### ACTUARIAL VALUATION June 30, 2006



Ву

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September 8, 2006

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, 2007.

#### 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 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 8, 2006 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, 2006. 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. 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.

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 which are consistent with the principles prescribed by the Actuarial Standards Board (ASB) and the Code of Professional Conduct and Qualification Standards for Public Statements of Actuarial Opinion of the American Academy of Actuaries.

We further certify that 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 of Retirement has the final decision regarding the appropriateness of the assumptions. These assumptions are based on our investigation of experience included in our June 30, 2005 valuation report. They were adopted by the Board in April of 2006 and are shown in detail in Appendix D of this report.

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 the enclosed report have been made on a basis consistent with our understanding of SamCERA's current funding requirements and of GASB Statement 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.



Board of Retirement San Mateo County Employees' Retirement Association September 8, 2006 Page 3

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

Sincerely,

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

Kan J. J

Joint Board Enrollment # 06-00581

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Joint Board Enrollment # 06-06471

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



#### 2006 Valuation Results

	June 30, 2006	June 30, 2005
County Contribution Rate	24.71%	25.16%
Funded Ratio	75.4%	74.2%

We are pleased to present the results of the June 30, 2006 actuarial valuation. Several key points are summarized as follows:

#### Overview

• Investment Returns: SamCERA's investment returns have exceeded the actuarial assumed rate over the past three years. However, these gains are offset by deferred losses recognized from prior years. These offsetting gains and losses mean that investment returns, usually the most significant factor in a retirement system's funding, had only a small impact on the change in the system's funding status and the required County contribution rate.

Note that currently a \$20 million net asset gain is being deferred. This is because the asset-smoothing method has recognized most of the losses from earlier in this decade, but only a portion of the gains from the prior three years. These deferred gains will be reflected in future valuations.

- Funding: The Funded Ratio increased from 74.2% to 75.4%. This was primarily due to employer contributions made to pay off the Unfunded Actuarial Accrued Liability (UAAL).
- Contribution Rates: The County Normal Cost rate (12.15%) increased slightly due to the changes in the membership being valued. These changes were well within an expected range for year-to-year changes. The rates will vary as the average entry age of the membership changes.

The County's required contribution rate to finance the Unfunded Actuarial Accrued Liability (UAAL) over 16 years decreased to 12.56%. The overall result is a small decrease in the required total contribution rate from the prior valuation of 0.45% (from 25.16% to 24.71% of payroll). The most important factor causing this decrease was the increase in the County's payroll. Since the payroll increased, a lesser percent is required to pay off the UAAL.

Summary of Recommendations

The following exhibit summarizes our recommendations to the Board.

# San Mateo County Employees' Retirement Association

Exhibit 1 Summary of Recommendations

Recommendation #1: Adopt new employer contribution rates for fiscal year beginning July 1, 2007

	June 30, 2006	June 30, 2005	Increase / (Decrease)
Gross Normal Cost	21.85%	21.74%	0.11%
Member Contributions	(9.70)%	(9.71)%	0.01%
County Normal Cost	12.15%	12.03%	0.12%
UAAL Amortization	12.56%	13.13%	(0.57)%
Total County Rate	24.71%	25.16%	(0.45)%

Note: Detail contribution rates by tier are shown in Section 6, Exhibits 12a & 12b.

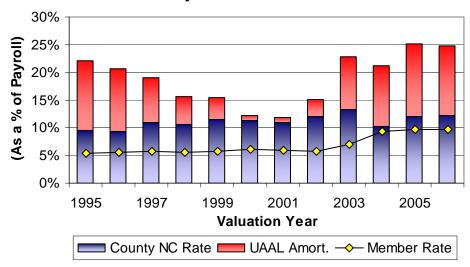
## County Contribution Rate

Under the Board's current funding objectives, the calculated County contribution rate for the fiscal year beginning July 1, 2007 is 24.71% of payroll. This is equal to the payment of the County Normal Cost rate plus a 16-year amortization of the Unfunded Actuarial Accrued Liability (UAAL). It should be noted that the 24.71% is a weighted average for all SamCERA tiers. The actual percent of payroll to be contributed by the County varies by tier. See Exhibits 11a and 11b for Normal Cost rates by tier.

The new rate is effective for the fiscal year beginning July 1, 2007. The 24.71% contribution rate is currently adequate to maintain the funding of the retirement system benefits based on the actuarial methods and assumptions shown in this report, and satisfies the current funding objective that calls for the UAAL to be paid off by June 30, 2022. See Exhibits 12a and 12b for the employer contribution rates by tier.

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





## 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 primary cause for the decrease in the contribution rate was an increase in the payroll that was greater than projected by the actuarial assumptions. The most significant reason for the increase in the funded ratio was employer contributions made to pay off the Unfunded Actuarial Accrued Liability (UAAL).

## Comparison with Last Year (continued)

The following chart shows how these 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, 2005 Actuarial Valuation	25.16%	74.2%
Expected Year-to-Year Change Recognized Asset Gain/Loss	0.00%	1.6%
From Current Year	-0.22%	0.4%
From Prior Years	0.43%	-0.8%
Retiree COLAs Less than Expected	-0.30%	0.4%
Change in Probation Pick-Up Rate	0.03%	0.0%
Salary / Payroll Variation	-0.46%	-0.3%
Assumption Changes	0.00%	0.0%
Other	0.07%	-0.1%
Total Change	-0.45%	1.2%
June 30, 2006 Actuarial Valuation	24.71%	75.4%

## Member Contribution Rates

There have been no changes in either the actuarial assumptions or the benefits provided to members since the 2005 valuation. Therefore, there are no changes to be recommended in the member contribution rates. The rates are the same as those shown in the 2005 report, except for the Probation group as the County increased their non-refundable pick up from 15% to 20% in April of 2006. Member rates for all tiers are discussed in Section 5 and are shown in detail in Appendix D.

#### **Funding Progress**

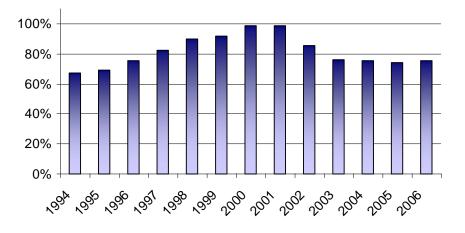
Based on the 2005 valuation, the expected UAAL as of June 30, 2006 was \$565 million. The actual UAAL for the fiscal year ending June 30, 2006 is \$576 million. There were several factors that had a relatively minor impact on the UAAL, both individually and in total. These factors are shown in detail 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 tiers 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 early in this decade that are still being recognized, the Funded Ratio has decreased significantly since then. Currently, the Funded Ratio is 75.4%; that is, the actuarial value of assets of \$1,769 million is about 25% less than the actuarial accrued liabilities of \$2,345 million.

#### All dollar amounts in millions

-	Market	Actuaria	ıl Value		
	Value of Total Assets	Valuation	Non- Valuation	Actuarial Accrued Liability	Funded Ratio
1999 2000	\$ 1,261 1,381	\$ 1,109 1,271	\$ 45 49	\$ 1,206 1,292	92.0% 98.4
2001 2002	1,308	1,385	51 32	1,404	98.6 85.3
2002	1,207 1,233	1,417 1,354	34	1,661 1,782	76.0
2004 2005	1,435 1,599	1,453 1,616	31 0	1,921 2,178	75.6 74.2
2006	1,790	1,769	Ö	2,345	75.4

#### **Historical Funded Ratios**



#### **Assets**

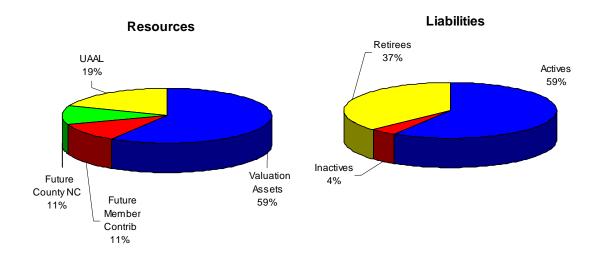
For the fiscal year ending June 30, 2006, we estimate that SamCERA earned 10.4%, net of investment expenses, on its market assets. Note that our return figure may be slightly different than that shown in the 2006 CAFR due to timing of contributions and benefit payments, as well as the treatment of expenses.

SamCERA uses an asset-smoothing method in the determination of valuation used in the calculation of UAAL contribution. Under this method, the market value returns are smoothed over a five-year period. Due to the recognition of prior losses, the return on valuation assets was somewhat lower than the market return, at 7.9%.

## Actuarial Balance Sheet

The first step in the valuation process is to compare the total actuarial assets of SamCERA with its total liabilities for all tiers. 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.



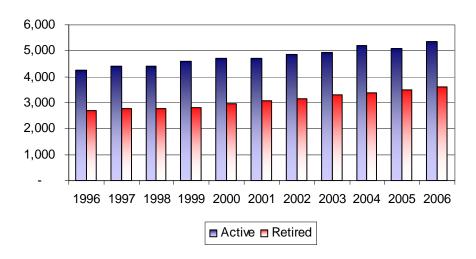
#### **Member Information**

The number of active members included in the valuation increased by 5.4% from 2005 to 2006.

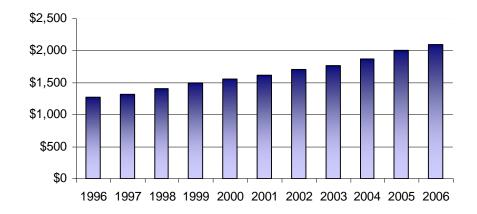
Retired member counts and average retirement benefit amounts continue to increase steadily. For 2006, there were 3,613 retired members and beneficiaries with an average benefit of \$2,099 per month. This represents a 3.2% increase in count and a 4.7% increase in the average monthly benefit.

Note that in prior valuations, a retiree with benefits from two different tiers was counted as two separate individuals. This overstated the count and understated the true average benefit, but did not affect the liabilities. We have changed the method this year (and made approximate adjustments for prior years), so that retirees are not double-counted.

### **Membership Count**



#### **Average Monthly Retirement Benefit**





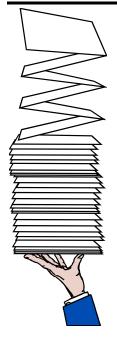
## Summary Valuation Results

The following Exhibit 2 presents a summary of key data elements on June 30, 2006 and June 30, 2005, 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** 

		J	lune 30, 2006	,	June 30, 2005	Relative Change
I.	Total Membership					
	A. Active Members		5,355		5,082	5.4 %
	B. Retired Members & Beneficiaries*		3,613		3,684	(1.9)%
	C. Vested Terminated Members		1,089		1,035	5.2%
	D. Total		10,057		9,801	2.6 %
	* Prior valuation reported retiree counts on a differ	ent ba		for fu		
II.	Pay Rate as of June 30, 2006					
	A. Annual Total (\$thousands)	\$	376,351	\$	341,001	10.4%
	B. Monthly Average	\$	5,857	\$	5,592	4.7%
III.	Average Monthly Benefit to Current Retirees and Beneficiaries*					
	A. Service Retirement	\$	2,190	\$	1,968	11.3%
	B. Disability Retirement	\$	2,259	\$	2,153	4.9%
	C. Surviving Spouse and Dependents	\$	1,469	\$	1,344	9.3%
	D. Total	\$	2,099	\$	1,903	10.3%
	* Prior valuation reported retiree benefits on a diffe	erent b	asis. See page	7 for f	urther comments.	
IV.	Actuarial Accrued Liability (\$thousands)					
	A. Active Members	\$	1,111,145	\$	1,044,408	6.4%
	B. Retired Members	\$	1,116,884	\$	1,022,039	9.3%
	C. Vested Terminated Members	\$	117,120	\$	111,312	5.2%
	D. Total	\$	2,345,149	\$	2,177,759	7.7%
V.	Assets					
	A. Market Value of Fund (\$thousands)	\$	1,789,898	\$	1,599,270	11.9%
	B. Actuarial Value (\$thousands)	\$	1,769,021	\$	1,615,585	9.5%
	·					
VI.	Unfunded Actuarial Accrued Liability					
	or Surplus Funding (\$thousands)	\$	576,128	\$	562,174	2.5%
VII.	Required County contribution rate for all plans combined as a percent of total payroll					
	A. Gross Normal Cost		21.85%		21.74%	0.5%
	B. Member Contributions		(9.70)%		(9.71)%	(0.1)%
	C. County Normal Cost		12.15%		12.03%	1.0%
	D. UAAL Amortization		12.56%		13.13%	(4.3)%
	E. Total County Rate		24.71%		25.16%	(1.8)%
VIII.	Funded Ratio		75.4%		74.2%	1.7%

#### Section 2: Scope of the Report



This report presents the actuarial valuation of the San Mateo County Employees' Retirement Association as of June 30, 2006. 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, 2006.

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:

<ul> <li>Appendix A</li> </ul>	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, 2006.

- Appendix C Schedules of valuation data classified by various categories of members by tier.
- Appendix D Member contribution rates by tier.
- Appendix E A glossary of actuarial terms used in this report.

#### 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, 2006. On that date, the assets available for the payment of retirement benefits are appraised. These assets are compared with the 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:

All dollar	amounts	ın	millions	

		Actuari	al Value
	Market Value of	Non- Valuation	Valuation
	Total Assets	Reserves	<u>Assets</u>
1999	\$ 1,261	\$ 45	\$ 1,109
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

On June 30, 2006, the total market value of the fund was about \$1.79 billion. The actuarial value of the fund was determined to be \$1.77 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.

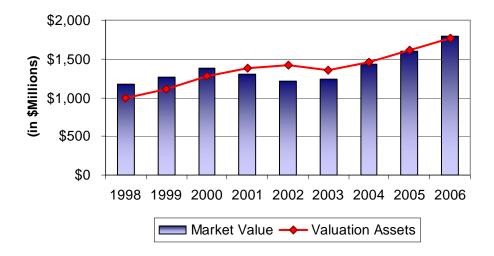
#### **Actuarial Asset Method**

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, 2006 actuarial value of assets is shown in Exhibits 6 and 7. Note the smoothing process has recognized much of the investment losses from 2002 and earlier over the last few years. The result is an actuarial value of assets that is approximately equal to the market 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 tier. 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, 2005 and 2006

		2006	2005	
Assets				
Cash and Deposits	\$	55,438,617	\$ 42,816,	781
Receivables				
Contributions		4,474,291	3,869,0	081
Due from broker for investments sold		30,117,467	68,043,	706
Investment Income		3,334,420	3,094,2	226
Other receivables		105,780	98,	581
Total Receivables		38,031,958	75,105,	594
Prepaid Expense		7,669	7,0	669
Investments at Fair Value				
Domestic fixed income securities		528,656,466	468,021,6	886
Domestic equities		879,251,914	803,519,	587
International equities		273,589,355	248,764,4	405
Real estate		117,547,767	59,219,	510
Total Investments	•	1,799,045,502	1,579,525,	190
Capital Assets Net of Depreciation		9,338	18,0	675
Total Assets	•	,892,533,084	1,697,473,	909
Liabilities				
Payables				
Investment management fees		1,378,369	1,054,	124
Due to broker for investments purchased		98,561,942	96,713,0	021
Mortgage Note Payable				
Due within one year		-		-
Due in more than one year		-		-
Other		2,694,956	437,0	063
Total Liabilities		102,635,267	98,204,2	208
Net Assets Held in Trust for Pension Benefits	\$ '	1,789,897,817	\$ 1,599,269,	701

**Statement of Changes in Plan Net Assets** Exhibit 4: For the Years Ended June 30, 2005 and 2006

	2006	2005
Additions		
Contributions		
Employer	\$ 76,089,599	\$ 76,930,928
Employee	39,962,616	33,647,561
Total Contributions	116,052,215	110,578,489
Investment Income/(Loss)		
Interest and dividends	32,160,351	23,503,153
Net appreciation/(depreciation) in Fair Value	143,184,761	123,910,381
, , , , , , , , , , , , , , , , , , , ,	175,345,112	147,413,534
Less investment expense	8,519,247	7,282,330
Net Investment Income/(Loss)	166,825,865	140,131,204
Other Additions	49,039	79,472
Total Additions/(Declines)	282,927,119	250,789,165
Deductions		
Association Benefits		
Service retirement allowances	76,380,171	71,217,876
Disability retirement allowances	10,629,865	10,933,461
Medical Benefits	-	(345)
Death and other death benefits	904,528	1,031,495
Total Association Benefits	87,914,564	83,182,487
Refunds of members' contributions	2,257,849	1,458,257
Administrative Expense	2,085,970	2,234,610
Other Expense	40,620	3,533
Total Deductions	92,299,003	86,878,887
Net Increase/(Decrease)	190,628,116	163,910,278
Net Assets Held in Trust for Pension Benefits:		
Beginning of Year	1,599,269,701	1,435,359,423
End of Year	1,789,897,817	1,599,269,701
Estimated Return, Net of Investment Expenses *	10.4%	9.7%

<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, 2005 and 2006

Valuation Reserves	2006	2005
1. Members Reserve	\$ 317,520,788	\$ 281,230,984
2. County Advance Reserve	237,937,565	219,867,963
3. Retiree Reserves	608,740,188	554,684,637
Cost of Living Reserve	 630,374,435	 581,174,967
5. Total Valuation Reserves	\$ 1,794,572,976	\$ 1,636,958,551
Non-Valuation Reserves	2006	2005
1 Contingency Reserve	-	-
a. Reserves for Deficiencies in Interest Earnings	\$ -	\$ -
b. Unallocated Earnings / Loss Account	 (25,551,978)	 (21,373,381)
c. Total	\$ (25,551,978)	\$ (21,373,381)
2 Supplemental Benefit Reserves	\$ -	\$ -
3 Undistributed Earning Reserve	\$ -	\$ -
4 Market Stabilization Account	20,876,819	(16,315,469)
5. Total Non-Valuation Reserves	\$ (4,675,159)	\$ (37,688,850)
6 Total Reserves	\$ 1,789,897,817	\$ 1,599,269,701

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

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

	History of Unexpected Asset Gains and 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)
6/30/2006	\$ 1,787,576,077	\$ 23,551,946	\$ 45,624,067	1,789,897,817	4.000%	\$ 71,011,7	38	\$ 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%	66,058,2	58	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%	62,398,4	48	17,753,015		(44,645,433)
12/31/2004	1,435,359,423	87,743,624	42,769,133	1,600,553,433	3.920%	58,350,7	52	120,219,519		61,868,767
6/30/2004	1,411,797,335	23,132,825	38,581,851	1,435,359,423	4.000%	56,040,5	80	39,011,114		(17,029,466)
12/31/2003	1,233,271,537	64,003,192	37,168,920	1,411,797,335	4.000%	50,651,7	80	151,691,526		101,039,818
6/30/2003	1,150,314,103	15,456,378	35,285,915	1,233,271,537	4.125%	46,952,4	00	102,786,971		55,834,571

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

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

	Phase-Out of Gain / (Loss)						
Six-Month	Percent			Unexpected			Gain / (Loss)
Period Ended	Excluded			Gain / (Loss)			Excluded
6/30/2006	90%	Χ	\$	(46,617,877)	=	\$	(41,956,089)
40/04/0005	000/			74 000 407			50 400 057
12/31/2005	80%	Х		74,296,197	=		59,436,957
6/30/2005	70%	х		(44,645,433)	=		(31,251,803)
0/00/2000	. 0 / 0	^		(11,010,100)			(01,201,000)
12/31/2004	60%	Х		61,868,767	=		37,121,260
6/30/2004	50%	Χ		(17,029,466)	=		(8,514,733)
40/04/0000	400/			404 000 040			10 115 007
12/31/2003	40%	Х		101,039,818	=		40,415,927
6/30/2003	30%	х		55,834,571	=		16,750,371
0/00/2000	0070	^		00,001,071			10,700,071
Pre-2003	22.22%	Х		(230,062,821)	=		(51,125,071)
Total Gain / (Loss	s) Excluded = Marl	ket S	Stab	ilization Reserve	=	\$	20,876,819

Deve	lopment of	Valuation I	Assets

1.	Market Value of Assets as of June 30, 2006	\$	1,789,897,817
2.	Market Stabilization Reserve		20,876,819
3.	Preliminary Actuarial Value of Assets (1) - (2)		1,769,020,998
4.	Corridor Around Market Value a) Minimum = 80% of Market b) Maximum = 120% of Market		1,431,918,254 2,147,877,380
5.	Gross Actuarial Value of Assets		1,769,020,998
6.	b) Medicare Part B Reserve	\$0 \$0 \$0	0

7. Valuation Assets (5) - (6)

\$ 1,769,020,998



#### Exhibit 8: Allocation of Valuation Assets (in \$1,000's)

	(	General	Safety	Р	robation	Total
1. Prior Year UAAL	\$	372,194	\$ 150,447	\$	39,533	\$ 562,174
2. Expected UAAL Contribution for Preceding Year		(24,039)	(9,353)		(2,856)	\$ (36,248)
3. Expected Interest at 7.75%		27,931	11,304		2,955	42,190
4 Expected UAAL Based on Prior Year Assumptions		376,086	152,398		39,633	568,116
5. Percentage of Total Expected UAAL		66.20%	26.83%		6.98%	100.00%
6. Actual UAAL Based on Prior Year Assumptions						\$ 576,128
7. Actual AAL Based on Prior Year Assumptions	\$	1,724,175	\$ 493,366	\$	127,608	\$ 2,345,149
8. Allocated UAAL		381,389	154,547		40,192	576,128
9. Actuarial Value of Assets	\$	1,342,785	\$ 338,819	\$	87,416	\$ 1,769,021

#### 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, 2006. 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, 2006.

The actuarial assumptions used to determine the liabilities are based on the results of our analysis of experience of June 30, 2005. These assumptions were adopted by the Board at their April 2006 meeting and are shown in Appendix A.

Exhibit 9: Actuarial Balance Sheet – June 30, 2006 (Dollars in Thousands)

Resources								
Valuation Assets (Actuarial)	\$	<b>General</b> 1,342,786	\$	<b>Safety</b> 338,819	<b>P</b> \$	robation 87,416	\$	<b>Total</b> 1,769,021
Present Value of Future Member Contributions		249,935		41,854		20,760		312,549
Present Value of Future Employer Contributions to Fund:								
a) Normal Cost		239,232		59,383		40,509		339,124
b) Unfunded Actuarial Accrued Liability		381,389		154,547		40,192		576,128
Total Resources	\$	2,213,341	\$	594,604	\$	188,878	\$	2,996,823

Liabilities								
	General		Safety		Probation			Total
Present Value of Future Benefits								
1. Present Retired Members	\$	788,961	\$	276,424	\$	51,499	\$	1,116,884
2. Current Inactive Members		97,149		13,902		6,069		117,120
3. Current Active Members								
- Service Retirement		1,170,483		275,995		115,013		1,561,491
- Disability Retirement		57,387		16,248		8,773		82,408
- Death Benefits		21,673		3,975		2,114		27,762
- Deferred Vested Benefit		51,154		6,761		4,637		62,551
- Refund of Member Contributions		26,533		1,298		774		28,605
- Total Active		1,327,231		304,277		131,311		1,762,818
Total Actuarial Liabilities	\$	2,213,341	\$	594,604	\$	188,878	\$	2,996,823

#### 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 tiers are summarized below:

(Dollars in millions)	2006	2005	Percent Change
A. Actuarial present value of all future benefits for contributing members, former contributing members, and their survivors	\$ 2,997	\$ 2,770	8.2%
B. Actuarial present value of total future Normal Costs for current members	<u>652</u>	<u>592</u>	10.1%
C. Actuarial accrued liability [A-B]	\$ 2,345	\$ 2,178	7.7%
D. Valuation Assets	<u>1,769</u>	<u>1,616</u>	9.5%
E. UAAL or Surplus Funding [C-D]	\$ 576	\$ 556	3.6%
F. Funded Ratio [D/C]	75.4%	74.2%	1.7%

# 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 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, or Surplus Funding, 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 UAAL is amortized over a fixed period ending June 30, 2022.

# 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 2006 actuarial valuation reflects an increase in the UAAL of \$14.0 million for the fiscal year just ended.

# Analysis of UAAL Change (All Dollar Values in \$Millions)

Unfunded Actuarial Accrued Liability - June 30, 2005	\$ 562.2
Expected Increase / (Decrease)	3.0
Expected UAAL - June 30, 2006	\$ 565.2
Asset (Gains) and Losses	(1.4)
Retiree COLA Less than Expected	(13.9)
Salary Increases Greater than Expected	19.7
Assumption Changes	-
Other Liability (Gain)/Loss	 6.5
Total Changes	 10.9
Actual UAAL - June 30, 2006	\$ 576.1

### Section 5: Member Contributions

### Basic Contributions

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

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

Tier	Code Section	Contribution Provides Average Annuity of				
General – County General – Mosquito AD	31621.9 31621	1/120th of FAC at age 55 1/120th of FAC at age 60				
Probation & Safety	31639.25	1/100th of FAC at age 50				

FAC = Final Average Compensation

There are no member contributions under General Tier 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

Since no changes in these assumptions or in benefits occurred since the 2005 valuation, no changes in member contributions were made, except for the Probation members. In April 2006, the County increased their non-refundable pick up for Probation members from 15% to 20%. The rates shown in Appendix D reflect this change in the Probation member contribution rates.

# 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.

# Cost-of-Living Contributions

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

# Member Contribution Rates

A sample of the current and recommended 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, 2007

	Entry Age	Basic	Cost Sharing	Total as a % of Pay
General Members	s - County			
Plans 1 & 2	25	5.97%	3.00%	8.97%
	35	7.15%	3.00%	10.15%
	45	8.59%	3.00%	11.59%
Plan 4	25	5.72%	3.00%	8.72%
	35	6.85%	3.00%	9.85%
	45	8.18%	3.00%	11.18%
General Members	s - Mosquito	Abatement Distri	ct	
Plans 1 & 2	25	5.13%	0.00%	5.13%
	35	6.15%	0.00%	6.15%
	45	7.37%	0.00%	7.37%
Plan 4	25	4.91%	0.00%	4.91%
	35	5.89%	0.00%	5.89%
	45	7.06%	0.00%	7.06%
Probation Member	ers (Reflects	Employer Pick-u	p)	
Plans 1 & 2	25	6.47%	3.50%	9.97%
	35	7.77%	3.50%	11.27%
	45	9.14%	3.50%	12.64%
Plan 4	25	6.20%	3.50%	9.70%
	35	7.43%	3.50%	10.93%
	45	8.59%	3.50%	12.09%
Safety Members -	Other than	Deputy Sheriff*		
Plans 1 & 2	25	8.09%	5.00%	13.09%
	35	9.71%	5.00%	14.71%
	45	11.42%	5.00%	16.42%
Plan 4	25	7.75%	5.00%	12.75%
	35	9.29%	5.00%	14.29%
	45	10.74%	5.00%	15.74%

<sup>\*</sup>Cost sharing varies for Deputy Sheriffs as follows:

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



<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.

## **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 tier 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 contribution made by the members.

The total calculated employer contribution rates for each tier, 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.

The total County contribution rate was 25.16% for the fiscal year beginning July 1, 2006. For the fiscal year beginning in 2007, the calculated rate based on this report decreased to 24.71%. This is equal to the aggregate County Normal Cost contribution rate, of 12.15% based on Milliman's 2006 valuation, plus a 16-year amortization payment of the UAAL as measured from the valuation date.

# County Contribution Rate

(all values as a % of Payroll)

County Normal Cost 12.15% 16-year Amortization of UAAL 12.56 Total County Contribution 24.71%

The most important factor causing the decrease in the total County contribution rate was the increase in the County's payroll. Since the payroll increased, a lesser percent of payroll is required to pay off the UAAL. The UAAL rate reflects a 16-year amortization from the valuation date and the one-year deferral in the implementation of the new County contribution rate effective July 1, 2007.

### 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 other 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 Tier 4, instead of the slightly more expensive Tiers 1 and 2. However, the change will be fairly gradual.
- (2) Contribution Shut-Off: For general members hired prior to April 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 April 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, 2006

	General - County					General - Mosquito Abatement District				
A. Normal Cost Contribution Rate	Tier 1	Tier 2	Tier 3	Tier 4	Total	Tier 1	Tier 2	Tier 4	<u>Total</u>	
Service Retirement	15.32%	16.54%	7.05%	15.14%	15.45%	12.56%	13.56%	12.41%	12.87%	
Disability Retirement	1.00%	1.21%	0.00%	1.25%	1.19%	0.82%	0.99%	1.03%	0.98%	
Death while Active	0.31%	0.35%	0.00%	0.35%	0.34%	0.25%	0.29%	0.29%	0.28%	
Termination (No Refund)	1.35%	1.26%	0.61%	1.21%	1.22%	1.11%	1.03%	0.99%	1.02%	
Refund of Member Contributions	1.63%	1.66%	0.00%	1.70%	1.64%	1.34%	1.36%	1.39%	1.37%	
Total	19.61%	21.02%	7.66%	19.65%	19.84%	16.08%	17.23%	16.11%	16.53%	
B. Member Contributions	(8.52)%	(9.53)%	0.00%	(9.74)%	(9.35)%	(6.99)%	(7.81)%	(7.99)%	(7.77)%	
C. Net Employer Normal Cost as of June 30, 2006 (A) - (B)	11.09%	11.49%	7.66%	9.91%	10.49%	9.09%	9.42%	8.12%	8.76%	
D. Net Employer Normal Cost as of June 30, 2005	10.92%	11.18%	7.59%	9.78%	10.36%	8.94%	9.17%	8.02%	8.69%	
E. Increase (Decrease) as a Percentage of Payroll (C) - (D)	0.17%	0.31%	0.07%	0.13%	0.13%	0.15%	0.25%	0.10%	0.07%	

Exhibit 11b: Calculated Employer Normal Cost Contribution Rates – June 30, 2006 (continued)

	Safety			Probation				All	
A. Normal Cost Contribution Rate	Tier 1	Tier 2	Tier 4	Total	Tier 1	Tier 2	Tier 4	Total	Tiers
Service Retirement	29.17%	28.07%	25.82%	27.05%	35.79%	28.33%	24.85%	26.38%	17.31%
Disability Retirement	2.23%	2.45%	2.62%	2.52%	3.00%	2.49%	2.45%	2.48%	1.40%
Death while Active	0.84%	0.80%	0.75%	0.78%	0.85%	0.76%	0.70%	0.73%	0.41%
Termination (No Refund)	1.12%	1.34%	1.25%	1.28%	1.85%	1.40%	1.30%	1.35%	1.23%
Refund of Member Contributions	0.68%	0.75%	0.85%	0.79%	0.71%	0.65%	0.67%	0.66%	1.49%
Total	34.04%	33.41%	31.29%	32.42%	42.20%	33.63%	29.97%	31.60%	21.85%
B. Member Contributions	(11.03)%	(12.25)%	(12.39)%	(12.24)%	(8.69)%	(9.89)%	(10.13)%	(10.01)%	(9.70)%
C. Net Employer Normal Cost as of June 30, 2006 (A) - (B)	23.01%	21.16%	18.90%	20.18%	33.51%	23.74%	19.84%	21.59%	12.15%
D. Net Employer Normal Cost as of June 30, 2005*	23.32%	21.36%	18.86%	20.43%	25.57%	22.92%	19.45%	21.10%	12.03%
E. Increase (Decrease) as a Percentage of Payroll (C) - (D)	(0.31)%	(0.20)%	0.04%	(0.25)%	7.94%	0.82%	0.39%	0.49%	0.12%

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

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

		General - County					General - Mosquito Abatement District			
	Tier 1	Tier 2	Tier 3	Tier 4	<u>Total</u>	Tier 1	Tier 2	Tier 4	<u>Total</u>	
A. Basic Employer Normal Cost Rate	5.40%	6.66%	7.66%	6.68%	6.63%	4.43%	6 5.46%	5.48%	5.44%	
B. COLA Normal Cost Rate	5.69%	4.83%	0.00%	3.23%	3.86%	4.66%	6 3.96%	2.64%	3.32%	
C. Employer Normal Cost Rate	11.09%	11.49%	7.66%	9.91%	10.49%	9.09%	6 9.42%	8.12%	8.76%	
D. UAAL Contribution Rate	9.97%	9.97%	9.97%	9.97%	9.97%	8.189	6 8.18%	8.18%	8.18%	
E. Total June 30, 2006 Contribution Rate (C) + (D)	21.06%	21.46%	17.63%	19.88%	20.46%	17.27%	6 17.60%	16.30%	16.94%	
F. Total June 30, 2005 Contribution Rate	21.30%	21.56%	17.97%	20.16%	20.74%	17.45%	6 17.68%	16.53%	17.20%	
G. Estimated Payroll for fiscal year beginning July 1, 2007	\$ 18,119 \$	121,282	\$ 8,443 \$	182,834	\$ 330,678	\$ 90	\$ 233	\$ 887	\$ 1,210	
H. Estimated Annual Contribution (E x G)*	\$ 3,816 \$	26,027	\$ 1,489 \$	36,347	\$ 67,657	\$ 16	\$ 41	\$ 145	\$ 205	
I. Last Year's Estimated Annual Contribution	\$ 4,544 \$	26,310	\$ 1,413 \$	30,750	\$ 62,999	\$ 15	\$ 44	\$ 141	\$ 205	
J. Increase / (Decrease) in Annual Contribution	\$ (728) \$	(283)	\$ 76 \$	5,597	\$ 4,658	\$ 1	\$ (3)	\$ 4	\$ -	

<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)

	Safety				Probation			AII	
	Tier 1	Tier 2	Tier 4	<u>Total</u>	Tier 1	Tier 2	Tier 4	Total	Tiers
A. Basic Employer Normal Cost Rate	11.46%	12.15%	12.77%	12.41%	21.12%	14.68%	13.91%	14.37%	7.68%
B. COLA Normal Cost Rate	11.55%	9.01%	6.13%	7.77%	12.39%	9.06%	5.93%	7.22%	4.47%
C. Employer Normal Cost Rate	23.01%	21.16%	18.90%	20.18%	33.51%	23.74%	19.84%	21.59%	12.15%
D. UAAL Contribution Rate	30.52%	30.52%	30.52%	30.52%	14.85%	14.85%	14.85%	14.85%	12.56%
E. Total June 30, 2006 Contribution Rate (C) + (D)	53.53%	51.68%	49.42%	50.70%	48.36%	38.59%	34.69%	36.44%	24.71%
F. Total June 30, 2005 Contribution Rate	55.34%	53.38%	50.88%	52.45%	42.00%	39.35%	35.88%	37.53%	25.16%
G. Estimated Payroll for fiscal year beginning July 1, 2007	\$ 3,443 \$	19,557	\$ 20,827	43,827	\$ 1,280	\$ 7,999	\$ 14,064	\$ 23,343	\$399,058
H. Estimated Annual Contribution (E x G)*	\$ 1,843 \$	10,107	\$ 10,293	22,220	\$ 619	\$ 3,087	\$ 4,879	\$ 8,506	\$ 98,607
I. Last Year's Estimated Annual Contribution **	\$ 2,348 \$	10,092	\$ 8,755	21,166	\$ 536	\$ 2,921	\$ 4,207	\$ 7,664	\$ 92,016
J. Increase / (Decrease) in Annual Contribution	\$ (505) \$	15	\$ 1,538 \$	1,054	\$ 83	\$ 166	\$ 672	\$ 842	\$ 6,591

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

<sup>\*\*</sup> Reflects change in probation pick-up adopted after last year's valuation was completed.

## **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.
- 9. 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 of Valuation Assets	(b) Actuarial Accrued Liabilities	(b-a) Unfunded Actuarial Accrued Liabilities (UAAL)	(a/b) Funded Ratio	(c) Covered Payroll	[(b-a)/c] UAAL as a Percentage of Covered Payroll
June 30, 1997	856,679	1,037,431	180,752	82.6%	196,391	92.04%
June 30, 1998	992,314	1,104,070	111,756	89.9%	211,259	52.90%
June 30, 1999	1,109,417	1,205,554	96,137	92.0%	238,864	40.25%
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%

<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			
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%		

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

Exhibit 15: Solvency Test (Dollars In Thousands)

		Act	uarial Accrued Lia	bilities for			
		Active Member	Retirees and	Active Members (Employer Financed		on of Actuarial A abilities Covered Assets	
Actuarial Valuation Date	ValuationAssets	Contributions (A)	Beneficiaries <sup>(1)</sup> (B)	Portion) (C)	(A)	(B)	(C)
June 30, 1997	\$ 1,047,575	\$ 130,736	\$ 565,593	\$ 351,246	100%	100%	100%
June 30, 1998	992,314	148,753	601,473	353,844	100%	100%	68%
June 30, 1999	1,104,833	157,826	629,653	416,489	100%	100%	76%
June 30, 2000	1,271,565	158,314	689,356	444,024	100%	100%	95%
June 30, 2001	1,384,586	174,066	789,104	440,890	100%	100%	96%
June 30, 2002	1,416,821	190,450	866,985	785,082	100%	100%	46%
June 30, 2003	1,353,941	202,551	858,273	915,108	100%	100%	32%
June 30, 2004	1,452,621	259,731	942,765	718,832	100%	100%	35%
June 30, 2005	1,615,585	281,231	1,133,351	763,177	100%	100%	26%
June 30, 2006	1,769,021	317,521	1,234,005	793,623	100%	100%	27%

<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>											
	General Member			Sa	fety Memb	oer	Probation Member					
Year	Normal	UAAL	Total	Normal	UAAL	Total	Normal	UAAL	Total			
1999	9.28%	4.36%	13.64%	17.51%	7.85%	25.36%	19.48%	6.06%	25.54%			
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%			

Rates for Mosquito Abatement District							
	General Member						
Year	Normal	UAAL	Total				
2005	8.69%	8.51%	17.20%				
2006	8.76% 8.18% 16.94%						

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



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

## Actuarial Analysis of Financial Experience (1)

Summary of (Gains) / Losses			Change In Liability		
	2006	2005	2004	2003	2002
Unfunded Liability as of July 1	562,174,000	468,707,000	427,603,000	243,745,000	19,474,000
Expected Change in UAAL	2,980,000	(1,700,000)	(419,000)	20.884,000	(2,125,000)
Salary (Gain) / Loss	19,671,000	(34,300,000)		(4,907,000)	(3,400,000)
Fewer Withdrawals than expected				1,268,000	425,000
Retiree COLA more / (less) than	(13,862,000)	(26,197,000)		(13,863,000)	8,499,000
expected					
Asset (Gain) / Loss	(1,363,000)	8,934,000	25,062,000	169,944,000	34,881,000
Change due to Assumption Changes		152,500,000	(13,989,000)	(7,797,000)	32,979,000
Change due to Actuarial Asset Corridor					31,919,000
Ventura Benefits & Asset transfers		(21,801,000)			
Miscellaneous Experience	6,528,000	16,031,000	30,450,000	(5,138,000)	1,580,000
Change Due to New Formula				23,467,000	119,513,000
Unfunded Liability as of June 30	576,128,000	562,174,000	468,707,000	427,603,000	243,745,000

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



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

		J	une 30, 2006		June 30, 2005	Relative Change
I.	Active Members					
	Number of Members		5,355		5,098	5.0 %
	Average Age		44.5		44.8	(0.7)%
	Average Credited Service		9.4		9.7	(3.1)%
	Total Active Payroll (\$thousands)	\$	376,351	\$	364,413	3.3%
	Average Monthly Salary	\$	5,857	\$	5,957	(1.7)%
	* June 30, 2005 CAFR report salary on a different basis.					
II.	Retired Members*					
	Number of Members		2.702		2.050	(2.6)0/
	Service Retirement Disability Retirement		2,783 342		2,858 341	(2.6)% 0.3 %
	Beneficiaries		488		485	0.5 %
	Average Age		71.2		70.8	0.6 %
	Total Retiree Payroll (\$thousands)	\$	91,006	\$	84,143	8.2 %
	Average Monthly Pension	\$	2,099	\$	1,903	10.3%
	* June 30, 2005 CAFR counted members eligible for ben	efits	,		,	
III.	Inactive Vested Members		1,089		872	24.9 %
IV.	Assets					
	Market Value of Fund (\$thousands)	\$	1,789,898	\$	1,599,270	11.9%
	Return on Market Value		10.4%		9.7%	
	Valuation Assets (\$thousands)	\$	1,769,021	\$	1,615,585	9.5%
	Return on Valuation Assets	Ψ	7.9%	Ψ	7.5%	0.070
	Return on Valuation Assets		7.370		7.570	
V.	Liability Values (\$thousands)					
	Actuarial Accrued Liability	\$	2,345,149	\$	2,177,759	7.7%
	Unfunded Actuarial Accrued Liability	\$	576,128	\$	562,174	2.5%
	Deferred Asset (Gains) / Losses	\$	(20,877)	\$	16,315	(228.0)%
	E. J. ID.C.					
VI.	Funded Ratio		<b>7</b> E 40/		74.00/	4 70/
	GASB Number 25 (based on valuation assets)		75.4%		74.2%	1.7%

Exhibit 19: **Summary of SamCERA Membership** 

Plan (Tier)	One	Two	Three	Four	Total
Retirees and beneficiaries curre	ently receiving	p benefits:			
General	2,182	925	63	15	3,185
Safety	283	63	-	1	347
Probation	61	20		-	81
Subotal	2,526	1,008	63	16	3,613
Terminated employees entitled	to but not cur	rently receivign	n benefits (Deferi	red):	
General	70	541	126	260	997
Safety	-	39	-	17	56
Probation	-	18	-	18	36
Subotal	70	598	126	295	1,089
Current employees:					
Vested:					
General	211	1,550	64	933	2,758
Safety	27	179	-	101	307
Probation	13	97	-	92	202
Non-Vested:					
General	1	3	69	1,783	1,856
Safety	-	-	-	121	121
Probation	-	-	-	111	111
Subotal	252	1,829	133	3,141	5,355
Total SamCERA Membership	2,848	3,435	322	3,452	10,057

Exhibit 20: **Summary of Active Member Valuation Data** 

Valu	ation Date	Members	Annual Salary	Average	% Change
4007		2.000	£400 040 E40	Annual Salary	Average Salary
1997	General	3,808	\$166,043,510	\$43,604	0.91%
	Safety	402	\$20,860,840	\$51,893	3.71%
	Probation	208	\$9,487,864	\$45,615	-1.48%
1000	Total	4,418	\$196,392,214	\$44,453	1.03%
1998	General	3,803	\$177,079,000	\$46,563	6.80%
	Safety	406	\$24,404,000	\$60,109	15.80%
	Probation	211	\$10,046,000	\$47,607	4.40%
	Total	4,420	\$211,529,000	\$47,857	7.70%
1999	General	3.908	\$196,936,000	\$50,393	8.20%
	Safety	425	\$29,862,000	\$70,264	16.90%
	Probation	245	\$12,067,000	\$49,253	3.4%
	Total	4,578	\$238,865,000	\$52,176	9.0%
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%
2001	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%
2000	Safety	409	\$39,999,593	\$97,799	-1.4%
	Probation	278	\$20,123,863	\$72,388	0.2%
	Total	5,098	\$364,412,893	\$72,366	1.4%
2006*	General		\$312,934,324	·	
2000		4,614		\$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%

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



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

	Retiree Me	mbership *					
Year	At Beginning Of Year	Additions	With- drawals	At End of Year	Total Retiree Payroll	Percent Increase In Payroll	Average Monthly Allowance
6/30/96	2,723	N/A	N/A	2,844	\$40,498,000	6.54%	\$1,209
6/30/97	2,844	163	107	2,900	\$42,338,000	4.54%	\$1,255
6/30/98	2,900	149	118	2,931	\$46,845,000	10.65%	\$1,332
6/30/99	2,931	238	210	2,959	\$50,491,000	7.80%	\$1,422
6/30/00	2,959	219	76	3,102	\$55,192,000	9.31%	\$1,483
6/30/01	3,102	233	82	3,253	\$62,416,000	13.1%	\$1,543
6/30/02	3,253	194	138	3,309	\$66,974,000	7.3%	\$1,627
6/30/03	3,309	128	115	3,322	\$69,451,000	3.7%	\$1,676
6/30/04	3,466	193	120	3,539	\$75,943,000	8.7%	\$1,778
6/30/05	3,539	238	95	3,682	\$84,183,000	11.5%	\$1,905
6/30/06	3,519	206	112	3,613	\$91,006,000	8.1%	\$2,099

<sup>\*</sup> For 6/30/2004 and 6/30/2005, retirees/beneficiaries who are entitled to multiple benefits are counted more than once. The 6/30/06 beginning of year count was revised to reflect only one retiree per benefit in 6/30/2006.

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

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

	2006	2005	2004	2003	2002	
General Tier 1	\$6,749	\$6,582	\$6,514	\$6,070	\$5,806	
General Tier 2	\$6,148	\$6,045	\$5,980	\$5,573	\$5,311	
General Tier 3	\$4,988	\$5,216	\$5,101	\$4,747	\$4,737	
General Tier 4	\$5,315	\$5,476	\$5,281	\$4,886	\$4,545	
General Tier Total	\$5,652	\$5,747	\$5,642	\$5,284	\$5,016	
Safety Tier 1	\$10,019	\$9,701	\$9,516	\$8,500	\$7,820	
Safety Tier 2	\$8,585	\$8,482	\$8,530	\$7,518	\$6,853	
Safety Tier 4	\$7,403	\$7,564	\$7,582	\$6,465	\$5,789	
Safety Tier Total	\$8,062	\$8,150	\$8,267	\$7,291	\$6,652	
Probation Tier 1	\$7,735	\$7,216	\$6,856	\$6,548	\$6,253	
Probation Tier 2	\$6,479	\$6,390	\$6,291	\$5,800	\$5,542	
Probation Tier 4	\$5,444	\$5,741	\$5,711	\$4,924	\$4,502	
Probation Tier Total	\$5,860	\$6,032	\$6,019	\$5,395	\$5,066	
Grand Total	\$5,857	\$5,955	\$5,871	\$5,467	\$5,164	

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

## **Participating Employers and Active Members**

		I	I	I		
	2006	2005	2004	2003	2002	
County of San Mateo						
General Members	4,594	4,391	4,474	4,202	4,175	
Safety/Probation Members	428	409	411	434	431	
Safety Member	313	278	288	290	293	
Total	5,335	5,078	5,173	4,926	4,899	
San Mateo County Mosquito A	batement D	istrict				
General Members Total	20	20	13	11	11	
Total Active Membership	5,355	5,098	5,186	4,937	4,910	

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

Retired Members	2006	2005	2004	2003	2002
Service Retirement					
Number Annual Allowance	2,783	2,865	2,706	2,637	2,638
Basic Only	\$ 54,942,000	\$ 49,760,000	\$ 41,723,000	\$ 36,929,000	\$ 36,260,000
COLA	\$ 18,188,000	\$ 17,759,000	\$ 17,502,000	\$ 17,185,000	\$ 16,668,000
Total	\$ 73,130,000	\$ 67,519,000	\$ 59,225,000	\$ 54,114,000	\$ 52,928,000
Average Monthly Payment	\$ 2,190	\$ 1,964	\$ 1,824	\$ 1,710	\$ 1,672
Disability Retirement					
Number	342	334	339	329	316
Annual Allowance		<b>^</b>		<b>.</b>	
Basic Only	\$ 6,915,000	\$ 6,575,000	\$ 6,164,000	\$ 5,588,000	\$ 5,061,000
COLA	\$ 2,356,000	\$ 2,205,000	\$ 2,172,000	\$ 2,130,000	\$ 2,049,000
Total	\$ 9,271,000	\$ 8,780,000	\$ 8,336,000	\$ 7,718,000	\$ 7,110,000
Average Monthly Payment	\$ 2,259	\$ 2,191	\$ 2,049	\$ 1,955	\$ 1,875
Beneficiaries					
Number	488	483	494	488	477
Annual Allowance					
Basic Only	\$ 4,659,000	\$ 4,084,000	\$ 4,250,000	\$ 4,065,000	\$ 3,548,000
COLA	\$ 3,946,000	\$ 3,800,000	\$ 3,682,000	\$ 3,554,000	\$ 3,388,000
Total	\$ 8,605,000	\$ 7,884,000	\$ 7,932,000	\$ 7,619,000	\$ 6,936,000
Average Monthly Payment	\$ 1,469	\$ 1,360	\$ 1,338	\$ 1,301	\$ 1,212
Total Retired Members					
Number	3,613	3,682	3,539	3,454	3,431
Annual Allowance					
Basic Only	\$ 66,516,000	\$ 60,419,000	\$ 52,137,000	\$ 46,582,000	\$ 44,869,000
COLA	\$ 24,490,000	\$ 23,764,000	\$ 23,356,000	\$ 22,869,000	\$ 22,105,000
Total	\$ 91,006,000	\$ 84,183,000	\$ 75,493,000	\$ 69,451,000	\$ 66,974,000
Average Monthly Payment	\$ 2,099	\$ 1,905	\$ 1,778	\$ 1,676	\$ 1,627
Inactive Members	1,089	872	877	855	833

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** 

June 30, 2006 Valuation Date **Actuarial Cost Method** Entry Age

Level Percent - Closed Amortization Method Remaining Amortization Period 16 years as of valuation date **Asset Valuation Method** 5-year smoothed market

**Actuarial Assumptions** 

Rate of Investment Return 7.75% Payroll Increases 4.00% Average Projected Salary Increases 5.20%

Attributable to Wage Inflation 4.00% Attributable to Merit and Longevity 1.20%

Shown on following page Sample Rates of Separation Additional Assumption Shown in Appendix A

#### Exhibit 24b: **Summary of Assumptions**

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

Years of	Other Tern	ninations		Disability		Death wh	ile Active	Service
Service	Ordinary	Vested	Age	Ordinary	Service	Ordinary	Service	Retirement
General Plan	1, 2 & 4 Male M	embers						
0	0.1200	0.0000	20	0.0003	0.0005	0.0002	0.0000	0.0000
5	0.0291	0.0291	30	0.0004	0.0005	0.0003	0.0000	0.0000
10	0.0183	0.0207	40	0.0007	0.0011	0.0006	0.0000	0.0000
15	0.0113	0.0177	50	0.0014	0.0022	0.0022	0.0000	0.0600
20	0.0049	0.0141	60	0.0022	0.0034	0.0042	0.0000	0.1500
30 & Above	0.0000	0.0000	70	0.0000	0.0000	0.0000	0.0000	1.0000
General Plan	1, 2 & 4 Female	Members						
0	0.1300	0.0000	20	0.0003	0.0005	0.0003	0.0000	0.0000
5	0.0316	0.0316	30	0.0004	0.0005	0.0003	0.0000	0.0000
10	0.0207	0.0233	40	0.0007	0.0011	0.0006	0.0000	0.0000
15	0.0133	0.0207	50	0.0014	0.0022	0.0013	0.0000	0.0600
20	0.0062	0.0178	60	0.0022	0.0034	0.0036	0.0000	0.1500
30 & Above	0.0000	0.0000	70	0.0000	0.0000	0.0000	0.0000	1.0000
General Plan	3 Male Members	S						
0	0.1200	0.0000	20	0.0000	0.0000	0.0002	0.0000	0.0000
5	0.0291	0.0291	30	0.0000	0.0000	0.0003	0.0000	0.0000
10	0.0183	0.0207	40	0.0000	0.0000	0.0006	0.0000	0.0000
15	0.0113	0.0177	50	0.0000	0.0000	0.0022	0.0000	0.0000
20	0.0049	0.0141	60	0.0000	0.0000	0.0042	0.0000	0.0300
30 & Above	0.0000	0.0000	70	0.0000	0.0000	0.0000	0.0000	1.0000
General Plan	3 Female Memb	ers						
0	0.1300	0.0000	20	0.0000	0.0000	0.0003	0.0000	0.0000
5	0.0316	0.0316	30	0.0000	0.0000	0.0003	0.0000	0.0000
10	0.0207	0.0233	40	0.0000	0.0000	0.0006	0.0000	0.0000
15	0.0133	0.0207	50	0.0000	0.0000	0.0013	0.0000	0.0000
20	0.0062	0.0178	60	0.0000	0.0000	0.0036	0.0000	0.0400
30 & Above	0.0000	0.0000	70	0.0000	0.0000	0.0000	0.0000	1.0000
Safety and Pro	obation Member	S						
0	0.0800	0.0000	20	0.0003	0.0012	0.0002	0.0010	0.0000
5	0.0116	0.0116	30	0.0004	0.0014	0.0003	0.0010	0.0000
10	0.0080	0.0090	40	0.0009	0.0035	0.0004	0.0010	0.0000
15	0.0047	0.0073	50	0.0015	0.0059	0.0009	0.0010	0.2500
20	0.0010	0.0030	60	0.0000	0.0000	0.0000	0.0000	1.0000
30 & Above	0.0000	0.0000	70	0.0000	0.0000	0.0000	0.0000	1.0000

## **Appendix A: Actuarial Procedures and Assumptions**



The assumptions were adopted, effective June 30, 2005. The actuarial procedures and assumptions used in this valuation are described in this section.

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 between tiers, entry age is based on original entry into the system.

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 (or Surplus Funding) 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, 2022. This is commonly referred to as a "fixed amortization method".

Since the Mosquito Abatement 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 tier-by-tier 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 set by the Retirement Board 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, tier and class are illustrated in Appendix D of the valuation report

### **Valuation of Assets**

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



## Investment Earnings and Expenses

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

### Post-retirement Benefit Increases

Post-retirement increases are described in Appendix B. Assumed increases for valuation purposes are:

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

Assumed Tier 1 General and Safety COLAs are set at the inflation (CPI) assumption of 3.5% per year. Since Tier 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 7.61% compounded semi-annually for an annualized rate of 7.75%. 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. This is a recommended change in the assumptions.

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

Tier 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 tier 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 Tier 3)
- Age 65 (General Tier 3 Members)
- Age 50 (Probation and Safety members)



#### Disablement

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

### Mortality – Other Than Disabled Members

The same post-retirement 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 one year.

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 two years.

Safety Females Same as General.

# 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%. Ages are set

forward six years.

Safety Males Same as General except minimum is 1.0% and

set forward is three years.

General Females RP-2000 Healthy Annuitant Mortality Table for

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

set forward six years.

Safety Females Same as General except minimum is 1.0% and

set forward is three years.



# 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.

### **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 Tier 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.

# 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 Tier 3 Normal Cost Rate

Tier 3 members are eligible to transfer to Tier 2 or Tier 4 (depending on entry date) after five years of service. We have adjusted the Tier 3 Normal Cost to account for this. The adjusted Tier 3 Normal Cost rate is 50% of the unadjusted Tier 3 Normal Cost rate and 50% of the Tier 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 a 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 Tier 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 7.61% semiannually (7.75% 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 were assumed to be deputy sheriffs.



## Table A-1: Summary of Valuation Assumptions as of June 30, 2006

1	Economic	assumptions
١.		assumbuons

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

### II. Demographic assumptions

Α.	Salary increases due to service	Table A-5

B. RetirementC. DisablementTables A-6 to A-11Tables A-6 to A-11

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	-1 year
General – Females	-2 years
Safety – Males	-1 year
Safety – Females	-2 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	+6 years	1.50%
General – Females	+6 years	1.25%
Safety – Males	+3 years	1.00%
Safety – Females	+3 years	1.00%

### F. Mortality for beneficiaries

Table A-2

Basis – Beneficiaries are assumed to have the same mortality as a general member of the opposite sex who has taken a service retirement.

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	<u>Male</u>	Female	Male	Female
20	0.033%	0.019%	0.033%	0.019%
25	0.038%	0.020%	0.038%	0.020%
30	0.041%	0.023%	0.041%	0.023%
35	0.053%	0.040%	0.053%	0.040%
40	0.083%	0.056%	0.083%	0.056%
45	0.123%	0.084%	0.123%	0.084%
50	0.184%	0.134%	0.184%	0.134%
55	0.295%	0.210%	0.295%	0.210%
60	0.497%	0.372%	0.497%	0.372%
65	0.969%	0.681%	0.969%	0.681%
70	1.719%	1.216%	1.719%	1.216%
75	2.997%	2.090%	2.997%	2.090%
80	5.318%	3.496%	5.318%	3.496%
85	9.379%	5.951%	9.379%	5.951%
90	16.109%	10.301%	16.109%	10.301%

Table A-3: Mortality for Members Retired for Disability

	General	General	Safety	Safety
Age	Male	<u>Female</u>	<u>Male</u>	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	2.140%	1.687%	1.557%	1.216%
70	3.778%	2.849%	2.671%	2.090%
75	6.678%	4.794%	4.748%	3.496%
80	11.678%	8.283%	8.398%	5.951%
85	19.498%	13.853%	14.487%	10.301%
90	28.390%	20.538%	22.946%	16.344%

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

Years of		
Service	General	Safety
0	100%	100%
1	100%	100%
2	100%	100%
3	100%	100%
4	100%	100%
5	50%	45%
6	50%	45%
7	50%	45%
8	49%	42%
9	48%	39%
10	47%	36%
11	46%	33%
12	45%	30%
13	43%	25%
14	41%	20%
15	39%	15%
16	37%	10%
17	35%	5%
18	32%	4%
19	29%	3%
20	26%	0%
21	23%	0%
22	20%	0%
23	16%	0%
24	12%	0%
25	8%	0%
26	4%	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 tier by sex:

Table A-6: General Tier 1, 2 & 4 Males A-10: Safety Tiers 1, 2 & 4 Males

A-7: General Tier 1, 2 & 4 Females A-11: Safety Tiers 1, 2 & 4 Females

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



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

18	Age	Service Retirement*	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
19	18	0.0000	0.0005	0.0003	N/A	0.0002	0	0.1200
20		0.0000	0.0005	0.0003		0.0002		
21								
222								
223								
24 0.0000 0.0005 0.0003 N/A 0.0002 6 0.0517 25 0.0000 0.0005 0.0003 N/A 0.0003 7 0.0450 26 0.0000 0.0005 0.0003 N/A 0.0003 8 0.0430 27 0.0000 0.0005 0.0003 N/A 0.0003 9 0.0410 28 0.0000 0.0005 0.0003 N/A 0.0003 10 0.0390 29 0.0000 0.0005 0.0004 N/A 0.0003 11 0.0390 30 0.0000 0.0005 0.0004 N/A 0.0003 11 0.0370 30 0.0000 0.0005 0.0004 N/A 0.0003 12 0.0380 31 0.0000 0.0006 0.0004 N/A 0.0003 12 0.0380 32 0.0000 0.0006 0.0004 N/A 0.0004 13 0.0330 33 0.0000 0.0006 0.0004 N/A 0.0004 13 0.0330 33 0.0000 0.0006 0.0004 N/A 0.0004 14 0.0310 34 0.0000 0.0007 0.0004 N/A 0.0005 15 0.0290 35 0.0000 0.0007 0.0004 N/A 0.0005 15 0.0290 36 0.0000 0.0008 0.0005 N/A 0.0005 17 0.0250 36 0.0000 0.0008 0.0006 N/A 0.0005 17 0.0250 37 0.0000 0.0008 0.0006 N/A 0.0006 18 0.0230 38 0.0000 0.0009 0.0006 N/A 0.0006 19 0.0210 39 0.0000 0.0010 0.0006 N/A 0.0006 19 0.0210 39 0.0000 0.0011 0.00006 N/A 0.0006 20 0.0190 39 0.0000 0.0011 0.00006 N/A 0.0006 22 0.0150 41 0.0000 0.0011 0.0007 N/A 0.0006 22 0.0150 41 0.0000 0.0011 0.0007 N/A 0.0006 22 0.0150 44 0.0000 0.0011 0.0007 N/A 0.0006 22 0.0150 44 0.0000 0.0011 0.0007 N/A 0.0006 24 0.0130 44 0.0000 0.0011 0.0007 N/A 0.0006 24 0.0130 44 0.0000 0.0011 0.0007 N/A 0.0006 24 0.0130 44 0.0000 0.0011 0.0007 N/A 0.0006 22 0.0150 44 0.0000 0.0011 0.0007 N/A 0.0006 22 0.0150 45 0.0000 0.0011 0.0007 N/A 0.0006 24 0.0130 46 0.0000 0.0011 0.0007 N/A 0.0006 25 0.0120 47 0.0000 0.0014 N/A 0.0012 27 0.0100 48 0.0000 0.0016 0.0018 N/A 0.0009 25 0.0120 50 0.0600 0.0022 0.0014 N/A 0.0012 27 0.0100 50 0.0600 0.0002 0.0016 N/A 0.0006 50 0.0600 0.0002 0.0016 N/A 0.0006 50 0.0600 0.0002 0.0016 N/A 0.0006 60 0.1500 0.0034 0.0022 N/A 0.0044 61 0.0000 0.0018 0.0022 N/A 0.0046 62 0.0300 0.0003 0.0022 N/A 0.0046 63 0.2500 0.0038 0.0022 N/A 0.0046 66 0.3000 0.0000 0.0000 N/A 0.0066								
25								
26								
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40         0.0000         0.0011         0.0007         N/A         0.0006         22         0.0150           41         0.0000         0.0011         0.0008         N/A         0.0007         23         0.0140           42         0.0000         0.0013         0.0009         N/A         0.0009         25         0.0120           43         0.0000         0.0014         0.0010         N/A         0.0010         26         0.0110           45         0.0000         0.0016         0.0010         N/A         0.0012         27         0.0100           46         0.0000         0.0017         0.0011         N/A         0.0014         28         0.0100           47         0.0000         0.0018         0.0012         N/A         0.0016         29         0.0100           48         0.0000         0.0019         0.0013         N/A         0.0018         30 & Above         0.0100           50         0.0600         0.0022         0.0014         N/A         0.0020         0.0100           51         0.0500         0.0023         0.0015         N/A         0.0024         0.004         0.004         0.0024         0.0016         N/A<						0.0006		
41         0.0000         0.0011         0.0008         N/A         0.0007         23         0.0140           42         0.0000         0.0012         0.0008         N/A         0.0008         24         0.0130           43         0.0000         0.0013         0.0009         N/A         0.0009         25         0.0120           44         0.0000         0.0016         0.0010         N/A         0.0010         26         0.0110           45         0.0000         0.0017         0.0011         N/A         0.0012         27         0.0100           46         0.0000         0.0018         0.0012         N/A         0.0014         28         0.0100           47         0.0000         0.0018         0.0012         N/A         0.0016         29         0.0100           48         0.0000         0.0019         0.0013         N/A         0.0018         30 & Above         0.0100           50         0.0600         0.0022         0.0014         N/A         0.0022         0.0100           51         0.0500         0.0023         0.0015         N/A         0.0024         0.0024           52         0.0500         0.0024								0.0150
42         0.0000         0.0012         0.0008         N/A         0.0009         25         0.0130           43         0.0000         0.0013         0.0009         N/A         0.0009         25         0.0120           44         0.0000         0.0016         0.0010         N/A         0.0012         27         0.0100           45         0.0000         0.0017         0.0011         N/A         0.0012         27         0.0100           46         0.0000         0.0018         0.0012         N/A         0.0014         28         0.0100           47         0.0000         0.0018         0.0012         N/A         0.0016         29         0.0100           48         0.0000         0.0020         0.0014         N/A         0.0018         30 & Above         0.0100           49         0.0000         0.0022         0.0014         N/A         0.0020         0.0100           50         0.0600         0.0022         0.0014         N/A         0.0024         0.0016         N/A         0.0026           51         0.0500         0.0024         0.0016         N/A         0.0026         0.0030         0.0036         0.0036         0			0.0011					
43         0.0000         0.0013         0.0009         N/A         0.0009         25         0.0120           444         0.0000         0.0016         0.0010         N/A         0.0010         26         0.0110           45         0.0000         0.0016         0.0010         N/A         0.0012         27         0.0100           46         0.0000         0.0018         0.0012         N/A         0.0016         29         0.0100           47         0.0000         0.0018         0.0012         N/A         0.0016         29         0.0100           48         0.0000         0.0019         0.0013         N/A         0.0018         30 & Above         0.0100           49         0.0000         0.0020         0.0014         N/A         0.0018         30 & Above         0.0100           50         0.0600         0.0022         0.0014         N/A         0.0022         0.0100         0.022         0.0100         0.0022         0.0100         0.0024         0.0024         0.0026         0.0016         N/A         0.0022         0.0100         0.0024         0.0024         0.0026         0.0018         N/A         0.0028         0.0030         0.0028								
44         0.0000         0.0014         0.0010         N/A         0.0010         26         0.0110           45         0.0000         0.0016         0.0010         N/A         0.0012         27         0.0100           46         0.0000         0.0017         0.0011         N/A         0.0016         28         0.0100           47         0.0000         0.0018         0.0012         N/A         0.0016         29         0.0100           48         0.0000         0.0019         0.0013         N/A         0.0018         30 & Above         0.0100           49         0.0000         0.0020         0.0014         N/A         0.0022         0.0100           50         0.0600         0.0022         0.0014         N/A         0.0022         0.0100           51         0.0500         0.0023         0.0015         N/A         0.0024         0.026         0.018         N/A         0.0026         0.010         0.0026         0.0018         N/A         0.0028         0.0028         0.0018         N/A         0.0032         0.0034         0.0036         0.0034         0.0034         0.0034         0.0034         0.0036         0.0036         0.0034         0.								
45         0.0000         0.0016         0.0010         N/A         0.0012         27         0.0100           46         0.0000         0.0017         0.0011         N/A         0.0014         28         0.0100           47         0.0000         0.0019         0.0013         N/A         0.0016         29         0.0100           48         0.0000         0.0019         0.0013         N/A         0.0018         30 & Above         0.0100           49         0.0000         0.0020         0.0014         N/A         0.0020         0.0100           50         0.0600         0.0022         0.0014         N/A         0.0022         0.0100           51         0.0500         0.0023         0.0015         N/A         0.0024         0.0026         0.018         N/A         0.0026         0.0026         0.0018         N/A         0.0028         0.0018         N/A         0.0032         0.0026         0.0030         0.0026         0.0032         N/A         0.0032         0.0034         0.0032         0.0032         0.0032         0.0032         0.0034         0.0032         0.0034         0.0034         0.0034         0.0034         0.0034         0.0034         0.0034								
46         0.0000         0.0017         0.0011         N/A         0.0014         28         0.0100           47         0.0000         0.0018         0.0012         N/A         0.0016         29         0.0100           48         0.0000         0.0019         0.0013         N/A         0.0020         0.0100           49         0.0000         0.0022         0.0014         N/A         0.0022         0.0100           50         0.0600         0.0022         0.0014         N/A         0.0022         0.0100           51         0.0500         0.0023         0.0015         N/A         0.0024         0.0016         N/A         0.0026           52         0.0500         0.0024         0.0016         N/A         0.0028         0.018         N/A         0.0028           54         0.0500         0.0026         0.0018         N/A         0.0032         0.0032         0.0032         0.0032         0.0032         0.0032         0.0034         0.0032         0.0032         0.0034         0.0032         0.0034         0.0034         0.0034         0.0034         0.0034         0.0034         0.0034         0.0034         0.0034         0.0034         0.0022								
47         0.0000         0.0018         0.0012         N/A         0.0016         29         0.0100           48         0.0000         0.0019         0.0013         N/A         0.0018         30 & Above         0.0100           49         0.0000         0.0020         0.0014         N/A         0.0022         0.014         N/A         0.0022           50         0.0600         0.0022         0.0014         N/A         0.0022         0.014         N/A         0.0022           51         0.0500         0.0023         0.0015         N/A         0.0024         0.0024         0.0016         N/A         0.0026         0.028         0.0028         0.0028         0.0028         0.0028         0.0028         0.0017         N/A         0.0028         0.0028         0.0030         0.0030         0.0030         0.0032         0.0032         0.0030         0.0032         0.0032         0.0032         0.0034         0.0032         0.0034         0.0034         0.0034         0.0034         0.0034         0.0034         0.0032         0.0022         N/A         0.0044         0.0044         0.0042         0.0044         0.0042         0.0044         0.0044         0.0044         0.0044         0.0044 </td <td></td> <td>0.0000</td> <td></td> <td>0.0011</td> <td></td> <td></td> <td></td> <td></td>		0.0000		0.0011				
48       0.0000       0.0019       0.0013       N/A       0.0018       30 & Above       0.0100         49       0.0000       0.0020       0.0014       N/A       0.0020       0.0100         50       0.0600       0.0022       0.0014       N/A       0.0022       0.015         51       0.0500       0.0023       0.0015       N/A       0.0024       0.0026         52       0.0500       0.0024       0.0016       N/A       0.0028       0.0028         53       0.0500       0.0025       0.0017       N/A       0.0030       0.0030         54       0.0500       0.0026       0.0018       N/A       0.0032       0.0032         56       0.0600       0.0028       0.0018       N/A       0.0034       0.0034         57       0.0800       0.0030       0.0020       N/A       0.0036       0.0034       0.0021       N/A       0.0038         59       0.1200       0.0032       0.0022       N/A       0.0040       0.0042       0.0042       0.0042       0.0042       0.0042       0.0044       0.0042       0.0044       0.0042       0.0044       0.0042       0.0044       0.0042       0.0044		0.0000	0.0018			0.0016		0.0100
49         0.0000         0.0020         0.0014         N/A         0.0020           50         0.0600         0.0022         0.0014         N/A         0.0022           51         0.0500         0.0023         0.0015         N/A         0.0024           52         0.0500         0.0024         0.0016         N/A         0.0026           53         0.0500         0.0025         0.0017         N/A         0.0030           54         0.0500         0.0026         0.0018         N/A         0.0030           55         0.0600         0.0028         0.0018         N/A         0.0032           56         0.0600         0.0029         0.0019         N/A         0.0034           57         0.0800         0.0031         0.0020         N/A         0.0036           58         0.1200         0.0031         0.0021         N/A         0.0038           59         0.1200         0.0032         0.0022         N/A         0.0040           60         0.1500         0.0034         0.0022         N/A         0.0042           61         0.2000         0.0035         0.0023         N/A         0.0044		0.0000	0.0019			0.0018		0.0100
50         0.0600         0.0022         0.0014         N/A         0.0022           51         0.0500         0.0023         0.0015         N/A         0.0024           52         0.0500         0.0024         0.0016         N/A         0.0026           53         0.0500         0.0025         0.0017         N/A         0.0028           54         0.0500         0.0026         0.0018         N/A         0.0030           55         0.0600         0.0028         0.0018         N/A         0.0032           56         0.0600         0.0029         0.0019         N/A         0.0034           57         0.0800         0.0031         0.0020         N/A         0.0036           58         0.1200         0.0031         0.0021         N/A         0.0048           59         0.1200         0.0032         0.0022         N/A         0.0040           60         0.1500         0.0034         0.0022         N/A         0.0042           61         0.2000         0.0035         0.0023         N/A         0.0044           62         0.3500         0.0036         0.0024         N/A         0.0046		0.0000	0.0020	0.0014		0.0020		
52         0.0500         0.0024         0.0016         N/A         0.0026           53         0.0500         0.0025         0.0017         N/A         0.0028           54         0.0500         0.0026         0.0018         N/A         0.0030           55         0.0600         0.0028         0.0018         N/A         0.0032           56         0.0600         0.0029         0.0019         N/A         0.0034           57         0.0800         0.0030         0.0020         N/A         0.0036           58         0.1200         0.0031         0.0021         N/A         0.0038           59         0.1200         0.0032         0.0022         N/A         0.0040           60         0.1500         0.0034         0.0022         N/A         0.0042           61         0.2000         0.0035         0.0023         N/A         0.0044           62         0.3500         0.0036         0.0024         N/A         0.0046           63         0.2500         0.0037         0.0025         N/A         0.0048           64         0.2500         0.0038         0.0026         N/A         0.0050		0.0600	0.0022	0.0014		0.0022		
52         0.0500         0.0024         0.0016         N/A         0.0026           53         0.0500         0.0025         0.0017         N/A         0.0028           54         0.0500         0.0026         0.0018         N/A         0.0030           55         0.0600         0.0028         0.0018         N/A         0.0032           56         0.0600         0.0029         0.0019         N/A         0.0034           57         0.0800         0.0030         0.0020         N/A         0.0036           58         0.1200         0.0031         0.0021         N/A         0.0038           59         0.1200         0.0032         0.0022         N/A         0.0040           60         0.1500         0.0034         0.0022         N/A         0.0042           61         0.2000         0.0035         0.0023         N/A         0.0044           62         0.3500         0.0036         0.0024         N/A         0.0046           63         0.2500         0.0037         0.0025         N/A         0.0048           64         0.2500         0.0038         0.0026         N/A         0.0050	51	0.0500	0.0023	0.0015	N/A	0.0024		
53         0.0500         0.0025         0.0017         N/A         0.0028           54         0.0500         0.0026         0.0018         N/A         0.0030           55         0.0600         0.0029         0.0019         N/A         0.0034           56         0.0600         0.0030         0.0020         N/A         0.0036           57         0.0800         0.0031         0.0021         N/A         0.0038           58         0.1200         0.0031         0.0021         N/A         0.0040           60         0.1500         0.0032         0.0022         N/A         0.0040           61         0.2000         0.0035         0.0023         N/A         0.0044           62         0.3500         0.0035         0.0023         N/A         0.0046           63         0.2500         0.0037         0.0025         N/A         0.0048           64         0.2500         0.0038         0.0026         N/A         0.0050           65         0.4000         0.0000         0.0000         N/A         0.0052           66         0.3000         0.0000         0.0000         N/A         0.0056		0.0500	0.0024	0.0016		0.0026		
54         0.0500         0.0026         0.0018         N/A         0.0030           55         0.0600         0.0028         0.0018         N/A         0.0032           56         0.0600         0.0029         0.0019         N/A         0.0034           57         0.0800         0.0030         0.0020         N/A         0.0036           58         0.1200         0.0031         0.0021         N/A         0.0038           59         0.1200         0.0032         0.0022         N/A         0.0040           60         0.1500         0.0034         0.0022         N/A         0.0042           61         0.2000         0.0035         0.0023         N/A         0.0044           62         0.3500         0.0036         0.0024         N/A         0.0046           63         0.2500         0.0037         0.0025         N/A         0.0048           64         0.2500         0.0038         0.0026         N/A         0.0050           65         0.4000         0.0000         0.0000         N/A         0.0056           67         0.3000         0.0000         0.0000         N/A         0.0065		0.0500	0.0025	0.0017	N/A	0.0028		
55         0.0600         0.0028         0.0018         N/A         0.0032           56         0.0600         0.0029         0.0019         N/A         0.0034           57         0.0800         0.0030         0.0020         N/A         0.0036           58         0.1200         0.0031         0.0021         N/A         0.0038           59         0.1200         0.0032         0.0022         N/A         0.0040           60         0.1500         0.0034         0.0022         N/A         0.0042           61         0.2000         0.0035         0.0023         N/A         0.0044           62         0.3500         0.0036         0.0024         N/A         0.0046           63         0.2500         0.0037         0.0025         N/A         0.0048           64         0.2500         0.0038         0.0026         N/A         0.0050           65         0.4000         0.0000         0.0000         N/A         0.0052           66         0.3000         0.0000         0.0000         N/A         0.0056           67         0.3000         0.0000         0.0000         N/A         0.0065		0.0500	0.0026	0.0018	N/A	0.0030		
57         0.0800         0.0030         0.0020         N/A         0.0036           58         0.1200         0.0031         0.0021         N/A         0.0038           59         0.1200         0.0032         0.0022         N/A         0.0040           60         0.1500         0.0034         0.0022         N/A         0.0042           61         0.2000         0.0035         0.0023         N/A         0.0044           62         0.3500         0.0036         0.0024         N/A         0.0046           63         0.2500         0.0037         0.0025         N/A         0.0048           64         0.2500         0.0038         0.0026         N/A         0.0050           65         0.4000         0.0000         0.0000         N/A         0.0052           66         0.3000         0.0000         0.0000         N/A         0.0056           67         0.3000         0.0000         0.0000         N/A         0.0065           69         0.3000         0.0000         0.0000         N/A         0.0070	55	0.0600	0.0028	0.0018	N/A	0.0032		
58         0.1200         0.0031         0.0021         N/A         0.0038           59         0.1200         0.0032         0.0022         N/A         0.0040           60         0.1500         0.0034         0.0022         N/A         0.0042           61         0.2000         0.0035         0.0023         N/A         0.0044           62         0.3500         0.0036         0.0024         N/A         0.0046           63         0.2500         0.0037         0.0025         N/A         0.0048           64         0.2500         0.0038         0.0026         N/A         0.0050           65         0.4000         0.0000         0.0000         N/A         0.0052           66         0.3000         0.0000         0.0000         N/A         0.0056           67         0.3000         0.0000         0.0000         N/A         0.0060           68         0.3000         0.0000         0.0000         N/A         0.0065           69         0.3000         0.0000         0.0000         N/A         0.0070	56	0.0600	0.0029	0.0019	N/A	0.0034		
59         0.1200         0.0032         0.0022         N/A         0.0040           60         0.1500         0.0034         0.0022         N/A         0.0042           61         0.2000         0.0035         0.0023         N/A         0.0044           62         0.3500         0.0036         0.0024         N/A         0.0046           63         0.2500         0.0037         0.0025         N/A         0.0048           64         0.2500         0.0038         0.0026         N/A         0.0050           65         0.4000         0.0000         0.0000         N/A         0.0052           66         0.3000         0.0000         0.0000         N/A         0.0056           67         0.3000         0.0000         0.0000         N/A         0.0060           68         0.3000         0.0000         0.0000         N/A         0.0065           69         0.3000         0.0000         0.0000         N/A         0.0070	57	0.0800	0.0030	0.0020	N/A	0.0036		
60       0.1500       0.0034       0.0022       N/A       0.0042         61       0.2000       0.0035       0.0023       N/A       0.0044         62       0.3500       0.0036       0.0024       N/A       0.0046         63       0.2500       0.0037       0.0025       N/A       0.0048         64       0.2500       0.0038       0.0026       N/A       0.0050         65       0.4000       0.0000       0.0000       N/A       0.0052         66       0.3000       0.0000       0.0000       N/A       0.0056         67       0.3000       0.0000       0.0000       N/A       0.0060         68       0.3000       0.0000       0.0000       N/A       0.0065         69       0.3000       0.0000       0.0000       N/A       0.0070	58	0.1200	0.0031	0.0021	N/A	0.0038		
61       0.2000       0.0035       0.0023       N/A       0.0044         62       0.3500       0.0036       0.0024       N/A       0.0046         63       0.2500       0.0037       0.0025       N/A       0.0048         64       0.2500       0.0038       0.0026       N/A       0.0050         65       0.4000       0.0000       0.0000       N/A       0.0052         66       0.3000       0.0000       0.0000       N/A       0.0056         67       0.3000       0.0000       0.0000       N/A       0.0060         68       0.3000       0.0000       0.0000       N/A       0.0065         69       0.3000       0.0000       0.0000       N/A       0.0070	59	0.1200	0.0032	0.0022	N/A	0.0040		
62       0.3500       0.0036       0.0024       N/A       0.0046         63       0.2500       0.0037       0.0025       N/A       0.0048         64       0.2500       0.0038       0.0026       N/A       0.0050         65       0.4000       0.0000       0.0000       N/A       0.0052         66       0.3000       0.0000       0.0000       N/A       0.0056         67       0.3000       0.0000       0.0000       N/A       0.0060         68       0.3000       0.0000       0.0000       N/A       0.0065         69       0.3000       0.0000       0.0000       N/A       0.0070	60	0.1500	0.0034	0.0022	N/A	0.0042		
63       0.2500       0.0037       0.0025       N/A       0.0048         64       0.2500       0.0038       0.0026       N/A       0.0050         65       0.4000       0.0000       0.0000       N/A       0.0052         66       0.3000       0.0000       0.0000       N/A       0.0056         67       0.3000       0.0000       0.0000       N/A       0.0060         68       0.3000       0.0000       0.0000       N/A       0.0065         69       0.3000       0.0000       0.0000       N/A       0.0070	61	0.2000	0.0035	0.0023	N/A	0.0044		
64       0.2500       0.0038       0.0026       N/A       0.0050         65       0.4000       0.0000       0.0000       N/A       0.0052         66       0.3000       0.0000       0.0000       N/A       0.0056         67       0.3000       0.0000       0.0000       N/A       0.0060         68       0.3000       0.0000       0.0000       N/A       0.0065         69       0.3000       0.0000       0.0000       N/A       0.0070	62	0.3500	0.0036	0.0024	N/A	0.0046		
65       0.4000       0.0000       0.0000       N/A       0.0052         66       0.3000       0.0000       0.0000       N/A       0.0056         67       0.3000       0.0000       0.0000       N/A       0.0060         68       0.3000       0.0000       0.0000       N/A       0.0065         69       0.3000       0.0000       0.0000       N/A       0.0070	63	0.2500		0.0025				
66 0.3000 0.0000 0.0000 N/A 0.0056 67 0.3000 0.0000 0.0000 N/A 0.0060 68 0.3000 0.0000 0.0000 N/A 0.0065 69 0.3000 0.0000 0.0000 N/A 0.0070	64	0.2500		0.0026	N/A	0.0050		
67 0.3000 0.0000 0.0000 N/A 0.0060 68 0.3000 0.0000 0.0000 N/A 0.0065 69 0.3000 0.0000 0.0000 N/A 0.0070			0.0000					
68 0.3000 0.0000 0.0000 N/A 0.0065 69 0.3000 0.0000 0.0000 N/A 0.0070	66							
69 0.3000 0.0000 0.0000 N/A 0.0070	67			0.0000				
		0.3000	0.0000					
70 1.0000 0.0000 0.0000 N/A 0.0000	69			0.0000	N/A			
· · · · · · · · · · · · · · · · · · ·	70	1.0000	0.0000	0.0000	N/A	0.0000		

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



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

Age	Service Retirement*	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	0.0005	0.0003	N/A	0.0003	0	0.1300
19	0.0000	0.0005	0.0003	N/A	0.0003	1	0.1100
20	0.0000	0.0005	0.0003	N/A	0.0003	2	0.0900
21	0.0000	0.0005	0.0003	N/A	0.0003	3	0.0800
22	0.0000	0.0005	0.0003	N/A	0.0003	4	0.0700
23	0.0000	0.0005	0.0003	N/A	0.0003	5	0.0633
24	0.0000	0.0005	0.0003	N/A	0.0003	6	0.0567
25	0.0000	0.0005	0.0003	N/A	0.0003	7	0.0500
26	0.0000	0.0005	0.0003	N/A	0.0003	8	0.0480
27	0.0000	0.0005	0.0003	N/A	0.0003	9	0.0460
28	0.0000	0.0005	0.0003	N/A	0.0003	10	0.0440
29	0.0000	0.0005	0.0004	N/A	0.0003	11	0.0420
30	0.0000	0.0005	0.0004	N/A	0.0003	12	0.0400
31	0.0000	0.0006	0.0004	N/A	0.0004	13	0.0380
32	0.0000	0.0006	0.0004	N/A	0.0004	14	0.0360
33	0.0000	0.0007	0.0004	N/A	0.0004	15	0.0340
34	0.0000	0.0007	0.0005	N/A	0.0004	16	0.0320
35	0.0000	0.0008	0.0005	N/A	0.0005	17	0.0300
36	0.0000	0.0008	0.0006	N/A	0.0005	18	0.0280
37	0.0000	0.0009	0.0006	N/A	0.0005	19	0.0260
38	0.0000	0.0010	0.0006	N/A	0.0006	20	0.0240
39	0.0000	0.0010	0.0007	N/A	0.0006	21	0.0220
40	0.0000	0.0011	0.0007	N/A	0.0006	22	0.0200
41	0.0000	0.0011	0.0008	N/A	0.0007	23	0.0180
42	0.0000	0.0012	0.0008	N/A	0.0008	24	0.0160
43	0.0000	0.0013	0.0009	N/A	0.0008	25	0.0140
44	0.0000	0.0014	0.0010	N/A	0.0009	26	0.0120
45	0.0000	0.0016	0.0010	N/A	0.0009	27	0.0100
46	0.0000	0.0017	0.0011	N/A	0.0010	28	0.0100
47	0.0000	0.0018	0.0012	N/A	0.0010	29	0.0100
48	0.0000	0.0019	0.0013	N/A	0.0011	30 & Above	0.0100
49	0.0000	0.0020	0.0014	N/A	0.0012		
50	0.0600	0.0022	0.0014	N/A	0.0013		
51	0.0500	0.0023	0.0015	N/A	0.0014		
52	0.0500	0.0024	0.0016	N/A	0.0015		
53	0.0500	0.0025	0.0017	N/A	0.0017		
54	0.0500	0.0026	0.0018	N/A	0.0019		
55 50	0.0600	0.0028	0.0018	N/A	0.0021		
56	0.0600	0.0029	0.0019	N/A	0.0022		
57 58	0.0800	0.0030 0.0031	0.0020 0.0021	N/A	0.0025 0.0028		
	0.1200	0.0031	0.0021	N/A N/A	0.0028		
59 60	0.1200	0.0032	0.0022	N/A N/A	0.0031		
61	0.1500 0.2000	0.0034	0.0022	N/A N/A	0.0036		
62	0.3500	0.0035	0.0023	N/A N/A	0.0042		
63	0.2500	0.0030	0.0024	N/A	0.0055		
64	0.2500	0.0037	0.0025	N/A N/A	0.0063		
65	0.4000	0.0000	0.0020	N/A	0.0003		
66	0.3000	0.0000	0.0000	N/A	0.0072		
67	0.3000	0.0000	0.0000	N/A	0.0093		
68	0.3000	0.0000	0.0000	N/A	0.0104		
69	0.3000	0.0000	0.0000	N/A	0.0116		
70	1.0000	0.0000	0.0000	N/A	0.0000		
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<sup>\* 100%</sup> probability of retirement is assumed at ages 62 and above with 38 or more years of service.



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

Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	N/A	N/A	N/A	0.0002	0	0.1200
19	0.0000	N/A	N/A	N/A	0.0002	1	0.1000
20	0.0000	N/A	N/A	N/A	0.0002	2	0.0850
21	0.0000	N/A	N/A	N/A	0.0002	3	0.0750
22	0.0000	N/A	N/A	N/A	0.0002	4	0.0650
23	0.0000	N/A	N/A	N/A	0.0002	5	0.0583
24	0.0000	N/A	N/A	N/A	0.0002	6	0.0517
25	0.0000	N/A	N/A	N/A	0.0003	7	0.0450
26	0.0000	N/A	N/A	N/A	0.0003	8	0.0430
27	0.0000	N/A	N/A	N/A	0.0003	9	0.0410
28	0.0000	N/A	N/A	N/A	0.0003	10	0.0390
29	0.0000	N/A	N/A	N/A	0.0003	11	0.0370
30	0.0000	N/A	N/A	N/A	0.0003	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	0.0005	16	0.0270
35	0.0000	N/A	N/A	N/A	0.0005	17	0.0250
36	0.0000	N/A	N/A	N/A	0.0006	18	0.0230
37	0.0000	N/A	N/A	N/A	0.0006	19	0.0210
38	0.0000	N/A	N/A	N/A	0.0006	20	0.0190
39	0.0000	N/A	N/A	N/A	0.0006	21	0.0170
40	0.0000	N/A	N/A	N/A	0.0006	22	0.0150
41	0.0000	N/A	N/A	N/A	0.0007	23	0.0140
42	0.0000	N/A	N/A	N/A	0.0008	24	0.0130
43	0.0000	N/A	N/A	N/A	0.0009	25	0.0120
44	0.0000	N/A	N/A	N/A	0.0010	26	0.0110
45	0.0000	N/A	N/A	N/A	0.0012	27	0.0100
46	0.0000	N/A	N/A	N/A	0.0012	28	0.0100
47	0.0000	N/A	N/A	N/A	0.0014	29	0.0100
48	0.0000	N/A	N/A	N/A	0.0018	30 & Above	0.0100
49	0.0000	N/A	N/A	N/A	0.0010	JO & ADOVE	0.0100
50	0.0000	N/A	N/A	N/A	0.0020		
51	0.0000	N/A	N/A	N/A	0.0024		
52	0.0000	N/A	N/A	N/A	0.0024		
53	0.0000	N/A	N/A	N/A	0.0028		
54	0.0000	N/A	N/A	N/A	0.0020		
55	0.0300	N/A	N/A	N/A	0.0032		
56	0.0300	N/A	N/A	N/A	0.0032		
57	0.0300	N/A	N/A	N/A	0.0036		
58	0.0300	N/A	N/A	N/A	0.0038		
59	0.0300	N/A	N/A	N/A	0.0040		
60	0.0300	N/A	N/A	N/A	0.0042		
61	0.0600	N/A	N/A	N/A	0.0042		
62	0.1500	N/A	N/A	N/A	0.0046		
63	0.1000	N/A	N/A	N/A	0.0048		
64	0.1500	N/A	N/A	N/A	0.0050		
65	0.3000	N/A	N/A	N/A	0.0052		
66	0.3000	N/A	N/A	N/A	0.0056		
67	0.3000	N/A	N/A	N/A	0.0060		
68	0.3000	N/A	N/A	N/A	0.0065		
69	0.3000	N/A	N/A	N/A	0.0003		
70	1.0000	N/A	N/A	N/A	0.0000		
70	1.0000	11/73	IN/A	111/73	0.0000		

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

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	0.0003	5	0.0633
24	0.0000	N/A	N/A	N/A	0.0003	6	0.0567
25	0.0000	N/A	N/A	N/A	0.0003	7	0.0500
26	0.0000	N/A	N/A	N/A	0.0003	8	0.0480
27	0.0000	N/A	N/A	N/A	0.0003	9	0.0460
28	0.0000	N/A	N/A	N/A	0.0003	10	0.0440
29	0.0000	N/A	N/A	N/A	0.0003	11	0.0420
30	0.0000	N/A	N/A	N/A	0.0003	12	0.0400
31	0.0000	N/A	N/A	N/A	0.0004	13	0.0380
32	0.0000	N/A	N/A	N/A	0.0004	14	0.0360
33	0.0000	N/A	N/A	N/A	0.0004	15	0.0340
34	0.0000	N/A	N/A	N/A	0.0004	16	0.0320
35	0.0000	N/A	N/A	N/A	0.0005	17	0.0300
36	0.0000	N/A	N/A	N/A	0.0005	18	0.0280
37	0.0000	N/A	N/A	N/A	0.0005	19	0.0260
38	0.0000	N/A	N/A	N/A	0.0006	20	0.0240
39	0.0000	N/A	N/A	N/A	0.0006	21	0.0220
40	0.0000	N/A	N/A	N/A	0.0006	22	0.0200
41	0.0000	N/A	N/A	N/A	0.0007	23	0.0180
42	0.0000	N/A	N/A	N/A	0.0008	24	0.0160
43	0.0000	N/A	N/A	N/A	0.0008	25	0.0140
44	0.0000	N/A	N/A	N/A	0.0009	26	0.0120
45	0.0000	N/A	N/A	N/A	0.0009	27	0.0100
46	0.0000	N/A	N/A	N/A	0.0010	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		
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	0.0015		
53	0.0000	N/A	N/A	N/A	0.0017		
54	0.0000	N/A	N/A	N/A	0.0019		
55	0.0400	N/A	N/A	N/A	0.0021		
56	0.0400	N/A	N/A	N/A	0.0022		
57	0.0400	N/A	N/A	N/A	0.0025		
58	0.0400	N/A	N/A	N/A	0.0028		
59	0.0400	N/A	N/A	N/A	0.0031		
60	0.0400	N/A	N/A	N/A	0.0036		
61	0.0600	N/A	N/A	N/A	0.0042		
62	0.1500	N/A	N/A	N/A	0.0048		
63	0.1000	N/A	N/A	N/A	0.0055		
64	0.1500	N/A	N/A	N/A	0.0063		
65	0.3000	N/A	N/A	N/A	0.0072		
66	0.3000	N/A	N/A	N/A	0.0082		
67	0.3000	N/A	N/A	N/A	0.0093		
68	0.3000	N/A	N/A	N/A	0.0104		
69	0.3000	N/A	N/A	N/A	0.0116		
70	1.0000	N/A	N/A	N/A	0.0000		
, ,					0.0000		

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

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	0.0350
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	0.0233
25	0.0000	0.0012	0.0003	0.0010	0.0002	7	0.0217
26	0.0000	0.0012	0.0003	0.0010	0.0003	8	0.0200
27	0.0000	0.0012	0.0003	0.0010	0.0003	9	0.0180
28	0.0000	0.0012	0.0003	0.0010	0.0004	10	0.0170
29	0.0000	0.0013	0.0003	0.0010	0.0004	11	0.0160
30	0.0000	0.0014	0.0003	0.0010	0.0004	12	0.0150
31	0.0000	0.0015	0.0004	0.0010	0.0003	13	0.0140
32	0.0000	0.0016	0.0004	0.0010	0.0004	14	0.0130
33	0.0000	0.0018	0.0005	0.0010	0.0004	15	0.0120
34	0.0000	0.0021	0.0005	0.0010	0.0004	16	0.0110
35	0.0000	0.0023	0.0006	0.0010	0.0004	17	0.0100
36	0.0000	0.0026	0.0006	0.0010	0.0004	18	0.0080
37	0.0000	0.0028	0.0007	0.0010	0.0004	19	0.0060
38	0.0000	0.0030	0.0008	0.0010	0.0004	20 & Above	0.0000
39	0.0000	0.0033	0.0008	0.0010	0.0004	20 0 7 15010	0.0000
40	0.0000	0.0035	0.0009	0.0010	0.0004		
41	0.0000	0.0038	0.0009	0.0010	0.0004		
42	0.0000	0.0040	0.0010	0.0010	0.0005		
43	0.0000	0.0042	0.0011	0.0010	0.0005		
44	0.0000	0.0045	0.0011	0.0010	0.0006		
45	0.0000	0.0047	0.0012	0.0010	0.0006		
46	0.0000	0.0050	0.0012	0.0010	0.0007		
47	0.0000	0.0052	0.0013	0.0010	0.0008		
48	0.0000	0.0054	0.0014	0.0010	0.0008		
49	0.0000	0.0057	0.0014	0.0010	0.0008		
50	0.2500	0.0059	0.0015	0.0010	0.0009		
51	0.1900	0.0062	0.0015	0.0010	0.0009		
52	0.1900	0.0064	0.0016	0.0010	0.0009		
53	0.2500	0.0066	0.0017	0.0010	0.0010		
54	0.2500	0.0069	0.0017	0.0010	0.0012		
55	0.4000	0.0071	0.0018	0.0010	0.0013		
56	0.4000	0.0074	0.0018	0.0010	0.0014		
57	0.4000	0.0076	0.0019	0.0010	0.0015		
58	0.4000	0.0070	0.0018	0.0010	0.0017		
59	0.4000	0.0065	0.0016	0.0010	0.0019		
60	1.0000	0.0000	0.0000	0.0000	0.0000		

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

Table A-11: **Rate of Separation From Active Service** Safety & Probation Tiers – 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	0.0003	7	0.0200
26	0.0000	0.0012	0.0003	0.0010	0.0003	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	0.0003	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	0.0003	14	0.0130
33	0.0000	0.0018	0.0005	0.0010	0.0004	15	0.0120
34	0.0000	0.0021	0.0005	0.0010	0.0004	16	0.0110
35	0.0000	0.0023	0.0006	0.0010	0.0004	17	0.0100
36	0.0000	0.0026	0.0006	0.0010	0.0004	18	0.0080
37	0.0000	0.0028	0.0007	0.0010	0.0004	19	0.0060
38	0.0000	0.0030	0.0008	0.0010	0.0004	20 & Above	0.0000
39	0.0000	0.0033	0.0008	0.0010	0.0004		
40	0.0000	0.0035	0.0009	0.0010	0.0004		
41	0.0000	0.0038	0.0009	0.0010	0.0004		
42	0.0000	0.0040	0.0010	0.0010	0.0005		
43	0.0000	0.0042	0.0011	0.0010	0.0005		
44	0.0000	0.0045	0.0011	0.0010	0.0006		
45	0.0000	0.0047	0.0012	0.0010	0.0006		
46	0.0000	0.0050	0.0012	0.0010	0.0007		
47	0.0000	0.0052	0.0013	0.0010	0.0008		
48	0.0000	0.0054	0.0014	0.0010	0.0008		
49	0.0000	0.0057	0.0014	0.0010	0.0008		
50	0.2500	0.0059	0.0015	0.0010	0.0009		
51	0.1900	0.0062	0.0015	0.0010	0.0009		
52	0.1900	0.0064	0.0016	0.0010	0.0009		
53	0.2500	0.0066	0.0017	0.0010	0.0010		
54	0.2500	0.0069	0.0017	0.0010	0.0012		
55	0.4000	0.0071	0.0018	0.0010	0.0013		
56	0.4000	0.0074	0.0018	0.0010	0.0014		
57	0.4000	0.0076	0.0019	0.0010	0.0015		
58	0.4000	0.0070	0.0018	0.0010	0.0017		
59	0.4000	0.0065	0.0016	0.0010	0.0019		
60	1.0000	0.0000	0.0000	0.0000	0.0000		

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

#### 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 Tier (CERL) of 1937, with provisions adopted by the SamCERA Board, effective through June 30, 2006. 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 TIERS**

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

Employees of the Mosquito Abatement District are eligible for participation in all General retirement tiers, except for Tier 3.

**Tier 1:** Employees hired on July 6, 1980 and earlier.

**Tier 2:** Employees hired after July 6, 1980, but on or before July 12, 1997.

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

five years of service, Tier 3 members can elect

membership under the open contributory tier. Members currently working in a contributory tier with Tier 3 service

may purchase an upgrade of their Tier 3 service.

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

#### MEMBER CONTRIBUTIONS

#### Basic:

**Tiers 1, 2 & 4:**Contributions are based on the entry age and class of each member and are required of all members in Tiers 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 tier 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.

(31591, 31700)

(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.

Tier 3: No member contributions are required under Tier 3

#### **Cost-of-Living:**

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

#### **Cost-Sharing:**

#### Tiers 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 service 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 service programs for members in

several of its unions.

Employer rates have not been adjusted to reflect the payment of the refundable employer pick-up of member contributions programs because the County payroll system

captures these costs on a pay-as-you-go basis while

processing each individual's biweekly pay.

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

employer pick-up of service 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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Tiers 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.

**Tier 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:** 

Tiers 1 & 2: Monthly average of a member's highest (31462)

12 consecutive months of compensation.

Tiers 3 & 4: Monthly average of a member's highest (31462.1)

36 consecutive months of compensation.

**Compensation Limit:** 

Tiers 1 & 2: 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.

Monthly Allowance: (31676.1) (31676.14)

Tiers 1, 2 & 4:General members:

1/60 x Final Compensation x General age

factor x years of service.

All Safety & Probation members: (31664.1)

3% x Final Compensation x Safety age factor x

Years of service.



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

#### Tier 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 Tier Age Factors).

#### Percentage of Final Average Compensation at Sample Ages:

<u>Tier</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)
Mosquito A.D.	1.182%	1.492%	1.971%	2.432%	(31676.1)
General Tier 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:**

Tiers 1, 2 & 4: Allowance may not exceed 100% of final compensation.

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

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.



(31497.3)

#### SERVICE RETIREMENT ALLOWANCE (Continued)

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

(31760.1)

**Tiers 1, 2 & 4:**Life Annuity payable to retired member with 60% continuance to an eligible survivor (or eligible

children).

**Tier 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)

(31497.71)

#### **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 a surviving spouse or beneficiary having an insurable interest in the life of the member.

**Option 3:** 50% of member's reduced allowance is payable to (31763)

a surviving spouse or beneficiary having an insurable interest in the life of the member.

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

payable to a surviving spouse or beneficiary(ies) having an insurable interest in the life of the

member.



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

A member may not revoke and name another beneficiary if the member elects (31782) Option 2, 3 or 4.

All allowances are made on a pro-rata basis (31600)

(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: Tiers 1, 2 & 4	(31720, 31720.5, 31720.6, 31720.7, 31720.9)	
Tier 3:	Not available under Tier 3.	(31487)
Monthly Allowance:	Greater of (1) 50% of final compensation, and (2) the service retirement allowance, if eligible to retire.	(31727.4)

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

spouse (or eligible children). (31760, 31786)



NONSERVICE-CONNECTED DISABILITY RETIREMENT ALLOWANCE										
Eligibility: Tiers 1, 2 & 4: Any aq incapa	(31720, 31836)									
Tier 3: Not av	railable under Tier 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:	(31726, 31726.5)								
General Members:	(a) 90% of 1/60 of Final Compensation x years of service, if member must rely on service in another retirement system in order to be eligible to retire, or allowance exceeds 1/3 of final compensation.	(31727(a))								
	(b) 90% 1/60 of Final Compensation x years of service projected to age 65, not to exceed 1/3 of Final Compensation.	(31727(b))								
Safety Members:	1/60 is replaced by 1/50 and age 65 is replaced by age 55 in (a) and (b) above.	(31727.2)								
Normal Form Of Payment:	Life Annuity with 60% continuance to a surviving spouse (or eligible children).	(31760.1)								

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SERVICE-CONNECTED DEATH BENEFITS								
Eligibility: Tiers 1, 2 & 4	Active members who die in service as a result of injury or disease arising out of and in the course of employment.	(31787)						
Tier 3:	Not available under Tier 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, a surviving spouse 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 surviving spouse.

#### 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)

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

A surviving spouse 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:**

**Tiers 1, 2 & 4:** Active members who die while in service or while physically or mentally incapacitated for the performance of duty.

(31780)

**Tier 3:** Not available under Tier 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, the following several optional death benefits are available to provide flexibility to survivors.

#### First Optional Death Benefit:

If a member who would have been entitled to a non-service-connected disability retirement allowance dies prior to retirement as a result of such disability, the surviving spouse (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, a surviving spouse (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:**

A surviving spouse 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 have been entitled if the member retired or been retired for a non-service-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 surviving spouse.

(31781.1)

#### NONSERVICE-CONNECTED DEATH BENEFITS (Continued)

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

If a member dies while eligible or a service retirement and the surviving spouse 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)

#### Fifth Optional Death Benefit:

If a member dies while eligible for a service retirement and the surviving spouse 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).

31705)

#### **DEFERRED VESTED BENEFITS**

#### **Eligibility:**

**Tiers 1, 2 & 4:** Age 50 with 10 years of service. Member (31700)

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.

**Tier 3:** Age 55 with 10 years of service. (31497.3)

**Monthly Allowance:** 

Tiers 1, 2 & 4: Same as service retirement allowance; (31703, 31704,

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 (31702)

effective date of the deferred retirement allowance, the member's accumulated contributions are paid to the estate or to the

named beneficiary.

Tier 3: Same as service retirement allowance at (31497.3)

normal retirement age 65 or in an

actuarially equivalent reduced amount at early retirement, after age 55.

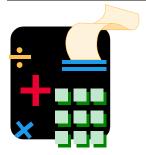
No benefit is paid for death while deferred.

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%.										
Tier 1:	General & Safety Members (and their beneficiaries) are limited to a maximum 5% cost-of-living increase.	(31870.2)								
	Probation Members (and their beneficiaries) are limited to a maximum 3% cost-of-living increase.	(31870.1)								
Tier 2:	All members Members (and their beneficiaries) are limited to a maximum 3% cost-of-living increase.	(31870.1)								
Tier 3:	Tier 3 does not have a COLA.	(31487)								
Tier 4:	All members  Members (and their beneficiaries) are limited to a maximum 2% cost-of-living increase.	(31870)								
COLA Bank:	Tier 1	(31870.1,								

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.

**Tiers 2 & 4**Tiers 2 & 4 do not have a COLA bank. (31874.4)

#### Appendix C: Valuation Data and Schedules



Data on SamCERA membership as of June 30, 2006 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, 2006 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, used total prior year earnings.

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 Tier Distribution of Retired Members

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



Exhibit C-1: SAMCERA Membership - Active Members as of June 30, 2006

		A					Average
	Total			Average	N	onthly	Credited
	Number	Α	nnual Salary	Age	;	Salary	Service
General Memi	bers						
Tier 1	212	\$	17,168,353	58.2	\$	6,749	30.0
Tier 2	1,553		114,571,610	50.4		6,148	16.2
Tier 3	133		7,961,057	42.8		4,988	8.4
Tier 4	2,716		173,233,305	41.1		5,315	3.7
Total	4,614	\$	312,934,324	45.1	\$	5,652	9.2
Safety Membe	ers						
Tier 1	27	\$	3,246,248	54.6	\$	10,019	29.2
Tier 2	179		18,439,809	45.9		8,585	16.9
Tier 4	222		19,721,715	38.0		7,403	4.5
Total	428	\$	41,407,772	42.3	\$	8,062	11.2
Probation Me	mbers						
Tier 1	13	\$	1,206,682	57.4	\$	7,735	26.5
Tier 2	97		7,541,969	43.7		6,479	15.0
Tier 4	203		13,260,559	36.2		5,444	4.5
Total	313	\$	22,009,210	39.4	\$	5,860	8.7
<b>Grand Total</b>	5,355	\$	376,351,306	44.5	\$	5,857	9.4

Exhibit C-2: SAMCERA Membership - Deferred Vested Members as of June 30, 2006

		Average
-	Number	Age
General Memb	pers	
Tier 1 Tier 2 Tier 3 Tier 4	70 541 126 260 997	56.9 47.4 51.2 42.6 47.3
Safety Member	ers	
Tier 1 Tier 2 Tier 4 Total	39 17 56	43.2 36.9 41.3
Probation Mei	mbers	
Tier 1 Tier 2 Tier 4 Total	- 18 18 36	42.3 36.2 39.3
Grand Total	1,089	46.7

Exhibit C-3a: SAMCERA Membership – Retired Members as of June 30, 2006

	Detinement			Manathh		Average
	Retirement			Monthly		Monthly
Plan	Туре	Number		Benefit	_	Benefit
General Tiers:						
	Healthy	2,495	\$	4,697,506	\$	1,883
	Disabled	257		457,864		1,782
	Beneficiaries	433		547,176		1,264
	Total	3,185	\$	5,702,547	\$	1,790
Safety Tiers:						
•	Healthy	214	\$	1,117,523	\$	5,222
	Disabled	82		309,490		3,774
	Beneficiaries	51		153,479		3,009
	Total	347	\$	1,580,493	\$	4,555
Probation Tiers:						
	Healthy	74	\$	279,036	\$	3,771
	Disabled	3		5,268		1,756
	Beneficiaries	4		16,457		4,114
	Total	81	\$	300,761	\$	3,713
Grand Totals						
	Healthy	2,783	\$	6,094,066	\$	2,190
	Disabled	342	•	772,622	·	2,259
	Beneficiaries	488		717,113	_	1,469
	Total	3,613	\$	7,583,801	\$	2,099

Exhibit C-3b: SAMCERA Membership – Retired Members as of June 30, 2006 Subtotaled by Class and Retirement Type

Plan	Retirement Type	Number		Monthly Benefit		Average Monthly Benefit
General Plans:						
	Healthy	2,495	\$	4,697,506	\$	1,883
	Disabled	257		457,864		1,782
	Beneficiaries	433		547,176		1,264
	Total	3,185	\$	5,702,547	\$	1,790
Safety Plans:						
	Healthy	214	\$	1,117,523	\$	5,222
	Disabled	82		309,490		3,774
	Beneficiaries	51	_	153,479	_	3,009
	Total	347	\$	1,580,493	\$	4,555
Probation Plans:						
	Healthy	74	\$	279,036	\$	3,771
	Disabled	3		5,268		1,756
	Beneficiaries	4		16,457	_	4,114
	Total	81	\$	300,761	\$	3,713
Grand Totals						
	Healthy	2,783	\$	6,094,066	\$	2,190
	Disabled	342		772,622		2,259
	Beneficiaries	488		717,113	_	1,469
	Total	3,613	\$	7,583,801	\$	2,099

Exhibit C-4: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2006 All Members

Count

	Years of Service									Total
Age	0-1	1-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	61	31	3	0	0	0	0	0	0	95
25-29	146	194	58	1	0	0	0	0	0	399
30-34	136	286	232	24	0	0	0	0	0	678
35-39	97	243	278	111	27	1	0	0	0	757
40-44	63	172	226	115	130	26	0	0	0	732
45-49	76	148	188	119	152	79	21	0	0	783
50-54	62	138	137	100	131	107	53	23	0	751
55-59	44	107	136	79	113	81	61	58	11	690
60-64	13	47	66	49	61	52	38	33	12	371
65 & Over	4	20	19	14	14	12	9	2	5	99
Total Count	702	1,386	1,343	612	628	358	182	116	28	5,355

_				Ye	ars of Servic	е				Average
Age	0-1	1-2	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	43,915	47,397	54,760	-	-	-	-	-	-	45,394
25-29	51,115	57,470	60,357	65,545	-	-	-	-	-	55,585
30-34	57,815	67,355	67,944	67,746	-	-	-	-	-	65,657
35-39	57,368	70,250	74,118	74,380	77,482	66,061	-	-	-	70,878
40-44	54,819	65,718	71,811	76,194	78,834	72,849	-	-	-	70,890
45-49	55,518	69,141	70,909	73,105	79,773	80,497	81,311	-	-	72,382
50-54	67,533	67,927	75,621	76,935	79,893	82,045	91,884	74,190	-	76,479
55-59	63,222	68,547	73,697	74,411	78,462	79,984	87,108	84,681	80,960	76,055
60-64	78,147	57,783	71,428	74,855	72,332	68,631	71,861	100,426	89,298	73,346
65 & Over	52,688	52,083	64,335	53,618	58,124	71,381	66,684	58,924	77,247	60,606
Avg. Annual Compensation	56,179	65,624	71,416	74,183	78,064	78,219	83,637	86,636	83,871	70,280



Exhibit C-4a: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2006 General Members

Count

	Years of Service									Total
Age	0-1	1-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	57	30	3	0	0	0	0	0	0	90
25-29	126	169	47	1	0	0	0	0	0	343
30-34	117	239	161	19	0	0	0	0	0	536
35-39	89	201	207	76	20	1	0	0	0	594
40-44	58	157	180	92	97	20	0	0	0	604
45-49	73	136	175	110	119	56	16	0	0	685
50-54	59	127	133	94	111	88	40	23	0	675
55-59	43	99	133	76	107	70	55	49	11	643
60-64	11	44	62	49	58	50	36	29	11	350
65 & Over	4	17	19	13	14	12	9	2	4	94
Total Count	637	1,219	1,120	530	526	297	156	103	26	4,614

				Ye	ars of Servic	e				Average
Age	0-1	1-2	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	43,085	46,408	54,760	-	-	-	-	-	-	44,582
25-29 30-34	50,757 55,897	55,239 66,265	55,163 64,026	65,545 63,754	-	-	-	-	-	53,612 63,241
35-39	55,738	69,041	71,333	69,259	68,406	66,061	-	-	-	67,848
40-44 45-49	52,686 53,786	64,774 67,827	69,092 69,863	72,096 70,873	73,903 75,028	65,025 71,607	- 73,223	-	-	67,490 69,026
50-54	66,210	66,273	74,741	76,141	75,740	77,901	84,568	74,190	-	73,737
55-59 60-64	62,513 76,208	67,176 56,828	73,400 70,738	73,890 74,855	78,251 70,268	75,494 67,172	84,056 71,303	79,736 96,660	80,960 86,783	74,330 71,861
65 & Over	52,688	46,853	64,335	51,479	58,124	71,381	66,684	58,924	70,662	59,253
Avg. Annual Compensation	54,910	64,151	69,468	71,848	74,400	73,170	79,131	82,858	81,839	67,823



Exhibit C-4b: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2006 Safety Members

Count

				Υe	ears of Service	e				Total
Age	0-1	1-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	2	1	0	0	0	0	0	0	0	3
25-29	3	13	8	0	0	0	0	0	0	24
30-34	10	23	28	3	0	0	0	0	0	64
35-39	6	19	38	19	5	0	0	0	0	87
40-44	3	9	28	16	19	4	0	0	0	79
45-49	2	8	7	7	26	17	5	0	0	72
50-54	3	7	3	4	14	13	12	0	0	56
55-59	1	7	1	2	3	9	3	5	0	31
60-64	2	1	1	0	1	1	0	4	0	10
65 & Over	0	1	0	0	0	0	0	0	1	2
Total Count	32	89	114	51	68	44	20	9	1	428

				Υe	ears 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	63,401	77,063	-	-	-	-	-	-	-	67,955
25-29 30-34	73,267 84,866	83,319 85,252	85,162 87,602	- 89,562	-	-	-	- -	-	82,677 86,422
35-39	82,374	93,299	92,152	97,321	113,980	-	-	-	-	94,111
40-44	95,294	81,881	91,034	100,990	107,259	107,712	-	-	-	96,916
45-49	107,999	94,036	92,034	98,638	100,936	108,409	107,194	-	-	101,476
50-54	93,558	95,544	112,198	92,725	106,134	108,973	115,889	-	-	106,253
55-59	93,701	87,941	104,154	89,978	94,364	114,960	128,565	121,589	-	106,605
60-64	88,814	83,849	105,526	-	92,119	120,972	-	127,730	-	109,102
65 & Over	-	88,814	-	-	-	-	-	-	103,589	96,202
Avg. Annual Compensation	85,731	88,089	91,012	97,548	104,312	110,138	115,617	124,318	103,589	96,747



Exhibit C-4c: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2006 Probation Members

Count

				Υe	ears of Service	e				Total
Age	0-1	1-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	2	0	0	0	0	0	0	0	0	2
25-29	17	12	3	0	0	0	0	0	0	32
30-34	9	24	43	2	0	0	0	0	0	78
35-39	2	23	33	16	2	0	0	0	0	76
40-44	2	6	18	7	14	2	0	0	0	49
45-49	1	4	6	2	7	6	0	0	0	26
50-54	0	4	1	2	6	6	1	0	0	20
55-59	0	1	2	1	3	2	3	4	0	16
60-64	0	2	3	0	2	1	2	0	1	11
65 & Over	0	2	0	1	0	0	0	0	0	3
Total Count	33	78	109	31	34	17	6	4	1	313

_				Ye	ears of Servic	е				Average
Age	0-1	1-2	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Hadar OF	40.000									40.000
Under 25	48,086	-	-	-	-	-	-	-	-	48,086
25-29	49,862	60,883	75,587	-	-	-	-	-	=	56,407
30-34	52,686	61,053	69,812	72,944	-	-	-	-	-	65,221
35-39	54,850	61,782	70,819	71,466	77,002	-	-	-	-	67,963
40-44	55,965	66,156	69,092	73,387	74,423	81,364	-	-	-	70,834
45-49	77,002	64,017	76,762	106,505	81,835	84,394	-	-	-	80,225
50-54	-	72,130	82,852	82,663	95,506	84,473	96,450	-	-	85,651
55-59	-	68,574	78,223	82,852	70,086	79,753	101,611	99,120	-	86,184
60-64	-	65,767	74,321	-	122,292	89,238	81,909	-	116,961	88,100
65 & Over	-	78,177	-	81,422	-	-	-	-	-	79,258
Avg. Annual Compensation	52,019	63,011	70,938	75,666	82,254	83,804	94,184	99,120	116,961	70,317



Exhibit C-5: Distribution of Retired Members by Age and Retirement Year as of June 30, 2006 All Tiers Combined

				Retire	ment Year				Total		erage onthly
Age	Pre-1974	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-06	Count	Be	nefit
Under 35	-	-	-	-	-	6	-	-	6	\$	699
35-39	-	-	-	-	-	1	6	2	9		2,384
40-44	-	-	-	1	1	7	7	-	16		1,931
45-49	-	-	-	1	2	9	18	-	30		1,928
50-54	-	-	-	2	8	13	63	53	139		2,078
55-59	1	-	3	6	23	63	162	93	351		2,483
60-64	1	1	4	15	46	144	216	135	562		2,832
65-69	6	2	4	35	139	165	191	49	591		2,355
70-74	5	12	31	67	111	154	70	10	460		1,956
75-79	3	20	82	102	173	68	13	1	462		1,858
80-84	14	77	124	185	69	12	3	-	484		1,682
85-89	41	91	146	64	6	1	-	-	349		1,559
90-94	27	61	30	3	-	-	-	-	121		1,317
95-99	13	12	3	-	-	-	-	1	29		1,584
100 & Over	2	2	-	-	-	-	-	-	4		974
Total Count	113	278	427	481	578	643	749	344	3,613		
Avg Monthly Benefit	\$ 1,402	\$ 1,537	\$ 1,402	\$ 1,811	\$ 1,864	\$ 2,016	\$ 2,602	\$ 3,504		\$	2,099

Exhibit C-5a: Distribution of Retired Members by Age and Retirement Year as of June 30, 2006 General Tiers Combined

				Retire	ment Year				Total	Average Monthly
Age	Pre-1974	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-06	Count	Benefit
Under 35	-	-	-	-	-	6	-	-	6	\$ 699
35-39	-	-	-	-	-	-	4	2	6	1,896
40-44	-	-	-	1	1	5	3	-	10	1,446
45-49	-	-	-	1	2	8	12	-	23	1,646
50-54	-	-	-	1	5	10	57	38	111	1,486
55-59	1	-	2	2	16	54	123	73	271	1,649
60-64	1	-	2	9	36	99	159	127	433	2,343
65-69	2	2	3	24	111	130	171	48	491	1,951
70-74	4	9	29	59	107	151	65	10	434	1,847
75-79	3	17	78	92	172	67	12	1	442	1,778
80-84	7	69	120	185	69	12	3	-	465	1,598
85-89	35	87	146	64	6	1	-	-	339	1,507
90-94	27	61	30	3	-	-	-	-	121	1,317
95-99	13	12	3	-	-	-	-	1	29	1,584
100 & Over	2	2	-	-	-	-	-	-	4	974
Total Count	95	259	413	441	525	543	609	300	3,185	
Avg Monthly Benefit	\$ 1,137	\$ 1,398	\$ 1,353	\$ 1,674	\$ 1,639	\$ 1,609	\$ 2,100	\$ 3,074		\$ 1,790

Exhibit C-5b: Distribution of Retired Members by Age and Retirement Year as of June 30, 2006 Safety Tiers Combined

				Retire	ment Year				Total	Average Monthly
Age	Pre-1974	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-06	Count	Benefit
Under 35	-	-	-	-	-	-	-	-	-	\$ -
35-39	-	-	-	-	-	1	2	-	3	3,359
40-44	-	-	-	-	-	2	3	-	5	3,025
45-49	-	-	-	-	-	1	4	-	5	3,491
50-54	-	-	-	1	3	3	5	9	21	4,401
55-59	-	-	1	4	7	7	36	17	72	5,378
60-64	-	1	2	6	10	35	41	2	97	4,736
65-69	4	-	1	11	26	26	8	1	77	4,572
70-74	1	3	2	8	4	-	1	-	19	3,850
75-79	-	3	4	10	1	-	1	-	19	3,639
80-84	7	8	4	-	-	-	-	-	19	3,756
85-89	6	4	-	-	-	-	-	-	10	3,310
90-94	-	-	-	-	-	-	-	-	-	-
95-99	-	-	-	-	-	-	-	-	-	-
100 & Over	-	-	-	-	-	-	-	-	-	-
Total Count	18	19	14	40	51	75	101	29	347	
Avg Monthly Benefit	\$ 2,797	\$ 3,432	\$ 2,865	\$ 3,325	\$ 3,937	\$ 4,324	\$ 5,493	\$ 7,307		\$ 4,555

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Exhibit C-5c: Distribution of Retired Members by Age and Retirement Year as of June 30, 2006 Probation Tiers Combined

				Retire	ment Year				Total	Average Monthly
Age	Pre-1974	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-06	Count	Benefit
Under 35	-	-	-	-	-	-	-	-	-	\$ -
35-39	-	-	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	-	1	-	1	1,310
45-49	-	-	-	-	-	-	2	-	2	1,261
50-54	-	-	-	-	-	-	1	6	7	4,511
55-59	-	-	-	-	-	2	3	3	8	4,677
60-64	-	-	-	-	-	10	16	6	32	3,668
65-69	-	-	-	-	2	9	12	-	23	3,572
70-74	-	-	-	-	-	3	4	-	7	3,569
75-79	-	-	-	-	-	1	-	-	1	3,421
80-84	-	-	-	-	-	-	-	-	-	-
85-89	-	-	-	-	-	-	-	-	-	-
90-94	-	-	-	-	-	-	-	-	-	-
95-99	-	-	-	-	-	-	-	-	-	-
100 & Over	-	-	-	-	-	-	-	-	-	-
Total Count	-	-	-	-	2	25	39	15	81	
Avg Monthly Benefit	\$ -	\$ -	\$ -	\$ -	\$ 7,970	\$ 3,921	\$ 2,959	\$ 4,759		\$ 3,713



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#### **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 (Me	osq. Dist.)	Proba	ition	Saf	ety
Entry Age *	Tiers 1&2	Tier 4	Tiers 1&2	Tier 4	Tiers 1&2	Tier 4	Tiers 1&2	Tier 4
16	5.07%	4.85%	4.34%	4.16%	5.50%	5.27%	6.88%	6.58%
17	5.16%	4.94%	4.43%	4.24%	5.60%	5.36%	7.00%	6.71%
18	5.26%	5.03%	4.51%	4.32%	5.71%	5.46%	7.13%	6.83%
19	5.35%	5.13%	4.59%	4.40%	5.81%	5.56%	7.26%	6.95%
20	5.45%	5.22%	4.68%	4.48%	5.92%	5.66%	7.40%	7.08%
21	5.55%	5.32%	4.77%	4.56%	6.02%	5.77%	7.53%	7.21%
22	5.66%	5.42%	4.86%	4.65%	6.13%	5.87%	7.67%	7.34%
23	5.76%	5.51%	4.95%	4.74%	6.25%	5.98%	7.81%	7.47%
24	5.87%	5.62%	5.04%	4.82%	6.36%	6.09%	7.95%	7.61%
25	5.97%	5.72%	5.13%	4.91%	6.47%	6.20%	8.09%	7.75%
26	6.08%	5.82%	5.23%	5.00%	6.59%	6.31%	8.24%	7.89%
27	6.19%	5.93%	5.32%	5.09%	6.71%	6.42%	8.39%	8.03%
28	6.30%	6.04%	5.42%	5.19%	6.83%	6.54%	8.54%	8.18%
29	6.42%	6.15%	5.52%	5.28%	6.96%	6.66%	8.70%	8.33%
30	6.54%	6.26%	5.62%	5.38%	7.08%	6.78%	8.85%	8.48%
31	6.65%	6.37%	5.72%	5.48%	7.21%	6.91%	9.02%	8.63%
32	6.77%	6.49%	5.83%	5.58%	7.35%	7.03%	9.18%	8.79%
33	6.90%	6.60%	5.93%	5.68%	7.48%	7.16%	9.35%	8.95%
34	7.02%	6.72%	6.04%	5.78%	7.62%	7.30%	9.53%	9.12%
35	7.15%	6.85%	6.15%	5.89%	7.77%	7.43%	9.71%	9.29%
36	7.28%	6.97%	6.26%	5.99%	7.91%	7.57%	9.89%	9.46%
37	7.42%	7.10%	6.37%	6.10%	8.06%	7.71%	10.08%	9.63%
38	7.55%	7.23%	6.49%	6.21%	8.21%	7.84%	10.27%	9.80%
39	7.69%	7.37%	6.61%	6.33%	8.36%	7.97%	10.45%	9.97%
40	7.84%	7.50%	6.73%	6.44%	8.51%	8.10%	10.63%	10.13%
41	7.99%	7.64%	6.85%	6.56%	8.65%	8.22%	10.81%	10.28%
42	8.14%	7.78%	6.98%	6.68%	8.79%	8.34%	10.98%	10.42%
43	8.29%	7.92%	7.11%	6.80%	8.91%	8.44%	11.14%	10.55%
44	8.44%	8.05%	7.24%	6.93%	9.03%	8.52%	11.29%	10.66%
45	8.59%	8.18%	7.37%	7.06%	9.14%	8.59%	11.42%	10.74%
46	8.73%	8.30%	7.52%	7.19%	9.23%	8.63%	11.54%	10.79%
47	8.87%	8.41%	7.66%	7.32%	9.30%	8.63%	11.62%	10.79%
48	9.00%	8.52%	7.80%	7.45%	9.33%	8.93%	11.66%	11.17%
49	9.12%	8.61%	7.94%	7.57%	9.33%	9.27%	11.66%	11.58%
50	9.23%	8.67%	8.08%	7.69%	9.33%	9.27%	11.66%	11.58%
51	9.32%	8.71%	8.21%	7.81%	9.33%	9.27%	11.66%	11.58%
52	9.39%	8.71%	8.34%	7.92%	9.33%	9.27%	11.66%	11.58%
53	9.41%	9.02%	8.47%	8.01%	9.33%	9.27%	11.66%	11.58%
54	9.41%	9.35%	8.58%	8.10%	9.33%	9.27%	11.66%	11.58%
55	9.41%	9.35%	8.68%	8.16%	9.33%	9.27%	11.66%	11.58%
56	9.41%	9.35%	8.77%	8.20%	9.33%	9.27%	11.66%	11.58%
57	9.41%	9.35%	8.83%	8.20%	9.33%	9.27%	11.66%	11.58%
58	9.41%	9.35%	8.86%	8.49%	9.33%	9.27%	11.66%	11.58%
59	9.41%	9.35%	8.86%	8.80%	9.33%	9.27%	11.66%	11.58%
60	9.41%	9.35%	8.86%	8.80%	9.33%	9.27%	11.66%	11.58%

<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 relect employer pick-up.



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

	General (	(County)	General (Mo	sq. Dist.)***	Proba	ation	Safe	ty**
Entry Age *	Tiers 1&2	Tier 4	Tiers 1&2	Tier 4	Tiers 1&2	Tier 4	Tiers 1&2	Tier 4
16	8.07%	7.85%	4.34%	4.16%	9.00%	8.77%	11.88%	11.58%
17	8.16%	7.94%	4.43%	4.24%	9.10%	8.86%	12.00%	11.71%
18	8.26%	8.03%	4.51%	4.32%	9.21%	8.96%	12.13%	11.83%
19	8.35%	8.13%	4.59%	4.40%	9.31%	9.06%	12.26%	11.95%
20	8.45%	8.22%	4.68%	4.48%	9.42%	9.16%	12.40%	12.08%
21	8.55%	8.32%	4.77%	4.56%	9.52%	9.27%	12.53%	12.21%
22	8.66%	8.42%	4.86%	4.65%	9.63%	9.37%	12.67%	12.34%
23	8.76%	8.51%	4.95%	4.74%	9.75%	9.48%	12.81%	12.47%
24	8.87%	8.62%	5.04%	4.82%	9.86%	9.59%	12.95%	12.61%
25	8.97%	8.72%	5.13%	4.91%	9.97%	9.70%	13.09%	12.75%
26	9.08%	8.82%	5.23%	5.00%	10.09%	9.81%	13.24%	12.89%
27	9.19%	8.93%	5.32%	5.09%	10.21%	9.92%	13.39%	13.03%
28	9.30%	9.04%	5.42%	5.19%	10.33%	10.04%	13.54%	13.18%
29	9.42%	9.15%	5.52%	5.28%	10.46%	10.16%	13.70%	13.33%
30	9.54%	9.26%	5.62%	5.38%	10.58%	10.28%	13.85%	13.48%
31	9.65%	9.37%	5.72%	5.48%	10.71%	10.41%	14.02%	13.63%
32	9.77%	9.49%	5.83%	5.58%	10.85%	10.53%	14.18%	13.79%
33	9.90%	9.60%	5.93%	5.68%	10.98%	10.66%	14.35%	13.95%
34	10.02%	9.72%	6.04%	5.78%	11.12%	10.80%	14.53%	14.12%
35	10.15%	9.85%	6.15%	5.89%	11.27%	10.93%	14.71%	14.29%
36	10.28%	9.97%	6.26%	5.99%	11.41%	11.07%	14.89%	14.46%
37	10.42%	10.10%	6.37%	6.10%	11.56%	11.21%	15.08%	14.63%
38	10.55%	10.23%	6.49%	6.21%	11.71%	11.34%	15.27%	14.80%
39	10.69%	10.37%	6.61%	6.33%	11.86%	11.47%	15.45%	14.97%
40	10.84%	10.50%	6.73%	6.44%	12.01%	11.60%	15.63%	15.13%
41	10.99%	10.64%	6.85%	6.56%	12.15%	11.72%	15.81%	15.28%
42	11.14%	10.78%	6.98%	6.68%	12.29%	11.84%	15.98%	15.42%
43	11.29%	10.92%	7.11%	6.80%	12.41%	11.94%	16.14%	15.55%
44	11.44%	11.05%	7.24%	6.93%	12.53%	12.02%	16.29%	15.66%
45	11.59%	11.18%	7.37%	7.06%	12.64%	12.09%	16.42%	15.74%
46	11.73%	11.30%	7.52% 7.66%	7.19%	12.73%	12.13%	16.54%	15.79%
47 48	11.87% 12.00%	11.41% 11.52%	7.80% 7.80%	7.32% 7.45%	12.80% 12.83%	12.13% 12.43%	16.62% 16.66%	15.79% 16.17%
49	12.12%	11.61%	7.94%	7.45%	12.83%	12.43%	16.66%	16.17%
50	12.12%	11.67%	8.08%	7.69%	12.83%	12.77%	16.66%	16.58%
51	12.32%	11.07 %	8.21%	7.81%	12.83%	12.77%	16.66%	16.58%
52	12.39%	11.71%	8.34%	7.92%	12.83%	12.77%	16.66%	16.58%
53	12.41%	12.02%	8.47%	8.01%	12.83%	12.77%	16.66%	16.58%
54	12.41%	12.35%	8.58%	8.10%	12.83%	12.77%	16.66%	16.58%
55	12.41%	12.35%	8.68%	8.16%	12.83%	12.77%	16.66%	16.58%
56	12.41%	12.35%	8.77%	8.20%	12.83%	12.77%	16.66%	16.58%
57	12.41%	12.35%	8.83%	8.20%	12.83%	12.77%	16.66%	16.58%
58	12.41%	12.35%	8.86%	8.49%	12.83%	12.77%	16.66%	16.58%
59	12.41%	12.35%	8.86%	8.80%	12.83%	12.77%	16.66%	16.58%
60	12.41%	12.35%	8.86%	8.80%	12.83%	12.77%	16.66%	16.58%

<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 relect employer pick-up.



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

<sup>\*\*\*</sup>Mosquito 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.

