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## June 30, 2009, Actuarial Valuation with January 22, 2010, Cost Impact of New Benefit Formula for Mosquito and Vector Control District

This PDF file contains SamCERA's June 30, 2009, actuarial valuation, along with a letter outlining the cost impact of new benefit formulas for the San Mateo County Mosquito and Vector Control District, dated January 22, 2010.

The cost impact is provided because as of January 22, 2010, the San Mateo County Mosquito and Vector Control District has a lower benefit formula than that available to County General members. The district had inquired about adopting the "enhanced" benefit formulas that apply to the County General members.

The full actuarial valuation immediately follows this page. The letter has been attached at the end of the valuation.

### ACTUARIAL VALUATION June 30, 2009



By

Nick J. Collier

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

and

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September 9, 2009

Board of Retirement San Mateo County Employees' Retirement Association 100 Marine Parkway, Suite 125 Redwood Shores, 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, 2010.

#### 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."



Board of Retirement San Mateo County Employees' Retirement Association September 9, 2009 Page 2

#### 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, 2009 In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the 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 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 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 our best estimate of anticipated experience affecting SamCERA.

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. Actuarial computations under GASB Statement No. 25 are for purposes of fulfilling financial accounting requirements. The computations prepared for this purpose may differ as disclosed in our report. The calculations in this report have been made on a basis consistent with our understanding of SamCERA's current funding requirements and of GASB Statements No. 25. 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 product was prepared exclusively for the use or benefit of SamCERA for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning SamCERA's operations, and uses SamCERA's data, which Milliman has not audited. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its 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.



Board of Retirement San Mateo County Employees' Retirement Association September 9, 2009 Page 3

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 J. Collier, ASA, EA, MAAA Consulting Actuary

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NJC/KIS/nlo

Karen I. Steffen, FSA, EA, MAAA Consulting Actuary

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



### 2009 Valuation Results

	June 30, 2009	June 30, 2008
County Contribution Rate	34.00%	23.62%
Funded Ratio	63.9%	79.1%

#### Overview

This report presents the results of the June 30, 2009 actuarial valuation. Several key points are summarized as follows:

- **Funding:** The Funded Ratio decreased from 79.1% to 63.9%. This decrease was primarily due to the recognition of exceptional asset losses occurring in 2008/2009.
- Contribution Rates: The County Normal Cost rate of 11.62% decreased from 11.69% reported in the prior year, due to the changes in the membership being valued. These changes were within an expected range for year-to-year changes. The rates will vary as the average entry age of the membership changes and as a greater proportion of members enter Plans 3 & 4 which are less expensive than Plans 1 & 2.

The County's required contribution rate to finance the UAAL over 15 years increased significantly from 11.93% to 22.38%. The overall result is an increase in the required total contribution rate from the prior valuation of 10.38% (from 23.62% to 34.00% of payroll). The increase was almost entirely due to the recognition of asset losses.

■ Investment Returns: SamCERA's investment return for the prior year (-22.5%) was significantly less than the actuarial assumed rate of 7.75%. Although only a portion of this loss is recognized in this valuation, portions of losses prior to this year were also recognized. The result was a significant decrease in the actuarial value of assets. This in turn resulted in a decrease in the system's funding status and an increase in the required County contribution rate.

Note that currently a \$318 million net asset loss is being deferred. This is because the asset-smoothing method has not yet recognized a portion of the net losses from the prior four years. These deferred losses will be reflected in future valuations.



### Overview (continued)

- Asset Corridor: SamCERA's asset smoothing method recognizes asset gains and losses over separate 5-year periods. Thus, generally only 20% of the loss is recognized each year. However, an asset corridor limits the amount that the valuation assets can deviate from market value. The preliminary smoothed value was outside of the corridor, which caused all losses outside the corridor (approximately \$340 million) to be recognized immediately.
- Funding Approach: The combination of the asset corridor and the large asset losses has produced a sharp increase in the County's contribution rate. There are alternative approaches that could mitigate this impact and still provide appropriate funding. We will discuss funding options for the Board's consideration at the September 22<sup>nd</sup> meeting. If an alternative approach is adopted, it could be incorporated in this valuation and therefore reflected in the County contribution rate effective July 1, 2010.

### Summary of Recommendations

The following exhibit summarizes our recommendations to the Board.

### Exhibit 1 Summary of Recommendations

Recommendation #1: Adopt new employer contribution rates for fiscal year beginning July 1, 2010

	June 30, 2009	June 30, 2008	Increase / (Decrease)
Gross Normal Cost	21.35%	21.43%	(0.08)%
Member Contributions	(9.73)%	(9.74)%	0.01%
County Normal Cost	11.62%	11.69%	(0.07)%
UAAL Amortization	22.38%	11.93%	10.45%
Total County Rate	34.00%	23.62%	10.38%

#### Notes:

- 1) Detailed contribution rates by plan are shown in Section 6, Exhibits 12a & 12b.
- 2) The contribution rates for the Mosquito and Vector Control District are based on the methodology adopted for the 2005 valuation and are shown in Exhibit 12a.



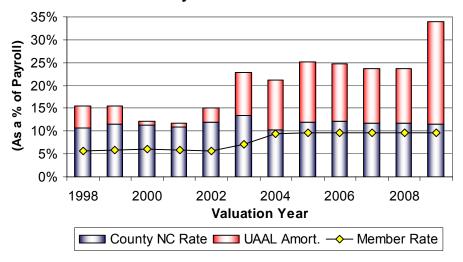
### **County Contribution Rate**

Under the Board's current funding objectives, the calculated County contribution rate for the fiscal year beginning July 1, 2010 is 34.00% of payroll. This is equal to the payment of the County Normal Cost rate plus a 15-year layered amortization of the UAAL for each year beginning with the UAAL as of June 30, 2008. It should be noted that the 34.00% is a weighted average for all SamCERA plans. The actual percent of payroll to be contributed by the County varies by plan. See Exhibits 11a and 11b for Normal Cost rates by plan.

The new rate is effective for the fiscal year beginning July 1, 2010. The 34.00% contribution rate is currently adequate to maintain the funding of the retirement system benefits based on the actuarial methods and assumptions shown in Appendix A of this report. See Exhibits 12a and 12b for the total employer contribution rates by plan.

A historical perspective of the total County contribution rate is shown in the following graph.

### **County Contribution Rate**



### Comparison with Last Year

A detailed analysis of the sources of the changes in both the County contribution rate and the funded ratio was performed. As discussed earlier, the asset loss was the overriding factor in the increase in the contribution rate and decrease in the funded ratio.



### Comparison with Last Year (continued)

The following chart shows how the investment return and various other factors affected the overall funding of SamCERA, as compared to the last valuation. The most significant factors are shown in bold.

Sources of Change	County Contribution Rate	Funded Ratio
June 30, 2008 Actuarial Valuation	23.62%	79.1%
Expected Year-to-Year Change Recognized Asset Gain/Loss	0.00%	2.1%
From Current Year	9.79%	-16.1%
From Prior Years	0.84%	-1.4%
Retiree COLAs Greater than Expected	0.02%	0.0%
Salary / Payroll Variation	-0.17%	0.0%
Change in Average Entry Age and Plan	-0.07%	0.0%
Assumption Changes	0.00%	0.0%
Other Experience Changes	-0.03%	0.2%
Total Change	10.38%	-15.2%
June 30, 2009 Actuarial Valuation	34.00%	63.9%

### **Funding Progress**

Based on the 2008 valuation, the expected UAAL as of June 30, 2009 was \$576 million. The actual UAAL for the fiscal year ending June 30, 2009 is \$1,078 million. This was primarily caused by the asset loss, although there were several factors that had an impact on the UAAL. These factors are shown in detail at the end of Section 4.

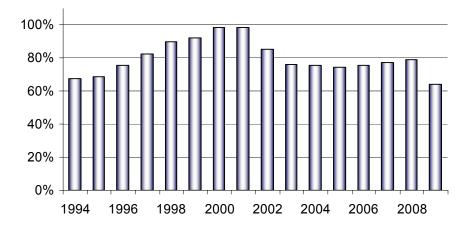
One measure of the funding adequacy of the system is the Funded Ratio which compares the value of the Actuarial Value of Assets (net of certain non-valuation reserves) to the Actuarial Accrued Liability (AAL), for all SamCERA plans combined. SamCERA's Funded Ratio increased rapidly in the last half of the 1990's, reaching almost 100% in 2001. However, due primarily to asset losses this decade, the Funded Ratio has decreased significantly since then. Currently, the Funded Ratio is 63.9%; that is, the actuarial value of assets of \$1,910 million is about 36% less than the actuarial accrued liabilities of \$2,988 million. Note that if the market value of assets was used, the Funded Ratio would be significantly less at 53.3%.

### Funding Progress (continued)

#### All dollar amounts in millions

	Market	Actuaria	l Value		
	Value of Total Assets	Valuation	Non- Valuation	Actuarial Accrued Liability	Funded Ratio
2000	\$1,381	\$1,271	\$49	\$1,292	98.4%
2001	1,308	1,385	51	1,404	98.6
2002	1,207	1,417	32	1,661	85.3
2003	1,233	1,354	34	1,782	76.0
2004	1,435	1,453	31	1,921	75.6
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

#### **Historical Funded Ratios**



#### **Assets**

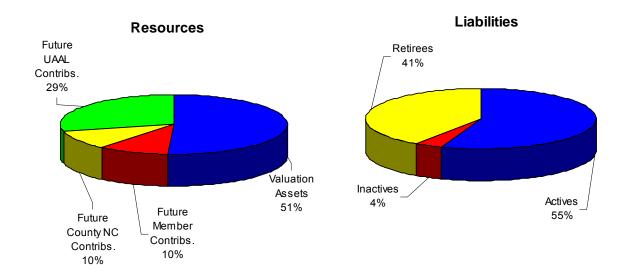
For the fiscal year ending June 30, 2009, we estimate that SamCERA lost 22.5%, net of investment expenses, on its market assets. Note that our return figure may be slightly different than that shown in the 2009 CAFR due to timing of contributions and benefit payments, as well as the treatment of expenses.

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. Due to the deferred recognition of recent losses, the return on valuation assets, at (14.1)%, was higher than the market return but substantially lower than the valuation assumption of 7.75%.

### 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.

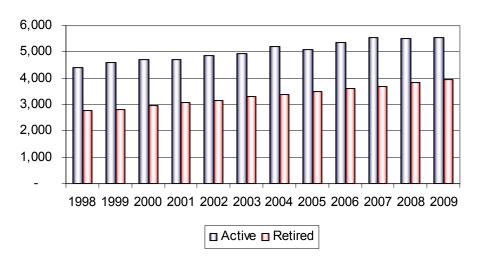


#### **Member Information**

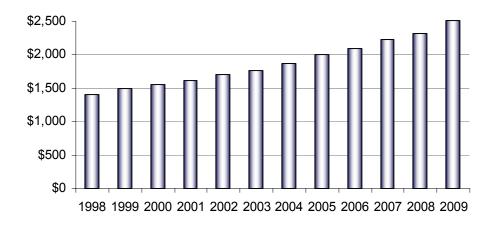
The number of active members included in the valuation increased by 0.7% from 5,500 in 2008 to 5,543 in 2009.

Retired member counts and average retirement benefit amounts continue to increase steadily. For 2009, there were 3,935 retired members and beneficiaries with an average benefit of \$2,521 per month. This represents a 2.4% increase in count from 3,842 in 2008 to 3,935 in 2009, and a 6.0% increase in the average monthly benefit from \$2,378 to \$2,521 over the period.

### **Membership Count**



### **Average Monthly Retirement Benefit**



### Summary Valuation Results

The following Exhibit 2 presents a summary of key data elements on June 30, 2009 and June 30, 2008, and how they changed over the past year. 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, 2009	,	June 30, 2008	Relative Change
1.	Total Membership					
	A. Active Members		5,543		5,500	0.8 %
	B. Retired Members & Beneficiaries		3,935		3,842	2.4%
	C. Vested Terminated Members		1,230		1,225	0.4%
	D. Total		10,708		10,567	1.3 %
2.	Pay Rate					
	A. Annual Total (\$thousands)	\$	445,152	\$	424,586	4.8%
	B. Monthly Average	\$	6,692	\$	6,433	4.0%
3.	Average Monthly Benefit to Current Retirees and Beneficiaries					
	A. Service Retirement	\$	2,639	\$	2,479	6.5%
	B. Disability Retirement	\$	2,663	\$	2,553	4.3%
	C. Surviving Spouse and Dependents	\$	1,757	\$	1,683	4.4%
	D. Total	\$	2,521	\$	2,378	6.0%
4.	Actuarial Accrued Liability (\$thousands)					
	A. Active Members	\$	1,317,165	\$	1,255,347	4.9%
	B. Retired Members C. Vested Terminated Members	\$ \$ \$	1,521,461 149,086	\$ \$	1,400,458 150,417	8.6% (0.9)%
	D. Total	\$	2,987,712	\$	2,806,222	6.5%
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5.	Assets  A. Market Value of Fund (\$thousands)	\$	1,591,400	\$	2,010,739	(20.9)%
	B. Return on Market Value*	Ψ	-22.5%	Ψ	-8.2%	(20.5)70
	C. Actuarial Value (\$thousands)	\$	1,909,679	\$	2,218,937	(13.9)%
	D. Return on Actuarial Value*		-14.1%		9.4%	
	* May differ from return reported in CAFR due treatment of expenses.	e to timin	g of contributions	and be	enefit payments ar	nd
6.	Unfunded Actuarial Accrued Liability					
	or Surplus Funding (\$thousands)	\$	1,078,033	\$	587,285	83.6%
7.	Required County contribution rate for all plans combined as a percent of total payroll					
	A. Gross Normal Cost		21.35%		21.43%	(0.4)%
	B. Member Contributions		(9.73)%		(9.74)%	(0.1)%
	C. County Normal Cost		11.62%		11.69%	(0.6)%
	D. UAAL Amortization		22.38%		11.93%	87.6%
	E. Total County Rate		34.00%		23.62%	43.9%
8.	Funded Ratio (5C / 4D)		63.9%		79.1%	(19.2)%
9.	Results Based on Market Value (No Asset Smoo	othing)	For Informational	Purpos	ses Only	
	A. Total County Rate		40.72%	-	27.85%	46.2%
	B. Funded Ratio (5A / 4D)		53.3%		71.7%	(25.7)%



### Section 2: Scope of the Report



This report presents the actuarial valuation of the San Mateo County Employees' Retirement Association as of June 30, 2009. 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, 2009.

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 County contributions needed to fund the benefits under the actuarial cost method in use.

Section 7 discloses the information required under Statement No. 25 of the Governmental Accounting Standards Board (GASB).

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, 2009.

- 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.



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#### 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, 2009. 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 County 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 the SamCERA's assets is presented below:

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		Actuarial Value			
	Market Value of <u>Total Assets</u>	Non- Valuation Reserves	Valuation <u>Assets</u>		
2000	\$ 1,381	\$ 49	\$ 1,271		
2001	1,308	51	1,385		
2002	1,207	32	1,417		
2003	1,233	34	1,354		
2004	1,435	31	1,453		
2005	1,599	0	1,616		
2006	1,790	0	1,769		
2007	2,132	0	1,977		
2008	2,011	0	2,219		
2009	1,591	0	1,910		

On June 30, 2009, the total market value of the fund was about \$1.59 billion. The actuarial value of the fund was determined to be \$1.91 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 directly from data furnished to us by SamCERA for their 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.

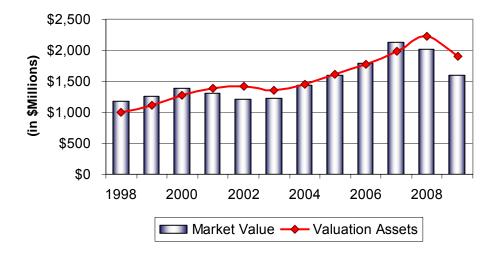
### Actuarial Asset Method

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. The current assumed rate of return, as recommended for this valuation, is 7.75%, 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.

### Actuarial Value of Assets

The development of the June 30, 2009 actuarial value of assets is shown in Exhibits 6 and 7. Note the smoothing process has recognized all of the investment losses from 2004 and earlier over the last few years. However, there are still large portions of prior investment losses that have not yet been recognized by the asset smoothing method. The result is a market value of assets that is less than the actuarial value. The following graph shows a historical comparison of the actuarial and market assets used for valuation purposes.

### **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 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 Exhibit 8. This is because UAAL contribution rates are determined separately by class.

In the calculation of the required 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.



Exhibit 3: Statement of Plan Net Assets
For the Years Ended June 30, 2008 and 2009

	2009	2008
Assets		
Cash and Cash Equivalents	67,909,157	64,334,888
Securities Lending Cash Collateral	119,950,929	234,500,134
Total Cash	\$ 187,860,087 \$	298,835,022
Total Casti	\$ 107,000,007 \$	290,035,022
Receivables		
Contributions	7,008,366	6,357,986
Due from broker for investments sold	64,890,282	103,095,295
Investment Income	4,210,923	4,902,481
Other receivables	313,211	249,895
Securities Lending Income	92,244	193,166
Total Receivables	76,515,027	114,798,824
Prepaid Expense	7,669	7,669
Investments at Fair Value		
Domestic fixed income securities	467,925,740	597,506,052
Domestic equities	618,757,277	818,989,347
International equities	359,981,040	405,738,858
Real estate	118,894,616	169,974,878
Total Investments	1,565,558,673	1,992,209,134
Capital Assets Net of Depreciation	<u>-</u>	<del>-</del>
Total Assets	1,829,941,455	2,405,850,649
Liabilities		
Payables		
Investment management fees	1,132,707	1,502,950
Due to broker for investments purchased	110,091,607	158,454,659
Collateral Payable for Securities Lending	119,950,929	234,500,134
Mortgage Note Payable		
Due within one year	-	-
Due in more than one year	-	-
Other	7,366,654	654,138
Total Liabilities	238,541,897	395,111,881
Net Assets Held in Trust for Pension Benefits	\$ 1,591,399,558 \$	2,010,738,768



Exhibit 4: Statement of Changes in Plan Net Assets For the Years Ended June 30, 2008 and 2009

### STATEMENT OF CHANGES IN PLAN NET ASSETS

For the Year Ended June 30, 2009 and 2008:

	2009	2008
Additions		
Contributions Employer Employee Total Contributions	\$ 106,123,055 50,371,592 156,494,646	\$ 105,339,570 60,111,183 165,450,753
Investment Income/(Loss) Interest and dividends Net appreciation/(depreciation) in Fair Value	42,096,352 (488,287,851) (446,191,499)	47,565,116 (214,563,618) (166,998,502)
Less investment expense Net Investment Income/(Loss)	11,117,817 (457,309,316)	11,380,285 (178,378,787)
Securities Lending Income Earnings Less securities lending expense Net Securities Lending Income	3,328,894 1,697,620 1,631,274	10,083,125 8,384,558 1,698,567
Other Additions  Total Additions/(Declines)	(15,957) <b>(299,199,353)</b>	181,048 <b>11,048,419</b>
Deductions Deductions	(200,100,000)	11,040,410
Association Benefits Service retirement allowances Disability retirement allowances Medical Benefits Death and other death benefits Total Association Benefits	99,208,814 13,816,561 - 965,432 113,990,807	90,306,503 12,760,602 - 902,959 103,970,063
Refunds of members' contributions Administrative Expense Other Expense	2,794,916 3,286,995 67,139	3,074,453 2,775,013 7,914
Total Deductions	120,139,857	109,827,443
Net Increase/(Decrease)	(419,339,210)	(120,875,862)
Net Assets Held in Trust for Pension Benefits:		
Beginning of Year	2,010,738,768	2,131,614,630
End of Year	1,591,399,558	2,010,738,768
Estimated Return, Net of Investment Expenses *	-22.5%	-8.2%

<sup>\*</sup> May differ from return reported in CAFR due to timing of contributions and benefit payments and treatment of expenses.



Exhibit 5: Allocation of Assets by Accounting Reserve Amounts For the Years Ended June 30, 2008 and 2009

Valuation Reserves	2009	2008
Member Deposit Reserve	\$ 412,146,516	\$ 385,300,221
2. County Advance Reserve	235,873,867	279,375,884
3. Retiree Reserves	636,170,664	784,613,246
4. Cost of Living Reserve	625,488,423	 769,647,607
5. Total Valuation Reserves	\$ 1,909,679,470	\$ 2,218,936,958
Non-Valuation Reserves	2009	2008
Contingency Reserve		
a. Reserves for Deficiencies in Interest Earnings	\$ -	\$ -
b. Unallocated Earnings / Loss Account	-	-
c. Total	\$ -	\$ -
Market Stabilization Account	 (318,279,912)	 (208,198,190)
3. Total Non-Valuation Reserves	\$ (318,279,912)	\$ (208,198,190)
4. Total Reserves	\$ 1,591,399,558	\$ 2,010,738,768

Note: These amounts were determined by SamCERA for accounting purposes.

Exhibit 6: 5-Year Smoothing of Gains and Losses on Market Value – History

		ı	History of Une	xpected Asset	: Gains and I	Losses		
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)
6/30/2009 \$	1,594,401,527	\$ 27,183,773	\$ 59,331,550	1,591,399,558	3.875%	\$ 61,167,136	\$ 29,145,808	\$ (32,021,328)
12/31/2008	2,010,738,768	129,310,873	57,454,173	1,594,401,527	3.875%	80,910,069	(488,193,941)	(569,104,010)
6/30/2008	2,180,911,208	37,433,714	55,033,629	2,010,738,768	3.875%	84,025,724	(152,572,525)	(236,598,249)
12/31/2007	2,131,614,629	128,017,039	52,010,887	2,180,911,208	3.875%	85,498,735	(26,709,573)	(112,208,308)
6/30/2007	2,035,751,839	29,280,037	49,671,897	2,131,614,629	3.875%	78,382,391	116,254,650	37,872,259
12/31/2006	1,789,897,817	113,965,567	47,360,082	2,035,751,839	3.875%	72,065,900	179,248,537	107,182,637
6/30/2006	1,787,576,077	23,551,946	45,624,067	1,789,897,817	4.000%	71,011,738	24,393,861	(46,617,877)
12/31/2005	1,599,269,700	92,500,269	44,548,346	1,787,576,077	4.000%	66,058,258	140,354,454	74,296,197
6/30/2005	1,600,553,433	22,834,864	41,871,612	1,599,269,700	3.920%	62,398,448	17,753,015	(44,645,433)



**Exhibit 7:** 5-Year Smoothing – Development of Valuation Assets

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

	Phase-Out of Gain / (Loss)							
Six-Month	Percent		Unexpected				Gain / (Loss)	
Period Ended	Excluded	•		Gain / (Loss)			Excluded	
6/30/2009	90%	х	\$	(32,021,328)	=	\$	(28,819,195)	
12/31/2008	80%	X		(569,104,010)	=		(455,283,208)	
6/30/2008	70%	X		(236,598,249)	=		(165,618,774)	
12/31/2007	60%	X		(112,208,308)	=		(67,324,985)	
6/30/2007	50%	X		37,872,259	=		18,936,130	
12/31/2006	40%	X		107,182,637	=		42,873,055	
6/30/2006	30%	X		(46,617,877)	=		(13,985,363)	
12/31/2005	20%	X		74,296,197	=		14,859,239	
6/30/2005	10%	X		(44,645,433)	=		(4,464,543)	
Total Gain / (Loss)	) Excluded = Mar	ket S	Stab	ilization Reserve	=	\$	(658.827.644)	

	Development of Valuation Assets										
1.	Market Value of Assets as of June 30, 2009		\$	1,591,399,558							
2.	Preliminary Market Stabilization Reserve			(658,827,644)							
3.	Preliminary Actuarial Value of Assets (1) - (2)			2,250,227,202							
4.	Corridor Around Market Value a) Minimum = 80% of Market b) Maximum = 120% of Market c) Corridor Adjustment	1,273,119,646 1,909,679,469		(340,547,732)							
5.	Market Stabilization Reserve	(318,279,912)									
6.	Gross Actuarial Valuation of Assets (3) - (4c)		\$	1,909,679,469							
7.	Non-Valuation Reserves and Designations a) Reserves for Interest Fluctuations b) Medicare Part B Reserve c) Total	0		0							
8.	Valuation Assets (1) - (5) - (6)		\$	1,909,679,469							



#### Exhibit 8: **Allocation of Valuation Assets** (Dollars in Thousands)

	General	Safety	Р	Probation	Total
Prior Year UAAL	\$ 401,749	\$ 148,211	\$	37,326	\$ 587,286
2. Expected UAAL Contribution for Preceding Year	(34,083)	(13,852)		(3,547)	(51,482)
3. Expected Interest at 7.75%	 29,839	10,960		2,758	43,557
4 Expected UAAL Based on Prior Year Assumptions	397,505	145,319		36,537	579,361
5. Percentage of Total Expected UAAL	68.61%	25.08%		6.31%	100.00%
6. Actual UAAL Based on Prior Year Assumptions					1,078,033
7. Actual AAL Based on Prior Year Assumptions	\$ 2,208,574	\$ 610,033	\$	169,105	\$ 2,987,712
8. Allocated UAAL	739,649	270,399		67,985	1,078,033
9. Actuarial Value of Assets	\$ 1,468,925	\$ 339,634	\$	101,120	\$ 1,909,679

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#### 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, 2009. 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 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 and investment returns. 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 County contributions in the future. Both the current and future assets (contributions) are compared to the actuarial liabilities in the Actuarial Balance Sheet.

Exhibit 9 contains an analysis of the actuarial present value of all future benefits for inactive members, (both retired and deferred vested members), and active members. The analysis is given 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, 2009.

The actuarial assumptions used to determine the liabilities are based on the results of our investigation of experience report for the period ending April 30, 2008. These assumptions were adopted by the Board at their August 2008 meeting and are shown in Appendix A.

Exhibit 9: Actuarial Balance Sheet – June 30, 2009 (Dollars in Thousands)

Resources								
Valuation Assets (Actuarial)	\$	<b>General</b> 1,468,925	\$	<b>Safety</b> 339,634	<b>P</b> \$	robation 101,120	\$	<b>Total</b> 1,909,679
Present Value of Future Member Contributions		299,218		48,961		25,567		373,746
Present Value of Future Employer Contributions to Fund: a) Normal Cost b) Unfunded Actuarial Accrued Liability		274,969 739,649		65,350 270,399		46,858 67,985		387,177 1,078,033
Total Resources	\$	2,782,761	\$	724,344	\$	241,530	\$	3,748,635

	Lial	oilities						
	General			Safety Probation			Total	
Present Value of Future Benefits								
1. Present Retired Members	\$ 1,0	90,684	\$	366,863	\$	63,915	\$	1,521,461
2. Current Inactive Members	1	22,928		17,409		8,749		149,086
3. Current Active Members								
- Service Retirement	1,4	08,256		310,445		151,068		1,869,769
- Disability Retirement		46,334		14,078		7,975		68,387
- Death Benefits		23,459		6,428		3,423		33,309
- Deferred Vested Benefit		61,513		7,587		5,570		74,671
- Refund of Member Contributions		29,588		1,535		829		31,951
- Total Active	1,5	69,149		340,073		168,866		2,078,087
Total Actuarial Liabilities	\$ 2,7	82,761	\$	724,344	\$	241,530	\$	3,748,635

### 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 County.

### 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 County. The member contribution rates are determined based upon requirements established in the '37 Act and the actuarial assumptions. 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 County'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 are summarized below:

(Dollars in millions)	2009	2008	Percent Change
A. Actuarial present value of all future benefits for contributing members, former contributing members, and their survivors	\$ 3,749	\$ 3,542	5.8%
B. Actuarial present value of total future Normal Costs for current members	<u>761</u>	<u>736</u>	3.4%
C. Actuarial accrued liability [A-B]	\$ 2,988	\$ 2,806	6.5%
D. Valuation Assets	<u>1,910</u>	<u>2,219</u>	(13.9)%
E. UAAL or Surplus Funding [C-D]	\$ 1,078	\$ 587	83.6%
F. Funded Ratio [D/C]	63.9%	79.1%	(19.2)%

# 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 County 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.

Exhibit 9 shows how the UAAL was derived for each classification. 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. If the UAAL amount is positive, that is, the Actuarial Accrued Liability to be funded is greater than the Valuation Assets, then the UAAL is amortized. Under the current funding method, the June 30, 2008 UAAL is amortized over a fixed period ending June 30, 2023. Any change in UAAL in future years will be 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, 2009.

### 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 2009 actuarial valuation reflects an increase in the UAAL of \$490.7 million for the fiscal year just ended.

Unfunded Actuarial Accrued Liability - June 30, 2008	\$	587.3
Expected Increase / (Decrease) *		(11.8)
Expected UAAL - June 30, 2009	\$	575.5
Asset (Gains) and Losses Retiree COLA Greater than Expected Salary Increases Less than Expected Assumption Changes Other Liability (Gain)/Loss	_	522.4 1.1 (7.3) - (13.7)
Total Changes	_	502.5
Actual UAAL - June 30, 2009	\$	1,078.0

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



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



Basic Contributions

For SamCERA, member contributions are of two types: Basic contributions and Cost Sharing contributions.

Basic contributions for each plan are defined in the following sections of the County Employees' Retirement Law:

Plan	Code Section	Contribution Provides Average Annuity of
General – County	31621.9	1/120 <sup>th</sup> of FAC at age 55
General – SMCMVCD	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 Funding 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 on service retirement
- 4. No COLAs are assumed

The member contribution rates were recalculated as of the June 30, 2008 valuation to reflect the assumptions adopted in the April 30, 2008 investigation of experience report. The rates are shown in Appendix D.

### Cost-Sharing Contributions

In addition to the basic rate, members make additional costsharing contributions as shown in Appendix B. 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

Members do not contribute towards the cost-of-living benefit.

### Member Contribution Rates

A sample of the current member contribution rates (basic plus cost-sharing) can be found in Exhibit 10.

Note that a portion of some of the member contribution rates is paid for ("picked up") by the County 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 pick-up for Probation members, but not other classes, due to the differing treatment of contributions for refund purposes.

Full disclosure of the member rates, showing both the basic and the total (basic plus cost-sharing) contribution rates, can be found in Appendix D.



Exhibit 10: Sample Member Contribution Rates Effective July 1, 2009

	Entry		Cost	Total as a
-	Age	Basic	Sharing	% of Pay
General Members	- County			
Plans 1 & 2	25	6.03%	3.00%	9.03%
	35	7.22%	3.00%	10.22%
	45	8.67%	3.00%	11.67%
Plan 4	25	5.78%	3.00%	8.78%
	35	6.91%	3.00%	9.91%
	45	8.26%	3.00%	11.26%
General Members	s - Mosquito	Abatement Dis	strict	
Plans 1 & 2	25	5.20%	0.00%	5.20%
	35	6.23%	0.00%	6.23%
	45	7.48%	0.00%	7.48%
Plan 4	25	4.98%	0.00%	4.98%
	35	5.97%	0.00%	5.97%
	45	7.16%	0.00%	7.16%
Probation Member	ers (Reflects	Employer Pick	r-up)	
Plans 1 & 2	25	6.53%	3.50%	10.03%
	35	7.83%	3.50%	11.33%
	45	9.21%	3.50%	12.71%
Plan 4	25	6.25%	3.50%	9.75%
	35	7.49%	3.50%	10.99%
	45	8.66%	3.50%	12.16%
Safety Members -	Other than	Deputy Sheriff	*	
Plans 1 & 2	25	8.16%	5.00%	13.16%
	35	9.78%	5.00%	14.78%
	45	11.52%	5.00%	16.52%
Plan 4	25	7.81%	5.00%	12.81%
	35	9.37%	5.00%	14.37%
	45	10.83%	5.00%	15.83%

<sup>\*</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.

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### **Section 6: County Contributions**



Calculated
Contribution Rate

Contributions to SamCERA are determined using the Entry Age Normal Cost Funding 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. Exhibits 11a & 11b illustrate the Normal Cost Rates by type of benefit and for each plan based on this valuation. A comparison with last year is also shown.

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 (or County) Normal Cost 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.

The total calculated employer contribution rates for each plan, along with a comparison to the prior year's computed rates, can be found in Exhibits 12a & 12b. These results are expressed as a percentage of payroll and annual contribution dollars. Note that SamCERA's UAAL is determined separately for each class. Thus, the County funds the UAAL evenly as a percentage of pay over salaries for all members within a class. Exhibit 12c (supplemental information) contains details on the UAAL.

The total County contribution rate was 23.76% for the fiscal year beginning July 1, 2009. For the fiscal year beginning in 2010, the calculated rate based on this report increased to 34.00%. This is equal to the aggregate County Normal Cost contribution rate of 11.62% based on Milliman's 2009 valuation, plus appropriate amounts to amortize the UAAL according to the funding policy, over layered 15-year closed periods.

## **County Contribution Rate**

(all values as a % of Payroll)

County Normal Cost11.62%Total Amortization of UAAL22.38Total County Contribution34.00%



### Calculated Contribution Rate (continued)

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 County contribution rate calculated in the 2009 valuation is paid over the remaining 14 years and is effective July 1, 2010.

Exhibit 12c-shows detail information on how the contribution rate is calculated using the layered method.

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

#### 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 3 and 4, instead of the slightly more expensive Plans 1 and 2. However, the change will be fairly gradual.
- (2) Contribution Shut-Off: For general members hired prior to March 7, 1973 and all Safety 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 is equal to the cost-sharing, resulting in a sizable increase in the County's share of the Normal Cost contributions for the years when the member has more than 30 years of service. The County'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. As most general members hired prior to March 7, 1973 have now attained 30 years of service, this statement applies mainly to Safety groups.

Exhibit 11a: Calculated Employer Normal Cost Contribution Rates – June 30, 2009

		Ge	neral - Co	unty			General - Si	MCM&VCD	
A. Normal Cost Contribution Rate	Plan 1	Plan 2	Plan 3	Plan 4	<u>Total</u>	Plan 1	Plan 2	Plan 4	<u>Total</u>
Service Retirement	15.84%	16.44%	7.27%	15.58%	15.59%	12.99%	13.48%	12.78%	12.90%
Disability Retirement	0.64%	0.74%	0.00%	0.82%	0.77%	0.52%	0.61%	0.67%	0.65%
Death while Active	0.29%	0.32%	0.00%	0.31%	0.31%	0.24%	0.26%	0.25%	0.25%
Termination (No Refund)	1.37%	1.29%	0.53%	1.27%	1.26%	1.12%	1.06%	1.04%	1.05%
Refund of Member Contributions	1.42%	1.56%	0.00%	1.62%	1.55%	1.16%	1.28%	1.33%	1.31%
Total	19.56%	20.35%	7.80%	19.60%	19.48%	16.03%	16.69%	16.07%	16.16%
B. Member Contributions	(8.52)%	(9.41)%	0.00%	(9.79)%	(9.37)%	(6.99)%	(7.72)%	(8.03)%	(7.91)%
C. Net Employer Normal Cost as of June 30, 2009 (A) - (B)	11.04%	10.94%	7.80%	9.81%	10.11%	9.04%	8.97%	8.04%	8.25%
D. Net Employer Normal Cost as of June 30, 2008	10.70%	11.01%	7.75%	9.82%	10.16%	8.77%	9.04%	8.05%	8.55%
E. Increase (Decrease) as a Percentage of Payroll (C) - (D)	0.34%	(0.07)%	0.05%	(0.01)%	(0.05)%	0.27%	(0.07)%	(0.01)%	(0.30)%



Exhibit 11b: Calculated Employer Normal Cost Contribution Rates – June 30, 2009 (continued)

		Sat	fety			Proba	tion		All Plans
A. Normal Cost Contribution Rate	Plan 1	Plan 2	<u>Plan 4</u>	<u>Total</u>	Plan 1	Plan 2	Plan 4	<u>Total</u>	
Service Retirement	31.10%	27.91%	25.83%	26.74%	28.33%	27.42%	24.50%	25.39%	17.32%
Disability Retirement	1.73%	1.78%	2.04%	1.94%	1.77%	1.74%	1.74%	1.74%	0.95%
Death while Active	0.99%	0.99%	0.92%	0.95%	1.04%	0.89%	0.83%	0.85%	0.40%
Termination (No Refund)	1.21%	1.33%	1.20%	1.25%	1.43%	1.33%	1.28%	1.30%	1.26%
Refund of Member Contributions	0.68%	0.74%	0.85%	0.80%	0.53%	0.62%	0.64%	0.64%	1.42%
Total	35.71%	32.75%	30.84%	31.68%	33.10%	32.00%	28.99%	29.92%	21.35%
B. Member Contributions	(11.34)%	(12.33)%	(12.58)%	(12.47)%	(8.63)%	(9.81)%	(10.09)%	(10.00)%	(9.73)%
C. Net Employer Normal Cost as of June 30, 2009 (A) - (B)	24.37%	20.42%	18.26%	19.21%	24.47%	22.19%	18.90%	19.92%	11.62%
D. Net Employer Normal Cost as of June 30, 2008	22.99%	20.46%	18.17%	19.32%	24.87%	22.22%	18.99%	20.05%	11.69%
E. Increase (Decrease) as a Percentage of Payroll (C) - (D)	1.38%	(0.04)%	0.09%	(0.11)%	(0.40)%	(0.03)%	(0.09)%	(0.13)%	(0.07)%



**Exhibit 12a: Total Employer Contributions** (Dollars In Thousands)

		G	eneral - Cou	nty			General -	SMCM&VCD	
	Plan 1	Plan 2	Plan 3	Plan 4	<u>Total</u>	Plan 1	Plan 2	Plan 4	<u>Total</u>
A. Basic Employer Normal Cost Rate	5.25%	6.17%	7.80%	6.52%	6.42%	4.31%	5.06%	5.35%	5.23%
B. COLA Normal Cost Rate	5.79%	4.77%	0.00%	3.29%	3.69%	4.73%	3.91%	2.69%	3.02%
C. Employer Normal Cost Rate	11.04%	10.94%	7.80%	9.81%	10.11%	9.04%	8.97%	8.04%	8.25%
D. UAAL Contribution Rate	18.40%	18.40%	18.40%	18.40%	18.40%	15.09%	15.09%	15.09%	15.09%
E. Total June 30, 2009 Contribution Rate (C) + (D)	29.44%	29.34%	26.20%	28.21%	28.51%	24.13%	24.06%	23.13%	23.34%
F. Total June 30, 2008 Contribution Rate	20.51%	20.82%	17.56%	19.63%	19.97%	16.81%	17.08%	16.09%	16.59%
G. Estimated Payroll for fiscal year beginning July 1, 2010	\$ 9,869 \$	114,398	\$ 11,350 \$	255,959	\$ 391,576	\$ 103	\$ 209	\$ 1,071	\$ 1,383
H. Estimated Annual Contribution (E x G)*	\$ 2,906 \$	33,568	\$ 2,974 \$	72,214	\$ 111,650	\$ 25	\$ 50	\$ 248	\$ 323
I. Last Year's Estimated Annual Contribution	\$ 2,498 \$	24,142	\$ 1,743 \$	46,199	\$ 74,569	\$ 17	\$ 47	\$ 147	\$ 214
J. Increase / (Decrease) in Annual Contribution	\$ 408 \$	9,426	\$ 1,231 \$	26,015	\$ 37,081	\$ 8	\$ 3	\$ 101	\$ 109

<sup>\*</sup> Estimated contributions shown for illustrative purposes based on monthly contributions. Actual contributions will vary depending on actual payroll and timing.



**Exhibit 12b: Total Employer Contributions (continued)** (Dollars In Thousands)

		Saf	fety					Prob	atio	n		All Plans
	 Plan 1	Plan 2		Plan 4	Total	_	Plan 1	Plan 2		Plan 4	Total	
A. Basic Employer Normal Cost Rate	12.24%	11.57%		12.21%	11.95%		14.67%	13.53%		13.13%	13.26%	7.39%
B. COLA Normal Cost Rate	 12.13%	8.85%		6.05%	7.26%	_	9.80%	8.66%		5.77%	6.66%	4.23%
C. Employer Normal Cost Rate	24.37%	20.42%		18.26%	19.21%		24.47%	22.19%		18.90%	19.92%	11.62%
D. UAAL Contribution Rate	 51.83%	51.83%		51.83%	51.83%	_	23.84%	23.84%		23.84%	23.84%	22.38%
E. Total June 30, 2009 Contribution Rate (C) + (D)	76.20%	72.25%		70.09%	71.04%		48.31%	46.03%		42.74%	43.76%	34.00%
F. Total June 30, 2008 Contribution Rate	50.30%	47.77%		45.48%	46.63%		37.68%	35.03%		31.80%	32.86%	23.62%
G. Estimated Payroll for fiscal year beginning July 1, 2010	\$ 1,386	\$ 19,735	\$	29,916	\$ 51,037	9	S 745	\$ 8,222	\$	18,896	\$ 27,863	\$471,859
H. Estimated Annual Contribution (E x G)*	\$ 1,056	\$ 14,258	\$	20,967	\$ 36,255	\$	360	\$ 3,784	\$	8,076	\$ 12,192	\$160,432
I. Last Year's Estimated Annual Contribution	\$ 1,138	\$ 9,701	\$	12,081	\$ 22,911	9	376	\$ 2,793	\$	5,492	\$ 8,622	\$ 106,307
J. Increase / (Decrease) in Annual Contribution	\$ (82)	\$ 4,557	\$	8,886	\$ 13,344	\$	(16)	\$ 991	\$	2,584	\$ 3,570	\$ 54,125

<sup>\*</sup> Estimated contributions shown for illustrative purposes based on monthly contributions. Actual contributions will vary depending on actual payroll and timing.



# Exhibit 12c: Supplemental Detail on UAAL Payments (Dollars in Thousands)

				Gen	eral					
Date Established	Description	 ance as of e 30, 2009	erest on Salance		Payment on 2010 1		lance as of e 30, 2010 <sup>2</sup>	Remaining Period as of June 30, 2010	Am	ly 1, 2010 ortization Payment
June 30, 2008	Initial UAAL	\$ 397,394	\$ 30,798	\$	38,112	\$	390,080	13 Years	\$	37,498
June 30, 2009	Gain / Loss	\$ 342,255	\$ 26,525	\$	504 <sup>3</sup>	\$	368,276	14 Years	\$	33,414
						Total /	Amortization Pa	yment July 1, 2010:	\$	70,912
							Projected F	Payroll July 1, 2010:	\$	385,328
UAAL as of	f June 30, 2009:	\$ 739,649	U	AAL Co	ntribution Rat	te (as	a % of Payroll)	FYB July 1, 2010:		18.40%
		 · · · · · · · · · · · · · · · · · · ·								<del></del>

				Saf	ety					
Date Established	Description	ance as of ne 30, 2009	erest on		Payment on 2010 1		ance as of e 30, 2010 <sup>2</sup>	Remaining Period as of June 30, 2010	Am	y 1, 2010 ortization ayment
June 30, 2008	Initial UAAL	\$ 145,014	\$ 11,239	\$	13,907	\$	142,346	13 Years	\$	13,683
June 30, 2009	Gain / Loss	\$ 125,385	\$ 9,717	\$	40 3	\$	135,062	14 Years	\$	12,254
					-	Total A	Amortization Pa	yment July 1, 2010:	\$	25,937
							Projected F	Payroll July 1, 2010:	\$	50,045
UAAL as o	f June 30, 2009:	\$ 270,399	U	AAL Co	ntribution Rat	e (as	a % of Payroll)	FYB July 1, 2010:		51.83%

					Proba	ition					
Date Established	Description		ance as of e 30, 2009	erest on alance		Payment on 30, 2010 <sup>1</sup>		ance as of e 30, 2010 <sup>2</sup>	Remaining Period as of June 30, 2010	Amo	y 1, 2010 ortization ayment
June 30, 2008	Initial UAAL	\$	36,332	\$ 2,816	\$	3,484	\$	35,664	13 Years	\$	3,428
June 30, 2009	Gain / Loss	\$	31,653	\$ 2,453	\$	110 <sup>3</sup>	\$	33,996	14 Years	\$	3,085
							Total A	mortization Pa	yment July 1, 2010:	\$	6,513
		-						Projected F	Payroll July 1, 2010:	\$	27,322
UAAL as o	f June 30, 2009:	\$	67,985	U	AAL Co	ntribution Rat	e (as a	a % of Payroll)	FYB July 1, 2010:		23.84%

#### **Explanatory Notes:**



<sup>&</sup>lt;sup>1</sup> Amortization Payments are based on a fixed schedule that increases by the payroll assumption each year.

<sup>&</sup>lt;sup>2</sup> The calculation of assets and liabilities used in the calculation of UAAL are as of June 30, 2009; whereas, the contribution rates are not effective until June 1, 2010. Therefore, the UAAL is adjusted to June 30, 2010 in the calculation of contribution rates.

<sup>&</sup>lt;sup>3</sup> The 15-year amortization of UAAL does not begin until July 1, 2010; however, the UAAL amount is adjusted based on the July 1, 2009 contribution rate.

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### 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. 25). The reporting requirements for Statement No. 25 include certain supplementary information that must be added to the financial statements. These include:

- (1) A Schedule of Funding Progress
- (2) A Schedule of Employer Contributions

The Schedule of Funding Progress, Exhibit 13, compares actuarial assets and liabilities of SamCERA, based on the actuarial funding method used. The required Schedule of Employer Contributions, Exhibit 14, compares the employer contributions required based on the actuarial valuation (the actuarial required contribution, or ARC) with the employer contributions actually made. The ARC must be calculated based on certain parameters required for disclosure purposes.

We believe the actuarial methods and assumptions used in this valuation to determine the employer's contribution for funding purposes satisfy the GASB reporting requirements.

GASB Statement No. 27 specifies required reporting for pension accounting by state and local governmental employers.

The comparability of the data from year-to-year can be affected by changes in actuarial assumptions, benefit provisions, accounting policies, etc.

Exhibit 15 compares the Actuarial Value of Valuation Assets to the types of Actuarial Accrued Liabilities, applying them first to Active Member contributions, then to retirees and beneficiaries, and then the remaining amount to the active members' benefits. This is referred to as the Solvency Test. Although not required under GASB, this test is part of the CAFR guidelines specified by the Government Finance Officers Association (GFOA).



# CAFR (continued)

In addition to the exhibits mentioned above, the following supporting information is supplied for inclusion in SamCERA's CAFR:

- 1. Exhibit 16 History of employer contribution rates.
- 2. Exhibit 17 Actuarial analysis of financial experience.
- 3. Exhibit 18 Summary of significant actuarial statistics and measurements.
- Exhibit 19 Summary of SamCERA membership. For more detailed information on the valuation data, see Appendix C.
- 5. Exhibit 20 Summary of active member valuation data.
- 6. Exhibit 21 Summary of demographic activity of retirees and beneficiaries.
- 7. Exhibit 22 Average salary and active counts by employer.
- 8. Exhibit 23 Summary of retired and inactive benefits.
- Exhibit 24 Summary of actuarial assumptions and cost method. For more detailed information, see Appendix A.



Exhibit 13: **Schedule of Funding Progress** (Dollars In Thousands)

Actuarial Valuation Date*	(a) Actuarial Value f Valuation Assets	(b) Actuarial Accrued Liabilities	F.	(b-a) nfunded Actuarial Accrued lities (UAAL)	(a/b) Funded Ratio	<u> </u>	Cover	(c) red Payroll	[(b-a)/c] UAAL as a Percentage of Covered Payroll
June 30, 2000	\$ 1,271,565	\$ 1,291,694	\$	20,129	98.4%	\$		259,075	7.77%
June 30, 2001	1,384,586	1,404,060		19,474	98.6%			274,318	7.10%
June 30, 2002	1,416,821	1,660,566		243,745	85.3%			301,891	80.74%
June 30, 2003	1,353,941	1,781,544		427,603	76.0%			323,896	132.02%
June 30, 2004	1,452,621	1,921,328		468,707	75.6%			365,385	128.28%
June 30, 2005	1,615,585	2,177,759		562,174	74.2%			334,315	168.16%
June 30, 2006	1,769,021	2,345,149		576,128	75.4%			368,972	156.14%
June 30, 2007	1,976,731	2,555,504		578,773	77.4%			407,912	141.92%
June 30, 2008	2,218,937	2,806,222		587,285	79.1%			416,243	141.09%
June 30, 2009	1,909,679	2,987,712		1,078,033	63.9%			436,424	247.02%

<sup>\*</sup>Information for years prior to 2005 reported by prior actuaries.

Exhibit 14: **Schedule of Contributions from the Employer** (All Dollars In Thousands)

Fiscal Year Ending*	Annual Required Contribution (ARC)	Actual Employer Contributions	Percentage of ARC Contributed
6/30/2000	\$ 38,695	\$ 38,695	100%
6/30/2001	39,482	39,482	100%
6/30/2002	33,541	33,541	100%
6/30/2003	36,070	36,070	100%
6/30/2004	60,042	60,042	100%
6/30/2005	76,931	76,931	100%
6/30/2006	76,090	76,090	100%
6/30/2007	100,550	100,550	100%
6/30/2008	105,340	105,340	100%
6/30/2009	106,123	106,123	100%

<sup>\*</sup>Information for years prior to 2005 reported by prior actuaries.

Exhibit 15: **Solvency Test** (Dollars In Thousands)

		Ac	tuarial	Accrued Liabi	lities fo	or			
		Active Member		etirees and	<b>(</b> I	ve Members Employer Financed		n of Actuarial A bilities Covered Assets	
Actuarial Valuation Date <sup>(1)</sup>	Valuation Assets	Contributions (A)	Be 	neficiaries <sup>(2)</sup> (B)		Portion) (C)	(A)	(B)	(C)
June 30, 2001	\$ 1,271,565	\$ 158,314	\$	689,356	\$	444,024	100%	100%	95%
June 30, 2002	1,384,586	174,066		789,104		440,890	100%	100%	96%
June 30, 2003	1,416,821	190,450		866,985		785,082	100%	100%	46%
June 30, 2004	1,353,941	202,551		858,273		915,108	100%	100%	32%
June 30, 2005	1,452,621	259,731		942,765		718,832	100%	100%	35%
June 30, 2006	1,615,585	281,231		1,133,351		763,177	100%	100%	26%
June 30, 2007	1,769,021	317,521		1,234,005		793,623	100%	100%	27%
June 30, 2007	1,976,731	359,484		1,348,013		848,007	100%	100%	32%
June 30, 2008	2,218,937	385,300		1,550,875		870,047	100%	100%	32%
June 30, 2009	1,909,679	412,147		1,670,547		905,018	100%	90%	0%

<sup>(1)</sup> Information for years prior to 2005 reported by prior actuaries.



<sup>(2)</sup> Includes deferred vested.

Exhibit 16: **History of Employer Contribution Rates** (Dollars In Thousands)

				County	Rates <sup>(1)</sup>				
	Ge	eneral Memb	per	S	afety Memb	er	Pro	bation Mem	ber
Year	Normal	UAAL	Total	Normal	UAAL	Total	Normal	UAAL	Total
2000	9.85%	3.60%	13.45%	17.70%	7.24%	24.94%	19.26%	5.53%	24.79%
2001	9.95%	0.71%	10.66%	17.81%	1.51%	19.32%	17.94%	1.16%	19.10%
2002	9.71%	0.70%	10.41%	17.22%	1.50%	18.72%	16.76%	1.17%	17.93%
2003	11.00%	4.60%	15.60%	21.99%	12.74%	34.73%	23.45%	8.10%	31.55%
2004	9.76%	8.25%	18.01%	15.34%	24.82%	40.16%	16.17%	15.28%	31.45%
2005	10.36%	10.38%	20.74%	20.43%	32.02%	52.45%	21.10%	16.43%	37.53%
2006	10.49%	9.97%	20.46%	20.18%	30.52%	50.70%	21.59%	14.85%	36.44%
2007	10.19%	9.46%	19.65%	19.94%	29.32%	49.26%	20.83%	14.06%	34.89%
2008	10.16%	9.81%	19.97%	19.32%	27.31%	46.63%	20.05%	12.81%	32.86%
2009	10.11%	18.40%	28.51%	19.21%	51.83%	71.04%	19.92%	23.84%	43.76%

Rates for Mosquito and Vector Control District									
	Ge	neral Mem	ber						
Year	Normal	UAAL	Total						
2005	8.69%	8.51%	17.20%						
2006	8.76%	8.18%	16.94%						
2007	8.50%	7.76%	16.26%						
2008	8.55%	8.04%	16.59%						
2008	8.25%	15.09%	23.34%						

(1) Information for years prior to 2005 reported by prior actuaries.



**Actuarial Analysis of Financial Experience** Exhibit 17:

Summary of (Gains) / Losses<sup>(1)</sup> **Change In Liability** 2009 2005 2008 2007 2006 \$ 578,773,000 \$468,707,000 Unfunded Liability as of July 1 \$ 587,285,000 \$ 576,128,000 \$ 562,174,000 **Expected Change in UAAL** (11,786,000)(31,649,000)(16,745,000)2,980,000 (1,700,000)(34,300,000)Salary (Gain) / Loss (10,081,000)(19,946,000)45,157,000 19,671,000 Fewer Withdrawals than expected Retiree COLA more / (less) than expected 1,080,000 937,000 (3,380,000)(13,862,000)(26,197,000)Asset (Gain) / Loss 522,444,000 (20.078.000)(22.639.000)(1,363,000)8,934,000 Change due to Assumption Changes 61,011,000 152,500,000 (21,801,000)Ventura Benefits & Asset transfers Miscellaneous Experience (10,909,000)18,237,000 252,000 6,528,000 16,031,000 Change Due to New Formula

\$ 587,285,000

\$ 578,773,000

\$ 576,128,000

\$ 562,174,000

\$ 1,078,033,000



Unfunded Liability as of June 30

<sup>(1)</sup> Information for years prior to 2005 reported by prior actuaries.

**Exhibit 18:** Summary of Significant Actuarial Statistics and Measures

		_	June 30th of			Relative	
			2009		2008	Change	
I.	Active Members						
	Number of Members		5,543		5,500	0.8 %	
	Average Age		44.9		44.5	0.9%	
	Average Credited Service		9.6		9.3	3.2%	
	Total Active Payroll (\$thousands)	\$	445,152	\$	424,586	4.8%	
	Average Monthly Salary	\$	6,692	\$	6,433	4.0%	
II.	Retired Members						
	Number of Members Service Retirement		3,032		2,958	2.5 %	
	Disability Retirement		3,032 369		2,956 361	2.2 %	
	Beneficiaries		534		523	2.1 %	
	Average Age		71.3		71.2	0.1 %	
	Total Retiree Payroll (\$thousands)	\$	119,052	\$	109,616	8.6 %	
	Average Monthly Pension	\$	2,521	\$	2,378	6.0%	
III.	Inactive Vested Members		1,230		1,225	0.4 %	
IV.	Assets						
	Market Value of Fund (\$thousands)	\$	1,591,400	\$	2,010,739	(20.9)%	
	Return on Market Value	,	-22.5%	•	-8.2%	( /	
	Valuation Assets (\$thousands)	\$	1,909,679	\$	2,218,937	(13.9)%	
	Return on Valuation Assets		-14.1%		9.4%	,	
V.	Liability Values (\$thousands)						
	Actuarial Accrued Liability	\$	2,987,712	\$	2,806,222	6.5%	
	Unfunded Actuarial Accrued Liability	\$	1,078,033	\$	587,285	83.6%	
	Deferred Asset (Gains) / Losses	\$	318,279	\$	208,198		
VI.	Funded Ratio						
	GASB 25 (based on valuation assets)		63.9%		79.1%	(19.2)%	



Exhibit 19: Summary of SamCERA Membership

Plan	One	Two	Three	Four	Total
Retirees and beneficiaries curr	ently receiving	benefits:			
General	2,093	1,206	83	71	3,453
Safety	291	88	-	6	385
Probation	68	26_		3_	97
Subotal	2,452	1,320	83	80	3,935
Terminated employees entitled	to but not cur	rently receiving	j benefits (Deferi	red):	
General	52	519	129	418	1,118
Safety	2	38	-	28	68
Probation		20_		24	44
Subotal	54	577	129	470	1,230
Current employees:					
Vested:					
General	104	1,265	65	1,493	2,927
Safety	10	153	-	150	313
Probation	6	88	-	146	240
Non-Vested:					
General	-	-	89	1,761	1,850
Safety	-	-	-	123	123
Probation	-	-	-	90	90
Subotal	120	1,506	154	3,763	5,543
Total SamCERA Membership	2,626	3,403	366	4,313	10,708



Exhibit 20: Summary of Active Member Valuation Data

Valu	ation Date	Members	Annual Salary	Average Annual Salary	% Change Average Salary
2000	General	4,018	\$ 214,625,000	\$53,412	6.0%
	Safety	423	\$ 31,180,000	\$73,716	4.9%
	Probation	249	\$ 13,270,000	\$53,292	8.2%
	Total	4,690	\$ 259,075,000	\$55,236	5.9%
2001	General	4,040	\$ 227,848,000	\$56,400	5.6%
	Safety	416	\$ 31,611,000	\$75,984	3.1%
	Probation	261	\$ 14,859,000	\$56,928	6.8%
	Total	4,717	\$ 274,318,000	\$58,152	5.3%
2002	General	4,159	\$ 250,344,000	\$60,192	6.7%
	Safety	431	\$ 34,405,000	\$79,824	5.1%
	Probation	282	\$ 17,142,000	\$60,792	6.8%
	Total	4,872	\$ 301,891,000	\$61,968	6.6%
2003	General	4,213	\$ 267,150,000	\$63,408	5.3%
	Safety	434	\$ 37,973,000	\$87,492	9.6%
	Probation	290	\$ 18,773,000	\$64,740	6.5%
	Total	4,937	\$ 323,896,00	\$65,964	5.9%
2004	General	4,487	\$ 303,786,879	\$67,700	6.8%
	Safety	411	\$ 40,796,852	\$99,202	13.4%
	Probation	288	\$ 20,800,813	\$72,225	11.6%
	Total	5,186	\$ 365,384,544	\$70,448	6.8%
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%

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



**Summary of Demographic Activity of Retirees and Beneficiaries** Exhibit 21:

		Allo	nnual wances		Allo	Annual			otal Retiree Payroll	% Increase	M	verage Ionthly
Year Ended	No.	in Th	nousands	No.	<u>in Tl</u>	nousands	No. <sup>(2)</sup>	in	Thousands	in Payroll	Allo	wances
June 30, 2000	219	\$	N/A	76	\$	N/A	3,102	\$	55,192	9.3 %	\$	1,483
June 30, 2001	233		N/A	82		N/A	3,253		62,416	13.1		1,543
June 30, 2002	194		N/A	138		N/A	3,309		66,974	7.3		1,627
June 30, 2003	128		N/A	115		N/A	3,322		69,451	3.7		1,676
June 30, 2004	193		N/A	120		N/A	3,539		75,943	8.7		1,778
June 30, 2005	238		N/A	95		N/A	3,682		84,183	11.5		1,905
June 30, 2006	206		N/A	112		N/A	3,613		91,006	8.1		2,099
June 30, 2007	155		N/A	74		N/A	3,694		98,790	8.6		2,229
June 30, 2008	218		N/A	70		N/A	3,842		109,616	11.0		2,378
June 30, 2009	159		12,717	66		3,281	3,935		119,052	8.6		2,521

<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 6/30/2004 and 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.

**Exhibit 22:** Average Salary and Active Counts by Employer

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

2009	2008	2007	2006	2005
\$ 7,534	\$ 7,252	\$ 7,175	\$ 6,749	\$ 6,582
\$ 7,120	\$ 6,872	\$ 6,688	\$ 6,148	\$ 6,045
\$ 5,791	\$ 5,619	\$ 5,287	\$ 4,988	\$ 5,216
\$ 6,212	\$ 5,914	\$ 5,714	\$ 5,315	\$ 5,476
\$ 6,468	\$ 6,211	\$ 6,054	\$ 5,652	\$ 5,747
\$10,889	\$11,113	\$10,212	\$10,019	\$ 9,701
\$10,135	\$ 9,612	\$ 9,299	\$ 8,585	\$ 8,482
\$ 8,610	\$ 8,349	\$ 7,882	\$ 7,403	\$ 7,564
\$ 9,197	\$ 8,937	\$ 8,538	\$ 8,062	\$ 8,150
\$ 9,751	\$ 9,791	\$ 8,522	\$ 7,735	\$ 7,216
\$ 7,341	\$ 6,960	\$ 6,899	\$ 6,479	\$ 6,390
\$ 6,291	\$ 5,978	\$ 5,766	\$ 5,444	\$ 5,741
\$ 6,634	\$ 6,344	\$ 6,171	\$ 5,860	\$ 6,032
\$ 6,692	\$ 6,433	\$ 6,260	\$ 5,857	\$ 5,955
	\$ 7,534 \$ 7,120 \$ 5,791 \$ 6,212 \$ 6,468 \$10,889 \$10,135 \$ 8,610 \$ 9,197 \$ 9,751 \$ 7,341 \$ 6,291 \$ 6,634	\$ 7,534 \$ 7,252 \$ 7,120 \$ 6,872 \$ 5,791 \$ 5,619 \$ 6,212 \$ 5,914 \$ 6,468 \$ 6,211 \$10,889 \$11,113 \$10,135 \$ 9,612 \$ 8,610 \$ 8,349 \$ 9,197 \$ 8,937 \$ 9,751 \$ 9,791 \$ 7,341 \$ 6,960 \$ 6,291 \$ 5,978 \$ 6,634 \$ 6,344	\$ 7,534 \$ 7,252 \$ 7,175 \$ 7,120 \$ 6,872 \$ 6,688 \$ 5,791 \$ 5,619 \$ 5,287 \$ 6,212 \$ 5,914 \$ 5,714 \$ 6,468 \$ 6,211 \$ 6,054 \$10,889 \$11,113 \$10,212 \$10,135 \$ 9,612 \$ 9,299 \$ 8,610 \$ 8,349 \$ 7,882 \$ 9,197 \$ 8,937 \$ 8,538 \$ 9,751 \$ 9,791 \$ 8,522 \$ 7,341 \$ 6,960 \$ 6,899 \$ 6,291 \$ 5,978 \$ 5,766 \$ 6,634 \$ 6,344 \$ 6,171	\$ 7,534       \$ 7,252       \$ 7,175       \$ 6,749         \$ 7,120       \$ 6,872       \$ 6,688       \$ 6,148         \$ 5,791       \$ 5,619       \$ 5,287       \$ 4,988         \$ 6,212       \$ 5,914       \$ 5,714       \$ 5,315         \$ 6,468       \$ 6,211       \$ 6,054       \$ 5,652         \$ 10,889       \$ 11,113       \$ 10,212       \$ 10,019         \$ 10,135       \$ 9,612       \$ 9,299       \$ 8,585         \$ 8,610       \$ 8,349       \$ 7,882       \$ 7,403         \$ 9,197       \$ 8,937       \$ 8,538       \$ 8,062         \$ 9,751       \$ 9,791       \$ 8,522       \$ 7,735         \$ 7,341       \$ 6,960       \$ 6,899       \$ 6,479         \$ 6,291       \$ 5,978       \$ 5,766       \$ 5,444         \$ 6,634       \$ 6,344       \$ 6,171       \$ 5,860

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

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

	2009	2008	2007	2006	2005	
County of San Mateo			1		1	
General Members	4,758	4,718	4,742	4,594	4,391	
Safety Members	436	432	443	428	409	
Probation Members	330	325	329	313	278	
Total	5,524	5,475	5,514	5,335	5,078	
San Mateo County Mosquito and Vector Control District						
General Members Total	19	25	25	20	20	
	•					
Total Active Membership	5,543	5,500	5,539	5,355	5,098	

**Exhibit 23:** Summary of Retired and Inactive Benefits

Retired Members	2009	2008	2007	2006	2005	2004
Service Retirement						
Number Annual Allowance	3,032	2,958	2,835	2,783	2,865	2,706
Basic Only	\$ 73,038,000	\$ 66,704,000	\$ 59,687,000	\$ 54,942,000	\$ 49,760,000	\$ 41,723,000
COLA	\$ 22,964,000	\$ 21,289,000	\$ 19,382,000	\$ 18,188,000	\$ 17,759,000	\$ 17,502,000
Total	\$ 96,002,000	\$ 87,993,000	\$ 79,069,000	\$ 73,130,000	\$ 67,519,000	\$ 59,225,000
Average Monthly Payment	\$ 2,639	\$ 2,479	\$ 2,324	\$ 2,190	\$ 1,964	\$ 1,824
Disability Retirement						
Number	369	361	351	342	334	339
Annual Allowance	¢ 0.700.000	e 0.214.000	¢ 7.574.000	¢ 6.045.000	¢ 6.575.000	¢ 6 464 000
Basic Only COLA	\$ 8,722,000 \$ 3,070,000	\$ 8,214,000 \$ 2,847,000	\$ 7,571,000 \$ 2,569,000	\$ 6,915,000 \$ 2,356,000	\$ 6,575,000 \$ 2,205,000	\$ 6,164,000 \$ 2,172,000
Total	\$ 11.792.000	\$ 2,847,000 \$ 11.061.000	\$ 10,140,000	\$ 9,271,000	\$ 2,203,000	\$ 8.336.000
Average Monthly Payment	\$ 11,792,000	\$ 11,001,000	\$ 10,140,000	\$ 9,271,000	\$ 6,760,000	\$ 2,049
Average Monthly Fayment	ψ 2,000	Ψ 2,555	ψ 2,407	ψ 2,233	Ψ 2,101	ψ 2,040
Beneficiaries						
Number	534	523	508	488	483	494
Annual Allowance						
Basic Only	\$ 6,052,000	\$ 5,757,000	\$ 5,220,000	\$ 4,659,000	\$ 4,084,000	\$ 4,250,000
COLA	\$ 5,206,000	\$ 4,805,000	\$ 4,361,000	\$ 3,946,000	\$ 3,800,000	\$ 3,682,000
Total	\$ 11,258,000	\$ 10,562,000	\$ 9,581,000	\$ 8,605,000	\$ 7,884,000	\$ 7,932,000
Average Monthly Payment	\$ 1,757	\$ 1,683	\$ 1,572	\$ 1,469	\$ 1,360	\$ 1,338
Total Retired Members						
Number	3,935	3,842	3,694	3,613	3,682	3,539
Annual Allowance						
Basic Only COLA	\$ 87,812,000 \$ 31,240,000	\$ 80,675,000 \$ 28,941,000	\$ 72,478,000 \$ 26,312,000	\$ 66,516,000 \$ 24,490,000	\$ 60,419,000 \$ 23,764,000	\$ 52,137,000 \$ 23,356,000
Total	\$ 31,240,000 \$ 119,052,000	\$ 109,616,000	\$ 98,790,000	\$ 91,006,000	\$ 84,183,000	\$ 75,493,000
Average Monthly Payment	\$ 119,032,000	\$ 109,010,000	\$ 2,229	\$ 2,099	\$ 1,905	\$ 1,778
	, _,-,- <b>_</b> .	,	. –,––•	,0	,	, .,.,.
Inactive Members	1,230	1,225	1,151	1,089	872	877

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



**Exhibit 24a:** Summary of Assumptions

### **Assumptions & Methods for Most Recent Actuarial Valuation**

**Actuarial Methods** 

Valuation Date June 30, 2009 Actuarial Cost Method Entry Age

Amortization Method Level Percent of Payroll

Remaining Amortization Period Original unfunded amount (UAAL) as of

June 30, 2008 is amortized over 15 years as of the valuation date. Future actuarial gains and losses are amortized over new 15-year periods (including the change in UAAL as of June 30, 2009). This is referred to as 15-year layered

amortization.

Asset Valuation Method 5-year smoothed market with 20% corridor

**Actuarial Assumptions** 

Rate of Investment Return 7.75%
Price Inflation (CPI) 3.50%
Payroll Increases 4.00%
Average Projected Salary Increases 5.20%

Attributable to Wage Inflation 4.00%

Attributable to Merit and Longevity 1.20% (actual rates vary by service)
Sample Rates of Separation Shown on following page

Additional Assumptions

Shown in Appendix A



## Exhibit 24b: Summary of Assumptions

## **Probability of Separation During Active Service**

Years of	Other Terr	minations		Disal	oility	Death wh	ile Active	Service
Service	Ordinary	Vested	Age	Ordinary	Service	Ordinary	Service	Retirement
General Plan	1, 2 & 4 Male M	lembers						
0	0.1300	0.0000	20	0.0002	0.0003	0.0003	0.0000	0.0000
5	0.0285	0.0348	30	0.0002	0.0004	0.0004	0.0000	0.0000
10	0.0172	0.0238	40	0.0004	0.0007	0.0010	0.0000	0.0000
15	0.0099	0.0191	50	0.0009	0.0013	0.0019	0.0000	0.0600
20	0.0040	0.0150	60	0.0015	0.0022	0.0040	0.0000	0.1500
30 & Above	0.0000	0.0000	70	0.0000	0.0000	0.0091	0.0000	1.0000
General Plan	1, 2 & 4 Female	Members						
0	0.1300	0.0000	20	0.0002	0.0003	0.0002	0.0000	0.0000
5	0.0285	0.0348	30	0.0002	0.0004	0.0002	0.0000	0.0000
10	0.0172	0.0238	40	0.0004	0.0007	0.0006	0.0000	0.0000
15	0.0099	0.0191	50	0.0009	0.0013	0.0013	0.0000	0.0600
20	0.0040	0.0150	60	0.0015	0.0022	0.0030	0.0000	0.1500
30 & Above	0.0000	0.0000	70	0.0000	0.0000	0.0066	0.0000	1.0000
General Plan	3 Male Member	'S						
0	0.1300	0.0000	20	0.0000	0.0000	0.0003	0.0000	0.0000
5	0.0285	0.0348	30	0.0000	0.0000	0.0004	0.0000	0.0000
10	0.0172	0.0238	40	0.0000	0.0000	0.0010	0.0000	0.0000
15	0.0099	0.0191	50	0.0000	0.0000	0.0019	0.0000	0.0000
20	0.0040	0.0150	60	0.0000	0.0000	0.0040	0.0000	0.0300
30 & Above	0.0000	0.0000	70	0.0000	0.0000	0.0091	0.0000	1.0000
General Plan	3 Female Memb	bers						
0	0.1300	0.0000	20	0.0000	0.0000	0.0002	0.0000	0.0000
5	0.0285	0.0348	30	0.0000	0.0000	0.0002	0.0000	0.0000
10	0.0172	0.0238	40	0.0000	0.0000	0.0006	0.0000	0.0000
15	0.0099	0.0191	50	0.0000	0.0000	0.0013	0.0000	0.0000
20	0.0040	0.0150	60	0.0000	0.0000	0.0030	0.0000	0.0400
30 & Above	0.0000	0.0000	70	0.0000	0.0000	0.0066	0.0000	1.0000
	obation Male Me							
0	0.0800	0.0000	20	0.0003	0.0012	0.0003	0.0010	0.0000
5	0.0105	0.0128	30	0.0004	0.0014	0.0004	0.0010	0.0000
10	0.0071	0.0099	40	0.0006	0.0022	0.0010	0.0010	0.0000
15	0.0041	0.0079	50	0.0009	0.0035	0.0019	0.0010	0.2000
20	0.0008	0.0032	60	0.0017	0.0067	0.0040	0.0010	1.0000
30 & Above	0.0000	0.0000	70	0.0000	0.0000	0.0091	0.0010	1.0000
,	obation Female							
0	0.0800	0.0000	20	0.0003	0.0012	0.0002	0.0010	0.0000
5	0.0105	0.0128	30	0.0004	0.0014	0.0002	0.0010	0.0000
10	0.0071	0.0099	40	0.0006	0.0022	0.0006	0.0010	0.0000
15	0.0041	0.0079	50	0.0009	0.0035	0.0013	0.0010	0.2000
20	0.0008	0.0032	60	0.0017	0.0067	0.0030	0.0010	1.0000
30 & Above	0.0000	0.0000	70	0.0000	0.0000	0.0066	0.0010	1.0000

#### Appendix A: Actuarial Procedures and Assumptions



The actuarial procedures and assumptions used in the valuation are described in this section. The assumptions were reviewed and changed as a result of the 2008 Investigation of Experience Study.

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.

Since the San Mateo County Mosquito and Vector Control District has a different formula than County General members, it is appropriate to calculate different contribution rates for both members and employers. The member rates are defined in the 37 Act; however, the method for determining employer contribution rates is not defined. The methodology adopted by the Board in 2006 is that the District contribute a percentage of the County contribution that is equal to:

District's Normal Cost Rate under their Current Formula (31676.14)-2%@61.25
Divided by
District's Normal Cost Rate if Calculated under the County
General Formula
(31676.1)-2%@55.5

This ratio is equal to approximately 82%. The District pays 82% of the County's contribution rate on a plan-by-plan basis.

See exhibit 12 for further details.

#### **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.

# County Contributions

The County contribution rate is recommend by the Retirement Board and adopted by the Board of Supervisors based on actuarial valuations.

## Member Contributions

The member contribution rates vary by entry age 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 (actually 10 six-month periods) 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.

After applying the smoothing method, the valuation assets are limited to be not less than 80% and not more than 120% of the market value of assets. This is referred to as a 20% asset corridor.

# Investment Earnings and Expenses

The future investment earnings of the assets of SamCERA are assumed to accrue at an annual rate of 7.75% compounded annually, net of both investment and administrative expenses. This rate was adopted June 30, 2005.

#### Postretirement Benefit Increases

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

	General	Safety	Probation
Plan 1	3.50%	3.50%	3.00%
Plan 2	2.75%	2.75%	2.75%
Plan 3	0.00%	N/A	N/A
Plan 4	2.00%	2.00%	2.00%

Assumed Plan 1 General and Safety COLAs are set at the inflation (CPI) assumption of 3.5% 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 7.75% compounded semi-annually for an annualized rate of 7.90%. This rate was adopted June 30, 2005.

#### **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 4.00% 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 by 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 3.5% per year. Note, statutory provisions describe exactly how to compute the offset for purposes of determining 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, they are also 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)
- Any age with 33 years of service (Safety & Probation)

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

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

The retirement rates were adopted June 30, 2008.



#### **Disablement**

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

The disability rates were adopted June 30, 2008.

#### 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 assumption as healthy members. Beneficiaries are assumed to be of the opposite sex, and have the same mortality as General members.

General Males RP-2000 Healthy Annuitant Mortality Table for

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

Safety Males Same as General.

General Females RP-2000 Healthy Annuitant 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, 2008.

## Mortality – Disabled Members

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

General Males RP-2000 Healthy Annuitant Mortality Table for

Males with adjustment for White Collar workers and minimum rate of 1.5%.

Safety Males Same as General except minimum is 1.0%.

General Females RP-2000 Healthy Annuitant Mortality Table for

Females with adjustment for White Collar workers and minimum rate of 1.25%.

Safety Females Same as General except minimum is 1.0%.

The rates of disabled mortality were adopted June 30, 2008.



## 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, 2008.

#### **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, 2008.

## Probability of Eligible Survivor

For members not currently in pay status, 80% 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 three 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.

#### **Reciprocal Benefits**

40% of future deferred vested members are assumed to immediately join a reciprocal agency. For current deferred vested members, eligibility is based on the data supplied by SamCERA.

# 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.



#### **Part-Time Employees**

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

# 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, the:

- A. 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 7.75%.
- 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 7.75% semiannually (7.90% annual rate).
- E. Member Rates are assumed to increase with entry age. 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.

For purposes of determining cost-sharing, 85% of Safety members (excluding Probation members) were assumed to be deputy sheriffs.



### Table A-1: Summary of Valuation Assumptions as of June 30, 2008

1	Economic	Seeum	ntione
I.		i assum	puons

A.	General wage increases	4.00%
B.	Investment earnings	7.75%
C.	Growth in active membership	0.00%
D.	CPI inflation assumption	3.50%

#### II. Demographic assumptions

Α.	Salary increases due to service	Table A-5

B. Retirement Tables A-6 to A-11
C. Disablement Tables A-6 to A-11

 D. Mortality for active members after termination and service retired members

Table A-2

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

Class of Members	Age <u>Adjustment</u>
General – Males	-2 years
General – Females	-3 years
Safety – Males	-2 years
Safety – Females	-3 years

#### E. Mortality among disabled members

Table A-3

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

Class of Members	Age <u>Adjustment</u>	Minimum <u>Rate</u>
General – Males	none	1.50%
General – Females	none	1.25%
Safety – Males	none	1.00%
Safety – Females	none	1.00%

#### F. Mortality for beneficiaries

Table A-2

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

G. Other terminations of employment

Tables A-6 to A-11

H. Refund of contributions on vested termination

Table A-4



Table A-2: Mortality for Members Retired for Service

	General	General	Safety	Safety
Age	Male	Female	<u>Male</u>	Female
20	0.032%	0.018%	0.032%	0.018%
25	0.037%	0.019%	0.037%	0.019%
30	0.039%	0.022%	0.039%	0.022%
35	0.048%	0.036%	0.048%	0.036%
40	0.077%	0.053%	0.077%	0.053%
45	0.112%	0.076%	0.112%	0.076%
50	0.171%	0.123%	0.171%	0.123%
55	0.271%	0.192%	0.271%	0.192%
60	0.449%	0.332%	0.449%	0.332%
65	0.848%	0.599%	0.848%	0.599%
70	1.557%	1.094%	1.557%	1.094%
75	2.671%	1.878%	2.671%	1.878%
80	4.748%	3.155%	4.748%	3.155%
85	8.398%	5.337%	8.398%	5.337%
90	14.487%	9.248%	14.487%	9.248%

Table A-3: Mortality for Members Retired for Disability

	General	General	Safety	Safety
Age	Male	Female	Male	Female
20	1.500%	1.250%	1.000%	1.000%
25	1.500%	1.250%	1.000%	1.000%
30	1.500%	1.250%	1.000%	1.000%
35	1.500%	1.250%	1.000%	1.000%
40	1.500%	1.250%	1.000%	1.000%
45	1.500%	1.250%	1.000%	1.000%
50	1.500%	1.250%	1.000%	1.000%
55	1.500%	1.250%	1.000%	1.000%
60	1.500%	1.250%	1.000%	1.000%
65	1.500%	1.250%	1.106%	1.000%
70	1.928%	1.519%	1.928%	1.519%
75	3.363%	2.572%	3.363%	2.572%
80	5.941%	4.308%	5.941%	4.308%
85	10.467%	7.419%	10.467%	7.419%
90	17.827%	12.615%	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%	45%
6	45%	45%
7	45%	45%
8	44%	42%
9	43%	39%
10	42%	36%
11	41%	33%
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	<b>Due to Promotion</b>	Total
Service	and Longevity	Annual Increase*
<1	6.00%	10.24%
1	4.00%	8.16%
2	3.00%	7.12%
3	2.50%	6.60%
4	2.00%	6.08%
5	1.75%	5.82%
6	1.50%	5.56%
7	1.25%	5.30%
8	1.05%	5.09%
9	0.90%	4.94%
10	0.80%	4.83%
11	0.70%	4.73%
12	0.60%	4.62%
13	0.50%	4.52%
14	0.50%	4.52%
15	0.50%	4.52%
16	0.50%	4.52%
17	0.50%	4.52%
18	0.50%	4.52%
19	0.50%	4.52%
20 or More	0.50%	4.52%



<sup>\*</sup> The total expected increase in salary is the increase due to promotions and longevity, adjusted for an assumed 4.00% 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 Males A-10: Safety Plans 1, 2 & 4 Males

A-7: General Plan 1, 2 & 4 Females A-11: Safety Plans 1, 2 & 4 Females

A-8: General Plan 3 Males A-9: General Plan 3 Females



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

Age	Service Retirement*	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	0.0003	0.0002	N/A	0.0003	0	0.1300
19	0.0000	0.0003	0.0002	N/A	0.0003	1	0.1100
20	0.0000	0.0003	0.0002	N/A	0.0003	2	0.0900
21	0.0000	0.0003	0.0002	N/A	0.0003	3	0.0800
22	0.0000	0.0003	0.0002	N/A	0.0003	4	0.0700
23	0.0000	0.0003	0.0002	N/A	0.0004	5	0.0633
24	0.0000	0.0003	0.0002	N/A	0.0004	6	0.0567
25	0.0000	0.0003	0.0002	N/A	0.0004	7	0.0500
26	0.0000	0.0003	0.0002	N/A	0.0004	8	0.0470
27	0.0000	0.0003	0.0002	N/A	0.0004	9	0.0440
28	0.0000	0.0003	0.0002	N/A	0.0004	10	0.0410
29	0.0000	0.0003	0.0002	N/A	0.0004	11	0.0380
30	0.0000	0.0004	0.0002	N/A	0.0004	12	0.0350
31	0.0000	0.0004	0.0002	N/A	0.0004	13	0.0330
32	0.0000	0.0004	0.0002	N/A	0.0004	14	0.0310
33	0.0000	0.0004	0.0003	N/A	0.0005	15	0.0290
34	0.0000	0.0004	0.0003	N/A	0.0006	16	0.0270
35	0.0000	0.0005	0.0003	N/A	0.0006	17	0.0250
36	0.0000	0.0005	0.0003	N/A	0.0007	18	0.0230
37	0.0000	0.0005	0.0004	N/A	0.0008	19	0.0210
38	0.0000	0.0006	0.0004	N/A	0.0008	20	0.0190
39	0.0000	0.0006	0.0004	N/A	0.0009	21	0.0170
40	0.0000	0.0007	0.0004	N/A	0.0010	22	0.0150
41	0.0000	0.0007	0.0004	N/A	0.0010	23	0.0140
42	0.0000	0.0007	0.0005	N/A	0.0011	24	0.0130
43	0.0000	0.0008	0.0005	N/A	0.0011	25	0.0120
44	0.0000	0.0008	0.0006	N/A	0.0012	26	0.0110
45	0.0000	0.0010	0.0006	N/A	0.0013	27	0.0100
46	0.0000	0.0010	0.0007	N/A	0.0014	28	0.0100
47	0.0000	0.0011	0.0007	N/A	0.0015	29	0.0100
48	0.0000	0.0011	0.0008	N/A	0.0016	30 & Above	0.0000
49	0.0000	0.0012	0.0008	N/A	0.0017		
50	0.0600	0.0013	0.0009	N/A	0.0019		
51	0.0500	0.0014	0.0009	N/A	0.0020		
52	0.0500	0.0014	0.0010	N/A	0.0021		
53	0.0500	0.0016	0.0010	N/A	0.0023		
54	0.0500	0.0016	0.0011	N/A	0.0024		
55	0.0600	0.0017	0.0012	N/A	0.0026		
56	0.0600	0.0018	0.0012	N/A	0.0028		
57	0.0800	0.0019	0.0013	N/A	0.0030		
58	0.1200	0.0020	0.0014	N/A	0.0033		
59	0.1200	0.0021	0.0014	N/A	0.0036		
60	0.1500	0.0022	0.0015	N/A	0.0040		
61	0.2000	0.0023	0.0015	N/A	0.0044		
62	0.3500	0.0024	0.0016	N/A	0.0049		
63	0.2500	0.0025	0.0017	N/A	0.0054		
64	0.2500	0.0026	0.0018	N/A	0.0059		
65	0.4000	0.0028	0.0018	N/A	0.0065		
66	0.3000	0.0029	0.0019	N/A	0.0070		
67	0.3000	0.0030	0.0020	N/A	0.0076		
68	0.3000	0.0031	0.0021	N/A	0.0081		
69 70	0.3000	0.0032	0.0022	N/A	0.0086		
70	1.0000	0.0000	0.0000	N/A	0.0091		

<sup>\* 100%</sup> probability of retirement is assumed at ages 62 and above with 38 or more years of service.



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

Age	Service Retirement*	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	0.0003	0.0002	N/A	0.0002	0	0.1300
19	0.0000	0.0003	0.0002	N/A	0.0002	1	0.1100
20	0.0000	0.0003	0.0002	N/A	0.0002	2	0.0900
21	0.0000	0.0003	0.0002	N/A	0.0002	3	0.0800
22	0.0000	0.0003	0.0002	N/A	0.0002	4	0.0700
23	0.0000	0.0003	0.0002	N/A	0.0002	5	0.0633
24	0.0000	0.0003	0.0002	N/A	0.0002	6	0.0567
25	0.0000	0.0003	0.0002	N/A	0.0002	7	0.0500
26	0.0000	0.0003	0.0002	N/A	0.0002	8	0.0470
27	0.0000	0.0003	0.0002	N/A	0.0002	9	0.0440
28	0.0000	0.0003	0.0002	N/A	0.0002	10	0.0410
29	0.0000	0.0003	0.0002	N/A	0.0002	11	0.0380
30	0.0000	0.0004	0.0002	N/A	0.0002	12	0.0350
31	0.0000	0.0004	0.0002	N/A	0.0002	13	0.0330
32	0.0000	0.0004	0.0002	N/A	0.0002	14	0.0310
33	0.0000	0.0004	0.0003	N/A	0.0003	15	0.0290
34	0.0000	0.0004	0.0003	N/A	0.0003	16	0.0270
35	0.0000	0.0005	0.0003	N/A	0.0003	17	0.0250
36	0.0000	0.0005	0.0003	N/A	0.0004	18	0.0230
37	0.0000	0.0005	0.0004	N/A	0.0004	19	0.0210
38	0.0000	0.0006	0.0004	N/A	0.0005	20	0.0190
39	0.0000	0.0006	0.0004	N/A	0.0005	21	0.0170
40	0.0000	0.0007	0.0004	N/A	0.0006	22	0.0150
41	0.0000	0.0007	0.0004	N/A	0.0006	23	0.0140
42	0.0000	0.0007	0.0005	N/A	0.0006	24	0.0130
43	0.0000	0.0008	0.0005	N/A	0.0007	25	0.0120
44	0.0000	0.0008	0.0006	N/A	0.0008	26	0.0110
45	0.0000	0.0010	0.0006	N/A	0.0009	27	0.0100
46	0.0000	0.0010	0.0007	N/A	0.0009	28	0.0100
47	0.0000	0.0011	0.0007	N/A	0.0010	29	0.0100
48	0.0000	0.0011	0.0008	N/A	0.0011	30 & Above	0.0000
49	0.0000	0.0012	0.0008	N/A	0.0012		
50	0.0600	0.0013	0.0009	N/A	0.0013		
51	0.0500	0.0014	0.0009	N/A	0.0014		
52	0.0500	0.0014	0.0010	N/A	0.0016		
53	0.0500	0.0016	0.0010	N/A	0.0017		
54	0.0500	0.0016	0.0011	N/A	0.0018		
55	0.0600	0.0017	0.0012	N/A	0.0020		
56	0.0600	0.0018	0.0012	N/A	0.0021		
57	0.0800	0.0019	0.0013	N/A	0.0023		
58	0.1200	0.0020	0.0014	N/A	0.0025		
59	0.1200	0.0021	0.0014	N/A	0.0028		
60	0.1500	0.0022	0.0015	N/A	0.0030		
61	0.2000	0.0023	0.0015	N/A	0.0033		
62	0.3500	0.0024	0.0016	N/A	0.0036		
63	0.2500	0.0025	0.0017	N/A	0.0039		
64	0.2500	0.0026	0.0018	N/A	0.0043		
65	0.4000	0.0028	0.0018	N/A	0.0047		
66	0.3000	0.0029	0.0019	N/A	0.0050		
67	0.3000	0.0030	0.0020	N/A	0.0054		
68	0.3000	0.0031	0.0021	N/A	0.0058		
69	0.3000	0.0032	0.0022	N/A	0.0062		
70	1.0000	0.0000	0.0000	N/A	0.0066		

<sup>\* 100%</sup> probability of retirement is assumed at ages 62 and above with 38 or more years of service.



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

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	0.0003	0	0.1300
19	0.0000	N/A	N/A	N/A	0.0003	1	0.1100
20	0.0000	N/A	N/A	N/A	0.0003	2	0.0900
21	0.0000	N/A	N/A	N/A	0.0003	3	0.0800
22	0.0000	N/A	N/A	N/A	0.0003	4	0.0700
23	0.0000	N/A	N/A	N/A	0.0004	5	0.0633
24	0.0000	N/A	N/A	N/A	0.0004	6	0.0567
25	0.0000	N/A	N/A	N/A	0.0004	7	0.0500
26	0.0000	N/A	N/A	N/A	0.0004	8	0.0470
27	0.0000	N/A	N/A	N/A	0.0004	9	0.0440
28	0.0000	N/A	N/A	N/A	0.0004	10	0.0410
29	0.0000	N/A	N/A	N/A	0.0004	11	0.0380
30	0.0000	N/A	N/A	N/A	0.0004	12	0.0350
31	0.0000	N/A	N/A	N/A	0.0004	13	0.0330
32	0.0000	N/A	N/A	N/A	0.0004	14	0.0310
33	0.0000	N/A	N/A	N/A	0.0005	15	0.0290
34	0.0000	N/A	N/A	N/A	0.0006	16	0.0270
35	0.0000	N/A	N/A	N/A	0.0006	17	0.0250
36	0.0000	N/A	N/A	N/A	0.0007	18	0.0230
37	0.0000	N/A	N/A	N/A	0.0008	19	0.0210
38	0.0000	N/A	N/A	N/A	0.0008	20	0.0190
39	0.0000	N/A	N/A	N/A	0.0009	21	0.0170
40	0.0000	N/A	N/A	N/A	0.0010	22	0.0150
41	0.0000	N/A	N/A	N/A	0.0010	23	0.0140
42	0.0000	N/A	N/A	N/A	0.0011	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	0.0012	26	0.0110
45	0.0000	N/A	N/A	N/A	0.0013	27	0.0100
46	0.0000	N/A	N/A	N/A	0.0014	28	0.0100
47	0.0000	N/A	N/A	N/A	0.0015	29	0.0100
48	0.0000	N/A	N/A	N/A	0.0016	30 & Above	0.0100
49	0.0000	N/A	N/A	N/A	0.0017		
50	0.0000	N/A	N/A	N/A	0.0019		
51	0.0000	N/A	N/A	N/A	0.0020		
52	0.0000	N/A	N/A	N/A	0.0021		
53	0.0000	N/A	N/A	N/A	0.0023		
54	0.0000	N/A	N/A	N/A	0.0024		
55 50	0.0300	N/A	N/A	N/A	0.0026		
56	0.0300	N/A	N/A	N/A	0.0028		
57	0.0300	N/A	N/A	N/A	0.0030		
58 50	0.0300	N/A	N/A	N/A	0.0033 0.0036		
59 60	0.0300	N/A N/A	N/A N/A	N/A N/A	0.0036		
	0.0300			N/A N/A			
61 62	0.0600 0.1500	N/A N/A	N/A N/A	N/A N/A	0.0044 0.0049		
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 N/A	N/A N/A	0.0059		
66	0.3000	N/A N/A	N/A N/A	N/A N/A	0.0065		
67	0.3000	N/A	N/A	N/A	0.0076		
68	0.3000	N/A	N/A	N/A	0.0070		
69	0.3000	N/A	N/A	N/A	0.0086		
70	1.0000	N/A	N/A	N/A	0.0091		
	1.0000	1 1// 1	14//1	1 1// 1	0.0001		



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

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	0.0002	0	0.1300
20								
21 0.0000 N/A N/A N/A N/A 0.0002 3 0.0800   22 0.0000 N/A N/A N/A N/A 0.0002 4 0.0700   23 0.0000 N/A N/A N/A N/A 0.0002 5 0.0633   24 0.0000 N/A N/A N/A N/A 0.0002 6 0.0567   25 0.0000 N/A N/A N/A N/A 0.0002 7 0.0550   26 0.0000 N/A N/A N/A N/A 0.0002 7 0.0550   26 0.0000 N/A N/A N/A N/A 0.0002 9 0.0470   27 0.0000 N/A N/A N/A N/A 0.0002 9 0.0440   28 0.0000 N/A N/A N/A N/A 0.0002 11 0.0410   29 0.0000 N/A N/A N/A N/A 0.0002 11 0.0380   30 0.0000 N/A N/A N/A N/A 0.0002 11 0.0330   31 0.0000 N/A N/A N/A N/A 0.0002 11 0.0330   32 0.0000 N/A N/A N/A N/A 0.0002 13 0.0330   32 0.0000 N/A N/A N/A N/A 0.0002 13 0.0330   33 0.0000 N/A N/A N/A N/A 0.0002 13 0.0330   34 0.0000 N/A N/A N/A N/A 0.0002 13 0.0330   34 0.0000 N/A N/A N/A N/A 0.0002 14 0.0310   35 0.0000 N/A N/A N/A N/A 0.0003 15 0.0290   34 0.0000 N/A N/A N/A N/A 0.0003 16 0.0270   36 0.0000 N/A N/A N/A N/A 0.0003 16 0.0270   36 0.0000 N/A N/A N/A N/A 0.0003 17 0.0250   36 0.0000 N/A N/A N/A N/A N/A 0.0004 19 0.0250   36 0.0000 N/A N/A N/A N/A 0.0005 2 0 0.0190   38 0.0000 N/A N/A N/A N/A 0.0005 2 0 0.0190   39 0.0000 N/A N/A N/A N/A 0.0005 2 1 0.0170   40 0.0000 N/A N/A N/A N/A 0.0006 2 2 0.0150   41 0.0000 N/A N/A N/A N/A 0.0006 2 2 0.0150   42 0.0000 N/A N/A N/A N/A 0.0006 2 2 0.0150   43 0.0000 N/A N/A N/A N/A 0.0006 2 2 0.0150   44 0.0000 N/A N/A N/A N/A 0.0006 2 2 0.0150   45 0.0000 N/A N/A N/A N/A 0.0006 2 2 0.0150   47 0.0000 N/A N/A N/A N/A 0.0006 2 2 0.0150   48 0.0000 N/A N/A N/A N/A 0.0006 2 2 0.0150   49 0.0000 N/A N/A N/A N/A 0.0006 2 0 0.0100   49 0.0000 N/A N/A N/A N/A 0.0006 2 0 0.0100   49 0.0000 N/A N/A N/A N/A 0.0006 2 0 0.0100   40 0.0000 N/A N/A N/A N/A 0.0006 2 0 0.0100   40 0.0000 N/A N/A N/A N/A 0.0006 2 0 0.0100   40 0.0000 N/A N/A N/A N/A 0.0006 2 0 0.0100   40 0.0000 N/A N/A N/A N/A N/A 0.0006 0 0 0 0.0100   40 0.0000 N/A N/A N/A N/A 0.0006 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0								
222 0.0000 N/A N/A N/A N/A 0.0002 5 0.0633 244 0.0000 N/A N/A N/A N/A 0.0002 5 0.0633 244 0.0000 N/A N/A N/A N/A 0.0002 7 0.05500 25 0.0000 N/A N/A N/A N/A 0.0002 7 0.05500 26 0.0000 N/A N/A N/A N/A 0.0002 8 0.0470 27 0.0000 N/A N/A N/A N/A 0.0002 9 0.0440 28 0.0000 N/A N/A N/A N/A 0.0002 10 0.0410 29 0.0000 N/A N/A N/A N/A 0.0002 11 0.09410 29 0.0000 N/A N/A N/A N/A 0.0002 12 0.0350 31 0.0000 N/A N/A N/A N/A 0.0002 12 0.0350 31 0.0000 N/A N/A N/A N/A 0.0002 12 0.0350 31 0.0000 N/A N/A N/A N/A 0.0002 14 0.0350 32 0.0000 N/A N/A N/A N/A 0.0002 14 0.0310 33 0.0000 N/A N/A N/A N/A 0.0002 14 0.0310 33 0.0000 N/A N/A N/A N/A 0.0003 15 0.0250 34 0.0000 N/A N/A N/A N/A 0.0003 15 0.0250 35 0.0000 N/A N/A N/A N/A 0.0003 15 0.0250 36 0.0000 N/A N/A N/A N/A 0.0003 15 0.0250 36 0.0000 N/A N/A N/A N/A 0.0003 17 0.0250 37 0.0000 N/A N/A N/A N/A 0.0003 17 0.0250 38 0.0000 N/A N/A N/A N/A 0.0001 18 0.0230 37 0.0000 N/A N/A N/A N/A 0.0001 19 0.0210 38 0.0000 N/A N/A N/A N/A 0.0005 20 0.0190 39 0.0000 N/A N/A N/A N/A 0.0005 20 0.0190 40 0.0000 N/A N/A N/A N/A 0.0005 21 0.0170 40 0.0000 N/A N/A N/A N/A 0.0005 22 0.0190 42 0.0000 N/A N/A N/A N/A 0.0005 22 0.0190 43 0.0000 N/A N/A N/A N/A N/A 0.0006 22 0.0190 44 0.0000 N/A N/A N/A N/A 0.0006 22 0.0190 45 0.0000 N/A N/A N/A N/A N/A 0.0006 22 0.0190 46 0.0000 N/A N/A N/A N/A N/A 0.0006 22 0.0190 47 0.0000 N/A N/A N/A N/A N/A 0.0006 22 0.0190 48 0.0000 N/A N/A N/A N/A N/A 0.0006 22 0.0190 49 0.0000 N/A N/A N/A N/A N/A 0.0006 24 0.0190 50 0.0000 N/A N/A N/A N/A N/A 0.0006 25 0.0100 50 0.0000 N/A N/A N/A N/A N/A 0.0006 25 0.0100 50 0.0000 N/A N/A N/A N/A N/A 0.0006 25 0.0100 50 0.0000 N/A N/A N/A N/A N/A 0.0006 26 0.01100 50 0.0000 N/A N/A N/A N/A N/A 0.0001 50 0.0000 N/A N/A N/A N/A N/A 0.0001 50 0.0000 N/A N/A N/A N/A N/A 0.0001 50 0.0000 N/A N/A N/A N/A 0.0003 61 0.0000 N/A N/A N/A N/A 0.0003 62 0.01000 N/A N/A N/A N/A 0.0003 63 0.0000 N/A N/A N/A N/A 0.0003 64 0.0000 N/A N/A N/A N/A 0.0003 65 0.0000 N/A N/A N/A N/A 0.0003 66 0.0000 N/A N/A N/A N/A N/A 0.0003 66 0.00000 N/A N/A N/A N								
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26         0.0000         N/A         N/A         N/A         0.0002         8         0.0470           27         0.0000         N/A         N/A         N/A         0.0002         9         0.0440           28         0.0000         N/A         N/A         N/A         0.0002         11         0.0380           30         0.0000         N/A         N/A         N/A         0.0002         11         0.0380           31         0.0000         N/A         N/A         N/A         0.0002         13         0.0330           32         0.0000         N/A         N/A         N/A         0.0002         14         0.0310           33         0.0000         N/A         N/A         N/A         0.0002         14         0.0310           34         0.0000         N/A         N/A         N/A         0.0003         15         0.0290           35         0.0000         N/A         N/A         N/A         0.0003         17         0.0250           36         0.0000         N/A         N/A         N/A         0.0003         17         0.0250           37         0.0000         N/A         N/A <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>								
277								
288								
29								
30						0.0002	11	
31		0.0000	N/A	N/A		0.0002	12	0.0350
32	31	0.0000	N/A	N/A		0.0002	13	0.0330
34	32	0.0000	N/A	N/A		0.0002	14	0.0310
35	33	0.0000	N/A	N/A	N/A	0.0003	15	0.0290
36 0.0000 N/A N/A N/A N/A 0.0004 18 0.0230 37 0.0000 N/A N/A N/A N/A 0.0004 19 0.0210 38 0.0000 N/A N/A N/A N/A 0.0005 20 0.0190 39 0.0000 N/A N/A N/A N/A 0.0005 21 0.0170 40 0.0000 N/A N/A N/A N/A 0.0006 22 0.0150 41 0.0000 N/A N/A N/A N/A 0.0006 22 0.0150 41 0.0000 N/A N/A N/A N/A 0.0006 23 0.0140 42 0.0000 N/A N/A N/A N/A 0.0006 24 0.0130 43 0.0000 N/A N/A N/A N/A 0.0007 25 0.0120 44 0.0000 N/A N/A N/A N/A 0.0007 25 0.0110 45 0.0000 N/A N/A N/A N/A 0.0008 26 0.0110 46 0.0000 N/A N/A N/A N/A 0.0009 27 0.0100 47 0.0000 N/A N/A N/A N/A 0.0009 28 0.0100 47 0.0000 N/A N/A N/A N/A 0.0011 29 0.0100 48 0.0000 N/A N/A N/A N/A 0.0011 30 & Above 0.0100 49 0.0000 N/A N/A N/A N/A 0.0012 50 0.0000 N/A N/A N/A N/A 0.0012 51 0.0000 N/A N/A N/A N/A 0.0012 52 0.0000 N/A N/A N/A N/A 0.0012 53 0.0000 N/A N/A N/A N/A 0.0012 54 0.0000 N/A N/A N/A N/A 0.0013 51 0.0000 N/A N/A N/A N/A 0.0016 53 0.0000 N/A N/A N/A N/A 0.0016 53 0.0000 N/A N/A N/A N/A 0.0016 54 0.0000 N/A N/A N/A N/A 0.0016 55 0.0400 N/A N/A N/A N/A 0.0016 56 0.0400 N/A N/A N/A N/A 0.0017 56 0.0400 N/A N/A N/A N/A 0.0018 56 0.0400 N/A N/A N/A N/A 0.0023 57 0.0400 N/A N/A N/A N/A 0.0023 58 0.0400 N/A N/A N/A N/A 0.0023 59 0.0400 N/A N/A N/A N/A 0.0023 50 0.0400 N/A N/A N/A N/A 0.0023 50 0.0400 N/A N/A N/A N/A 0.0033 61 0.0600 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 62 0.1500 N/A N/A N/A N/A N/A 0.0039 64 0.1500 N/A N/A N/A N/A N/A 0.0047 66 0.3000 N/A N/A N/A N/A N/A 0.0056 69 0.3000 N/A N/A N/A N/A N/A 0.0056	34	0.0000	N/A			0.0003	16	0.0270
36 0.0000 N/A N/A N/A N/A 0.0004 18 0.0230 37 0.0000 N/A N/A N/A N/A 0.0004 19 0.0210 38 0.0000 N/A N/A N/A N/A 0.0005 20 0.0190 39 0.0000 N/A N/A N/A N/A 0.0005 21 0.0170 40 0.0000 N/A N/A N/A N/A 0.0006 22 0.0150 41 0.0000 N/A N/A N/A N/A 0.0006 22 0.0150 41 0.0000 N/A N/A N/A N/A 0.0006 23 0.0140 42 0.0000 N/A N/A N/A N/A 0.0006 24 0.0130 43 0.0000 N/A N/A N/A N/A 0.0007 25 0.0120 44 0.0000 N/A N/A N/A N/A 0.0007 25 0.0110 45 0.0000 N/A N/A N/A N/A 0.0008 26 0.0110 46 0.0000 N/A N/A N/A N/A 0.0009 27 0.0100 47 0.0000 N/A N/A N/A N/A 0.0009 28 0.0100 47 0.0000 N/A N/A N/A N/A 0.0011 29 0.0100 48 0.0000 N/A N/A N/A N/A 0.0011 30 & Above 0.0100 49 0.0000 N/A N/A N/A N/A 0.0012 50 0.0000 N/A N/A N/A N/A 0.0012 51 0.0000 N/A N/A N/A N/A 0.0012 52 0.0000 N/A N/A N/A N/A 0.0012 53 0.0000 N/A N/A N/A N/A 0.0012 54 0.0000 N/A N/A N/A N/A 0.0013 51 0.0000 N/A N/A N/A N/A 0.0016 53 0.0000 N/A N/A N/A N/A 0.0016 53 0.0000 N/A N/A N/A N/A 0.0016 54 0.0000 N/A N/A N/A N/A 0.0016 55 0.0400 N/A N/A N/A N/A 0.0016 56 0.0400 N/A N/A N/A N/A 0.0017 56 0.0400 N/A N/A N/A N/A 0.0018 56 0.0400 N/A N/A N/A N/A 0.0023 57 0.0400 N/A N/A N/A N/A 0.0023 58 0.0400 N/A N/A N/A N/A 0.0023 59 0.0400 N/A N/A N/A N/A 0.0023 50 0.0400 N/A N/A N/A N/A 0.0023 50 0.0400 N/A N/A N/A N/A 0.0033 61 0.0600 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 62 0.1500 N/A N/A N/A N/A N/A 0.0039 64 0.1500 N/A N/A N/A N/A N/A 0.0047 66 0.3000 N/A N/A N/A N/A N/A 0.0056 69 0.3000 N/A N/A N/A N/A N/A 0.0056	35	0.0000	N/A			0.0003	17	0.0250
37 0.0000 N/A N/A N/A N/A 0.0004 19 0.0210 38 0.0000 N/A N/A N/A N/A 0.0005 20 0.0190 39 0.0000 N/A N/A N/A N/A 0.0005 21 0.0170 40 0.0000 N/A N/A N/A N/A 0.0006 22 0.0150 41 0.0000 N/A N/A N/A N/A 0.0006 23 0.0140 42 0.0000 N/A N/A N/A N/A 0.0006 23 0.0140 43 0.0000 N/A N/A N/A N/A 0.0006 24 0.0130 43 0.0000 N/A N/A N/A N/A 0.0007 25 0.0120 44 0.0000 N/A N/A N/A N/A 0.0008 26 0.0110 45 0.0000 N/A N/A N/A N/A 0.0009 27 0.0100 46 0.0000 N/A N/A N/A N/A 0.0009 28 0.0100 47 0.0000 N/A N/A N/A N/A 0.0010 29 0.0100 48 0.0000 N/A N/A N/A N/A 0.0011 30 & Above 0.0100 49 0.0000 N/A N/A N/A N/A 0.0011 30 & Above 0.0100 49 0.0000 N/A N/A N/A N/A 0.0012 50 0.0000 N/A N/A N/A N/A 0.0012 51 0.0000 N/A N/A N/A N/A 0.0014 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 53 0.0000 N/A N/A N/A N/A 0.0016 53 0.0000 N/A N/A N/A N/A 0.0016 55 0.0400 N/A N/A N/A N/A 0.0017 54 0.0000 N/A N/A N/A N/A 0.0016 55 0.0400 N/A N/A N/A N/A 0.0018 55 0.0400 N/A N/A N/A N/A 0.0018 55 0.0400 N/A N/A N/A N/A 0.0020 56 0.0400 N/A N/A N/A N/A 0.0023 58 0.0400 N/A N/A N/A N/A 0.0023 58 0.0400 N/A N/A N/A N/A 0.0023 59 0.0400 N/A N/A N/A N/A 0.0023 58 0.0400 N/A N/A N/A N/A 0.0023 59 0.0400 N/A N/A N/A N/A 0.0023 50 0.0000 N/A N/A N/A N/A 0.0023 50 0.0400 N/A N/A N/A N/A 0.00030 61 0.0600 N/A N/A N/A N/A N/A 0.0033 62 0.1500 N/A N/A N/A N/A 0.0033 63 0.1000 N/A N/A N/A N/A 0.0039 64 0.1500 N/A N/A N/A N/A N/A 0.0047 66 0.3000 N/A N/A N/A N/A N/A 0.0047 66 0.3000 N/A N/A N/A N/A N/A 0.0056 69 0.3000 N/A N/A N/A N/A N/A 0.0062								
38						0.0004		
39	38	0.0000		N/A		0.0005	20	0.0190
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       0.0008       26       0.0110         45       0.0000       N/A       N/A       N/A       0.0009       27       0.0100         46       0.0000       N/A       N/A       N/A       0.0009       28       0.0100         47       0.0000       N/A       N/A       N/A       0.0010       29       0.0100         48       0.0000       N/A       N/A       N/A       0.0011       30 & Above       0.0100         49       0.0000       N/A       N/A       N/A       0.0012       30 & Above       0.0100         49       0.0000       N/A       N/A       N/A       0.0012       30 & Above       0.0100         49       0.0000       N/A       N/A       N/A       0.0012       30 & Above       0.0100         50       0.0000<	39	0.0000	N/A	N/A		0.0005	21	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       0.0008       26       0.0110         45       0.0000       N/A       N/A       N/A       0.0009       27       0.0100         46       0.0000       N/A       N/A       N/A       0.0009       28       0.0100         47       0.0000       N/A       N/A       N/A       0.0010       29       0.0100         48       0.0000       N/A       N/A       N/A       0.0011       30 & Above       0.0100         49       0.0000       N/A       N/A       N/A       0.0012       30 & Above       0.0100         49       0.0000       N/A       N/A       N/A       0.0012       30 & Above       0.0100         49       0.0000       N/A       N/A       N/A       0.0012       30 & Above       0.0100         50       0.0000<								
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       0.0008       26       0.0110         45       0.0000       N/A       N/A       N/A       0.0009       27       0.0100         46       0.0000       N/A       N/A       N/A       0.0009       28       0.0100         47       0.0000       N/A       N/A       N/A       0.0010       29       0.0100         48       0.0000       N/A       N/A       N/A       0.0011       30 & Above       0.0100         49       0.0000       N/A       N/A       N/A       0.0012       0.0100       0.0100         50       0.0000       N/A       N/A       N/A       0.0012       0.0100       0.0100       0.0100       0.0100       0.0100       0.0100       0.0100       0.0000       0.0000       0.0000       0.0000       0.0000       0.0000       0.0000       0.0000       0.0000       0.0000       0.00000       0.0000       0.0000       0.00000							23	
43         0.0000         N/A         N/A         N/A         0.0007         25         0.0120           44         0.0000         N/A         N/A         N/A         0.0008         26         0.0110           45         0.0000         N/A         N/A         N/A         0.0009         27         0.0100           46         0.0000         N/A         N/A         N/A         0.0009         28         0.0100           47         0.0000         N/A         N/A         N/A         0.0010         29         0.0100           48         0.0000         N/A         N/A         N/A         0.0011         30 & Above         0.0100           49         0.0000         N/A         N/A         N/A         0.0012         0.0100         0.0100           50         0.0000         N/A         N/A         N/A         0.0013         0.0110         0.0100         0.0100         0.0000         N/A         N/A         N/A         0.0014         0.0014         0.0014         0.0014         0.0014         0.0014         0.0014         0.0014         0.0014         0.0014         0.0014         0.0014         0.0014         0.0014         0.0014         0.0	42	0.0000	N/A	N/A		0.0006	24	0.0130
44         0.0000         N/A         N/A         N/A         0.0008         26         0.0110           45         0.0000         N/A         N/A         N/A         0.0009         27         0.0100           46         0.0000         N/A         N/A         N/A         0.0009         28         0.0100           47         0.0000         N/A         N/A         N/A         0.0011         29         0.0100           48         0.0000         N/A         N/A         N/A         0.0011         30 & Above         0.0100           49         0.0000         N/A         N/A         N/A         0.0013         N/A         N/A         0.0012         0.0000         N/A         N/A         N/A         0.0013         0.0013         0.0000         N/A         N/A         N/A         0.0014         0.	43	0.0000	N/A			0.0007	25	0.0120
46         0.0000         N/A         N/A         N/A         0.0009         28         0.0100           47         0.0000         N/A         N/A         N/A         0.0010         29         0.0100           48         0.0000         N/A         N/A         N/A         0.0011         30 & Above         0.0100           49         0.0000         N/A         N/A         N/A         0.0012         N/A         N/A         0.0013         N/A         N/A         0.0013         N/A         N/A         0.0013         N/A         N/A         0.0013         N/A         N/A         N/A         0.0014         N/A         0.0014         N/A         0.0014         N/A         0.0014         N/A         0.0014         0.0	44	0.0000	N/A	N/A		0.0008	26	0.0110
47         0.0000         N/A         N/A         N/A         0.0010         29         0.0100           48         0.0000         N/A         N/A         N/A         0.0011         30 & Above         0.0100           49         0.0000         N/A         N/A         N/A         0.0012         N/A         N/A         0.0013         0.0000         N/A         N/A         0.0013         0.00013         0.0000         N/A         N/A         N/A         0.0014         0.0014         0.0014         0.0014         0.0016         0.0000         N/A         N/A         N/A         0.0016         0.0017         0.0016         0.0017         0.0017         0.0017         0.0017         0.0017         0.0017         0.0017         0.0018         0.0017         0.0018         0.0017         0.0018         0.0017         0.0018         0.0017         0.0018         0.0017         0.0018         0.0018         0.0017         0.0018         0.0018         0.0017         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018	45	0.0000	N/A	N/A	N/A	0.0009	27	0.0100
47         0.0000         N/A         N/A         N/A         0.0010         29         0.0100           48         0.0000         N/A         N/A         N/A         0.0011         30 & Above         0.0100           49         0.0000         N/A         N/A         N/A         0.0012         N/A         N/A         0.0013         0.0000         N/A         N/A         0.0013         0.00013         0.0000         N/A         N/A         N/A         0.0014         0.0014         0.0014         0.0014         0.0016         0.0000         N/A         N/A         N/A         0.0016         0.0017         0.0016         0.0017         0.0017         0.0017         0.0017         0.0017         0.0017         0.0017         0.0018         0.0017         0.0018         0.0017         0.0018         0.0017         0.0018         0.0017         0.0018         0.0017         0.0018         0.0018         0.0017         0.0018         0.0018         0.0017         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018         0.0018	46	0.0000	N/A	N/A	N/A	0.0009	28	0.0100
49         0.0000         N/A         N/A         N/A         0.0012           50         0.0000         N/A         N/A         N/A         0.0013           51         0.0000         N/A         N/A         N/A         0.0016           52         0.0000         N/A         N/A         N/A         0.0017           53         0.0000         N/A         N/A         N/A         0.0017           54         0.0000         N/A         N/A         N/A         0.0018           55         0.0400         N/A         N/A         N/A         0.0020           56         0.0400         N/A         N/A         N/A         0.0021           57         0.0400         N/A         N/A         N/A         0.0023           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         0.0030           61         0.0600         N/A         N/A         N/A         0.0033           62         0.1500         N/A         N/A	47	0.0000	N/A	N/A		0.0010	29	0.0100
50         0.0000         N/A         N/A         N/A         0.0013           51         0.0000         N/A         N/A         N/A         0.0014           52         0.0000         N/A         N/A         N/A         0.0016           53         0.0000         N/A         N/A         N/A         0.0017           54         0.0000         N/A         N/A         N/A         0.0018           55         0.0400         N/A         N/A         N/A         0.0020           56         0.0400         N/A         N/A         N/A         0.0021           57         0.0400         N/A         N/A         N/A         0.0023           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         0.0030           61         0.0600         N/A         N/A         N/A         0.0033           62         0.1500         N/A         N/A         N/A         0.0043           65         0.3000         N/A         N/A	48	0.0000	N/A	N/A	N/A	0.0011	30 & Above	0.0100
51         0.0000         N/A         N/A         N/A         0.0014           52         0.0000         N/A         N/A         N/A         0.0016           53         0.0000         N/A         N/A         N/A         0.0017           54         0.0000         N/A         N/A         N/A         0.0018           55         0.0400         N/A         N/A         N/A         0.0020           56         0.0400         N/A         N/A         N/A         0.0021           57         0.0400         N/A         N/A         N/A         0.0023           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         0.0030           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         0.0043           65         0.3000         N/A	49	0.0000	N/A	N/A	N/A	0.0012		
52         0.0000         N/A         N/A         N/A         0.0016           53         0.0000         N/A         N/A         N/A         0.0017           54         0.0000         N/A         N/A         N/A         0.0018           55         0.0400         N/A         N/A         N/A         0.0020           56         0.0400         N/A         N/A         N/A         0.0021           57         0.0400         N/A         N/A         N/A         0.0023           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         0.0030           61         0.0600         N/A         N/A         N/A         0.0033           62         0.1500         N/A         N/A         N/A         0.0036           63         0.1000         N/A         N/A         N/A         0.0043           65         0.3000         N/A         N/A         N/A         0.0047           66         0.3000         N/A         N/A	50	0.0000	N/A	N/A	N/A	0.0013		
53         0.0000         N/A         N/A         N/A         0.0017           54         0.0000         N/A         N/A         N/A         0.0018           55         0.0400         N/A         N/A         N/A         0.0020           56         0.0400         N/A         N/A         N/A         0.0021           57         0.0400         N/A         N/A         N/A         0.0023           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         0.0030           61         0.0600         N/A         N/A         N/A         0.0033           62         0.1500         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         0.0043           65         0.3000         N/A         N/A         N/A         0.0050           67         0.3000         N/A         N/A	51	0.0000	N/A	N/A	N/A	0.0014		
54         0.0000         N/A         N/A         N/A         0.0018           55         0.0400         N/A         N/A         N/A         0.0020           56         0.0400         N/A         N/A         N/A         0.0021           57         0.0400         N/A         N/A         N/A         0.0023           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         0.0030           61         0.0600         N/A         N/A         N/A         0.0033           62         0.1500         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         0.0043           65         0.3000         N/A         N/A         N/A         0.0047           66         0.3000         N/A         N/A         N/A         0.0050           67         0.3000         N/A         N/A	52	0.0000	N/A	N/A	N/A	0.0016		
55         0.0400         N/A         N/A         N/A         0.0020           56         0.0400         N/A         N/A         N/A         0.0021           57         0.0400         N/A         N/A         N/A         0.0023           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         0.0030           61         0.0600         N/A         N/A         N/A         0.0033           62         0.1500         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         0.0043           65         0.3000         N/A         N/A         N/A         0.0047           66         0.3000         N/A         N/A         N/A         0.0050           67         0.3000         N/A         N/A         N/A         0.0054           68         0.3000         N/A         N/A	53	0.0000	N/A	N/A	N/A	0.0017		
56         0.0400         N/A         N/A         N/A         0.0021           57         0.0400         N/A         N/A         N/A         0.0023           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         0.0030           61         0.0600         N/A         N/A         N/A         0.0033           62         0.1500         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         0.0043           65         0.3000         N/A         N/A         N/A         0.0047           66         0.3000         N/A         N/A         N/A         0.0050           67         0.3000         N/A         N/A         N/A         0.0054           68         0.3000         N/A         N/A         N/A         N/A         0.0062		0.0000				0.0018		
57         0.0400         N/A         N/A         N/A         0.0023           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         0.0030           61         0.0600         N/A         N/A         N/A         0.0033           62         0.1500         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         0.0043           65         0.3000         N/A         N/A         N/A         0.0047           66         0.3000         N/A         N/A         N/A         0.0050           67         0.3000         N/A         N/A         N/A         0.0054           68         0.3000         N/A         N/A         N/A         0.0058           69         0.3000         N/A         N/A         N/A         N/A         0.0062		0.0400				0.0020		
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         0.0030           61         0.0600         N/A         N/A         N/A         0.0033           62         0.1500         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         0.0043           65         0.3000         N/A         N/A         N/A         0.0047           66         0.3000         N/A         N/A         N/A         0.0050           67         0.3000         N/A         N/A         N/A         0.0054           68         0.3000         N/A         N/A         N/A         0.0058           69         0.3000         N/A         N/A         N/A         N/A         0.0062		0.0400	N/A			0.0021		
59         0.0400         N/A         N/A         N/A         0.0028           60         0.0400         N/A         N/A         N/A         0.0030           61         0.0600         N/A         N/A         N/A         0.0033           62         0.1500         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         0.0043           65         0.3000         N/A         N/A         N/A         0.0047           66         0.3000         N/A         N/A         N/A         0.0050           67         0.3000         N/A         N/A         N/A         0.0054           68         0.3000         N/A         N/A         N/A         0.0058           69         0.3000         N/A         N/A         N/A         N/A         0.0062		0.0400				0.0023		
60       0.0400       N/A       N/A       N/A       0.0030         61       0.0600       N/A       N/A       N/A       0.0033         62       0.1500       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       0.0043         65       0.3000       N/A       N/A       N/A       0.0047         66       0.3000       N/A       N/A       N/A       0.0050         67       0.3000       N/A       N/A       N/A       0.0054         68       0.3000       N/A       N/A       N/A       0.0058         69       0.3000       N/A       N/A       N/A       0.0062	58	0.0400						
61       0.0600       N/A       N/A       N/A       0.0033         62       0.1500       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       0.0043         65       0.3000       N/A       N/A       N/A       0.0047         66       0.3000       N/A       N/A       N/A       0.0050         67       0.3000       N/A       N/A       N/A       0.0054         68       0.3000       N/A       N/A       N/A       0.0058         69       0.3000       N/A       N/A       N/A       0.0062	59	0.0400		N/A		0.0028		
62       0.1500       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       0.0043         65       0.3000       N/A       N/A       N/A       0.0047         66       0.3000       N/A       N/A       N/A       0.0050         67       0.3000       N/A       N/A       N/A       0.0054         68       0.3000       N/A       N/A       N/A       0.0058         69       0.3000       N/A       N/A       N/A       0.0062	60	0.0400	N/A	N/A		0.0030		
63       0.1000       N/A       N/A       N/A       0.0039         64       0.1500       N/A       N/A       N/A       0.0043         65       0.3000       N/A       N/A       N/A       0.0047         66       0.3000       N/A       N/A       N/A       0.0050         67       0.3000       N/A       N/A       N/A       0.0054         68       0.3000       N/A       N/A       N/A       0.0058         69       0.3000       N/A       N/A       N/A       0.0062		0.0600	N/A	N/A				
64 0.1500 N/A N/A N/A 0.0043 65 0.3000 N/A N/A N/A 0.0047 66 0.3000 N/A N/A N/A 0.0050 67 0.3000 N/A N/A N/A 0.0054 68 0.3000 N/A N/A N/A 0.0058 69 0.3000 N/A N/A N/A 0.0062								
65 0.3000 N/A N/A N/A 0.0047 66 0.3000 N/A N/A N/A 0.0050 67 0.3000 N/A N/A N/A 0.0054 68 0.3000 N/A N/A N/A 0.0058 69 0.3000 N/A N/A N/A 0.0062								
66 0.3000 N/A N/A N/A 0.0050 67 0.3000 N/A N/A N/A 0.0054 68 0.3000 N/A N/A N/A 0.0058 69 0.3000 N/A N/A N/A 0.0062								
67 0.3000 N/A N/A N/A 0.0054 68 0.3000 N/A N/A N/A 0.0058 69 0.3000 N/A N/A N/A 0.0062								
68 0.3000 N/A N/A N/A 0.0058 69 0.3000 N/A N/A N/A 0.0062								
69 0.3000 N/A N/A N/A 0.0062	67	0.3000				0.0054		
70 1.0000 N/A N/A N/A 0.0066								
	70	1.0000	N/A	N/A	N/A	0.0066		



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

Age	Service Retirement*	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	0.0012	0.0003	0.0010	0.0003	0	0.0800
19	0.0000	0.0012	0.0003	0.0010	0.0003	1	0.0650
20	0.0000	0.0012	0.0003	0.0010	0.0003		0.0500
21	0.0000	0.0012	0.0003	0.0010	0.0003	2 3	0.0350
22	0.0000	0.0012	0.0003	0.0010	0.0003	4	0.0250
23	0.0000	0.0012	0.0003	0.0010	0.0004	5	0.0233
24	0.0000	0.0012	0.0003	0.0010	0.0004	6	0.0217
25	0.0000	0.0012	0.0003	0.0010	0.0004	7	0.0200
26	0.0000	0.0012	0.0003	0.0010	0.0004	8	0.0190
27	0.0000	0.0012	0.0003	0.0010	0.0004	9	0.0180
28	0.0000	0.0013	0.0003	0.0010	0.0004	10	0.0170
29	0.0000	0.0014	0.0003	0.0010	0.0004	11	0.0160
30	0.0000	0.0014	0.0004	0.0010	0.0004	12	0.0150
31	0.0000	0.0015	0.0004	0.0010	0.0004	13	0.0140
32	0.0000	0.0016	0.0004	0.0010	0.0004	14	0.0130
33	0.0000	0.0017	0.0004	0.0010	0.0005	15	0.0120
34	0.0000	0.0018	0.0004	0.0010	0.0006	16	0.0110
35	0.0000	0.0018	0.0005	0.0010	0.0006	17	0.0100
36	0.0000	0.0019	0.0005	0.0010	0.0007	18	0.0080
37	0.0000	0.0020	0.0005	0.0010	0.0008	19	0.0060
38	0.0000	0.0021	0.0005	0.0010	0.0008	20 & Above	0.0000
39	0.0000	0.0022	0.0005	0.0010	0.0009		
40	0.0000	0.0022	0.0006	0.0010	0.0010		
41	0.0000	0.0023	0.0006	0.0010	0.0010		
42	0.0000	0.0024	0.0006	0.0010	0.0011		
43	0.0000	0.0025	0.0006	0.0010	0.0011		
44	0.0000	0.0026	0.0006	0.0010	0.0012		
45	0.0000	0.0026	0.0007	0.0010	0.0013		
46	0.0000	0.0027	0.0007	0.0010	0.0014		
47	0.0000	0.0028	0.0007	0.0010	0.0015		
48	0.0000	0.0030	0.0008	0.0010	0.0016		
49	0.0000	0.0033	0.0008	0.0010	0.0017		
50	0.2000	0.0035	0.0009	0.0010	0.0019		
51	0.1500	0.0038	0.0009	0.0010	0.0020		
52	0.1500	0.0040	0.0010	0.0010	0.0021		
53	0.2000	0.0051	0.0013	0.0010	0.0023		
54	0.2000	0.0062	0.0016	0.0010	0.0024		
55	0.3000	0.0074	0.0018	0.0010	0.0026		
56	0.3000	0.0085	0.0021	0.0010	0.0028		
57	0.3000	0.0096	0.0024	0.0010	0.0030		
58	0.3000	0.0086	0.0022	0.0010	0.0033		
59	0.3000	0.0077	0.0019	0.0010	0.0036		
60	1.0000	0.0067	0.0000	0.0010	0.0040		

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



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

Age	Service Retirement*	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	0.0012	0.0003	0.0010	0.0002	0	0.0800
19	0.0000	0.0012	0.0003	0.0010	0.0002	1	0.0650
20	0.0000	0.0012	0.0003	0.0010	0.0002	2	0.0500
21	0.0000	0.0012	0.0003	0.0010	0.0002	3	0.0350
22	0.0000	0.0012	0.0003	0.0010	0.0002	4	0.0250
23	0.0000	0.0012	0.0003	0.0010	0.0002	5	0.0233
24	0.0000	0.0012	0.0003	0.0010	0.0002	6	0.0217
25	0.0000	0.0012	0.0003	0.0010	0.0002	7	0.0200
26	0.0000	0.0012	0.0003	0.0010	0.0002	8	0.0190
27	0.0000	0.0012	0.0003	0.0010	0.0002	9	0.0180
28	0.0000	0.0013	0.0003	0.0010	0.0002	10	0.0170
29	0.0000	0.0014	0.0003	0.0010	0.0002	11	0.0160
30	0.0000	0.0014	0.0004	0.0010	0.0002	12	0.0150
31	0.0000	0.0015	0.0004	0.0010	0.0002	13	0.0140
32	0.0000	0.0016	0.0004	0.0010	0.0002	14	0.0130
33	0.0000	0.0017	0.0004	0.0010	0.0003	15	0.0120
34	0.0000	0.0018	0.0004	0.0010	0.0003	16	0.0110
35	0.0000	0.0018	0.0005	0.0010	0.0003	17	0.0100
36	0.0000	0.0019	0.0005	0.0010	0.0004	18	0.0080
37	0.0000	0.0020	0.0005	0.0010	0.0004	19	0.0060
38	0.0000	0.0021	0.0005	0.0010	0.0005	20 & Above	0.0000
39	0.0000	0.0022	0.0005	0.0010	0.0005		
40	0.0000	0.0022	0.0006	0.0010	0.0006		
41	0.0000	0.0023	0.0006	0.0010	0.0006		
42	0.0000	0.0024	0.0006	0.0010	0.0006		
43	0.0000	0.0025	0.0006	0.0010	0.0007		
44	0.0000	0.0026	0.0006	0.0010	0.0008		
45	0.0000	0.0026	0.0007	0.0010	0.0009		
46	0.0000	0.0027	0.0007	0.0010	0.0009		
47	0.0000	0.0028	0.0007	0.0010	0.0010		
48	0.0000	0.0030	0.0008	0.0010	0.0011		
49	0.0000	0.0033	0.0008	0.0010	0.0012		
50	0.2000	0.0035	0.0009	0.0010	0.0013		
51	0.1500	0.0038	0.0009	0.0010	0.0014		
52	0.1500	0.0040	0.0010	0.0010	0.0016		
53	0.2000	0.0051	0.0013	0.0010	0.0017		
54	0.2000	0.0062	0.0016	0.0010	0.0018		
55	0.3000	0.0074	0.0018	0.0010	0.0020		
56	0.3000	0.0085	0.0021	0.0010	0.0021		
57	0.3000	0.0096	0.0024	0.0010	0.0023		
58	0.3000	0.0086	0.0022	0.0010	0.0025		
59	0.3000	0.0077	0.0019	0.0010	0.0028		
60	1.0000	0.0067	0.0000	0.0010	0.0030		

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



### **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, 2008. The benefit and contribution provisions of this law are summarized briefly below, along with corresponding references to the State Code. This summary does not attempt to cover all the detailed provisions of the law.

Government Code Section

#### MEMBERSHIP IN RETIREMENT PLANS

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

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 July 6, 1980 and earlier.

**Plan 2:** Employees hired after July 6, 1980, but on or before

July 12, 1997.

Plan 3: General members may elect to participate in Plan 3. After (31496)

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.

**Plan 4:** Employees hired after July 12, 1997 (if Plan 3 not elected).



#### **MEMBER CONTRIBUTIONS**

#### Basic:

Plans 1, 2 & 4:

Contributions are based on the entry age and class of each member and are required of all members in Plans 1, 2 and 4. 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.

(31625.2, 31664.1)

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)

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

Cost-of-Living:

Plans 1, 2 & 4: Members do not contribute towards the cost-of-living

benefit.

**Cost-Sharing:** 

Plans 1, 2 & 4: General members: (31678.2)

Members contribute basic rate plus 3.0%.

Safety members (except Deputy Sheriffs):

Members contribute basic rate plus 5.0%.

Safety members (Deputy Sheriffs only):

Members contribute basic rate plus varying 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%

#### **Probation members:**

Members contribute basic rate plus 3.5%.



## **MEMBER CONTRIBUTIONS** (Continued)

Employer Pick-Up: (31581.2)

**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 (31678.2)

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** The County provides a variety of refundable service-based (31639.85)

**members:** 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)

### **SERVICE RETIREMENT ALLOWANCE**

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_	шч	IIN	41		

Plans 1, 2 & 4\* General members:

> Age 50 with 10 years of service; Any age with 30 years of service; or

Age 70 regardless of service.

All Safety & Probation members: (31663.25)

Age 50 with 10 years of service; Any age with 20 years of service.

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

Plan 3: Age 65 with 10 years of service. A reduced benefit (31497.3)

is also payable at age 55 with 10 years of service.

**Final Compensation:** 

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

12 consecutive months of compensation.

(31462,Plans 3 & 4: Monthly average of a member's highest 31496.3(d))

compensation during any three years. Years do

not have to be consecutive.

**Compensation Limit:** 

All Plans: The amount of compensation that is taken into (31671)

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.

(31676.1)**Monthly Allowance:** (31676.14)

Plans 1, 2 & 4: General members:

1/60 x Final Compensation x General age

factor x years of service.

(31664.1)All Safety & Probation members:

3% x Final Compensation x Safety age factor x

Years of service.



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

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

- (a) 2% x Final Compensation x (Years of Service, (up to 35 years), plus (31497.3)
- (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:

<u>Plan</u>	Age 50	Age 55	Age 60	Age 65 & Up	
County General 1,2&4	1.475%	1.948%	2.440%	2.611%	(31676.14)
SMCM&VCD	1.182%	1.492%	1.971%	2.432%	(31676.1)
General Plan 3*	N/A	0.780%	1.220%	2.000%	(31497.3(f))
Safety & Probation	3.000%	3.000%	3.000%	3.000%	(31664.1)

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

### **Maximum Allowance:**

Plans 1, 2 & 4: Allowance may not exceed 100% of final

compensation.

**Plan 3:** The sum of the normal retirement allowance and (31497.3)

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



(31760.1)

(31497.71)

## SERVICE RETIREMENT ALLOWANCE (Continued)

<u>Unmodified Retirement Allowance (Normal Form):</u>

Plans 1, 2 & 4: Life Annuity payable to retired member with 60%

continuance to an eligible survivor (or eligible

children).

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

continuance to an eligible survivor (or eligible

children).

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 (31761)

refund of any unpaid annuity payments (up to the

amount of the member's contributions at retirement) to the member's estate or to a

beneficiary having an insurable interest in the life of

the member.

**Option 2:** 100% of member's reduced allowance is payable (31762)

to an 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 (31763)

an eligible survivor or beneficiary having an insurable interest in the life of the member.

**Option 4:** Other % of member's reduced allowance is (31764)

payable to an eligible survivor or beneficiary(ies) having an insurable interest in the life of the

member.



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

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)

31720.9)

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:

Plans 1, 2 & 4:

Any age or years of service; disability must result

(31720, 31720.5, 31720.5)

from occupational injury or disease, and member must be permanently incapacitated for the

performance of duty.

Not available under Plan 3. (31487)

**Monthly Allowance:** Greater of (1) 50% of final compensation, and (2) (31727.4)

the service retirement allowance, if eligible to retire.

**Normal Form Of Payment:** Life Annuity with 100% continuance to a surviving (31760, 31786)

spouse (or eligible children).

#### RECIPROCAL SERVICE-CONNECTED DISABILITY ALLOWANCE

Eligibility: (31837)

Plans 1, 2 & 4:

Any member regardless of age or years of service who 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 31837, 31838.5)

case shall the allowance be greater than if all

service was with one entity.

Normal Form Of Payment: Life Annuity with 100% continuance to a surviving

spouse (or eligible children).

(31760, 31786)



Plan 3:

(31726,

31726.5)

### NONSERVICE-CONNECTED DISABILITY RETIREMENT ALLOWANCE

**Eligibility:** 

Plans 1, 2 & 4: Any age with five years of service and permanently (31720, 31836)

incapacitated for the performance of duty.

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

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

retirement allowance if the member is eligible to retire, otherwise allowance equals (a) or (b) where:

General Members: (a) 90% of 1/60th of Final Compensation x years of (31727(a))

service, if member must rely on service in another retirement system in order to be eligible to retire, or allowance exceeds 1/3 of final compensation.

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

service projected to age 65, not to exceed 1/3 of (31727(b))

Final Compensation.

Safety Members: 1/60 is replaced by 1/50 and age 65 is replaced (31727.2)

by age 55 in (a) and (b) above.

**Normal Form Of Payment:** Life Annuity with 60% continuance to a surviving (31760.1)

spouse (or eligible children).

#### SERVICE-CONNECTED DEATH BENEFITS

Eligibility:
Plans 1, 2 & 4: Active members who die in service as a result of (31787)

injury or disease arising out of and in the course of

employment.

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

**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.



(31787)

### **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.

(31787.6)

(31780)

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

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:**

Plans 1, 2 & 4: Active members who die while in service or while

physically or mentally incapacitated for the

performance of duty.

Plan 3: Not available under Plan 3.



### NONSERVICE-CONNECTED DEATH BENEFITS (Continued)

## **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:

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.

(31781.1)

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

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).

(31781.2, 31765.2)

### **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

(31781.3)

(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.

(31781.1)



### 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).



(31700)

(31703, 31704,

31705)

(31702)

(31497.3)

### **DEFERRED VESTED BENEFITS**

## **Eligibility:**

Plans 1, 2 & 4: Age 50 with 10 years of membership.

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. (31497.3)

**Monthly Allowance:** 

Plans 1, 2 & 4: Same as service retirement allowance;

payable anytime 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

early retirement, after age 55.

actuarially equivalent reduced amount at

No benefit is paid for death while deferred.



(31874.4)

COST-OF-LIVING INCREASES				
Cost-of-living increases (or decreases) are applied to all retirement allowances (service and disability), optional death allowances, and annual death allowances effective April 1, based on changes in the Consumer Price Index (CPI) from the previous January 1 to the current January 1, to the nearest ½ of 1%.				
Plan 1:	General & Safety Members (and their beneficiaries) are limited to a maximum 5% cost-of-living increase.	(31870.2)		
	<b>Probation</b> Members (and their beneficiaries) are limited to a maximum 3% cost-of-living increase.	(31870.1)		
Plan 2:	All members Members (and their beneficiaries) are limited to a maximum 3% cost-of-living increase.	(31870.1)		
Plan 3:	Plan 3 does not have a COLA.	(31487)		
Plan 4:	All members Members (and their beneficiaries) are limited to a maximum 2% cost-of-living increase.	(31870)		
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.	(31870.1, 31870.2)		

Plans 2 & 4



Plans 2 & 4 do not have a COLA bank.

## **Appendix C: Valuation Data and Schedules**



Data on SamCERA membership as of June 30, 2009 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, 2009 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, 2009

						verage	Average
	Total			Average	N	lonthly	Credited
	Number	Α	nnual Salary	Age	;	Salary	Service
General Mem	hors						
General Menn	uers						
Plan 1	104	\$	9,402,741	59.3	\$	7,534	31.3
Plan 2	1,265		108,077,860	52.0		7,120	18.9
Plan 3	154		10,701,353	43.9		5,791	7.8
Plan 4	3,254		242,578,875	42.4		6,212	5.1
Total	4,777	\$	370,760,830	45.4	\$	6,468	9.4
Safety Membe	ers						
Plan 1	10	\$	1,306,727	58.2	\$	10,889	30.0
Plan 2	153		18,607,026	48.2		10,135	19.5
Plan 4	273		28,206,328	40.1		8,610	6.0
Total	436	\$	48,120,081	43.4	\$	9,197	11.3
Probation Me	mbers						
Plan 1	6	\$	702,064	61.2	\$	9,751	28.7
Plan 2	88	•	7,752,539	46.3	•	7,341	17.9
Plan 4	236		17,816,199	36.8		6,291	6.5
Total	330	\$	26,270,802	39.8	\$	6,634	9.9
Grand Total	5,543	\$	445,151,713	44.9	\$	6,692	9.6



Exhibit C-2: SamCERA Membership - Deferred Vested Members as of June 30, 2009

		Average				
<u>-</u>	Number	Age				
General Members						
Plan 1 Plan 2 Plan 3 Plan 4 Total	52 519 129 418	59.1 49.2 51.6 43.3				
Safety Membe	ers					
Plan 1 Plan 2 Plan 4	2 38 28	62.0 44.2 38.4				
Total  Probation Me	68 <b>mbers</b>	42.3				
Plan 1 Plan 2 Plan 4 Total	20 24 44	- 43.0 41.3 42.1				
Grand Total	1,230	47.2				



Exhibit C-3a: SamCERA Membership – Retired Members as of June 30, 2009

_	Number	Average Age	Monthly Allowance	Мо	Average nthly Benefit
General Memb	oers				
Plan 1 Plan 2 Plan 3 Plan 4	2,093 1,206 83 71	76.8 65.3 68.7 59.9	\$ 5,111,472 2,180,557 65,645 102,874	\$	2,442 1,808 791 1,449
Total	3,453	72.2	\$ 7,460,547	\$	2,161
Safety Membe	rs				
Plan 1 Plan 2 Plan 4	291 88 6	68.0 56.6 49.5	\$ 1,651,386 408,186 19,042	\$	5,675 4,638 3,174
Total	385	65.1	\$ 2,078,614	\$	5,399
Probation Mer	mbers				
Plan 1 Plan 2 Plan 4	68 26 3	65.8 60.5 60.7	\$ 307,566 69,183 5,128	\$	4,523 2,661 1,709
Total	97	64.2	\$ 381,878	\$	3,937
Grand Total	3,935	71.3	\$ 9,921,039	\$	2,521



Exhibit C-3b: SamCERA Membership – Retired Members as of June 30, 2009 Subtotaled by Class and Retirement Type

Plan	Retirement Type	Number		Monthly Benefit	Average Monthly Benefit		
General Plans:				<u> </u>			
	Healthy	2,703	\$	6,160,542	\$	2,279	
	Disabled	276		575,621		2,086	
	Beneficiaries	474		724,384		1,528	
	Total	3,453	\$	7,460,547	\$	2,161	
Safety Plans:							
	Healthy	239	\$	1,483,005	\$	6,205	
	Disabled	90		401,316		4,459	
	Beneficiaries	56		194,293		3,470	
	Total	385	\$	2,078,614	\$	5,399	
Probation Plans:							
	Healthy	90	\$	356,618	\$	3,962	
	Disabled	3		5,756		1,919	
	Beneficiaries	4		19,504		4,876	
	Total	97	\$	381,878	\$	3,937	
Grand Totals							
	Healthy	3,032	\$	8,000,165	\$	2,639	
	Disabled	369		982,693		2,663	
	Beneficiaries	534	_	938,181	_	1,757	
	Total	3,935	\$	9,921,039	\$	2,521	



Exhibit C-4: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2009 All Members

				Ye	ars of Service	e e				Total
Age	0-1	1-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	24	48	0	0	0	0	0	0	0	72
25-29	64	286	46	0	0	0	0	0	0	396
30-34	73	352	217	31	0	0	0	0	0	673
35-39	51	296	297	142	21	0	0	0	0	807
40-44	40	209	232	173	102	27	0	0	0	783
45-49	26	170	188	139	117	114	25	0	0	779
50-54	40	159	162	113	119	114	66	11	0	784
55-59	17	117	164	86	97	94	63	29	20	687
60-64	13	62	101	55	62	48	44	15	12	412
65 & Over	2	14	45	27	18	19	12	7	6	150
Total Count	350	1,713	1,452	766	536	416	210	62	38	5,543
Compensation										
				Ye	ars of Service	e				Average
Age	0-1	1-2	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	48,765	58,118	-	-	-	-	-	-	_	55,000
25-29	58,305	65,318	63,852	-	-	-	-	-	-	64,014
30-34	67,501	71,920	79,400	78,527	-	-	-	-	-	74,157
35-39	63,172	78,295	80,363	85,120	77,880	-	-	-	-	79,290
40-44	77,745	78,631	85,683	84,899	85,051	96,559	-	-	-	83,514
45-49	87,454	71,836	82,309	89,327	82,384	98,955	86,711	-	-	84,036
50-54	82,261	77,150	76,540	85,511	88,800	91,111	92,922	108,013	-	84,049
55-59	81,274	84,007	80,477	89,503	86,000	93,501	97,189	98,478	81,253	87,105
60-64	78,753	73,751	76,584	85,584	85,397	86,324	88,398	90,875	89,622	82,050
65 & Over	81,953	77,287	64,854	75,202	71,504	97,675	81,711	99,710	89,208	77,009
Avg. Annual Compensation	69,413	73,764	79,641	85,800	84,777	93,902	91,874	98,470	85,152	80,309



Count

Exhibit C-4a: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2009 General Members

Count										
	_			Υe	ars of Service	е				Total
Age	0-1	1-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	20	43	0	0	0	0	0	0	0	63
25-29	57	234	42	0	0	0	0	0	0	333
30-34	68	305	166	20	0	0	0	0	0	559
35-39	50	258	237	97	17	0	0	0	0	659
40-44	38	197	192	109	76	18	0	0	0	630
45-49	25	165	165	120	100	78	19	0	0	672
50-54	29	153	151	104	101	95	53	10	0	696
55-59	16	107	156	81	91	84	50	25	20	630
60-64	12	58	96	54	60	47	41	13	11	392
65 & Over	2	13	42	27	17	18	12	7	5	143
Total Count	317	1,533	1,247	612	462	340	175	55	36	4,777

_	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	46,011	56,747	-	-	-	-	-	-	-	53,339		
25-29	56,103	63,104	60,772	-	-	-	-	-	-	61,612		
30-34	67,316	70,569	76,223	70,378	-	-	-	-	-	71,846		
35-39	63,059	76,638	77,782	80,848	73,509	-	-	-	-	76,558		
40-44	77,805	77,868	84,464	77,100	78,236	80,289	-	-	-	79,855		
45-49	88,096	71,250	80,281	88,572	77,871	91,603	75,212	-	-	80,647		
50-54	73,505	75,506	74,839	83,329	85,287	85,140	85,692	108,621	-	80,433		
55-59	80,693	81,286	79,465	88,320	84,031	91,959	90,631	93,378	81,253	84,764		
60-64	75,812	71,419	75,441	85,012	83,654	85,941	85,791	87,197	86,096	80,463		
65 & Over	81,953	75,256	62,929	75,202	70,376	96,440	81,711	99,710	83,186	75,821		
Avg. Annual Compensation	67,836	72,387	77,535	82,882	81,080	88,759	85,715	95,495	83,001	77,614		



Exhibit C-4b: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2009 Safety Members

Count										
	<u>-</u>			Ye	ears of Service	се				Total
Age	0-1	1-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	1	2	0	0	0	0	0	0	0	3
25-29	5	22	3	0	0	0	0	0	0	30
30-34	2	21	22	6	0	0	0	0	0	51
35-39	1	21	27	21	2	0	0	0	0	72
40-44	2	9	18	34	15	7	0	0	0	85
45-49	1	2	15	9	12	25	6	0	0	70
50-54	11	6	5	7	12	13	11	1	0	66
55-59	1	10	5	5	4	6	9	3	0	43
60-64	1	4	4	0	0	1	1	1	0	12
65 & Over	0	1	1	0	0	1	0	0	1	4
Total Count	25	98	100	82	45	53	27	5	1	436

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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	74,985	83,756	-	-	-	-	-	-	-	80,832	
25-29	82,635	91,314	99,672	-	-	-	-	-	-	90,703	
30-34	89,971	94,646	103,102	106,229	-	-	-	-	-	99,473	
35-39	68,827	104,384	107,145	106,131	108,519	-	-	-	-	105,550	
40-44	76,593	97,775	107,787	111,641	118,484	140,778	-	-	-	112,139	
45-49	71,414	115,555	107,628	105,026	118,164	122,830	123,125	-	-	115,566	
50-54	105,346	119,080	119,916	116,661	115,393	132,768	126,522	101,928	-	119,604	
55-59	90,573	113,122	117,169	108,679	129,334	117,303	129,974	132,769	-	119,541	
60-64	114,052	107,565	105,915	-	-	104,363	171,305	137,957	-	115,133	
65 & Over	-	103,684	103,684	-	-	119,893	-	-	119,317	111,644	
Avg. Annual Compensation	92,998	100,477	107,275	109,356	118,096	126,608	128,576	127,638	119,317	110,367	



Exhibit C-4c: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2009 Probation Members

Count	1									
	-			Υe	ears of Service	е				Total
Age	0-1	1-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	3	3	0	0	0	0	0	0	0	6
25-29	2	30	1	0	0	0	0	0	0	33
30-34	3	26	29	5	0	0	0	0	0	63
35-39	0	17	33	24	2	0	0	0	0	76
40-44	0	3	22	30	11	2	0	0	0	68
45-49	0	3	8	10	5	11	0	0	0	37
50-54	0	0	6	2	6	6	2	0	0	22
55-59	0	0	3	0	2	4	4	1	0	14
60-64	0	0	1	1	2	0	2	1	1	8
65 & Over	0	0	2	0	1	0	0	0	0	3
Total Count	8	82	105	72	29	23	8	2	1	330

Compensation										
-					ears 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	58,380	60,670	-	-	-	-	-	-	-	59,525
25-29	60,253	63,517	85,758	-	-	-	-	-	-	63,993
30-34	56,713	69,415	79,602	77,883	-	-	-	-	-	74,171
35-39	-	71,212	76,983	84,002	84,401	-	-	-	-	78,104
40-44	-	71,303	78,233	82,926	86,548	88,220	-	-	-	81,637
45-49	-	74,903	76,649	84,260	86,776	96,832	-	-	-	85,933
50-54	-	-	83,192	89,913	94,737	95,402	99,715	-	-	91,784
55-59	-	-	71,932	-	88,958	90,166	105,407	123,108	-	92,794
60-64	-	-	68,968	116,461	137,689	-	100,405	91,613	128,407	110,205
65 & Over	-	-	85,848	-	90,682	-	-	-	-	87,459
Avg. Annual Compensation	58,223	67,580	78,329	83,779	91,969	94,551	102,733	107,361	128,407	79,608



Exhibit C-5: Distribution of Retired Members by Age and Retirement Year as of June 30, 2009 All Plans Combined

				Retire	ment Year				Total	Averaç Month	verage Ionthly	
Age	Pre-1974	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-09	Count	Benef	•	
Under 35	-	-	-	-	-	5	2	-	7	\$ 9	85	
35-39	-	-	-	-	1	-	1	4	6	2,1	62	
40-44	-	-	-	1	1	1	8	8	19	2,4	48	
45-49	-	-	-	-	-	12	10	13	35	2,4	58	
50-54	-	-	-	1	3	7	27	86	124	2,9	15	
55-59	-	-	-	3	14	20	102	208	347	2,6	88	
60-64	2	-	5	8	26	95	189	301	626	3,3	97	
65-69	-	1	4	23	91	174	223	228	744	3,0	49	
70-74	8	2	14	57	128	148	139	49	545	2,4	46	
75-79	4	13	50	69	128	134	32	14	444	2,0	19	
80-84	5	47	91	130	126	32	5	3	439	1,8	93	
85-89	23	69	130	127	27	4	-	-	380	1,8	27	
90-94	26	51	69	19	2	1	-	-	168	1,4	56	
95-99	14	20	10	-	-	-	-	1	45	1,5	603	
100 & Over	4	2	-	-	-	-	-	-	6	1,4	57	
Total Count	86	205	373	438	547	633	738	915	3,935			
Avg Monthly Benefit	\$ 1,629	\$ 1,645	\$ 1,512	\$ 1,932	\$ 2,042	\$ 2,204	\$ 2,843	\$ 3,741		\$ 2,5	21	



Exhibit C-5a: Distribution of Retired Members by Age and Retirement Year as of June 30, 2009 General Plans Combined

Age	Pre-1974	1975-79	1980-84	<b>Retire</b> 1985-89	ment Year 1990-94	1995-99	2000-04	2005-09	Total Count	M	verage Ionthly Benefit
Under 35	-	-	-	-	-	5	2	-	7	\$	985
35-39	-	-	-	-	1	-	1	4	6		2,162
40-44	-	-	-	1	1	-	5	5	12		1,836
45-49	-	-	-	-	-	10	6	9	25		1,899
50-54	-	-	-	1	1	5	19	60	86		1,732
55-59	-	-	-	2	11	16	95	167	291		2,045
60-64	2	-	3	4	15	85	124	275	508		2,870
65-69	-	-	2	13	71	111	184	219	600		2,626
70-74	4	2	14	46	111	135	130	48	490		2,149
75-79	3	10	47	61	127	132	30	14	424		1,925
80-84	5	41	86	128	126	32	5	3	426		1,857
85-89	15	61	128	127	27	4	-	-	362		1,703
90-94	23	51	69	19	2	1	-	-	165		1,456
95-99	14	20	10	-	-	-	-	1	45		1,503
100 & Over	4	2	-	-	-	-	-	-	6		1,457
Total Count	70	187	359	402	493	536	601	805	3,453		
Avg Monthly Benefit	\$ 1,348	\$ 1,429	\$ 1,448	\$ 1,783	\$ 1,778	\$ 1,751	\$ 2,293	\$ 3,316		\$	2,161



Exhibit C-5b: Distribution of Retired Members by Age and Retirement Year as of June 30, 2009 Safety Plans Combined

Retirement Year							Total	Average Monthly		
Age	Pre-1974	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-09	Count	Benefit
Under 35	-	-	-	-	-	-	-	-	-	\$ -
35-39	-	-	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	1	2	3	6	3,840
45-49	-	-	-	-	-	2	4	4	10	3,856
50-54	-	-	-	-	2	2	5	21	30	6,352
55-59	-	-	-	1	3	4	6	30	44	6,558
60-64	-	-	2	4	11	8	56	16	97	5,972
65-69	-	1	2	10	19	46	24	3	105	5,102
70-74	4	-	-	11	16	10	1	1	43	5,328
75-79	1	3	3	8	1	-	-	-	16	4,293
80-84	-	6	5	2	-	-	-	-	13	3,061
85-89	8	8	2	-	-	-	-	-	18	4,314
90-94	3	-	-	-	-	-	-	-	3	1,451
95-99	-	-	-	-	-	-	-	-	-	-
100 & Over	-	-	-	-	-	-	-	-	-	-
Total Count	16	18	14	36	52	73	98	78	385	
Avg Monthly Benefit	\$ 2,861	\$ 3,895	\$ 3,146	\$ 3,598	\$ 4,289	\$ 4,807	\$ 6,060	\$ 7,966		\$ 5,399



Exhibit C-5c: Distribution of Retired Members by Age and Retirement Year as of June 30, 2009 Probation Plans Combined

Age	Pre-1974	1975-79	1980-84	<b>Retire</b> 1985-89	ment Year 1990-94	1995-99	2000-04	2005-09	Total Count	Average Monthly Benefit
Under 35	-	-	-	-	-	-	-	-	-	\$ -
35-39	-	-	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	-	1	-	1	1,431
45-49	-	-	-	-	-	-	-	-	-	-
50-54	-	-	-	-	-	-	3	5	8	2,747
55-59	-	-	-	-	-	-	1	11	12	4,071
60-64	-	-	-	-	-	2	9	10	21	4,242
65-69	-	-	-	-	1	17	15	6	39	4,030
70-74	-	-	-	-	1	3	8	-	12	4,236
75-79	-	-	-	-	-	2	2	-	4	2,817
80-84	-	-	-	-	-	-	-	-	-	1,269
85-89	-	-	-	-	-	-	-	-	-	-
90-94	-	-	-	-	-	-	-	-	-	-
95-99	-	-	-	-	-	-	-	-	-	-
100 & Over	-	-	-	-	-	-	-	-	-	-
Total Count	-	-	-	-	2	24	39	32	97	
Avg Monthly Benefit	\$ -	\$ -	\$ -	\$ -	\$ 8,709	\$ 4,421	\$ 3,233	\$ 4,133		\$ 3,937



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



This section illustrates the member basic contribution rates and the basic plus cost-sharing contribution rates by entry age.

**Exhibit D-1: Basic Member Contribution Rates** 

	General (County)		General (SMCM&VCD)		Proba	tion	Safety		
Entry Age *	Plans 1&2	Plan 4	Plans 1&2	Plan 4	Plans 1&2	Plan 4	Plans 1&2	Plan 4	
16	5.12%	4.90%	4.40%	4.22%	5.55%	5.31%	6.93%	6.64%	
17	5.21%	4.99%	4.49%	4.30%	5.65%	5.41%	7.06%	6.76%	
18	5.31%	5.08%	4.57%	4.38%	5.75%	5.51%	7.19%	6.88%	
19	5.41%	5.18%	4.66%	4.46%	5.86%	5.61%	7.32%	7.01%	
20	5.51%	5.27%	4.74%	4.54%	5.96%	5.71%	7.45%	7.14%	
21	5.61%	5.37%	4.83%	4.63%	6.07%	5.81%	7.59%	7.27%	
22	5.71%	5.47%	4.92%	4.71%	6.18%	5.92%	7.73%	7.40%	
23	5.82%	5.57%	5.01%	4.80%	6.30%	6.03%	7.87%	7.53%	
24	5.92%	5.67%	5.11%	4.89%	6.41%	6.14%	8.01%	7.67%	
25	6.03%	5.78%	5.20%	4.98%	6.53%	6.25%	8.16%	7.81%	
26 26	6.14%	5.88%	5.30%	5.07%	6.64%	6.36%	8.31%	7.01%	
			5.40%					7.95% 8.10%	
27	6.25%	5.99%		5.17%	6.76%	6.48%	8.46%		
28	6.37%	6.10%	5.49%	5.26%	6.89%	6.59%	8.61%	8.24%	
29	6.48%	6.21%	5.59%	5.36%	7.01%	6.71%	8.77%	8.39%	
30	6.60%	6.32%	5.70%	5.45%	7.14%	6.84%	8.93%	8.55%	
31	6.72%	6.43%	5.80%	5.55%	7.27%	6.96%	9.09%	8.70%	
32	6.84%	6.55%	5.91%	5.65%	7.40%	7.09%	9.26%	8.86%	
33	6.97%	6.67%	6.01%	5.76%	7.54%	7.22%	9.43%	9.03%	
34	7.09%	6.79%	6.12%	5.86%	7.68%	7.36%	9.60%	9.19%	
35	7.22%	6.91%	6.23%	5.97%	7.83%	7.49%	9.78%	9.37%	
36	7.35%	7.04%	6.35%	6.08%	7.98%	7.63%	9.97%	9.54%	
37	7.49%	7.17%	6.46%	6.19%	8.13%	7.77%	10.16%	9.71%	
38	7.63%	7.30%	6.58%	6.30%	8.28%	7.90%	10.35%	9.88%	
39	7.77%	7.44%	6.70%	6.41%	8.43%	8.04%	10.53%	10.05%	
40	7.92%	7.58%	6.82%	6.53%	8.57%	8.17%	10.72%	10.21%	
41	8.07%	7.72%	6.95%	6.65%	8.72%	8.29%	10.90%	10.36%	
42	8.22%	7.86%	7.07%	6.77%	8.86%	8.40%	11.07%	10.50%	
43	8.37%	8.00%	7.20%	6.90%	8.99%	8.50%	11.23%	10.63%	
44	8.52%	8.13%	7.34%	7.03%	9.10%	8.59%	11.38%	10.74%	
45	8.67%	8.26%	7.48%	7.16%	9.21%	8.66%	11.52%	10.83%	
46	8.82%	8.38%	7.62%	7.29%	9.30%	8.70%	11.63%	10.88%	
47	8.96%	8.50%	7.77%	7.42%	9.37%	8.70%	11.71%	10.88%	
48	9.09%	8.60%	7.91%	7.55%	9.40%	9.01%	11.75%	11.26%	
49	9.21%	8.69%	8.05%	7.68%	9.40%	9.34%	11.75%	11.68%	
50	9.32%	8.76%	8.19%	7.80%	9.40%	9.34%	11.75%	11.68%	
51	9.41%	8.80%	8.33%	7.92%	9.40%	9.34%	11.75%	11.68%	
52	9.48%	8.80%	8.46%	8.03%	9.40%	9.34%	11.75%	11.68%	
53	9.51%	9.11%	8.58%	8.12%	9.40%	9.34%	11.75%	11.68%	
54	9.51%	9.45%	8.70%	8.21%	9.40%	9.34%	11.75%	11.68%	
55	9.51%	9.45%	8.80%	8.27%	9.40%	9.34%	11.75%	11.68%	
56	9.51%	9.45%	8.89%	8.31%	9.40%	9.34%	11.75%	11.68%	
56 57	9.51%	9.45%	8.95%	8.31%	9.40%	9.34%	11.75%	11.68%	
5 <i>7</i> 58	9.51%	9.45% 9.45%	8.98%	8.60%	9.40% 9.40%	9.34%	11.75%	11.68%	
56 59			8.98%	8.92%					
	9.51%	9.45%			9.40%	9.34%	11.75%	11.68%	
60	9.51%	9.45%	8.98%	8.92%	9.40%	9.34%	11.75%	11.68%	

<sup>\*</sup> For County General members entering after age 55, the rate equals the rate at age 55. Likewise for Safey and Probation members entering after age 50, the rate equals the rate at age 50. Only Probation rates reflect employer pick-up.



Exhibit D-2: Basic Plus Cost-Sharing Member Contribution Rates

	General (County)		General (SMCM&VCD)***		Proba	tion	Safety**		
Entry Age *	Plans 1&2	Plan 4	Plans 1&2	Plan 4	Plans 1&2	Plan 4	Plans 1&2	Plan 4	
16	8.12%	7.90%	4.40%	4.22%	9.05%	8.81%	11.93%	11.64%	
17	8.21%	7.99%	4.49%	4.30%	9.15%	8.91%	12.06%	11.76%	
18	8.31%	8.08%	4.57%	4.38%	9.25%	9.01%	12.19%	11.88%	
19	8.41%	8.18%	4.66%	4.46%	9.36%	9.11%	12.32%	12.01%	
20	8.51%	8.27%	4.74%	4.54%	9.46%	9.21%	12.45%	12.14%	
21	8.61%	8.37%	4.83%	4.63%	9.57%	9.31%	12.59%	12.27%	
22	8.71%	8.47%	4.92%	4.71%	9.68%	9.42%	12.73%	12.40%	
23	8.82%	8.57%	5.01%	4.80%	9.80%	9.53%	12.87%	12.53%	
24	8.92%	8.67%	5.11%	4.89%	9.91%	9.64%	13.01%	12.67%	
25	9.03%	8.78%	5.20%	4.98%	10.03%	9.75%	13.16%	12.81%	
26	9.14%	8.88%	5.30%	5.07%	10.14%	9.86%	13.31%	12.95%	
27	9.25%	8.99%	5.40%	5.17%	10.26%	9.98%	13.46%	13.10%	
28	9.37%	9.10%	5.49%	5.26%	10.39%	10.09%	13.61%	13.24%	
29	9.48%	9.21%	5.59%	5.36%	10.51%	10.21%	13.77%	13.39%	
30	9.60%	9.32%	5.70%	5.45%	10.64%	10.34%	13.93%	13.55%	
31	9.72%	9.43%	5.80%	5.55%	10.77%	10.46%	14.09%	13.70%	
32	9.84%	9.55%	5.91%	5.65%	10.90%	10.59%	14.26%	13.86%	
33	9.97%	9.67%	6.01%	5.76%	11.04%	10.72%	14.43%	14.03%	
34	10.09%	9.79%	6.12%	5.86%	11.18%	10.86%	14.60%	14.19%	
35	10.22%	9.91%	6.23%	5.97%	11.33%	10.99%	14.78%	14.37%	
36	10.35%	10.04%	6.35%	6.08%	11.48%	11.13%	14.97%	14.54%	
37	10.49%	10.17%	6.46%	6.19%	11.63%	11.27%	15.16%	14.71%	
38	10.63%	10.30%	6.58%	6.30%	11.78%	11.40%	15.35%	14.88%	
39	10.77%	10.44%	6.70%	6.41%	11.93%	11.54%	15.53%	15.05%	
40	10.92%	10.58%	6.82%	6.53%	12.07%	11.67%	15.72%	15.21%	
41	11.07%	10.72%	6.95%	6.65%	12.22%	11.79%	15.90%	15.36%	
42	11.22%	10.86%	7.07%	6.77%	12.36%	11.90%	16.07%	15.50%	
43	11.37%	11.00%	7.20%	6.90%	12.49%	12.00%	16.23%	15.63%	
44	11.52%	11.13%	7.34%	7.03%	12.60%	12.09%	16.38%	15.74%	
45	11.67%	11.26%	7.48%	7.16%	12.71%	12.16%	16.52%	15.83%	
46	11.82%	11.38%	7.62%	7.29%	12.80%	12.20%	16.63%	15.88%	
47	11.96%	11.50%	7.77%	7.42%	12.87%	12.20%	16.71%	15.88%	
48	12.09%	11.60%	7.91%	7.55%	12.90%	12.51%	16.75%	16.26%	
49	12.21%	11.69%	8.05%	7.68%	12.90%	12.84%	16.75%	16.68%	
50	12.32%	11.76%	8.19%	7.80%	12.90%	12.84%	16.75%	16.68%	
51	12.41%	11.80%	8.33%	7.92%	12.90%	12.84%	16.75%	16.68%	
52	12.48%	11.80%	8.46%	8.03%	12.90%	12.84%	16.75%	16.68%	
53	12.51%	12.11%	8.58%	8.12%	12.90%	12.84%	16.75%	16.68%	
54	12.51%	12.45%	8.70%	8.21%	12.90%	12.84%	16.75%	16.68%	
55	12.51%	12.45%	8.80%	8.27%	12.90%	12.84%	16.75%	16.68%	
56	12.51%	12.45%	8.89%	8.31%	12.90%	12.84%	16.75%	16.68%	
57	12.51%	12.45%	8.95%	8.31%	12.90%	12.84%	16.75%	16.68%	
58	12.51%	12.45%	8.98%	8.60%	12.90%	12.84%	16.75%	16.68%	
59	12.51%	12.45%	8.98%	8.92%	12.90%	12.84%	16.75%	16.68%	
60	12.51%	12.45%	8.98%	8.92%	12.90%	12.84%	16.75%	16.68%	

<sup>\*</sup> For County General members entering after age 55, the rate equals the rate at age 55. Likewise for Safey and Probation members entering after age 50, the rate equals the rate at age 50. Only Probation rates reflect employer pick-up.



<sup>\*\*</sup> Cost sharing is less for deputy sheriffs

<sup>\*\*\*</sup>Mosquito and Vector Control District does not participate in cost sharing.

#### 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 adjustment 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 twelve-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.





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January 22, 2010

Mr. David Bailey Chief Executive Officer San Mateo County Employees' Retirement Association 100 Marine Parkway, Suite 125 Redwood Shores, CA 94065-5208

Re: Cost Impact of New Benefit Formula - Mosquito & Vector Control District

#### Dear David:

The San Mateo County Mosquito and Vector Control District currently has a lower benefit formula than that available to County General members. The district has inquired about adopting the "enhanced" benefit formulas that apply to the County. Per your request, we have calculated the required contribution rate as a percentage of pay effective July 1, 2010 if the District adopts these formulas.

	General Members				
	Plan 1	Plan 2	Plan 4	Total	
Employer Normal Cost	14.04%	13.94%	12.81%	13.07%	
UAAL Contribution Rate	18.40%	18.40%	18.40%	18.40%	
Total Required Employer Contribution Rate	32.44%	32.34%	31.21%	31.47%	

#### **Analysis**

The required contribution rate shown represents a material increase from the prior formula due to the increased value of benefits. The following chart shows the expected increase in the annual contribution for the fiscal year beginning July 1, 2010.

	Enhanced Formula	Current Formula	Increase Due to New Formula
Estimated Payroll for fiscal year beginning July 1, 2010	\$1,383,000	\$ 1,383,000	\$ -
Total Required Contribution Rate	31.47%	23.34%	8.13%
Estimated Employer Contribution for FYB July 1, 2010	\$ 435,000	\$ 323,000	\$ 112,000



The \$112,000 represents the estimated annual increase in District contributions to *SamCERA* for the fiscal year beginning July 1, 2010. The District should be aware that further increases in contribution rates are expected to occur in the future. This is due to the recognition of asset losses that are currently being deferred for funding purposes and therefore not included in the current calculation of contribution rates. Thus, the annual cost of providing the enhanced benefit will likely increase over the next few years.

Specifically, there is projected to be an additional 25% increase in the contribution rate that will occur over the next few years. In rough numbers, the employer rate with the enhanced benefits is approximately 32% of pay for the upcoming fiscal year. A 25% increase would raise this by 8% (one-fourth of 32%) to a total contribution rate of 40%. This estimate is based on a number of assumptions about the future, in particular that the investment return will be 7.75%. To the extent actual experience differs from these assumptions, the actual required contribution rate will be either higher or lower.

#### **Benefit Provisions Valued**

The current and enhanced benefit formulas are defined in the 1937 Act. The calculations provided in this analysis assume that changes would be made both retroactively and prospectively. That is, the enhanced formula would apply to both prior and future service.

	Enhanced Formula	Current Formula
1937 Act Code Section	31676.14	31676.1
% of Final Average Compensation per year of service at sample ages		
- Age 55	1.948%	1.492%
- Age 60	2.440%	1.971%
- Age 65	2.611%	2.432%

The County General members currently are paying a higher contribution rate than District members. In addition, County General members pay 3% of pay in cost sharing. If the District adopts the enhanced benefit formulas, it is our understanding that District members would pay (prior to any pick-ups) the higher member contribution rate, but not the 3% cost sharing. The member contributions formulas are defined in the 1937 Act.

	Enhanced Formula	Current Formula
1937 Act Code Section	31621.9	31621
Member Contributions as a % of Pay at sample entry ages (Plan 4)		
- Age 25	5.78%	4.98%
- Age 35	6.91%	5.97%
- Age 45	8.26%	7.16%



#### **Actuarial Certification**

All data, methods and assumptions are the same as those used in our June 30, 2009 actuarial valuation for *SamCERA*. Please refer to that report for further details.

In preparing the valuation upon which this letter was based, 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. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. It should be noted that if any data or other information is materially inaccurate or incomplete, our calculations may need to be revised.

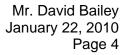
The cost estimates presented in this letter reflect the benefit provisions in effect as of June 30, 2009, except where noted. These cost estimates are subject to the uncertainties of a regular actuarial valuation; the costs are inexact because they are based on assumptions that are themselves necessarily inexact, even though we consider them reasonable. Thus, the emerging costs may vary from those presented in this letter to the extent actual experience differs from that projected by the actuarial assumptions.

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 our best estimate of anticipated experience affecting *SamCERA*. Nevertheless, the emerging costs will vary from those presented in this report to the extent that actual experience differs from that projected by the actuarial assumptions. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix B of the valuation report.

Actuarial computations presented in this report are for purposes of determining the estimated cost of potential changes to District's benefits. The calculations in this letter 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 letter report. Accordingly, additional determinations may be needed for other purposes.

Milliman's work product was prepared exclusively for the use or benefit of SamCERA for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning SamCERA's operations, and uses SamCERA's data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its 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.





On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this cost study report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions, and supporting Recommendations of the American Academy of Actuaries. We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

We respectfully submit this letter and look forward to discussing it with you.

Sincerely,

Nick J. Collier, ASA, EA, MAAA Principal and Consulting Actuary

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