#### ACTUARIAL VALUATION June 30, 2010



Ву

Karen I. Steffen

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

and

Daniel R. Wade

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



1301 Fifth Avenue Suite 3800 Seattle, WA 98101-2605

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

milliman.com

December 7, 2010

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

Dear Members of the Board:

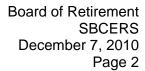
As requested, we performed an actuarial valuation of the Santa Barbara County Employees Retirement System (SBCERS) as of June 30, 2010 for determining contributions for the fiscal year beginning July 1, 2011. Our findings are set forth in this actuary's report. This report reflects the benefit provisions in effect as of the valuation date.

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

All costs, liabilities, rates of interest, and other factors for 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 a reasonable estimate of anticipated experience affecting the System.

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

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for 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 two 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. The calculations in this report





have been made on a basis consistent with our understanding of the plan provisions described in Appendix B of this report, and of GASB Statements No. 25 and 27. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

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

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

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

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

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

We would like to express our appreciation to members of SBCERS' staff, who gave substantial assistance in supplying the data on which this report is based.

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

Sincerely,

Karen I. Steffen, FSA, EA, MAAA

Consulting Actuary KIS/DRW/nlo

Kan J. Stell

Daniel R. Wade, FSA, EA, MAAA Consulting Actuary

Daniel Woole

#### **Table of Contents**

	Page
Summary of the Findings	1
Summary of Significant Valuation Results	8
Summary of Valuation Results	9
Scope of the Report	11
Assets	13
Statement of Plan Net Assets For the Years Ended June 30, 2009 and 201	016
Statement of Changes in Plan Net Assets	
For the Years Ended June 30, 2009 and 2010	17
Allocation of Assets by Accounting Reserve Amounts	
•	
	24
	27
Calculated Employer Normal Cost Contribution Rates  – June 30, 2010 General Members	28
Calculated Employer Normal Cost Contribution Rates  – June 30, 2010 Safety Members	29
Calculated Employer Normal Cost Contribution Rates	
·	
Member Contributions	35
Employer Contributions	37
Total Employer Contributions General Members	40
Total Employer Contributions Safety Members	41
Total Employer Contributions APCD Members	42
Analysis of Change in Unfunded Actuarial Accrued Liability	43
• • • • • • • • • • • • • • • • • • • •	
····	
	For the Years Ended June 30, 2009 and 2010

### Table of Contents (continued)

		Page
Appendices		
Appendix A:	Actuarial Procedures and Assumptions	A-1
Appendix B:	Summary of Benefit Provisions	B-1
Appendix C:	Valuation Data and Schedules	C-1
Appendix D:	Member Contribution Rates	D-1
Appendix E:	Glossary	E-1

#### Section 1: Summary of the Findings



#### Overview

#### 2010 Valuation Results

	June 30, 2010	June 30, 2009
Employer Contribution Rate	34.48%	28.88%
Funded Ratio	73.7%	75.3%

We are pleased to present the results of the June 30, 2010 actuarial valuation. Key points are summarized as follows:

Experience Study: Since our prior valuation, the assumptions used have been revised based upon the 2010 Investigation of Experience. As a result of the investigation, demographic assumptions for disability, termination, mortality, retirement, probability of marriage and sick leave load upon retirement were all updated to better reflect recent experience.

In addition, the Board elected to decrease the economic assumptions for inflation, wage growth and investment return (discount rate) from 3.50%, 4.00% and 8.16%, respectively, to 3.25%, 3.75% and 7.75%. It is our understanding that it is the Board's intention to use these assumptions for the 2010 and 2011 valuation, but then use a 7.50% investment return assumption for the 2012 valuation. All of the assumptions will be reviewed prior to the 2013 valuation as a result of the triennial Investigation of Experience scheduled for that time.

 Investment Returns: SBCERS' investment returns were 13.43% over the past year on a Market Value basis compared to an assumed return of 8.16% per year.

The Actuarial Value of Assets (AVA) is based upon the Market Value of Assets (MVA), but is a smoothed value that recognizes, over a five-year period, investment earnings less than (or greater than) the assumed investment return. When a loss (or gain) occurs, 20% of that amount is recognized each year until it is fully recognized in the fifth year.

### Overview (continued)

To prevent the AVA from deviating too much from the MVA, it has been SBCERS practice to apply an asset corridor limit on the AVA, such that the AVA stays within 20% of the MVA. After the smoothed value of assets is calculated, the smoothed value is compared to 80% of MVA and 120% of MVA. If the smoothed value is within that range, the smoothed value is used. If the smoothed value is higher than 120% of MVA, then the AVA is set equal to 120% of MVA. Similarly, if the smoothed value is lower than 80% of MVA, the AVA is set equal to 80% of MVA.

At the time of the prior valuation, the smoothed value of assets was greater than 120% of the MVA. Because of this, the AVA used in the valuation was equal to 120% of MVA. As of this valuation, the AVA is approximately 119.7% of the MVA and thus, the asset corridor no longer applies.

After applying the asset-smoothing method and applying the asset corridor to the previous valuation results, the rate of return on the AVA was 13.16% since last year, higher than the assumed rate of 8.16%. Note that currently, the MVA is \$1,609.4 million, while the AVA is \$1,927.2 million. This means that a \$317.8 million net investment return loss is being deferred. These deferred losses will be reflected in future valuations.

• Funded Ratio: The Funded Ratio decreased from 75.3% to 73.7%. This is the ratio of the Valuation Assets (the AVA net of certain non-valuation reserves) to the Actuarial Accrued Liability (AAL). This decrease was caused primarily by the changes in assumptions pursuant to the Investigation of Experience. These losses were partially offset by the positive investment experience since the prior valuation. Please see Exhibit 13 for more detail.

On a Market Value of Valuation Assets basis, the funded ratio has decreased from 62.8% to 61.5%.

 Contribution Rates: The Employer Normal Cost rate increased from 14.21% to 16.58%. This increase was due almost entirely to the change in assumptions resulting from the Investigation of Experience.

The Employer's required contribution rate to finance the Unfunded Actuarial Accrued Liability (UAAL) over the 17-year amortization period is 17.90%. This compares to a rate of 14.67% in the previous valuation. The increase was primarily caused by the changes in assumptions and was partially offset by the positive investment experience in the previous year. The overall result is an increase in the required total contribution rate from the prior valuation of 5.60% (from 28.88% to 34.48%) of payroll.

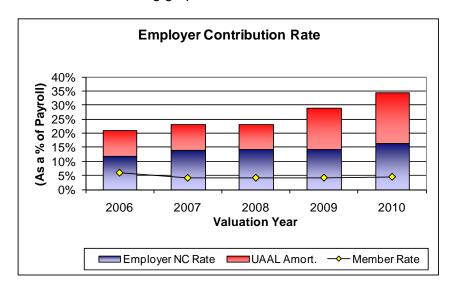
### **Employer Contribution Rate**

Under the Board's current funding objectives, the calculated Employer contribution rate for the fiscal year beginning July 1, 2011 is 34.48% of payroll. This is equal to the payment of the Employer Normal Cost rate plus a 17-year amortization of the UAAL.

It should be noted that the 34.48% is a weighted average for all SBCERS cost groups (General, Safety, and APCD). The actual percentage of payroll to be contributed by the Employer varies by tier. See Exhibits 10a, 10b and 10c for Normal Cost rates by tier. See Exhibit 11a for the UAAL contribution rates for General, Safety, and APCD. 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, 2011 of 34.48% 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 amortized over an open/rolling 17-year period.

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



#### Comparison with Last Year

A detailed analysis of the sources of the changes since the 2009 valuation is shown in the Gain and Loss Exhibit 13, Section 6 of this report.

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, 2009 Actuarial Valuation	28.88%	75.3%
Change due to new assumptions	6.75%	-4.4%
Expected Year-to-Year Change	0.80%	0.1%
Expected June 30, 2010 Actuarial Valuation	36.43%	71.0%
Asset Gain/Loss	-2.22%	3.2%
Salary / Payroll Variation	-0.20%	0.3%
CPI Less than Expected	-0.38%	0.5%
New Entrants	0.03%	0.0%
Retirement from Active Status Experience	0.50%	-0.7%
Retirement due to Early Retirement Incentive Program	0.19%	-0.3%
Retirement from Deferred Status Experience	0.13%	0.0%
Retired Mortality Experience	0.15%	-0.2%
All Other Experience	-0.04%	-0.1%
Total Experience	-1.95%	2.7%
Actual June 30, 2010 Actuarial Valuation	34.48%	73.7%

### Benefit Provision Changes

To our knowledge, there have been no changes to the benefit plan provisions since our previous valuation.

### Member Contribution Rates

The changes in the assumptions for wage increases, investment returns and retiree mortality all have an impact on the member contribution rates. Therefore, there have been changes recommended in the member contribution rates since our prior valuation. Member rates for all tiers are discussed in Section 5 and are shown in detail in Appendix D.

The aggregate member contribution rate has changed from 4.22% to 4.54% of payroll since our prior valuation.

#### **Funding Progress**

Based on Milliman's Investigation of Experience, the expected UAAL as of June 30, 2010 was \$759.5 million. The actual UAAL for the fiscal year ending June 30, 2010 is \$688.9 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 change for this valuation was the positive investment experience since the prior valuation.

One measure of the funding adequacy of the system is the Funded Ratio, which compares the value of the Valuation Assets to the 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 and again in 2008 and 2009, the Funded Ratio has decreased since then.

Currently, the Funded Ratio is 73.7%; that is, the Valuation Assets of \$1,927.2 million are 26.3% less than the AAL of \$2,616.1 million.

(all dollar amounts in millions)

Valuation	Market Value of	Actuarial Value of	Valuation	Non Valuation	 ctuarial ccrued	Funding
Year	Assets	Assets	Assets	Assets	 iability	Ratio
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%
2008	\$ 1,763	\$ 1,894	\$ 1,891	\$ 3	\$ 2,136	88.6%
2009	\$ 1,421	\$ 1,706	\$ 1,706	\$ -	\$ 2,264	75.3%
2010	\$ 1,609	\$ 1,927	\$ 1,927	\$ -	\$ 2,616	73.7%

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

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.



#### **Assets**

For the fiscal year ending June 30, 2010, we estimate that SBCERS earned 13.43%, net of expenses, on its Market Value of Assets. Note that our return figure may be slightly different than that shown in the 2010 CAFR due to timing of contributions and benefit payments, as well as the treatment of expenses.

As mentioned above, SBCERS uses an asset-smoothing method in the determination of the AVA used in the calculation of the UAAL contribution rate. Under this method, the Market Value returns are smoothed over a five-year period. After that, it has been SBCERS practice to apply an asset corridor limit on the AVA, such that the AVA stays within 20% of the MVA. At the time of this valuation, the smoothed value of assets is approximately 119.7% of the MVA. Because of this, the corridor no longer applies to the AVA.

After applying the asset-smoothing method and applying the asset corridor to the previous valuation results, the rate of return on the AVA was 13.16% since last year, lower than the market rate of return due to asset smoothing, but higher than the assumed rate of 8.16%.

Because \$317.8 million in asset losses are being deferred as of the valuation date, it is likely that there will be decreases in the funded ratio and increases in the employer contribution rates in future years.

At its September 19, 2008 meeting, the Board directed a new classification of assets effective June 30, 2007. As a result of that classification, the Health Coverage Reserve was eliminated. The \$93.5 million that had been in the Health Coverage Reserve was allocated into two new reserves.

One of those new reserves was 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 was allocated to the Transferred Funds reserve and included with Valuation Assets.

As of June 30, 2010, the Transferred Funds reserve was \$106.5 million. At its September 24, 2008 meeting, the Board directed that the Transferred Funds reserve be treated as a sub-account of the Retired Member reserve.

Note that the Health Benefits are reported in the SBCERS GASB 43 actuarial valuation of Post Employment Benefits Other than Pensions.

### Non-Valuation Assets

As of June 30, 2010, the entire AVA is included for valuation purposes. In valuations prior to 2009, certain non-valuation assets were excluded from the Valuation Assets.

We have based our understanding of the purposes of the various reserves on information provided to us by the Board and staff.

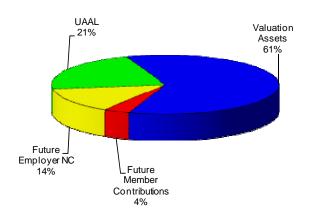
### Actuarial Balance Sheet

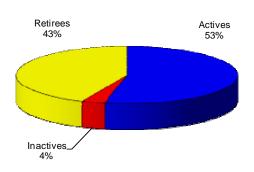
The first step in the valuation process is to compare the total actuarial assets of SBCERS with its total liabilities for all tiers. In this analysis, SBCERS' resources equal the Valuation Assets plus the expected future contributions by both the employers and members. Liabilities reflect benefits already 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.

#### Resources

#### **Present Value of Future Benefits**





#### **Member Information**

The number of active members included in the valuation decreased by 239 (or 5.4%) between 2009 and 2010.

Retired member counts and average retirement benefit amounts continue to increase steadily. For 2010, there were 3,318 retired members and beneficiaries with an average benefit of \$2,637 per month. This represents a 6.4% increase in count and a 6.9% increase in the average monthly benefit.

### Summary Valuation Results

The following Exhibits present a summary of key data elements on June 30, 2010 and June 30, 2009, 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 Significant Valuation Results** 

			June 30, 2010		June 30, 2009	Relative Change
I.	Total Membership					
	A. Active Members		4,228		4,467	(5.4)%
	B. Retired Members & Beneficiaries		3,318		3,117	6.4%
	C. Vested Terminated Members		902		906	(0.4)%
	D. Terminated Members (with Contributions)		279		248	12.5%
	E. Total		8,727		8,738	(0.1)%
II.	Annualized Payroll as of the Valuation Date					
	A. Annual Total (\$thousands)	\$	306,963	\$	306,524	0.1%
	B. Monthly Average	\$	6,050	\$	5,718	5.8%
		Ψ	0,000	Ψ	0,7.10	0.070
III.	Average Monthly Benefit to Current					
	Retirees and Beneficiaries	\$	2,637	\$	2,467	6.9%
IV.	Actuarial Accrued Liability (\$thousands)					
	A. Active Members	\$	1,132,419	\$	1,026,647	10.3%
	B. Retired Members	\$ \$	1,375,289	\$	1,131,188	21.6%
	C. Vested Terminated Members	\$	108,439	\$	106,027	2.3%
	D. Total	\$	2,616,147	\$	2,263,862	15.6%
V.	Assets (\$thousands)					
	A. Market Value of Fund	\$	1,609,449	\$	1,421,519	13.2%
	B. Market Value of Valuation Reserves	\$	1,609,449	\$	1,421,519	13.2%
	C. Valuation Assets	\$	1,927,229		1,705,733	13.0%
VI.	Funded Ratios					
	A. Market Value of Assets Basis (V.B. / IV.)		61.5%		62.8%	(2.0)%
	B. Valuation Assets Basis (V.C. / IV.)		73.7%		75.3%	(2.2)%
VII.	Unfunded Actuarial Accrued Liability	Ф	000 040	æ	550 400	22.40/
	or Surplus Funding (\$thousands)	\$	688,918	\$	558,129	23.4%
VIII.	Required Employer contribution rate for all tiers combined as a percent of total payroll					
	A. Gross Normal Cost		21.12%		18.43%	14.6%
	B. Member Contributions		(4.54)%		(4.22)%	7.6%
	C. Employer Normal Cost		16.58%		14.21%	16.7%
	D. UAAL Amortization		17.90%		14.67%	22.0%
	E. Total Employer Rate		34.48%		28.88%	19.4%

**Exhibit 2:** Summary of Valuation Results

	06/30/2009	06/30/2010	Percent	06/30/2009	06/30/2010	Percent	06/30/2009	06/30/2010	Percent	06/30/2009	06/30/2010	Percent
	General	General	Change	Safety	Safety	Change	APCD	APCD	Change	Total	Total	Change
Actives	3,450	3,261	-5.5%	967	921	-4.8%	50	46	-8.0%	4,467	4,228	-5.4%
Inactives *	949	974	2.6%	191	192	0.5%	14	15	7.1%	1,154	1,181	2.3%
Retirees	2,425	2,548	5.1%	669	742	10.9%	23	28	21.7%	3,117	3,318	6.4%
Totals	6,824	6,783	-0.6%	1,827	1,855	1.5%	87	89	2.3%	8,738	8,727	-0.1%
Active Payroll **	223,239,074	223,636,643	0.2%	79,330,451	79,611,070	0.4%	3,954,592	3,715,513	-6.0%	306,524,117	306,963,226	0.1%
Average	64,707	68,579	6.0%	82,038	86,440	5.4%	79,092	80,772	2.1%	68,620	72,602	5.8%
Retiree Benefits	55,279,752	63,146,124	14.2%	36,290,484	40,964,544	12.9%	705,084	868,116	23.1%	92,275,320	104,978,784	13.8%
Average	22,796	24,783	8.7%	54,246	55,208	1.8%	30,656	31,004	1.1%	29,604	31,639	6.9%
Valuation Assets	990,027,615	1,128,896,050	14.0%	692,960,780	772,276,213	11.4%	22,744,625	26,056,912	14.6%	1,705,733,020	1,927,229,175	13.0%
Market Value of Assets	825,023,012	942,752,581	14.3%	577,467,317	644,935,725	11.7%	18,953,854	21,760,392	14.8%	1,421,444,183	1,609,448,698	13.2%
Actuarial Accrued Liability	1,362,168,269	1,580,178,198	16.0%	870,833,441	1,001,336,747	15.0%	30,860,609	34,631,911	12.2%	2,263,862,319	2,616,146,856	15.6%
Unfunded Actuarial Accrued Liability	372,140,654	451,282,148	21.3%	177,872,661	229,060,534	28.8%	8,115,984	8,574,999	5.7%	558,129,299	688,917,681	23.4%
Retirement Contribution Rates Employer Normal Cost Unfunded Actuarial Accrued Liability Total	11.87%	13.85%	16.7%	20.87%	24.33%	16.6%	13.33%	14.76%	10.7%	14.21%	16.58%	16.7%
	13.44%	16.09%	19.7%	18.07%	22.95%	27.0%	16.54%	18.41%	11.3%	14.67%	17.90%	22.0%
	25.31%	29.94%	18.3%	38.94%	47.28%	21.4%	29.87%	33.17%	11.0%	28.88%	34.48%	19.4%
<u>Funded Ratios</u> Valuation Assets Market Value of Assets	72.7% 60.6%	71.4% 59.7%	-1.7% -1.5%	79.6% 66.3%	77.1% 64.4%	-3.1% -2.9%	73.7% 61.4%	75.2% 62.8%	2.1% 2.3%	75.3% 62.8%	73.7% 61.5%	-2.2% -2.0%

<sup>\*</sup> June 30, 2010 numbers include 279 terminated members with a pending refund of contributions as of June 30, 2010. The June 30, 2009 numbers include 248 such members.

<sup>\*\*</sup> Active payroll excludes pay for Safety members over 65 and General members over age 75. These members are assumed to retire at the valuation date.

This page intentionally left blank.



#### Section 2: Scope of the Report



This report presents the actuarial valuation of the Santa Barbara County Employees' Retirement System as of June 30, 2010. 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 as of June 30, 2010.

In Section 4, we describe 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.

In Section 5, we present the methodology for determining the Member contribution rates.

In Section 6, we develop the calculations for the Employer contributions needed to fund the benefits under the actuarial cost method in use.

In Section 7, we disclose the information required under Statement No. 25 of the Governmental Accounting Standards Board (GASB).

This report includes several appendices:

- Appendix A A summary of the actuarial procedures, and assumptions used to estimate liabilities and contributions.
- Appendix B A summary of the current benefit structure, as determined by the provisions of governing law on June 30, 2010.
- 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.



#### 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, 2010. 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. Section 5 covers the member contribution rates. Section 6 deals with the process for determining required employer 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

		Actuarial Value			
Valuation Date	Market Value of Total Assets	Total Assets	Valuation Assets		
2004 2005 2006 2007 2008 2009	\$ 1,347 1,476 1,629 1,900 1,763 1,421	\$ 1,379 1,444 1,553 1,735 1,894 1,706	\$ 1,242 1,306 1,415 1,704 1,891 1,706		
2010	1,609	1,927	1,927		

On June 30, 2010, the total Market Value of Assets (MVA) was about \$1.609 billion. The Actuarial Value of Assets (AVA), which are equal to Valuation Assets as of June 30, 2010, was determined to be \$1.927 billion, equal to 119.7% of the Market Value of Assets.

#### **Financial Exhibits**

Exhibit 3 is the Statement of Plan Net Assets and Exhibit 4 is the Statement of Changes in Plan Net Assets. Exhibit 5 displays 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 its annual financial report. We have accepted these tables for use in this report without audit, but we have reviewed them for reasonableness and consistency with previous reports.

### Actuarial Asset Method

Under the actuarial asset method used by SBCERS, we compute the expected MVA based on the prior year's MVA, the actual cash flow of contributions and benefit payments, and the assumed investment rate of return.

The assumed rate of return through June 30, 2010 is 8.16%, net of all expenses. After June 30, 2010, the assumed rate of return will be 7.75%.

The difference between the actual Market Value and the computed expected Market Value is smoothed, or recognized over a five-year period. When a loss (or gain) occurs, 20% of that amount is recognized each year until it is fully recognized in the fifth year.

To prevent the AVA from deviating too much from the MVA, it has been SBCERS practice to apply an asset corridor limit on the AVA, such that the AVA stays within 20% of the MVA. After the smoothed value of assets is calculated, the smoothed value is compared to 80% of MVA and 120% of MVA. If the smoothed value is within that range, the smoothed value is used. If the smoothed value is higher than 120% of MVA, then the AVA is set equal to 120% of MVA. Similarly, if the smoothed value is lower than 80% of MVA, the AVA is set equal to 80% of MVA.

At the time of this valuation, the smoothed value of assets is 119.7% of the MVA. Because of this, the corridor no longer applies to the AVA.

### Actuarial Value of Assets

The development of the June 30, 2010 AVA is shown in Exhibit 6. As of that date, the Actuarial Value of Assets is 119.7% of the Market Value of Assets. At the time of the last valuation, the corridor applied and thus, the AVA was 120% of MVA. There are \$317.8 million of deferred investment return losses yet to be recognized.

#### Valuation Assets and Non-Valuation Assets

Valuation Assets are the AVA, 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. As of June 30, 2010, the entire AVA is included for valuation purposes. In valuations prior to 2009, certain non-valuation assets were excluded from the Valuation Assets.

#### **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.

The Member Deposit Reserve, County and District Advance Reserve, Retired Member Reserve, and Transferred Funds Reserve were all separated by classification by SBCERS.

At its September 24, 2008 meeting, the Board decided to classify the Transferred Funds Reserve as a sub-account of the Retired Member Reserve.

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, 2009 and 2010

		2010		2009
Assets				
Cash and Deposits	\$	21,483,873	\$	11,632,923
Receivables				
Contributions		3,983,960		3,272,529
Security Sales Pending		46,507,251		103,481,151
Dividends		1,308,354		1,093,149
Accrued Interest		3,912,942		4,525,452
Other Receivables		123,565		91,314
Total Receivables	\$	55,836,072	\$	112,463,595
Investments at Fair Value				
Short Term Investments		51,142,189		43,494,167
Alternative Equity		55,168,188		36,708,253
Domestic Fixed Income Securities		415,198,303		375,970,642
Domestic Equities		585,091,702		542,060,779
International Equities		305,747,082		281,406,268
International Fixed Income Securities		106,185,345		81,776,521
Real Estate		67,295,389		64,834,896
Total Investments	\$	1,585,828,198	\$	1,426,251,526
Collateral Held for Securities Lent		71,502,381		105,353,402
Total Assets	\$	1,734,650,524	\$	1,655,701,446
Liabilities				
Payables				
Collateral Held for Securities Lent		71,502,381		105,353,402
Securities Purchases Pending		46,411,500		121,475,768
Benefits Payable		6,907,423		7,061,794
Accounts Payable		380,522		291,300
Total Liabilities		125,201,826		234,182,264
Not Access Holdin Tours (1) Building Building	•	1 600 449 600	¢	4 424 540 482
Net Assets Held in Trust for Pension Benefits	\$	1,609,448,698	\$	1,421,519,182

Exhibit 4: Statement of Changes in Plan Net Assets For the Years Ended June 30, 2009 and 2010

	J	une 30, 2010	Ju	ne 30, 2009
Additions				
Contributions				
Employer	\$	84,647,133	\$	75,902,140
Member		11,648,994		11,083,461
Total Contributions		96,296,127		86,985,601
Investment Income				
Net Appreciation in Fair Value of Investments		162,597,693		(371,374,336)
Interest		21,392,480		25,979,256
Dividends		14,356,470		15,979,425
Total Investment Income		198,346,643		(329,415,655)
Less investment expense		(4,390,414)		(4,754,340)
Net Investment Income		193,956,229		(334,169,995)
Securities Lending Income		398,599		949,462
Securities Lending Expense		228,249		(566,725)
Net Securities Income		626,848		382,737
Other Income		228,879		63,736
Total Other Income		228,879		63,736
TOTAL ADDITIONS	\$	291,108,083	\$	(246,737,921)
Deductions				
Benefits Paid - Includes Pension, Death, and Health Benefits*	\$	97,813,216	\$	89,180,779
Member Withdrawals		1,319,448		1,609,893
Administrative Expenses		4,045,904		3,900,782
TOTAL DEDUCTIONS	\$	103,178,568	\$	94,691,454
NET INCREASE	\$	187,929,515	\$	(341,429,375)
Assets Held in Trust - Beginning of Year	\$	1,421,519,182	\$	1,762,948,557
Assets Held in Trust - End of Year	\$	1,609,448,697	\$	1,421,519,182

<sup>\*</sup> Includes pensions and death benefits. It also includes health benefis paid prior to the establishment of the 401(h) account.

## Exhibit 5: Allocation of Assets by Accounting Reserve Amounts For the Years Ended June 30, 2009 and 2010

	2010	2009
Member Deposit Reserve	\$ 162,431,794	\$ 174,951,218
2. County and District Advance Reserve	542,735,967	574,314,844
3. Retired Member Reserve	1,361,616,490	1,164,480,350
4. Transferred Funds Reserve *	106,451,816	98,420,688
	\$ 2,173,236,067	\$ 2,012,167,100
5. Market Stabilization Account	(563,787,369)	(590,647,917)
Total Reserves	\$ 1,609,448,698	\$ 1,421,519,183

<sup>\*</sup> Established as a valuation asset 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	Expected Market Value	Actual Market Value
6/30/2007	79,248,435	78,730,066	132,943,731	270,984,635	138,040,904	20%	27,608,181	1,762,420,390	1,900,461,294
6/30/2008	84,940,244	86,228,890	155,026,096	(136,224,090)	(291,250,186)	40%	(116,500,074)	2,054,198,744	1,762,948,558
6/30/2009	86,985,601	90,790,672	143,701,399	(337,624,304)	(481,325,703)	60%	(288,795,422)	1,902,844,886	1,421,519,183
6/30/2010	96,296,127	99,132,664	115,882,504	190,766,052	74,883,548	80%	59,906,838	1,534,565,150	1,609,448,698
1. Total							\$ (317,780,477)		
2. Market Valu	ue of Assets as of Ju	une 30, 2010					\$ 1,609,448,698		
3. Preliminary	Actuarial Value of A	ssets as of June 3	30, 2010 = (2) - (1)				\$ 1,927,229,175		
4. Corridor Limit  a. 80% of Net Market Value  b. 120% of Net Market Value							1,287,558,958 1,931,338,438		
5. Actuarial Value of Assets After Corridor as of June 30, 2010							\$ 1,927,229,175		
6. Special Reserves (Non-valuation reserves)							\$		
7. Valuation As	ssets as of June 30,	2010 = (5) - (6)					\$ 1,927,229,175		

<sup>\*</sup> Includes pensions, death benefits, and member withdrawals. It also includes health benefits paid prior to the establishment of the 401(h) account.

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

		 Valuation Assets		Actuarial Assets		larket Value of Assets
1.	Total June 30, 2009 Valuation	\$ 1,705,733,020	\$	1,705,733,020	\$	1,421,519,183
2.	Changes During the Year  Member Contributions  Employer Contributions	11,648,994 84,647,133		11,648,994 84,647,133		11,648,994 84,647,133
	Benefit Payments Investment Return, Net of Expenses Total Changes	\$ (99,132,664) 224,332,692 221,496,155	\$	(99,132,664) 224,332,692 221,496,155	\$	(99,132,664) 190,766,052 187,929,515
3.	Total June 30, 2010 Valuation = 1 + 2	\$ 1,927,229,175	\$	1,927,229,175	\$	1,609,448,698
4. 5. 6.	Expected Value as of June 30, 2009 Gain / (Loss) = (3) - (4) Rate of Return	\$ 1,841,970,836 85,258,339 13.16%	\$	1,841,970,836 85,258,339 13.16%	\$	1,534,565,150 74,883,548 13.43%

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

Year Ended June 30	Net Return at Market Value	Net Return at Actuarial Value	Increase in Consumer Price Index*
1988	1.9%	7 totaanar Varao	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%
2008	-7.2%	9.2%	5.0%
2009	-19.2%	-9.6%	-1.4%
2010	13.4%	13.2%	1.1%
2010	10.770	10.2/0	1.170
23-Year Compound Average	8.0%		2.9%

<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, 2010

(Dollars in Thousands)

		General		Safety		, APCD		Total
1.	Member Deposit Reserve	\$	129,767	\$	30,759	\$	1,906	\$ 162,432
2.	County and District Advance Reserve		346,177		184,617		11,942	542,736
3.	Retired Member Reserve		741,995		605,203		14,418	1,361,616
4.	Transferred Funds Reserve *		55,057		50,277		1,118	106,452
5.	Total Valuation Reserves (1 + 2 + 3 + 4)	\$	1,272,996	\$	870,856	\$	29,384	\$ 2,173,236
6.	Percentage of Line 5. by Plan		58.58%		40.07%		1.35%	100.00%
7.	Actuarial Value of Valuation Assets (Exhibit 6)							\$ 1,927,229
8.	Allocated Valuation Assets (6 x 7)	\$	1,128,896	\$	772,276	\$	26,057	\$ 1,927,229

The Transferred Funds Reserve is a sub-account of Retired Member Reserves.

#### Section 4: Actuarial Liabilities



In the previous section, an actuarial valuation was compared with an inventory process, and an analysis was given of the inventory of SBCERS' assets as of the valuation date, June 30, 2010. 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 common in all but fully closed down funds, 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 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, 2010.

The actuarial assumptions used to determine the liabilities are based on the results of our analysis of experience as of June 30, 2010 and were adopted by the Board in October 2010. These assumptions are summarized in Appendix A.

Exhibit 9: Actuarial Balance Sheet – June 30, 2010

(Dollars in Thousands)

Resources								
	<u>General</u>	<u>Safety</u>	APCD	<u>Total</u>				
Valuation Assets (Actuarial)	\$ 1,128,896	\$ 772,276	\$ 26,057	\$ 1,927,229				
Present Value of Future Member Contributions	77,992	39,907	1,568	119,467				
Present Value of Future Employer Contributions to Fund:								
a) Normal Cost	262,132	172,753	3,813	438,698				
b) Unfunded Actuarial Accrued Liability	451,282	229,061	8,575	688,918				
Total Resources	\$ 1,920,302	\$ 1,213,997	\$ 40,013	\$ 3,174,312				

Liabilities								
	General Safety					<u>APCD</u>		<u>Total</u>
Present Value of Future Benefits								
1. Present Retired Members	\$	791,462	\$	571,023	\$	12,804	\$	1,375,289
2. Current Inactive Members		78,522		28,121		1,796		108,439
3. Current Active Members								
- Service Retirement		964,330		560,132		23,612		1,548,074
- Disability Retirement		34,495		30,917		726		66,138
- Death Benefits		15,799		5,863		629		22,291
- Deferred Vested Benefit		31,829		17,564		383		49,776
- Refund of Member Contributions		3,865		<u>377</u>		<u>63</u>		<u>4,305</u>
- Total Active	\$	1,050,318	\$	614,853	\$	25,413	\$	1,690,584
Total Actuarial Liabilities	\$	1,920,302	\$	1,213,997	\$	40,013	\$	3,174,312

#### 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

In the Actuarial Balance sheet, we determine 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. Under the entry age actuarial cost method, the Normal Cost contribution rate maintains the funding of benefits as a level percentage of pay.

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. If experience follows the actuarial assumptions precisely and if the employers contributed the Normal Cost, the fund would be completely liquidated when the last payment to the last survivor of the group was made.

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.

### Normal Cost (continued)

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.

In Exhibit 10, we report the Total Normal Cost Contribution Rate for each class in total and then reduce the total by the members' average contribution rates to develop the Employer's Net Normal Cost Contribution Rate as of June 30, 2010. 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.

Note that the normal cost rates for Safety Plan 6A are actually lower than the rates for Safety Plan 6B. This is the case despite the fact that the only difference in benefits between the plans is that Safety Plan 6A uses the member's highest 12 months of compensation and Safety Plan 6B uses the member's highest 36 months of compensation. The reason for this is demographic differences between the two plans. The average entry age for Safety Plan 6B is significantly higher than the average entry age for Safety Plan 6A and that causes the normal cost rate to be higher for Safety Plan 6B.

Exhibit 10: Calculated Employer Normal Cost Contribution Rates - June 30, 2010 **All Members** 

	General	Safety	APCD	All Plans
A. Normal Cost Contribution Rate				
Service Retirement	14.88%	24.58%	15.92%	17.41%
Disability Retirement	0.82%	2.54%	0.93%	1.27%
Death while Active	0.32%	0.42%	0.94%	0.35%
Termination (No Refund)	1.48%	2.23%	1.91%	1.68%
Refund of Member Contributions	0.47%	0.22%	0.62%	0.41%
Total	17.97%	29.99%	20.32%	21.12%
B. Member Contributions	(4.12)%	(5.66)%	(5.56)%	(4.54)%
C. Net Employer Normal Cost as of June 30, 2010 (A) + (B)	13.85%	24.33%	14.76%	16.58%
D. Net Employer Normal Cost as of June 30, 2009	11.87%	20.87%	13.33%	14.21%
E. Increase (Decrease) as a Percentage of Payroll (C) - (D)	1.98%	3.46%	1.43%	2.37%

Exhibit 10a: Calculated Employer Normal Cost Contribution Rates – June 30, 2010 General Members

	General - County							
A. Normal Cost Contribution Rate	<u>5A</u>	<u>5B</u>	<u>5C</u>	Plan 2	Total			
Service Retirement	13.43%	17.24%	14.90%	2.31%	14.88%			
Disability Retirement	0.72%	0.98%	0.82%	0.12%	0.82%			
Death while Active	0.33%	0.36%	0.30%	0.03%	0.32%			
Termination (No Refund)	1.77%	1.26%	1.41%	0.38%	1.48%			
Refund of Member Contributions	0.37%	0.84%	0.38%	0.00%	0.47%			
Total	16.62%	20.68%	17.81%	2.84%	17.97%			
B. Member Contributions	(3.23)%	(7.50)%	(3.36)%	0.00%	(4.12)%			
C. Net Employer Normal Cost as of June 30, 2010 (A) + (B)	13.39%	13.18%	14.45%	2.84%	13.85%			
D. Net Employer Normal Cost as of June 30, 2009	11.49%	11.46%	12.38%	2.26%	11.87%			
E. Increase (Decrease) as a Percentage of Payroll (C) - (D)	1.90%	1.72%	2.07%	0.58%	1.98%			

Exhibit 10b: Calculated Employer Normal Cost Contribution Rates – June 30, 2010 **Safety Members** 

			Safety	/		
A. Normal Cost Contribution Rate	<u>4A</u>	<u>4B</u>	<u>4C</u>	<u>6A</u>	<u>6B</u>	Total
Service Retirement	24.15%	25.54%	23.13%	25.36%	25.74%	24.58%
Disability Retirement	2.77%	2.91%	2.60%	2.37%	2.46%	2.54%
Death while Active	0.48%	0.35%	0.42%	0.42%	0.41%	0.42%
Termination (No Refund)	1.99%	1.58%	1.90%	2.53%	2.54%	2.23%
Refund of Member Contributions	0.23%	0.50%	0.22%	0.21%	0.22%	0.22%
Total	29.62%	30.88%	28.27%	30.89%	31.37%	29.99%
B. Member Contributions	(5.81)%	(11.90)%	(5.54)%	(5.45)%	(5.48)%	(5.66)%
C. Net Employer Normal Cost as of June 30, 2010 (A) + (B)	23.81%	18.98%	22.73%	25.44%	25.89%	24.33%
D. Net Employer Normal Cost as of June 30, 2009	20.56%	14.28%	19.86%	21.44%	22.02%	20.87%
E. Increase (Decrease) as a Percentage of Payroll (C) - (D)	3.25%	4.70%	2.87%	4.00%	3.87%	3.46%
i electicage of i ayroll (C) - (D)	5.25/0	7.7070	2.01 /0	7.00/0	3.07 /0	3.4070

### Exhibit 10c: Calculated Employer Normal Cost Contribution Rates – June 30, 2010 APCD Members

		APCD	
A. Normal Cost Contribution Rate	Plan 1	Plan 2	Total
Service Retirement	15.35%	16.82%	15.92%
Disability Retirement	0.90%	0.97%	0.93%
Death while Active	1.01%	0.82%	0.94%
Termination (No Refund)	2.09%	1.64%	1.91%
Refund of Member Contributions	0.45%	0.89%	0.62%
Total	19.80%	21.14%	20.32%
B. Member Contributions	(3.94)%	(8.09)%	(5.56)%
C. Net Employer Normal Cost as of June 30, 2010 (A) + (B)	15.86%	13.05%	14.76%
D. Net Employer Normal Cost as of June 30, 2009	13.85%	12.32%	13.33%
E. Increase (Decrease) as a Percentage of Payroll (C) - (D)	2.01%	0.73%	1.43%

### 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 Valuation Assets 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 AAL. The difference between the AAL and the Valuation Assets is called the Unfunded Actuarial Accrued Liability (UAAL). If a UAAL amount exists, it usually results from prior years' benefit or assumption changes and the net effect of accumulated gains and losses.

If the 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 AAL 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 AAL to be funded is greater than the Valuation Assets, then the UAAL is amortized. Under the current funding method, the UAAL is amortized over an open/rolling 17-year period.

Under an open/rolling amortization method, the entire UAAL is amortized over a constant period, in this case, 17 years. A 17-year amortization factor will be applied to the entire UAAL for each of the General, Safety, and APCD groups. The factor does not change from year to year unless the discount rate or salary scale assumption is changed. Because the discount rate and salary scale did change from the prior valuation due to the Investigation of Experience, the amortization factor has changed from the previous valuation.

The Board adopted this funding policy at its September 23, 2009 meeting. Exhibit 11a discloses the development of the UAAL payment for each classification.

### 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 2010 actuarial valuation reflects an increase in the UAAL of \$130.8 million for the fiscal year just ended from \$558.1 million to \$688.9 million. See Exhibit 13 in Section 6 for a detailed breakdown of the change in UAAL.

The changes in assumptions pursuant to the Investigation of Experience resulted in a large increase in the UAAL. This loss was partially offset by the positive investment experience since our prior valuation.

Exhibit 11: Calculated UAAL Amount by Class - June 30, 2010 **All Members** 

(Dollars in Millions)

		C	General	Safety	A	PCD	2010 All Plans	2009 All Plans	Percent Change	
A.	Actuarial present value of all future benefits for contributing members, former contributing members, and their survivors	\$	1,920.3	\$ 1,214.0	\$	40.0	\$ 3,174.3	\$ 2,719.7	16.7%	
В.	Actuarial present value of total future Normal Costs for current members		340.1	 212.7		5.4	 558.2	 455.9	22.4%	
C.	Actuarial Accrued Liability [A-B]	\$	1,580.2	\$ 1,001.3	\$	34.6	\$ 2,616.1	\$ 2,263.8	15.6%	
D.	Valuation Assets		1,128.9	 772.2		26.1	 1,927.2	 1,705.7	13.0%	
E.	UAAL or Surplus Funding [C-D]	\$	451.3	\$ 229.1	\$	8.5	\$ 688.9	\$ 558.1	23.4%	
F.	Funded Ratio [D/C]		71.4%	77.1%		75.4%	73.7%	75.3%	(2.2)%	

Exhibit 11a: UAAL Amortization Rates – June 30, 2010

	General 	Safety	APCD	All Plans
A. Unfunded Actuarial Accrued Liability	\$ 451,282,148	\$ 229,060,534	\$8,574,999	\$ 688,917,681
B. 17-Year Amortization Factor	0.079757	0.079757	0.079757	0.079757
C. Beginning of Year Payment [AxB]	\$ 35,992,722	\$ 18,269,085	\$ 683,913	\$ 54,945,720
D. Beginning of Year Payroll	\$ 223,636,643	\$ 79,611,070	\$3,715,513	\$ 306,963,226
E. UAAL Amortization Rate [C/D]	16.09%	22.95%	18.41%	17.90%

#### 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 & 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 have occurred since the prior valuation. The expected rate of return on assets, the wage growth assumptions and the mortality assumptions have all been changed. The rates shown in Appendix D reflect member contribution rates, effective July 1, 2011.

#### 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 indicated in the table.

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

General Plan 2 members make no employee contributions.

This page intentionally left blank.



#### **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 Normal Cost is the portion of the annual benefit for which the employer is responsible. This is the Normal Cost Contribution rate less the contribution rate paid 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.

#### Calculated **Contribution Rate**

The total Employer contribution rate was 28.88% for the fiscal year beginning July 1, 2010. For the fiscal year beginning in 2011, the calculated rate based on this report increased to 34.48%. This is equal to the aggregate Net Normal Cost contribution rate of 16.58% plus the amortization payment of the UAAL as measured from the valuation date and reported in Exhibit 11a. The aggregate UAAL contribution rate is 17.90%.

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 four factors. These four 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 recently. Changes in the aggregate composition of the membership among the various plans will lead to experience gains and losses.
- (3) Changes in Actuarial Assumptions: There have been significant changes since the prior actuarial valuation due to the Investigation of Experience.
- (4) Changes in Actuarial Methods: The amortization period for the UAAL was changed from a 15-year layered approach to a 17-year open/rolling period, effective with the June 30, 2009 valuation. It has not changed since our prior valuation.

#### 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 2009 valuation. The changes in assumptions based upon the Investigation of Experience resulted in significant increases in the UAAL contribution rate. These increases have been partially offset by the positive investment experience since the previous valuation.

Another change from the prior valuation was that the COLAs for some retirees and beneficiaries were less than the 3.0% we expected. The annual COLA that SBCERS retirees and beneficiaries are eligible to receive is based upon the change in the consumer price index. Our assumption is that all receive 3.0% increases each year. Because the CPI actually decreased over 2009, some members did not receive the full 3.0% increases in April 2010. For retirees and beneficiaries retired on or before April 1, 2006, the COLA banks were drawn down and the full 3.0% COLA was granted on April 1, 2010. For those retired after that date, the COLAs were less than 3.0%.

Another change from the prior valuation was the Early Retirement Incentive Program (ERIP). That program resulted in approximately \$7.3 million of additional liability.

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

		_	General	Safety	 APCD	2010 All Plans
A.	Basic Employer Normal Cost Rate		9.09%	15.37%	9.37%	10.72%
В.	COLA Normal Cost Rate		4.76%	8.96%	5.39%	5.86%
C.	Employer Normal Cost Rate		13.85%	24.33%	14.76%	16.58%
D.	Basic UAAL Contribution Rate		10.95%	14.77%	13.07%	11.97%
E.	COLA UAAL Contribution Rate		5.14%	8.18%	5.34%	5.93%
F.	UAAL Contribution Rate		16.09%	22.95%	18.41%	17.90%
G.	Total June 30, 2010 Contribution Rate (C + F)		29.94%	47.28%	33.17%	34.48%
H.	Total June 30, 2009 Contribution Rate		25.31%	38.94%	29.87%	28.88%
l.	Estimated Payroll for fiscal year					
	beginning July 1, 2011 *	\$	236,334	\$ 84,132	\$ 3,927	\$ 324,393
J.	Estimated Annual Contribution (G x I) **	\$	70,763	\$ 39,797	\$ 1,303	\$ 111,863
K.	Prior Valuation Estimated Annual Contribution ***	\$	57,734	\$ 31,567	\$ 1,128	\$ 90,429
L.	Increase / (Decrease) in Annual Contribution	\$	13,029	\$ 8,230	\$ 175	\$ 21,434

<sup>\*</sup> Estimated payroll based upon the assumption of 3.75% annual payroll growth.

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

<sup>\*\*\*</sup>Estimated contribution for fiscal year beginning July 1, 2010 based on salary information as of June 30, 2010.

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

				General		
		<u>5A</u>	<u>5B</u>	<u>5C</u>	Plan 2	Total
Α.	Basic Employer Normal Cost Rate	8.93%	7.82%	9.71%	2.84%	9.09%
В.	COLA Normal Cost Rate	 4.46%	5.36%	4.74%	0.00%	4.76%
C.	Employer Normal Cost Rate	13.39%	13.18%	14.45%	2.84%	13.85%
D.	Basic UAAL Contribution Rate	10.95%	10.95%	10.95%	10.95%	10.95%
E.	COLA UAAL Contribution Rate	 5.14%	5.14%	5.14%	5.14%	5.14%
F.	UAAL Contribution Rate	16.09%	16.09%	16.09%	16.09%	16.09%
G.	Total June 30, 2010 Contribution Rate (C + F)	29.48%	29.27%	30.54%	18.93%	29.94%
Н.	Total June 30, 2009 Contribution Rate	24.93%	24.90%	25.82%	15.70%	25.31%
I.	Estimated Payroll for fiscal year beginning July 1, 2011 *	\$ 68,810	\$ 46,137	\$ 120,547	\$ 840	\$ 236,334
J.	Estimated Annual Contribution (G x I) **	\$ 20,285	\$ 13,504	\$ 36,815	\$ 159	\$ 70,763
K.	Prior Valuation Estimated Annual Contribution ***	\$ 16,534	\$ 11,073	\$ 30,000	\$ 127	\$ 57,734
L.	Increase / (Decrease) in Annual Contribution	\$ 3,751	\$ 2,431	\$ 6,815	\$ 32	\$ 13,029

<sup>\*</sup> Estimated payroll based upon the assumption of 3.75% annual payroll growth.

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

<sup>\*\*\*</sup>Estimated contribution for fiscal year beginning July 1, 2010 based on salary information as of June 30, 2010.

### Exhibit 12b: Total Employer Contributions Safety Members

	,	Safety											
			<u>4A</u>		<u>4B</u>		<u>4C</u>		<u>6A</u>		<u>6B</u>		Total
A.	Basic Employer Normal Cost Rate		15.18%		10.08%		14.50%		15.93%		16.29%		15.37%
В.	COLA Normal Cost Rate		8.63%		8.90%		8.23%		9.51%		9.60%		8.96%
C.	Employer Normal Cost Rate		23.81%		18.98%		22.73%		25.44%		25.89%		24.33%
D.	Basic UAAL Contribution Rate		14.77%		14.77%		14.77%		14.77%		14.77%		14.77%
E.	COLA UAAL Contribution Rate		8.18%		8.18%		8.18%		8.18%		8.18%		8.18%
F.	UAAL Contribution Rate		22.95%		22.95%		22.95%		22.95%		22.95%		22.95%
G.	Total June 30, 2010 Contribution Rate (C + F)		46.76%		41.93%		45.68%		48.39%	1	48.84%		47.28%
H.	Total June 30, 2009 Contribution Rate		38.63%		32.35%		37.93%		39.51%		40.09%		38.94%
l.	Estimated Payroll for fiscal year beginning July 1, 2011 *	\$	12,035	\$	1,504	\$	27,524	\$	15,541	\$	27,528	\$	84,132
J.	Estimated Annual Contribution (G x I) **	\$	5,628	\$	631	\$	12,573	\$	7,520	\$	13,445	\$	39,797
K.	Prior Valuation Estimated Annual Contribution ***	\$	4,481	\$	469	\$	10,062	\$	5,918	\$	10,637	\$	31,567
L.	Increase / (Decrease) in Annual Contribution	\$	1,147	\$	162	\$	2,511	\$	1,602	\$	2,808	\$	8,230

<sup>\*</sup> Estimated payroll based upon the assumption of 3.75% annual payroll growth.

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

<sup>\*\*\*</sup> Estimated contribution for fiscal year beginning July 1, 2010 based on salary information as of June 30, 2010.

### Exhibit 12c: Total Employer Contributions APCD Members

	,		APCD	
		Plan 1	Plan 2	Total
A.	Basic Employer Normal Cost Rate	10.54%	7.54%	9.37%
В.	COLA Normal Cost Rate	 5.32%	5.51%	5.39%
C.	Employer Normal Cost Rate	15.86%	13.05%	14.76%
D.	Basic UAAL Contribution Rate	13.07%	13.07%	13.07%
E.	COLA UAAL Contribution Rate	 5.34%	5.34%	5.34%
F.	UAAL Contribution Rate	18.41%	18.41%	18.41%
G.	Total June 30, 2010 Contribution Rate (C + F)	34.27%	31.46%	33.17%
H.	Total June 30, 2009 Contribution Rate	30.39%	28.86%	29.87%
I.	Estimated Payroll for fiscal year			
	beginning July 1, 2011 *	\$ 2,396	\$ 1,531	\$ 3,927
J.	Estimated Annual Contribution (G x I) **	\$ 821	\$ 482	\$ 1,303
K.	Prior Valuation Estimated Annual Contribution ***	\$ 702	\$ 426	\$ 1,128
L.	Increase / (Decrease) in Annual Contribution	\$ 119	\$ 56	\$ 175

<sup>\*</sup> Estimated payroll based upon the assumption of 3.75% annual payroll growth.

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

<sup>\*\*\*</sup> Estimated contribution for fiscal year beginning July 1, 2010 based on salary information as of June 30, 2010.

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

	_	Amount	As a Percent of June 30, 2010 Actuarial Accrued Liability	UAAL Contribution Rate % of Pay *
Unfunded Actuarial Accrued Liability - June 30, 2009	\$	558.1	21.33%	14.67%
Increase in UAAL due to new assumptions		170.7	6.52%	4.29%
Unfunded Actuarial Accrued Liability - June 30, 2009 (Modified Valuation with new assumptions)	\$	728.8	27.85%	18.96%
Interest Accrued		56.5	2.16%	1.47%
Benefits Accrued (Normal Cost)		74.2	2.84%	1.93%
Contributions (with Assumed Interest) Employer - Cash Member	(87.9) (12.1)		-3.36% -0.46%	-2.29% -0.31%
Total		(100.0)	-3.82%	-2.60%
Expected Unfunded Actuarial Accrued Liability - June 30, 20	)10 \$	759.5	29.03%	19.76%
Source of Change				
Asset (Gains) and Losses		(85.3)	-3.26%	-2.22%
Actuarial (Gains) and Losses	(7.0)		0.000/	0.000/
Salary Increases	(7.6)		-0.29%	-0.20%
CPI Less than Expected New Entrants	(14.1) 1.1		-0.54% 0.04%	-0.38% 0.03%
Retirement from Active Status Experience	19.2		0.04%	0.03%
Retirement due to Early Retirement Incentive Program	7.3		0.73%	0.30%
Retirement from Deferred Status Experience	0.9		0.28%	0.19%
Retired Mortality Experience	5.9		0.03%	0.02%
All Other Experience	2.0		0.23%	0.15%
Total	2.0	14.7	0.56%	0.03%
Total Changes		(70.6)	-2.70%	-1.86%
Unfunded Actuarial Accrued Liability - June 30, 2010	\$	688.9	26.33%	17.90%

<sup>\*</sup> The June 30, 2009 Unfunded Actuarial Accrued Liability contribution rate, interest and benefits accrued, and contributions, as a percentage of pay is based on 2009 valuation pay. The June 30, 2010 Expected Unfunded Actuarial Accrued Liability as a percentage of pay is based on expected 2010 valuation pay. Otherwise, actual 2010 valuation pay is used to express the contribution rate as a percentage of pay.

This page intentionally left blank.



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



The Governmental Accounting Standards Board (GASB) sets standards for defined benefit pension plan reporting and disclosures (Statement No. 25). The reporting requirements for Statement No. 25 include certain supplementary information that must be added to the financial statements. These include:

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

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

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

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

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

Exhibit 15 is the Schedule of Contributions from the Employer and compares the calculated Annual Required Contribution (ARC) to the actual employer contribution paid.

Exhibit 16 compares the Actuarial Value of Valuation Assets to the types of Actuarial Accrued Liabilities, applying them first to Active Member contributions, then to retirees and beneficiaries, and then the remaining amount to the Active Members benefits. This is referred to as the Solvency Test. Although not required under GASB, this test is part of the CAFR guidelines specified by the Government Finance Officers System (GFOA).

#### Exhibit 14: **Schedule of Funding Progress**

Actuarial Valuation Date*	(a) Actuarial Value of Assets	(b) Non-Valuation Assets (NVA)	(c) Valuation Assets (a)-(b)	(d) Valuation Actuarial Accrued Liabilities (AAL)	(e) AAL with NVA (b)+(d)	(f) Unfunded Actuarial Accrued Liabilities (UAAL) (d)-(c) = (e)-(a)	(g) Prior Method Funded Ratio (a)/(e)	(h) Current Method Funded Ratio (c)/(d)	(i) Covered Payroll	UAAL as a Percentage of Covered Payroll (f)/(i)
June 30, 2005	1,443,824	137,829	1,305,995	1,549,803	1,687,632	243,808	85.6%	84.3%	267,785	91.0%
June 30, 2006	1,552,776	137,825	1,414,951	1,671,831	1,809,656	256,880	85.8%	84.6%	287,382	89.4%
June 30, 2007 **	1,735,489	31,020	1,704,469	1,956,834	1,987,854	252,365	87.3%	87.1%	294,163	85.8%
June 30, 2008	1,893,984	2,528	1,891,456	2,135,955	2,138,483	244,499	88.6%	88.6%	307,264	79.6%
June 30, 2009	1,705,733	-	1,705,733	2,263,862	2,263,862	558,129	75.3%	75.3%	306,524	182.1%
June 30, 2010	1,927,229	-	1,927,229	2,616,147	2,616,147	688,918	73.7%	73.7%	306,963	224.4%

Information for years prior to 2007 was provided by prior actuaries. Prior to 2007, non-valuation asset reserves were included with the Actuarial Value of Assets (AVA). Non-valuation asset reserves were also added to the AAL prior to 2007. Beginning in 2007, non-valuation assets are not included in the AVA and are no longer added to the AAL.



Results as of June 30, 2007 do not match those previously reported in the 2007 Comprehensive Annual Financial Report (CAFR). This information reflects the Board's actions on September 19, 2008 regarding asset reserve classifications.

#### Exhibit 15: Schedule of Contributions from the Employer

Fiscal Year Ending*	Annual Required Contribution (ARC)	Actual Employer Contributions	Percentage of ARC Contributed
June 30, 2005	46,721	46,721	100%
June 30, 2006	53,977	53,977	100%
June 30, 2007	63,395	63,395	100%
June 30, 2008	69,461	69,461	100%
June 30, 2009	75,902	75,902	100%
June 30, 2010	84,647	84,647	100%

<sup>\*</sup> Information for years prior to 2007 was provided by prior actuaries.

Exhibit 16: **Solvency Test** 

(Dollars In Thousands)

		Actua	arial Accrued Liab						
		Active Member	Retirees and	Active Members (Employer Financed	Portion of Actuarial Accrued Liabilities Covered by Assets				
Actuarial Valuation Date*	Valuation Assets	Contributions (A)	Beneficiaries (B)	Portion) (C)	(A)	(B)	(C)		
June 30, 2005	1,443,824	125,040	715,319	847,273	100%	100%	71%		
June 30, 2006	1,552,776	137,148	788,479	884,029	100%	100%	71%		
June 30, 2007 **	1,704,469	169,218	979,657	810,516	100%	100%	69%		
June 30, 2008	1,891,456	177,770	1,124,748	833,437	100%	100%	71%		
June 30, 2009	1,705,733	174,951	1,237,215	851,696	100%	100%	34%		
June 30, 2010	1,927,229	162,432	1,483,728	969,987	100%	100%	29%		

Information for years prior to 2007 was provided by prior actuaries.

Prior to 2007, non-valuation asset reserves were included with the Actuarial Value of Assets (AVA).

Non-valuation asset reserves were also added to the Actuarial Accrued Liabilities (AAL) for Active Members prior to 2007.

Beginning in 2007, non-valuation assets are not included in the AVA and are no longer added to the AAL.

Also beginning in 2007, liabilities for terminated members with vested deferred benefits are included with the AAL for Retirees and Beneficiaries.

Results as of June 30, 2007 do not match those previously reported in the 2007 Comprehensive Annual Financial Report (CAFR). This information reflects the Board's actions on September 19, 2008 regarding asset reserve classifications.



#### 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, 2010 as a result of the 2010 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 2010 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.

#### **Actuarial Cost** Method (continued)

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. The UAAL is amortized over an "open/rolling" 17-year period. Effective with the June 30, 2009 valuation, each year, the entire UAAL is amortized over a constant 17-year period. The amortization factor does not change from year to year unless the discount rate or salary assumption is changed.

#### **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 fiveyear 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 7.75% compounded annually, net of both investment and administrative expenses. This rate was adopted effective June 30, 2010.

#### **Postretirement Benefit Increases**

Postretirement increases are assumed for the valuation in accordance with the benefits provided as described in Appendix B. These adjustments are assumed to be payable each year in the future as they are less than the expected increase in the Consumer Price Index of 3.25% per year. This rate was adopted effective June 30, 2010.

#### Interest on Member Contributions

The annual credited interest rate on member contributions is assumed to be 4.25%. This rate was adopted effective June 30, 2010. As of June 30, 2008, the credited interest rate each sixmonth period is the semi-annual yield of the five-year Treasury note as of the last business day of the interest crediting period.

#### **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 3.75% per annum rate of increase in the general wage level of the membership. These rates were adopted effective June 30, 2010.

### 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 3.75% 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 58 for General members and age 54 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, 2010.

#### 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, 2010.

#### Sick Leave Service Credit Upon Retirement

Upon retirement, members are entitled to turn their sick leave balances into service credit for retirement benefits. Members are limited to one year of service credit. We apply a 1.34% load to the expected years of service at retirement for sick leave service credit.

#### Mortality – Other **Than Disabled** Members

The same postretirement mortality rates are used in the valuation for active members, members retired for service, and beneficiaries. These rates are illustrated in Table A-2. Beneficiary mortality is assumed to be the same assumption as healthy members. Beneficiaries are assumed to be of the opposite sex, and have the same mortality as General members. These rates were adopted June 30, 2010.

General members: RP-2000 Combined Healthy Males: Mortality Table for Males projected to 2010 using scale AA, with ages set back two years.

> Safety members: RP-2000 Combined Healthy Mortality Table for Males projected to 2010 using scale AA, with ages set back two years.

Females: General members: RP-2000 Combined Healthy Mortality Table for Females projected to 2010 using scale AA, with ages set back four years.

> Safety members: RP-2000 Combined Healthy Mortality Table for Females projected to 2010 using scale AA, with ages set back four 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, 2010.

Males: General members: RP-2000 Combined Healthy Mortality Table for Males projected to 2010 using scale AA, with no age adjustment.

> Safety members: RP-2000 Combined Healthy Mortality Table for Males projected to 2010 using scale AA, with no age adjustment.

Females: General members: RP-2000 Combined Healthy Mortality Table for Females projected to 2010 using scale AA, with no age adjustment.

> Safety members: RP-2000 Combined Healthy Mortality Table for Females projected to 2010 using scale AA, 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, 2010.

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.

All terminating members are assumed not to be rehired by SBCERS. Table A-4 gives the assumed probabilities that terminated members will elect a refund of contributions immediately upon termination. All other terminating members are assumed to leave their contributions on deposit. Fifty percent (50%) of members who leave their contributions on deposit are assumed to take employment at a reciprocal agency.

Former members with contributions on deposit are assumed to receive a retirement benefit commencing at the following ages:

General Plan 5 Members	Age 58
General Plan 2 Members	Age 65
Safety Plan 4 Members	Age 54
Safety Plan 6 Members	Age 50
APCD Members	Age 58

Reciprocal members are assumed to remain with the reciprocal agency until retirement, and receive annual salary increases of:

General & APCD Members 4.00% Safety Members 4.25%

These rates and assumptions were adopted effective June 30, 2010.

### Probability of Eligible Survivor

For members not currently in pay status, 80% of all males and 55% of all females are assumed to have eligible survivors (spouses or qualified domestic partners). Survivors are assumed to be three years younger than male members and three years older than female members. Survivors are assumed to be of the opposite sex as the member. There is no explicit assumption for children's benefits. We believe the survivor benefits based on this assumption are sufficient to cover children's benefits as they occur.

#### 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

projected to 2010 using scale AA,

set back 4 years.

Safety Healthy Members: RP-2000 Combined Healthy Male

projected to 2010 using scale AA,

set back 3 years.

Beneficiaries: RP-2000 Combined Healthy Female

projected to 2010 using scale AA,

set back 2 years.

General Disabled Members: RP-2000 Combined Healthy Male

projected to 2010 using scale AA,

set back 1 year.

Safety Disabled Members: RP-2000 Combined Healthy Male

projected to 2010 using scale AA,

no adjustment.

- B. The annuity factor used in determining the present value of future benefits (PVFB) at entry age is equal to the life only annuity factor at 7.75%.
- C. The Final Compensation is based on the salary paid in the year prior to attaining the retirement age.

Example: For a 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, 2010

**Economic assumptions** 

A. General wage increases 3.75% B. Investment earnings 7.75% C. Growth in membership 0.00

D. Postretirement benefit increases (varies by plan) Plan COLA not greater than CPI assumption.

E. CPI inflation assumption 3.25%

Demographic assumptions II.

> 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 C. Disablement

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

Table A-2

Basis - RP-2000 Combined Healthy Mortality Table for respective sexes for general members projected to 2010 using scale AA, as adjusted:

Class of Members	Age <u>Adjustment</u>
General – males	-2 years
General – females	-4 years
Safety – males	-2 years
Safety – females	-4 years

E. Mortality among disabled members

Table A-3

Basis - RP-2000 Combined Healthy Mortality Table projected to 2010 using scale AA, 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-12

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	0.026%	0.015%	0.026%	0.015%
25	0.032%	0.016%	0.032%	0.016%
30	0.037%	0.019%	0.037%	0.019%
35	0.060%	0.028%	0.060%	0.028%
40	0.091%	0.046%	0.091%	0.046%
45	0.116%	0.067%	0.116%	0.067%
50	0.158%	0.103%	0.158%	0.103%
55	0.238%	0.158%	0.238%	0.158%
60	0.449%	0.291%	0.449%	0.291%
65	0.870%	0.553%	0.870%	0.553%
70	1.552%	1.042%	1.552%	1.042%
75	2.612%	1.749%	2.612%	1.749%
80	4.620%	2.858%	4.620%	2.858%
85	8.279%	4.734%	8.279%	4.734%
90	14.323%	8.215%	14.323%	8.215%

Table A-3: Mortality for Members Retired for Disability

	Safety	Safety	General	General
Age	Male	Female	Male	Female
20	0.028%	0.016%	0.028%	0.016%
25	0.034%	0.018%	0.034%	0.018%
30	0.042%	0.024%	0.042%	0.024%
35	0.074%	0.043%	0.074%	0.043%
40	0.100%	0.061%	0.100%	0.061%
45	0.132%	0.096%	0.132%	0.096%
50	0.178%	0.141%	0.178%	0.141%
55	0.299%	0.251%	0.299%	0.251%
60	0.574%	0.481%	0.574%	0.481%
65	1.106%	0.923%	1.106%	0.923%
70	1.909%	1.592%	1.909%	1.592%
75	3.286%	2.594%	3.286%	2.594%
80	5.821%	4.277%	5.821%	4.277%
85	10.324%	7.292%	10.324%	7.292%
90	17.620%	12.778%	17.620%	12.778%

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

Years of Service	General Male	General Female	Safety
0	100%	100%	100%
1	100%	100%	100%
2	100%	100%	100%
3	100%	100%	100%
4	100%	100%	100%
5	40%	40%	25%
6	40%	40%	25%
7	40%	40%	25%
8	40%	40%	25%
9	40%	40%	25%
10	25%	25%	0%
11	25%	25%	0%
12	25%	25%	0%
13	25%	25%	0%
14	25%	25%	0%
15	10%	10%	0%
16	10%	10%	0%
17	10%	10%	0%
18	10%	10%	0%
19	10%	10%	0%
20	10%	10%	0%
21	10%	10%	0%
22	10%	10%	0%
23	10%	10%	0%
24	10%	10%	0%
25	0%	10%	0%
26	0%	10%	0%
27	0%	10%	0%
28	0%	10%	0%
29	0%	10%	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%	8.68%		
1	4.00%	7.90%		
2	3.25%	7.12%		
3	2.50%	6.34%		
4	2.00%	5.83%		
5	1.50%	5.31%		
6	1.25%	5.05%		
7	1.00%	4.79%		
8	0.90%	4.68%		
9	0.80%	4.58%		
10	0.78%	4.55%		
11	0.75%	4.53%		
12	0.70%	4.48%		
13	0.65%	4.42%		
14	0.60%	4.37%		
15	0.55%	4.32%		
16	0.50%	4.27%		
17	0.48%	4.25%		
18	0.46%	4.23%		
19	0.44%	4.21%		
20	0.42%	4.19%		
21	0.40%	4.16%		
22	0.38%	4.14%		
23	0.36%	4.12%		
24	0.34%	4.10%		
25	0.32%	4.08%		
26	0.30%	4.06%		
27	0.28%	4.04%		
28	0.26%	4.02%		
29	0.25%	4.01%		
30 or More	0.25%	4.01%		

<sup>\*</sup> The total expected increase in salary is the increase due to promotions and longevity, adjusted for an assumed 3.75% 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	Due to Promotion	Total
Service	and Longevity	Annual Increase*
<1	6.00%	9.98%
1	5.00%	8.94%
2	4.00%	7.90%
3	3.25%	7.12%
4	2.50%	6.34%
5	2.00%	5.83%
6	1.60%	5.41%
7	1.30%	5.10%
8	1.20%	4.99%
9	1.10%	4.89%
10	1.00%	4.79%
11	0.95%	4.74%
12	0.92%	4.70%
13	0.89%	4.68%
14	0.87%	4.65%
15	0.85%	4.63%
16	0.82%	4.60%
17	0.80%	4.57%
18	0.77%	4.55%
19	0.74%	4.52%
20	0.72%	4.50%
21	0.69%	4.47%
22	0.67%	4.45%
23	0.64%	4.42%
24	0.62%	4.39%
25	0.59%	4.37%
26	0.57%	4.34%
27	0.54%	4.32%
28	0.52%	4.29%
29	0.50%	4.27%
30 or More	0.50%	4.27%

<sup>\*</sup> The total expected increase in salary is the increase due to promotions and longevity, adjusted for an assumed 3.75% per annum increase in the general wage level of the membership. The total result is compounded rather than additive.



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

All P	'ians - Maid	9			
Service Retirement	Service Disability	Ordinary Disability	Death	Years of Service	Other Terminations
0.0000	0.00003	0.00005	0.00023	0	0.1300
0.0000	0.00003	0.00005	0.00025	1	0.1200
0.0000	0.00003	0.00005	0.00026	2	0.0950
0.0000	0.00003	0.00005	0.00027	3	0.0700
0.0000	0.00003	0.00005	0.00028	4	0.0600
0.0000	0.00003	0.00005	0.00030	5	0.0550
0.0000	0.00003	0.00005	0.00031	6	0.0500
0.0000	0.00003	0.00005	0.00032	7	0.0450
0.0000	0.00003	0.00005	0.00033	8	0.0430
0.0000	0.00003	0.00005	0.00034		0.0410
0.0000	0.00003	0.00005	0.00036		0.0390
					0.0370
					0.0350
	0.00003				0.0330
					0.0310
					0.0290
					0.0270
					0.0250
					0.0240
					0.0230
					0.0220
					0.0210
					0.0200
					0.0160
					0.0120
					0.0080 0.0040
					0.0000
					0.0000
					0.0000
					0.0000
				oo a Above	0.0000
0.0400	0.00137	0.00205	0.00238		
0.0600	0.00145	0.00218	0.00261		
0.0600	0.00154	0.00231	0.00299		
0.0600	0.00163	0.00244	0.00350		
0.1200	0.00171	0.00257	0.00395		
0.1500	0.00180	0.00270	0.00449		
0.2500	0.00180	0.00270	0.00506		
0.2500	0.00180	0.00270	0.00574		
0.2500	0.00180	0.00270	0.00660		
0.2500	0.00180	0.00270	0.00753		
0.2500	0.00180	0.00270	0.00870		
0.2500	0.00180		0.00980		
1.0000	0.00000	0.00000	0.00000		
	Service Retirement  0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300 0.0300	Service Retirement         Service Disability           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0000         0.00003           0.0300         0.00003           0.0300         0.00	Service Retirement         Service Disability         Ordinary Disability           0.0000         0.00003         0.00005           0.0000         0.00003         0.00005           0.0000         0.00003         0.00005           0.0000         0.00003         0.00005           0.0000         0.00003         0.00005           0.0000         0.00003         0.00005           0.0000         0.00003         0.00005           0.0000         0.00003         0.00005           0.0000         0.00003         0.00005           0.0000         0.00003         0.00005           0.0000         0.00003         0.00005           0.0000         0.00003         0.00005           0.0000         0.00003         0.00005           0.0000         0.00003         0.00005           0.0000         0.00003         0.00005           0.0000         0.00003         0.00005           0.0000         0.00003         0.00005           0.0000         0.00003         0.00005           0.0000         0.00003         0.00005           0.0000         0.00003         0.00005           0.0000         0.00003 <td>  Service Retirement</td> <td>Service Retirement         Service Disability         Ordinary Disability         Death         Years of Service           0.0000         0.00003         0.00005         0.00025         1           0.0000         0.00003         0.00005         0.00025         1           0.0000         0.00003         0.00005         0.00027         3           0.0000         0.00003         0.00005         0.00028         4           0.0000         0.00003         0.00005         0.00034         4           0.0000         0.00003         0.00005         0.00031         6           0.0000         0.00003         0.00005         0.00032         7           0.0000         0.00003         0.00005         0.00032         7           0.0000         0.00003         0.00005         0.00032         7           0.0000         0.00003         0.00005         0.00034         9           0.0000         0.00003         0.00005         0.00036         10           0.0000         0.00003         0.00005         0.00036         11           0.0000         0.00003         0.00005         0.00039         13           0.0000         0.00003         0.000</td>	Service Retirement	Service Retirement         Service Disability         Ordinary Disability         Death         Years of Service           0.0000         0.00003         0.00005         0.00025         1           0.0000         0.00003         0.00005         0.00025         1           0.0000         0.00003         0.00005         0.00027         3           0.0000         0.00003         0.00005         0.00028         4           0.0000         0.00003         0.00005         0.00034         4           0.0000         0.00003         0.00005         0.00031         6           0.0000         0.00003         0.00005         0.00032         7           0.0000         0.00003         0.00005         0.00032         7           0.0000         0.00003         0.00005         0.00032         7           0.0000         0.00003         0.00005         0.00034         9           0.0000         0.00003         0.00005         0.00036         10           0.0000         0.00003         0.00005         0.00036         11           0.0000         0.00003         0.00005         0.00039         13           0.0000         0.00003         0.000

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

	All F	ialis - Fell	iaie			
Age	Service Retirement	Service Disability	Ordinary Disability	Death	Years of Service	Other Terminations
18	0.0000	0.00003	0.00005	0.00014	0	0.1300
19	0.0000	0.00003	0.00005	0.00014	1	0.1300
20	0.0000	0.00003	0.00005	0.00015	2	0.1000
21	0.0000	0.00003	0.00005	0.00016	3	0.0800
22	0.0000	0.00003	0.00005	0.00016	4	0.0600
23	0.0000	0.00003	0.00005	0.00016	5	0.0550
24	0.0000	0.00003	0.00005	0.00016	6	0.0483
25	0.0000	0.00003	0.00005	0.00016	7	0.0450
26	0.0000	0.00003	0.00005	0.00016	8	0.0420
27	0.0000	0.00003	0.00005	0.00017	9	0.0390
28	0.0000	0.00003	0.00005	0.00017	10	0.0360
29	0.0000	0.00003	0.00005	0.00018	11	0.0330
30	0.0000	0.00003	0.00005	0.00019	12	0.0300
31	0.0000	0.00003	0.00005	0.00020	13	0.0280
32	0.0000	0.00003	0.00005	0.00021	14	0.0260
33	0.0000	0.00003	0.00005	0.00022	15	0.0240
34	0.0000	0.00003	0.00005	0.00024	16	0.0220
35	0.0000	0.00003	0.00005	0.00028	17	0.0200
36	0.0000	0.00003	0.00005	0.00032	18	0.0190
37	0.0000	0.00003	0.00005	0.00036	19	0.0180
38	0.0000	0.00003	0.00005	0.00039	20	0.0170
39	0.0000	0.00003	0.00005	0.00043	21	0.0160
40	0.0700	0.00006	0.00009	0.00046	22	0.0150
41	0.0700	0.00015	0.00022	0.00049	23	0.0140
42	0.0700	0.00023	0.00035	0.00052	24	0.0130
43	0.0700	0.00032	0.00048	0.00056	25	0.0120
44	0.0700	0.00041	0.00061	0.00061	26	0.0110
45	0.0700	0.00050	0.00074	0.00067	27	0.0100
46	0.0700	0.00058	0.00087	0.00073	28	0.0067
47	0.0700	0.00067	0.00100	0.00081	29	0.0033
48	0.0700	0.00076	0.00113	0.00088	30 & Above	0.0000
49	0.0700	0.00084	0.00126	0.00096		
50	0.0700	0.00093	0.00140	0.00103		
51	0.0300	0.00102	0.00153	0.00111		
52	0.0300	0.00110	0.00166	0.00120		
53	0.0300	0.00119	0.00179	0.00129		
54	0.0900	0.00128	0.00192	0.00141		
55	0.0900	0.00137	0.00205	0.00158		
56	0.0900	0.00145	0.00218	0.00175		
57	0.0900	0.00154	0.00231	0.00196		
58	0.0900	0.00163	0.00244	0.00219		
59	0.1200	0.00171	0.00257	0.00251		
60	0.1500	0.00180	0.00270	0.00291		
61	0.1800	0.00180	0.00270	0.00331		
62	0.2500	0.00180	0.00270	0.00373		
63	0.2500	0.00180	0.00270	0.00422		
64	0.2500	0.00180	0.00270	0.00481		
65	0.2500	0.00180	0.00270	0.00553		
66	0.2500	0.00180	0.00270	0.00633		
67	0.2500	0.00180	0.00270	0.00727		
68	0.2500	0.00180	0.00270	0.00820		
69	0.2500	0.00180	0.00270	0.00923		
70	0.2500	0.00180	0.00270	0.01042		
71	0.2500	0.00180	0.00270	0.01157		
72	0.2500	0.00180	0.00270	0.01279		
73	0.2500	0.00180	0.00270	0.01413		
74	0.2500	0.00180	0.00270	0.01592		
75	1.0000	0.00000	0.00000	0.00000		

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

18	Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
19	18	0.0000	0.00090	0.00010	0.00010	0.00023	0	0.0800
20         0.0000         0.00090         0.00010         0.00010         0.00026         2         0.0300           21         0.0000         0.00090         0.00010         0.00027         3         0.0300           22         0.0000         0.00090         0.00010         0.00010         0.00030         5         0.0300           23         0.0000         0.00090         0.00010         0.00011         0.00031         6         0.0300           24         0.0000         0.00090         0.00010         0.00011         0.00032         7         0.0300           25         0.0000         0.00090         0.00010         0.00012         0.00033         8         0.0270           27         0.0000         0.00090         0.00010         0.00034         9         0.0240           28         0.0000         0.00090         0.00010         0.00036         10         0.0210           29         0.0000         0.00035         0.00010         0.00036         11         0.0180           30         0.0200         0.00135         0.00015         0.00010         0.00036         11         0.0180           31         0.0200         0.00135								
21         0.0000         0.00010         0.00010         0.00027         3         0.0300           22         0.0000         0.00090         0.00010         0.00028         4         0.0300           23         0.0000         0.00090         0.00010         0.00030         5         0.0300           24         0.0000         0.00090         0.00010         0.00011         0.00031         6         0.0300           25         0.0000         0.00090         0.00010         0.00012         0.00032         7         0.0300           26         0.0000         0.00090         0.00010         0.00013         0.00033         8         0.0270           27         0.0000         0.00090         0.00010         0.00013         0.00034         9         0.0240           28         0.0000         0.00090         0.00010         0.00016         0.00036         10         0.0210           29         0.0000         0.00090         0.00015         0.00010         0.00037         12         0.0150           31         0.0200         0.00135         0.00015         0.00010         0.00037         12         0.0150           31         0.0200								
22         0.0000         0.00090         0.00010         0.00010         0.00028         4         0.0300           23         0.0000         0.00090         0.00010         0.00010         0.00031         6         0.0300           24         0.0000         0.00090         0.00010         0.00010         0.00031         6         0.0300           25         0.0000         0.00090         0.00010         0.00010         0.00032         7         0.0300           26         0.0000         0.00090         0.00010         0.00014         0.00034         9         0.0240           28         0.0000         0.00090         0.00010         0.00036         10         0.0210           29         0.0000         0.00039         0.00010         0.00036         11         0.0180           30         0.0200         0.00135         0.00015         0.00010         0.00037         12         0.0150           31         0.0200         0.00135         0.00015         0.00010         0.00039         13         0.0140           32         0.0200         0.00135         0.00015         0.00010         0.00047         15         0.0120           34								
23         0.0000         0.00090         0.00010         0.00030         5         0.0300           24         0.0000         0.00090         0.00010         0.00011         6         0.0300           25         0.0000         0.00090         0.00010         0.00011         0.00032         7         0.0300           26         0.0000         0.00090         0.00010         0.00013         8         0.0270           27         0.0000         0.00090         0.00010         0.00034         9         0.0240           28         0.0000         0.00090         0.00010         0.00036         10         0.0210           29         0.0000         0.00090         0.00015         0.00010         0.00036         11         0.0180           30         0.0200         0.00135         0.00015         0.00010         0.00037         12         0.0150           31         0.0200         0.00135         0.00015         0.00010         0.00039         13         0.0140           32         0.0200         0.00135         0.00015         0.00010         0.00047         15         0.0150           34         0.0200         0.00135         0.00015								
24         0.0000         0.00090         0.00010         0.00001         0.00031         6         0.0300           25         0.0000         0.00090         0.00010         0.00032         7         0.0300           26         0.0000         0.00090         0.00010         0.00033         8         0.0270           27         0.0000         0.00090         0.00010         0.00014         9         0.0240           28         0.0000         0.00090         0.00010         0.00036         10         0.0210           29         0.0000         0.00090         0.00010         0.00036         11         0.0180           30         0.0200         0.00135         0.00015         0.00010         0.00037         12         0.0150           31         0.0200         0.00135         0.00015         0.00010         0.00039         13         0.0140           32         0.0200         0.00135         0.00015         0.00010         0.00042         14         0.0130           33         0.0200         0.00135         0.00015         0.00010         0.0047         15         0.0120           34         0.0200         0.00180         0.00020								
25         0.0000         0.00090         0.00010         0.00010         0.00032         7         0.0300           26         0.0000         0.00090         0.00010         0.00013         8         0.0270           27         0.0000         0.00090         0.00010         0.00034         9         0.0240           28         0.0000         0.00090         0.00010         0.00010         0.00036         10         0.0210           29         0.0000         0.00090         0.00015         0.00010         0.00037         12         0.0150           30         0.0200         0.00135         0.00015         0.00010         0.00039         13         0.0140           31         0.0200         0.00135         0.00015         0.00010         0.00039         13         0.0140           32         0.0200         0.00135         0.00015         0.00010         0.00042         14         0.0130           34         0.0200         0.00135         0.00015         0.00010         0.00042         14         0.0130           34         0.0200         0.00180         0.00015         0.00010         0.00047         15         0.0120           34 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
26         0.0000         0.00090         0.00010         0.00010         0.00003         8         0.0270           27         0.0000         0.00090         0.00010         0.00010         0.00036         10         0.0240           28         0.0000         0.00090         0.00010         0.00016         0.00036         10         0.0210           29         0.0000         0.00035         0.00010         0.00036         11         0.0180           30         0.0200         0.00135         0.00015         0.00010         0.00037         12         0.0150           31         0.0200         0.00135         0.00015         0.00010         0.00039         13         0.0140           32         0.0200         0.00135         0.00015         0.00010         0.00042         14         0.0130           33         0.0200         0.00135         0.00015         0.00010         0.00047         15         0.0120           34         0.0200         0.00180         0.00020         0.00010         0.00063         16         0.0110           35         0.0200         0.00180         0.00020         0.00010         0.00060         17         0.0100								
27         0.0000         0.00090         0.00010         0.00010         0.00034         9         0.0240           28         0.0000         0.00090         0.00010         0.00016         0.00036         10         0.0210           29         0.0000         0.00090         0.00015         0.00010         0.00036         11         0.0180           30         0.0200         0.00135         0.00015         0.00010         0.00039         13         0.0140           31         0.0200         0.00135         0.00015         0.00010         0.00039         13         0.0140           32         0.0200         0.00135         0.00015         0.00010         0.00042         14         0.0130           33         0.0200         0.00135         0.00015         0.00010         0.00047         15         0.0120           34         0.0200         0.00180         0.00020         0.00010         0.00053         16         0.0110           35         0.0200         0.00180         0.00020         0.00010         0.00060         17         0.0100           36         0.0200         0.00180         0.00020         0.00010         0.00067         18         <								
28         0.0000         0.00090         0.00010         0.00016         0.00036         10         0.0210           29         0.0000         0.00019         0.00010         0.00036         11         0.0180           30         0.0200         0.00135         0.00015         0.00010         0.00037         12         0.0150           31         0.0200         0.00135         0.00015         0.00010         0.00039         13         0.0140           32         0.0200         0.00135         0.00015         0.00010         0.00047         15         0.0130           33         0.0200         0.00135         0.00015         0.00010         0.00047         15         0.0120           34         0.0200         0.00135         0.00015         0.00010         0.00047         15         0.0120           34         0.0200         0.00180         0.00020         0.00010         0.00060         17         0.0120           35         0.0200         0.00180         0.00020         0.00010         0.00067         18         0.0080           37         0.0200         0.0180         0.00020         0.00010         0.00074         19         0.0060								
29         0.0000         0.00090         0.00010         0.00010         0.00036         11         0.0180           30         0.0200         0.00135         0.00015         0.00010         0.00037         12         0.0150           31         0.0200         0.00135         0.00015         0.00010         0.00039         13         0.0140           32         0.0200         0.00135         0.00015         0.00010         0.00042         14         0.0130           33         0.0200         0.00135         0.00015         0.00010         0.00047         15         0.0120           34         0.0200         0.00180         0.00020         0.00010         0.00060         17         0.0100           35         0.0200         0.00180         0.00020         0.00010         0.00067         18         0.0080           37         0.0200         0.00180         0.00020         0.00010         0.00074         19         0.0060           38         0.0200         0.00180         0.00020         0.00010         0.00086         20 & Above         0.0000           40         0.0200         0.00180         0.00025         0.00010         0.00086         20 & Abo								
30         0.0200         0.00135         0.00015         0.00010         0.00037         12         0.0150           31         0.0200         0.00135         0.00015         0.00010         0.00039         13         0.0140           32         0.0200         0.00135         0.00015         0.00010         0.00042         14         0.0130           33         0.0200         0.00135         0.00015         0.00010         0.00047         15         0.0120           34         0.0200         0.00180         0.00020         0.00010         0.00060         17         0.0100           35         0.0200         0.00180         0.00020         0.00010         0.00060         17         0.0100           36         0.0200         0.00180         0.00020         0.00010         0.00067         18         0.0080           37         0.0200         0.00180         0.00020         0.00010         0.00067         18         0.0080           38         0.0200         0.00180         0.00020         0.00010         0.00080         20 & Above         0.0000           40         0.0200         0.00225         0.00025         0.00010         0.00095         4								
31         0.0200         0.00135         0.00015         0.00010         0.00039         13         0.0140           32         0.0200         0.00135         0.00015         0.00010         0.00042         14         0.0130           33         0.0200         0.00135         0.00015         0.00010         0.00047         15         0.0120           34         0.0200         0.00135         0.00015         0.00010         0.00053         16         0.0110           35         0.0200         0.00180         0.00020         0.00010         0.00060         17         0.0100           36         0.0200         0.00180         0.00020         0.00010         0.00067         18         0.0080           37         0.0200         0.00180         0.00020         0.00010         0.00067         18         0.0080           38         0.0200         0.00180         0.00020         0.00010         0.00080         20 & Above         0.0000           39         0.0200         0.00180         0.00025         0.00010         0.00086         20 & Above         0.0000           40         0.0200         0.00225         0.00025         0.00010         0.00095								
32         0.0200         0.00135         0.00015         0.00010         0.00042         14         0.0130           33         0.0200         0.00135         0.00015         0.00010         0.00047         15         0.0120           34         0.0200         0.00180         0.00010         0.00010         0.00053         16         0.0110           35         0.0200         0.00180         0.00020         0.00010         0.00060         17         0.0100           36         0.0200         0.00180         0.00020         0.00010         0.00067         18         0.0080           37         0.0200         0.00180         0.00020         0.00010         0.00074         19         0.0060           38         0.0200         0.00180         0.00020         0.00010         0.00086         20 & Above         0.0000           39         0.0200         0.00180         0.00025         0.00010         0.00086         20 & Above         0.0000           40         0.0200         0.00225         0.00025         0.00010         0.00091         0.00091         41         0.0200         0.00225         0.00025         0.00010         0.00104         41         0.0200								
33         0.0200         0.00135         0.00015         0.00010         0.00047         15         0.0120           34         0.0200         0.00135         0.00015         0.00010         0.00063         16         0.0110           35         0.0200         0.00180         0.00020         0.00010         0.00060         17         0.0100           36         0.0200         0.00180         0.00020         0.00010         0.00067         18         0.0080           37         0.0200         0.00180         0.00020         0.00010         0.00074         19         0.0060           38         0.0200         0.00180         0.00020         0.00010         0.00080         20 & Above         0.0000           39         0.0200         0.00180         0.00025         0.00010         0.00086         20 & Above         0.0000           40         0.0200         0.00225         0.00025         0.00010         0.00086         20 & Above         0.0000           41         0.0200         0.00225         0.00025         0.00010         0.00095         42         0.0200         0.00225         0.00025         0.00010         0.00100         43         0.0200         0.00225 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
34       0.0200       0.00135       0.00015       0.00010       0.00053       16       0.0110         35       0.0200       0.00180       0.00020       0.00010       0.00060       17       0.0100         36       0.0200       0.00180       0.00020       0.00010       0.00067       18       0.0080         37       0.0200       0.00180       0.00020       0.00010       0.00074       19       0.0060         38       0.0200       0.00180       0.00020       0.00010       0.00080       20 & Above       0.0000         39       0.0200       0.00180       0.00020       0.00010       0.00086       20 & Above       0.0000         40       0.0200       0.00225       0.00025       0.00010       0.00095       41       0.0200       0.00225       0.00025       0.00010       0.00095       42       0.0200       0.00225       0.00025       0.00010       0.00100       43       0.0200       0.00225       0.00025       0.00010       0.00100       44       0.0200       0.00225       0.00025       0.00010       0.00110       0.0014       44       0.0200       0.00225       0.00025       0.00010       0.00110       0.00110       0.00110								
35         0.0200         0.00180         0.00020         0.00010         0.00060         17         0.0100           36         0.0200         0.00180         0.00020         0.00010         0.00067         18         0.0080           37         0.0200         0.00180         0.00020         0.00010         0.00074         19         0.0060           38         0.0200         0.00180         0.00020         0.00010         0.00086         20 & Above         0.0000           39         0.0200         0.00180         0.00025         0.00010         0.00091         0.0024         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000         0.0000								
36       0.0200       0.00180       0.00020       0.00010       0.00067       18       0.0080         37       0.0200       0.00180       0.00020       0.00010       0.00074       19       0.0060         38       0.0200       0.00180       0.00020       0.00010       0.00080       20 & Above       0.0000         39       0.0200       0.00180       0.00025       0.00010       0.00091       0.0024       0.00091         41       0.0200       0.00225       0.00025       0.00010       0.00095       0.0010       0.00095         42       0.0200       0.00225       0.00025       0.00010       0.00100       0.0010       0.0010         43       0.0200       0.00225       0.00025       0.00010       0.00104       0.0010       0.0010         44       0.0200       0.00225       0.00025       0.00010       0.00110       0.00110         45       0.0200       0.00270       0.00030       0.00010       0.00124       0.00124         47       0.0200       0.00360       0.00045       0.00010       0.00140       0.00140         48       0.0200       0.0405       0.00055       0.00010       0.00149								
37         0.0200         0.00180         0.00020         0.00010         0.00074         19         0.0060           38         0.0200         0.00180         0.00020         0.00010         0.00086         20 & Above         0.0000           39         0.0200         0.00180         0.00025         0.00010         0.00086         40         0.0200         0.00225         0.00025         0.00010         0.00095         41         0.0200         0.00225         0.00025         0.00010         0.00095         42         0.0200         0.00225         0.00025         0.00010         0.00100         0.00100         43         0.0200         0.00225         0.00025         0.00010         0.00100         0.00110         0.00110         0.00110         0.00110         44         0.0200         0.00225         0.00025         0.00010         0.00110         0.00110         0.00110         44         0.0200         0.00225         0.00025         0.00010         0.00110         0.00110         0.00116         46         0.0200         0.00315         0.00035         0.00010         0.00124         47         0.0200         0.00455         0.00010         0.00140         0.00140         49         0.0200         0.00450         0.00055 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
38       0.0200       0.00180       0.00020       0.00010       0.00080       20 & Above       0.0000         39       0.0200       0.00180       0.00025       0.00010       0.00086       0.00091         40       0.0200       0.00225       0.00025       0.00010       0.00095       0.00095         41       0.0200       0.00225       0.00025       0.00010       0.00100         43       0.0200       0.00225       0.00025       0.00010       0.00104         44       0.0200       0.00225       0.00025       0.00010       0.00110         45       0.0200       0.00270       0.00030       0.00010       0.00116         46       0.0200       0.00315       0.00035       0.00010       0.00124         47       0.0200       0.00360       0.00040       0.0010       0.00140         49       0.0200       0.00405       0.00055       0.00010       0.00149         50       0.0800       0.00495       0.00055       0.00010       0.00158         51       0.0400       0.00540       0.00065       0.00010       0.00178         53       0.0400       0.00630       0.00075       0.00010       0								
39         0.0200         0.00180         0.00020         0.00010         0.00086           40         0.0200         0.00225         0.00025         0.00010         0.00091           41         0.0200         0.00225         0.00025         0.00010         0.00100           42         0.0200         0.00225         0.00025         0.00010         0.00104           43         0.0200         0.00225         0.00025         0.00010         0.00104           44         0.0200         0.00225         0.00025         0.00010         0.00110           45         0.0200         0.00270         0.00030         0.00010         0.00116           46         0.0200         0.00315         0.00035         0.00010         0.00132           48         0.0200         0.00405         0.00045         0.00010         0.00140           49         0.0200         0.00450         0.00055         0.00010         0.00158           50         0.0800         0.00495         0.00055         0.00010         0.00168           52         0.0400         0.00585         0.00065         0.00010         0.00178           53         0.0400         0.00630 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>								
40       0.0200       0.00225       0.00025       0.00010       0.00091         41       0.0200       0.00225       0.00025       0.00010       0.00095         42       0.0200       0.00225       0.00025       0.00010       0.00100         43       0.0200       0.00225       0.00025       0.00010       0.00110         44       0.0200       0.00225       0.00025       0.00010       0.00110         45       0.0200       0.00270       0.00030       0.00010       0.00116         46       0.0200       0.00315       0.00035       0.00010       0.00124         47       0.0200       0.00360       0.00040       0.00010       0.00132         48       0.0200       0.00405       0.00045       0.00010       0.00140         49       0.0200       0.00450       0.00050       0.00010       0.00149         50       0.0800       0.00495       0.00055       0.00010       0.00188         51       0.0400       0.00540       0.0066       0.00010       0.00178         53       0.0400       0.00630       0.00075       0.00010       0.00202         54       0.2000       0.00675							20 0 7 15010	0.0000
41       0.0200       0.00225       0.00025       0.00010       0.00095         42       0.0200       0.00225       0.00025       0.00010       0.00100         43       0.0200       0.00225       0.00025       0.00010       0.00110         44       0.0200       0.00270       0.00030       0.00010       0.00116         45       0.0200       0.00315       0.00035       0.00010       0.00124         47       0.0200       0.00360       0.00040       0.00010       0.00132         48       0.0200       0.00405       0.00045       0.00010       0.00140         49       0.0200       0.00450       0.00050       0.00010       0.00149         50       0.0800       0.00495       0.00055       0.00010       0.00158         51       0.0400       0.00540       0.00060       0.00010       0.00178         53       0.0400       0.00630       0.00075       0.00010       0.00202         54       0.2000       0.00675       0.00075       0.00010       0.00218								
42       0.0200       0.00225       0.00025       0.00010       0.00100         43       0.0200       0.00225       0.00025       0.00010       0.00104         44       0.0200       0.00225       0.00025       0.00010       0.00110         45       0.0200       0.00270       0.00030       0.00010       0.00116         46       0.0200       0.00315       0.00035       0.00010       0.00124         47       0.0200       0.00360       0.00040       0.00010       0.00132         48       0.0200       0.00405       0.00045       0.00010       0.00140         49       0.0200       0.00450       0.00050       0.00010       0.00149         50       0.0800       0.00495       0.00055       0.00010       0.00158         51       0.0400       0.00540       0.00060       0.00010       0.00178         52       0.0400       0.00585       0.00065       0.00010       0.00178         53       0.0400       0.00630       0.00070       0.00010       0.00202         54       0.2000       0.00675       0.00075       0.00010       0.00218								
43       0.0200       0.00225       0.00025       0.00010       0.00104         44       0.0200       0.00225       0.00025       0.00010       0.00110         45       0.0200       0.00270       0.00030       0.00010       0.00116         46       0.0200       0.00315       0.00035       0.00010       0.00124         47       0.0200       0.00360       0.00040       0.00010       0.00132         48       0.0200       0.00405       0.00045       0.00010       0.00140         49       0.0200       0.00450       0.00050       0.00010       0.00149         50       0.0800       0.00495       0.00055       0.00010       0.00158         51       0.0400       0.00540       0.00060       0.00010       0.00168         52       0.0400       0.00585       0.00065       0.00010       0.00178         53       0.0400       0.00630       0.00070       0.00010       0.00202         54       0.2000       0.00675       0.00075       0.00010       0.00218								
44       0.0200       0.00225       0.00025       0.00010       0.00110         45       0.0200       0.00270       0.00030       0.00010       0.00116         46       0.0200       0.00315       0.00035       0.00010       0.00124         47       0.0200       0.00360       0.00040       0.00010       0.00132         48       0.0200       0.00405       0.00045       0.00010       0.00140         49       0.0200       0.00450       0.00050       0.00010       0.00149         50       0.0800       0.00495       0.00055       0.00010       0.00158         51       0.0400       0.00540       0.00060       0.00010       0.00168         52       0.0400       0.00585       0.00065       0.00010       0.00178         53       0.0400       0.00630       0.00070       0.00010       0.00202         54       0.2000       0.00675       0.00075       0.00010       0.00218								
45       0.0200       0.00270       0.00030       0.00010       0.00116         46       0.0200       0.00315       0.00035       0.00010       0.00124         47       0.0200       0.00360       0.00040       0.00010       0.00132         48       0.0200       0.00405       0.0005       0.00010       0.00140         49       0.0200       0.00450       0.00050       0.00010       0.00149         50       0.0800       0.00495       0.00055       0.00010       0.00158         51       0.0400       0.00540       0.00060       0.00010       0.00168         52       0.0400       0.00585       0.00065       0.00010       0.00178         53       0.0400       0.00630       0.00070       0.00010       0.00202         54       0.2000       0.00675       0.00075       0.00010       0.00218								
46       0.0200       0.00315       0.00035       0.00010       0.00124         47       0.0200       0.00360       0.00040       0.00010       0.00132         48       0.0200       0.00405       0.00045       0.00010       0.00140         49       0.0200       0.00450       0.00050       0.00010       0.00149         50       0.0800       0.00495       0.00055       0.00010       0.00158         51       0.0400       0.00540       0.00060       0.00010       0.00168         52       0.0400       0.00585       0.00065       0.00010       0.00178         53       0.0400       0.00630       0.00070       0.00010       0.00202         54       0.2000       0.00675       0.00075       0.00010       0.00218								
47       0.0200       0.00360       0.00040       0.00010       0.00132         48       0.0200       0.00405       0.00045       0.00010       0.00140         49       0.0200       0.00450       0.00050       0.00010       0.00149         50       0.0800       0.00495       0.00055       0.00010       0.00158         51       0.0400       0.00540       0.00060       0.00010       0.00168         52       0.0400       0.00585       0.00065       0.00010       0.00178         53       0.0400       0.00630       0.00070       0.00010       0.00202         54       0.2000       0.00675       0.00075       0.00010       0.00218								
48       0.0200       0.00405       0.00045       0.00010       0.00140         49       0.0200       0.00450       0.00050       0.00010       0.00149         50       0.0800       0.00495       0.00055       0.00010       0.00158         51       0.0400       0.00540       0.00060       0.00010       0.00168         52       0.0400       0.00585       0.00065       0.00010       0.00178         53       0.0400       0.00630       0.00070       0.00010       0.00202         54       0.2000       0.00675       0.00075       0.00010       0.00218								
49       0.0200       0.00450       0.00050       0.00010       0.00149         50       0.0800       0.00495       0.00055       0.00010       0.00158         51       0.0400       0.00540       0.0060       0.0010       0.00168         52       0.0400       0.00585       0.00065       0.00010       0.00178         53       0.0400       0.00630       0.00070       0.00010       0.00202         54       0.2000       0.00675       0.00075       0.00010       0.00218								
50     0.0800     0.00495     0.00055     0.00010     0.00158       51     0.0400     0.00540     0.0060     0.00010     0.00168       52     0.0400     0.00585     0.00065     0.00010     0.00178       53     0.0400     0.00630     0.00070     0.00010     0.00202       54     0.2000     0.00675     0.00075     0.00010     0.00218								
51     0.0400     0.00540     0.00060     0.00010     0.00168       52     0.0400     0.00585     0.00065     0.00010     0.00178       53     0.0400     0.00630     0.00070     0.00010     0.00202       54     0.2000     0.00675     0.00075     0.00010     0.00218								
52     0.0400     0.00585     0.00065     0.00010     0.00178       53     0.0400     0.00630     0.00070     0.00010     0.00202       54     0.2000     0.00675     0.00075     0.00010     0.00218								
53       0.0400       0.00630       0.00070       0.00010       0.00202         54       0.2000       0.00675       0.00075       0.00010       0.00218								
54 0.2000 0.00675 0.00075 0.00010 0.00218								
56 0.2500 0.00720 0.00080 0.00010 0.00261								
57 0.2500 0.00720 0.00080 0.00010 0.00299								
58 0.2500 0.00720 0.00080 0.00010 0.00350								
59 0.2500 0.00720 0.00080 0.00010 0.00395								
60 0.2500 0.00720 0.00080 0.00010 0.00449								
61 0.2500 0.00720 0.00080 0.00010 0.00506								
62 0.3500 0.00720 0.00080 0.00010 0.00574								
63 0.3500 0.00720 0.00080 0.00010 0.00660								
64 0.3500 0.00720 0.00080 0.00010 0.00753								
65 1.0000 0.00000 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	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	0.00090	0.00010	0.00010	0.00014	0	0.0800
19	0.0000	0.00090	0.00010	0.00010	0.00014	1	0.0800
20	0.0000	0.00090	0.00010	0.00010	0.00015	2	0.0300
21	0.0000	0.00090	0.00010	0.00010	0.00016	3	0.0300
22	0.0000	0.00090	0.00010	0.00010	0.00016	4	0.0300
23	0.0000	0.00090	0.00010	0.00010	0.00016	5	0.0300
24	0.0000	0.00090	0.00010	0.00010	0.00016	6	0.0300
25	0.0000	0.00090	0.00010	0.00010	0.00016	7	0.0300
26	0.0000	0.00090	0.00010	0.00010	0.00016	8	0.0270
27	0.0000	0.00090	0.00010	0.00010	0.00017	9	0.0240
28	0.0000	0.00090	0.00010	0.00010	0.00017	10	0.0210
29	0.0000	0.00090	0.00010	0.00010	0.00018	11	0.0180
30	0.0200	0.00135	0.00015	0.00010	0.00019	12	0.0150
31	0.0200	0.00135	0.00015	0.00010	0.00020	13	0.0140
32	0.0200	0.00135	0.00015	0.00010	0.00021	14	0.0130
33	0.0200	0.00135	0.00015	0.00010	0.00022	15	0.0120
34	0.0200	0.00135	0.00015	0.00010	0.00024	16	0.0110
35	0.0200	0.00180	0.00020	0.00010	0.00028	17	0.0100
36	0.0200	0.00180	0.00020	0.00010	0.00032	18	0.0080
37	0.0200	0.00180	0.00020	0.00010	0.00036	19	0.0060
38	0.0200	0.00180	0.00020	0.00010	0.00039	20 & Above	0.0000
39	0.0200	0.00180	0.00020	0.00010	0.00043		
40	0.0200	0.00225	0.00025	0.00010	0.00046		
41	0.0200	0.00225	0.00025	0.00010	0.00049		
42	0.0200	0.00225	0.00025	0.00010	0.00052		
43	0.0200	0.00225	0.00025	0.00010	0.00056		
44	0.0200	0.00225	0.00025	0.00010	0.00061		
45	0.0200	0.00270	0.00030	0.00010	0.00067		
46	0.0200	0.00315	0.00035	0.00010	0.00073		
47	0.0200	0.00360	0.00040	0.00010	0.00081		
48	0.0200	0.00405	0.00045	0.00010	0.00088		
49	0.0200	0.00450	0.00050	0.00010	0.00096		
50	0.0800	0.00495	0.00055	0.00010	0.00103		
51	0.0400	0.00540	0.00060	0.00010	0.00111		
52	0.0400	0.00585	0.00065	0.00010	0.00120		
53	0.0400	0.00630	0.00070	0.00010	0.00129		
54	0.2000	0.00675	0.00075	0.00010	0.00141		
55	0.3300	0.00720	0.00080	0.00010	0.00158		
56	0.2500	0.00720	0.00080	0.00010	0.00175		
57	0.2500	0.00720	0.00080	0.00010	0.00196		
58	0.2500	0.00720	0.00080	0.00010	0.00219		
59	0.2500	0.00720	0.00080	0.00010	0.00251		
60	0.2500	0.00720	0.00080	0.00010	0.00291		
61	0.2500	0.00720	0.00080	0.00010	0.00331		
62	0.3500	0.00720	0.00080	0.00010	0.00373		
63	0.3500	0.00720	0.00080	0.00010	0.00422		
64	0.3500	0.00720	0.00080	0.00010	0.00422		
65	1.0000	0.00000	0.00000	0.00000	0.00000		

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

Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	0.00090	0.00010	0.00010	0.00023	0	0.0800
19	0.0000	0.00090	0.00010	0.00010	0.00025	1	0.0800
20	0.0000	0.00090	0.00010	0.00010	0.00026	2	0.0300
21	0.0000	0.00090	0.00010	0.00010	0.00027	3	0.0300
22	0.0000	0.00090	0.00010	0.00010	0.00028	4	0.0300
23	0.0000	0.00090	0.00010	0.00010	0.00030	5	0.0300
24	0.0000	0.00090	0.00010	0.00010	0.00031	6	0.0300
25	0.0000	0.00090	0.00010	0.00010	0.00032	7	0.0300
26	0.0000	0.00090	0.00010	0.00010	0.00033	8	0.0270
27	0.0000	0.00090	0.00010	0.00010	0.00034	9	0.0240
28	0.0000	0.00090	0.00010	0.00010	0.00036	10	0.0210
29	0.0000	0.00090	0.00010	0.00010	0.00036	11	0.0180
30	0.0200	0.00135	0.00015	0.00010	0.00037	12	0.0150
31	0.0200	0.00135	0.00015	0.00010	0.00039	13	0.0140
32	0.0200	0.00135	0.00015	0.00010	0.00042	14	0.0130
33	0.0200	0.00135	0.00015	0.00010	0.00047	15	0.0120
34	0.0200	0.00135	0.00015	0.00010	0.00053	16	0.0110
35	0.0200	0.00180	0.00020	0.00010	0.00060	17	0.0100
36	0.0200	0.00180	0.00020	0.00010	0.00067	18	0.0080
37	0.0200	0.00180	0.00020	0.00010	0.00074	19	0.0060
38	0.0200	0.00180	0.00020	0.00010	0.00080	20 & Above	0.0000
39	0.0200	0.00180	0.00020	0.00010	0.00086		
40	0.0200	0.00225	0.00025	0.00010	0.00091		
41	0.0200	0.00225	0.00025	0.00010	0.00095		
42	0.0200	0.00225	0.00025	0.00010	0.00100		
43	0.0200	0.00225	0.00025	0.00010	0.00104		
44	0.0200	0.00225	0.00025	0.00010	0.00110		
45	0.0200	0.00270	0.00030	0.00010	0.00116		
46	0.0200	0.00315	0.00035	0.00010	0.00124		
47	0.0700	0.00360	0.00040	0.00010	0.00132		
48	0.0700	0.00405	0.00045	0.00010	0.00140		
49	0.1000	0.00450	0.00050	0.00010	0.00149		
50	0.2000	0.00495	0.00055	0.00010	0.00158		
51	0.1000	0.00540	0.00060	0.00010	0.00168		
52	0.1000	0.00585	0.00065	0.00010	0.00178		
53	0.1000	0.00630	0.00070	0.00010	0.00202		
54	0.3000	0.00675	0.00075	0.00010	0.00218		
55	0.3300	0.00720	0.00080	0.00010	0.00238		
56	0.2500	0.00720	0.00080	0.00010	0.00261		
57	0.2500	0.00720	0.00080	0.00010	0.00299		
58	0.2500	0.00720	0.00080	0.00010	0.00350		
59	0.2500	0.00720	0.00080	0.00010	0.00395		
60	0.2500	0.00720	0.00080	0.00010	0.00449		
61	0.2500	0.00720	0.00080	0.00010	0.00506		
62	0.3500	0.00720	0.00080	0.00010	0.00574		
63	0.3500	0.00720	0.00080	0.00010	0.00660		
64	0.3500	0.00720	0.00080	0.00010	0.00753		
65	1.0000	0.00000	0.00000	0.00000	0.00000		

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

Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	0.00090	0.00010	0.00010	0.00014	0	0.0800
19	0.0000	0.00090	0.00010	0.00010	0.00014	1	0.0800
20	0.0000	0.00090	0.00010	0.00010	0.00015	2	0.0300
21	0.0000	0.00090	0.00010	0.00010	0.00016	3	0.0300
22	0.0000	0.00090	0.00010	0.00010	0.00016	4	0.0300
23	0.0000	0.00090	0.00010	0.00010	0.00016	5	0.0300
24	0.0000	0.00090	0.00010	0.00010	0.00016	6	0.0300
25	0.0000	0.00090	0.00010	0.00010	0.00016	7	0.0300
26	0.0000	0.00090	0.00010	0.00010	0.00016	8	0.0270
27	0.0000	0.00090	0.00010	0.00010	0.00017	9	0.0240
28	0.0000	0.00090	0.00010	0.00010	0.00017	10	0.0210
29	0.0000	0.00090	0.00010	0.00010	0.00018	11	0.0180
30	0.0200	0.00135	0.00015	0.00010	0.00019	12	0.0150
31	0.0200	0.00135	0.00015	0.00010	0.00020	13	0.0140
32	0.0200	0.00135	0.00015	0.00010	0.00021	14	0.0130
33	0.0200	0.00135	0.00015	0.00010	0.00022	15	0.0120
34	0.0200	0.00135	0.00015	0.00010	0.00024	16	0.0110
35	0.0200	0.00180	0.00020	0.00010	0.00021	17	0.0100
36	0.0200	0.00180	0.00020	0.00010	0.00032	18	0.0080
37	0.0200	0.00180	0.00020	0.00010	0.00036	19	0.0060
38	0.0200	0.00180	0.00020	0.00010	0.00039	20 & Above	0.0000
39	0.0200	0.00180	0.00020	0.00010	0.00043	20 Q / 100VC	0.0000
40	0.0200	0.00225	0.00025	0.00010	0.00046		
41	0.0200	0.00225	0.00025	0.00010	0.00049		
42	0.0200	0.00225	0.00025	0.00010	0.00052		
43	0.0200	0.00225	0.00025	0.00010	0.00056		
44	0.0200	0.00225	0.00025	0.00010	0.00061		
45	0.0200	0.00220	0.00020	0.00010	0.00067		
46	0.0200	0.00276	0.00035	0.00010	0.00073		
47	0.0700	0.00360	0.00040	0.00010	0.00073		
48	0.0700	0.00405	0.00045	0.00010	0.00088		
49	0.1000	0.00450	0.00050	0.00010	0.00096		
50	0.2000	0.00495	0.00055	0.00010	0.00103		
51	0.1000	0.00540	0.00060	0.00010	0.00111		
52	0.1000	0.00585	0.00065	0.00010	0.00120		
53	0.1000	0.00630	0.00070	0.00010	0.00129		
54	0.3000	0.00675	0.00075	0.00010	0.00123		
55	0.3300	0.00073	0.00073	0.00010	0.00141		
56	0.2500	0.00720	0.00080	0.00010	0.00135		
57	0.2500	0.00720	0.00080	0.00010	0.00176		
58	0.2500	0.00720	0.00080	0.00010	0.00190		
59	0.2500	0.00720	0.00080	0.00010	0.00213		
60	0.2500	0.00720	0.00080	0.00010	0.00291		
61	0.2500	0.00720	0.00080	0.00010	0.00291		
62	0.3500	0.00720	0.00080	0.00010	0.00331		
63	0.3500	0.00720	0.00080	0.00010	0.00373		
64	0.3500	0.00720	0.00080	0.00010	0.00422		
65	1.0000	0.00720	0.00000	0.00000	0.00000		
00	1.0000	0.00000	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, 2008. The benefit and contribution provisions of this law are summarized briefly below, along with corresponding references to the State Code. This summary does not attempt to cover all the detailed provisions of the law.

## 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. Membership in a particular tier depends upon date of entry to the system and bargaining unit.

**General members:** all non-Safety employees are eligible to be General members. 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 in 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 General Plan 5A:

who did not elect to join General Plan 2, and Safety

employees hired before October 10, 1994.

Safety Plan 4B &

General Plan 5B:

Employees hired on or after October 10, 1994.

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

October 10, 1994. Members in those bargaining units

transferred from Plan 5B on March 10, 2008.

Safety Plan 4C: Members in certain bargaining units who were hired

> on or after October 10, 1994. All members in certain bargaining units. 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

transferred 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

transferred 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, regardless of hire date.

(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.

General Plan 5A member rates are half General Plan 5B member rates. (31621.2, 31621.5)

General Plan 5C is based on half rates.

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

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

Safety Plans 4C, 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

SERVICE RETIREMEN	I ALLOWANCE	
Eligibility:		
Plans 5A, 5B & 5C:	General 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)
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 & 6B:

Monthly average of a member's highest

36 consecutive months of compensation.

(31462)

## **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	Safe	ety
			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, Any age and length of service: disability must result from 31720.6.

All other Plans: Any age and length of service; disability must result from

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: 31727.3) Age 55

## **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)

(31789.5)

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

(31486.7, 31787)

disease arising out of and in the course of employment.

## **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 max of 6 years).

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

(31787)

the greater of the Member's Service Retirement Allowance (if he is eligible for service Retirement at his date of 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,

(31781)

(31787)

(31855.11,

31855.12)

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

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

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

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.

ch

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,



	JETI MING	<b>INCREASES</b>
<b>0031-</b> 0		INCINEROLO

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)

(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, 31874 1

(excluding General Plan 2): percentage, the difference between the actual CPI and the maximum cost-of-living increase given

31874.1, 31874.2, 31874.3)

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, 2010 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, 2010 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 the total prior year earnings, adjusted for one-half year of expected salary increases.

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.

Exhibit C-6 displays the reconciliation of system membership categories since the previous valuation.

Exhibit C-1a: SBCERS Membership - Active Members as of June 30, 2010

	Total Number	Co	Annual ompensation	Average Age	Average Monthly Compensation	Average Vesting Service
General Members	•					
Plan 5A	879	\$	65,384,928	52.2	\$6,199	21.1
Plan 5B	465	\$	43,745,013	45.2	\$7,840	6.6
Plan 5C	1,905	\$	114,070,593	43.0	\$4,990	7.1
Plan 2	12	\$	794,584	52.0	\$5,518	23.5
Total	3,261	\$	223,995,118	45.8	\$5,724	10.8
Safety Members						
Plan 4A	104	\$	11,388,831	49.2	\$9,126	20.3
Plan 4B	12	\$	1,422,973	47.4	\$9,882	18.5
Plan 4C	341	\$	26,145,012	40.1	\$6,389	9.1
Plan 6A	148	\$	14,705,745	47.8	\$8,280	21.2
Plan 6B	316	\$	26,132,937	38.2	\$6,892	7.7
Total	921	\$	79,795,497	41.8	\$7,220	12.0
APCD Members						
Plan 1	26	\$	2,266,878	54.6	\$7,266	21.3
Plan 2	20	\$	1,448,635	43.7	\$6,036	6.6
Total	46	\$	3,715,512	49.8	\$6,731	14.9
Grand Total	4,228	\$	307,506,128	45.0	\$6,061	11.1

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

Valuation Date	Plan Type	Number	Annual Payroll	Averag Annua Salary	I Increase in
June 30, 2003	General	3,648	\$ 193,102,000	\$ 52.	934 10.1%
,	Safety	925	\$ 64,135,000		335 13.4%
	Total	4,573	257,237,000		251 10.8%
June 30, 2004		3,559	\$ 199,365,000		017 5.8%
	Safety	944	\$ 67,596,000		606 3.3%
	Total	4,503	266,961,000	59,	285 5.4%
June 30, 2005		3,558	\$ 199,371,000		035 0.0%
	Safety	947	\$ 68,414,000		243 0.9%
	Total	4,505	267,785,000	59,	442 0.3%
June 30, 2006	General	3,658	\$ 214,405,000		613 4.6%
	Safety	982	\$ 72,977,000		315 2.9%
	Total	4,640	287,382,000	61,	936 4.2%
June 30, 2007		3,569	\$ 214,717,000	\$ 60,	162 2.6%
	APCD	53	\$ 3,940,000		340 N/A
	Safety	1,003	\$ 75,506,000		280 1.3%
	Total	4,625	294,163,000	63,	603 2.7%
June 30, 2008	General	3,552	\$ 226,426,000	\$ 63,	746 6.0%
	APCD	48	\$ 3,608,000	75,	167 1.1%
	Safety	1,006	\$ 77,230,000	76,	769 2.0%
	Total	4,606	307,264,000	66,	710 4.9%
June 30, 2009	General	3,450	\$ 223,831,000	\$ 64,	879 1.8%
	APCD	50	\$ 3,955,000	79,	100 5.2%
	Safety	967	\$ 79,596,000	82,	312 7.2%
	Total	4,467	307,382,000	68,	812 3.2%
June 30, 2010	General	3,261	\$ 223,995,000	\$ 68,	689 5.9%
	APCD	46	\$ 3,716,000	80,	783 2.1%
	Safety	921	\$ 79,795,000	86,	640 5.3%
	Total	4,228	307,506,000	72,	731 5.7%

Exhibit C-2: SBCERS Membership – Deferred Vested Members as of June 30, 2010

	Number	Average Age
General Members		
Plan 5A	319	51.3
Plan 5B	480	44.8
Plan 5C	146	41.1
Plan 2	29	52.3
Total	974	46.6
Safety Members		
Plan 4A	7	44.7
Plan 4B	61	41.1
Plan 4C	37	37.6
Plan 4D	8	38.8
Plan 6A	64	48.8
Plan 6B	15	37.0
Total	192	42.7
APCD Members		
Plan 1	12	49.2
Plan 2	3	46.7
Total	15	48.7
Grand Total	1,181	46.0

SBCERS Membership - Retired Members as of June 30, 2010 Exhibit C-3a:

_	Number	Average Age	 Monthly Illowance	M	erage onthly enefit
General Members					
Plan 5A	928	63.3	\$ 2,754,286	\$	2,968
Plan 5B	150	63.5	\$ 186,851		1,246
Plan 5C	58	61.3	\$ 80,539		1,389
Plan 2	41	71.3	\$ 26,445		645
Other _	1,371	77.0	\$ 2,214,057		1,615
Total	2,548	70.8	\$ 5,262,177	\$	2,065
Safety Members					
Plan 4A	192	60.7	\$ 1,219,075	\$	6,349
Plan 4B	77	61.4	\$ 304,432	\$	3,954
Plan 4C	28	59.1	\$ 75,434	\$	2,694
Plan 4D	2	55.0	\$ 6,595	\$	3,298
Plan 6A	81	55.2	\$ 484,946	\$	5,987
Plan 6B	3	58.0	\$ 7,487	\$	2,496
Other _	359	70.0	\$ 1,315,743	\$	3,665
Total	742	64.6	\$ 3,413,712	\$	4,601
APCD Members					
Plan 1	24	61.5	\$ 65,596	\$	2,733
Plan 2	4	62.5	\$ 6,747	\$	1,687
Total	28	61.7	\$ 72,343	\$	2,584
Grand Total	3,318	69.3	\$ 8,748,232	\$	2,637

Exhibit C-3b: SBCERS Membership – Retired Members as of June 30, 2010 Subtotaled by Class and Retirement Type

	Number	Α	Monthly llowance	M	erage onthly enefit
•	_				
General Members					
Healthy	2,056	\$	4,583,059	\$	2,229
Disabled	127	\$	239,660	\$	1,887
Beneficiaries	365	\$	439,457	\$	1,204
Total	2,548	\$	5,262,177	\$	2,065
Safety Members					
Healthy	554	\$	2,869,855	\$	5,180
Disabled	122	\$	380,495	\$	3,119
Beneficiaries	66	\$	163,362	\$	2,475
Total	742	\$	3,413,712	\$	4,601
APCD Members					
Healthy	27	\$	70,409	\$	2,608
Disabled	-	\$	-	\$	-
Beneficiaries	1	\$	1,934	\$	1,934
Total	28	\$	72,343	\$	2,584
Grand Total	3,318	\$	8,748,232	\$	2,637

Exhibit C-4: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2010 **All Members** 

Count										
	_			Years	of Vesting S	ervice				Total
Age	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	8	32	-	-	-	-	-	-	-	40
25-29	27	240	45	-	-	-	-	-	-	312
30-34	31	232	168	33	-	-	-	-	-	464
35-39	15	145	200	181	34	-	-	-	-	575
40-44	13	135	163	165	107	32	-	-	-	615
45-49	13	118	112	136	120	113	33	-	-	645
50-54	14	96	108	130	108	113	87	28	1	685
55-59	6	81	93	93	88	83	61	39	3	547
60-64	6	36	59	58	39	31	20	18	7	274
65 & Over	3	9	14	24	6	6	5	1	3	71
Total Count	136	1,124	962	820	502	378	206	86	14	4,228

Com	pensation

				Years	of Vesting Se	ervice				Average
Age	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	46,135	50,268	-	-	-	-	-	-	-	49,441
25-29	48,114	58,644	62,650	-	-	-	-	-	-	58,311
30-34	55,413	61,909	65,573	67,823	-	-	-	-	-	63,222
35-39	50,418	68,155	70,302	76,334	68,241	-	-	-	-	71,019
40-44	89,408	70,471	71,014	73,910	70,819	83,149	-	-	-	72,658
45-49	91,910	69,704	69,281	74,484	75,042	81,775	91,960	-	-	75,332
50-54	90,437	72,920	76,011	67,285	75,933	86,196	89,865	83,170	83,902	77,948
55-59	52,840	82,512	72,597	71,005	81,952	82,688	78,129	90,879	108,774	78,733
60-64	104,169	81,952	63,153	79,737	72,338	80,823	99,978	89,747	89,054	78,435
65 & Over	41,906	95,992	88,737	84,822	90,697	66,809	71,728	212,149	51,568	83,637
Avg. Annual	64,950	66,873	69,812	73,647	75,061	83,097	87,267	89,542	84,879	72,731
Compensation	•	•	•	·	·	·	,	,	,	•



Exhibit C-4a: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2010 **General Members** 

	_			Yea	ars of Servic	e				Total
Age	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	8	27	-	-	-	-	-	-	-	35
25-29	25	171	31	-	-	-	-	-	-	227
30-34	30	160	104	22	-	-	-	-	-	316
35-39	15	119	138	107	23	-	-	-	-	402
40-44	13	111	122	112	69	16	-	-	-	443
45-49	13	107	97	108	83	67	20	-	-	495
50-54	12	86	101	114	87	79	61	18	1	559
55-59	5	71	83	80	81	66	50	34	1	471
60-64	6	32	56	53	33	28	17	16	5	246
65 & Over	3	8	14	22	6	6	4	1	3	67
otal Count	130	892	746	618	382	262	152	69	10	3,261
Compensation	<u> </u>			Ya	ars of Servic	••				Average
Compensation Age	0-1	1-4	5-9	<b>Ye</b> :	ars of Servic 15-19	ce	25-29	30-34	35&Over	Average Comp.
Age	0-1		5-9				25-29	30-34	35&Over	Comp.
<u> </u>	0-1 46,135	45,765	-				25-29 	30-34	35&Over - -	Comp. 45,849
<b>Age</b> Under 25 25-29	0-1 46,135 46,350	45,765 52,739	- 54,700	10-14 - -			25-29 - - -	30-34	35&Over - -	Comp. 45,849 52,303
Age Under 25 25-29 30-34	0-1 46,135 46,350 55,647	45,765 52,739 56,818	54,700 57,259	10-14 - - 59,390	15-19 - - -		25-29 - - - -	30-34	35&Over - - -	Comp. 45,849 52,303 57,031
<b>Age</b> Under 25 25-29	0-1 46,135 46,350 55,647 50,418	45,765 52,739 56,818 65,471	54,700 57,259 63,622	10-14 - -	15-19 - - - - 61,321	20-24 - - - -	25-29 - - - - -	30-34 - - - -	35&Over - - - -	Comp. 45,849 52,303 57,031 64,713
Age Under 25 25-29 30-34 35-39	0-1 46,135 46,350 55,647 50,418 89,408	45,765 52,739 56,818 65,471 69,063	54,700 57,259	10-14 - - 59,390 68,009 68,018	15-19 - - - 61,321 61,915	20-24 - - - - - 67,359	- - - - -	30-34 - - - - -		Comp. 45,849 52,303 57,031 64,713 67,352
Age Under 25 25-29 30-34 35-39 40-44	0-1 46,135 46,350 55,647 50,418	45,765 52,739 56,818 65,471	54,700 57,259 63,622 65,906	- - 59,390 68,009	15-19 - - - 61,321 61,915 70,595	20-24 - - - - - 67,359 70,321	25-29 - - - - - - 73,859 81,423	30-34 - - - - - - - 68.683	- - - - - -	Comp. 45,849 52,303 57,031 64,713 67,352 70,703
Age Under 25 25-29 30-34 35-39 40-44 45-49 50-54	0-1 46,135 46,350 55,647 50,418 89,408 91,910 81,685	45,765 52,739 56,818 65,471 69,063 69,576 69,558	54,700 57,259 63,622 65,906 67,654 76,277	10-14 - - 59,390 68,009 68,018 71,739 66,084	15-19 - - - 61,321 61,915 70,595 74,557	20-24 - - - - 67,359 70,321 79,156	- - - - - 73,859 81,423	- - - - - - 68,683	- - - - - - 83,902	Comp. 45,849 52,303 57,031 64,713 67,352 70,703 73,751
Age Under 25 25-29 30-34 35-39 40-44 45-49	0-1 46,135 46,350 55,647 50,418 89,408 91,910	45,765 52,739 56,818 65,471 69,063 69,576	54,700 57,259 63,622 65,906 67,654	10-14 - - 59,390 68,009 68,018 71,739	15-19 - - - 61,321 61,915 70,595	20-24 - - - - - 67,359 70,321	- - - - - 73,859	- - - - - -	- - - - - -	Comp. 45,849 52,303 57,031 64,713 67,352 70,703



75,659

78,586

85,042

61,653

68,689

Avg. Annual

Compensation

63,553

64,343

66,260

69,984

71,747

Exhibit C-4b: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2010 **Safety Members** 

Count	]												
	Years of Service												
Age	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count			
Under 25	-	5	-	-	-	-	-	_	-	5			
25-29	1	66	14	-	-	-	-	-	-	81			
30-34	-	70	63	11	-	-	-	-	-	144			
35-39	-	26	62	73	11	-	-	-	-	172			
40-44	-	23	40	53	38	16	-	-	-	170			
45-49	-	11	14	27	33	44	13	-	-	142			
50-54	2	10	7	15	20	31	25	10	-	120			
55-59	1	10	6	13	6	12	9	5	2	64			
60-64	-	3	3	4	3	1	3	2	2	21			
65 & Over	-	1	-	1	-	-	-	-	-	2			
Total Count	4	225	209	197	111	104	50	17	4	921			

	Years of Service											
Age	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.		
Under 25	-	74,584	-	-	-	-	-	_	-	74,584		
25-29	80,337	73,762	80,252	-	-	-	-	-	-	74,965		
30-34	-	73,275	79,533	84,687	-	-	-	-	-	76,884		
35-39	-	80,440	85,169	87,983	82,709	-	-	-	-	85,491		
40-44	-	77,040	85,902	86,360	86,985	98,938	-	-	-	86,315		
45-49	-	70,952	78,975	86,707	85,757	99,447	119,807	-	-	91,481		
50-54	142,950	101,831	72,181	75,718	81,625	102,653	109,838	109,246	-	96,653		
55-59	96,761	92,095	80,398	76,520	107,384	102,816	119,415	108,961	129,260	97,672		
60-64	-	73,558	88,538	72,216	77,862	95,126	88,076	97,736	156,629	89,373		
65 & Over	-	100,150	-	84,275	-	-	-	-	-	92,213		
Avg. Annual Compensation	115,750	76,775	82,343	85,158	86,086	100,671	112,848	107,808	142,944	86,640		



Exhibit C-4c: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2010 APCD Members

Count										
_					ars of Servi					Total
Age	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Lindor OF										
Under 25 25-29	- 4	-	-	-	-	-	-	-	-	-
25-29 30-34	1	3 2	-	-	-	-	-	-	-	4
	1		1	-	-	-	-	-	-	4
35-39	-	-	-	1	-	-	-	=	-	1
40-44	-	1	1	-	-	-	-	-	-	2
45-49	-	-	1	1	4	2	-	-	-	8
50-54	-	-		1	1	3	1	-	-	6
55-59	-	-	4	-	1	5	2	-	-	12
60-64	-	1	-	1	3	2	-	=	-	7
65 & Over	-	-	-	1	-	-	1	-	-	2
Total Count	2	7	7	5	9	12	4	-	-	46
Compensation										
				Ye	ars of Servi	ce				Average
Age	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	_	_	_	_	_	_	_	_	_	_
25-29	59,982	62,668	_	_	_	_	_	_	_	61,996
30-34	48,376	71,390	50,733	_	_	_	_	_	_	60,472
35-39	-	-	-	116,598	_	_	_	_	_	116,598
40-44	_	75,617	98,588	-	-	-	-	-	-	87,102
45-49	-	· <u>-</u>	91,345	41,004	78,917	76,664	-	_	-	75,168
50-54	_	_	-	77,662	81,892	101,516	105,516	_	_	94,936
55-59	-	-	69,818	-	106,354	96,540	96,755	-	-	88,486
60-64	-	90,876	-	79,282	71,291	88,950	-	_	_	80,276
65 & Over	-	-	-	49,521	-	-	90,582	-	-	70,052
Avg. Annual Compensation	54,179	71,039	74,277	72,813	79,754	93,206	97,402	-	-	80,772



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.

Exhibit C-5: Distribution of Retired Members by Age and Retirement Year as of June 30, 2010 All Members

		Benefit Effective Date											
Age	Pre-1974	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-10	Total Count	Benefit			
Under 35	-	-	-	-	-	3	4	6	13	\$ 883			
35-39	-	-	-	-	-	1	2	-	3	2,294			
40-44	-	-	-	-	2	3	3	3	11	1,893			
45-49	-	-	-	-	-	2	9	13	24	2,034			
50-54	-	-	-	1	1	17	15	151	185	2,153			
55-59	-	1	3	3	1	9	74	257	348	3,058			
60-64	1	4	2	5	5	69	177	379	642	3,462			
65-69	2	10	7	6	31	144	214	226	640	3,248			
70-74	4	15	12	26	76	123	134	62	452	2,451			
75-79	6	8	21	42	74	94	54	27	326	2,055			
80-84	5	23	42	65	76	35	30	31	307	1,865			
85-89	13	42	40	52	24	16	17	15	219	1,578			
90-94	10	26	33	12	3	3	13	10	110	1,469			
95-99	10	11	6	1	-	2	2	-	32	935			
100 & Over	2	3	-	-	-	-	-	1	6	1,460			
Total Count	53	143	166	213	293	521	748	1,181	3,318				
Avg Monthly Benefit	\$ 1,614	\$ 1,329	\$ 1,692	\$ 2,111	\$ 2,271	\$ 2,399	\$ 2,791	\$ 3,166		\$ 2,637			



Exhibit C-5a: Distribution of Retired Members by Age and Retirement Year as of June 30, 2010 General Members

					ffective Date				Total	Average Monthly	
Age	Pre-1974	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-10	Count	Benefit	
Under 35	-	-	-	-	-	3	4	3	10	\$ 743	
35-39	-	-	-	-	-	1	1	-	2	1,651	
40-44	-	-	-	-	2	1	1	2	6	1,058	
45-49	-	-	-	-	-	2	6	7	15	1,528	
50-54	-	-	-	1	1	11	10	81	104	1,201	
55-59	-	1	1	1	1	7	52	164	227	1,652	
60-64	-	1	-	3	2	53	109	311	479	2,818	
65-69	-	2	2	3	18	79	152	198	454	2,561	
70-74	-	2	2	16	57	90	122	56	345	2,069	
75-79	4	5	16	32	60	84	49	24	274	1,814	
80-84	1	19	38	63	75	32	25	29	282	1,778	
85-89	6	40	39	51	23	16	17	15	207	1,513	
90-94	7	24	33	12	3	3	13	10	105	1,389	
95-99	10	11	6	1	-	2	2	-	32	935	
100 & Over	2	3	-	-	-	-	-	1	6	1,460	
Total Count	30	108	137	183	242	384	563	901	2,548		
Avg Monthly Benefit	\$ 1,177	\$ 1,058	\$ 1,484	\$ 1,883	\$ 1,883	\$ 1,642	\$ 2,090	\$ 2,554		\$ 2,065	

Exhibit C-5b: Distribution of Retired Members by Age and Retirement Year as of June 30, 2010 Safety Members

				Benefit E	ffective Date				Total	Average Monthly
Age	Pre-1974	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-10	Count	Benefit
Under 35	-	-	-	-	-	-	-	3	3	\$ 1,352
35-39	-	-	-	-	-	-	1	-	1	3,579
40-44	-	-	-	-	-	2	2	1	5	2,896
45-49	-	-	-	-	-	-	3	6	9	2,878
50-54	-	-	-	-	-	6	5	63	74	3,536
55-59	-	-	2	2	-	2	21	88	115	5,857
60-64	1	3	2	2	3	16	65	65	157	5,421
65-69	2	8	5	3	13	65	62	25	183	4,966
70-74	4	13	10	10	19	33	9	4	102	3,715
75-79	2	3	5	10	14	10	5	3	52	3,325
80-84	4	4	4	2	1	3	4	2	24	2,948
85-89	7	2	1	1	1	-	-	-	12	2,698
90-94	3	2	-	-	-	-	-	-	5	3,163
95-99	-	-	-	-	-	-	-	-	-	-
100 & Over	-	-	-	-	-	-	-	-	-	-
Total Count	23	35	29	30	51	137	177	260	742	
Avg Monthly Benefit	\$ 2,183	\$ 2,167	\$ 2,673	\$ 3,498	\$ 4,113	\$ 4,520	\$ 5,047	\$ 5,319		\$ 4,601

Exhibit C-5c: Distribution of Retired Members by Age and Retirement Year as of June 30, 2010 APCD Members

				Renefit F	ffective Date				Total	Average Monthly	
Age	Pre-1974	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-10	Count	Benefit	
Under 35	-	-	-	-	-	-	-	-	-	\$ -	
35-39	-	-	-	-	-	-	-	-	-	-	
40-44	-	-	-	-	-	-	-	-	-	-	
45-49	-	-	-	-	-	-	-	-	-	-	
50-54	-	-	-	-	-	-	-	7	7	1,664	
55-59	-	-	-	-	-	-	1	5	6	2,614	
60-64	-	-	-	-	-	-	3	3	6	3,676	
65-69	-	-	-	-	-	-	-	3	3	2,480	
70-74	-	-	-	-	-	-	3	2	5	3,023	
75-79	-	-	-	-	-	-	-	-	-	-	
80-84	-	-	-	-	-	-	1	-	1	398	
85-89	-	-	-	-	-	-	-	-	-	-	
90-94	-	-	-	-	-	-	-	-	-	-	
95-99	-	-	-	-	-	-	-	-	-	-	
100 & Over	-	-	-	-	-	-	-	-	-	-	
Total Count	-	-	-	-	-	-	8	20	28		
Avg Monthly Benefit	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,220	\$ 2,729		\$ 2,584	

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

Terms with Contributions Vested Retirees (1) Actives Terms on Deposit **Disabilities Beneficiaries** Total Total Record Count as of July 1, 2009 4,467 906 248 2,430 250 437 8,738 **New Members** 124 124 Rehired Non-Vested Members 10 (1) 9 Rehired Vested Members 5 (2)(2)Non-Vested Terms - Contributions on Deposit (61)(1) 62 Vested Terms (59)64 (5) Service Retirements (182)(61)243 Retirement Disabilities (2)(1) 3 **New Beneficiaries** 31 31 Deaths (4) (57)(5)(35)(101)Refund of Contributions (70)(8)(36)(114)Other Status Transfers 6 11 17 Data Adjustments (2)24 22 Subtotal of Net Changes from 2009 to 2010 31 207 (239)(4) (2)(4) (11)Total Record Count as of July 1, 2010 279 433 8,727 4,228 902 2,637 248

<sup>(1)</sup> Retiree count includes duplicate records for members being both Service Retirement and Continuance benefits as well as members being paid benefits from multiple plans.



# **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, 2010 Actuarial Valuation

## **Member Contribution Rates**

		General		AP	CD	Safety			
Entry Age	5A	5B	5C	1	2	4A & 6A	4B	4C & 6B	
16	2.60%	5.19%	2.50%	3.07%	6.15%	4.83%	9.66%	4.63%	
17	2.60%	5.19%	2.50%	3.07%	6.15%	4.83%	9.66%	4.63%	
18	2.60%	5.19%	2.50%	3.07%	6.15%	4.83%	9.66%	4.63%	
19	2.60%	5.19%	2.50%	3.07%	6.15%	4.83%	9.66%	4.63%	
20	2.60%	5.19%	2.50%	3.07%	6.15%	4.83%	9.66%	4.63%	
21	2.66%	5.31%	2.55%	3.14%	6.28%	4.93%	9.86%	4.73%	
22	2.72%	5.43%	2.61%	3.21%	6.42%	5.03%	10.06%	4.83%	
23	2.78%	5.55%	2.67%	3.28%	6.56%	5.13%	10.26%	4.92%	
24	2.84%	5.67%	2.73%	3.35%	6.71%	5.24%	10.48%	5.03%	
25	2.90%	5.80%	2.79%	3.43%	6.86%	5.35%	10.69%	5.13%	
26	2.97%	5.93%	2.85%	3.50%	7.01%	5.45%	10.91%	5.23%	
27	3.03%	6.06%	2.91%	3.58%	7.16%	5.56%	11.13%	5.34%	
28	3.10%	6.19%	2.98%	3.66%	7.31%	5.68%	11.35%	5.44%	
29	3.17%	6.33%	3.04%	3.74%	7.47%	5.79%	11.58%	5.55%	
30	3.24%	6.47%	3.11%	3.81%	7.63%	5.90%	11.80%	5.65%	
31	3.31%	6.61%	3.18%	3.89%	7.79%	6.01%	12.03%	5.76%	
32	3.38%	6.75%	3.25%	3.98%	7.95%	6.13%	12.26%	5.87%	
33	3.45%	6.90%	3.32%	4.06%	8.11%	6.25%	12.49%	5.98%	
34	3.53%	7.05%	3.39%	4.14%	8.28%	6.36%	12.73%	6.09%	
35	3.60%	7.20%	3.46%	4.22%	8.45%	6.48%	12.96%	6.20%	
36	3.68%	7.35%	3.53%	4.31%	8.62%	6.60%	13.20%	6.32%	
37	3.75%	7.50%	3.60%	4.40%	8.79%	6.72%	13.44%	6.43%	
38	3.83%	7.66%	3.68%	4.48%	8.97%	6.84%	13.68%	6.54%	
39	3.91%	7.81%	3.75%	4.57%	9.15%	6.97%	13.93%	6.66%	
40	3.99%	7.97%	3.83%	4.66%	9.32%	7.09%	14.18%	6.78%	
41	4.07%	8.13%	3.90%	4.75%	9.50%	7.22%	14.44%	6.90%	
42	4.15%	8.30%	3.98%	4.84%	9.68%	7.35%	14.70%	7.02%	
43	4.23%	8.46%	4.06%	4.93%	9.86%	7.48%	14.96%	7.14%	
44	4.32%	8.63%	4.14%	5.02%	10.05%	7.62%	15.23%	7.27%	
45	4.40%	8.80%	4.22%	5.12%	10.23%	7.75%	15.51%	7.39%	
46	4.48%	8.96%	4.29%	5.21%	10.43%	7.89%	15.78%	7.51%	
47	4.57%	9.13%	4.37%	5.31%	10.62%	8.03%	16.06%	7.63%	
48	4.65%	9.30%	4.45%	5.40%	10.81%	8.17%	16.34%	7.73%	
49	4.74%	9.48%	4.53%	5.49%	10.98%	8.29%	16.58%	7.81%	
50	4.83%	9.65%	4.62%	5.57%	11.14%	8.40%	16.79%	7.86%	
51	4.92%	9.84%	4.70%	5.63%	11.27%	8.47%	16.94%	7.87%	
52	5.01%	10.02%	4.77%	5.67%	11.35%	8.50%	17.01%	7.87%	
53	5.10%	10.20%	4.85%	5.69%	11.38%	8.50%	17.01%	8.13%	
54	5.18%	10.36%	4.91%	5.69%	11.38%	8.50%	17.01%	8.43%	
55	5.26%	10.51%	4.95%	5.69%	11.38%	8.50%	17.01%	8.43%	
56	5.32%	10.63%	4.98%	5.69%	11.38%	8.50%	17.01%	8.43%	
57	5.36%	10.71%	4.98%	5.69%	11.38%	8.50%	17.01%	8.43%	
58	5.37%	10.73%	5.16%	5.69%	11.38%	8.50%	17.01%	8.43%	
59	5.37%	10.73%	5.35%	5.69%	11.38%	8.50%	17.01%	8.43%	
60	5.37%	10.73%	5.35%	5.69%	11.38%	8.50%	17.01%	8.43%	

Assumptions:

Interest:

2010 Valuation Scale (Service Based) Salary:

Unisex Mortality: General, Safety, and APCD - RP 2000 Projected to 2010 with Scale AA (Male, Setback 4 years)



# Exhibit D-2 **Old Rates** Based on June 30, 2009 Actuarial Valuation

## **Member Contribution Rates**

	General			AP	CD	Safety			
Entry Age	5A	5B	5C	1	2	4A & 6A	4B	4C & 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:

Salary: 2007 Valuation Scale (Service Based)

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



### 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.

