### ACTUARIAL VALUATION June 30, 2007

Revised as of September 19, 2008



Ву

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September 19, 2008

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Board of Retirement Santa Barbara County Employees' Retirement System 3916 State Street, Suite 210 Santa Barbara, CA 93105

#### Dear Members of the Board:

As requested, we have completed a revised Actuarial Valuation of the Santa Barbara County Employees Retirement System (SBCERS) as of June 30, 2007 for determining contributions beginning July 1, 2008. The major findings of the valuation are contained in this report.

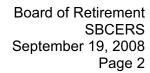
This report reflects the pension benefit provisions in effect as of June 30, 2007. It also includes the costs of the changes for the new Safety Plan 6A and 6B members effective February 25, 2008 and the new General Plan 5C, effective March 10, 2008. This report also reflects the reclassification of a portion of the Health Coverage Reserve as valuation assets in the Undesignated Earnings Reserve based upon the Board's anticipated action at its September 19, 2008 meeting.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System'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. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is 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 Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions, and supporting Recommendations of the American Academy of Actuaries.

We further certify that all costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer our best estimate of anticipated experience affecting the System. Nevertheless, the emerging costs will vary from those presented in this report to the extent actual experience differs from that projected by the actuarial assumptions. The Board of Retirement has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix A.

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Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for SBCERS. Actuarial computations presented in this report under GASB Statements No. 25 and 27 are for purposes of fulfilling financial accounting requirements. The computations prepared for these purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. 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 SBCERS for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning SBCERS' operations, and uses SBCERS' data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

We would like to express our appreciation to Mr. Oscar Peters, Retirement Administrator 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,

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Consulting Actuary

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



#### Overview

#### 2007 Valuation Results

	June 30, 2007	June 30, 2006
Employer Contribution Rate	23.06%	21.09%
Funded Ratio	87.1%	84.6%

We are pleased to present the results of the June 30, 2007 actuarial valuation. Key points are summarized as follows:

• Investment Returns: SBCERS' investment returns have exceeded the actuarial assumed rate over the past three years on a market value basis. However, these gains are offset by deferred losses recognized from prior years when using the actuarial asset smoothing method. The Valuation Assets used to fund the basic pension benefits did not experience an asset gain until this year.

Note that currently a \$165 million net asset gain is being deferred. This is because the asset-smoothing method has recognized all of the losses from earlier in this decade, but only a portion of the gains from the prior four years. These deferred gains will be reflected in future valuations.

Funding: The Funded Ratio increased from 84.6% to 87.1%. This was primarily due to the new classification of a portion of the Health Reserves based upon the anticipated action by the Board of Retirement at its September 19, 2008 meeting. The increase in the funded ratio based upon that change was partially offset by changes in actuarial methods and assumptions as discussed in the 2007 Investigation of Experience report.

In prior valuation reports, the non valuation assets were included in the actuarial balance sheet as both assets and equal, but offsetting, liabilities. In last year's actuarial valuation report, the funded ratio was reported as 85.8% as of June 30, 2006 when the non valuation assets were included, and the funding ratio was reported as 84.6% when only considering valuation assets and liabilities. For this valuation report, we have excluded non valuation assets. For this reason, we compared the current ratio of 87.1% to 84.6% as of June 30, 2006.

Contribution Rates: The Employer Normal Cost rate, 13.93%, increased from 11.80%. This increase was primarily due to the change in actuarial methods regarding the probability of refund after retirement eligibility. The implementation of Safety Plan 6 and the implementation of General Plan 5C also increased contribution rates.

## Overview (continued)

The Employer's required contribution rate to finance the Unfunded Actuarial Accrued Liability (UAAL) over the layered 15 year amortization periods decreased from 9.29% to 9.13%. Based on the changes in the actuarial methods and assumptions, this rate was expected to be about 13.40%. The asset gain realized since the last valuation reduced the rate by nearly 2% and the transfer of Health Reserves reduced the rate by approximately 2.5%.

The overall result is an increase in the required total contribution rate from the prior valuation of 1.97% (from 21.09% to 23.06% of payroll). Note that the 21.09% total contribution rate differs slightly from what was reported in the 2006 actuarial valuation report. The 21.09% was calculated based upon weighting the contribution rate for each individual tier by the payroll in the 2006 valuation report.

### **Employer Contribution Rate**

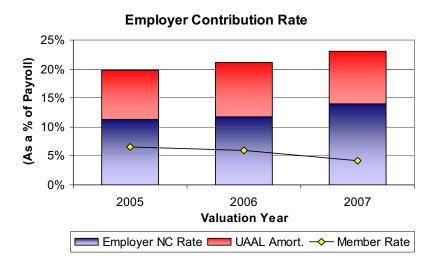
Under the Board's current funding objectives, the calculated Employer contribution rate for the fiscal year beginning July 1, 2008 is 23.06% of payroll. This is equal to the payment of the Employer Normal Cost rate plus a 15-year layered amortization of the UAAL.

It should be noted that the 23.06% is a weighted average for all SBCERS tiers. The actual percent of payroll to be contributed by the Employer varies by tier. See Exhibits 10a, 10b and 10c for Normal Cost rates by tier. See Exhibits 11a, 11b and 11c for the UAAL contribution rates by tier. See Exhibits 12a, 12b and 12c for the total Employer contribution rates by tier.

The new rate effective for the fiscal year beginning July 1, 2008 of 23.06% 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 in 15 year layered amortization periods.

#### Employer Contribution Rate (continued)

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



#### Comparison with Last Year

A detailed analysis of the sources of the changes since the 2006 valuation is shown in the Gain and Loss Exhibit 13, Section 6 of this report. As discussed earlier, the primary cause for the increase in the contribution rate was a change in the actuarial methods. In addition, there were increases in the contribution rate due to members entering Safety Plan 6 and General Plan 5C. These increases were partially offset by the large asset gain and the reclassification of the Health Reserves which increased the Funded Ratio and decreased the UAAL contribution rate.

Also the Special Allowance benefits and reserves were transferred from non valuation to valuation status as of June 30, 2007. Additional ad hoc COLA benefits were granted by the Board in June 2007 and are reflected in this report along with the transfer of assets for those benefits.

#### Comparison with Last Year (continued)

The following chart summarizes how these and various other factors affected the overall funding of SBCERS and the Employer Contribution Rate, as compared to the last valuation.

Sources of Change	Employer Contribution Rate	Funded Ratio
June 30, 2006 Actuarial Valuation	21.09%	84.6%
Assumption Changes Methodology Changes	1.58% 3.78%	-2.2% -3.9%
Modified June 30, 2006 Actuarial Valuation with new assumptions	26.45%	78.5%
Expected Year-to-Year Change	0.29%	1.1%
Expected June 30, 2007 Actuarial Valuation	26.74%	79.6%
Special Allowances Asset Gain/Loss Transfer from Health Coverage Reserves Safety Plan 6 Changes General Plan 5C Changes Retiree COLAs Less than Expected Mortality Experience Salary / Payroll Variation Assumption Changes Other	0.00% -1.73% -2.52% 0.38% 0.66% 0.00% -0.21% 0.38% -0.52% -0.12%	0.2% 2.9% 4.3% -0.7% 0.1% 0.0% 0.4% -0.6% 0.9% 0.0%
Total Change	-3.68%	7.5%
Actual June 30, 2007 Actuarial Valuation	23.06%	87.1%

#### Safety Member Benefit Changes

Effective February 25, 2008, certain Safety members will move from Plan 4 (3% @ 55) to Plan 6 (3% @ 50). The following chart summarizes these changes.

	Plan 4A	Plan 4B	Plan 4C	Plan 4D	Plan 6A	Plan 6B	Total
Count as of 7/1/1007 Members moving from Plan 4B to 4C on 1/14/2008	342	126 (114)	243 114	292	0	0	1,003
Members moving from Plan 4A to 6A on 2/25/2008 Members moving from Plan 4D to 6B on	(216)	, ,			216		0
2/25/2008				(292)		292	0
Totals as of 2/26/2008	126	12	357	0	216	292	1,003

Note that in Exhibit 13 – Analysis of Charge in UAAL, we have isolated the actuarial loss as \$12.8 million in the UAAL for these benefit changes. In addition, the increase in the contribution rates between the various Safety tiers, including the new plans 6A and 6B are shown in Exhibits 10b, 11b and 12b.

#### General Member Benefit Changes

Many of the General members previously covered by General Plan 5B moved to General Plan 5C as of March 10, 2008. There are two significant differences between Plan 5B and Plan 5C.

- 1. For Plan 5B, the Final Average Salary (FAS) Calculation period is 12 months, while it is 36 months under Plan 5C.
- For Plan 5B, the member contribution annuity formula is based upon CERL 31621.2 (1/100<sup>th</sup> of FAS at age 60), while CERL 31621.5 (1/200<sup>th</sup> of FAS at age 60) is used for General Plan 5C.

The service retirement, death, and disability benefit formulas are identical between the two tiers, although the final average salary used in the formula will be different as specified above.

## Member Contribution Rates

There have been changes to the actuarial assumptions since the 2006 valuation. Therefore, there are changes recommended in the member contribution rates. The rates are the same as those shown in the 2007 experience study report, but we have added the member contribution rates for General Plan 5C. Member rates for all tiers are discussed in Section 5 and are shown in detail in Appendix D.

#### **Funding Progress**

Based on Milliman's Modified 2006 valuation with the actuarial method and assumption changes, the expected UAAL as of June 30, 2007 was \$394.3 million. The actual UAAL for the fiscal year ending June 30, 2007 is \$252.3 million. There were several factors that had an impact on the UAAL, both individually and in total. These factors are shown in detail at the end of Section 6, Exhibit 13. The major changes for this valuation are the new classification of Health Reserves, the asset gain discussed above and the loss due to the movement of certain Safety members to the new Plans 6A and 6B, with larger benefit payments.

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 SBCERS tiers combined. SBCERS' Funded Ratio increased rapidly in the last half of the 1990's, reaching almost 100% in 2000. However, due primarily to asset losses early in this decade that were still being recognized until now, the Funded Ratio has decreased since then.

Currently, the Funded Ratio is 87.1%; that is, the valuation assets of \$1,704.5 million is about 13% less than the actuarial accrued liabilities of \$1,956.8 million.

(all dollar	amounts	in	millions	)
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	M	larket	Αc	tuarial			١	Non	Α	ctuarial	
Valuation	Va	alue of	Va	alue of	Va	luation	Val	uation	Α	ccrued	Funding
Year *	<u>A</u>	<u>ssets</u>	<u>A</u>	<u>Assets</u>		<u>Assets</u>		ssets	Lia	ability **	Ratio **
2002			\$	1,296					\$	1,364	95.0%
2003			\$	1,347					\$	1,455	92.6%
2004	\$	1,347	\$	1,379	\$	1,242	\$	137	\$	1,579	87.4%
2005	\$	1,476	\$	1,444	\$	1,306	\$	138	\$	1,688	85.6%
2006	\$	1,629	\$	1,553	\$	1,415	\$	138	\$	1,810	85.8%
2007	\$	1,900	\$	1,735	\$	1,704	\$	31	\$	1,957	87.1%

The scheduled timing of the actuarial valuation was changed to a fiscal year basis effective June 30, 2003.

Prior to 2007 Funded Ratio is measured against Actuarial Value of Assets (AVA), which includes Non Valuation Assets.

Effective in 2007, Funded Ratio is measured against Valuation Assets.

Effective in 2007, the Special Allowance Reserve was added to the Valuation Reserves. Liabilities also include Special Allowances.



<sup>\*\*</sup> Prior to 2007, Actuarial Accrued Liability (AAL) was the sum of actuarial accrued liability calculated for the valuation and the non-valuation assets.

#### **Assets**

For the fiscal year ending June 30, 2007, we estimate that SBCERS earned 16.63%, net of expenses, on its market assets. Note that our return figure may be slightly different than that shown in the 2007 CAFR due to timing of contributions and benefit payments, as well as the treatment of expenses.

SBCERS uses an asset-smoothing method in the determination of valuation assets used in the calculation of the UAAL contribution rate. Under this method, the market value returns are smoothed over a five-year period. Due to the delayed recognition of prior gains and the removal of all non-valuation assets, the return on Valuation Assets was somewhat lower than the market return, at 12.22%.

At its January 29, 2008 meeting, the Board decided to include the liabilities for Special Allowances with the actuarial accrued liability. Per the recommendation of staff, we added an amount equal to the liability for the Special Allowances to the valuation assets. This is discussed further in Section 3 of this report.

It is our understanding that the Board, at its September 19, 2008 meeting, will direct a new classification of assets effective June 30, 2007. As a result of that classification, the Health Coverage Reserve will be eliminated. The \$93.5 million that had been in the Health Coverage Reserve will be allocated into two new reserves.

One of those new reserves is the 2007-2008 Health Benefit Reserve of \$9.4 million, created to pay the \$15 Health Benefits from July 2007 through September 2008 and the \$4 Supplemental Benefits from July 2007 through December 2008. The remaining \$84.1 million will be allocated to an Undesignated Earnings reserve and included with valuation assets.

### Non-Valuation Assets

The 2007-2008 Health Benefit reserve will provide postemployment health and supplemental benefits to retirees separate and apart from their basic retirement benefits. Assets in this reserve will not represent the regular pension benefit promises of SBCERS. For this reason, we believe it is appropriate under generally accepted actuarial principles to exclude the 2007-2008 Health Benefit Reserve from the valuation assets used for contribution rate calculations.

Consistent with past practice, we have excluded the statutory Contingency reserve from valuation assets. We believe this is appropriate under generally accepted actuarial principles.

#### Non-Valuation Assets (continued)

We have based our understanding of the purposes of the various reserves on information provided to us by the Board and staff. We are not attorneys and can not express a legal opinion as to the appropriateness of their determinations regarding these fund allocations.

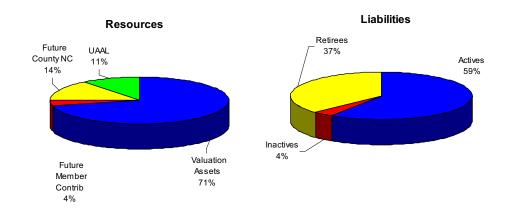
In previous valuations, the Special Allowance reserve was also excluded from valuation assets.

In prior valuation reports, the non valuation assets were included in the actuarial balance sheet as both assets and equal, but offsetting, liabilities. Under GASB 25 and 27 reporting, these assets should not be included. Therefore for this report we have removed them when discussing the Funded Ratio, valuation assets, etc. This means that some of the information reported for comparison purposes back to the 2006 valuation may be slightly different due to the removal of the non valuation assets.

#### Actuarial Balance Sheet

The first step in the valuation process is to compare the total actuarial assets of SBCERS with its total liabilities for all tiers. In this analysis, SBCERS' 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 decreased by 0.3% between 2006 and 2007.

Retired member counts and average retirement benefit amounts continue to increase steadily. For 2007, there were 2,812 retired members and beneficiaries with an average benefit of \$2,097 per month. This represents a 5.0% increase in count and a 4.4% increase in the average monthly benefit.

### Summary Valuation Results

Many changes occurred between the 2006 valuation and the 2007 valuation due to the changes made and adopted in the 2007 Investigation of Experience study. Therefore, we have included as Exhibit 1, the summary of the Financial Impact of Adopted Assumptions from page 8 of that report. That information then established the basis for the comparison for certain key data elements. The following Exhibits 2a and 2b present a summary of these and other key data elements on June 30, 2007 and June 30, 2006, 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 1: Summary of Financial Impact on 6/30/2006 Valuation for all Pension Benefit Assumption Changes

			Actuarial County Accrued Normal Co Liability Rate		UAAL Rate	Total County Contribution Rate
A.	June 30, 2006 Buck Valuation	\$	1,671.8	11.80%	9.29%	21.09%
В.	June 30, 2006 Milliman Replication Valuation	\$	1,676.0	11.13%	9.35%	20.48%
C.	Modified June 30, 2006 Valuation	\$	1,758.0	13.18%	11.69%	24.87%
D.	Adopted Demographic Changes *					
	Termination Rates & Refund %		9.9	1.37%	0.31%	1.68%
	Service Retirement Mortality		48.7	0.51%	1.53%	2.04%
	Rates of Retirement		18.5	0.27%	0.58%	0.85%
	Merit Salary		(35.3)	-2.17%	-1.11%	-3.28%
	Deferred Retirement Age Total Demographic Changes	\$	3.6 45.4	0.18% 0.16%	0.11% 1.42%	0.29%
	Total Demographic Changes	φ	45.4	0.10%	1.42 /0	1.56 /6
E.	Adopted Economic Changes					
	Investment Return = 8.16%	\$	0.0	0.00%	0.00%	0.00%
F.	Combined Change (D + E)	\$	45.4	0.16%	1.42%	1.58%
G.	Revised June 30, 2006 Valuation	\$	1,803.4	13.34%	13.11%	26.45%
	General Plan 5A			12.14%	12.11%	24.25%
	General Plan 5B			10.76%	12.11%	22.87%
	General Plan 2			2.73%	12.11%	14.84%
	Safety Plan 4A			19.61%	15.94%	35.55%
	Safety Plan 4B			16.06%	15.94%	32.00%
	Safety Plan 4C			19.64%	15.94%	35.58%
	Safety Plan 4D			19.52%	15.94%	35.46%
	APCD Plan 1			14.54%	13.49%	28.03%
	APCD Plan 2			12.61%	13.49%	26.10%

<sup>\*</sup> All assumption changes except Deferred Retirement Age were approved and adopted at the October 2007 Board meeting. The Deferred Retirement Age assumption change was approved and adopted at the December 2007 Board meeting.

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

		June 30, 2007		June 30, 2006 *	Relative Change
I.	Total Membership				
	A. Active Members	4,625		4,640	(0.3)%
	B. Retired Members & Beneficiaries	2,812		2,679	5.0%
	C. Vested Terminated Members	895		778	15.0%
	D. Terminated Members (with Contributions)	 242 **	*	N/A	N/A
	E. Total	8,574		8,097	5.9 %
II.	Annualized Payroll as of the Valuation Date				
	A. Annual Total (\$thousands)	\$ 294,163	\$	287,382	2.4%
	B. Monthly Average	\$ 5,300	\$	5,161	2.7%
III.	Average Monthly Benefit to Current				
	Retirees and Beneficiaries	\$ 2,097	\$	2,009	4.4%
IV.	Actuarial Accrued Liability (\$thousands)				
	A. Active Members	\$ 977,176	\$	816,690	19.7%
	B. Retired Members	\$ 892,839	\$	788,479	13.2%
	C. Vested Terminated Members	\$ 86,819	_\$_	66,662	30.2%
	D. Total	\$ 1,956,834	\$	1,671,831	17.0%
V.	Assets (\$thousands)				
	A. Market Value of Fund	\$ 1,900,461	\$	1,628,958	16.7%
	B. Market Value of Valuation Reserves	\$ 1,869,441	\$	1,491,133	25.4%
	C. Valuation Assets	\$ 1,704,469		1,414,950	20.5%
VI.	Funded Ratios	05 50/		00.00/	7.40/
	A. Market Value of Assets Basis (V.B. / IV.)	95.5%		89.2% 84.6%	7.1% 2.9%
	B. Actuarial Value of Assets Basis (V.C. / IV.)	87.1%		04.0%	2.9%
VII.	Unfunded Actuarial Accrued Liability				
	or Surplus Funding (\$thousands)	\$ 252,365	\$	256,880	(1.8)%
VIII.	Required Employer contribution rate for all tiers combined as a percent of total payroll				
	A. Gross Normal Cost	18.09%		17.80%	1.6%
	B. Member Contributions	 (4.16)%		(6.00)%	(30.7)%
	C. Employer Normal Cost	13.93%		11.80% ***	18.1%
	D. UAAL Amortization	 9.13%		9.29%	(1.7)%
	E. Total Employer Rate	23.06%		21.09% ***	9.3%
IX.	Funded Ratio	87.1%		84.6%	2.9%

<sup>\*</sup> From the prior actuary's actuarial valuation report.

<sup>\*\*</sup> The "vested terminated" count for June 30, 2007 includes 242 non-vested inactive members with a pending refund of contributions.

<sup>\*\*\*</sup> The employer normal cost differs slightly from what appeared in the 2006 valuation report.

The numbers above are based upon weighting the normal cost for each individual tier by the payroll in the 2006 valuation report.

#### Exhibit 2b: **Summary of Valuation Results**

	06/30/2006	06/30/2007	Percent	06/30/2006	06/30/2007	Percent	06/30/2006	06/30/2007	Percent	06/30/2006	06/30/2007	Percent
	General	General	Change	Safety	Safety	Change	APCD	APCD	Change	Total	Total	Change
Actives	3,602	3,569	-0.9%	982	1,003	2.1%	56	53	-5.4%	4,640	4,625	-0.3%
Inactives *	608	936	*	152	186	*	18	15	*	778	1,137	*
Retirees	2,100	2,230	6.2%	568	565	-0.5%	11	17	54.5%	2,679	2,812	5.0%
Totals	6,310	6,735	6.7%	1,702	1,754	3.1%	85	85	0.0%	8,097	8,574	5.9%
Active Payroll	210,289,225	214,717,344	2.1%	72,976,483	75,506,157	3.5%	4,115,949	3,939,567	-4.3%	287,381,657	294,163,067	2.4%
Average	58,381	60,162	3.0%	74,314	75,280	1.3%	73,499	74,331	1.1%	61,936	63,603	2.7%
Retiree Benefits	38,537,539	43,244,377	12.2%	25,731,150	27,017,455	5.0%	311,321	501,273	61.0%	64,580,010	70,763,105	9.6%
Average	18,351	19,392	5.7%	45,221	47,819	5.7%	28,302	29,487	4.2%	24,106	25,165	4.4%
Valuation Assets **	823,041,899	993,414,818	20.7%	574,113,271	689,366,613	20.1%	17,795,091	21,687,154	21.9%	1,414,950,261	1,704,468,585	20.5%
Market Value of Assets **	867,355,423	1,089,565,678	25.6%	605,024,191	756,089,187	25.0%	18,753,199	23,786,215	26.8%	1,491,132,813	1,869,441,080	25.4%
Actuarial Accrued Liability **	982,290,710	1,182,790,818	20.4%	668,359,353	748,010,613	11.9%	21,180,484	26,032,154	22.9%	1,671,830,547	1,956,833,585	17.0%
Unfunded Actuarial Accrued Liability **	159,248,811	189,376,000	18.9%	94,246,082	58,644,000	-37.8%	3,385,393	4,345,000	28.3%	256,880,286	252,365,000	-1.8%
Retirement Contribution Rates Employer Normal Cost Unfunded Actuarial Accrued Liability Total	9.76%	11.67%	19.6%	17.68%	20.39%	15.4%	11.85%	13.13%	10.8%	11.80%	13.93%	18.1%
	7.45%	8.99%	20.7%	14.66%	9.44%	-35.6%	8.25%	11.26%	36.5%	9.29%	9.13%	-1.7%
	17.21%	20.66%	20.0%	32.34%	29.83%	-7.7%	20.10%	24.39%	21.3%	21.09%	23.06%	9.3%
<u>Funded Ratios</u> Valuation Assets Market Value of Assets	83.8% 88.3%	84.0% 92.1%	0.2% 4.3%	85.9% 90.5%	92.2% 101.1%	7.3% 11.7%	84.0% 88.5%	83.3% 91.4%	-0.8% 3.2%	84.6% 89.2%	87.1% 95.5%	2.9% 7.1%

<sup>\*</sup> June 30, 2007 numbers include 242 terminated members with a pending refund of contributions as of June 30, 2007.



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<sup>\*\*</sup> Excludes non-valuation reserves.

#### Section 2: Scope of the Report



This report presents the actuarial valuation of the Santa Barbara County Employees' Retirement System as of June 30, 2007. 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 SBCERS. The assets and investment income are presented in Exhibits 3-5. Exhibits 6-8 develop the Actuarial Value of Assets and the Valuation Assets as of June 30, 2007.

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

Section 5 discusses the Member contribution rates.

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

This report includes several appendices:

- Appendix A A summary of the actuarial procedures, and assumptions used to estimate liabilities and contributions.
- Appendix B A summary of the current benefit structure, as determined by the provisions of governing law on June 30, 2007.
- Appendix C Schedules of valuation data classified by various categories of members by class, plan and tier.
- Appendix D Member contribution rates by class, plan and tier.
- Appendix E A glossary of actuarial terms used in this report.



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#### Section 3: **Assets**



In many respects, an actuarial valuation can be thought of as an inventory process. The inventory is taken as of the actuarial valuation date which, for this valuation, is June 30, 2007. 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 SBCERS' assets is presented below:

All dollar amounts in millions

		Actuaria	ıl Value
Valuation Date	Market Value of Total Assets	Total Assets	Valuation Assets
2004 2005 2006 2007	\$ 1,347 1,476 1,629 1,900	\$ 1,379 1,444 1,553 1,735	\$ 1,242 1,306 1,415 1,704

On June 30, 2007, the total market value of the fund was about \$1.90 billion. The actuarial value of the fund was determined to be \$1.74 billion, including the non-valuation reserves. The valuation reserves used to fund the regular pension benefits are \$1.70 billion.

#### **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 SBCERS' assets by the various reserve values determined for accounting purposes.

Exhibits 3 and 4 and the data for Exhibit 5 are taken directly from data furnished to us by SBCERS 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 used for this valuation, is 8.16%, 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, 2007 actuarial value of assets is shown in Exhibit 6. Note that the smoothing process has recognized all of the investment losses from 2001 and earlier. The market value of assets is 109.5% of the actuarial value of assets. There are \$165.0 million of Deferred Investment return gains yet to be recognized.

#### Valuation Assets and Non-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. The development of the Valuation Assets is shown in Exhibit 7.

It is our understanding that the Board, at its September 19, 2008 meeting, will direct a new classification of assets effective June 30, 2007. As a result of that classification, the Health Coverage Reserve will be eliminated. The \$93.5 million that had been in the Health Coverage Reserve will be allocated into two new reserves.

One of those new reserves is the 2007-2008 Health Benefit Reserve of \$9.4 million, created to pay the \$15 Health Benefits from July 2007 through September 2008 and the \$4 Supplemental Benefits from July 2007 through December 2008. The remaining \$84.1 million will be allocated to an Undesignated Earnings reserve and included with valuation assets

Valuation Assets and Non-Valuation **Assets** (continued)

The 2007-2008 Health Benefit reserve will provide postemployment health and supplemental benefits to retirees separate and apart from their basic retirement benefits. Assets in this reserve will not represent the regular pension benefit promises of SBCERS. Therefore, we believe it is appropriate under generally accepted actuarial principles to exclude the 2007-2008 Health Benefit Reserve from the valuation assets used for contribution rate calculations.

Consistent with past practice, we have excluded the statutory Contingency reserve from valuation assets. We believe this is appropriate under generally accepted actuarial principles.

We have based our understanding of the purposes of the various reserves on information provided to us by the Board and staff. We are not attorneys and cannot express a legal opinion as to the appropriateness of their determinations regarding these fund allocations.

At its January 29, 2008 meeting, the Board decided to add the Special Allowance reserve of \$18.044,206 to the Retired Member reserve, and thus include it with the valuation assets. Similarly, the Board decided to include the liabilities for Special Allowances with the actuarial accrued liability.

The present value of Special Allowance benefits was \$19,042,353 for benefits that members were receiving as of June 30, 2007.

At its meeting on May 23, 2007, the Board agreed to provide an Ad Hoc cost-of-living adjustment (COLA) for certain retirees who retired on or before April 1, 1981. The purpose of the Ad Hoc COLA was to reduce their loss of purchasing power since retirement to 20%. As stated in our letter dated October 24, 2007, the estimated present value of these benefits as of June 30, 2007 was \$2,151,450. This estimate was revised in July 2008 based upon revised data. The July 2008 estimate is not reflected in this actuarial valuation report.

The combined value of the Ad Hoc COLA and the other Special Allowances meant an increase of \$21,193,803 in the AAL.

At its February 27, 2008 meeting, the Board voted to transfer an amount from the Contingency reserve sufficient to result in no change in the UAAL based upon the inclusion of the Special Allowances. The result is summarized below.



#### Valuation Assets and Non-Valuation **Assets** (continued)

<ol> <li>Special Allowances approved prior to 2007</li> <li>Ad Hoc COLA</li> </ol>	\$ 19,042,353 2,151,450
3. AAL increase for Special Allowances (1.+ 2.)	\$ 21,193,803
<ul><li>4. Special Allowance reserve</li><li>5. Transfer from Contingency Reserve</li></ul>	\$ 18,044,206 3,149,597
6. Additional Assets included in Valuation Assets (4.+ 5.)	\$ 21,193,803
7. Additional UAAL (3 6.)	\$ 0

The assets were allocated to General, Safety, and APCD member reserves in amounts equal to the additional actuarial accrued liability.

#### Allocation of Assets

Valuation Assets are allocated by classification (General, Safety and APCD) as shown in Exhibit 8. This is because UAAL contribution rates are determined separately by class.

The Normal Cost employer contribution rate is determined separately for each tier of each class.

At its January 29, 2008 meeting, the Board decided to add the Special Allowance reserve and Burial reserve to the Retired Member reserve. Since the previous valuation, the Sick Leave, Spousal Continuance, and APCD Death reserves have been added to the Employer Advanced reserves.

The Member reserves, Employer Advanced reserves, and Retired Member reserves were separated by classification. The APCD Death reserve is for APCD.

We allocated the Sick Leave and Spousal Continuance reserves by classification in proportion to the rest of the Employer Advance reserves.

We allocated the Special Allowance reserve by classification in proportion to the liabilities for Special Allowances. We then allocated the Burial Allowance reserve by classification in proportion to the Retired Member reserves, including the Special Allowance reserves.

The Undesignated Earnings Reserve was allocated by class in proportion to the sum of the Member reserves, Employer Reserves, and Retired Member Reserves.

Please see Exhibit 8 for a detailed summary of the allocation of assets across classes.



Exhibit 3: **Statement of Plan Net Assets** For the Years Ended June 30, 2006 and 2007

	Ju	ne 30, 2007	Ju	ne 30, 2006
Assets				
Cash	\$	9,595,904	\$	10,862,585
Receivables				
Contributions		3,037,589		2,279,476
Other		8,108		-
Accrued Interest		4,174,264		3,870,136
Dividends		1,250,515		1,063,747
Due from Brokers for Security Sales		117,096,434		84,254,071
Total Receivables		125,566,910		91,467,430
Investments at Fair Value				
Short Term Investments		53,193,708		32,313,116
Alternative Equity		42,193,870		1,191,537
Domestic Equity		903,228,521		795,953,481
Domestic Bonds		452,344,445		437,812,053
International Equity		445,283,673		357,415,303
International Bonds		42,506,167		, , , <u>-</u>
Real Estate		46,548,318		40,576,518
Total Investments		1,985,298,702		1,665,262,008
Collateral Held for Securities Lent		222,156,141		196,246,974
Total Investments Including				
Collateral Held for Securities Lent		2,207,454,843		1,861,508,982
TOTAL ASSETS	\$	2,342,617,657	\$	1,963,838,997
Liabilities				
Accounts Payable	\$	916,557	\$	164,180
Benefits Payable		931,092		1,128,497
Collateral Held for Securities Lent		222,156,141		196,246,974
Due to Brokers for Security Purchases		218,152,573		137,341,056
Total Liabilities		442,156,363		334,880,707
NET ASSETS HELD IN TRUST FOR PENSION BENEFITS	\$	1,900,461,294	\$	1,628,958,290

Exhibit 4: Statement of Changes in Plan Net Assets For the Years Ended June 30, 2006 and 2007

	J	une 30, 2007	Ju	ne 30, 2006
Additions				
Contributions				
Employer	\$	63,395,296	\$	53,976,749
Member		15,853,139		15,057,589
Total Contributions		79,248,435		69,034,338
Investment Income				
Net Appreciation in Fair Value of Investments		234,289,600		127,740,795
Interest		19,532,891		19,466,663
Dividends		22,759,075		15,528,633
Total Investment Income		276,581,566		162,736,091
Less investment expense		(5,330,158)		(4,474,219)
Net Investment Income		271,251,408		158,261,872
Securities Lending Income		8,915,940		7,579,927
Securities Lending Expense		(8,556,870)		(7,174,176)
Net Securities Income		359,070		405,751
Other Income		2,233,265		55,990
Total Other Income		2,233,265		55,990
TOTAL ADDITIONS	\$	353,092,178	\$	227,757,951
Deductions				
Benefits Paid	\$	76,846,452	\$	71,018,064
Member Withdrawals		1,883,614		1,474,822
Administrative Expenses		2,859,108		2,464,794
TOTAL DEDUCTIONS	\$	81,589,174	\$	74,957,680
NET INCREASE	\$	271,503,004	\$	152,800,271
Assets Held in Trust - Beginning of Year	\$	1,628,958,290	\$	1,476,158,019
Assets Held in Trust - End of Year	\$	1,900,461,294	\$	1,628,958,290

Exhibit 5: Allocation of Assets by Accounting Reserve Amounts For the Years Ended June 30, 2006 and 2007

		2007		2006
Member Deposit Reserve	\$	169,217,997	\$	148,181,920
County and District Advance Reserve (1)	Ψ	558,510,143	Ψ	496,447,927
3. Retired Member Reserve (1)		912,832,239		747,078,120
4. Sick Leave Reserve (1)		N/A		5,890,788
5. Spousal Continuance Reserve (1)		N/A		1,685,478
6. APCD Death Allowance Reserve (1)		N/A		45,009
7. Burial Allowance Reserve (1)		N/A		5,392,745
8. Special Allowance Reserve (1)		N/A		18,820,406
9. Undesignated Earnings Reserve <sup>(2)</sup>		84,130,416		N/A
	\$	1,724,690,795	\$	1,423,542,394
10. Market Stabilization Account		144,750,285		86,410,823
	\$	1,869,441,080	\$	1,509,953,217
11. Special Reserves (Non-valuation reserves)				
a. Health/Supplemental Health Coverage Reserve (2)		N/A	\$	94,235,261
b. 2007-2008 Health Benefit Reserve (2)		9,400,000		N/A
c. Contingency Reserve (3)		21,620,214		24,769,811
	\$	31,020,214	\$	119,005,072
Total Reserves	\$	1,900,461,294	\$	1,628,958,289

<sup>(1)</sup> Beginning with the June 30, 2007 actuarial valuation: 1. County and District Advance reserve includes Sick Leave, Spousal Continuance, and APCD Death Allowance reserves. 2. Retired Member reserve includes Burial Allowance and Special Allowance reserves.

<sup>(2)</sup> Beginning with the June 30, 2007 actuarial valuation: the Health Coverage reserve and Supplemental Health Coverage reserve are eliminated. The associated assets are allocated to: 1. The Undesignated Earnings reserve. This reserve is included with valuation assets. 2. The 2007-2008 Health Benefit reserve. This reserve is used to pay \$15 Health Benefits through September 2008 and \$4 Supplemental Benefits through December 2008.

<sup>(3)</sup> Transfer of \$3,149,597 from Contingency Reserve to Retired Member Reserve effective June 30, 2007.

#### Exhibit 6: Five-Year Smoothing of Gains and Losses on Market Value

Plan Year Ending	Contributions	Benefits*	Expected Investment Return	Actual Investment Return	Earnings Gain or (Loss)	Deferred Portion of Gain/Loss	 Deferred Investment Return
06/30/2003	\$ 15,852,113	\$ 27,532,133	\$ 42,964,924	\$ 101,134,014	\$ 58,169,090	10%	\$ 5,816,909
06/30/2004	52,968,440	59,102,412	95,174,169	183,336,227	88,162,058	20%	17,632,412
06/30/2005	61,548,644	65,539,276	109,721,321	133,529,299	23,807,978	40%	9,523,191
06/30/2006	69,034,338	72,492,886	120,313,386	156,258,819	35,945,433	60%	21,567,260
06/30/2007	79,248,435	78,730,066	132,943,731	270,984,635	138,040,904	80%	 110,432,723
1. Total							\$ 164,972,495
2. Market Value	e of Assets as of June	e 30, 2007					\$ 1,900,461,294
3. Preliminary A	Actuarial Value of Ass	sets as of June 30, 2	007 = (2) -(1)				\$ 1,735,488,799
	t et Market Value let Market Value						1,520,369,035 2,280,553,552
5. Actuarial Value	ue of Assets After Co	rridor as of June 30,	2007				\$ 1,735,488,799
. 2	erves (Non-valuation r 007-2008 Health Ben contingency Reserve	,				\$ 9,400,000 21,620,214	
	otal					21,020,214	\$ 31,020,214
7. Valuation Ass	sets as of June 30, 20	007 = (5) - (6)					\$ 1,704,468,585

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#### Exhibit 7a: **Development of Valuation Assets**

		Valuation Assets	n Actuarial Assets		M	larket Value of Assets
1.	Total June 30, 2006 Valuation	\$ 1,414,950,260	\$	1,552,775,738	\$	1,628,958,290
2.	Changes During the Year Member Contributions County Contributions Benefit Payments Special Allowance Reserve Adjustment * Health Coverage Reserve Adjustment ** Investment Return, net of expenses Total Changes	\$ 15,853,139 63,395,296 (68,617,406) 21,193,803 84,130,416 173,563,077 289,518,325	\$	15,853,139 63,395,296 (78,730,066) - 182,194,692 182,713,061	\$	15,853,139 63,395,296 (78,730,066) - 270,984,635 271,503,004
3.	Total June 30, 2007 Valuation = 1 + 2	\$ 1,704,468,585	\$	1,735,488,799	\$	1,900,461,294
4. 5. 6.	Expected Value as of June 30, 2006 Gain/Loss = 3 - 4 Rate of Return	\$ 1,646,790,690 57,677,895 12.22%	\$	1,680,021,342 55,467,457 11.73%	\$	1,762,420,390 138,040,904 16.63%

Effective June 30, 2007, the Special Allowance reserve is included with the Valuation Assets. Previously, it was not included with the Valuation Assets. Also included in this line is a transfer from the Contingency reserve.

<sup>\*\*</sup> Effective June 30, 2007, \$84,130,416 of the Health Coverage reserve is included with the Valuation Assets. Previously, it was not included with the Valuation Assets.

Net Return on Assets vs. Increase in Consumer Price Index Exhibit 7b:

			Increase in
Year Ended	Net Return at	Net Return at	Consumer
June 30,	Market Value	Actuarial Value	Price Index*
1988	1.9%		4.0%
1989	17.6%		5.2%
1990	10.8%		4.7%
1991	9.7%		4.7%
1992	18.5%		3.1%
1993	13.2%		3.0%
1994	-0.7%		2.5%
1995	17.7%		3.0%
1996	15.6%		2.8%
1997	19.9%		2.3%
1998	18.9%		1.7%
1999	10.5%		2.0%
2000	6.4%		3.7%
2001	-4.3%		3.2%
2002	-5.4%		1.1%
2003	4.6%		2.1%
2004	15.7%	2.9%	3.3%
2005	9.9%	5.0%	2.5%
2006	10.6%	7.8%	4.3%
2007	16.6%	11.7%	2.7%
20-Year Compound Average	10.1%		3.1%

<sup>\*</sup> Based on All Urban Consumers -- U.S. City Average, June indices.

Exhibit 8: **Allocation of Valuation Assets** For the Year Ended June 30, 2007

(Dollars in Thousands)

		(	General	:	Safety	APCD	Total
1.	Member Reserves	\$	131,268	\$	35,787	\$ 2,163	\$ 169,218
2.	Employer Reserves Previously Allocated by Plan (i)	\$	330,194	\$	209,698	\$ 10,424	\$ 550,316
3.	Percentage of Employer Reserves by Plan		60.00%		38.11%	1.89%	100.00%
4.	Sick Leave and Spousal Continuance Reserves (ii)	\$	4,916	\$	3,122	\$ 155	\$ 8,194
5.	Employer Reserves (2. + 4.)	\$	335,110	\$	212,820	\$ 10,579	\$ 558,510
6.	Retired Member Reserves Previously Allocated by Plan (iii)	\$	471,435	\$	406,592	\$ 8,079	\$ 886,106
7.	Transfer from Special Allowance and Contingency reserves (iv)	\$	15,385	\$	5,805	\$ 4	\$ 21,194
8.	Retired Member Reserves w/ Special Allowance Reserve (6.+7.)	\$	486,820	\$	412,397	\$ 8,083	\$ 907,300
9.	Percentage of Line 8. by Plan		53.66%		45.45%	0.89%	100.00%
10.	Burial Reserve (v)	\$	2,969	\$	2,515	\$ 49	\$ 5,533
11.	Total Retired Member Reserves (8.+10.)	\$	489,789	\$	414,912	\$ 8,132	\$ 912,833
12.	Total Member, Employer, and Retired Reserves (1.+5.+11.)	\$	956,167	\$	663,519	\$ 20,874	\$ 1,640,560
13.	Percentage of Line 12. by Plan		58.28%		40.44%	1.27%	100.00%
14.	Transfer from Health Coverage Reserve (vi)	\$	49,033	\$	34,026	\$ 1,071	\$ 84,130
15.	Total Valuation Reserves (12.+14.)	\$	1,005,200	\$	697,545	\$ 21,945	\$ 1,724,690
16.	Actuarial Value of Valuation Assets (Exhibit 6)						\$ 1,704,469
17.	Allocated Valuation Assets (13.x15.)	\$	993,415	\$	689,367	\$ 21,687	\$ 1,704,469

 <sup>(</sup>i) Does not include the Sick Leave or Spousal Continuance Reserves, as those reserves were not allocated by Plan. APCD includes APCD Death Reserve.
 (ii) Allocated in proportion to Employer Reserves previously allocated by Plan.
 (iii) Does not include Burial Allowance Reserve or Special Allowance Reserve, as those reserves were not allocated by Plan.

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<sup>\$18,044,206</sup> from Special Allowance reserve and \$3,149,597 from Contingency reserve allocated into General, Safety, and APCD based upon liabilities for Special Allowance benefits.

<sup>(</sup>v) Burial Reserves allocated in proportion to Line 8.

<sup>(</sup>vi) \$84,130,416 from Health Coverage reserve allocated in proportion to Line 13.

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#### **Actuarial Liabilities** Section 4:



In the previous section, an actuarial valuation was compared with an inventory process, and an analysis was given of the inventory of SBCERS' assets as of the valuation date, June 30, 2007. In this section, the discussion will focus on the commitments of SBCERS 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 pension valuation liabilities reflect the benefits effective through June 30, 2007.

It also reflects the new Safety Plan 6A and 6B, effective February 25, 2008 and the new General Plan 5C, effective March 10, 2008.

Note: Prior valuations included the non-valuation assets in the actuarial balance sheet. Those assets do not represent the regular pension benefit promises of SBCERS and are no longer included in the actuarial balance sheet.

#### **Actuarial Balance Sheet - Liabilities** (continued)

The actuarial assumptions used to determine the liabilities are based on the results of our analysis of experience as of June 30, 2007. Some of these assumptions were adopted by the Board at its October 2007 meeting while others were adopted at the December 2007 meeting. These assumptions are summarized in Appendix A.

Exhibit 9: Actuarial Balance Sheet – June 30, 2007

(Dollars in Thousands)

Resources											
		General Safety			APCD		<u>Total</u>				
Valuation Assets (Actuarial)	\$	993,415	\$	689,367	\$	21,687	\$	1,704,469			
Present Value of Future Member Contributions		63,878		35,944		1,552		101,374			
Present Value of Future Employer Contributions to Fund: a) Normal Cost		197,897		140,665		3,807		342,369			
b) Unfunded Actuarial Accrued Liability		189,376		58,644		4,345		252,365			
Total Resources	\$	1,444,566	\$	924,620	\$	31,391	\$	2,400,577			

Liabilities										
	<u>General</u>		<u>Safety</u>		<b>APCD</b>			<u>Total</u>		
Present Value of Future Benefits										
1. Present Retired Members	\$	511,795	\$	374,094	\$	6,950	\$	892,839		
2. Current Inactive Members		62,966		22,076		1,777		86,819		
3. Current Active Members										
- Service Retirement		772,418		469,536		20,414		1,262,368		
- Disability Retirement		39,061		34,522		927		74,510		
- Death Benefits		15,446		6,080		637		22,163		
- Deferred Vested Benefit		35,746		16,110		598		52,454		
- Refund of Member Contributions		<u>7,134</u>		2,202		<u>88</u>		9,424		
- Total Active	\$	869,805	\$	528,450	\$	22,664	\$	1,420,919		
Total Actuarial Liabilities	<u> </u>	1.444.566	\$	924.620	\$	31.391	\$	2.400.577		

#### **Actuarial Balance** Sheet - Resources

For the purpose of the Actuarial Balance Sheet, SBCERS' 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 Employers.

#### **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 Unfunded Actuarial Accrued Liability (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 Employers. The member contribution rates are determined based upon requirements established in bargaining agreements between the employers and employees 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 Employer's portion of the future Normal Cost contributions.

Exhibit 10 reports the Total Normal Cost Contribution Rate for each class in total and then reduces the total by the members' average contribution rates to develop the Employer's Net Normal Cost Contribution Rate as of June 30, 2007. Exhibits 10a, 10b and 10c provide similar information regarding the normal cost rates, but they give the information by each tier within each plan, one exhibit for each class.

Exhibit 10: Calculated Employer Normal Cost Contribution Rates - June 30, 2007 **All Members** 

	General	Safety	APCD	All Plans
A. Normal Cost Contribution Rate				
Service Retirement	11.70%	19.75%	13.29%	13.79%
Disability Retirement	0.98%	2.87%	1.08%	1.47%
Death while Active	0.32%	0.42%	1.02%	0.36%
Termination (No Refund)	1.74%	2.16%	2.08%	1.85%
Refund of Member Contributions	0.68%	0.45%	0.92%	0.62%
Total	15.42%	25.65%	18.39%	18.09%
B. Member Contributions	(3.75)%	(5.26)%	(5.26)%	(4.16)%
C. Net Employer Normal Cost as of June 30, 2007 (A) + (B)	11.67%	20.39%	13.13%	13.93%
D. Net Employer Normal Cost as of June 30, 2006*	9.76%	17.68%	11.85%	11.80%
E. Increase (Decrease) as a Percentage of Payroll (C) - (D)	1.91%	2.71%	1.28%	2.13%

The net employer normal cost rate as of June 30, 2006 for all Safety members does not match the 2006 valuation report. The 17.68% above is based upon weighting the normal cost for each individual tier by the payroll in the 2006 valuation report. Similarly, the 11.80% for all plans does not match the 11.61% in the 2006 valuation report. The 11.80% above is based upon weighting the normal cost for each plan by the payroll in the 2006 valuation report.

Exhibit 10a: Calculated Employer Normal Cost Contribution Rates – June 30, 2007 **General Members** 

		Ge	eneral - County		
A. Normal Cost Contribution Rate	<u>5A</u>	<u>5B</u>	<u>5C*</u>	Plan 2	<u>Total</u>
Service Retirement	10.85%	13.78%	11.77%	2.12%	11.70%
Disability Retirement	0.96%	1.11%	0.96%	0.14%	0.98%
Death while Active	0.32%	0.36%	0.30%	0.03%	0.32%
Termination (No Refund)	1.94%	1.59%	1.66%	0.29%	1.74%
Refund of Member Contributions	0.55%	1.27%	0.58%	0.00%	0.68%
Total	14.62%	18.11%	15.27%	2.58%	15.42%
B. Member Contributions	(3.07)%	(7.05)%	(3.16)%	0.00%	(3.75)%
C. Net Employer Normal Cost as of June 30, 2007 (A) + (B)	11.55%	11.06%	12.11%	2.58%	11.67%
D. Net Employer Normal Cost as of June 30, 2006	9.81%	9.81%	0.00%*	3.36%	9.76%
E. Increase (Decrease) as a Percentage of Payroll (C) - (D)	1.74%	1.25%	NA	(0.78)%	1.91%

<sup>\*</sup> New plan effective March 10, 2008.

Exhibit 10b: Calculated Employer Normal Cost Contribution Rates - June 30, 2007 Safety Members

				Safety			
A. Normal Cost Contribution Rate	<u>4A</u>	<u>4B</u>	<u>4C</u>	<u>4D</u>	6A*	<u>6B*</u>	<u>Total</u>
Service Retirement	19.21%	20.17%	18.93%	18.71%	20.25%	20.51%	19.75%
Disability Retirement	3.02%	2.50%	2.85%	2.76%	2.89%	2.81%	2.87%
Death while Active	0.47%	0.38%	0.42%	0.43%	0.41%	0.41%	0.42%
Termination (No Refund)	1.99%	1.62%	1.82%	1.80%	2.41%	2.45%	2.16%
Refund of Member Contributions	0.46%	0.89%	0.45%	0.44%	0.43%	0.45%	0.45%
Total	25.15%	25.56%	24.47%	24.14%	26.39%	26.63%	25.65%
B. Member Contributions	(5.31)%	(10.88)%	(5.18)%	(5.12)%	(5.07)%	(5.12)%	(5.26)%
C. Net Employer Normal Cost as of June 30, 2007 (A) + (B)	19.84%	14.68%	19.29%	19.02%	21.32%	21.51%	20.39%
D. Net Employer Normal Cost as of June 30, 2006	20.90%	15.69%	15.23%	14.97%	0.00%*	0.00%*	17.68%
E. Increase (Decrease) as a Percentage of Payroll (C) - (D)	(1.06)%	(1.01)%	4.06%	4.05%	NA	NA	2.71%

<sup>\*</sup> New plans effective February 25, 2008. All members in Plan 4D will move to Plan 6B.

As discussed with the Board in August 2007, the 2006 valuation reflected the new member rates for Safety 4C and 4D by increasing the UAAL rates rather than increasing the County's portion of the total normal cost rate.

The net employer normal cost rate as of June 30, 2006 for all Safety members does not match the 2006 valuation report. The 17.68% above is based upon weighting the normal cost for each individual tier by the payroll in the 2006 valuation report.



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Exhibit 10c: Calculated Employer Normal Cost Contribution Rates - June 30, 2007 **APCD Members** 

		APCD	
A. Normal Cost Contribution Rate	Plan 1	Plan 2	Total
Service Retirement	12.28%	15.10%	13.29%
Disability Retirement	1.06%	1.12%	1.08%
Death while Active	0.99%	1.08%	1.02%
Termination (No Refund)	2.27%	1.74%	2.08%
Refund of Member Contributions	0.65%	1.41%	0.92%
Total	17.25%	20.45%	18.39%
B. Member Contributions	(3.68)%	(8.07)%	(5.26)%
C. Net Employer Normal Cost as of June 30, 2007 (A) + (B)	13.57%	12.38%	13.13%
D. Net Employer Normal Cost as of June 30, 2006*	11.68%	12.20%	11.85%
E. Increase (Decrease) as a Percentage of Payroll (C) - (D)	1.89%	0.18%	1.28%

#### **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 (AAL). 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 SBCERS for all classes are summarized in Exhibit 11.

#### **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 Employers have 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 11 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 SBCERS 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 15-year period, with a new layer of UAAL established for each year's experience.

Exhibits 11a, 11b and 11c disclose the development of these UAAL layers for each classification. The Exhibits also show the remaining outstanding balances for each base established since January 1, 2003 when SBCERS adopted this layered amortization schedule for any UAAL.

Each year the difference between the aggregate UAAL (as shown in Exhibit 11) and the expected UAAL from the prior year's amortization schedules equals the additional UAAL created during the past year. This new amount is then amortized over a fixed (closed) period of 15 years.

### 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 2007 actuarial valuation reflects a decrease in the UAAL of \$4.5 million for the fiscal year just ended. See Exhibit 13 in Section 6 for a detailed breakdown of the change in UAAL.

Exhibit 11: Calculated UAAL Amount by Class - June 30, 2007

**All Members** 

(Dollars in Millions)

		General		General Safety		Δ	APCD		2007 All Plans		2006 All lans <sup>(1)</sup>	Percent Change
A.	Actuarial present value of all future benefits for contributing members, former contributing members, and their survivors	\$	1,444.6	\$	924.6	\$	31.4	\$	2,400.6	\$	2,118.8	13.3%
В.	Actuarial present value of total future Normal Costs for current members		261.8		176.6		5.4	_	443.8		447.0	(0.7)%
C.	Actuarial Accrued Liability [A-B]	\$	1,182.8	\$	748.0	\$	26.0	\$	1,956.8	\$	1,671.8	17.0%
D.	Valuation Assets		993.4		689.4		21.7		1,704.5		1,415.0	20.5%
E.	UAAL or Surplus Funding [C-D]	\$	189.4	\$	58.6	\$	4.3	\$	252.3	\$	256.8	-1.8%
F.	Funded Ratio [D/C]		84.0%		92.2%		83.3%		87.1%		84.6%	2.9%

<sup>(1)</sup> Excludes non-valuation assets from present value of benefits and Valuation Assets.



#### Exhibit 11a: UAAL Amortization Rates - June 30, 2007 **General Members**

Interest 8.16% Annual Payroll Increases 4.00% Amortization factor (n=15) 0.088195

Base Number: Date Base Established: Years Remaining:	Base 1 Initial (1/1/2003) 10.5	Base 2 07/01/2003 11	Base 3 07/01/2004 12	Base 4 07/01/2005 13	Base 5 07/01/2006 14	Base 6 07/01/2007 15	All Bases
Original Balance: Current Balance:		, ., ,	\$ 54,044,533 51.602.766	\$ 25,521,889 24.861.821	\$ 42,046,577 41,544,593	\$ 21,637,963 21,637,963	\$ 197,366,015 189,376,000
Amortization Factor: Beginning of Year Payment:	0.116242	0.111932	0.104483	0.098199 <b>\$ 2,441,406</b>	0.092831 <b>\$ 3,856,608</b>	0.088195 \$ 1,908,349	\$ 19,312,477

Beginning of Year Payroll: \$ 214,717,344

UAAL Amortization Rate - General: 8.99%

		Base 1 Base 2		Base 3	Base 4	Base 5	Base 6	All Bases	Discounted
Perio	d	Payment	Payment	Payment	Payment	Payment	Payment	Totals	Totals
1	\$	4,077,471	\$ 1,750,201	\$ 5,498,387	\$ 2,489,755	\$ 3,932,984	\$ 1,946,142	\$ 19,694,940	\$ 18,937,442
2		4,240,570	1,820,209	5,718,322	2,589,346	4,090,303	2,023,987	20,482,737	18,209,079
3		4,410,192	1,893,017	5,947,055	2,692,919	4,253,915	2,104,947	21,302,045	17,508,728
4		4,586,600	1,968,738	6,184,938	2,800,636	4,424,072	2,189,145	22,154,129	16,835,317
5		4,770,064	2,047,487	6,432,335	2,912,662	4,601,035	2,276,711	23,040,294	16,187,805
6		4,960,867	2,129,387	6,689,628	3,029,168	4,785,076	2,367,779	23,961,905	15,565,197
7		5,159,301	2,214,562	6,957,214	3,150,335	4,976,479	2,462,490	24,920,381	14,966,535
8		5,365,673	2,303,145	7,235,502	3,276,348	5,175,538	2,560,990	25,917,196	14,390,899
9		5,580,300	2,395,271	7,524,922	3,407,402	5,382,560	2,663,429	26,953,884	13,837,403
10		5,803,512	2,491,081	7,825,919	3,543,698	5,597,862	2,769,967	28,032,039	13,305,195
11		3,017,826	2,590,725	8,138,956	3,685,446	5,821,777	2,880,765	26,135,495	11,469,133
12				8,464,514	3,832,864	6,054,648	2,995,996	21,348,022	8,661,455
13					3,986,179	6,296,834	3,115,836	13,398,849	5,026,133
14						6,548,707	3,240,469	9,789,176	3,395,048
15							3,370,088	3,370,088	1,080,631
Total	s \$	51,972,376	\$23,603,823	\$82,617,692	\$41,396,758	\$71,941,790	\$ 38,968,741	\$ 310,501,180	\$ 189,376,000



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#### Exhibit 11b: UAAL Amortization Rates - June 30, 2007 Safety Members

8.16% 4.00% Interest Annual Payroll Increases Amortization factor (n=15) 0.088195

							Bases for		New Base for	All
Base Number:	Base 1	Base 2	Base 3	Base 4	Base 5	Base 6	All Safety	31	% @ 50 Formula	Bases
Date Base Established:	Initial (1/1/2003)	07/01/2003	07/01/2004	07/01/2005	07/01/2006	07/01/2007			07/01/2007	
Years Remaining:	10.5	11	12	13	14	15			15	
Original Balance:	\$ 28,803,194 \$	23,375,065	\$ 38,660,471 \$	20,254,712	(21,026,765) \$	(38,082,847) \$	51,983,830	\$	12,795,769 \$	64,779,599
Current Balance:	26,335,625	21,726,551	36,913,766	19,730,868	(20,775,732)	(38,082,847)	45,848,231		12,795,769	58,644,000
Amortization Factor:	0.116242	0.111932	0.104483	0.098199	0.092831	0.088195			0.088195	
Beginning of Year Payment:	\$ 3,061,305	2,431,904	3,856,861	1,937,552	(1,928,623) \$	(3,358,698) \$	6,000,301	\$	1,128,517	7,128,818

Beginning of Year Payroll: \$ 75,506,157 Beginning of Year Payroll: \$ 38,872,640 2.90%

UAAL Amortization Rate - Safety: 7.95%

New Base for 3% @ 50 Formula Payment \$ 1,150,866 Base 1 Base 2 Base 3 Base 4 Base 5 Base 6 All Safety Discounted Discounted Totals 1,106,602 1,064,041 1,023,116 983,765 Payment (1,966,817) Totals 5,883,780 2.480.065 Payment (3,425,213) Totals 6,119,131 (3,425,213) (3,562,222) (3,704,711) (3,852,899) (4,007,015) (4,167,296) (4,333,988) (4,507,347) (4,887,641) (4,875,147) (5,070,152) (5,272,959) (5,483,877) (5,703,232) (5,703,232) (5,931,361) (68,585,060) 3,121,931 3,246,808 3,376,680 3,511,748 2,579,268 2,682,439 2,789,736 4,090,572 4,254,194 4,424,362 2,054,960 2,137,158 2,222,645 (2,045,490) (2,127,310) (2,212,402) 6,363,896 6,618,450 6,883,190 5,657,480 5,439,883 5,230,659 1,196,901 1,244,777 1,294,568 3,511,748 3,652,217 3,798,306 3,950,238 4,108,248 4,272,578 2,789,736 2,901,325 3,017,379 3,138,074 3,263,597 3,394,140 3,529,906 3,671,102 4,424,362 4,601,337 4,785,390 4,976,806 5,175,878 5,382,913 2,222,645 2,311,551 2,404,013 2,500,173 2,600,180 2,704,187 (2,212,402) (2,300,898) (2,392,934) (2,488,651) (2,588,197) (2,691,725) (2,799,394) (2,911,370) 6,883,190 7,158,517 7,444,858 7,742,652 8,052,359 8,374,452 8,709,431 6,747,198 5,230,659 5,029,479 4,836,038 4,650,036 4,471,189 4,299,220 1,294,568 1,346,350 1,400,205 1,456,213 1,514,461 1,575,040 1,638,041 1,703,563 983,765 945,928 909,546 874,564 840,926 808,583 777,484 747,581 5 6 7 8 9 10 11 12 13 14 15 5,598,230 5,822,159 2,812,355 4,443,481 2,310,610 4,133,865 2.924.849 2.960.897 6,747,198 796,104 (5,469,298) (8,978,127) (5,931,361) 60,631,452 2,960,897 323,000 (2,051,626) (3,113,763) (1,901,906) 45,848,231 1,703,563 747,581 1,771,705 718,827 1,842,574 691,180 1,916,277 664,597 1,992,928 639,028 23,044,469 \$ 12,795,769 (3,027,825) (3,148,938) (3,274,895) 6,055,045 3,041,843 3,163,517 39,792,845 \$ 33,447,031 \$ 59,100,128 \$ 32,853,354 \$ (35,976,846) \$ Totals

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#### Exhibit 11c: UAAL Amortization Rates - June 30, 2007

**APCD Members** 

8.16% 4.00% Interest Annual Payroll Increases Amortization factor (n=15) 0.088195

Base Number: Date Base Established:	Base 1 itial (1/1/2003)	0	Base 2 7/01/2003	0	Base 3 7/01/2004	(	Base 4 07/01/2005	0	Base 5 7/01/2006	Base 6 07/01/2007	All Bases
Years Remaining:	10.5		11		12		13		14	15	
Original Balance:	\$ 1,227,034	\$	950,363	\$	(152,364)	\$	975,400	\$	199,108	\$ 1,338,322	\$ 4,537,863
Current Balance:	1,121,914		883,340		(145,480)		950,173		196,731	1,338,322	4,345,000
Amortization Factor:	0.116242		0.111932		0.104483		0.098199	(	0.092831	0.088195	
Beginning of Year Payment:	\$ 130,413	\$	98,874	\$	(15,200)	\$	93,306	\$	18,263	\$ 118,033	\$ 443,689

Beginning of Year Payroll: \$ 3,939,567

UAAL Amortization Rate: 11.26%

		Base 1	Base 2		Base 3	Base 4	Base 5	Base 6	All Bases	Discounted
Perio	od	Payment	Payment	F	Payment	Payment	Payment	Payment	Totals	Totals
1	\$	132,996	\$ 100,832	\$	(15,501)	\$ 95,154	\$ 18,625	\$ 120,371	\$ 452,476	\$ 435,073
2		138,316	104,865		(16,121)	98,960	19,370	125,185	470,575	418,339
3		143,848	109,060		(16,766)	102,918	20,144	130,193	489,397	402,249
4		149,602	113,422		(17,437)	107,035	20,950	135,400	508,972	386,777
5		155,586	117,959		(18,134)	111,317	21,788	140,816	529,332	371,902
6		161,810	122,678		(18,859)	115,769	22,660	146,449	550,507	357,599
7		168,282	127,585		(19,614)	120,400	23,566	152,307	572,526	343,844
8		175,013	132,688		(20,398)	125,216	24,509	158,399	595,427	330,619
9		182,014	137,996		(21,214)	130,225	25,489	164,735	619,245	317,904
10		189,294	143,516		(22,063)	135,434	26,509	171,325	644,015	305,677
11		98,433	149,256		(22,945)	140,851	27,569	178,178	571,342	250,724
12					(23,863)	146,485	28,672	185,305	336,599	136,567
13						152,344	29,819	192,717	374,880	140,624
14							31,011	200,426	231,437	80,266
15								 208,443	 208,443	 66,836
Tota	ls \$	1,695,194	\$ 1,359,857	\$	(232,915)	\$ 1,582,108	\$ 340,681	\$ 2,410,249	\$ 7,155,173	\$ 4,345,000



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



For SBCERS, member contributions are of just one type: Basic contributions.

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

Plan/Tier	Code Section	Member Contribution Provides Average Annuity of	FAS Period
General 5A	31621.5	1/200th of FAS* at age 60	1 year
General 5B	31621.2	1/100th of FAS* at age 60	1 year
General 5C	31621.5	1/200th of FAS* at age 60	3 years
General 2	NA	NA	3 years
APCD 1	31621.6 & 31581.1	1/2 x 1/100th of FAS* at age 55	1 year
APCD 2	31621.6	1/100th of FAS* at age 55	1 year
Safety 4A & 6A		1/2 x 3/200th of FAS* at age 55	1 year
Safety 4B		3/200th of FAS* at age 55	1 year
Safety 4C & 4D & 6B		1/2 x 3/200th of FAS* at age 55	3 years

<sup>\*</sup>FAS is Final Average Salary. FAS Period is length of time for the average.

#### **Basic Contributions**

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
- No COLAs are assumed

Changes in the actuarial assumptions occurred since the 2006 valuation, so changes in member contributions are needed. The rates shown in Appendix D reflect member contribution rates, to become effective July 1, 2008.

#### Safety Member **Contributions**

Based on information provided by SBCERS, the Safety member contribution rates were established during negotiations in 2000. They do not directly correspond to a CERL Section. Contribution rates were not changed when Plans 6A and 6B were adopted.

#### **Member Contribution** Rates

Some members only pay one-half of the rate otherwise defined by the formulas shown above. The groups paying half rates are indicted in the table.

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

General Plan 2 members make no employee contributions.

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



Contributions to SBCERS 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. Exhibit 10 in Section 4 shows the aggregate Normal Cost by class and in total for all plans. Exhibits 10a, 10b and 10c in Section 4 illustrate the Normal Cost Rates by type of benefit and for each plan and tier based on this valuation.

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

Exhibit 12 shows the total employer contribution rates by class in total for all plans.

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 and 12c. These results are expressed as a percentage of payroll and annual contribution dollars. Note that SBCERS' UAAL is determined separately for each class. The System funds the UAAL evenly as a percentage of pay over salaries for all members within a class with one exception. The initial additional UAAL for the new 3% @ 50 Formula is amortized as a percentage of pay for those moving to Safety Plan 6.

#### Calculated **Contribution Rate**

The total Employer contribution rate was 21.09% for the fiscal year beginning July 1, 2007. For the fiscal year beginning in 2008, the calculated rate based on this report increased to 23.06%. This is equal to the aggregate Net Normal Cost contribution rate of 13.93% plus the amortization payment of the UAAL as measured from the valuation date and reported in Exhibits 11, 11a, 11b and 11c. The aggregate UAAL contribution rate is 9.13%.

#### Calculated **Contribution Rate** (continued)

Both the normal cost rates and the UAAL rates are broken into pieces for the "Basic" rate and the COLA rate. The Basic rate is for the benefits without cost-of-living adjustments.

For each class, the Basic UAAL Contribution rate was determined by multiplying the total UAAL rate by the portion of the total AAL attributable to basic benefits.

#### 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. These 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.
- (2) Changes in Benefit Provisions: Plans 5C, 6A, and 6B have been added.

#### **Changes in UAAL** and UAAL **Contribution Rates**

Exhibit 13 shows the source of the major gains and losses for the System as a whole.

Changes have occurred since the 2006 valuation. A change in actuarial firms resulted in changes in both actuarial methods (the Modified 2006 Valuation) and the actuarial assumptions based on the 2007 Experience Study report.

In addition to regular experience gains and losses, benefits were increased as some Safety members will move from Plan 4 (3% @ 55) to Plan 6 (3% at 50). Please see the Executive Summary for a further description of this change.

The creation of General Plan 5C caused a slight decrease in the UAAL rate.

The addition of the Special Allowance reserve and corresponding liabilities, along with the transfer from the Contingency reserve, resulted in no change to the UAAL.

The transfer of assets from the Health Coverage Reserve to the Undesignated Earnings Reserve decreased the UAAL rate.

#### Exhibit 12: **Total Employer Contributions All Members**

(Dollars in Thousands)

	 General	 Safety	 APCD	 2007 All Plans
A. Basic Employer Normal Cost Rate	7.88%	13.32%	8.61%	9.28%
B. COLA Normal Cost Rate	3.79%	7.07%	4.52%	4.65%
C. Employer Normal Cost Rate	11.67%	20.39%	13.13%	13.93%
D. Basic UAAL Contribution Rate	6.17%	6.34%	8.25%	6.24%
E. COLA UAAL Contribution Rate	2.82%	3.10%	3.01%	2.89%
F. UAAL Contribution Rate	8.99%	9.44%	11.26%	9.13%
E. Total June 30, 2007 Contribution Rate (C) + (D)	20.66%	29.83%	24.39%	23.06%
F. Total June 30, 2006 Contribution Rate	17.21%	32.34%	20.10%	21.09%
G. Estimated Payroll for fiscal year beginning July 1, 2008	\$ 227,728	\$ 80,082	\$ 4,178	\$ 311,988
H. Estimated Annual Contribution (E x G)*	\$ 47,041	\$ 23,892	\$ 1,019	\$ 71,952
I. Last Year's Estimated Annual Contribution	\$ 38,383	\$ 25,027	\$ 877	\$ 64,288
J. Increase / (Decrease) in Annual Contribution	\$ 8,658	\$ (1,135)	\$ 142	\$ 7,665

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

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#### Exhibit 12a: **Total Employer Contributions General Members**

(Dollars in Thousands)

			General		
	<u>5A</u>	<u>5B</u>	<u>5C</u>	Plan 2	<u>Total</u>
A. Basic Employer Normal Cost Rate	7.89%	6.77%	8.34%	2.58%	7.88%
B. COLA Normal Cost Rate	3.66%	4.29%	3.77%	0.00%	3.79%
C. Employer Normal Cost Rate	11.55%	11.06%	12.11%	2.58%	11.67%
D. Basic UAAL Contribution Rate	6.17%	6.17%	6.17%	6.17%	6.17%
E. COLA UAAL Contribution Rate	 2.82%	2.82%	2.82%	2.82%	2.82%
F. UAAL Contribution Rate	8.99%	8.99%	8.99%	8.99%	8.99%
G. Total June 30, 2007 Contribution Rate (C) + (F)	20.54%	20.05%	21.10%	11.57%	20.66%
F. Total June 30, 2006 Contribution Rate	17.26%	17.26%	N/A	10.81%	17.21%
G. Estimated Payroll for fiscal year beginning July 1, 2008	\$ 81,299	\$ 37,671	\$ 107,084	\$ 1,674	\$ 227,728
H. Estimated Annual Contribution (E x G)*	\$ 16,699	\$ 7,553	\$ 22,595	\$ 194	\$ 47,041
I. Last Year's Estimated Annual Contribution	\$ 14,853	\$ 23,342	N/A	\$ 188	\$ 38,383
J. Increase / (Decrease) in Annual Contribution	\$ 1,846	\$ (15,789)	\$ 22,595	\$ 6	\$ 8,658

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

**Total Employer Contributions** Exhibit 12b:

Safety Members

(Dollars in Thousands)

				5	Safety			
	<u>4A</u>	<u>4B</u>	<u>4C</u>		<u>4D</u>	6A*	<u>6B*</u>	Total
A. Basic Employer Normal Cost Rate	12.96%	8.00%	12.65%		N/A	13.91%	14.11%	13.32%
B. COLA Normal Cost Rate	 6.88%	6.68%	6.64%		N/A	7.41%	7.40%	7.07%
C. Employer Normal Cost Rate	19.84%	14.68%	19.29%		N/A	21.32%	21.51%	20.39%
D. Basic UAAL Contribution Rate	5.26%	5.26%	5.26%		N/A	7.36%	7.36%	6.34%
E. COLA UAAL Contribution Rate	2.69%	2.69%	2.69%		N/A	3.49%	3.49%	3.10%
F. UAAL Contribution Rate	7.95%	7.95%	7.95%		N/A	10.85%	10.85%	9.44%
G. Total June 30, 2007 Contribution Rate (C) + (F)	27.79%	22.63%	27.24%		N/A	32.17%	32.36%	29.83%
F. Total June 30, 2006 Contribution Rate	34.04%	28.83%	31.86%		31.60%	N/A	N/A	32.34%
G. Estimated Payroll for fiscal year beginning July 1, 2008	\$ 12,579	\$ 1,431	\$ 24,844	\$	-	\$ 19,677	\$ 21,551	\$ 80,082
H. Estimated Annual Contribution (E x G)*	\$ 3,496	\$ 324	\$ 6,768	\$	-	\$ 6,330	\$ 6,974	\$ 23,892
I. Last Year's Estimated Annual Contribution	\$ 11,368	\$ 2,969	\$ 4,832	\$	5,859	N/A	N/A	\$ 25,027
J. Increase / (Decrease) in Annual Contribution	\$ (7,872)	\$ (2,645)	\$ 1,936	\$	(5,859)	\$ 6,330	\$ 6,974	\$ (1,135)

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

This work product was prepared solely for SBCERS. It may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to 49 other parties who receive this work.

Exhibit 12c: Total Employer Contributions APCD Members

(Dollars in Thousands)

		APCD	
	Plan 1	Plan 2	Total
A. Basic Employer Normal Cost Rate	9.21%	7.55%	8.61%
B. COLA Normal Cost Rate	4.36%	4.83%	4.52%
C. Employer Normal Cost Rate	13.57%	12.38%	13.13%
D. Basic UAAL Contribution Rate	8.25%	8.25%	8.25%
E. COLA UAAL Contribution Rate	 3.01%	3.01%	3.01%
F. UAAL Contribution Rate	11.26%	11.26%	11.26%
G. Total June 30, 2007 Contribution Rate (C) + (F)	24.83%	23.64%	24.39%
F. Total June 30, 2006 Contribution Rate	19.93%	20.45%	20.10%
G. Estimated Payroll for fiscal year beginning July 1, 2008	\$ 2,676	\$ 1,502	\$ 4,178
H. Estimated Annual Contribution (E x G)*	\$ 664	\$ 355	\$ 1,019
I. Last Year's Estimated Annual Contribution	\$ 583	\$ 294	\$ 877
J. Increase / (Decrease) in Annual Contribution	\$ 81	\$ 61	\$ 142

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

**Analysis of Change in Unfunded Actuarial Accrued Liability** Exhibit 13: (Dollars in Millions)

	_	Amount	As a Percent of June 30, 2007 Actuarial Accrued Liability	UAAL Contribution Rate % of Pay *
Unfunded Actuarial Accrued Liability - June 30, 2006	\$	256.8	13.1%	9.29%
Increase in UAAL due to new assumptions		45.4	2.3%	1.42%
Increase in UAAL due to change in methodology		86.2	4.4%	2.40%
Unfunded Actuarial Accrued Liability - June 30, 2006 (Modified Valuation with new assumptions)	\$	388.4	19.8%	13.11%
Interest Accrued		31.7	1.6%	1.06%
Benefits Accrued (Normal Cost)		56.6	2.9%	1.70%
Contributions (with Assumed Interest) Employer - Cash Member Transfer from Non-Valuation Assets Total  Expected Unfunded Actuarial Accrued Liability - June 30, 200	(65.9) (16.5) - - - - 77 \$	(82.4) <b>394.3</b>	-3.4% -0.8% 0.0% -4.2% 20.2%	-1.98% -0.49% 0.00% -2.47% <b>13.40%</b>
Source of Change				
Asset (Gains) and Losses		(57.6)	-2.9%	-1.73%
Transfer from Health Coverage Reserve		(84.1)	-4.3%	-2.52%
Actuarial (Gains) and Losses Salary Increases	12.6		0.6%	0.38%
CPI Less than Expected	-		0.0%	0.00%
New Entrants	4.0		0.2%	0.12%
Data changes	(4.5)		-0.2% -0.4%	-0.13% -0.21%
Mortality Experience Change in Safety Plan retirement age assumption **	(6.9) (17.4)		-0.4% -0.9%	-0.21% -0.52%
All Other Experience	1.8		0.1%	0.05%
Total	1.0_	(10.4)	-0.5%	-0.31%
New Safety Plan 6A & 6B Benefits				
Retirement assumption change	6.3		0.3%	0.19%
All other changes	6.5		0.3%	0.19%
Total		12.8	0.7%	0.38%
New General Tier 5C Benefits	(0.5)			
All changes	(2.6)	(0.0)	-0.1%	-0.09%
Total	-	(2.6)	-0.1%	-0.09%
Total Changes		(141.9)	-7.3%	-4.27%
Unfunded Actuarial Accrued Liability - June 30, 2007	\$	252.3	12.9%	9.13%

<sup>2006</sup> valuation pay used to compute UAAL contribution rate as a percentage of pay for 2006 Modified Valuation with new assumptions. Otherwise, 2007 valuation pay used to compute contribution rate as a source of change.



<sup>\*\*</sup> Adopted with 2007 Experience Study assumption changes, but previously omitted for 2006 financial values.

#### Appendix A: Actuarial Procedures and Assumptions



The actuarial procedures and assumptions used in this valuation are described in this section. The assumptions were reviewed and changed June 30, 2007 as a result of the 2007 Investigation of Experience Study.

The actuarial assumptions used in the valuations are intended to estimate the future experience of the members of SBCERS and of SBCERS 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 SBCERS' 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 and A-6 present the expected annual percentage increase in salaries.

Tables A-7 to A-12 were developed from the experience as measured by the 2007 Investigation of Experience Study. The rates are the probabilities a member will leave the system for various reasons.

### 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 plans, 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 percentage of the projected salaries of present and future members of SBCERS. Each year's change is measured separately and amortized over a fixed 15-year period. This approach is sometimes referred to as a "layered" amortization method.

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

#### Internal Revenue Code Section 415 Limit

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

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

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

### Employer Contributions

The County and other employers' contribution rates are set by the Retirement Board based on actuarial valuations.

The employer contribution rates consist of both normal cost rates and UAAL rates. Both the normal cost rates and the UAAL rates are broken into pieces for the "Basic" rate and the COLA rate. The Basic rate is for the benefits without cost-of-living adjustments. For each class, the Basic UAAL contribution rate was determined by multiplying the total UAAL rate by the portion of the total AAL attributable to basic benefits.

#### Member Contributions

The member contribution rates vary by entry age and are described in the law. Code references and a description of the rates are shown in Section 5 of the report. The methods and assumptions used are detailed later in this section.

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

#### 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. The expected market-value, with five-year smoothing valuation basis for all assets was adopted effective June 30, 2002.

### Investment Earnings and Expenses

The future investment earnings of the assets of SBCERS are assumed to accrue at an annual rate of 8.16% compounded annually, net of both investment and administrative expenses. This rate was adopted prior to June 30, 2007.

#### Post-retirement Benefit Increases

Post-retirement increases are assumed for the valuation in accordance with the benefits provided as described in Appendix B. These adjustments are assumed payable each year in the future as they are less than the expected increase in the Consumer Price Index of 3.5% per year. This rate was adopted effective June 30, 2007.

### Interest on Member Contributions

The annual credited interest rate on member contributions is assumed to be 8.00% compounded semi-annually for an annualized rate of 8.16%. This rate was adopted prior to June 30, 2007.

#### **Future Salaries**

The rates of annual salary increase assumed for the purpose of the valuation are illustrated in Table A-5 and A-6. In addition to increases in salary due to promotions and longevity, this scale includes an assumed 4.0% per annum rate of increase in the general wage level of the membership. These rates were adopted effective June 30, 2007.

### Social Security Wage Base

General Plan 2 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 4% 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

After members attain age 50 (55 for General Plan 2 members) and have 10 years of service, they may retire with a benefit commencing immediately. All members except General Plan 2 members, may also retire regardless of age after 20 years of service for safety members and after 30 years of service for general members. The retirement rates vary by age and are shown by plan in Tables A-7 to A-12

All General members who attain or who have attained age 75 in active service and all Safety members who have attained age 65 in active service are assumed to retire immediately.

All deferred vested members are assumed to retire at the later of age at termination or age 56 for General members and age 52 for Safety members, except for General Plan 2, who are assumed to retire at 65 and Safety Plan 6 who are assumed to retire at age 50.

The assumptions regarding termination of employment, early retirement, and unreduced service retirement are treated as a single set of decrements in regards to a particular member. For example, a general member hired at age 30 has a probability to withdraw from SBCERS due to death, disability or other termination of employment until age 50. After age 50, the member could still withdraw due to death, disability or retirement. Thus, in no year during the member's projected employment would they be eligible for both a probability of other termination of employment and a probability of retirement.

These rates were adopted effective June 30, 2007.

#### Disability

The rates of disability used in the valuation are also illustrated in Tables A-7 to A-12. These rates were revised June 30, 2006.

#### 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. These rates were adopted June 30, 2007.

#### Males

General members: RP-2000 Combined Mortality Table for Males, with ages set back three years.

Safety members: RP-2000 Combined Mortality Table for Males, with ages set back three years.

### Females General members: RP-2000 Combined Mortality Table for Females, with ages set back two years.

Safety members: RP-2000 Combined Mortality Table for Females, with ages set back two years.

### Mortality – Disabled Members

For disabled members, the mortality rates used in the valuation rates are illustrated in Table A-3. These rates were adopted June 30, 2007.

#### Males General members: RP-2000 Combined Mortality Table

for Males, with no age adjustment.

Safety members: RP-2000 Combined Mortality Table for Males, with no age adjustment.

### Females General members: RP-2000 Combined Mortality Table for Females, with no age adjustment.

Safety members: RP-2000 Combined Mortality Table for Females, with no age adjustment.

### Other Employment Terminations

Tables A-7 to A-12 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. These rates were adopted effective June 30, 2007.

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 SBCERS. 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 SBCERS or a reciprocal retirement system.

# Other Employment Terminations (continued)

All terminating members are assumed to not be rehired. 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. Some non-vested members may not elect a refund due to employment at a reciprocal agency. These rates were adopted effective June 30, 2007.

### Probability of Eligible Survivor

For members not currently in pay status, 80% of all males and 50% 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.

### 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 and Safety members is based on using a unisex mortality assumption. For these purposes, as well as determining option factors, the unisex mortality assumption is:

General Healthy Members: RP-2000 Combined Healthy Male,

set back 4 years

Safety Healthy Members: RP-2000 Combined Healthy Male,

set back 3 years

Beneficiaries: RP-2000 Combined Healthy Male,

set back 4 years

General Disabled Members: RP-2000 Combined Healthy Female,

set forward 1 year

Safety Disabled Members: RP-2000 Combined Healthy Male,

no adjustment



#### **Member Contribution Rate Assumptions** (continued)

- 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 8.16%.
- C. The Final Compensation is based on the salary paid in the year prior to attaining the retirement age.

Example: For a General Plan 5 member who enters at age 59 or earlier, the Final Compensation at retirement (age 60) will be the monthly average of the annual salaries during age 59.

D. Member Rates are assumed to increase with entry age.

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

<ol> <li>Economic assumptions</li> </ol>
--

A.	General wage increases	4.00%
B.	Investment earnings	8.16%
C.	Growth in membership	0.00

D. Post-retirement benefit increases (varies by plan) Plan COLA not greater

than CPI assumption.

E. CPI inflation assumption 3.50%

II. Demographic assumptions

A. Salary increases due to service

Tables A-5 to A-6

B. Retirement

Tables A-7 to A-12

Tables A-7 to A-12

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

Table A-2

Basis – RP-2000 Healthy Combined Mortality Table for respective sexes for general members, as adjusted:

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

#### E. Mortality among disabled members

Table A-3

Basis – RP-2000 Healthy Combined Mortality Table, as adjusted:

General - males 0 years
General - females 0 years
Safety - males 0 years
Safety - females 0 years

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-7 to A-10

H. Refund of contributions on vested termination

Table A-4



Table A-2: **Mortality for Members Retired for Service** 

	Safety	Safety	General	General
Age	Male	Female	Male	Female
20	0.030%	0.019%	0.030%	0.019%
25	0.037%	0.020%	0.037%	0.020%
30	0.038%	0.024%	0.038%	0.024%
35	0.056%	0.039%	0.056%	0.039%
40	0.090%	0.060%	0.090%	0.060%
45	0.122%	0.094%	0.122%	0.094%
50	0.173%	0.143%	0.173%	0.143%
55	0.267%	0.221%	0.267%	0.221%
60	0.469%	0.392%	0.469%	0.392%
65	0.876%	0.765%	0.876%	0.765%
70	1.608%	1.345%	1.608%	1.345%
75	2.728%	2.297%	2.728%	2.297%
80	4.691%	3.760%	4.691%	3.760%
85	8.049%	6.251%	8.049%	6.251%
90	13.604%	10.730%	13.604%	10.730%

Table A-3: Mortality for Members Retired for Disability

	Safety	Safety	General	General
Age	Male	Female	<u>Male</u>	Female
20	0.035%	0.019%	0.035%	0.019%
25	0.038%	0.021%	0.038%	0.021%
30	0.044%	0.026%	0.044%	0.026%
35	0.077%	0.048%	0.077%	0.048%
40	0.108%	0.071%	0.108%	0.071%
45	0.151%	0.112%	0.151%	0.112%
50	0.214%	0.168%	0.214%	0.168%
55	0.362%	0.272%	0.362%	0.272%
60	0.675%	0.506%	0.675%	0.506%
65	1.274%	0.971%	1.274%	0.971%
70	2.221%	1.674%	2.221%	1.674%
75	3.783%	2.811%	3.783%	2.811%
80	6.437%	4.588%	6.437%	4.588%
85	11.076%	7.745%	11.076%	7.745%
90	18.341%	13.168%	18.341%	13.168%

Table A-4: **Immediate Refund of Contributions Upon Termination of Employment** 

Years of Service	General Male	General Female	Safety
0	100%	100%	100%
1	95%	95%	100%
2	90%	95%	90%
3	80%	85%	85%
4	80%	85%	75%
5	50%	50%	35%
6	50%	50%	35%
7	50%	50%	35%
8	50%	50%	35%
9	50%	50%	35%
10	15%	20%	35%
11	15%	20%	35%
12	15%	20%	35%
13	15%	20%	35%
14	15%	20%	35%
15	10%	10%	20%
16	10%	10%	20%
17	10%	10%	20%
18	10%	10%	20%
19	10%	10%	20%
20	0%	0%	0%
21	0%	0%	0%
22	0%	0%	0%
23	0%	0%	0%
24	0%	0%	0%
25	0%	0%	0%
26	0%	0%	0%
27	0%	0%	0%
28	0%	0%	0%
29	0%	0%	0%
30 & Up	0%	0%	0%

Table A-5: Annual Increase in Salary General

Years of	<b>Due to Promotion</b>	Total
Service	and Longevity	Annual Increase*
<1	4.75%	8.94%
1	4.00%	8.16%
2	3.25%	7.38%
3	2.50%	6.60%
4	2.00%	6.08%
5	1.50%	5.56%
6	1.25%	5.30%
7	1.00%	5.04%
8	0.90%	4.94%
9	0.80%	4.83%
10	0.78%	4.81%
11	0.75%	4.78%
12	0.70%	4.73%
13	0.65%	4.68%
14	0.60%	4.62%
15	0.55%	4.57%
16	0.50%	4.52%
17	0.48%	4.50%
18	0.46%	4.48%
19	0.44%	4.46%
20	0.42%	4.44%
21	0.40%	4.42%
22	0.38%	4.40%
23	0.36%	4.37%
24	0.34%	4.35%
25	0.32%	4.33%
26	0.30%	4.31%
27	0.28%	4.29%
28	0.26%	4.27%
29	0.25%	4.26%
30 or More	0.25%	4.26%

<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.



Table A-6: **Annual Increase in Salary Safety** 

Years of	<b>Due to Promotion</b>	Total	
Service	and Longevity	Annual Increase*	
<1	6.00%	10.24%	
1	5.00%	9.20%	
2	4.00%	8.16%	
3	3.25%	7.38%	
4	2.50%	6.60%	
5	2.00%	6.08%	
6	1.60%	5.66%	
7	1.30%	5.35%	
8	1.20%	5.25%	
9	1.10%	5.14%	
10	1.00%	5.04%	
11	0.95%	4.99%	
12	0.92%	4.96%	
13	0.89%	4.93%	
14	0.87%	4.90%	
15	0.85%	4.88%	
16	0.82%	4.85%	
17	0.80%	4.83%	
18	0.77%	4.80%	
19	0.74%	4.77%	
20	0.72%	4.75%	
21	0.69%	4.72%	
22	0.67%	4.70%	
23	0.64%	4.67%	
24	0.62%	4.64%	
25	0.59%	4.62%	
26	0.57%	4.59%	
27	0.54%	4.57%	
28	0.52%	4.54%	
29	0.50%	4.52%	
30 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.



Rate of Separation From Active Service For General Members Table A-7: All Plans - Male

	All Fidits - Wale						
_	Service	Service	Ordinary		Years of	Other	
Age	Retirement	Disability	Disability	<u>Death</u>	Service	Terminations	
18	0.0000	0.00008	0.00000	0.00027	0	0.0998	
19	0.0000	0.00008	0.00000	0.00028	1	0.0998	
20	0.0000	0.00008	0.00000	0.00030	2	0.0998	
21	0.0000	0.00008	0.00000	0.00032	3	0.0998	
22	0.0000	0.00008	0.00000	0.00033	4	0.0998	
23	0.0000	0.00008	0.00000	0.00035	5	0.0875	
24	0.0000	0.00008	0.00000	0.00036	6	0.0752	
25	0.0000	0.00008	0.00000	0.00037	7	0.0630	
26	0.0000	0.00008	0.00000	0.00037	8	0.0582	
27	0.0000	0.00008	0.00000	0.00038	9	0.0535	
28	0.0000	0.00008	0.00000	0.00038	10	0.0487	
29	0.0000	0.00008	0.00000	0.00038	11	0.0440	
30	0.0000	0.00017	0.00000	0.00038	12	0.0392	
31	0.0000	0.00017	0.00000	0.00039	13	0.0373	
32	0.0000	0.00017	0.00000	0.00041	14	0.0354	
33	0.0000	0.00017	0.00000	0.00044	15	0.0334	
34	0.0000	0.00017	0.00000	0.00050	16	0.0315	
35	0.0000	0.00025	0.00008	0.00056	17	0.0296	
36	0.0000	0.00033	0.00008	0.00063	18	0.0276	
37	0.0000	0.00041	0.00008	0.00070	19	0.0257	
38	0.0000	0.00050	0.00008	0.00077	20	0.0237	
39	0.0000	0.00058	0.00016	0.00084	21	0.0218	
40	0.0200	0.00066	0.00016	0.00090	22	0.0198	
41	0.0200	0.00074	0.00016	0.00096	23	0.0160	
42	0.0200	0.00091	0.00024	0.00102	24	0.0123	
43	0.0200	0.00099	0.00032	0.00108	25	0.0085	
44	0.0200	0.00107	0.00040	0.00114	26	0.0048	
45	0.0200	0.00124	0.00047	0.00112	27	0.0010	
46	0.0200	0.00124	0.00055	0.00130	28	0.0008	
47	0.0200	0.00140	0.00063	0.00140	29	0.0006	
48	0.0200	0.00148	0.00071	0.00151	30 & Above	0.0004	
49	0.0200	0.00157	0.00087	0.00162	00 07 10000	0.0004	
50	0.0200	0.00165	0.00103	0.00173			
51	0.0200	0.00182	0.00103	0.00175			
52	0.0400	0.00198	0.001134	0.00200			
53	0.0500	0.00206	0.00150	0.00214			
54	0.0700	0.00200	0.00166	0.00245			
55	0.0800	0.00214	0.00182	0.00243			
56	0.0800	0.00237	0.00102	0.00292			
57	0.0800	0.00256	0.00137	0.00232			
58	0.1000	0.00264	0.00236	0.00362			
59	0.0900	0.00281	0.00260	0.00302			
60	0.1500	0.00289	0.00292	0.00469			
61	0.2500	0.00205	0.00232	0.00527			
62	0.2500	0.00314	0.00355	0.00595			
63	0.1500	0.00330	0.00386	0.00675			
64	0.3000	0.00346	0.00300	0.00768			
65	0.1500	0.00346	0.00410	0.00766			
66	0.1300	0.00346	0.00449	0.01001			
67	0.2000	0.00346	0.00520	0.01001			
68	0.2000	0.00346	0.00559	0.01128			
69	0.2000	0.00346	0.00599	0.01274			
70	0.2000	0.00346	0.00599	0.01441			
70 71	0.2000	0.00346	0.00599	0.01787			
71 72	0.2000	0.00346	0.00599	0.01787			
72 73	0.2000	0.00346	0.00599	0.01980			
73 74	0.2000	0.00346	0.00599	0.02221			
74 75	1.0000	0.00346	0.00099	0.02457			
10	1.0000	0.00000	0.00000	0.00000			

Table A-8: Rate of Separation From Active Service For General Members
All Plans - Female

	All Plans - Female						
		Service	Service	Ordinary		Years of	Other
	Age	Retirement	Disability	Disability	Death	Service	Terminations
-						<del></del>	
	18	0.0000	0.00012	0.00000	0.00018	0	0.1132
	19	0.0000	0.00012	0.00000	0.00018	1	0.1132
	20	0.0000	0.00012	0.00000	0.00019	2	0.1132
	21	0.0000	0.00012	0.00000	0.00019	3	0.0952
	22	0.0000	0.00012	0.00000	0.00019	4	0.0861
	23	0.0000	0.00012	0.00000	0.00019	5	0.0784
	24	0.0000	0.00012	0.00000	0.00019	6	0.0681
	25	0.0000	0.00012	0.00018	0.00020	7	0.0630
	26	0.0000	0.00012	0.00018	0.00020	8	0.0582
	27	0.0000	0.00012	0.00018	0.00021	9	0.0535
	28	0.0000	0.00012	0.00018	0.00021	10	0.0487
	29	0.0000	0.00012	0.00018	0.00022	11	0.0440
	30	0.0000	0.00012	0.00018	0.00024	12	0.0392
	31	0.0000	0.00012	0.00018	0.00025	13	0.0373
	32	0.0000	0.00012	0.00035	0.00026	14	0.0354
	33	0.0000	0.00012	0.00035	0.00031	15	0.0334
	34	0.0000	0.00012	0.00035	0.00035	16	0.0315
	35	0.0000	0.00024	0.00050	0.00039	17	0.0296
	36	0.0000	0.00024	0.00050	0.00044	18	0.0276
	37	0.0000	0.00036	0.00050	0.00048	19	0.0257
	38	0.0000	0.00036	0.00050	0.00051	20	0.0237
	39	0.0000	0.00048	0.00050	0.00055	21	0.0218
	40	0.0800	0.00060	0.00068	0.00060	22	0.0198
	41	0.0800	0.00072	0.00085	0.00065	23	0.0160
	42	0.0800	0.00084	0.00085	0.00071	24	0.0123
	43	0.0800	0.00096	0.00117	0.00077	25	0.0085
	44	0.0800	0.00096	0.00135	0.00085	26	0.0048
	45	0.0800	0.00108	0.00153	0.00094	27	0.0010
	46	0.0800	0.00108	0.00168	0.00103	28	0.0008
	47	0.0800	0.00120	0.00168	0.00112	29	0.0006
	48	0.0800	0.00132	0.00185	0.00122	30 & Above	0.0004
	49	0.0800	0.00144	0.00203	0.00133		
	50	0.0800	0.00144	0.00219	0.00143		
	51	0.0800	0.00156	0.00236	0.00155		
	52	0.0800	0.00168	0.00252	0.00168		
	53	0.0800	0.00180	0.00252	0.00185		
	54	0.0800	0.00192	0.00270	0.00202		
	55	0.0800	0.00204	0.00286	0.00221		
	56	0.0800	0.00216	0.00305	0.00242		
	57	0.0800	0.00216	0.00319	0.00272		
	58	0.1000	0.00228	0.00354	0.00309		
	59	0.1200	0.00240	0.00387	0.00348		
	60	0.1500	0.00252	0.00422	0.00392		
	61	0.1800	0.00264	0.00458	0.00444		
	62	0.3000	0.00276	0.00506	0.00506		
	63	0.3000	0.00288	0.00557	0.00581		
	64	0.2000	0.00300	0.00608	0.00666		
	65	0.2500	0.00300	0.00608	0.00765		
	66	0.2500	0.00300	0.00608	0.00862		
	67	0.2500	0.00300	0.00608	0.00971		
	68	0.2500	0.00300	0.00608	0.01095		
	69	0.2500	0.00300	0.00608	0.01216		
	70	0.3000	0.00300	0.00608	0.01345		
	71	0.3000	0.00300	0.00608	0.01486		
	72	0.5000	0.00300	0.00608	0.01674		
	73	0.5000	0.00300	0.00608	0.01858		
	74	0.5000	0.00300	0.00608	0.02067		
	75	1.0000	0.00000	0.00000	0.00000		

Table A-9: Rate of Separation From Active Service For Safety Members Plan 4 - Male

Age	Service Retirement	Service Disability	Ordinary Disability	Death	Years of Service	Other Terminations
18	0.0000	0.00015	0.00000	0.00027	0	0.0488
19	0.0000	0.00015	0.00000	0.00028	1	0.0488
20	0.0000	0.00015	0.00000	0.00030	2	0.0488
21	0.0000	0.00015	0.00000	0.00032	3	0.0488
22	0.0000	0.00015	0.00000	0.00033	4	0.0392
23	0.0000	0.00015	0.00000	0.00035	5	0.0360
24	0.0000	0.00020	0.00000	0.00036	6	0.0328
25	0.0000	0.00030	0.00004	0.00037	7	0.0296
26	0.0000	0.00040	0.00004	0.00037	8	0.0286
27	0.0000	0.00054	0.00004	0.00038	9	0.0276
28	0.0000	0.00069	0.00004	0.00038	10	0.0266
29	0.0000	0.00085	0.00004	0.00038	11	0.0257
30	0.0300	0.00103	0.00004	0.00038	12	0.0247
31	0.0300	0.00123	0.00007	0.00039	13	0.0237
32	0.0300	0.00143	0.00010	0.00041	14	0.0227
33	0.0300	0.00168	0.00017	0.00044	15	0.0218
34	0.0300	0.00193	0.00025	0.00050	16	0.0208
35	0.0300	0.00222	0.00032	0.00056	17	0.0198
36	0.0300	0.00257	0.00038	0.00063	18	0.0158
37	0.0300	0.00292	0.00046	0.00070	19	0.0119
38	0.0300	0.00327	0.00052	0.00077	20 & Above	0.0000
39	0.0300	0.00362	0.00059	0.00084		
40	0.0300	0.00396	0.00066	0.00090		
41	0.0300	0.00430	0.00074	0.00096		
42	0.0300	0.00470	0.00081	0.00102		
43	0.0300	0.00510	0.00084	0.00108		
44	0.0300	0.00549	0.00084	0.00114		
45	0.0300	0.00594	0.00088	0.00122		
46	0.0300	0.00639	0.00088	0.00130		
47	0.0300	0.00683	0.00091	0.00140		
48	0.0300	0.00727	0.00091	0.00151		
49	0.0300	0.00772	0.00094	0.00162		
50	0.0400	0.00816	0.00094	0.00173		
51	0.0300	0.00867	0.00098	0.00186		
52	0.0300	0.00916	0.00098	0.00200		
53	0.0300	0.00965	0.00102	0.00214		
54	0.1500	0.01014	0.00105	0.00245		
55	0.2000	0.01014	0.00105	0.00267		
56	0.2000	0.01014	0.00105	0.00292		
57	0.3000	0.01014	0.00105	0.00320		
58	0.3000	0.01014	0.00105	0.00362		
59	0.2000	0.01014	0.00105	0.00420		
60	0.2000	0.01014	0.00105	0.00469		
61	0.2000	0.01014	0.00105	0.00527		
62	0.3500	0.01014	0.00105	0.00595		
63	0.2000	0.01014	0.00105	0.00675		
64	0.2000	0.01014	0.00105	0.00768		
65	1.0000	0.00000	0.00000	0.00000		

Table A-10: Rate of Separation From Active Service For Safety Members Plan 4 - Female

Age	Service Retirement	Service Disability	Ordinary Disability	Death	Years of Service	Other Terminations
18	0.0000	0.00015	0.00000	0.00018	0	0.0488
19	0.0000	0.00015	0.00000	0.00018	1	0.0488
20	0.0000	0.00015	0.00000	0.00019	2	0.0488
21	0.0000	0.00015	0.00000	0.00019	3	0.0488
22	0.0000	0.00015	0.00000	0.00019	4	0.0392
23	0.0000	0.00015	0.00000	0.00019	5	0.0360
24	0.0000	0.00020	0.00000	0.00019	6	0.0328
25	0.0000	0.00030	0.00004	0.00020	7	0.0296
26	0.0000	0.00040	0.00004	0.00020	8	0.0286
27	0.0000	0.00054	0.00004	0.00021	9	0.0276
28	0.0000	0.00069	0.00004	0.00021	10	0.0266
29	0.0000	0.00085	0.00004	0.00022	11	0.0257
30	0.0300	0.00103	0.00004	0.00024	12	0.0247
31	0.0300	0.00123	0.00007	0.00025	13	0.0237
32	0.0300	0.00143	0.00010	0.00026	14	0.0227
33	0.0300	0.00168	0.00017	0.00031	15	0.0218
34	0.0300	0.00193	0.00025	0.00035	16	0.0208
35	0.0300	0.00222	0.00032	0.00039	17	0.0198
36	0.0300	0.00257	0.00038	0.00044	18	0.0158
37	0.0300	0.00292	0.00046	0.00044	19	0.0119
38	0.0300	0.00232	0.00040	0.00051	20 & Above	0.0000
39	0.0300	0.00327	0.00052	0.00051	20 & Above	0.0000
40	0.0300	0.00302	0.00066	0.00060		
41	0.0300	0.00390	0.00074	0.00065		
42	0.0300	0.00470	0.00074	0.00003		
43	0.0300	0.00470	0.00084	0.00077		
44	0.0300	0.00549	0.00084	0.00077		
45	0.0300	0.00549	0.00088	0.00083		
46	0.0300	0.00594	0.00088	0.00094		
47	0.0300	0.00683	0.00088	0.00103		
48	0.0300	0.00083	0.00091	0.00112		
49	0.0300	0.00727	0.00091	0.00122		
50	0.0300		0.00094	0.00133		
51	0.0300	0.00816 0.00867	0.00094	0.00143		
52 53	0.0300 0.0300	0.00916	0.00098	0.00168		
53 54	0.1500	0.00965 0.01014	0.00102	0.00185		
5 <del>4</del> 55	0.1500		0.00105	0.00202 0.00221		
		0.01014	0.00105			
56 57	0.2000	0.01014	0.00105	0.00242		
	0.3000	0.01014	0.00105	0.00272		
58 59	0.3000	0.01014	0.00105	0.00309 0.00348		
	0.2000	0.01014	0.00105			
60 61	0.2000	0.01014 0.01014	0.00105	0.00392 0.00444		
61 62	0.2000		0.00105			
62	0.3500	0.01014	0.00105	0.00506		
63	0.2000	0.01014	0.00105	0.00581		
64 65	0.2000	0.01014	0.00105	0.00666		
65	1.0000	0.00000	0.00000	0.00000		

Table A-11: Rate of Separation From Active Service For Safety Members Plan 6 - Male

A	Service	Service	Ordinary	Dooth	Years of	Other
Age	Retirement	Disability	Disability	Death	Service	Terminations
18	0.0000	0.00015	0.00000	0.00027	0	0.0488
19	0.0000	0.00015	0.00000	0.00028	1	0.0488
20	0.0000	0.00015	0.00000	0.00030	2	0.0488
21	0.0000	0.00015	0.00000	0.00032	3	0.0488
22	0.0000	0.00015	0.00000	0.00033	4	0.0392
23	0.0000	0.00015	0.00000	0.00035	5	0.0360
24	0.0000	0.00020	0.00000	0.00036	6	0.0328
25	0.0000	0.00030	0.00004	0.00037	7	0.0296
26	0.0000	0.00040	0.00004	0.00037	8	0.0286
27	0.0000	0.00054	0.00004	0.00038	9	0.0276
28	0.0000	0.00069	0.00004	0.00038	10	0.0266
29	0.0000	0.00085	0.00004	0.00038	11	0.0257
30	0.0300	0.00103	0.00004	0.00038	12	0.0247
31	0.0300	0.00123	0.00007	0.00039	13	0.0237
32	0.0300	0.00143	0.00010	0.00041	14	0.0227
33	0.0300	0.00168	0.00017	0.00044	15	0.0218
34	0.0300	0.00193	0.00025	0.00050	16	0.0208
35	0.0300	0.00222	0.00032	0.00056	17	0.0198
36	0.0300	0.00257	0.00038	0.00063	18	0.0158
37	0.0300	0.00292	0.00046	0.00070	19	0.0119
38	0.0300	0.00327	0.00052	0.00077	20 & Above	0.0000
39	0.0300	0.00362	0.00059	0.00084	20 0.7 1.5010	0.000
40	0.0300	0.00396	0.00066	0.00090		
41	0.0400	0.00430	0.00074	0.00096		
42	0.0400	0.00470	0.00081	0.00102		
43	0.0400	0.00510	0.00084	0.00108		
44	0.0400	0.00549	0.00084	0.00114		
45	0.0400	0.00594	0.00088	0.00114		
46	0.0400	0.00639	0.00088	0.00122		
47	0.0400	0.00683	0.00091	0.00140		
48	0.0400	0.00727	0.00091	0.00140		
49	0.0800	0.00727	0.00091	0.00162		
<del>4</del> 9 50	0.0800	0.00772	0.00094	0.00102		
51	0.0800	0.00867	0.00094	0.00173		
52	0.1000	0.00916	0.00098	0.00200		
53	0.1000	0.00910	0.00090	0.00200		
54	0.1500	0.01014	0.00102	0.00214		
55	0.2000	0.01014	0.00105	0.00243		
56	0.2000	0.01014	0.00105	0.00207		
57	0.3000	0.01014	0.00105	0.00292		
58	0.3000	0.01014	0.00105	0.00320		
59	0.2000	0.01014	0.00105	0.00302		
60	0.2000	0.01014	0.00105	0.00420		
61	0.2000	0.01014	0.00105	0.00469		
62	0.2000	0.01014	0.00105	0.00527		
62 63	0.3500	0.01014	0.00105	0.00595 0.00675		
64	0.2000	0.01014		0.00675		
		0.01014	0.00105			
65	1.0000	0.00000	0.00000	0.00000		

Table A-12: Rate of Separation From Active Service For Safety Members Plan 6 - Female

	Service	Service	Ordinary		Years of	Other
Age	Retirement	Disability	Disability	Death	Service	Terminations
18	0.0000	0.00015	0.00000	0.00018	0	0.0488
19	0.0000	0.00015	0.00000	0.00018	1	0.0488
20	0.0000	0.00015	0.00000	0.00019	2	0.0488
21	0.0000	0.00015	0.00000	0.00019	3	0.0488
22	0.0000	0.00015	0.00000	0.00019	4	0.0392
23	0.0000	0.00015	0.00000	0.00019	5	0.0360
24	0.0000	0.00020	0.00000	0.00019	6	0.0328
25	0.0000	0.00030	0.00004	0.00020	7	0.0296
26	0.0000	0.00040	0.00004	0.00020	8	0.0286
27	0.0000	0.00054	0.00004	0.00021	9	0.0276
28	0.0000	0.00069	0.00004	0.00021	10	0.0266
29	0.0000	0.00085	0.00004	0.00021	11	0.0257
30	0.0300	0.00103	0.00004	0.00024	12	0.0247
31	0.0300	0.00123	0.00007	0.00024	13	0.0237
32	0.0300	0.00123	0.00007	0.00025	14	0.0237
33	0.0300	0.00143	0.00017	0.00020	15	0.0227
34	0.0300	0.00193	0.00017	0.00031	16	0.0208
35	0.0300	0.00193	0.00023	0.00033	17	0.0208
36	0.0300	0.00222	0.00032	0.00039	18	0.0158
37	0.0300	0.00237	0.00038	0.00044	19	0.0138
38	0.0300	0.00292	0.00040	0.00048	20 & Above	0.0000
39	0.0300	0.00327	0.00052		20 & Above	0.0000
40	0.0300	0.00362	0.00059	0.00055		
				0.00060		
41 42	0.0400 0.0400	0.00430	0.00074	0.00065		
42		0.00470	0.00081	0.00071 0.00077		
	0.0400	0.00510	0.00084			
44	0.0400	0.00549	0.00084	0.00085		
45 46	0.0400	0.00594	0.00088	0.00094		
46	0.0400	0.00639	0.00088	0.00103		
47	0.0400	0.00683	0.00091	0.00112		
48	0.0400	0.00727	0.00091	0.00122		
49	0.0800	0.00772	0.00094	0.00133		
50	0.0800	0.00816	0.00094	0.00143		
51	0.0800	0.00867	0.00098	0.00155		
52	0.1000	0.00916	0.00098	0.00168		
53	0.1000	0.00965	0.00102	0.00185		
54	0.1500	0.01014	0.00105	0.00202		
55	0.2000	0.01014	0.00105	0.00221		
56	0.2000	0.01014	0.00105	0.00242		
57	0.3000	0.01014	0.00105	0.00272		
58	0.3000	0.01014	0.00105	0.00309		
59	0.2000	0.01014	0.00105	0.00348		
60	0.2000	0.01014	0.00105	0.00392		
61	0.2000	0.01014	0.00105	0.00444		
62	0.3500	0.01014	0.00105	0.00506		
63	0.2000	0.01014	0.00105	0.00581		
64	0.2000	0.01014	0.00105	0.00666		
65	1.0000	0.00000	0.00000	0.00000		

### **Appendix B: Summary of Benefit Provisions**



All actuarial calculations are based on our understanding of the statutes governing the SBCERS as contained in the County Employees Retirement Law (CERL) of 1937, with provisions adopted by the SBCERS Board, effective through June 30, 2007. 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.

#### **MEMBERSHIP IN RETIREMENT PLANS**

The County has established several defined benefit tiers based primarily on a member's date of entry into SBCERS. There are two types of SBCERS members:

Government Code Section

**Safety members:** employees whose principal duty is active law enforcement or active fire suppression are eligible to be Safety members. Safety members are eligible to join Plans 4A, 4B, 4C, 4D, 6A and 6B. Membership in a particular tier depends primarily upon date of entry to the system.

**General members:** all non-Safety employees are eligible to be General members. General members are eligible to be members of General Plan 2, 5A, 5B and 5C. Membership in a particular tier depends primarily upon date of entry to the system.

General members employed by Santa Barbara County Air Pollution Control District (APCD) are eligible to join APCD Plan 1 or APCD Plan 2 depending upon their date of entry to the system.

**APCD Plan 1:** APCD employees hired on or before July 3, 1995.

**APCD Plan 2:** APCD employees hired after July 3, 1995.

**General Plan 2:** Employees hired on or before January 11, 1999 who

elected to join General Plan 2.

**Safety Plan 4A &** General employees hired before October 10, 1994 who did not elect to join General Plan 2, and Safety

employees hired before October 10, 1994.

**Safety Plan 4B &** Employees hired on or after October 10, 1994.

General Plan 5B:

Safety Plan 4D:

General Plan 5C: Members in certain bargaining units hired on or after

October 10, 1994. Members in those bargaining units

will transfer from Plan 5B on March 10, 2008.

Safety Plan 4C & Members in certain bargaining units hired on or after

October 10, 1994. Members in those bargaining units

transferred from Plan 4B on July 3, 2006.

Safety Plan 6A: Members in certain bargaining units hired prior to

October 10, 1994. Members in those bargaining units

will transfer from Plan 4A on February 25, 2008.



Safety Plan 6B: Members in certain bargaining units hired after

October 10, 1994. Members in those bargaining units

will transfer from Plan 4D on February 25, 2008.

#### **MEMBER CONTRIBUTIONS**

#### Basic:

Contributions are based on the entry age and class of each member and are required of all members except General Plan 2 members. See Section 5 for details on this calculation. Current member rates are shown in Appendix D.

(31453, 31454, 31454.1)

Contributions cease when general members are credited with 30 years of service in a contributory plan provided they were members of SBCERS or a reciprocal system on March 7, 1973, and continuously thereafter. All safety members are eligible for the 30-year cessation of contributions.

(31625,31625.2)

Interest is credited to contributions semiannually on June 30 and December 31 at an interest rate set by the Board of Retirement on amounts that have been on deposit for at least six months.

(31591, 31700)

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

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

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

Members contribute a varying amount based on entry age and Plan.

(31621.2,General Plan 5A member rates are half General Plan 5B member rates. 31621.5) General Plan 5C is based on half rates.

(31621.6,APCD Plan 1 member rates are half APCD Plan 2 member rates. 31581.1)

Safety Plan 4A member rates are half Safety Plan 4B member rates.

Safety Plans 4C, 4D, 6A and 6B are based on half rates.

#### **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, 31454.1. 31581)



## SERVICE RETIREMENT ALLOWANCE

Eligibility: Plans 5A, 5B & 5C:	General Plan members: Age 50 with 5 years of service and 10 years of elapsed time since hire;	(31672, 31672.1)
	Any age with 30 years of service; or Age 70 regardless of service.	
Plan 2:	Age 55 with 10 years of service	(31486.4)
	APCD Plan members:	
	Age 50 with 5 years of service and 10 years of elapsed time since hire; Any age with 30 years of service; or Age 70 regardless of service.	(31672, 31672.1)
	Safety Plan members:	
	Age 50 with 5 years of service and 10 years of elapsed time since hire; Any age with 20 years of service; or Age 60, regardless of service.	(31663.25)
Final Compensation:		
	General Plan members:	
Plans 5A & 5B:	Monthly average of a member's highest 12 consecutive months of compensation.	(31462.1)
Plan 5C:	Monthly average of a member's highest 36 consecutive months of compensation.	(31462)
Plan 2:	Monthly average of a member's highest three years of compensation.	(31486.1)
	APCD Plan members:	
	Monthly average of a member's highest 12 consecutive months of compensation.	(31486.1)
	Safety Plan members:	
Plans 4A, 4B & 6A:	Monthly average of a member's highest 12 consecutive months of compensation.	(31462.1)
Plans 4C, 4D & 6B:	Monthly average of a member's highest	(31462)



36 consecutive months of compensation.

### **Compensation Limit:**

The amount of compensation that is taken into account in computing benefits payable to any person who first becomes a member on or after July 1, 1996, shall not exceed the dollar limitations in Section 401(a)(17) of Title 26 of the US Code.

(31671)

### **Monthly Allowance:**

#### General members:

Plans 5A, 5B & 5C: 2% x Final Compensation x General Age (31676.12)

Factor x Years of Service.

Plan 2: Sum of (a) + (b) – (c): (31486.4)

(a) 2% x Final Compensation x Years of Service

(max. 35 years); plus

(b) 1% x Final Compensation x Years of Service in excess of 35 (max. 10 years); minus

(c) 1/35 x Primary Insurance Amount (PIA) at age 65 x Years of Covered Service (max. 35 years)

The PIA is calculated based on certain assumptions specified by statute, and an assumed Social Security retirement age of 65. If retirement occurs prior to age 65, benefit amount is adjusted by an actuarial equivalent factor (see Sample Plan Age Factors).

#### **APCD** members:

2% x Final Compensation x APCD Age Factor x Years of (31676.15) Service.

#### Safety members:

3% x Final Compensation x Safety Age Factor x (31664.2) Years of service.



### Age Factors are higher for Plans 6A and 6B

(31664.1)

#### Age Factors by Plan

	General APCD		<u>Safety</u>			
			Plan 4	Plan 6		
Code Section:	31676.12	31676.15	31664.2	31664.1		
Label:	2% @ 57	2% @ 55	3% @ 55	3% @ 50		
Base:	2.00%	2.00%	3.00%	3.00%		
Age						
41			0.4777	0.6258		
42			0.5058	0.6625		
43			0.5347	0.7004		
44			0.5647	0.7397		
45			0.5958	0.7805		
46			0.6280	0.8226		
47			0.6625	0.8678		
48			0.6936	0.9085		
49			0.7269	0.9522		
50	0.6681	0.7454	0.7634	1.0000		
51	0.7056	0.7882	0.8028	1.0000		
52	0.7454	0.8346	0.8457	1.0000		
53	0.7882	0.8850	0.8926	1.0000		
54	0.8346	0.9399	0.9418	1.0000		
55	0.8850	1.0000	1.0000	1.0000		
56	0.9399	1.0447	1.0000	1.0000		
57	1.0000	1.1048	1.0000	1.0000		
58	1.0447	1.1686	1.0000	1.0000		
59	1.1048	1.2365	1.0000	1.0000		
60	1.1686	1.3093	1.0000	1.0000		
61	1.2365	1.3608				
62	1.3093	1.4123				
63	1.3093	1.4638				
64	1.3093	1.5153				
65	1.3093	1.5668				

#### **Maximum Allowance:**

General Plan 2: The sum of the normal retirement allowance and the

(31486.4)

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.

All other Plans: Allowance may not exceed 100% of Final

Compensation.



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

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

General Plan 2:	Life Annuity payable to retired member with 50%	(31486.6)

continuance to an eligible survivor (or eligible children).

All other Plans: Life Annuity payable to retired member with 60% (31760.1)

continuance to an eligible survivor (or eligible children).

Eligible survivor includes certain domestic partners. (31780.2)

#### **Optional Retirement Allowance:**

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

Option 1:	Member's allowance is reduced to pay a cash refund of any unpaid	(31761)

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

insurable interest in the life of the member.

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

spouse or beneficiary having an insurable interest in the life of the

member.

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

spouse or beneficiary having an insurable interest in the life of the

member.

Option 4: Other % of member's reduced allowance is payable to a surviving

spouse or beneficiary(ies) having an insurable interest in the life of

the member.

A member may not revoke and name another beneficiary if the member elects (31782)

Option 2, 3 or 4.



(31764)

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

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

(31600)

(31789.5)

number of days in that month) if not in effect for the entire month

of retirement.

#### **Death after Retirement:**

General Plan 2: No benefit is payable upon death after retirement, other than in

accordance with form of benefit allowance.

All other Plans: Upon a member's death after retirement, a special lump sum of

\$5,000 is payable to an eligible survivor, or the member's

estate.

#### SERVICE-CONNECTED DISABILITY RETIREMENT ALLOWANCE

#### **Eligibility:**

General Plan 2: Disability benefits not valued since provided outside of the (31720,

retirement system. 31720.5,

All other Plans: Any age with five (5) years of service; disability must result from 31720.6, 31720.7.

occupational injury or disease, and member must be 31720.7, permanently incapacitated for the performance of duty. 31720.9)

#### **Monthly Allowance:**

General Plan 2: Service retirement benefit payable at age 65 with service

projected from disability until age 65. Prior to age 65, disability

benefits are provided outside of retirement system.

All other Plans: Greater of (1) 50% of final compensation, and (2) the service (31727.4)

retirement allowance, if eligible to retire.

#### **Supplemental Disability Allowance:**

APCD Members: Upon retirement for service disability, APCD members receive a (31740)

monthly supplemental allowance of \$300.

#### **Normal Form Of Payment:**

General Plan 2: Service retirement benefit payable at age 65 with service

projected from disability until age 65. Prior to age 65, disability

benefits are provided outside of retirement system.

All other Plans: Life Annuity payable to retired member with 100% continuance

to an eligible survivor (or eligible children).



(31760, 31786)

(31789.5)

#### **Death after Retirement:**

General Plan 2: No benefit is payable upon death after retirement, other than in

accordance with form of benefit allowance.

All other Plans: Upon a member's death after retirement, a special lump sum of

\$5,000 is payable to an eligible survivor, or the member's

estate.

#### NONSERVICE-CONNECTED DISABILITY RETIREMENT ALLOWANCE

#### **Eligibility**:

General Plan 2: Disability benefits not valued since provided outside of the

retirement system.

All other Plans: Any age with five (5) years of service and permanently

incapacitated for the performance of duty.

(31720)

#### **Monthly Allowance:**

General Plan 2: Service retirement benefit payable at age 65 with service

projected from disability until age 65. Prior to age 65, disability

benefits are provided outside the retirement system.

All other Plans: The monthly allowance is equal to a service retirement

(31727.1,allowance if the member is eligible to retire and the service 31727.2. retirement allowance exceeds the benefits described below. 31727.3)

Otherwise, allowance equals (a) or (b) where:

(a) 90% x 1/50 x 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.

(b) 90% x 1/50 x Final Compensation x Projected Service, not to

exceed 1/3 of Final Compensation.

#### **Projected Service:**

General Members: Age 62 (31727.1,APCD Members: Age 65 31727.2, Safety Members: Age 55 31727.3)

#### **Supplemental Monthly Disability Retirement:**

APCD Members: Upon retirement for service disability, APCD members receive a (31740)

monthly supplemental allowance of \$300.



#### **Normal Form Of Payment:**

General Plan 2: Service retirement benefit payable at age 65 with service

projected from disability until age 65. Prior to age 65, disability

benefits are provided outside of retirement system.

All other Plans: Life Annuity with 60% continuance to a surviving spouse (or

(31760.1)

eligible children).

#### **Death after Retirement:**

General Plan 2: No benefit is payable upon death after retirement, other than in

accordance with form of benefit allowance.

All other Plans: Upon a member's death after retirement, a special lump sum of

\$5,000 is payable to an eligible survivor, or the member's

estate.

### SERVICE-CONNECTED DEATH BENEFITS

#### **Eligibility**:

All Plans: Active members who die in service as a result of injury or disease arising out of and in the course of employment.

(31486.7,

(31789.5)

31787)

#### **Monthly Allowance:**

General Plan 2: A lump sum is payable to an eligible survivor equal to 1/12 x

(31781)

All other Plans: A monthly allowance is payable to an eligible survivor equal to

the greater of 60% x the Member's Service Retirement

(31787)

Allowance (if he is eligible for service Retirement at his date of

final 12 months Salary x years of service (up to max of 6 years).

death), and (b) 50% x Final Compensation.

#### **Supplemental Monthly Death Benefit:**

APCD Members: Eligible survivors of an active members who dies while

employed with at least 18 months continuous service

(31855.11, 31855.12)

immediately prior to death, shall receive a supplemental monthly allowance. The amount of the supplemental allowance is based

on the family demographics of the beneficiaries.



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

**Eligibility:** 

All Plans: Active members who die while in service but not as a result of

(31486.7,

injury or disease arising out of and in the course of employment. 31780)

**Monthly Allowance:** 

General Plan 2: A lump sum is payable to an eligible survivor equal to 1/12 x

(31781)

final 12 months Salary x years of service (up to maximum of 6

years).

All other Plans: If an active member is eligible for Non-Service Connected

(31787)

Disability at his date of death, then a monthly allowance is payable to an eligible survivor equal to 60% x the member's allowance. Otherwise, the benefit is a refund of contributions plus a lump sum equal to 1/12 x final 12 months Salary x years

of service (up to maximum of 6 years).

**Supplemental Monthly Death Benefit:** 

APCD Members: Eligible survivors of an active members who dies while

(31855.11, 31855.12)

employed with at least 18 months continuous service immediately prior to death, shall receive a supplemental monthly allowance. The amount of the supplemental allowance is based

on the family demographics of the beneficiaries.

(31700)

#### **DEFERRED VESTED BENEFITS**

**Eligibility**:

General Plan 2: The member must have terminated with 10 years of service.

Members are eligible for service retirement when they reach service retirement eligibility (based on years of service at

termination plus reciprocal service, if any).

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

must have terminated with five (5) years of service or entered a reciprocal agency. Members are eligible for service retirement when they reach service retirement eligibility (based on years of

service at termination plus reciprocal service, if any).

(31700, 31701, 31702)

**Monthly Allowance:** 

General Plan 2: Same as service retirement allowance at normal retirement age

65 or in an actuarially equivalent reduced amount at early

retirement, after age 55.

All other Plans: Same as service retirement allowance; payable anytime after

the member would have been eligible for service retirement.

(31703, 31704,

31705)



COOT	OF LIVING	INIODE	AOFO
CO51-	OF-LIVING	INCRE	ASES

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%.

(31870,31870.1)

All Plans Members (and their beneficiaries) are (31870.1)

31874.2,

31874.3)

(excluding General Plan 2): limited to a maximum 3% cost-of-living increase.

General Plan 2: General Plan 2 does not have a COLA.

**COLA Bank:** 

All Plans When the CPI exceeds the applicable

(31874,percentage, the difference between the actual 31874.1,

(excluding General Plan 2): 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.

General Plan 2: General Plan 2 does not have a COLA and,

therefore, does not have a COLA Bank.

### Appendix C: Valuation Data and Schedules



Data on SBCERS membership as of June 30, 2007 was supplied to us by the system staff. On the following tables, Exhibit C-1a and C-1b, we present summaries of SBCERS membership at June 30, 2007 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 the compensation 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, we used the total prior year earnings.

However, the bi-weekly pay reported was used to establish the pay rate as of June 30, 2007.

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

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

Exhibit C-5: Age, Retirement Year, Benefit Amount and Class Distribution of Retired Members

Exhibits C-4 and C-5 are shown for all members combined as well as for each class separately.

SBCERS Membership - Active Members as of June 30, 2007 Exhibit C-1a:

					Average	Average
	Total		Annual	Average	Monthly	Vesting
	Number	С	ompensation	Age	Compensation	Service
General Mem	bers					
Plan 5A	1,142	\$	76,654,227	51.7	\$5,594	19.4
Plan 5B	429	\$	35,519,037	43.3	\$6,900	5.4
Plan 5C	1,972	\$	100,965,410	41.5	\$4,267	5.5
Plan 2	26	\$	1,578,671	54.4	\$5,060	19.2
Total	3,569	\$	214,717,344	45.0	\$5,013	10.1
Safety Membe	ore					
Salety Welliot	<del>2</del> 13					
Plan 4A	126	\$	11,859,947	48.6	\$7,844	20.4
Plan 4B	12	\$	1,349,328	51.8	\$9,370	21.0
Plan 4C	357	\$	23,424,243	38.8	\$5,468	8.2
Plan 6A*	216	\$	18,553,101	47.2	\$7,158	20.8
Plan 6B*	292	\$	20,319,539	35.9	\$5,799	5.9
Total	1,003	\$	75,506,157	41.2	\$6,273	11.9
APCD Members						
Plan 1	32	\$	2,523,483	51.3	\$6,572	19.3
Plan 2	21	\$	1,416,084	47.6	\$5,619	6.7
Total	53	\$	3,939,567	49.8	\$6,194	14.3
<b>Grand Total</b>	4,625	\$	294,163,067	44.3	\$5,300	10.5

<sup>\*</sup> There are no members in Plan 6 as of June 30, 2007. The statistics in this exhibit for Plan 6 are for those expected to enter Plan 6 in February 2008.

Exhibit C-1b: Schedule of Active Member Valuation Data

Valuation Date	Plan Type	Number	Ar	nnual Payroll	Δ	verage Annual Salary	Increase in Average Pay
June 30, 2002	General Safety <b>Total</b>	3,660 961 <b>4,621</b>	\$	175,920,000 58,763,000 <b>234,683,000</b>	\$	48,066 61,148 <b>50,786</b>	9.1% 8.5% <b>8.9%</b>
June 30, 2003	General Safety <b>Total</b>	3,648 925 <b>4,573</b>	\$	193,102,000 64,135,000 <b>257,237,000</b>	\$	52,934 69,335 <b>56,251</b>	10.1% 13.4% <b>10.8%</b>
June 30, 2004	General Safety <b>Total</b>	3,559 944 <b>4,503</b>	\$	199,365,000 67,596,000 <b>266,961,000</b>	\$	56,017 71,606 <b>59,285</b>	5.8% 3.3% <b>5.4%</b>
June 30, 2005	General Safety Total	3,558 947 <b>4,505</b>	\$	199,371,000 68,414,000 <b>267,785,000</b>	\$	56,035 72,243 <b>59,442</b>	0.0% 0.9% <b>0.3%</b>
June 30, 2006	General Safety Total	3,658 982 <b>4,640</b>	\$	214,405,000 72,977,000 <b>287,382,000</b>	\$	58,613 74,315 <b>61,936</b>	4.6% 2.9% <b>4.2%</b>
June 30, 2007	General APCD Safety <b>Total</b>	3,569 53 1,003 <b>4,625</b>	\$	214,717,000 3,940,000 75,506,000 <b>294,163,000</b>	\$ \$	60,162 74,340 75,280 <b>63,603</b>	2.6% N/A 1.3% <b>2.7%</b>

Exhibit C-2: SBCERS Membership - Deferred Vested Members as of June 30, 2007

		Average				
	Number	Age				
General Memi	bers					
Plan 5A Plan 5B Plan 5C Plan 2 Other Total	200 467 - 30 239 936	48.9 42.3 - 50.8 49.3 45.8				
Safety Members						
Plan 4A Plan 4B Plan 4C Plan 4D Plan 6A Plan 6B Other	29 61 14 5 - - 77	45.3 39.5 35.6 33.8 - - 44.8 42.1				
APCD Members						
Plan 1 Plan 2	13 2	47.2 50.5				
Total	15	47.6				
Grand Total	1,137	45.2				

SBCERS Membership - Retired Members as of June 30, 2007 Exhibit C-3a:

						verage
				Monthly		lonthly
_	Number	Average Age		Allowance	E	Benefit
General Memb	ers					
Plan 5A	578	61.4	\$	1,350,173	\$	2,336
Plan 5B	84	62.2	\$	92,208		1,098
Plan 5C	-	-	\$	-		-
Plan 2	32	71.0	\$	11,570		362
Other _	1,536	74.9	\$	2,149,746		1,400
Total	2,230	70.8	\$	3,603,698	\$	1,616
Safety Member	rs					
Plan 4A	160	58.5	\$	917,249	\$	5,733
Plan 4B	59	59.8	\$	224,100	\$	3,798
Plan 4C	2	60.0	\$	2,674	\$	1,337
Plan 4D	1	42.0	\$	3,572	\$	3,572
Plan 6A	_	-	\$	· -	\$	-
Plan 6B	_	-	\$	-	\$	-
Other _	343	67.6	\$	1,103,859	\$	3,218
Total	565	64.1	\$	2,251,455	\$	3,985
APCD Member	rs					
Plan 1	17	61.6	\$	41,773	\$	2,457
Plan 2	-	-	\$	<del>-</del>	\$	
Total	17	61.6	\$	41,773	\$	2,457
Grand Tatal	0.040	60.4	¢	E 906 005	<b>c</b>	2 007
Grand Total	2,812	69.4	\$	5,896,925	\$	2,097

Exhibit C-3b: SBCERS Membership - Retired Members as of June 30, 2007 **Subtotaled by Class and Retirement Type** 

			Average Monthly		
		Monthly		onthly	
	Number	Allowance	<u> </u>	Benefit	
General Membe	ers				
Healthy	1,773	\$ 3,094,793	\$	1,746	
Disabled	127	\$ 209,283	\$	1,648	
Beneficiaries _	330	\$ 299,622	\$	908	
Total	2,230	\$ 3,603,698	\$	1,616	
Safety Members	s				
Healthy	395	\$ 1,847,912	\$	4,678	
Disabled	117	\$ 303,800	\$	2,597	
Beneficiaries	53	\$ 99,743	\$	1,882	
Total	565	\$ 2,251,455	\$	3,985	
APCD Members	5				
Healthy	16	\$ 39,990	\$	2,499	
Disabled	-	\$ -	\$	-	
Beneficiaries	1	\$ 1,783	\$	1,783	
Total	17	\$ 41,773	\$	2,457	
Grand Total	2,812	\$ 5,896,925	\$	2,097	

Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2007 All Members Exhibit C-4:

All I	Members									
Count										
_					of Vesting Se	ervice				Total
Age	0-1	1-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	59	45	-	-	_	-	-	-	_	104
25-29	126	244	50	-	-	-	-	-	-	420
30-34	66	185	208	35	-	-	-	-	-	494
35-39	53	152	255	133	35	1	-	-	-	629
40-44	41	113	173	126	116	51	-	-	-	620
45-49	38	91	159	117	135	110	40	-	-	690
50-54	30	85	142	101	124	121	122	21	-	746
55-59	24	75	105	70	91	74	74	38	6	557
60-64	9	34	63	55	45	20	25	21	8	280
65 & Over	-	8	19	19	18	10	3	6	2	85
Total Count	446	1,032	1,174	656	564	387	264	86	16	4,625
Compensation										
_					of Vesting Se	ervice				Average
Age	0-1	1-2	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	40,584	45,430	-	-	-	-	-	-	-	42,681
25-29	47,916	49,389	56,489	-	-	-	-	-	-	49,792
30-34	49,245	54,589	59,692	67,727	-	-	-	-	-	56,955
35-39	53,825	56,460	63,659	64,208	68,035	56,585	-	-	-	61,439
40-44	56,856	59,015	62,650	64,303	69,597	73,375	-	-	-	64,122
45-49	62,617	57,248	58,814	61,832	66,697	80,032	80,575	-	-	65,515
50-54	69,993	65,615	63,237	62,438	69,156	78,457	81,415	88,265	-	70,801
55-59	62,312	61,391	56,945	65,500	69,858	73,790	89,836	91,032	83,286	70,177
60-64	64,042	64,312	63,722	65,752	67,773	76,135	66,172	92,052	86,823	68,744
65 & Over	-	67,986	56,334	61,211	86,149	75,905	112,437	56,134	77,029	69,590
Avg. Annual Compensation	52,505	55,781	61,079	63,898	69,134	77,100	82,557	88,171	84,272	63,603

This work product was prepared solely for SBCERS. It may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to cher parties who receive this work.

Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2007 General Members Exhibit C-4a:

Count										
					ars of Servic					Total
Age	0-1	1-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	50	34	-	-	-	-	-	-	-	84
25-29	91	175	35	-	-	-	-	-	-	301
30-34	58	145	123	23	-	-	-	-	-	349
35-39	44	119	174	88	19	1	-	-	-	445
40-44	35	103	135	90	66	31	-	-	-	460
45-49	34	80	141	98	103	57	24	-	-	537
50-54	28	79	123	86	106	84	60	11	-	577
55-59	21	69	95	64	76	66	59	30	5	485
60-64	8	32	52	52	37	19	24	21	7	252
65 & Over	-	8	17	16	18	10	2	6	2	79
Total Count	369	844	895	517	425	268	169	68	14	3,569
Compensation	ſ									
,					ars of Servic					Average
Age	0-1	1-2	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	38,597	41,865	-	-	-	-	-	-	-	39,920
25-29	44,448	44,452	48,443	-	-	-	-	-	-	44,915
30-34	47,935	51,561	52,586	61,176	-	-	-	-	-	51,953
35-39	52,950	53,552	59,429	57,974	62,780	56,585	-	-	-	57,066
40-44	57,698	58,011	60,271	57,715	65,661	62,348	-	-	-	59,982
45-49	62,765	56,812	57,582	59,945	62,010	71,445	64,517	-	-	60,857
50-54	66,021	65,717	63,447	61,253	68,156	72,456	65,000	69,040	-	66,000
55-59	61,994	59,935	55,932	64,587	68,660	72,927	88,202	88,909	71,427	68,339
60-64	62,620	63,575	62,778	66,536	67,773	75,919	66,671	92,052	84,709	68,793
65 & Over	-	67,986	56,109	59,624	86,149	75,905	115,834	56,134	77,029	69,418
Avg. Annual Compensation	51,191	53,883	58,207	60,721	66,858	71,503	73,870	83,774	78,868	60,162

This work product was prepared solely for SBCERS. It may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to cher parties who receive this work.

 ${\bf Age~\&~Service~Distribution~of~Active~Members~by~Count~and~Average~Compensation~as~of~June~30,~2007~Safety~Members}\\$ Exhibit C-4b:

				Ye	ars 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	9	10	-	-	-	-	_	-	-	19
25-29	35	67	15	-	-	-	-	-	-	117
30-34	8	39	85	11	-	-	-	-	-	143
35-39	9	33	79	45	16	-	-	-	-	182
40-44	6	10	38	35	45	20	-	-	-	154
45-49	3	10	18	19	29	50	16	-	-	145
50-54	2	6	14	14	14	34	60	10	-	154
55-59	3	6	8	6	9	8	14	7	1	62
60-64	-	2	8	2	7	-	1	-	1	21
65 & Over	-	-	2	3	-	-	1	-	-	6
Total Count	75	183	267	135	120	112	92	17	2	1,003
Compensation	]									
_					ars of Service					Average
Age	0-1	1-2	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	51,624	55,851	-	-	-	-	-	-	-	53,849
25-29	56,934	61,451	75,265	-	-	-	-	-	-	61,871
30-34	58,747	65,996	69,976	78,187	-	-	-	-	-	68,894
35-39	58,101	66,946	72,814	76,397	74,274	-	-	-	-	72,037
40-44	51,941	69,357	71,099	80,873	76,333	90,466	-	-	-	76,506
45-49	59,992	58,504	68,469	71,563	80,959	90,007	104,661	-	-	81,930
50-54	125,600	64,273	60,806	67,198	75,569	91,753	96,708	109,414	-	87,682
55-59	64,540	78,135	63,565	75,240	79,475	80,904	97,215	102,910	142,578	84,014
60-64	-	76,106	77,081	42,447	66,729	_	54,211	-	101,621	70,318
65 & Over	-	-	58,242	69,677	-	-	105,644	-	-	71,860
Avg. Annual Compensation	58,488	64,175	70,623	75,365	76,763	89,969	97,803	106,736	122,099	75,280

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This work product was prepared solely for SBCERS. It may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to cher parties who receive this work.

Exhibit C-4c: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2007 APCD Members

Count				٧a	ars 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	-	1	-	-	-	-	-	-	-	1
25-29	-	2	-	-	-	-	-	-	-	2
30-34	-	1	-	1	-	-	-	-	-	2
35-39	-	-	2	-	-	-	-	-	-	2
40-44	-	-	-	1	5	-	-	-	-	6
45-49	1	1	-	-	3	3	-	-	-	8
50-54	-	-	5	1	4	3	2	-	-	15
55-59	-	-	2	-	6	-	1	1	-	10
60-64	1	-	3	1	1	1	-	-	-	7
65 & Over	-	-	-	-	-	-	-	-	-	-
Total Count	2	5	12	4	19	7	3	1	-	53
Compensation										
,					ars of Service					Average
Age	0-1	1-2	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	-	62,428	-	-	-	-	-	-	-	62,428
25-29	-	77,253	-	-	-	-	-	-	-	77,253
30-34	-	48,694	-	103,356	-	-	-	-	-	76,025
35-39	-	-	70,002	-	-	-	-	-	-	70,002
40-44	-	-	-	77,231	60,923	-	-	-	-	63,641
45-49	65,437	79,614	-	-	89,753	76,919	-	-	-	80,633
50-54	-	-	64,900	97,706	73,208	95,785	115,100	-	-	82,173
55-59	-	-	78,583	-	70,609	_	82,951	71,584	-	73,535
60-64	75,417	-	44,459	71,583	75,102	80,242	-	-	-	62,246
65 & Over	-	-	-	-	-	-	-	-	-	-
Avg. Annual Compensation	70,427	69,048	62,921	87,469	71,866	85,479	104,383	71,584	-	74,331



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This work product was prepared solely for SBCERS. It may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to C-10 other parties who receive this work.

Sbc0076 Appendix C.doc 25 003 SBC 65 / 25.003.SBC.10.2007 / KIS/DRW/nlo

Exhibit C-5: Distribution of Retired Members by Age and Retirement Year as of June 30, 2007 **All Members** 

Age	Pre-1974	1975-79	1980-84	<b>Retire</b> 1985-89	ment Year 1990-94	1995-99	2000-04	2005-07	Total Count	N	verage Monthly Benefit
Under 35	-	-	-	-	-	3	5	4	12	\$	955
35-39	-	-	-	-	-	3	3	1	7		1,636
40-44	-	-	-	-	2	2	4	2	10		1,377
45-49	-	-	-	-	-	11	13	10	34		1,663
50-54	-	-	-	3	1	12	46	75	137		1,445
55-59	-	1	2	6	3	40	119	126	297		2,414
60-64	2	10	7	4	19	120	233	136	531		3,154
65-69	4	15	11	17	72	130	177	57	483		2,524
70-74	5	13	12	45	68	126	78	23	370		1,904
75-79	7	13	40	50	111	61	44	11	337		1,672
80-84	13	46	47	90	38	18	23	7	282		1,283
85-89	17	45	65	26	8	7	23	3	194		1,303
90-94	19	30	23	5	1	5	9	2	94		882
95-99	8	8	2	-	-	1	2	1	22		1,238
100 & Over	2	-	-	-	-	-	-	-	2		1,220
Total Count	77	181	209	246	323	539	779	458	2,812		
Avg Monthly Benefit	\$ 1,118	\$ 1,007	\$ 1,318	\$ 1,678	\$ 2,012	\$ 2,149	\$ 2,498	\$ 2,589		\$	2,097

This work product was prepared solely for SBCERS. It may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to C-11 other parties who receive this work.

Exhibit C-5a: Distribution of Retired Members by Age and Retirement Year as of June 30, 2007 **General Members** 

Age	Pre-1974	1975-79	1980-84	<b>Retire</b> 1985-89	ment Year 1990-94	1995-99	2000-04	2005-07	Total Count	Average Monthly Benefit
Under 35			_		_	3	4	2	9	\$ 673
35-39	-	-		-		2	2		5	1,244
	-	-	-	-	-	1		1	5 7	,
40-44	-	-	-	-	2		3	1		640
45-49	-	-	-	-	-	9	7	3	19	1,121
50-54	-	-	-	1	1	7	33	58	100	1,125
55-59	-	1	-	4	3	33	83	90	214	1,530
60-64	-	1	-	2	10	77	146	111	347	2,164
65-69	-	4	4	10	56	80	151	50	355	2,002
70-74	2	5	8	31	51	117	73	23	310	1,707
75-79	3	9	33	45	105	55	38	9	297	1,581
80-84	7	43	46	89	37	18	23	7	270	1,250
85-89	12	41	62	26	8	7	23	3	182	1,205
90-94	17	30	23	4	1	5	9	2	91	864
95-99	8	8	2	-	-	1	2	1	22	1,238
100 & Over	2	-	-	-	-	-	-	-	2	1,220
Total Count	51	142	178	212	274	415	597	361	2,230	
Avg Monthly Benefit	\$ 873	\$ 802	\$ 1,150	\$ 1,498	\$ 1,692	\$ 1,525	\$ 1,863	\$ 1,980		\$ 1,616

This work product was prepared solely for SBCERS. It may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to C-12 other parties who receive this work.

Exhibit C-5b: Distribution of Retired Members by Age and Retirement Year as of June 30, 2007 Safety Members

Age	Pre-1974	1975-79	1980-84	<b>Retire</b> 1985-89	ment Year 1990-94	1995-99	2000-04	2005-07	Total Count	Average Monthly Benefit
Under 35	-	-	-	_	_	-	1	2	3	\$ 1,799
35-39	-	-	-	-	-	1	1	-	2	2,617
40-44	-	-	-	-	-	1	1	1	3	3,097
45-49	-	-	-	-	-	2	6	6	14	2,391
50-54	-	-	-	2	-	5	13	15	35	2,396
55-59	-	-	2	2	-	7	34	35	80	4,774
60-64	2	9	7	2	9	43	85	22	179	5,067
65-69	4	11	7	7	16	50	25	5	125	3,980
70-74	3	8	4	14	17	9	3	-	58	2,972
75-79	4	4	7	5	6	6	5	2	39	2,400
80-84	6	3	1	1	1	-	-	-	12	2,013
85-89	5	4	3	-	-	-	-	-	12	2,776
90-94	2	-	-	1	-	-	-	-	3	1,416
95-99	-	-	-	-	-	-	-	-	-	-
100 & Over	-	-	-	-	-	-	-	-	-	-
Total Count	26	39	31	34	49	124	174	88	565	
Avg Monthly Benefit	\$ 1,600	\$ 1,757	\$ 2,281	\$ 2,796	\$ 3,802	\$ 4,239	\$ 4,701	\$ 5,064		\$ 3,985

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This work product was prepared solely for SBCERS. It may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to C-13 other parties who receive this work.

Exhibit C-5c: Distribution of Retired Members by Age and Retirement Year as of June 30, 2007 APCD Members

Age	Pre-1974	1975-79	1980-84	<b>Retire</b> 1985-89	ment Year 1990-94	1995-99	2000-04	2005-07	Total Count	Average Monthly Benefit
Under 35	-	-	-	-	-	-	-	-	-	\$ -
35-39	-	-	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	-	-	-	-	-
45-49	-	-	-	-	-	-	-	1	1	1,783
50-54	-	-	-	-	-	-	-	2	2	765
55-59	-	-	-	-	-	-	2	1	3	2,500
60-64	-	-	-	-	-	-	2	3	5	3,360
65-69	-	-	-	-	-	-	1	2	3	3,651
70-74	-	-	-	-	-	-	2	-	2	1,423
75-79	-	-	-	-	-	-	1	-	1	362
80-84	-	-	-	-	-	-	-	-	-	-
85-89	-	-	-	-	-	-	-	-	-	-
90-94	-	-	-	-	-	-	-	-	-	-
95-99	-	-	-	-	-	-	-	-	-	-
100 & Over	-	-	-	-	-	-	-	-	-	-
Total Count	-	-	-	-	-	-	8	9	17	
Avg Monthly Benefit	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,017	\$ 2,849		\$ 2,457

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This work product was prepared solely for SBCERS. It may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to C-14 other parties who receive this work.

Exhibit C-6: **Reconciliation of System Membership Since Prior Valuation** 

	Actives	Vested Terms	Terms with Contributions on Deposit	Retirees	Disabilities	Beneficiaries	Total
Total Record Count as of July 1, 2006 *	4,611	778		2,089	239	371	8,088
New Entrants	432						432
Rehired Non-Vested Participants	32						32
Rehired Vested Participants	11	(10)		(1)			-
Non-Vested Terminees	(192)		49				(143)
Vested Terms	(158)	158					-
Service Retirements	(107)	(30)		137			-
Retirement Disabilities	(4)	(1)		(3)	8		-
New Beneficiaries						27	27
Deaths with no Beneficiaries		(1)		(51)	(3)	(15)	(70)
Lump Sum, Annuity or Other		(10)					(10)
Data Adjustments		10	193	13		1	217
Subtotal of Net Changes from 2006 to 2007	14	116	242	95	5	13	485
Total Record Count as of July 1, 2007	4,625	894	242	2,184	244	384	8,573

Counts as of July 1, 2006 are from the Milliman 2006 replication valuation and may vary from counts shown in the 2006 actuarial valuation performed by the prior actuaries.

Milliman

This work product was prepared solely for SBCERS. It may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to C-15 other parties who receive this work.

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



This section illustrates the member contribution rates by plan, tier and entry age.

### **Exhibit D-1 New Rates** Based on June 30, 2007 Actuarial Valuation

#### **Member Contribution Rates**

		General		AP	CD		Safe	ty
Entry Age	5A	5B	5C	1	2	4A & 6A	4B	4C & 4D & 6B
16	2.39%	4.77%	2.29%	2.84%	5.68%	4.47%	8.93%	4.28%
17	2.39%	4.77%	2.29%	2.84%	5.68%	4.47%	8.93%	4.28%
18	2.39%	4.77%	2.29%	2.84%	5.68%	4.47%	8.93%	4.28%
19	2.39%	4.77%	2.29%	2.84%	5.68%	4.47%	8.93%	4.28%
20	2.39%	4.77%	2.29%	2.84%	5.68%	4.47%	8.93%	4.28%
21	2.45%	4.89%	2.35%	2.91%	5.82%	4.56%	9.13%	4.37%
22	2.50%	5.00%	2.40%	2.98%	5.95%	4.66%	9.32%	4.46%
23	2.56%	5.12%	2.46%	3.04%	6.09%	4.76%	9.52%	4.56%
24	2.62%	5.24%	2.51%	3.11%	6.23%	4.86%	9.73%	4.66%
25	2.68%	5.36%	2.57%	3.19%	6.37%	4.97%	9.94%	4.76%
26	2.74%	5.48%	2.63%	3.26%	6.52%	5.07%	10.15%	4.86%
27	2.81%	5.61%	2.69%	3.33%	6.67%	5.18%	10.36%	4.96%
28	2.87%	5.74%	2.75%	3.41%	6.82%	5.29%	10.58%	5.06%
29	2.94%	5.87%	2.82%	3.48%	6.97%	5.40%	10.80%	5.16%
30	3.01%	6.01%	2.88%	3.56%	7.12%	5.51%	11.02%	5.27%
31	3.07%	6.14%	2.95%	3.64%	7.28%	5.62%	11.24%	5.37%
32	3.14%	6.28%	3.01%	3.72%	7.44%	5.73%	11.47%	5.48%
33	3.21%	6.42%	3.08%	3.80%	7.60%	5.85%	11.69%	5.58%
34	3.29%	6.57%	3.15%	3.88%	7.76%	5.96%	11.92%	5.69%
35	3.36%	6.71%	3.22%	3.96%	7.92%	6.08%	12.15%	5.80%
36	3.43%	6.86%	3.29%	4.04%	8.09%	6.19%	12.39%	5.91%
37	3.51%	7.01%	3.36%	4.13%	8.26%	6.31%	12.62%	6.02%
38	3.58%	7.16%	3.43%	4.21%	8.43%	6.43%	12.86%	6.14%
39	3.66%	7.31%	3.50%	4.30%	8.60%	6.55%	13.10%	6.25%
40	3.74%	7.47%	3.58%	4.39%	8.78%	6.67%	13.35%	6.37%
41	3.81%	7.62%	3.65%	4.48%	8.95%	6.80%	13.60%	6.48%
42	3.89%	7.78%	3.73%	4.56%	9.13%	6.93%	13.86%	6.60%
43	3.98%	7.95%	3.80%	4.65%	9.31%	7.06%	14.12%	6.73%
44	4.06%	8.11%	3.88%	4.74%	9.49%	7.19%	14.38%	6.85%
45	4.14%	8.27%	3.96%	4.84%	9.67%	7.33%	14.65%	6.97%
46	4.22%	8.44%	4.03%	4.93%	9.86%	7.46%	14.93%	7.09%
47	4.31%	8.61%	4.11%	5.03%	10.05%	7.60%	15.20%	7.20%
48	4.39%	8.77%	4.19%	5.12%	10.24%	7.74%	15.47%	7.30%
49	4.47%	8.94%	4.27%	5.21%	10.41%	7.86%	15.72%	7.39%
50	4.56%	9.12%	4.35%	5.28%	10.57%	7.96%	15.93%	7.44%
51	4.65%	9.29%	4.43%	5.35%	10.69%	8.04%	16.08%	7.45%
52	4.74%	9.47%	4.50%	5.39%	10.78%	8.08%	16.15%	7.45%
53	4.83%	9.65%	4.58%	5.41%	10.81%	8.08%	16.15%	7.71%
54	4.91%	9.81%	4.64%	5.41%	10.81%	8.08%	16.15%	8.02%
55	4.98%	9.96%	4.68%	5.41%	10.81%	8.08%	16.15%	8.02%
56	5.04%	10.08%	4.71%	5.41%	10.81%	8.08%	16.15%	8.02%
57	5.08%	10.16%	4.71%	5.41%	10.81%	8.08%	16.15%	8.02%
58	5.10%	10.19%	4.90%	5.41%	10.81%	8.08%	16.15%	8.02%
59	5.10%	10.19%	5.10%	5.41%	10.81%	8.08%	16.15%	8.02%
60	5.10%	10.19%	5.10%	5.41%	10.81%	8.08%	16.15%	8.02%

Assumptions:

Interest: 8.16%

Salary: 2007 Valuation Scale (Service Based)

General and APCD - RP 2000 (Male, Setback 4 years); Safety - RP 2000 (Male, Setback 3 years) Unisex Mortality:



### Exhibit D-2 **Old Rates** Based on June 30, 2006 Actuarial Valuation

#### **Member Contribution Rates**

Entry Age	General		APCD		Safety		
	5A	5B	1	2	4A & 6A	4B	4C & 4D & 6B
16	3.57%	7.13%	4.16%	8.33%	5.47%	10.93%	5.24%
17	3.57%	7.13%	4.16%	8.33%	5.47%	10.93%	5.24%
18	3.57%	7.13%	4.16%	8.33%	5.47%	10.93%	5.24%
19	3.57%	7.13%	4.16%	8.33%	5.47%	10.93%	5.24%
20	3.57%	7.13%	4.16%	8.33%	5.47%	10.93%	5.24%
21	3.56%	7.13%	4.16%	8.31%	5.46%	10.93%	5.23%
22	3.56%	7.13%	4.15%	8.30%	5.47%	10.93%	5.24%
23	3.56%	7.13%	4.15%	8.30%	5.47%	10.94%	5.24%
24	3.57%	7.14%	4.15%	8.30%	5.48%	10.95%	5.25%
25	3.57%	7.15%	4.15%	8.30%	5.49%	10.98%	5.26%
26	3.58%	7.16%	4.16%	8.31%	5.50%	11.01%	5.27%
27	3.59%	7.18%	4.16%	8.32%	5.52%	11.05%	5.29%
28	3.60%	7.20%	4.17%	8.34%	5.55%	11.10%	5.32%
29	3.62%	7.23%	4.18%	8.37%	5.58%	11.16%	5.35%
30	3.63%	7.26%	4.20%	8.40%	5.62%	11.24%	5.39%
31	3.65%	7.30%	4.22%	8.43%	5.67%	11.34%	5.43%
32	3.67%	7.34%	4.23%	8.47%	5.72%	11.44%	5.48%
33	3.69%	7.39%	4.26%	8.51%	5.77%	11.55%	5.53%
34	3.72%	7.43%	4.28%	8.56%	5.83%	11.66%	5.58%
35	3.74%	7.49%	4.31%	8.61%	5.89%	11.78%	5.64%
36	3.77%	7.54%	4.33%	8.67%	5.95%	11.90%	5.70%
37	3.80%	7.60%	4.36%	8.73%	6.02%	12.03%	5.76%
38	3.83%	7.66%	4.39%	8.79%	6.09%	12.17%	5.83%
39	3.86%	7.73%	4.43%	8.86%	6.16%	12.31%	5.90%
40	3.90%	7.80%	4.47%	8.93%	6.23%	12.47%	5.97%
41	3.94%	7.88%	4.51%	9.01%	6.31%	12.63%	6.05%
42	3.98%	7.96%	4.55%	9.10%	6.40%	12.79%	6.13%
43	4.02%	8.04%	4.59%	9.18%	6.48%	12.97%	6.21%
44	4.06%	8.13%	4.64%	9.27%	6.58%	13.15%	6.30%
45	4.11%	8.21%	4.68%	9.37%	6.67%	13.35%	6.39%
46	4.15%	8.31%	4.73%	9.46%	6.78%	13.56%	6.50%
47	4.20%	8.41%	4.79%	9.57%	6.89%	13.78%	6.60%
48	4.25%	8.51%	4.84%	9.68%	7.00%	13.99%	6.70%
49	4.31%	8.61%	4.89%	9.79%	7.11%	14.21%	6.81%
50	4.36%	8.72%	4.95%	9.90%	7.22%	14.44%	6.92%
51	4.42%	8.83%	5.01%	10.03%	7.33%	14.67%	7.03%
52	4.47%	8.95%	5.08%	10.15%	7.45%	14.91%	7.14%
53	4.53%	9.06%	5.14%	10.28%	7.59%	15.18%	7.27%
54	4.59%	9.18%	5.21%	10.41%	7.72%	15.45%	7.40%
55	4.65%	9.30%	5.21%	10.41%	7.72%	15.45%	7.40%
56	4.71%	9.41%	5.21%	10.41%	7.72%	15.45%	7.40%
57	4.77%	9.53%	5.21%	10.41%	7.72%	15.45%	7.40%
58	4.83%	9.65%	5.21%	10.41%	7.72%	15.45%	7.40%
59	4.89%	9.77%	5.21%	10.41%	7.72%	15.45%	7.40%
60	4.89%	9.77%	5.21%	10.41%	7.72%	15.45%	7.40%

Assumptions:

Interest:

2006 Valuation Scale (Age Based) Salary:

General and APCD - GAM 1994 (Male, Setback 3 years); Safety - GAM 1994 (Male, Setback 2 years) Unisex Mortality:

Please note that the previous valuation report stated that the Safety member contribution rates were based upon Sections 31639.5 and 316 We confirmed that this was not correct with Buck Consultants. Buck actually used a target annuity of 1.50% at age 55. We continued that procedure for the proposed member contribution rates.



#### 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 SBCERS and include terms used exclusively by SBCERS 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 12-month period beginning July 1 and ending June 30.

Projected Benefits Those pension plan benefit amounts which are expected to be paid

at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation

and service credits.

Unfunded Actuarial Accrued Liability The excess, if any, of the Actuarial Accrued Liability over the

Actuarial Value of Assets.

Valuation Date The date upon which the Normal Cost, Actuarial Accrued Liability,

and Actuarial Value of Assets are determined. Generally, the Valuation Date will coincide with the ending of a Plan Year.

Valuation Reserves

All reserves excluding the Non-Valuation Reserves.

