92%	9.26%	13.42%	12.41%	11.57%	13.42%
48	9.95%	9.56%	13.42%	12.44%	11.95%	13.42%
49	9.95%	9.89%	13.42%	12.44%	12.37%	13.42%
50	9.95%	9.89%	13.42%	12.44%	12.37%	13.42%

<sup>(1)</sup> For Probation members entering after age 50, the rate equals the rate at age 50.



<sup>(2)</sup> PDA basic member rates reflect 20% pickup.

<sup>(3)</sup> Probation manager basic member contribution rates except Plan 7 are based on rates in corresponding Safety Plan.

Exhibit D-4: General Member Contribution Rates (including SMCM&VCD)

		25% Member C	50% Member COLA Rates					
Entry Age <sup>(1)</sup>	Plan 1	Plan 2	Plan 4	Plan 5	Plan 1	Plan 2	Plan 4	Plan 5
16	1.05%	0.90%	0.60%	0.49%	2.10%	1.81%	1.19%	0.98%
17	1.07%	0.92%	0.61%	0.50%	2.14%	1.84%	1.21%	1.00%
18	1.09%	0.94%	0.62%	0.51%	2.19%	1.88%	1.23%	1.02%
19	1.11%	0.96%	0.63%	0.52%	2.23%	1.91%	1.26%	1.04%
20	1.13%	0.97%	0.64%	0.53%	2.27%	1.95%	1.28%	1.06%
21	1.15%	0.99%	0.65%	0.54%	2.31%	1.98%	1.31%	1.08%
22	1.18%	1.01%	0.66%	0.55%	2.35%	2.02%	1.33%	1.10%
23	1.20%	1.03%	0.68%	0.56%	2.39%	2.06%	1.35%	1.12%
24	1.22%	1.05%	0.69%	0.57%	2.44%	2.09%	1.38%	1.14%
25	1.24%	1.07%	0.70%	0.58%	2.48%	2.13%	1.40%	1.16%
26	1.27%	1.09%	0.71%	0.59%	2.53%	2.17%	1.43%	1.18%
27	1.29%	1.11%	0.73%	0.60%	2.57%	2.21%	1.45%	1.20%
28	1.31%	1.13%	0.74%	0.61%	2.62%	2.25%	1.48%	1.23%
29	1.34%	1.15%	0.76%	0.62%	2.67%	2.29%	1.51%	1.25%
30	1.36%	1.17%	0.77%	0.64%	2.72%	2.33%	1.54%	1.27%
31	1.39%	1.19%	0.78%	0.65%	2.77%	2.38%	1.57%	1.30%
32	1.41%	1.21%	0.80%	0.66%	2.82%	2.42%	1.59%	1.32%
33	1.44%	1.23%	0.81%	0.67%	2.87%	2.47%	1.62%	1.34%
34	1.46%	1.25%	0.83%	0.68%	2.92%	2.51%	1.65%	1.37%
35	1.49%	1.28%	0.84%	0.70%	2.98%	2.56%	1.68%	1.39%
36	1.52%	1.30%	0.86%	0.71%	3.03%	2.60%	1.71%	1.42%
37	1.54%	1.33%	0.87%	0.72%	3.09%	2.65%	1.74%	1.44%
38	1.57%	1.35%	0.89%	0.74%	3.15%	2.70%	1.74%	1.47%
39	1.60%	1.38%	0.91%	0.75%	3.21%	2.75%	1.81%	1.50%
40	1.63%	1.40%	0.92%	0.76%	3.26%	2.80%	1.84%	1.53%
41	1.66%	1.43%	0.94%	0.78%	3.33%	2.86%	1.88%	1.55%
42	1.70%	1.46%	0.96%	0.79%	3.39%	2.91%	1.91%	1.58%
43	1.73%	1.48%	0.97%	0.79%	3.46%	2.97%	1.95%	1.61%
44	1.76%	1.51%	0.99%	0.82%	3.52%	3.02%	1.98%	1.64%
45	1.79%	1.54%	1.01%	0.84%	3.58%	3.07%	2.01%	1.67%
	1.79%	1.56%	1.02%	0.85%			2.04%	1.70%
46 47	1.85%	1.59%	1.02 %	0.87%	3.64% 3.70%	3.13% 3.17%	2.07%	1.73%
48	1.88%	1.61%	1.05%	0.87 %	3.75%	3.17%	2.07 %	1.76%
49	1.90%	1.63%	1.06%	0.90%	3.80%	3.26%	2.09%	1.79%
50	1.92%	1.65%	1.00%	0.91%	3.85%	3.20%	2.12%	1.79%
50 51	1.94%	1.67%	1.07%	0.93%	3.89%	3.34%	2.15%	1.85%
52	1.94%	1.68%	1.07%	0.93%	3.92%	3.36%	2.15%	1.88%
53	1.96%	1.69%	1.07%	0.94%	3.93%	3.37%	2.15%	1.90%
54								
	1.96%	1.69%	1.15%	0.96%	3.93%	3.37%	2.29% 2.29%	1.92%
55 56	1.96%	1.69%	1.15%	0.97%	3.93%	3.37% 3.37%	2.29% 2.29%	1.94% 1.94%
	1.96%	1.69%	1.15%	0.97%	3.93%			
57 58	1.96% 1.96%	1.69% 1.69%	1.15% 1.15%	0.97% 1.00%	3.93% 3.93%	3.37% 3.37%	2.29% 2.29%	1.94% 2.01%
59	1.96%	1.69%	1.15%	1.04%	3.93%	3.37%	2.29%	2.08%
60	1.96%	1.69%	1.15%	1.04%	3.93%	3.37%	2.29%	2.08%

<sup>(1)</sup> For County General members (except plan 5 members) entering after age 55, the rate equals the rate at age 55. For County General plan 5 members entering after age 60, the rate equals the rate at age 60.



**Exhibit D-5: Safety Member Contribution Rates** 

25% Member COLA Rates 50% Member COLA Rates Entry Age (1) Plans 1&2 Plan 4 Plan 5 Plan 6 Plans 1&2 Plan 4 Plan 5 Plan 6 16 2.12% 1.20% 1.08% 0.99% 4.24% 2.39% 2.16% 1.98% 17 2.16% 1.22% 1.10% 1.01% 4.32% 2.44% 2.20% 2.02% 18 2.20% 1.24% 1.12% 1.03% 4.40% 2.48% 2.24% 2.05% 1.14% 19 2.24% 1.26% 1.05% 4.48% 2.53% 2.29% 2.09% 20 2.28% 1.29% 1.16% 1.06% 4.56% 2.57% 2.33% 2.13% 21 2.32% 1.31% 1.19% 1.08% 4.65% 2.62% 2.37% 2.17% 22 2.36% 1.33% 1.21% 1.10% 4.73% 2.67% 2.41% 2.21% 23 2.41% 1.36% 1.23% 1.12% 4.82% 2.72% 2.46% 2.25% 2.45% 1.25% 1.14% 2.50% 2.29% 24 1.38% 4.91% 2.77% 25 2.50% 1.41% 1.27% 1.17% 5.00% 2.82% 2.55% 2.33% 26 2.54% 1.43% 1.30% 1.19% 5.09% 2.87% 2.59% 2.37% 27 2.59% 1.32% 5.18% 2.64% 1.46% 1.21% 2.92% 2.42% 28 2.64% 1.49% 1.34% 1.23% 5.27% 2.97% 2.69% 2.46% 2.74% 29 2.69% 1.51% 1.37% 1.25% 5.37% 3.03% 2.51% 30 2.74% 1.54% 1.40% 1.28% 5.47% 3.08% 2.79% 2.55% 31 2.78% 1.57% 1.42% 1.30% 5.57% 3.14% 2.84% 2.60% 32 2.84% 1.60% 1.45% 1.32% 5.67% 3.20% 2.90% 2.65% 33 2.89% 1.63% 1.47% 1.35% 5.78% 3.26% 2.95% 2.70% 34 1.50% 1.37% 3.00% 2.75% 2.94% 1.66% 5.89% 3.32% 35 3.00% 1.69% 1.53% 1.40% 6.00% 3.38% 3.06% 2.80% 36 3.06% 1.72% 1.56% 1.43% 6.11% 3.44% 3.12% 2.85% 37 3.12% 1.75% 1.59% 1.45% 6.23% 3.51% 3.17% 2.90% 38 1.78% 3.17% 1.61% 1.48% 3.57% 3.23% 2.95% 6.35% 39 1.81% 1.64% 1.50% 3.28% 3.00% 3.23% 6.46% 3.63% 40 3.29% 1.84% 1.67% 1.53% 6.57% 3.69% 3.34% 3.05% 41 3.34% 1.87% 1.69% 1.55% 6.68% 3.74% 3.39% 3.10% 42 3.40% 1.90% 1.72% 1.57% 6.79% 3.79% 3.43% 3.14% 43 3.45% 1.92% 1.74% 6.89% 3.84% 3.48% 3.18% 1.59% 44 3.49% 1.94% 1.76% 1.61% 6.98% 3.88% 3.51% 3.21% 45 3.53% 1.96% 1.77% 1.62% 7.07% 3.91% 3.54% 3.24% 46 3.57% 1.97% 1.78% 1.63% 7.14% 3.93% 3.56% 3.25% 47 3.60% 1.97% 1.78% 1.63% 7.19% 3.93% 3.56% 3.25% 48 3.61% 2.03% 1.84% 1.68% 7.21% 4.06% 3.67% 3.36% 49 3.61% 2.10% 1.90% 1.74% 7.21% 4.20% 3.80% 3.48% 50 3.61% 2.10% 1.90% 1.74% 7.21% 4.20% 3.80% 3.48%



<sup>(1)</sup> For Safety members entering after age 50, the rate equals the rate at age 50.

**Exhibit D-6: Probation Member Contribution Rates** 

	25% M	ember CO	LA Rates - I	PDA <sup>(2)</sup>	50% M	ember COL	-A Rates - P	DA (2)
Entry Age (1)	Plans 1&2	Plan 4	Plan 5	Plan 6	Plans 1&2	Plan 4	Plan 5	Plan 6
16	1.98%	1.17%	1.09%	0.94%	3.96%	2.34%	2.18%	1.88%
17	2.01%	1.19%	1.11%	0.96%	4.02%	2.39%	2.22%	1.91%
18	2.05%	1.21%	1.13%	0.97%	4.10%	2.43%	2.26%	1.95%
19	2.03%	1.24%	1.15%	0.99%	4.18%	2.47%	2.30%	1.98%
20	2.03%	1.24%	1.17%	1.01%	4.25%	2.52%	2.34%	2.02%
21	2.16%	1.28%	1.17%	1.03%	4.33%	2.56%	2.39%	2.06%
22	2.10%	1.30%	1.13%	1.05%	4.41%	2.61%	2.43%	2.00%
23	2.24%	1.33%	1.24%	1.07%	4.49%	2.66%	2.47%	2.13%
24	2.24%	1.35%	1.24 %	1.09%	4.57%	2.71%	2.52%	2.17%
25	2.33%	1.38%	1.28%	1.11%	4.66%	2.76%	2.56%	2.17 %
26	2.37%	1.40%	1.30%	1.11%	4.74%	2.70%	2.61%	2.21%
27	2.41%	1.43%	1.33%	1.15%	4.83%	2.86%	2.66%	2.29%
28	2.46%	1.45%	1.35%	1.17%	4.91%	2.91%	2.71%	2.33%
29	2.50%	1.48%	1.38%	1.17 %	5.00%	2.96%	2.76%	2.38%
30	2.55%	1.51%	1.40%	1.13%	5.10%	3.02%	2.81%	2.42%
31	2.60%	1.54%	1.43%	1.23%	5.10%	3.08%	2.86%	2.47%
32	2.64%	1.56%	1.46%	1.26%	5.29%	3.13%	2.91%	2.51%
33	2.69%	1.59%	1.48%	1.28%	5.39%	3.19%	2.97%	2.56%
34	2.74%	1.62%	1.51%	1.30%	5.49%	3.25%	3.02%	2.61%
35	2.79%	1.65%	1.54%	1.33%	5.59%	3.31%	3.08%	2.65%
36	2.75%	1.69%	1.57%	1.35%	5.70%	3.37%	3.14%	2.70%
37	2.90%	1.72%	1.60%	1.38%	5.81%	3.43%	3.19%	2.75%
38	2.96%	1.75%	1.62%	1.40%	5.91%	3.49%	3.25%	2.80%
39	3.01%	1.77%	1.65%	1.42%	6.02%	3.55%	3.30%	2.85%
40	3.06%	1.80%	1.68%	1.45%	6.12%	3.61%	3.36%	2.89%
41	3.12%	1.83%	1.70%	1.47%	6.23%	3.66%	3.41%	2.94%
42	3.12%	1.86%	1.73%	1.49%	6.32%	3.71%	3.45%	2.98%
43	3.21%	1.88%	1.75%	1.51%	6.42%	3.76%	3.49%	3.01%
44	3.25%	1.90%	1.77%	1.52%	6.51%	3.80%	3.53%	3.05%
45	3.29%	1.91%	1.78%	1.54%	6.58%	3.83%	3.56%	3.07%
46	3.32%	1.92%	1.79%	1.54%	6.65%	3.85%	3.58%	3.09%
47	3.35%	1.92%	1.79%	1.54%	6.70%	3.85%	3.58%	3.09%
48	3.36%	1.92 %	1.75%	1.59%	6.72%	3.97%	3.70%	3.19%
49	3.36%	2.06%	1.91%	1.65%	6.72%	4.11%	3.82%	3.30%
50	3.36%	2.06%	1.91%	1.65%	6.72%	4.11%	3.82%	3.30%
50	3.30 /0	2.00 /0	1.5170	1.00/0	0.12/0	7.11/0	J.UZ /0	3.30 /0

<sup>(1)</sup> For Probation members entering after age 50, the rate equals the rate at age 50.

<sup>&</sup>lt;sup>(2)</sup> Probation Manager member COLA rates are based on rates in corresponding Safety Plan (shown in Appendix D-5)

### Appendix E: Glossary



The following definitions include excerpts from a list adopted by the major actuarial organizations in the United States. In some cases, the definitions have been modified for specific applicability to SamCERA and include terms used exclusively by SamCERA. Defined terms are capitalized throughout this Appendix.

#### **Accrued Benefit**

The amount of an individual's benefit (whether or not vested) as of a specific date, determined in accordance with the terms of a pension plan and based on compensation and service to that date.

### Actuarial Accrued Liability

That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of pension plan benefits and expenses which is not provided for by future Normal Costs.

## Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement, and retirement; changes in compensation; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; and other relevant items.

## Actuarial Gain (Loss)

A measure of the difference between actual experience and that expected based on a set of Actuarial Assumptions during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

### Actuarial Present Value

The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions.

## Actuarial Valuation

The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

### Actuarial Value of Assets

The value of cash, investments and other property belonging to a pension plan, as used by the actuary for the purpose of an Actuarial Valuation.

# Actuarially Equivalent

Of equal Actuarial Present Value, determined as of a given date with each value based on the same set of Actuarial Assumptions.

# Amortization Payment

That portion of the pension plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

### COLA

Cost of living adjustments to benefit payments are made each April 1. See full description in Appendix B.



#### **Employer Reserve**

The accumulation of employer contributions for future retirement benefit payments. Additions include contributions from employers and related earnings. Deductions include annuity payments to retired members and survivors, lump sum death benefit payments to member survivors, and supplemental disability payments.

### Entry Age Actuarial Cost Method

A method under which the Actuarial Present Value of the Projected Benefits of each individual included in an Actuarial Valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit ages. The portion of this Actuarial Present Value allocated to a valuation year is called the Normal Cost. The portion of this Actuarial Present Value not provided for at a valuation date by the Actuarial Present Value of future Normal Costs is called the Actuarial Accrued Liability.

#### **Funded Ratio**

A measurement of the funded status of the system. The Funded Ratio is calculated by dividing the Valuation Assets by the Actuarial Accrued Liability. For example, a Funded Ratio of 90% indicates assets are 10% less than liabilities.

#### Member Reserve

The accumulation of member contributions. Additions include member contributions and related earnings. Deductions include annuity payments to retirees and refunds to members.

### Non-Valuation Reserves

Reserves excluded from the calculation of contribution rates.

#### **Normal Cost**

That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.

#### Plan Year

A 12-month period beginning July 1 and ending June 30.

#### **Projected Benefits**

Those pension plan benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits.

### Unfunded Actuarial Accrued Liability

The excess, if any, of the Actuarial Accrued Liability over the Actuarial Value of Assets.

### **Valuation Date**

The date upon which the Normal Cost, Actuarial Accrued Liability, and Actuarial Value of Assets are determined. Generally, the Valuation Date will coincide with the ending of a Plan Year.

### Valuation Reserves

All reserves excluding the Non-Valuation Reserves.

