### Contra Costa County Employees' Retirement Association

Actuarial Valuation and Review as of December 31, 2007

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The Segal Company 120 Montgomery Street, Suite 500, San Francisco, CA 94104 T 415.263.8200 F 415.263.8290 www.segalco.com

July 3, 2008

Board of Retirement Contra Costa County Employees' Retirement Association 1335 Willow Way, Suite 221 Concord, CA 94520

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of December 31, 2007. The report summarizes the actuarial data used in the valuation, establishes the funding requirements for the fiscal year beginning July 1, 2009 and analyzes the preceding year's experience.

The census information on which our calculations were based was prepared by the CCCERA and the financial information was provided by the Association's staff. That assistance is gratefully acknowledged. The actuarial calculations were completed under the supervision of John Monroe, ASA, MAAA, Enrolled Actuary.

This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board of Retirement are reasonably related to the experience of and the expectations for the Plan.

We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

THE SEGAL COMPANY

Jul Crylo

By:

Paul Angelo, FSA, EA, MAAA, FCA Senior Vice President and Actuary

John Monoe

John Monroe, EA, ASA, MAAA Vice President and Associate Actuary

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#### PURPOSE AND SCOPE

This report has been prepared by The Segal Company to present a valuation of the Contra Costa County Employees' Retirement Association (CCCERA) as of December 31, 2007. The valuation was performed to determine contribution rates that, in combination with current assets, are sufficient to provide the prescribed benefits. The contribution rate requirements presented in this report are based on:

- > The benefit provisions of the Retirement Association, as administered by the Board;
- The characteristics of covered active members, terminated members, and retired members and beneficiaries as of December 31, 2007, provided by the Association's staff;
- > The assets of the Plan as of December 31, 2007, provided by the Association's staff;
- > Economic assumptions regarding future salary increases and investment earnings; and
- > Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

One of the general goals of an actuarial valuation is to establish contributions that fully fund the system's liabilities, and that, as a percentage of payroll, remain as level as possible for each generation of active members. Annual actuarial valuations measure the progress toward this goal, as well as test the adequacy of the contribution rates.

The actuarial valuation required for the Contra Costa County Employees' Retirement Association has been prepared as of December 31, 2007 by The Segal Company. In preparing this valuation, we have employed generally accepted actuarial methods and assumptions to evaluate the Association's assets, liabilities and future contribution requirements. Our calculations are based upon member data and financial information provided to us by the Association's staff. This information has not been audited by us, but it has been reviewed and found to be reasonably consistent, both internally and with prior years' information.

The contribution requirements are determined as a percentage of payroll. The Association's employer rates provide for both normal cost and a contribution to amortize any unfunded or overfunded actuarial accrued liabilities. The Association's unfunded actuarial accrued liability (UAAL) is being amortized over a decreasing 20-year period starting with the December 31, 2002 valuation. There are 15 years left in the amortization period as of December 31, 2007.

We recommend that the rates calculated in this report be adopted by the Board for the fiscal year that extends from July 1, 2009 through June 30, 2010.

#### SIGNIFICANT ISSUES IN VALUATION YEAR

The following key findings were the result of this actuarial valuation:

- The ratio of the valuation value of assets to actuarial accrued liabilities increased from 84.3% to 89.9%. The Association's UAAL has decreased from \$833 million to \$565 million. This decrease is primarily due to an investment return on actuarial value that exceeded the 7.80% assumed rate. A reconciliation of the Association's UAAL is provided in Section 3, Exhibit I, page 54.
- > The aggregate employer rate calculated in this valuation (before considering the employer subvention of member rates and member subvention of employer rates) has decreased from 28.18% of payroll to 24.71% of payroll. This decrease is primarily due to the investment gain mentioned above. A complete reconciliation of the Association's aggregate employer rate is provided in Section 2, Subsection D, see Chart 15, page 32.
- The aggregate member rate calculated in this valuation (before considering the employer subvention of these rates or member subvention of employer rates) has decreased from 10.68% of payroll to 10.66% of payroll. This decrease is due to the changes in the member population for the December 31, 2007 valuation. A complete reconciliation of the Association's aggregate member rate is provided in Section 2, Subsection D, see Chart 16, page 33.
- The Summary of Key Valuation Results (page iv) and the employer and member rate reconciliations (Charts 15 and 16) do not reflect any employer subvention of member rates or member subvention of employer rates. The Summary of Contribution Rates with Employer Subvention (page v) is an illustration of what the rates would be if all employers (except for Safety Districts) subvented 50% of the member basic rates. The detailed rate tables (Charts 13 and 14) also include the 50% subvention line (except for Safety Districts).

- As detailed on page 5 of this valuation report, the total unrecognized investment gain as of December 31, 2007 is about \$170 million. This investment gain will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, and will serve to offset any investment losses that may occur after December 31, 2007. This means that if the Association earns the assumed rate of investment return of 7.80% per year (net of expenses) on a market value basis, that will result in investment gains on the actuarial value of assets in the next few years.
- Safety Tier C members are included in this valuation for the first time. All County Sheriff's Department Safety members hired on or after January 1, 2007 will be placed into this Tier. This Tier provides benefits under the 3% at 50 formula; however, a 36-month period is used for purposes of determining final average salary and a 2% post-retirement COLA is provided.
- ➤ The Contra Costa County Fire Protection District contributed an extra \$3.0 million towards their UAAL during 2007. Their December 31, 2007 UAAL rates have been adjusted accordingly.

#### Impact of Future Experience on Contribution Rates

Future contribution requirements may differ from those determined in the valuation because of:

- > Differences between actual experience and anticipated experience;
- > Changes in actuarial assumptions or methods;
- > Changes in statutory provisions; and
- > Differences between the contribution rates determined by the valuation and those adopted by the Board.

	Decembe	er 31, 2007	Decembe	er 31, 2006
Employer Contribution Rates (County and District combined) <sup>(1)</sup> :		Estimated		Estimated
	Total Rate	Annual Amount	Total Rate	Annual Amount
General Tier 1 Non-enhanced	28.76%	\$1,677,654	30.91%	\$1,860,427
General Tier 1 Enhanced	24.50%	18,818,703	27.00%	21,510,474
General Tier 3 Enhanced	19.89%	86,783,615	22.86%	95,888,815
Safety Tier A Non-enhanced	34.38%	731,240	41.90%	836,113
Safety Tier A Enhanced	38.51%	57,230,588	43.71%	64,159,358
Safety Tier C Enhanced	34.76%	694,926	39.29%	N/A
All Employers combined	24.71%	\$165,936,726	28.18%	\$184,255,187
Average Member Contribution Rates <sup>(1)</sup> :		Estimated		Estimated
	Total Rate	Annual Amount	Total Rate	Annual Amount
General Tier 1 Non-enhanced	10.88%	\$634,662	10.90%	\$656,055
General Tier 1 Enhanced	9.32%	7,159,614	9.26%	7,377,821
General Tier 3 Enhanced	9.41%	41,048,389	9.45%	39,640,170
Safety Tier A Non-enhanced	12.76%	271,397	12.78%	255,024
Safety Tier A Enhanced	14.95%	22,218,343	14.95%	21,945,408
Safety Tier C Enhanced	11.89%	237,706	11.41%	N/A
All Categories Combined	10.66%	\$71,570,111	10.68%	\$69,874,478
Refundability Factors	Non-enhanced	Enhanced	Non-enhanced	Enhanced
General Tier 1	.9951	.9972	.9952	.9973
General Tier 3	N/A	.9929	N/A	.9938
Safety Tier A	1.0000	.9971	1.0000	.9975
Safety Tier C	N/A	.9800	N/A	.9978
Funded Status:				
Actuarial accrued liability	\$5,581,048,225		\$5,293,977,010	
Valuation value of assets	\$5,016,136,535		\$4,460,871,033	
Funded percentage	89.9%		84.3%	
Unfunded Actuarial Accrued Liability (UAAL)	\$564,911,690		\$833,105,977	
Key Assumptions:				
Interest rate	7.80%		7.80%	
Inflation rate	3.75%		3.75%	

<sup>(1)</sup> Based on projected payroll as of each valuation date shown. These rates do not include any employer subvention of member contributions or any member subvention of employer contributions.

	Decemb	per 31, 2007	December 31, 2006	
Employer Contribution Rates (County and District combined) <sup>(1)</sup> :		Estimated		Estimated
	Total Rate	Annual Amount	Total Rate	Annual Amount
General Tier 1 Non-enhanced	32.38%	\$1,888,819	34.54%	\$2,078,309
General Tier 1 Enhanced	27.41%	21,054,162	29.88%	23,805,088
General Tier 3 Enhanced	23.03%	100,480,952	26.01%	109,102,205
Safety Tier A Non-enhanced	34.38%	731,240	41.90%	836,113
Safety Tier A Enhanced	40.96%	60,873,463	46.20%	67,822,516
Safety Tier C Enhanced	38.89%	777,493	43.33%	N/A
All Employers combined	27.67%	\$185,806,129	31.14%	\$203,644,231
Average Member Contribution Rates <sup>(1)</sup> :		Estimated		Estimated
	Total Rate	Annual Amount	Total Rate	Annual Amount
General Tier 1 Non-enhanced	7.25%	\$422,913	7.26%	\$436,969
General Tier 1 Enhanced	6.41%	4,924,155	6.38%	5,083,207
General Tier 3 Enhanced	6.25%	27,263,808	6.28%	26,342,885
Safety Tier A Non-enhanced	12.76%	271,397	12.78%	255,024
Safety Tier A Enhanced	12.49%	18,562,348	12.45%	18,275,607
Safety Tier C Enhanced	7.68%	153,539	7.37%	N/A
All Categories Combined	7.68%	\$51,598,160	7.71%	\$50,393,692

f C. .... 41. E. n 1 C--L 4.

<sup>(1)</sup> Based on projected payroll as of each valuation date shown. These rates include a 50% employer subvention of members' basic contributions for all employers except Safety Districts. The rates do not include any member subvention of employer contributions. As of December 31, 2007, for most Safety Tier A employers, Safety members contribute up to an extra 9% of compensation (depending on their *MOU*) that reduces the employer's contribution rate.

	December 31, 2007	December 31, 2006	Percentage Change
Active Members:			
Number of members	9,421	9,210	2.3%
Average age	45.6	45.7	N/A
Average service	10.2	10.4	N/A
Projected total compensation	\$671,617,932	\$653,953,163	2.79
Average projected compensation	\$71,289	\$71,005	0.49
Retired Member and Beneficiaries:			
Number of members:			
Service retired	4,873	4,615	5.69
Disability retired	923	913	1.19
Beneficiaries	1,115	1,118	-0.39
Total	6,911	6,646	4.09
Average age	69.0	69.0	N/2
Average Monthly Benefit	\$2,943	\$2,815	4.59
Vested Terminated Members:			
Number of terminated vested members <sup>(1)</sup>	2,008	1,919	4.69
Average age	45.4	45.4	N/A
Summary of Financial Data:			
Market value of assets	\$5,199,116,582	\$4,871,009,631	6.79
Return on market value of assets	6.03%	14.23%	N/.
Actuarial value of assets	\$5,029,275,788	\$4,473,657,139	12.49
Return on actuarial value of assets	11.63%	8.63%	N/.
Valuation value of assets	\$5,016,136,535	\$4,460,871,033	12.49
Return on valuation value of assets	11.64%	8.64%	N/

<sup>(1)</sup> Includes nonvested terminated members.

#### A. MEMBER DATA

The Actuarial Valuation and Review considers the number and demographics of covered mbers, including active members, vested terminated members, retired members and beneficiaries. This section presents a summary of significant statistical data on these member groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A, B, C and D.

#### A historical perspective of how the member population has changed over the past eight valuations can be eight in this chart.

#### CHART 1

Member Population: 2000 – 2007

Year Ended December 31	Active Members	Vested Terminated Members <sup>(1)</sup>	Retired Members and Beneficiaries	Ratio of Non-Actives to Actives
2000	8,884	877	5,245	0.69
2001	9,229	955	5,487	0.70
2002	9,611	1,067	5,619	0.70
2003	9,476	1,248	5,936	0.76
2004	9,358	1,517	6,118	0.82
2005	9,205	1,731	6,437	0.89
2006	9,210	1,919	6,646	0.93
2007	9,421	2,008	6,911	0.95

<sup>(1)</sup>Includes nonvested terminated members.

#### **Active Members**

Plan costs are affected by the age, years of service and compensation of active members. In this year's valuation, there are 9,421 active members with an average age of 45.6, average years of service of 10.2 years and average compensation of \$71,289. The 9,210 active members in the prior valuation had an average age of 45.7, average service of 10.4 years and average compensation of \$71,005.

Among the active members, there were none with unknown age or service information.

#### **Inactive Members**

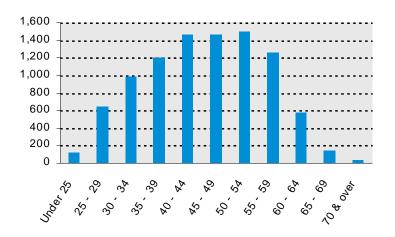
In this year's valuation, there were 2,008 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their employee contributions versus 1,919 in the prior valuation.

## These graphs show a distribution of active

members by age and by years of service.

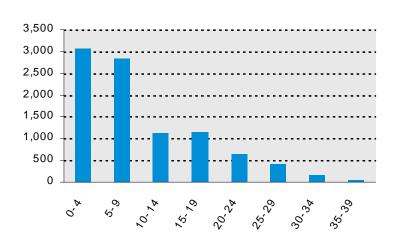
#### CHART 2

Distribution of Active Members by Age as of December 31, 2007



#### CHART 3

Distribution of Active Members by Years of Service as of December 31, 2007



#### **Retired Members and Beneficiaries**

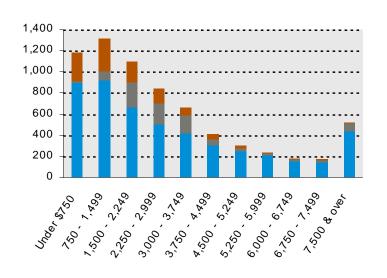
As of December 31, 2007, 5,796 retired members and 1,115 beneficiaries were receiving total monthly benefits of \$20,342,219. For comparison, in the previous valuation, there were 5,528 retired members and 1,118 beneficiaries receiving monthly benefits of \$18,708,820.

These graphs show a distribution of the current retired members and beneficiaries based on their monthly amount and age, by type of pension.



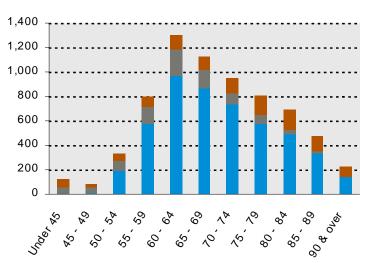
#### CHART 4

Distribution of Retired Members and Beneficiaries by Type and by Monthly Amount as of December 31, 2007



#### CHART 5

Distribution of Retired Members and Beneficiaries by Type and by Age as of December 31, 2007



#### **B. FINANCIAL INFORMATION**

Retirement plan funding anticipates that, over the long term, both contributions and net investment earnings (less investment and administrative fees) will be needed to cover benefit payments.

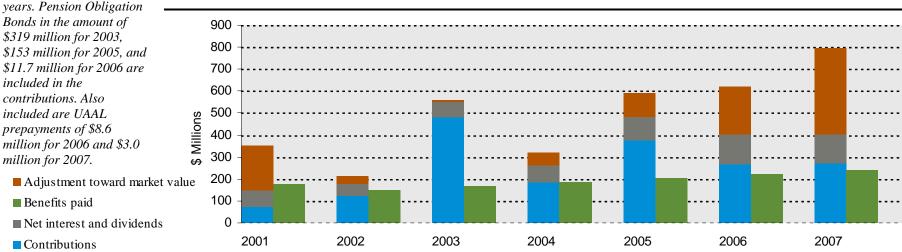
Retirement plan assets change as a result of the net impact of these income and expense components. The adjustment toward market value shown in the chart is the "non-cash" earnings on investment implicitly included in the Actuarial Value of Assets. Additional financial information, including a summary of these transactions for the valuation year, is presented in Section 3, Exhibits E and F.

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board of Retirement has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuation is not recognized in a single year and, as a result, the asset value and the plan costs are more stable.

The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

#### **CHART 6**

Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended December 31, 2001 - 2007



\* SEGAL

The chart depicts the

components of changes in the actuarial value of

assets over the last seven

#### CHART 7

(e) Amount Recognized during 2012

(f)

Subtotal

#### Determination of Actuarial and Valuation Value of Assets for Year Ended December 31, 2007

The chart shows the determination of the actuarial and valuation value of assets as of the valuation date.

Six Mo	nth Period	Total Actual				
		Market	Expected Market	Investment	Deferred	Deferred
From	То	Return (net)	Return (net)	Gain (Loss)	Factor	Return
7/2003	12/2003	\$366,693,598	\$123,112,205	\$243,581,393	0.1	\$24,358,139
1/2004	6/2004	81,082,517	138,259,604	(57,177,087)	0.2	(11,435,417)
7/2004	12/2004	325,616,709	135,588,114	190,028,594	0.3	57,008,578
1/2005	6/2005	95,562,086	148,852,732	(53,290,646)	0.4	(21,316,258)
7/2005	12/2005	228,037,754	156,484,262	71,553,492	0.5	35,776,746
1/2006	6/2006	166,440,802	167,088,121	(647,319)	0.6	(388,392)
7/2006	12/2006	436,850,889	174,623,395	262,227,494	0.7	183,559,246
1/2007	6/2007	260,000,409	192,710,429	67,289,979	0.8	53,831,983
7/2007	12/2007	35,143,730	203,536,876	(168,393,146)	0.9	<u>(151,553,831)</u>
<ol> <li>Marke</li> <li>Actuar</li> <li>Non-v.</li> <li>a. Post</li> <li>b. Stat</li> <li>c. Add</li> <li>d. Unr</li> <li>e. Tota</li> </ol>	aluation Reserv Retirement Do utory Continge itional One Pe estricted Desig d	ets ssets (Item 2 – Item 1) ves and Designations: eath Benefit ency rcent Contingency mation				$ \begin{array}{r} \$169,840,794\\ 5,199,116,582\\ 5,029,275,788\\ 13,139,253\\ 0\\ 0\\ 0\\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$
5. Valuat	ion Value of A	ssets (Item 3 – Item 4e)	)			\$5,016,136,535
(a) Ar (b) Ar (c) Ar	red Return Reco nount Recognize nount Recognize nount Recognize nount Recognize	ed during 2009 ed during 2010	5 years: \$86,676,412 54,750,830 39,250,751 6,002,116			
	- × ·		(16 000 015)			

(16,839,315)

\$169,840,794

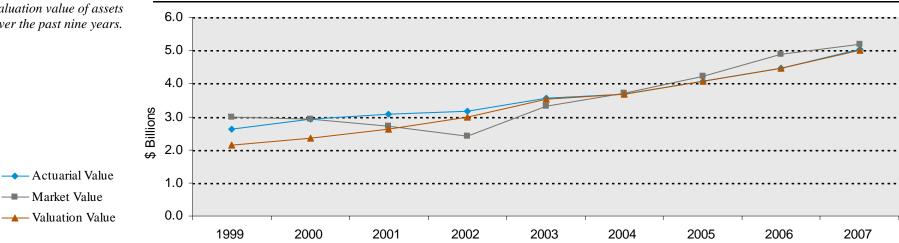
The market value, actuarial value and valuation value of assets are representations of the Plan's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets, but with less volatility. The valuation value of assets is the actuarial value, excluding any nonvaluation reserves. The valuation value of assets is significant because the Plan's liabilities are compared to this measure of its assets to determine what portion, if any, remains unfunded. Amortization of the unfunded liability is an important element in determining the contribution requirement.

#### CHART 8

change in the relative values of market value, actuarial value and valuation value of assets over the past nine years.

This chart shows the

Relative Values of Market Value, Actuarial Value and Valuation Value of Assets for Years Ended December 31, 1999 – 2007



#### C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term

development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total gain is \$244.9 million, \$171.9 million gain from investments and \$73.0 million gain from all other sources. The net experience variation from individual sources other than investments was 1.3% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

#### CHART 9

This chart provides a summary of the actuarial *experience during the past* vear.

#### Actuarial Experience for Year Ended December 31, 2007

1.	Net gain/(loss) from investments*	\$171,935,387
2.	Net gain/(loss) from other experience**	72,992,900
3.	Net experience gain/(loss): $(1) + (2)$	\$244,928,287

\* Details in Chart 10

\*\* See Section 3, Exhibit I. Does not include the effect of plan or assumption changes, if any.

#### **Investment Rate of Return**

CHART 10

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the Plan's investment policy. For valuation purposes, the assumed rate of return on the actuarial value of assets during 2007 was 7.80%. The rate of return on Actuarial Value for the 2007 Plan Year was 11.63%.

Since the actual return for the year was more than the assumed return, the Plan experienced an actuarial gain on the Actuarial and Valuation Value of Assets during the year ended December 31, 2007.

# This chart shows the gain/(loss) due to investment experience.

Investment Experience for Year Ended December 31, 2007 – Valuation Value and Actuarial Value of Assets

	Valuation Value	Actuarial Value
1. Actual return	\$521,211,436	\$522,206,583
2. Average value of assets	4,477,898,066	4,490,363,172
3. Actual rate of return: $(1) \div (2)$	11.64%	11.63%
4. Assumed rate of return	7.80%	7.80%
5. Expected return: $(2) \times (4)$	349,276,049	350,248,327
6. Actuarial gain/(loss): $(1) - (5)$	<u>\$171,935,387</u>	<u>\$171,958,256</u>

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rates of return on an actuarial, valuation and market value basis for the last seven years. Based upon recommendations previously adopted by the Board, we have maintained the assumed rate of return of 7.80%.

#### CHART 11

Investment Return – Market Value, Actuarial Value, and Valuation Value: 2001 – 2007

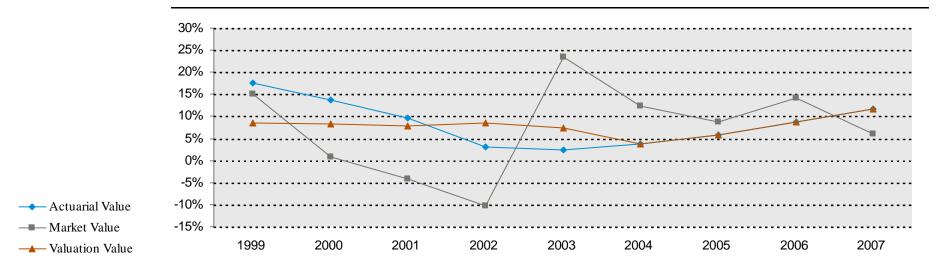
	Market Investmer			Actuarial Value Investment Return		Valuation Value Investment Return	
Year Ended December 31	Amount	Percent of Assets	Amount	Percent of Assets	Amount	Percent of Assets	
2001	\$(121,804,662)	(4.23%)	\$278,746,528	9.73%	\$186,188,249	7.92%	
2002	(274,820,794)	(10.28%)	93,144,770	3.05%	227,080,187	8.53%	
2003	599,528,120	23.44%	83,420,012	2.52%	244,215,190	7.41%	
2004	406,427,237	12.27%	136,674,234	3.85%	135,741,405	3.84%	
2005	331,400,271	8.71%	216,618,073	5.74%	215,737,484	5.74%	
2006	603,899,378	14.23%	353,776,306	8.63%	352,838,472	8.64%	
2007	294,694,885	6.03%	522,206,583	11.63%	521,211,436	11.64%	
Total	\$1,839,324,435		\$1,684,586,506		\$1,883,012,423		
Five-Year Average Re	eturn	11.89%		6.83%		7.67%	

Note: Each year's yield is weighted by the average asset value in that year.

Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.

#### CHART 12

Market, Actuarial and Valuation Value Rates of Return for Years Ended December 31, 1999 - 2007



#### **Other Experience**

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- > the extent of turnover among the participants,
- > retirement experience (earlier or later than expected),
- > mortality (more or fewer deaths than expected),
- > the number of disability retirements, and
- > salary increases different than assumed.

Please see Exhibit I in Section 3 for a detailed reconciliation of changes in the Unfunded Actuarial Accrued Liability.

#### **D. RECOMMENDED CONTRIBUTION**

Employer contributions consist of two components:

Normal Cost	The annual contribution rate that, if paid annually from a member's first year of membership through the year of retirement, would accumulate to the amount necessary to fully fund the member's retirement-related benefits. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution rate is expressed as a level percentage of the member's compensation.
Contribution to the Unfunded	
Actuarial Accrued Liability (UAAL)	That annual contribution rate that, if paid annually over the UAAL amortization period, would accumulate to the amount necessary to fully fund the UAAL. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution (or rate credit in the case of a negative UAAL) is calculated to remain as a level percentage of future active member payroll (including payroll for new members as they enter the Association) assuming a constant number of active members. In order to remain as a level percentage of payroll, amortization payments (credits) are scheduled to increase at the combined annual inflation and "across the board" salary increase rate of 4.25% along with expected payroll. The current UAAL is being recognized over a 15-year declining period effective December 31, 2007.

The recommended employer contributions are provided on Charts 13 and 14.

Member Contributions	Articles 6 and 6.8 of the 1937 Act define the methodology to be used in the calculation of member basic contribution rates for General and Safety members, respectively. The basic contribution rate is determined as that percentage of compensation which if paid annually from a member's first year of membership through the prescribed retirement age would accumulate to the amount necessary to fund a prescribed annuity.
	The annuity is equal to:
	<ul> <li>1/120 of one year Final Average Salary per year of service at age 55 for General Tier 1 and Tier 3 Non-enhanced members</li> </ul>
	<ul> <li>1/100 of one year Final Average Salary per year of service at age 50 for Safety Tier A Non-enhanced members</li> </ul>
	<ul> <li>1/120 of one year Final Average Salary per year of service at age 60 for General Tier 1 and Tier 3 Enhanced members</li> </ul>
	<ul> <li>1/100 of one year Final Average Salary per year of service at age 50 for Safety Tier A Enhanced</li> </ul>
	<ul> <li>1/100 of three year Final Average Salary per year of service at age 50 for Safety Tier C Enhanced members</li> </ul>
	Member contributions are accumulated at an annual interest rate adopted annually by the Board. The County is now paying 50% of the members' basic contributions on a nonrefundable basis. For illustration purposes only, the rates shown in Charts 13 and 14 <u>include</u> the 50% employer subvention of members' basic contributions for all employers (except for Safety Districts). Districts pay varying portions, up to 100%, of the members' basic contributions on a nonrefundable basis. Members also pay 50% of the cost-of-living benefit. For most Safety Tier A employers, Safety members also subvent a portion of the employer rate, currently up to 9% of compensation (depending on their MOU). This is not reflected in Charts 13 and 14. The age specific contribution rates are provided in Appendix A.
	Please note that the terminal pay assumptions are only used in establishing cost-of- living member contributions. They are not used in establishing the basic member contributions.

Cost Sharing Adjustments	CCCERA's member and employer contribution rate structure contains certain cost sharing arrangements consistent with its classification as a "cost sharing multiple employer plan." The rate adjustments that achieve this cost sharing have their roots in historical actuarial valuations. Here is a summary of the adjustments:								
	<ul> <li>Non-enhanced General Tier 1 and Non-enhanced Safety Tier A members share their combined member COLA normal costs in proportion to their basic member contribution rates.</li> </ul>								
	General Tier 1 and Safety Tier A employers share COLA normal cost in the same way that member COLA contributions are shared (i.e., by allocating COLA normal costs in proportion to basic normal costs). These costs are shared equally among member classifications with comparable benefit levels (i.e., enhanced versus non-enhanced).								
	<ul> <li>UAAL costs are shared equally among member classifications with comparable benefit levels (i.e., enhanced versus non-enhanced).</li> </ul>								
	The UAAL created when the non-enhanced Tier 3 was adopted by the County is borne only by the County, and not by the Districts. The outstanding balance of this UAAL as of December 31, 2007 was \$25,246,620 for Basic benefits and \$4,696,980 for COL benefits.								
Other Adjustments	Other adjustments made in the determination of rates are as follows:								
	<ul> <li>CCCERA assets are first applied to fund the liability associated with deferred vested and retired members.</li> </ul>								
	The remainder of the assets are allocated to Non-enhanced and Enhanced General and Safety. The allocation is based on an estimate of the assets each of these cost groups would have using the prior year UAAL contribution rates.								
	There is an adjustment made to the District UAAL rates to reflect that they did not issue Pension Obligation Bonds (POBs) during years when the County did. The outstanding balance of these adjustments as of December 31, 2007 is as follows:								
	General Safety								
	Basic \$23,326,537 \$61,879,617								
	COL \$18,719,953 \$57,379,898								

Adjustments are also made to the Contra Costa County Fire Protection District (CCCFPD) and Moraga-Orinda Fire District (Moraga) UAAL contribution rates to account for POBs and any other special contributions made in 2005, 2006, and 2007. The outstanding balance of these adjustments as of December 31, 2007 is as follows:

	CC	CFPD	Me	oraga
	General	Safety	General	Safety
Basic	\$4,568,584	\$72,339,748	\$443,821	\$15,989,024
COL	\$3,181,969	\$55,169,531	\$257,589	\$11,222,061

			(16 Year Amortization Period	riod as of December 31, 2006)					
		Non-enhanced	1	Enhanced County					
		Districts							
	Normal Cost +	UAAL	= Total	Normal Cost +	UAAL	= Total			
General Tier 1 (Aggregate)									
Basic	12.06%	8.73%	20.79%	12.39%	5.23%	17.62%			
50% Subvention	3.62%	0.00%	3.62%	2.88%	0.00%	2.88%			
Basic + 50% Subvention	15.68%	8.73%	24.41%	15.27%	5.23%	20.50%			
COL	3.71%	6.41%	10.12%	3.78%	3.24%	7.02%			
Total	19.39%	15.14%	34.53%	19.05%	8.47%	27.52%			
General Tier 1 (Under \$350)									
Basic	8.25%	5.97%	14.22%	8.41%	3.55%	11.96%			
50% Subvention	2.48%	0.00%	2.48%	1.95%	0.00%	1.95%			
Basic + 50% Subvention	10.73%	5.97%	16.70%	10.36%	3.55%	13.91%			
COL	2.54%	4.39%	6.93%	2.57%	2.20%	4.77%			
Total	13.27%	10.36%	23.63%	12.93%	5.75%	18.68%			
General Tier 1 (Over \$350)									
Basic	12.38%	8.96%	21.34%	12.61%	5.32%	17.93%			
50% Subvention	3.72%	0.00%	3.72%	2.93%	0.00%	2.93%			
Basic + 50% Subvention	16.10%	8.96%	25.06%	15.54%	5.32%	20.86%			
COL	3.80%	6.58%	10.38%	3.85%	3.30%	7.15%			
Total	19.90%	15.54%	35.44%	19.39%	8.62%	28.01%			

	Enhanced						Enhanced					
	Districts without POB						Districts with POB (CCCFPD)					
	Normal Cost	+	UAAL	=	Total	N	formal Cost	+	UAAL	=	Total	
General Tier 1 (Aggregate)												
Basic	12.39%		9.34%		21.73%		12.39%		0.29%		12.68%	
50% Subvention	2.88%	_	0.00%		2.88%		2.88%		0.00%		2.88%	
Basic + 50% Subvention	15.27%		9.34%		24.61%	_	15.27%		0.29%		15.56%	
COL	3.78%	_	6.82%		10.60%		3.78%		0.69%		4.47%	
Total	19.05%		16.16%		35.21%		19.05%		0.98%		20.03%	
General Tier 1 (Under \$350)												
Basic	8.42%		6.33%		14.75%		8.42%		0.20%		8.62%	
50% Subvention	1.95%	_	0.00%		1.95%		1.95%		0.00%		1.95%	
Basic + 50% Subvention	10.37%		6.33%		16.70%		10.37%		0.20%		10.57%	
COL	2.57%	_	4.63%		7.20%		2.57%		0.47%		3.04%	
Total	12.94%		10.96%		23.90%		12.94%		0.67%		13.61%	
General Tier 1 (Over \$350)												
Basic	12.63%		9.50%		22.13%		12.63%		0.30%		12.93%	
50% Subvention	2.93%		0.00%		2.93%		2.93%		0.00%		2.93%	
Basic + 50% Subvention	15.56%		9.50%		25.06%		15.56%		0.30%		15.86%	
COL	3.85%	_	6.94%		10.79%		3.85%		0.70%		4.55%	
Total	19.41%		16.44%		35.85%		19.41%		1.00%		20.41%	

				(16 Yea	r Amortization Per				
	Enhanced								
	Districts with POB (Moraga)								
	Normal Cost	+	UAAL	=	Total				
General Tier 1 (Aggregate)									
Basic	12.39%		1.24%		13.63%				
50% Subvention	2.88%		0.00%		2.88%				
Basic + 50% Subvention	15.27%		1.24%		16.51%				
COL	3.78%		2.12%		5.90%				
Total	19.05%		3.36%		22.41%				
General Tier 1 (Under \$350)									
Basic	8.42%		0.84%		9.26%				
50% Subvention	1.95%		0.00%		1.95%				
Basic + 50% Subvention	10.37%		0.84%		11.21%				
COL	2.57%		1.44%		4.01%				
Total	12.94%		2.28%		15.22%				
General Tier 1 (Over \$350)									
Basic	12.63%		1.26%		13.89%				
50% Subvention	2.93%		0.00%		2.93%				
Basic + 50% Subvention	15.56%		1.26%		16.82%				
COL	3.85%		2.16%		6.01%				
Total	19.41%		3.42%		22.83%				

	Non-enhanced Districts						Enhanced County				
	Normal Cost	+	UAAL	=	Total		Normal Cost	+	UAAL	=	Total
Safety Tier A											
Basic	14.11%		11.91%		26.02%		21.54%		10.39%		31.93%
0%/50% Subvention	0.00%		0.00%		0.00%		4.25%		0.00%		4.25%
Basic + 0%/50% Subvention	14.11%		11.91%		26.02%		25.79%	_	10.39%		36.18%
COL	4.34%		11.54%		15.88%		6.57%		7.28%		13.85%
Total	18.45%		23.45%		41.90%		32.36%		17.67%		50.03%

	Enhanced Districts without POB						Enhanced Districts with POB (CCCFPD)				
	Normal Cost	+	UAAL	=	Total		Normal Cost	+	UAAL	=	Total
Safety Tier A											
Basic	21.54%		18.63%		40.17%		21.54%		0.52%		22.06%
0% Subvention	0.00%		0.00%		0.00%		0.00%		0.00%		0.00%
Basic + 0% Subvention	21.54%		18.63%		40.17%		21.54%		0.52%		22.06%
COL	6.57%		14.91%		21.48%		6.57%		1.49%		8.06%
Total	28.11%		33.54%		61.65%		28.11%		2.01%		30.12%

	Enhanced								
	Districts with POB (Moraga)								
	Normal Cost	+	UAAL =	Total					
Safety Tier A									
Basic	21.54%		-0.55%	20.99%					
0% Subvention	0.00%		0.00%	0.00%					
Basic + 0% Subvention	21.54%		-0.55%	20.99%					
COL	6.57%		1.45%	8.02%					
Total	28.11%		0.90%	29.01%					

			(16 Year Amortization Peri	riod as of December 31, 2006)					
		Enhanced		Enhanced					
		County		Districts without POB					
	Normal Cost	+ UAAL	= Total	Normal Cost +	UAAL =	= Total			
General Tier 3 (Aggregate)									
Basic	11.11%	5.27%	16.38%	11.11%	9.81%	20.92%			
50% Subvention	3.15%	0.00%	3.15%	3.15%	0.00%	3.15%			
Basic + 50% Subvention	14.26%	5.27%	19.53%	14.26%	9.81%	24.07%			
COL	3.17%	3.25%	6.42%	3.17%	6.91%	10.08%			
Total	17.43%	8.52%	25.95%	17.43%	16.72%	34.15%			
General Tier 3 (Under \$350)									
Basic	7.57%	3.59%	11.16%	7.57%	6.68%	14.25%			
50% Subvention	2.15%	0.00%	2.15%	2.15%	0.00%	2.15%			
Basic + 50% Subvention	9.72%	3.59%	13.31%	9.72%	6.68%	16.40%			
COL	2.16%	2.22%	4.38%	2.16%	4.70%	6.86%			
Total	11.88%	5.81%	17.69%	11.88%	11.38%	23.26%			
General Tier 3 (Over \$350)									
Basic	11.36%	5.39%	16.75%	11.36%	10.02%	21.38%			
50% Subvention	3.22%	0.00%	3.22%	3.22%	0.00%	3.22%			
Basic + 50% Subvention	14.58%	5.39%	19.97%	14.58%	10.02%	24.60%			
COL	3.24%	3.32%	6.56%	3.24%	7.05%	10.29%			
Total	17.82%	8.71%	26.53%	17.82%	17.07%	34.89%			

		Enhanced								
	County									
	Normal Cost +	UAAL	=	Total						
Safety Tier C										
Basic	18.19%	10.39%		28.58%						
50% Subvention	4.04%	0.00%		4.04%						
Basic + 50% Subvention	22.23%	10.39%		32.62%						
COL	3.43%	7.28%		10.71%						
Total	25.66%	17.67%		43.33%						

#### Grand Total (Includes Both Enhanced and Non-enhanced – County and District)

	Normal Cost	+	UAAL	=	Total
Basic	13.63%		6.28%		19.91%
50% Subvention*	2.96%		0.00%	_	2.96%
Basic + 50% Subvention*	16.59%		6.28%		22.87%
COL	4.02%		4.25%	_	8.27%
Total	20.61%		10.53%		31.14%

Payroll	Tier 1		Tier 3		Safety Tier A		Safety Tier C	Total
	Non-		Non-					
	Enhanced	Enhanced	Enhanced	Enhanced	Non-Enhanced	Enhanced	Enhanced	
County	-	\$46,267,917	-	\$416,435,621	-	\$86,191,956	-	\$548,895,494
Districts without POB	\$6,018,851	28,788,128	-	3,037,073	\$1,995,496	20,694,737	-	60,534,285
Districts with POB (CCCFPD)	-	4,161,642	-	-	-	32,958,206	-	37,119,848
Districts with POB (Moraga)		456,408				6,947,128		7,403,536
Total	\$6,018,851	\$79,674,095	-	\$419,472,694	\$1,995,496	\$146,792,027	-	\$653,953,163

\* These rates include the 50% employer subvention of members' basic contributions (except for Safety District rates).

#### CHART 14

#### Components of Recommended Employer Contribution Rates Employer Rates Under Recommended Assumptions for July 1, 2009 through June 30, 2010

	(15 Year Amortization Period as of December 31, 2007)									
		Non-enhanced		Enhanced						
		Districts		County						
	Normal Cost +	UAAL	=	Total	Normal Cost +	UAAL	=	Total		
General Tier 1 (Aggregate)										
Basic	11.96%	7.28%		19.24%	12.33%	3.40%		15.73%		
50% Subvention	3.62%	0.00%		3.62%	2.91%	0.00%		2.91%		
Basic + 50% Subvention	15.58%	7.28%		22.86%	15.24%	3.40%		18.64%		
COL	3.70%	5.82%		9.52%	3.78%	2.39%		6.17%		
Total	19.28%	13.10%		32.38%	19.02%	5.79%		24.81%		
General Tier 1 (Under \$350)										
Basic	8.19%	4.99%		13.18%	8.36%	2.31%		10.67%		
50% Subvention	2.48%	0.00%		2.48%	1.97%	0.00%		1.97%		
Basic + 50% Subvention	10.67%	4.99%		15.66%	10.33%	2.31%		12.64%		
COL	2.53%	3.98%		6.51%	2.57%	1.62%		4.19%		
Total	13.20%	8.97%		22.17%	12.90%	3.93%		16.83%		
General Tier 1 (Over \$350)										
Basic	12.28%	7.48%		19.76%	12.54%	3.46%		16.00%		
50% Subvention	3.72%	0.00%		3.72%	2.96%	0.00%		2.96%		
Basic + 50% Subvention	16.00%	7.48%		23.48%	15.50%	3.46%		18.96%		
COL	3.80%	5.97%		9.77%	3.85%	2.43%		6.28%		
Total	19.80%	13.45%		33.25%	19.35%	5.89%		25.24%		

7.80% Interest, 4.25% Wage Inflation, Plus Merit Salary Increase Assumptions

#### CHART 14 (continued) Components of Recommended Employer Contribution Rates Employer Rates Under Recommended Assumptions for July 1, 2009 through June 30, 2010

(15 Year Amortization Period as of December 31, 2007)										
	Enhan	ced		Enhanced Districts with POB (CCCFPD)						
	Districts with	nout POB								
Normal Cost	+ UAA	L =	Total	Normal Cost	+ UAAL	=	Total			
12.33%	7.659	6	19.98%	12.33%	-1.66%		10.67%			
2.91%	0.009	6	2.91%	2.91%	0.00%		2.91%			
15.24%	7.659	6	22.89%	15.24%	-1.66%		13.58%			
3.78%	6.089	6	9.86%	3.78%	-0.40%		3.38%			
19.02%	13.73	%	32.75%	19.02%	-2.06%		16.96%			
8.37%	5.199	6	13.56%	8.37%	-1.13%		7.24%			
1.98%	0.009	6	1.98%	1.98%	0.00%		1.98%			
10.35%	5.199	6	15.54%	10.35%	-1.13%		9.22%			
2.56%	4.129	6	6.68%	2.56%	-0.27%		2.29%			
12.91%	9.319	6	22.22%	12.91%	-1.40%		11.51%			
12.56%	7.789	6	20.34%	12.56%	-1.69%		10.87%			
2.96%	0.009	6	2.96%	2.96%	0.00%		2.96%			
15.52%	7.789	6	23.30%	15.52%	-1.69%		13.83%			
3.85%	6.189	6	10.03%	3.85%	-0.41%		3.44%			
19.37%	13.96	%	33.33%	19.37%	-2.10%		17.27%			
	12.33% 2.91% 15.24% 3.78% 19.02% 8.37% 1.98% 10.35% 2.56% 12.91% 12.56% 2.96% 15.52% 3.85%	Districts with           Normal Cost         +         UAA           12.33%         7.659           2.91%         0.009           15.24%         7.659           3.78%         6.089           19.02%         13.73*           8.37%         5.199           1.98%         0.009           10.35%         5.199           2.56%         4.129           12.91%         9.319           12.56%         7.789           2.96%         0.009           15.52%         7.789           3.85%         6.189	EnhancedDistricts without POBNormal Cost+UAAL= $12.33\%$ 7.65% $2.91\%$ $0.00\%$ $15.24\%$ 7.65% $3.78\%$ $6.08\%$ $19.02\%$ $13.73\%$ $8.37\%$ $5.19\%$ $10.35\%$ $5.19\%$ $2.56\%$ $4.12\%$ $12.91\%$ $9.31\%$ $12.56\%$ $7.78\%$ $2.96\%$ $0.00\%$ $15.52\%$ $7.78\%$ $3.85\%$ $6.18\%$	EnhancedDistricts without POBNormal Cost+UAAL=Total $12.33\%$ 7.65%19.98% $2.91\%$ 0.00%2.91% $15.24\%$ 7.65%22.89% $3.78\%$ 6.08%9.86% $19.02\%$ 13.73%32.75% $8.37\%$ 5.19%13.56% $1.98\%$ 0.00%1.98% $10.35\%$ 5.19%15.54% $2.56\%$ 4.12%6.68% $12.91\%$ 9.31%22.22% $12.56\%$ 7.78%20.34% $2.96\%$ 0.00%2.96% $15.52\%$ 7.78%23.30% $3.85\%$ 6.18%10.03%	EnhancedDistricts without POBDistricts without POBNormal Cost+UAAL=TotalNormal Cost $12.33\%$ 7.65%19.98%12.33% $2.91\%$ 0.00%2.91%2.91% $15.24\%$ 7.65%22.89%15.24% $3.78\%$ 6.08%9.86%3.78% $19.02\%$ 13.73%32.75%19.02% $8.37\%$ 5.19%13.56%8.37% $19.02\%$ 5.19%15.54%10.35% $2.56\%$ 4.12%6.68%2.56% $12.91\%$ 9.31%22.22%12.91% $12.56\%$ 7.78%20.34%12.56% $2.96\%$ 0.00%2.96%2.96% $15.52\%$ 7.78%23.30%15.52% $3.85\%$ 6.18%10.03%3.85%	EnhancedEnhancedDistricts without POBDistricts with POB (CNormal Cost+UAAL=TotalNormal Cost+UAAL12.33%7.65%19.98%12.33%-1.66%2.91%0.00%2.91%2.91%0.00%15.24%7.65%22.89%15.24%-1.66%3.78%6.08%9.86%3.78%-0.40%19.02%13.73%32.75%19.02%-2.06%8.37%5.19%13.56%8.37%-1.13%1.98%0.00%1.98%1.98%0.00%10.35%5.19%15.54%10.35%-1.13%2.56%4.12%6.68%2.56%-0.27%12.91%9.31%22.22%12.91%-1.40%12.56%7.78%20.34%12.56%-1.69%2.96%0.00%2.96%2.96%0.00%15.52%7.78%23.30%15.52%-1.69%3.85%6.18%10.03%3.85%-0.41%	Enhanced         Enhanced           Districts without POB         Districts with POB (CCCFPD)           Normal Cost         +         UAAL         =         Total         Normal Cost         +         UAAL         =           12.33%         7.65%         19.98%         12.33%         -1.66%           2.91%         0.00%         2.91%         0.00%         -           15.24%         7.65%         22.89%         15.24%         -1.66%           3.78%         6.08%         9.86%         3.78%         -0.40%           19.02%         13.73%         32.75%         19.02%         -2.06%           8.37%         5.19%         13.56%         8.37%         -1.13%           10.35%         5.19%         15.54%         10.35%         -1.13%           2.56%         4.12%         6.68%         2.56%         -0.27%           12.91%         9.31%         22.22%         12.91%         -1.40%           12.56%         7.78%         20.34%         12.56%         -1.69%           2.96%         0.00%         2.96%         0.00%         -1.69%           15.52%         7.78%         23.30%         15.52%         -1.69%			

#### CHART 14 (continued) Components of Recommended Employer Contribution Rates Employer Rates Under Recommended Assumptions for July 1, 2009 through June 30, 2010

				(15 Yea	r Amortization Pe	riod			
			Enhanced			_			
	Districts with POB (Moraga)								
	Normal Cost	+	UAAL	=	Total	_			
General Tier 1 (Aggregate)									
Basic	12.33%		-1.02%		11.31%				
50% Subvention	2.91%		0.00%		2.91%				
Basic + 50% Subvention	15.24%		-1.02%		14.22%	-			
COL	3.78%		1.05%		4.83%				
Total	19.02%		0.03%		19.05%	-			
General Tier 1 (Under \$350)									
Basic	8.37%		-0.69%		7.68%				
50% Subvention	1.98%		0.00%		1.98%	_			
Basic + 50% Subvention	10.35%		-0.69%		9.66%				
COL	2.56%		0.71%		3.27%	_			
Total	12.91%		0.02%		12.93%				
General Tier 1 (Over \$350)									
Basic	12.56%		-1.04%		11.52%				
50% Subvention	2.96%		0.00%		2.96%				
Basic + 50% Subvention	15.52%		-1.04%		14.48%				
COL	3.85%	_	1.07%		4.92%				
Total	19.37%		0.03%		19.40%				
Basic 50% Subvention Basic + 50% Subvention COL	2.96% 15.52% 3.85%		0.00% -1.04% 1.07%		2.96% 14.48% 4.92%	-			

#### CHART 14 (continued) Components of Recommended Employer Contribution Employer Rates Under Recommended Assumptions for July 1, 2009 through June 30, 2010

	Non-enhanced Districts						Enhanced County					
	Normal Cost	+	UAAL	=	Total	Normal Cost	+	UAAL	=	Total		
Safety Tier A												
Basic	13.91%		7.02%		20.93%	21.46%		7.09%		28.55%		
0%/50% Subvention	0.00%	_	0.00%		0.00%	4.25%		0.00%		4.25%		
Basic + 0%/50% Subvention	13.91%		7.02%		20.93%	25.71%		7.09%		32.80%		
COL	4.30%	_	9.15%		13.45%	6.58%		5.68%		12.26%		
Total	18.21%		16.17%		34.38%	32.29%		12.77%		45.06%		

#### CHART 14 (continued) Components of Recommended Employer Contribution Employer Rates Under Recommended Assumptions for July 1, 2009 through June 30, 2010

7.80% Interest, 4.25% Wage Inflation, Plus Merit Salary Increase Assumptions (15 Year Amortization Period as of December 31, 2007)

			Enhanced				Enhanced				
		Districts without POB				I	Districts with POB (CCCFPD)				
	Normal Cost	+	UAAL	=	Total	Normal Cost	+	UAAL	=	Total	
Safety Tier A											
Basic	21.46%		15.36%		36.82%	21.46%		-3.00%		18.46%	
0% Subvention	0.00%		0.00%		0.00%	0.00%		0.00%		0.00%	
Basic + 0% Subvention	21.46%		15.36%		36.82%	21.46%		-3.00%		18.46%	
COL	6.58%		13.34%		19.92%	6.58%		-0.66%		5.92%	
Total	28.04%		28.70%		56.74%	28.04%		-3.66%		24.38%	

		Enhanced	
	Dist	tricts with POB (Morag	a)
	Normal Cost +	UAAL =	Total
Safety Tier A			
Basic	21.46%	-3.28%	18.18%
0% Subvention	0.00%	0.00%	0.00%
Basic + 0% Subvention	21.46%	-3.28%	18.18%
COL	6.58%	0.26%	6.84%
Total	28.04%	-3.02%	25.02%

#### CHART 14 (continued) Components of Recommended Employer Contribution Employer Rates Under Recommended Assumptions for July 1, 2009 through June 30, 2010

			(15 Year Amortization Per	riod as of December 31, 200	)7)	
		Enhanced			Enhanced	
		County		D	Districts without PO	В
	Normal Cost	+ UAAL	= Total	Normal Cost +	UAAL	= Total
General Tier 3 (Aggregate)						
Basic	10.86%	3.44%	14.30%	10.86%	8.11%	18.97%
50% Subvention	3.14%	0.00%	3.14%	3.14%	0.00%	3.14%
Basic + 50% Subvention	14.00%	3.44%	17.44%	14.00%	8.11%	22.11%
COL	3.14%	2.40%	5.54%	3.14%	6.17%	9.31%
Total	17.14%	5.84%	22.98%	17.14%	14.28%	31.42%
General Tier 3 (Under \$350)						
Basic	7.40%	2.35%	9.75%	7.40%	5.53%	12.93%
50% Subvention	2.14%	0.00%	2.14%	2.14%	0.00%	2.14%
Basic + 50% Subvention	9.54%	2.35%	11.89%	9.54%	5.53%	15.07%
COL	2.14%	1.63%	3.77%	2.14%	4.21%	6.35%
Total	11.68%	3.98%	15.66%	11.68%	9.74%	21.42%
General Tier 3 (Over \$350)						
Basic	11.10%	3.52%	14.62%	11.10%	8.30%	19.40%
50% Subvention	3.21%	0.00%	3.21%	3.21%	0.00%	3.21%
Basic + 50% Subvention	14.31%	3.52%	17.83%	14.31%	8.30%	22.61%
COL	3.21%	2.45%	5.66%	3.21%	6.31%	9.52%
Total	17.52%	5.97%	23.49%	17.52%	14.61%	32.13%

7.80% Interest, 4.25% Wage Inflation, Plus Merit Salary Increase Assumptions (15 Year Amortization Period as of December 31, 2007)

#### CHART 14 (continued) Components of Recommended Employer Contribution Employer Rates Under Recommended Assumptions for July 1, 2009 through June 30, 2010

7.80% Interest, 4.25% Wage Inflation, Plus Merit Salary Increase Assumptions (15 Year Amortization Period as of December 31, 2007)

		Enhanced		
		County		
	Normal Cost +	UAAL	= '	Total
Safety Tier C				
Basic	18.45%	7.09%	2	5.54%
50% Subvention	4.13%	0.00%	4	.13%
Basic + 50% Subvention	22.58%	7.09%	2	9.67%
COL	3.54%	5.68%	9	.22%
Total	26.12%	12.77%	3	8.89%

#### CHART 14 (continued) Components of Recommended Employer Contribution Rates Employer Rates Under Recommended Assumptions for July 1, 2009 through June 30, 2010

	_	Normal Cost	+ UAAL =	Total			
Basic		13.42%	4.10%	17.52%			
50% Subvent	ion*	2.96%	0.00%	2.96%			
Basic + 50%	Subvention*	16.38%	4.10%	20.48%			
COL		3.98%	3.21%	7.19%			
Total		20.36%	7.31%	27.67%			
Payroll	Tie	er 1	Tier 3	Safety	v Tier A	Safety Tier C	Total
	Non-Enhanced	Enhanced	Enhanced	Non-Enhanced	Enhanced	Enhanced	
County	-	\$42,445,656	\$433,408,322	-	\$85,714,700	\$1,999,212	\$563,567,890
Districts without POB	\$5,833,289	29,665,797	2,812,602	\$2,126,935	21,220,598	-	61,659,221
Districts with POB (CCCFPD)	-	4,263,675	-	-	34,231,408	-	38,495,083
Districts with POB (Moraga)		444,766		-	7,450,972		7,895,738
Total	\$5,833,289	\$76,819,894	\$436,220,924	\$2,126,935	\$148,617,678	\$1,999,212	\$671,617,932

#### Grand Total (Includes Both Enhanced and Non-enhanced – County and District)

\* These rates include the 50% employer subvention of members' basic contributions (except for Safety District rates).

The employer contribution rates as of December 31, 2007 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

#### **Reconciliation of Recommended Employer Contribution Rate**

The chart below details the changes in the recommended employer contribution rate from the prior valuation to the current year's valuation.

#### CHART 15

# Reconciliation of Recommended Average Employer Contribution from December 31, 2006 to December 31, 2007 Valuation

	Contribution Rate*	Estimated Annual Dollar Cost**
Recommended Average Employer Contribution Rate in December 31, 2006 Valuation	28.18%	\$184,255,187
Effect of investment (gain)/loss <sup>(1)</sup>	(2.22%)	(14,909,918)
Effect of difference in actual versus expected contributions due to delay in implementation of contribution rates calculated in 12/31/2006 valuation	(0.17%)	(1,141,750)
Effect of actual versus expected salary increase including total payroll growth <sup>(2)</sup>	(0.47%)	(3,156,604)
Effect of extra UAAL contributions deposited by District <sup>(3)</sup>	(0.04%)	(268,647)
Effect of net other changes <sup>(4)</sup>	<u>(0.57%)</u>	1,158,458
Total change	<u>(3.47%)</u>	<u>(\$18,318,461)</u>
Recommended Average Employer Contribution Rate in December 31, 2007 Valuation	24.71%	\$165,936,726

\* These rates do not include any employer subvention of member contributions, or member subvention of employer contributions.

\*\* Based on projected payroll for each valuation date shown.

<sup>(1)</sup> Return on valuation of assets of 11.64% was greater than the 7.80% assumed in the valuation.

(2) This item represents the net impact of lower than expected individual salary increases and total payroll growth. Lower individual salary increases decrease cost while lower total payroll growth increases the UAAL contribution rate, since the remaining UAAL is amortized over a smaller payroll.

<sup>(3)</sup> This item represents the impact of the extra UAAL contributions deposited by one district during 2007.

<sup>(4)</sup> Other differences in actual versus expected experience. Estimated annual dollar cost also reflects change in payroll from prior valuation.

The member contribution rates as of December 31, 2007 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

#### **Reconciliation of Recommended Member Contribution** Rate

The chart below details the changes in the recommended member contribution rate from the prior valuation to the current year's valuation.

# CHART 16

The chart reconciles the member contribution from the prior valuation to the amount determined in this valuation.

# Reconciliation of Recommended Average Member Contribution from December 31, 2006 to December 31, 2007 Valuation

	Contribution Rate*	Estimated Annual Dollar Cost**
Recommended Average Member Contribution Rate in December 31, 2006 Valuation	10.68%	\$69,874,478
Effect of other experience (gains)/losses <sup>(1)</sup>	<u>(0.02%)</u>	<u>1,695,633</u>
Total change	<u>(0.02%)</u>	<u>\$1,695,633</u>
Recommended Average Member Contribution Rate in December 31, 2007 Valuation	10.66%	\$71,570,111

These rates do not include any employer subvention of member contributions, or member subvention of employer contributions. \*

Based on projected payroll for each valuation date shown. \*\*

(1)Other differences in actual versus expected experience. Estimated annual dollar cost also reflects change in payroll from prior valuation.

#### E. INFORMATION REQUIRED BY GASB

Government Accounting Standards Board (GASB) reporting information provides standardized information for comparative purposes of governmental pension plans. This information allows a reader of the financial statements to compare the funding status of one governmental plan to another on relatively equal terms.

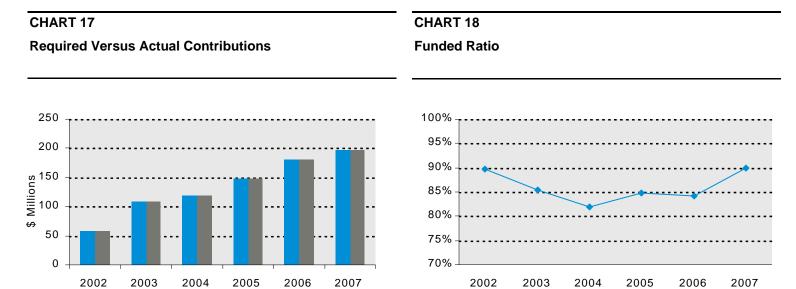
Critical information to GASB is the historical comparison of the GASB required contributions to the actual contributions. This comparison demonstrates whether a plan is being funded on an actuarially sound basis and in accordance with the GASB funding requirements. Chart 17 below presents a graphical representation of this information for the Plan

Required Actual

The other critical piece of information regarding the Plan's financial status is the funded ratio. This ratio compares the valuation value of assets of the plan to the liabilities of the plan as calculated under GASB. High ratios indicate a well-funded plan with assets sufficient to pay most benefits. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other changes.

The details regarding the calculations of these values and other GASB numbers may be found in Section 4, Exhibits I, II, and III.

VVA Basis



# GASB factors. Requ

These graphs show key

#### EXHIBIT A

Table of Plan Coverage

i. General Tier 1

	Year Ended		
Number Average age Average service Projected total compensation <sup>(1)</sup> Projected average compensation Account balances Total active vested members ested terminated members <sup>(2)</sup>	2007	2006	Change From Prior Year
Active members in valuation			
Number	1,040	1,108	-6.1%
Average age	49.9	49.5	N/A
	17.6	17.5	N/A
Projected total compensation <sup>(1)</sup>	\$82,653,183	\$85,692,946	-3.5%
Projected average compensation	\$79,474	\$77,340	2.8%
Account balances	\$75,259,255	\$73,614,848	2.2%
Total active vested members	898	936	-4.1%
Vested terminated members <sup>(2)</sup>	305	318	-4.1%
Retired members			
Number in pay status	2,698	2,714	-0.6%
Average age	73.3	73.3	N/A
Average monthly benefit <sup>(3)</sup>	\$2,908	\$2,780	4.6%
Disabled members			
Number in pay status	357	364	-1.9%
Average age	66.7	65.9	N/A
Average monthly benefit <sup>(3)</sup>	\$2,241	\$2,202	1.8%
Beneficiaries			
Number in pay status	726	734	-1.1%
Average age	74.7	74.4	N/A
Average monthly benefit <sup>(3)</sup>	\$1,645	\$1,569	4.8%

<sup>(1)</sup> Calculated by increasing actual calendar year salaries by the assumed salary scale.

<sup>(2)</sup> Includes nonvested terminated members.

<sup>(3)</sup> Includes adjustment to reflect COLA that is paid for a partial year starting with the April 1 following the valuation date.

**EXHIBIT A (continued)** 

Table of Plan Coverage

ii. General Tier 2

	Year Ended D		
Category	2007	2006	Change From Prior Year
Active members in valuation			
Number <sup>(3)</sup>	0	0	N/A
Average age	N/A	N/A	N/A
Average service	N/A	N/A	N/A
Projected total compensation <sup>(1)</sup>	N/A	N/A	N/A
Projected average compensation	N/A	N/A	N/A
Account balances	N/A	N/A	N/A
Total active vested members	N/A	N/A	N/A
Vested terminated members <sup>(2)</sup>	332	361	-8.0%
Retired members			
Number in pay status	435	418	4.1%
Average age	69.5	69.0	N/A
Average monthly benefit <sup>(4)</sup>	\$800	\$752	6.4%
Disabled members			
Number in pay status	61	66	-7.6%
Average age	64.6	64.0	N/A
Average monthly benefit <sup>(4)</sup>	\$1,796	\$1,764	1.8%
Beneficiaries			
Number in pay status	77	77	0.0%
Average age	58.9	57.9	N/A
Average monthly benefit <sup>(4)</sup>	\$846	\$795	6.4%

<sup>(1)</sup> Calculated by increasing actual calendar year salaries by the assumed salary scale.

<sup>(2)</sup> Includes nonvested terminated members.

<sup>(3)</sup> As of the December 31, 2005 valuation, there are no longer any Tier 2 Active Members since they have all transferred to Tier 3.

<sup>(4)</sup> Includes adjustment to reflect COLA that is paid for a partial year starting with the April 1 following the valuation date.

EXHIBIT A (continued)

Table of Plan Coverage

iii. General Tier 3

	Year Ended		
Category	2007	2006	Change From Prior Year
Active members in valuation			
Number	6,766	6,494	4.2%
Average age	46.1	46.2	N/A
Average service	8.8	8.9	N/A
Projected total compensation <sup>(1)</sup>	\$436,220,924	\$419,472,694	4.0%
Projected average compensation	\$64,472	\$64,594	-0.2%
Account balances	\$215,184,080	\$182,539,348	17.9%
Total active vested members	4,373	4,231	3.4%
Vested terminated members <sup>(2)</sup>	1,074	988	8.7%
Retired members			
Number in pay status	872	680	28.2%
Average age	63.5	63.3	N/A
Average monthly benefit <sup>(3)</sup>	\$1,884	\$1,708	10.3%
Disabled members			
Number in pay status	59	56	5.4%
Average age	58.9	58.4	N/A
Average monthly benefit <sup>(3)</sup>	\$1,992	\$2,024	-1.6%
Beneficiaries			
Number in pay status	50	41	22.0%
Average age	50.5	49.6	N/A
Average monthly benefit <sup>(3)</sup>	\$1,247	\$935	33.4%

<sup>(1)</sup> Calculated by increasing actual calendar year salaries by the assumed salary scale.

<sup>(2)</sup> Includes nonvested terminated members.

<sup>(3)</sup> Includes adjustment to reflect COLA that is paid for a partial year starting with the April 1 following the valuation date.

# EXHIBIT A (continued)

Table of Plan Coverage

iv. Safety

	Year Ended		
Category	2007	2006	Change From Prior Year
Active members in valuation			
Number	1,615	1,608	0.4%
Average age	40.6	40.9	N/A
Average service	11.4	11.8	N/A
Projected total compensation <sup>(1)</sup>	\$152,743,825	\$148,787,523	2.7%
Projected average compensation	\$94,578	\$92,530	2.2%
Account balances	\$155,840,378	\$143,709,516	8.4%
Total active vested members	1,219	1,202	1.4%
Vested terminated members <sup>(2)</sup>	297	252	17.9%
Retired members			
Number in pay status	868	803	8.1%
Average age	65.2	64.8	N/A
Average monthly benefit <sup>(3)</sup>	\$6,236	\$6,062	2.9%
Disabled members			
Number in pay status	446	427	4.4%
Average age	59.5	59.0	N/A
Average monthly benefit <sup>(3)</sup>	\$4,554	\$4,316	5.5%
Beneficiaries			
Number in pay status	262	266	-1.5%
Average age	67.3	66.8	N/A
Average monthly benefit <sup>(3)</sup>	\$2,720	\$2,616	4.0%

<sup>(1)</sup> Calculated by increasing actual calendar year salaries by the assumed salary scale.

<sup>(2)</sup> Includes nonvested terminated members.

<sup>(3)</sup> Includes adjustment to reflect COLA that is paid for a partial year starting with the April 1 following the valuation date.

#### EXHIBIT B

Members in Active Service and Projected Compensation as of December 31, 2007 By Age and Years of Service

i. General Tier 1 Non-Enhanced

Years of Service										
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	1	1								
	\$41,684	\$41,684								
25 - 29	8	6	2							
	43,828	42,743	\$47,081							
30 - 34	10	5	3	2						
	39,283	34,488	39,422	\$51,062						
35 - 39	14	6	5	2	1					
	56,393	49,700	52,425	65,721	\$97,733					
40 - 44	14	6	4	1	2	1				
	55,935	59,310	46,164	66,304	61,341	\$53,595				
45 - 49	18	6	8	1	2	1				
	57,663	56,834	58,652	64,080	45,779	72,076				
50 - 54	19	5	5	3	3	2		1		
	53,309	51,148	57,030	51,126	51,895	54,370		\$54,176		
55 - 59	17	2	7	3	2		2	1		
	61,942	69,059	59,147	55,272	67,367		\$68,309	63,708		
60 - 64	6	3		2		1				
	50,998	44,726		61,325		49,157				
65 & over	2	1		1						
	32,875	11,445		54,305						
Total	109	41	34	15	10	5	2	2		
	\$53,516	\$48,906	\$53,753	\$57,340	\$60,239	\$56,714	\$68,309	\$58,942		

# EXHIBIT B (continued)

Members in Active Service and Projected Compensation as of December 31, 2007 By Age and Years of Service

# ii. General Tier 1 Enhanced

Years of Service											
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over	
Under 25	3	3									
	\$59,467	\$59,467									
25 - 29	21	16	5								
	64,362	58,526	\$83,040								
30 - 34	40	15	23	2							
	69,085	59,860	74,764	\$72,954							
35 - 39	60	13	37	9	1						
	73,893	58,881	80,222	65,999	\$105,906						
40 - 44	114	29	48	16	18	3					
	79,972	69,586	84,050	76,424	84,904	\$104,475					
45 - 49	129	20	39	20	29	8	12	1			
	79,931	55,133	89,779	82,202	85,478	88,785	\$67,075	\$68,958			
50 - 54	238	18	45	20	34	24	47	46	4		
	85,170	72,672	92,833	81,907	91,881	97,306	92,956	66,017	\$70,472		
55 - 59	241	14	35	19	18	19	53	65	18		
	87,434	79,104	84,462	95,211	86,402	96,329	95,582	83,589	73,015		
60 - 64	75	2	12	10	9	8	9	13	12		
	86,597	57,916	74,751	97,286	104,341	65,878	83,053	88,780	95,113		
65 & over	10	1	2	2	2	1			2		
	82,812	66,170	67,951	49,622	138,988	68,371			90,230		
Total	931	131	246	98	111	63	121	125	36		
	\$82,513	\$64,858	\$84,575	\$82,918	\$90,173	\$91,821	\$90,803	\$77,545	\$81,055		

#### EXHIBIT B (continued)

Members in Active Service and Projected Compensation as of December 31, 2007 By Age and Years of Service

#### iii. General Tier 3 Enhanced

Years of Service											
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over	
Under 25	93	91	2								
	\$38,162	\$37,728	\$57,911								
25 - 29	459	393	66								
	48,871	48,355	51,946								
30 - 34	666	414	235	17							
	57,213	54,915	60,882	\$62,471							
35 - 39	805	371	319	92	22	1					
	63,946	56,969	69,340	73,414	\$63,780	\$64,468					
40 - 44	1,010	328	342	168	141	31					
	65,666	56,328	66,676	70,024	77,289	76,838					
45 - 49	1,058	301	309	145	187	73	42	1			
	66,233	55,406	66,001	73,542	75,683	74,956	\$63,125	\$63,479			
50 - 54	1,105	254	325	158	174	123	66	4	1		
	68,906	55,040	64,719	69,152	79,461	86,785	79,532	96,806	\$64,381		
55 - 59	938	215	261	146	159	95	51	8	3		
	69,393	58,606	64,935	70,165	77,126	82,228	77,616	125,608	86,604		
60 - 64	476	73	145	73	77	61	34	9	4		
	68,538	55,753	61,879	72,217	71,893	68,515	96,005	101,386	104,456		
65 - 69	126	22	52	12	22	11	3	3	1		
	67,362	58,548	65,047	68,883	78,167	58,004	103,240	85,810	65,604		
70 & over	30	2	8	4	10	4	2				
	63,990	68,042	45,992	86,961	73,506	48,368	69,647				
Total	6,766	2,464	2,064	815	792	399	198	25	9		
	\$64,472	\$54,194	\$64,861	\$70,994	\$76,431	\$78,735	\$78,646	\$105,019	\$89,736		

#### EXHIBIT B (continued)

Members in Active Service and Projected Compensation as of December 31, 2007 By Age and Years of Service

# iv. Safety Tier A Non-Enhanced

				Years of \$	Service			
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30 & over
Under 25								
25 - 29								
30 - 34	3		3					
	\$97,085		\$97,085					
35 - 39	2		1		1			
	96,787		96,625		\$96,949			
40 - 44	4				4			
	102,280				102,280			
45 - 49	5				1	3	1	
	104,535				109,563	\$101,183	\$109,563	
50 - 54	3			1			2	
	104,286			\$96,949			107,954	
55 - 59	3		1			2		
	132,484		154,808			121,323		
60 - 64								
65 & over								
Total	20		5	1	6	5	3	
	\$106,347		\$108,538	\$96,949	\$102,605	\$109,239	\$108,490	

# EXHIBIT B (continued)

Members in Active Service and Projected Compensation as of December 31, 2007 By Age and Years of Service

# v. Safety Tier A Enhanced

Years of Service											
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over	
Under 25	26	26									
	\$70,536	\$70,536									
25 - 29	151	120	31								
	78,685	75,172	\$92,284								
30 - 34	258	111	139	8							
	83,577	82,446	84,040	\$91,224							
35 - 39	318	75	153	71	19						
	92,086	86,275	91,646	94,638	\$109,026						
40 - 44	321	33	89	52	108	38	1				
	101,231	83,146	94,080	91,591	111,798	\$116,577	\$111,443				
45 - 49	257	16	36	25	62	93	25				
	108,670	97,962	97,138	92,413	112,185	114,958	116,279				
50 - 54	134	13	18	8	25	32	35	3			
	109,862	94,130	80,747	90,836	112,890	116,054	127,050	\$111,672			
55 - 59	65	8	8	12	9	13	11	3	1		
	98,726	77,907	92,971	88,399	97,322	108,985	103,688	148,909	\$109,358		
60 - 64	19	2	6	2	3	1	5				
	95,372	93,444	88,908	66,591	111,526	76,822	109,429				
65 & over	9		4	4		1					
	75,780		74,092	78,334		72,313					
Total	1,558	404	484	182	226	178	77	6	1		
	\$95,390	\$81,242	\$89,796	\$92,067	\$111,212	\$114,610	\$118,868	\$130,291	\$109,358		

#### EXHIBIT B (continued)

Members in Active Service and Projected Compensation as of December 31, 2007 By Age and Years of Service

#### vi. Safety Tier C Enhanced

Years of Service										
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	6	6								
	\$49,601	\$49,601								
25 - 29	13	13								
	54,148	54,148								
30 - 34	10	9	1							
	49,916	47,843	\$68,579							
35 - 39	6	6								
	58,521	58,521								
40 - 44	1	1								
	74,607	74,607								
45 - 49	1	1								
	72,792	72,792								
50 - 54										
55 - 59										
60 - 64										
65 & over										
Total	37	36	1							
	\$54,033	\$53,629	\$68,579							

## EXHIBIT C

Average Monthly Benefit and Membership Distribution of Retired Members and Beneficiaries i. General Tier 1 as of December 31, 2007

					Years of Re	etirement				
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	4			4						
	\$536			\$536						
25 - 29	1			1						
	479			479						
30 - 34	5	1		2	1	1				
	915	\$1,964		507	\$821	\$776				
35 - 39	3			2	1					
	841			848	826					
40 - 44	13	2	3	4	4					
	873	894	\$849	866	888					
45 - 49	19	6	5	3	3	2				
	1,570	1,480	2,118	1,061	1,883	762				
50 - 54	93	52	16	9	7	5	1	3		
	1,802	1,967	1,589	1,968	1,818	1,402	\$1,412	\$350		
55 - 59	319	190	85	15	14	6	6	1	2	
	2,644	3,278	1,717	2,052	1,764	1,283	1,415	847	\$1,181	
60 - 64	564	278	154	76	26	15	6	9		
	3,470	4,583	2,892	1,804	1,698	2,292	1,751	1,261		
65 - 69	522	80	200	129	71	22	13	5	1	1
	3,194	4,645	4,142	2,160	1,528	1,836	2,286	1,464	654	\$2,157
70 - 74	534	16	124	159	134	79	15	4	2	1
	2,788	3,973	4,266	3,041	2,096	1,175	2,017	1,314	1,405	785
75 - 80	569	3	31	110	198	138	60	19	6	4
	2,401	1,249	2,458	3,521	2,817	1,511	1,376	1,805	1,323	1,925
80 - 84	560	3	9	18	127	197	140	62	3	1
	2,178	5,420	2,709	2,572	2,584	2,371	1,721	1,433	1,847	2,517
85 - 89	402	1	4	4	19	104	176	79	13	2
	1,977	1,016	2,764	2,165	1,776	2,023	2,090	1,805	1,358	837
90 & over	173			1	2	9	61	59	32	9
	1,623			48	1,453	1,406	1,733	1,881	1,233	1,000
Total	3,781 \$2,602	632 \$3,905	631 \$3,326	537 \$2,611	607 \$2,314	578 \$1,874	478 \$1,836	241 \$1,670	59 \$1,295	18 \$1,324

*Note: Total retired benefit \$9,840,158, average age 72.9 and average years retired 16.1.* 

SECTION 3:	Supplemental Information for the Contra Costa County Employees' Retirement Association

# EXHIBIT C (continued)

Average Monthly Benefit and Membership Distribution of Retired Members and Beneficiaries ii. General Tier 2 as of December 31, 2007

					Years of Re	etirement				
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	3	1	2						-	
	\$481	\$108	\$668						-	
25 - 29									-	
									-	
30 - 34	8		3	3	2				-	
	694		727	\$508	\$925				-	
35 - 39	7		2	2	3				-	
	847		350	1,683	620				-	
40 - 44	4	1		2	1				-	
	1,299	520		1,537	1,604				-	
45 - 49	3	1	1	1					-	
	1,208	145	2,726	752					-	
50 - 54	26	16	4	5	1				-	
	755	542	1,168	794	2,305				-	
55 - 59	54	25	19	6	4				-	
	833	678	706	1,567	1,311				-	
60 - 64	115	28	45	37	2	3			-	
	818	885	732	809	1,396	\$1,229			-	
65 - 69	95	14	38	34	9				-	
	980	1,016	1,017	949	889				-	
70 - 74	128	2	48	52	20	6			-	
	999	718	1,005	1,049	891	987			-	
75 - 80	80	1	10	45	19	3	2		-	
	971	49	816	979	1,196	576	\$468		-	
80 - 84	41		4	20	16	1			-	
	931		771	929	1,003	447			-	
85 - 89	7			3	4				-	
	739			531	896				-	
90 & over	2				2				-	
	157				157				-	
Total	573	89	176	210	83	13	2		-	
	\$912	\$751	\$887	\$967	\$1,014	\$906	\$468		-	

Note: Total retired benefit \$522,843, average age 67.6 and average years retired 10.2.

# EXHIBIT C (continued)

Average Monthly Benefit and Membership Distribution of Retired Members and Beneficiaries iii. General Tier 3 as of December 31, 2007

					Years of Re	etirement				
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	4	1	2	1					-	
	\$1,214	\$1,144	\$1,544	\$624						
25 - 29	4	4							-	
	535	535								
30 - 34	1	1								
	1,274	1,274								
35 - 39	5	2	3							
	903	857	934							
40 - 44	7	5	2							
	1,536	1,782	919							
45 - 49	6	5	1							
	1,889	2,001	1,327						-	
50 - 54	82	76	6							
	1,454	1,380	2,399							
55 - 59	199	167	32							
	1,933	2,120	962							
60 - 64	294	244	48	1	1					
	2,156	2,337	1,260	1,605	\$1,646					
65 - 69	250	177	71		2					
	1,903	2,068	1,515		1,108					
70 - 74	109	59	50							
	1,289	1,369	1,194							
75 - 80	15	8	7							
	1,540	1,293	1,821							
80 - 84	5	3	2							
	1,980	2,445	1,283							
85 - 89									-	
									-	
90 & over										
Total	981	752	224	2	3					
	\$1,857	\$2,020	\$1,327	\$1,115	\$1,287					

Note: Total retired benefit \$1,823,010, average age 62.6 and average years retired 3.4.

SECTION 3: Supplemental Information for the Contra Costa County Employees' Retirement Association
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# EXHIBIT C (continued)

Average Monthly Benefit and Membership Distribution of Retired Members and Beneficiaries iv. Safety as of December 31, 2007

					Years of Re	etirement				
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	4	4								
	\$1,037	\$1,037								
25 - 29	2			2						
	990			\$990						
30 - 34	5	4			1					
	3,230	3,855			\$729					
35 - 39	21	15	5		1					
	3,272	3,564	\$2,906		729					
40 - 44	34	13	13	6	2					
	3,165	3,229	3,556	2,957	829					
45 - 49	56	22	21	9	4					
	3,289	3,172	3,406	3,350	3,182					
50 - 54	175	130	23	9	9	4				
	6,213	7,263	3,509	2,922	2,813	\$2,696				
55 - 59	281	164	55	30	18	10	2	1	1	
	5,926	7,579	4,506	2,892	2,834	2,682	\$2,877	\$2,917	\$1,106	j
60 - 64	353	92	162	46	19	19	13	1	1	
	5,498	6,233	6,555	3,427	3,334	2,271	2,798	2,239	2,728	
65 - 69	229	17	73	73	34	13	9	8	2	
	5,545	4,617	7,037	5,979	4,238	2,862	3,155	3,218	2,913	
70 - 74	148	3	9	39	56	21	13	4	2	2 1
	4,897	1,872	4,449	5,348	6,067	3,375	3,170	2,965	2,159	\$2,463
75 - 80	136		1	14	22	52	27	17	1	. 2
	4,146		7,896	5,476	4,429	4,412	3,596	2,885	2,532	1,881
80 - 84	87	1		1	1	9	38	21	e	5 10
	3,941	680		5,015	5,659	5,086	4,624	3,067	3,219	2,634
85 - 89	35				1		5	21	4	4
	4,134				3,068		6,743	4,174	3,277	1,789
90 & over	10							3	5	5 2
	3,392							4,773	2,666	5 3,134
Total	1,576	465	362	229	168	128	107	76	22	. 19
	\$5,175	\$6,517	\$5,758	\$4,573	\$4,438	\$3,625	\$3,909	\$3,397	\$2,830	\$2,420

Note: Total retired benefit \$8,156,208, average age 63.9 and average years retired 12.5.

#### EXHIBIT D

	Active Participant	Vested Former s Participants <sup>(1)</sup>	Pensioners	Disableds	Beneficiaries	Total
Number as of December 31, 2006	9,210	1,919	4,615	913	1,118	17,775
New participants	923	50	0	0	77	1,050
Terminations – with vested rights <sup>(1)</sup>	-286	286	0	0	0	0
Contributions Refunds	-133	-126	0	0	0	-259
Retirements	-303	-75	383	-5	0	0
New disabilities	-25	0	-7	32	0	0
Return to work	53	-44	-8	-1	0	0
Died with or without beneficiary	-19	-2	-120	-17	-79	-237
Data adjustments	_1	0	10	_1	<u>-1</u>	<u>11</u>
Number as of December 31, 2007	9,421	2,008	4,873	923	1,115	18,340

Reconciliation of Member Data – December 31, 2006 to December 31, 2007

(1) Includes nonvested terminated members.

## EXHIBIT E

Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended Dece	ember 31, 2007	Year Ended Dec	ember 31, 2006
Contribution income:				
Employer contributions <sup>(1)</sup>	\$196,929,570		\$191,448,711	
Employee contributions	75,590,807		73,468,648	
Net contribution income		\$272,520,377		\$264,917,359
Investment income:				
Interest, dividends and other income	\$162,829,132		\$162,206,699	
Adjustment toward market value <sup>(2)</sup>	391,640,836		218,390,227	
Less investment and administrative fees	(32,263,385)		(26,820,620)	
Net investment income		522,206,583		353,776,306
Total income available for benefits		\$794,726,960		\$618,693,665
Less benefit payments:				
Benefits paid	\$(235,656,024)		\$(216,057,476)	
Refunds of contributions	(3,113,234)		(3,231,903)	
Adjustments/transfers	(339,053)		(239,979)	
Net benefit payments		\$(239,108,311)		\$(219,529,358)
Change in reserve for future benefits		\$555,618,649		\$399,164,307

(1) Includes proceeds from Pension Obligation Bonds of \$11,693,396 issued during 2006.
 (2) Equals the "non-cash" earnings on investments implicitly included in the Actuarial Value of Assets.

#### EXHIBIT F

# Summary Statement of Assets

	Year Ended Dec	Year Ended December 31, 2007		ember 31, 2006
Cash equivalents	\$641,310,			\$685,912,065
Accounts receivable:				
Investment trades	\$418,536,394		\$305,392,264	
Investment income	16,697,511		11,590,110	
Employee and employer contributions	8,195,756		8,671,611	
Additional contributions <sup>(1)</sup>	26,366,059		26,538,917	
Total accounts receivable		469,795,720		352,192,902
Investments:				
Stocks	\$2,622,477,662		\$2,492,243,648	
Bonds	1,997,853,713		1,813,655,433	
Real estate	449,530,954		447,863,712	
Alternative investments	189,479,124		164,124,889	
Total investments at market value		5,259,341,453		4,917,887,682
Total assets		\$6,370,447,307		\$5,955,992,649
Less accounts payable:				
Investment trades	\$(649,189,678)		\$(642,186,387)	
Security lending	(420,834,135)		(356,759,508)	
Employer contributions unearned	(88,171,861)		(76,343,369)	
Other	(13,135,051)		(9,693,754)	
Total accounts payable		\$(1,171,330,725)		\$(1,084,983,018)
Net assets at market value		<u>\$5,199,116,582</u>		<u>\$4,871,009,631</u>
Net assets at actuarial value		<u>\$5,029,275,788</u>		\$4,473,657,139
Net assets at valuation value		<u>\$5,016,136,535</u>		\$4,460,871,033

<sup>(1)</sup> Equals the sum of additional contribution receivables for the final Paulson Settlement.

#### **EXHIBIT G**

#### **Actuarial Balance Sheet**

An overview of the Plan's funding is given by an Actuarial Balance Sheet. In this approach, we first determine the amount and timing of all future payments that are projected/anticipated to be made by the Plan for current participants. We then discount these payments at the valuation interest rate to the date of the valuation, thereby determining their present value. We refer to this present value as the "liability" of the Plan. Second, we determine how this liability will be met. These actuarial "assets" include the net amount of assets already accumulated by the Plan, the present value of future member contributions, the present value of future employer normal cost contributions, and the present value of future employer amortization payments.

As	sets	Basic	COLA	Total
1.	Total valuation value of assets	\$3,303,481,391	\$1,712,655,144	\$5,016,136,535
2.	Present value of future contributions by members	357,836,393	202,454,334	560,290,727
3.	Present value of future employer contributions for:			
	(a) entry age normal cost	701,184,296	207,292,606	908,476,902
	(b) unfunded actuarial accrued liability	317,657,807	247,253,883	564,911,690
4.	Total actuarial assets	\$4,680,159,887	\$2,369,655,967	\$7,049,815,854
Lia	abilities			
5.	Present value of retirement allowances payable to present retired			
	members	\$1,819,523,114	\$1,251,247,077	\$3,070,770,191
6.	Present value of retirement allowances to be granted in the future	2,860,636,773	1,118,408,890	3,979,045,663
7.	Total present value of benefits	\$4,680,159,887	\$2,369,655,967	\$7,049,815,854

## EXHIBIT H

# **Summary of Total Allocated Reserves**

Reserves	December 31, 2007	December 31, 2006
Member Deposits <sup>(1)</sup>	\$402,308,679	\$371,508,163
Member Cost of Living <sup>(1)</sup>	150,321,127	123,249,338
Employer Advance <sup>(1)</sup>	1,255,462,859	1,166,763,516
Employer Cost of Living <sup>(1)</sup>	853,911,376	801,248,106
Retired Members <sup>(1)</sup>	1,580,626,451	1,457,052,539
Retired Cost of Living <sup>(1)</sup>	652,971,328	587,945,318
Smoothed Market Value Valuation <sup>(1)</sup>	184,150,047	170,187,940
Dollar Power Cost of Living Supplement Pre-Funding <sup>(1)</sup>	22,895,560	25,787,120
Post Retirement Death Benefit <sup>(2)</sup>	13,139,253	12,786,106
Statutory Contingency (one percent) <sup>(2)</sup>	0	0
Additional One Percent Contingency Designation <sup>(2)</sup>	0	0
Contra Tracking Account <sup>(1)</sup>	(86,510,892)	(242,871,007)
Total Allocated Reserves	\$5,029,275,788	\$4,473,657,139
Market Stabilization Account	169,840,794	397,352,492
Net Market Value	\$5,199,116,582	\$4,871,009,631

<sup>(1)</sup> Included in valuation value of assets.

<sup>(2)</sup> Not included in valuation value of assets.

# EXHIBIT I

# Development of Unfunded Actuarial Accrued Liability

		Year En December 3	
1.	Unfunded actuarial accrued liability at beginning of year	\$833,10	)5,977
2.	Gross Normal cost at middle of year	187,58	34,606
3.	Actual employer and member contributions	(272,52	20,377)
4.	Interest (whole year on (1) plus half year on (2) - (3))	61,66	<u>59,771</u>
5.	Expected unfunded actuarial accrued liability at end of year	<u>\$809,83</u>	<u>89,977</u>
6.	Actuarial (gain)/loss due to all changes:		
	a. Investment return	(\$171,935,387)	
	b. Salary increases	(47,442,946)	
	c. Plan changes	0	
	d. Change in assumptions	0	
	e. Other experience (gain)/loss	(25,549,954)	
	f. Total changes	<u>(\$244,92</u>	28,287)
7.	Unfunded actuarial accrued liability at end of year	\$564,91	1,690

# EXHIBIT J

#### **Section 415 Limitations**

Section 415 of the Internal Revenue Code (IRC) specifies the maximum benefits that may be paid to an individual from a defined benefit plan and the maximum amounts that may be allocated each year to an individual's account in a defined contribution plan.

A qualified pension plan may not pay benefits in excess of the Section 415 limits. The ultimate penalty for noncompliance is disqualification: active participants could be taxed on their vested benefits and the IRS may seek to tax the income earned on the plan's assets.

In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar limit of \$160,000 indexed for inflation. That limit is \$185,000 for 2008. Normal Retirement Age for these purposes is age 62. These are the limits in simplified terms. They must generally be adjusted based on each participant's circumstances, for such things as age at retirement, form of benefits chosen and after tax contributions. Limits are also affected by the "grandfather" election under Section 415(b)(10).

Benefits in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m).

Legal Counsel's review and interpretation of the law and regulations should be sought on any questions in this regard.

Contribution rates determined in this valuation have not been reduced for the Section 415 limitations. Actual limitations will result in actuarial gains as they occur.

#### EXHIBIT K

#### **Definitions of Pension Terms**

The following list defines certain technical terms for the convenience of the reader: **Assumptions or Actuarial Assumptions:** The estimates on which the cost of the Plan is calculated including: Investment return — the rate of investment yield that the Plan will earn over (a) the long-term future; Mortality rates — the death rates of employees and pensioners; life (b) expectancy is based on these rates; <u>Retirement rates</u> — the rate or probability of retirement at a given age; and (c) (d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement. Normal Cost: The amount of contributions required to fund the level cost allocated to the current year of service. **Actuarial Accrued Liability** For Actives: The equivalent of the accumulated normal costs allocated to the years before the valuation date. Actuarial Accrued Liability The single sum value of lifetime benefits to existing pensioners. This sum takes For Pensioners: account of life expectancies appropriate to the ages of the pensioners and of the interest that the sum is expected to earn before it is entirely paid out in benefits. **Unfunded Actuarial Accrued** The extent to which the actuarial accrued liability of the Plan exceeds the assets of the Liability: Plan. There are many approaches to paying off the unfunded actuarial accrued liability, from meeting interest accrual only to amortizing it over a specific period of time.

Amortization of the Unfunded Actuarial Accrued Liability:	Payments made over a period of years equal in value to the Plan's unfunded actuarial accrued liability.
Investment Return:	The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the market gains and losses to avoid significant swings in the value of assets from one year to the next.

#### EXHIBIT I

Supplementary Information Required by GASB – Schedule of Employer Contributions

Plan Year Ended December 31	Annual Required Contributions	Actual Contributions	Percentage Contributed
2002	\$58,319,678	\$57,474,043	98.6% <sup>(1)</sup>
2003	108,728,047	108,728,047 <sup>(2)</sup>	100.0%
2004	118,245,418	118,245,418	100.0%
2005	147,165,108	147,165,108 <sup>(3)</sup>	100.0%
2006	179,755,315	179,755,315 <sup>(4)</sup>	100.0%
2007	196,929,570	196,929,570	100.0%

<sup>(1)</sup> The contribution percentage is less than 100% due to actions taken by the Board of Retirement to phase-in, over three years, increased contribution requirements associated with the significant actuarial assumption changes and the expansion of earnable compensation required by the "Ventura Decision".

<sup>(2)</sup> Excludes pension obligation bond proceeds of \$319,094,719.

<sup>(3)</sup> Excludes pension obligation bond proceeds of \$153,134,911.

<sup>(4)</sup> Excludes pension obligation bond proceeds of \$11,693,396.

# EXHIBIT II

Supplementary Information Required by GASB – Schedule of Funding Progress

Actuarial Valuation Date	Valuation Value of Assets <sup>(1)</sup> (a)	Actuarial Accrued Liability (AAL) <sup>(2)</sup> (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b) - (a)] / (c)
12/31/2002	\$3,296,736,000	\$3,677,624,000	\$380,888,000	89.64%	\$580,415,000	65.62%
12/31/2003	3,538,722,000	4,141,390,000	602,668,000	85.45%	600,274,000	100.40%
12/31/2004	3,673,858,074	4,481,242,899	807,384,825	81.98%	619,132,218	130.41%
12/31/2005	4,062,057,143	4,792,428,024	730,370,881	84.76%	627,546,408	116.39%
12/31/2006	4,460,871,033	5,293,977,010	833,105,977	84.26%	653,953,163	127.40%
12/31/2007	5,016,136,535	5,581,048,225	564,911,690	89.88%	671,617,932	84.11%

<sup>(1)</sup> Excludes assets for non-valuation reserves.

<sup>(2)</sup> Excludes liabilities for non-valuation reserves.

# EXHIBIT III

# Supplementary Information Required by GASB

Valuation date	December 31, 2007		
Actuarial cost method	Entry Age Normal Actuarial Cost Method		
Amortization method	Level percent of payroll for total unfunded liability (4.25% payroll growth assumed)		
Remaining amortization period	15 years (declining) for all UAAL		
Asset valuation method	Market value of assets less unrecognized returns in each of the last nine semi-annual accounting periods. Unrecognized return is equal to the difference between the actual mark return and the expected return on the market value, and is recognized semi-annually over a five-year period. The Actuarial Value of Assets is reduced by the value of the non-valuation reserves and designations		
Actuarial assumptions:			
Investment rate of return	7.80%		
Inflation rate	3.75%		
Projected salary increases <sup>(1)</sup>	General: 5.00% to 11.75%; Safety: 5.00% to 12.25%		
Cost of living adjustments	3% per year except for Tier 3 disability benefits and Tier 2 benefits that are valued as a 3.75% increase per year. Safety Tier C benefits are assumed to increase at 2% per year.		
Plan membership:			
Retired members and beneficiaries receiving benefits	6,911		
Terminated members entitled to, but not yet receiving benefits <sup>(2)</sup>	2,008		
Active members	<u>9,421</u>		
Total	18,340		

<sup>(1)</sup> Includes inflation at 3.75%, plus "across the board" salary increases of 0.50%, plus merit and promotional increases. See Exhibit IV for these increases.

<sup>(2)</sup> Includes nonvested terminated members.

# EXHIBIT IV

Actuarial Assumptions and Actuarial Cost Method

Post – Retirement Mortality Rates:	
Healthy:	For General Members: RP-2000 Combined Healthy Mortality Table set back two years.
	For Safety Members: RP-2000 Combined Healthy Mortality Table set back two years.
Disabled:	For General members: RP-2000 Combined Healthy Mortality Table set forward six years.
	For Safety members: RP-2000 Combined Healthy Mortality Table.
Member Contribution Rates:	For General members: RP-2000 Combined Healthy Mortality Table set back two years weighted 30% male and 70% female.
	For Safety members: RP-2000 Combined Healthy Mortality Table set back two years weighted 85% male and 15% female.

# **Termination Rates Before Retirement:**

		Rate (%) Mortality		
	Ge	Sa	ifety	
Age	Male	Female	Male	Female
25	0.04	0.02	0.04	0.02
30	0.04	0.02	0.04	0.02
35	0.06	0.04	0.06	0.04
40	0.10	0.06	0.10	0.06
45	0.13	0.09	0.13	0.09
50	0.19	0.14	0.19	0.14
55	0.29	0.22	0.29	0.22
60	0.53	0.39	0.53	0.39
65	1.00	0.76	1.00	0.76

All pre-retirement deaths are assumed to be non-service connected.

# **Termination Rates Before Retirement (continued):**

Rate (%) Disability			
20	0.03	0.00	0.06
25	0.08	0.02	0.22
30	0.22	0.04	0.39
35	0.36	0.06	0.63
40	0.46	0.09	0.90
45	0.56	0.16	1.30
50	0.69	0.26	2.40
55	0.84	0.36	3.30
60	0.96	0.46	0.00

- (1) 75% of General Tier 1 disabilities are assumed to be duty disabilities. The other 25% are assumed to be ordinary disabilities.
- (2) 20% of General Tier 3 disabilities are assumed to be duty disabilities. The other 80% are assumed to be ordinary disabilities.
- (3) 100% of Safety disabilities are assumed to be duty disabilities.

**Termination Rates Before Retirement (continued):** 

	( )		
Withdrawal (Less than Five Years of Service)			
Years of Service	General	Safety	
0	14.00	11.00	
1	9.00	7.00	
2	8.00	5.00	
3	6.00	4.00	
4	5.00	3.00	

Rate (%)

# Withdrawal (Five or More Years of Service) \*

	•	,
Age	General	Safety
20	5.00	3.00
25	5.00	3.00
30	5.00	3.00
35	4.92	2.20
40	4.23	1.61
45	3.54	1.05
50	1.68	0.00
55	0.37	0.00
60	0.00	0.00

\* The member is assumed to receive the greater of the member's contribution balance or a deferred retirement benefit. No withdrawal is assumed after a member is first assumed to retire.

### **Retirement Rates (Enhanced):**

For those members covered under the enhanced benefit formulas the following rates apply:

Rate (%)				
Age	General Tier 1	General Tier 3	Safety Tier A	Safety Tier C
45	0.00	0.00	2.00	1.00
46	0.00	0.00	2.00	1.00
47	0.00	0.00	2.00	1.00
48	0.00	0.00	2.00	1.00
49	0.00	0.00	10.00	5.00
50	3.00	3.00	25.00	15.00
51	3.00	3.00	20.00	12.00
52	5.00	3.00	20.00	12.00
53	8.00	3.00	20.00	12.00
54	15.00	5.00	25.00	15.00
55	20.00	10.00	30.00	20.00
56	20.00	10.00	30.00	20.00
57	25.00	10.00	40.00	25.00
58	25.00	10.00	40.00	25.00
59	25.00	10.00	40.00	30.00
60	25.00	15.00	100.00	100.00
61	30.00	20.00	100.00	100.00
62	30.00	25.00	100.00	100.00
63	30.00	25.00	100.00	100.00
64	30.00	30.00	100.00	100.00
65	35.00	35.00	100.00	100.00
66	35.00	35.00	100.00	100.00
67	35.00	35.00	100.00	100.00
68	35.00	35.00	100.00	100.00
69	35.00	35.00	100.00	100.00
70	100.00	100.00	100.00	100.00

## **Retirement Rates (Non-enhanced):**

For those members not covered under the enhanced benefit formulas the following rates apply:

Rate (%)			
Age	General Tier 1	Safety Tier A	
50	3.00	1.00	
51	3.00	1.00	
52	3.00	1.00	
53	3.00	1.00	
54	3.00	1.00	
55	10.00	2.00	
56	10.00	2.00	
57	10.00	3.00	
58	10.00	4.00	
59	10.00	20.00	
60	25.00	17.00	
61	15.00	17.00	
62	40.00	18.00	
63	25.00	20.00	
64	30.00	100.00	
65	40.00	100.00	
66	35.00	100.00	
67	35.00	100.00	
68	35.00	100.00	
69	35.00	100.00	
70	100.00	100.00	

Retirement Age and Benefit for Deferred Vested Members:	For deferred vested benefits, we make the following retirement assumption:		
	General:Age 58Safety:Age 55		
	We assume that 40% and 60% of future General and Safety deferred vested members, respectively, will continue to work for a reciprocal employer. For reciprocals, we assume 6.25% compensation increases per annum.		
Future Benefit Accruals:	1.0 year of service per year for the full-time employees. Continuation of current partial service accrual for part-time employees.		
Unknown Data for Members:	Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.		
Percent Married:	80% of male members and 55% of female members and assumed to be married at pre- retirement death or retirement.		
Age of Spouse:	Females are 3 years younger than their spouses.		
Offsets by Other Plans of the Employer for Disability Benefits:	The Plan requires members who retire because of disability from General Tier 3 to offset the Plan's disability benefits with other Plans of the employer. We have not assumed any offsets in this valuation.		
Terminal Pay Assumptions:	The following assumptions for terminal pay as a percentage of final average pay are used:		
	General Tier 1:11.50%General Tier 2:3.25%General Tier 3:7.00%Safety Tier A:11.00%Safety Tier C:3.75%		

For determining the cost of the basic benefit (i.e. non-COLA component), the cost of this pay element is currently recognized in the valuation as an employer only cost and does not affect member contribution rates.

Service From Unused Sick Leave Conversion:	The following assumptions for service converted from unused sick leave as a percentage of service at retirement are used:		
	Service Retirements:		
	General:       1.25%         Safety:       2.25%		
	Disability Retirements:		
	General:         0.25%           Safety:         1.25%		
	Pursuant to Section 31641.01, the cost of this benefit will be charged only to employers and will not affect member contribution rates.		
Net Investment Return:	7.80%, net of administration and investment expenses.		
Employee Contribution Crediting Rate:	7.80%, compounded semi-annually.		
Consumer Price Index:	Increase of 3.75% per year; retiree COLA increases due to CPI subject to a 3.00% maximum change per year except for Tier 3 disability benefits and Tier 2 benefits which are subject to a 4.00% (valued as 3.75% increase) maximum change per year. Safety Tier C benefits are subject to a 2.00% maximum change per year.		

**Salary Increases:** 

#### **Annual Rate of Compensation Increase**

Inflation: 3.75% per year, plus "across the board" salary increases of 0.50% per year, plus the following merit and promotional increases.

Years of Service	General	Safety
Less than 1	7.50%	8.00%
1	6.50%	6.50%
2	5.00%	5.50%
3	4.00%	4.50%
4	3.00%	2.25%
5	2.00%	0.75%
6	1.75%	0.75%
7	1.50%	0.75%
8	1.25%	0.75%
9	1.00%	0.75%
10	0.75%	0.75%
11	0.75%	0.75%
12	0.75%	0.75%
13	0.75%	0.75%
14	0.75%	0.75%
15	0.75%	0.75%
16	0.75%	0.75%
17	0.75%	0.75%
18	0.75%	0.75%
19	0.75%	0.75%
20 & over	0.75%	0.75%

Actuarial Value of Assets:	Market value of assets less unrecognized returns in each of the last nine semi-annual accounting periods. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized semi-annually over a five-year period.	
Valuation Value of Assets:	Actuarial Value of Assets reduced by the value of the non-valuation reserves and designations.	
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method. Entry Age is age minus years of service. Actuarial Accrued Liability is calculated on an individual basis and is based on costs allocated as a level percent of compensation. The Normal Cost is calculated on an aggregate basis by taking the Present Value of Future Normal Costs divided by Present Value of Future Salaries to obtain a normal cost rate for each rate group of employees. This normal cost rate is then multiplied by the total of current salaries for that rate group. The Present Value of Future Normal Costs is determined as if the current benefit accrual rate had always been in effect.	

**Changes in Actuarial Assumptions:** There have been no changes in actuarial assumptions since the previous valuation.

### EXHIBIT V

#### **Summary of Plan Provisions**

This exhibit summarizes the major provisions of the Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Membership Eligibility:	
General Tier 1	All General members hired before July 1, 1980 and electing not to transfer to Tier 2 Plan. Certain General members who are hired after July 1, 1980 and work for specific employers are placed in Tier 1.
General Tier 2	Most General members hired on or after August 1, 1980 and all General members hired before July 1, 1980 electing to transfer to the Tier 2 Plan. Effective October 1, 2002, for the County, Tier 2 was eliminated and all County employees (excluding CNA employees) in Tier 2 were placed in Tier 3. Effective January 1, 2005, all CNA employees in Tier 2 were placed in Tier 3.
General Tier 3	Tier 2 members can elect Tier 3 coverage (for future service) effective on the later of: October 1, 1998 or the day after achieving 5 years of service. All County General members (excluding CNA employees) hired on or after October 1, 2002 will be placed in Tier 3. All CNA employees hired after January 1, 2005 were placed in Tier 3.
Safety	All Safety members. All County Sheriff's Department Safety members hired on or after January 1, 2007 will be placed in Safety Tier C Enhanced.

General Tier 1, Tier 3, and Safety Tier A	Highest consecutive twelve months of compensation earnable. (FAS1)
General Tier 2 and Safety	
Tier C	Highest consecutive thirty-six months of compensation earnable. (FAS3)

C 1T: 2	e Amount:			
General Tier 2	Estimated Social So	Estimated Social Security award at age 62 assuming level future earnings. (PIA)		
Service:				
General Tier 1 and 3 and Safety	y Years of service. (Y	Yrs)		
General Tier 2	Years of service up	to a maximum of 30 years. (Yrs30)		
Service Retirement Eligibility:				
General		Age 50 with 10 years of service, or age 70 regardless of service, or after 30 years of service, regardless of age.		
Safety	•	Age 50 with 10 years of service, or age 70 regardless of service, or after 20 years of service, regardless of age.		
Benefit Formula:				
General Tier 1 and Tier 3 (No enhanced)(§31676.11)	<i>n</i> -Retirement Age	Benefit Formula		
	50	(1.24%xFAS1 - 1/3x1.24%x\$350x12)xYrs		
	55	(1.67%xFAS1 - 1/3x1.67%x\$350x12)xYrs		
	60	(2.18%xFAS1 - 1/3x2.18%x\$350x12)xYrs		
	62	(2.35%xFAS1 - 1/3x2.35%x\$350x12)xYrs		
	65	(2.61%xFAS1 - 1/3x2.61%x\$350x12)xYrs		
Maximum Benefit: 100% of F	AS1			
General Tier 2(§31752)	50	(0.83%xFAS3xYrs – 0.57%xYrs30xPIA)		
	55	(1.13% xFAS3xYrs - 0.87% xYrs30xPIA)		
	60	(1.43%xFAS3xYrs – 1.37%xYrs30xPIA)		
	62	(1.55%xFAS3xYrs – 1.67%xYrs30xPIA)		
	65	(1.73%xFAS3xYrs – 1.67%xYrs30xPIA)		

# **Benefit Formula:**

Safety Tier A (Non-enhanced)(§31664)	50	(2.00%xFAS1xYrs)
	55	(2.62%xFAS1xYrs)

Maximum Benefit: 100% of FAS1

General Tier 1 and Tier 3 (Enhanced) (§31676.16)	Retirement Age	Benefit Formula
	50	(1.43%xFAS1 - 1/3x1.43%x\$350x12)xYrs
	55	(2.00% xFAS1 - 1/3x2.00% x\$350x12)xYrs
	60	(2.26% xFAS1 - 1/3x2.26% x\$350x12)xYrs
	62	(2.37% xFAS1 - 1/3x2.37% x\$350x12)xYrs
	65	(2.42% xFAS1 - 1/3x2.42% x\$350x12) xYrs

For members previously covered under the non-enhanced §31676.11 formula, they are entitled to at least the benefits they could have received under §31676.11.

 Maximum Benefit: 100% of FAS1

 Safety Tier A (Enhanced)(§31664.1)
 50
 (3.00%xFAS1xYrs)

 Maximum Benefit: 100% of FAS1

 Safety Tier C (Enhanced) (§31664.1)
 50
 (3.00%xFAS3xYrs)

Maximum Benefit: 100% of FAS3

<u>General Tier 1</u>	
Eligibility	Five years of service (§31720).
Benefit Formula	1.5% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 65, but total benefit cannot be more than one-third of Final Compensation (§31727).
General Tier 2 and General	<u>l Tier 3</u>
Eligibility	Ten years of service (definition of disability is more strict than Tier 1 Plan) (§31720.1).
Benefit Formula	40% of Final Compensation plus 10% of Final Compensation used in the benefit determination for each minor child (maximum of three) (§31727.01).
Offset	Disability benefits are offset by other plans of the employer except Workers Compensation and Social Security.
<u>Safety</u>	
Eligibility	Five years of service (§31720).
Benefit Formula	1.8% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 55, but total benefit cannot be more than one-third of Final Compensation (§31727.2).
e-of-Duty Disability:	
<u>General Tier 1 and Safety</u>	
Eligibility	No age or service requirements (§31720).
Benefit Formula	50% of the Final Compensation (§31727.4).
General Tier 2 and General	<u>l Tier 3</u>
Eligibility	No age or service requirements (§31720).
Benefit Formula	40% of Final Compensation plus 10% of Final Compensation for each minor child (maximum of three) (§31727.01).
Offset	Disability benefits are offset by other plans of the Employer except Workers Compensation and Social Security.

General Tier 1 and Tier 3, a	nd Safety
Eligibility - A	None.
Benefit - A	Refund of employee contributions with interest plus one month's compensation for each year of service to a maximum of six month's compensation (§31781); 50% of Final Compensation payable to spouse if Line of Duty death (§31787).
	OR
Eligibility - B	Five years of service.
Benefit - B	Option 2 (100% continuation) of Service Retirement or Ordinary Disability benefit payable to designated beneficiary.
Death in line of duty	50% of Final compensation.
<u>General Tier 2</u>	
Eligibility - A	None.
Benefit - A	Refund of employee contributions with interest plus \$2,000 lump sum benefit offset by any Social Security payment. (§31781.01); If a Line of Duty death, then 60% of Service or Disability Retirement Benefit (minimum benefit is 24% of Final Compensation) plus, for each minor child, 10% of the allowance otherwise paid to th member. Minimum family benefit is 60% of the member's allowance. Maximum family benefit is 100% of member's allowance.
	OR
Eligibility - B	Ten years of service.
Benefit - B	Option 2 (100% continuation) of Service Retirement or Ordinary Disability benefit payable to designated beneficiary.

Death After Retirement:	
General Tier 1 and Tier 3, and Sa	faty
Service or	
Ordinary Disability Retirement	60% of member's unmodified allowance continued to eligible spouse. An eligible spouse is a surviving spouse who was married to the member one year prior to member's retirement or at least two years prior to the date of death and has attained age 55 on or prior to the date of death (§31760.2). An additional lump sum benefit of \$5,000 is payable to the member's beneficiary (§31789.12).
Line-of-Duty Disability	100% of members allowance continued to eligible spouse (§31786). An additional lump sum benefit of \$5,000 is payable to the member's beneficiary (§31789.12).
<u>General Tier 2</u>	
Service or	
Disability Retirement	60% of member's unmodified allowance continued to eligible spouse plus 10% of allowance to each minor child. Minimum benefit is 60% of allowance. Maximum benefit is 100% of allowance. \$7,000 lump sum benefit, less any Social Security Lump sum payment payable to member's beneficiary.
Withdrawal Benefits:	
Less than Five Years of Service	Refund of accumulated employee contributions with interest, or earned benefit at age 70 (§31628).
Five or More Years of Service	If contributions left on deposit, entitled to earned benefits commencing at any time after eligible to retire (§31700).

Post-Retirement Cost-of-Living Benefits:			
General Tier 1 and Tier 3, and Sa	fety		
Tier A	Future changes based on Consumer Price Index to a maximum of 3% per year, exc "banked." Tier 3 disability benefits have a maximum of 4% per year, excess "banked."		
General Tier 2	Future changes based on Consumer Price Index to a maximum of 4% per year, excess "banked."		
Safety Tier C	Future changes based on Consumer Price Index to a maximum of 2% per year, excess "banked."		
<b>County Contributions:</b>	Determined by the Entry Age Normal Cost method. The total Unfunded Actuarial Accrued Liability is being funded as a level percent of payroll over a fixed 15-year period as of December 31, 2007.		
Member Contributions:	Please refer to Appendix A for the specific rates.		
General Tier 1 and Tier 3 (Non-enhand	ced)		
Basic	Provide for one-half of the §31676.11 benefit payable at age 55.		
Cost-of-Living	Provide for one-half of future Cost-of-Living costs.		
Safety Tier A (Non-enhanced)			
Basic	Provide for one-half of the §31664 benefit payable at age 50.		
Cost-of-Living	Provide for one-half of future Cost-of-Living costs.		
General Tier 1 and Tier 3 (Enhanced)			
Basic	Provide for an average annuity at age 60 equal to 1/120 of FAS1.		
Cost-of-Living Provide for one-half of future Cost-of-Living costs.			

Other Information:	Transfers from the Tier 1 Plan to the Tier 2 Plan were made on an individual voluntary irrevocable basis. Credit is given under the Tier 2 Plan for future service only. The Cost-of-Living maximum is 4% only for the credit under the Tier 2 Plan.
Other Informations	Transform from the Tion 1 Dien to the Tion 2 Dien were made on an individual
Cost-of-Living	Provide for one-half of future Cost-of-Living costs.
Basic	Provide for an average annuity at age 50 equal to 1/100 of FAS3.
Safety Tier C (Enhanced)	
Cost-of-Living	Provide for one-half of future Cost-of-Living costs.
Basic	Provide for an average annuity at age 50 equal to 1/100 of FAS1.
Safety Tier A (Enhanced)	

**NOTE:** The summary of major plan provisions is designed to outline principal plan benefits as interpreted for purposes of the actuarial valuation. If the Association should find the plan summary not in accordance with the actual provisions, the Association should alert the actuary so that both can be sure the proper provisions are valued.

contributions after 30 years of service.

Transferred Tier 2 Plan members keep the five-year requirement for nonserviceconnected disability. Those who were members on or before March 7, 1973 and all safety under the enhanced benefit formula will be exempt from paying member

There have been no changes in plan provisions since the previous valuation.

**Plan Amendments:** 

### Appendix A

**Member Contribution Rates** 

General Tier 1 (Non-enhanced) Members' Contribution Rates for Members Not Receiving Benefits under 2% at 55 Formula from the December 31, 2007 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

	Basic		Basic COLA		Total	
Entry Age	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
15	3.59%	5.38%	1.78%	2.67%	5.37%	8.05%
16	3.65%	5.47%	1.81%	2.71%	5.46%	8.18%
17	3.71%	5.56%	1.84%	2.76%	5.55%	8.32%
18	3.76%	5.64%	1.87%	2.80%	5.63%	8.44%
19	3.82%	5.73%	1.89%	2.84%	5.71%	8.57%
20	3.88%	5.82%	1.93%	2.89%	5.81%	8.71%
21	3.95%	5.92%	1.96%	2.94%	5.91%	8.86%
22	4.01%	6.01%	1.99%	2.98%	6.00%	8.99%
23	4.07%	6.10%	2.01%	3.02%	6.08%	9.12%
24	4.13%	6.20%	2.05%	3.07%	6.18%	9.27%
25	4.20%	6.30%	2.08%	3.12%	6.28%	9.42%
26	4.27%	6.40%	2.11%	3.17%	6.38%	9.57%
27	4.33%	6.50%	2.15%	3.22%	6.48%	9.72%
28	4.40%	6.60%	2.18%	3.27%	6.58%	9.87%
29	4.47%	6.70%	2.21%	3.32%	6.68%	10.02%
30	4.54%	6.81%	2.25%	3.38%	6.79%	10.19%
31	4.61%	6.92%	2.29%	3.43%	6.90%	10.35%
32	4.69%	7.03%	2.33%	3.49%	7.02%	10.52%
33	4.76%	7.14%	2.36%	3.54%	7.12%	10.68%
34	4.83%	7.25%	2.40%	3.60%	7.23%	10.85%
35	4.91%	7.37%	2.43%	3.65%	7.34%	11.02%
36	4.99%	7.49%	2.47%	3.71%	7.46%	11.20%
37	5.07%	7.61%	2.51%	3.77%	7.58%	11.38%

Calculated Under Recommended Assumptions

	Basic		COLA		Total	
Entry Age	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
38	5.16%	7.74%	2.56%	3.84%	7.72%	11.58%
39	5.25%	7.87%	2.60%	3.90%	7.85%	11.77%
40	5.33%	8.00%	2.65%	3.97%	7.98%	11.97%
41	5.43%	8.14%	2.69%	4.04%	8.12%	12.18%
42	5.53%	8.29%	2.74%	4.11%	8.27%	12.40%
43	5.63%	8.44%	2.79%	4.19%	8.42%	12.63%
44	5.74%	8.61%	2.85%	4.27%	8.59%	12.88%
45	5.84%	8.76%	2.89%	4.34%	8.73%	13.10%
46	5.95%	8.92%	2.95%	4.42%	8.90%	13.34%
47	6.04%	9.06%	2.99%	4.49%	9.03%	13.55%
48	6.13%	9.20%	3.04%	4.56%	9.17%	13.76%
49	6.22%	9.33%	3.09%	4.63%	9.31%	13.96%
50	6.29%	9.44%	3.12%	4.68%	9.41%	14.12%
51	6.30%	9.45%	3.13%	4.69%	9.43%	14.14%
52	6.29%	9.43%	3.12%	4.68%	9.41%	14.11%
53	6.23%	9.34%	3.09%	4.63%	9.32%	13.97%
54	6.05%	9.08%	3.00%	4.50%	9.05%	13.58%
55	6.05%	9.08%	3.00%	4.50%	9.05%	13.58%
56	6.05%	9.08%	3.00%	4.50%	9.05%	13.58%
57	6.05%	9.08%	3.00%	4.50%	9.05%	13.58%
58	6.05%	9.08%	3.00%	4.50%	9.05%	13.58%
59	6.05%	9.08%	3.00%	4.50%	9.05%	13.58%
60	6.05%	9.08%	3.00%	4.50%	9.05%	13.58%
terest:	7.80%					
alary Increase:	See Exhibit	t IV.				
OLA Loading:	49.59%					

#### General Tier 1 (Non-enhanced) Members' Contribution Rates for Members Not Receiving Benefits under 2% at 55 Formula from the December 31, 2007 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

# General Tier 1 (Enhanced) Members' Contribution Rates for Members Receiving Benefits under 2% at 55 Formula from the December 31, 2007 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

			nder Recommend	•		
		Basic COLA		Тс	otal	
Entry Age	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
15	3.11%	4.67%	1.87%	2.80%	4.98%	7.47%
16	3.17%	4.75%	1.89%	2.84%	5.06%	7.59%
17	3.21%	4.82%	1.93%	2.89%	5.14%	7.71%
18	3.27%	4.90%	1.95%	2.93%	5.22%	7.83%
19	3.32%	4.98%	1.99%	2.98%	5.31%	7.96%
20	3.37%	5.06%	2.02%	3.03%	5.39%	8.09%
21	3.43%	5.14%	2.05%	3.08%	5.48%	8.22%
22	3.48%	5.22%	2.09%	3.13%	5.57%	8.35%
23	3.53%	5.30%	2.11%	3.17%	5.64%	8.47%
24	3.59%	5.39%	2.15%	3.23%	5.74%	8.62%
25	3.65%	5.47%	2.19%	3.28%	5.84%	8.75%
26	3.71%	5.56%	2.22%	3.33%	5.93%	8.89%
27	3.77%	5.65%	2.25%	3.38%	6.02%	9.03%
28	3.83%	5.74%	2.29%	3.44%	6.12%	9.18%
29	3.89%	5.83%	2.33%	3.49%	6.22%	9.32%
30	3.95%	5.92%	2.37%	3.55%	6.32%	9.47%
31	4.01%	6.01%	2.40%	3.60%	6.41%	9.61%
32	4.07%	6.11%	2.44%	3.66%	6.51%	9.77%
33	4.13%	6.20%	2.47%	3.71%	6.60%	9.91%
34	4.20%	6.30%	2.51%	3.77%	6.71%	10.07%
35	4.27%	6.40%	2.55%	3.83%	6.82%	10.23%
36	4.33%	6.50%	2.59%	3.89%	6.92%	10.39%
37	4.40%	6.60%	2.63%	3.95%	7.03%	10.55%
38	4.47%	6.71%	2.68%	4.02%	7.15%	10.73%
39	4.54%	6.81%	2.72%	4.08%	7.26%	10.89%
40	4.61%	6.92%	2.76%	4.14%	7.37%	11.06%

**Calculated Under Recommended Assumptions** 

# General Tier 1 (Enhanced) Members' Contribution Rates for Members Receiving Benefits under 2% at 55 Formula from the December 31, 2007 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

	Basic		COLA		Total	
Entry Age	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
41	4.69%	7.04%	2.81%	4.22%	7.50%	11.26%
42	4.77%	7.15%	2.85%	4.28%	7.62%	11.43%
43	4.85%	7.27%	2.90%	4.35%	7.75%	11.62%
44	4.93%	7.39%	2.95%	4.43%	7.88%	11.82%
45	5.01%	7.52%	3.00%	4.50%	8.01%	12.02%
46	5.10%	7.65%	3.05%	4.58%	8.15%	12.23%
47	5.19%	7.79%	3.11%	4.67%	8.30%	12.46%
48	5.29%	7.93%	3.17%	4.75%	8.46%	12.68%
49	5.39%	8.09%	3.23%	4.85%	8.62%	12.94%
50	5.49%	8.23%	3.29%	4.93%	8.78%	13.16%
51	5.59%	8.38%	3.35%	5.02%	8.94%	13.40%
52	5.67%	8.51%	3.40%	5.10%	9.07%	13.61%
53	5.77%	8.65%	3.45%	5.18%	9.22%	13.83%
54	5.84%	8.76%	3.50%	5.25%	9.34%	14.01%
55	5.91%	8.87%	3.54%	5.31%	9.45%	14.18%
56	5.92%	8.88%	3.55%	5.32%	9.47%	14.20%
57	5.91%	8.86%	3.54%	5.31%	9.45%	14.17%
58	5.85%	8.78%	3.51%	5.26%	9.36%	14.04%
59	5.69%	8.53%	3.41%	5.11%	9.10%	13.64%
60	5.69%	8.53%	3.41%	5.11%	9.10%	13.64%

Interest:	7.80%
Salary Increase:	See Exhibit IV.
COLA Loading:	59.89%
Mortality:	RP-2000 Combined Healthy Mortality Table (30% Male and 70% Female, with ages set back two years)

	Ba	sic	COLA		Тс	otal
Entry Age	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
15	3.11%	4.67%	1.51%	2.27%	4.62%	6.94%
16	3.17%	4.75%	1.54%	2.31%	4.71%	7.06%
17	3.21%	4.82%	1.57%	2.35%	4.78%	7.17%
18	3.27%	4.90%	1.59%	2.39%	4.86%	7.29%
19	3.32%	4.98%	1.61%	2.42%	4.93%	7.40%
20	3.37%	5.06%	1.64%	2.46%	5.01%	7.52%
21	3.43%	5.14%	1.67%	2.50%	5.10%	7.64%
22	3.48%	5.22%	1.69%	2.54%	5.17%	7.76%
23	3.53%	5.30%	1.72%	2.58%	5.25%	7.88%
24	3.59%	5.39%	1.75%	2.62%	5.34%	8.01%
25	3.65%	5.47%	1.77%	2.66%	5.42%	8.13%
26	3.71%	5.56%	1.81%	2.71%	5.52%	8.27%
27	3.77%	5.65%	1.83%	2.75%	5.60%	8.40%
28	3.83%	5.74%	1.86%	2.79%	5.69%	8.53%
29	3.89%	5.83%	1.89%	2.84%	5.78%	8.67%
30	3.95%	5.92%	1.92%	2.88%	5.87%	8.80%
31	4.01%	6.01%	1.95%	2.93%	5.96%	8.94%
32	4.07%	6.11%	1.98%	2.97%	6.05%	9.08%
33	4.13%	6.20%	2.01%	3.02%	6.14%	9.22%
34	4.20%	6.30%	2.05%	3.07%	6.25%	9.37%
35	4.27%	6.40%	2.08%	3.12%	6.35%	9.52%
36	4.33%	6.50%	2.11%	3.16%	6.44%	9.66%
37	4.40%	6.60%	2.14%	3.21%	6.54%	9.81%
38	4.47%	6.71%	2.18%	3.27%	6.65%	9.98%
39	4.54%	6.81%	2.21%	3.32%	6.75%	10.13%

General Tier 3 (Enhanced) Members' Contribution Rates for Members Receiving Benefits under 2% at 55 Formula from the December 31, 2007 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

## SECTION 4: Reporting Information for the Contra Costa County Employees' Retirement Association

# \*segal

# General Tier 3 (Enhanced) Members' Contribution Rates for Members Receiving Benefits under 2% at 55 Formula from the December 31, 2007 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

	Bas	sic	CC	DLA	То	otal
Entry Age	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
40	4.61%	6.92%	2.25%	3.37%	6.86%	10.29%
41	4.69%	7.04%	2.29%	3.43%	6.98%	10.47%
42	4.77%	7.15%	2.32%	3.48%	7.09%	10.63%
43	4.85%	7.27%	2.36%	3.54%	7.21%	10.81%
44	4.93%	7.39%	2.40%	3.60%	7.33%	10.99%
45	5.01%	7.52%	2.44%	3.66%	7.45%	11.18%
46	5.10%	7.65%	2.48%	3.72%	7.58%	11.37%
47	5.19%	7.79%	2.53%	3.79%	7.72%	11.58%
48	5.29%	7.93%	2.57%	3.86%	7.86%	11.79%
49	5.39%	8.09%	2.63%	3.94%	8.02%	12.03%
50	5.49%	8.23%	2.67%	4.01%	8.16%	12.24%
51	5.59%	8.38%	2.72%	4.08%	8.31%	12.46%
52	5.67%	8.51%	2.76%	4.14%	8.43%	12.65%
53	5.77%	8.65%	2.81%	4.21%	8.58%	12.86%
54	5.84%	8.76%	2.84%	4.26%	8.68%	13.02%
55	5.91%	8.87%	2.88%	4.32%	8.79%	13.19%
56	5.92%	8.88%	2.88%	4.32%	8.80%	13.20%
57	5.91%	8.86%	2.87%	4.31%	8.78%	13.17%
58	5.85%	8.78%	2.85%	4.27%	8.70%	13.05%
59	5.69%	8.53%	2.77%	4.15%	8.46%	12.68%
60	5.69%	8.53%	2.77%	4.15%	8.46%	12.68%
nterest: Galary Increase: COLA Loading: Mortality:	7.80% See Exhibit 48.68% RP-2000 Ce		fortality Table (309	6 Male and 70% Fe	male, with ages set	back two years

### **Calculated Under Recommended Assumptions**

Entry Age	Basic	COLA	Total
15	7.85%	3.89%	11.74%
16	7.85%	3.89%	11.74%
17	7.85%	3.89%	11.74%
18	7.85%	3.89%	11.74%
19	7.85%	3.89%	11.74%
20	7.85%	3.89%	11.74%
21	7.85%	3.89%	11.74%
22	7.97%	3.95%	11.92%
23	8.09%	4.01%	12.10%
24	8.22%	4.08%	12.30%
25	8.35%	4.14%	12.49%
26	8.48%	4.21%	12.69%
27	8.61%	4.27%	12.88%
28	8.74%	4.33%	13.07%
29	8.87%	4.40%	13.27%
30	9.02%	4.47%	13.49%
31	9.15%	4.54%	13.69%
32	9.30%	4.61%	13.91%
33	9.45%	4.69%	14.14%
34	9.59%	4.76%	14.35%
35	9.75%	4.84%	14.59%
36	9.91%	4.91%	14.82%
37	10.08%	5.00%	15.08%
38	10.25%	5.08%	15.33%
39	10.43%	5.17%	15.60%
40	10.62%	5.27%	15.89%
41	10.82%	5.37%	16.19%
42	11.05%	5.48%	16.53%
43	11.31%	5.61%	16.92%
44	11.60%	5.75%	17.35%

Safety Tier A (Non-enhanced) Members' Contribution Rates for Members Not Receiving Benefits under 3% at 50
Formula from the December 31, 2007 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

Entry Age	Basic	COLA	Total
45	11.77%	5.84%	17.61%
46	11.80%	5.85%	17.65%
47	11.73%	5.82%	17.55%
48	11.56%	5.73%	17.29%
49	11.51%	5.71%	17.22%
50	11.51%	5.71%	17.22%
51	11.51%	5.71%	17.22%
52	11.51%	5.71%	17.22%
53	11.51%	5.71%	17.22%
54	11.51%	5.71%	17.22%
55	11.51%	5.71%	17.22%
56	11.51%	5.71%	17.22%
57	11.51%	5.71%	17.22%
58	11.51%	5.71%	17.22%
59	11.51%	5.71%	17.22%
60	11.51%	5.71%	17.22%

Safety Tier A (Non-enhanced) Members' Contribution Rates for Members Not Receiving Benefits under 3% at 50
Formula from the December 31, 2007 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

SECTION 4:

Interest:	7.80%
Salary Increase:	See Exhibit IV.
COLA Loading:	49.59%
Mortality:	RP-2000 Combined Healthy Mortality Table (85% Male and 15% Female, with ages set back two years)

	Calculated Under Recommended Assumptions				
Entry Age	Basic	COLA	Total		
15	7.85%	5.91%	13.76%		
16	7.85%	5.91%	13.76%		
17	7.85%	5.91%	13.76%		
18	7.85%	5.91%	13.76%		
19	7.85%	5.91%	13.76%		
20	7.85%	5.91%	13.76%		
21	7.85%	5.91%	13.76%		
22	7.97%	6.00%	13.97%		
23	8.09%	6.09%	14.18%		
24	8.22%	6.19%	14.41%		
25	8.35%	6.29%	14.64%		
26	8.48%	6.39%	14.87%		
27	8.61%	6.49%	15.10%		
28	8.74%	6.58%	15.32%		
29	8.87%	6.68%	15.55%		
30	9.02%	6.79%	15.81%		
31	9.15%	6.89%	16.04%		
32	9.30%	7.00%	16.30%		
33	9.45%	7.12%	16.57%		
34	9.59%	7.22%	16.81%		
35	9.75%	7.34%	17.09%		
36	9.91%	7.46%	17.37%		
37	10.08%	7.59%	17.67%		
38	10.25%	7.72%	17.97%		
39	10.43%	7.86%	18.29%		
40	10.62%	8.00%	18.62%		
41	10.82%	8.15%	18.97%		
42	11.05%	8.32%	19.37%		
43	11.31%	8.52%	19.83%		
44	11.60%	8.74%	20.34%		

# Safety Tier A (Enhanced) Members' Contribution Rates for Members Receiving Benefits under 3% at 50 Formula from the December 31, 2007 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

\*segal

\_\_\_\_\_

\_\_\_\_\_

Entry Age	Basic	COLA	Total
45	11.77%	8.87%	20.64%
46	11.80%	8.89%	20.69%
47	11.73%	8.84%	20.57%
48	11.56%	8.71%	20.27%
49	11.51%	8.67%	20.18%
50	11.51%	8.67%	20.18%
51	11.51%	8.67%	20.18%
52	11.51%	8.67%	20.18%
53	11.51%	8.67%	20.18%
54	11.51%	8.67%	20.18%
55	11.51%	8.67%	20.18%
56	11.51%	8.67%	20.18%
57	11.51%	8.67%	20.18%
58	11.51%	8.67%	20.18%
59	11.51%	8.67%	20.18%
60	11.51%	8.67%	20.18%

Safety Tier A (Enhanced) Members' Contribution Rates for Members Receiving Benefits under 3% at 50 Formula from
the December 31, 2007 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

Interest:	7.80%
See Exhibit IV:	See Exhibit IV.
COLA Loading:	75.32%
Mortality:	RP-2000 Combined Healthy Mortality Table (85% Male and 15% Female, with ages set back two years)
	These rates exclude up to an extra 9% of compensation (depending on their MOU) that most Safety Tier

These rates exclude up to an extra 9% of compensation (depending on their MOU) that most Safety Tier A (Enhanced) members contribute that reduces the employer's contribution rate.

**SECTION 4:** 

Calculated Under Recommended Assumptions				
Entry Age	Basic	COLA	Total	
15	7.48%	3.09%	10.57%	
16	7.48%	3.09%	10.57%	
17	7.48%	3.09%	10.57%	
18	7.48%	3.09%	10.57%	
19	7.48%	3.09%	10.57%	
20	7.48%	3.09%	10.57%	
21	7.48%	3.09%	10.57%	
22	7.60%	3.14%	10.74%	
23	7.72%	3.18%	10.90%	
24	7.83%	3.23%	11.06%	
25	7.96%	3.28%	11.24%	
26	8.08%	3.33%	11.41%	
27	8.20%	3.38%	11.58%	
28	8.33%	3.44%	11.77%	
29	8.46%	3.49%	11.95%	
30	8.59%	3.54%	12.13%	
31	8.73%	3.60%	12.33%	
32	8.86%	3.65%	12.51%	
33	9.00%	3.71%	12.71%	
34	9.15%	3.77%	12.92%	
35	9.29%	3.83%	13.12%	
36	9.44%	3.89%	13.33%	
37	9.60%	3.96%	13.56%	
38	9.76%	4.03%	13.79%	
39	9.94%	4.10%	14.04%	
40	10.13%	4.18%	14.31%	
41	10.31%	4.25%	14.56%	
42	10.53%	4.34%	14.87%	
43	10.71%	4.42%	15.13%	

Safety Tier C (Enhanced) Members' Contribution Rates for Members Receiving Benefits under 3% at 50 Formula from
the December 31, 2007 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

Entry Age	Basic	COLA	Total
44	10.82%	4.46%	15.28%
45	10.84%	4.47%	15.31%
46	10.77%	4.44%	15.21%
47	10.56%	4.36%	14.92%
48	11.01%	4.54%	15.55%
49	11.51%	4.75%	16.26%
50	11.51%	4.75%	16.26%
51	11.51%	4.75%	16.26%
52	11.51%	4.75%	16.26%
53	11.51%	4.75%	16.26%
54	11.51%	4.75%	16.26%
55	11.51%	4.75%	16.26%
56	11.51%	4.75%	16.26%
57	11.51%	4.75%	16.26%
58	11.51%	4.75%	16.26%
59	11.51%	4.75%	16.26%
60	11.51%	4.75%	16.26%

Safety Tier C (Enhanced) Members' Contribution Rates for Members Receiving Benefits under 3% at 50 Formula from	
the December 31, 2007 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)	

Interest:	7.80%
See Exhibit IV:	See Exhibit IV.
COLA Loading:	41.25%
Mortality:	RP-2000 Combined Healthy Mortality Table (85% Male and 15% Female, with ages set back two years)

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SECTION 4:

\*segal