Alameda County Employees' Retirement Association

Actuarial Valuation and Review as of December 31, 2008

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July 13, 2009

Board of Retirement Alameda County Employees' Retirement Association 475 – 14<sup>th</sup> Street, Suite 1000 Oakland, CA 94612

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of December 31, 2008. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2009-2010 and analyzes the preceding year's experience. The results of this valuation were prepared using the actuarial assumptions and methods recommended in the triennial experience study as of November 30, 2007.

The census and financial information were prepared by ACERA. That assistance is gratefully acknowledged. The actuarial calculations were completed under the supervision of Andy Yeung, ASA, MAAA, Enrolled Actuary.

This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices, including Actuarial Standards of Practice (ASOPs) Nos. 4, 27, 35, 44, and all other relevant ASOPs. In our opinion, the combined operation of the assumptions and the methods applied in this valuation fairly represent past and anticipated future experience of the Association and meet the parameters required by GASB Statement 25. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate.

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 By:

bul Chyla

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

Arely Yeung

Andy Yeung, ASA, MAAA, EA Vice President and Associate Actuary

HEM/bqb:hy

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#### Purpose

This report has been prepared by The Segal Company to present a valuation of the Alameda County Employees' Retirement Association as of December 31, 2008. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- > The benefit provisions of the Retirement Association, as administered by the Board of Retirement;
- > The characteristics of covered active members, inactive vested members, retired members and beneficiaries as of November 30, 2008, provided by the Retirement Association;
- > The assets of the Plan as of December 31, 2008, provided by the Retirement Association;
- > Economic assumptions regarding future salary increases and investment earnings; and
- > Other actuarial assumptions, regarding employee terminations, retirement, death, etc. that the Board has adopted for the December 31, 2008 valuation.

One of the general goals of an actuarial valuation is to establish contributions that fully fund the Association'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.

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 consistent, both internally and with prior year's information.

The contribution requirements are determined as a percentage of payroll. The Association's employer rates provide for both normal cost and a payment or credit to amortize any unfunded or overfunded actuarial accrued liabilities. In this valuation, we have continued with the Board's funding policy to amortize the Association's entire unfunded actuarial accrued liability as of December 31, 2008 over a declining 24-year period. The aggregate employer contribution rate calculated using the declining 24-year amortization period is 16.91% of payroll. In this valuation, we have applied the 8.00% net investment earnings and 3.75% inflation assumptions adopted by the Board. The 8.00% investment return assumption has been developed without taking into consideration the impact of the "excess earnings" sharing mechanism between the SRBR and the Retirement Plan.

The rates calculated in this report may 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:

Ref: Pg. 47	The results of this valuation reflect changes in actuarial assumptions as recommended by Segal and adopted by the Association for the December 31, 2008 valuation. These changes were documented in our triennial experience study as of November 30, 2007 and are also outlined in Section 4, Exhibit IV.
Ref: Pg. 45	In the December 31, 2007 valuation, the ratio of the valuation value of assets to actuarial accrued liabilities was 89.2%. In this December 31, 2008 valuation, the funding ratio has declined to 83.9%.
	The Association's unfunded actuarial accrued liability (UAAL) as of December 31, 2007 was \$552.2 million. In this year's valuation, the UAAL has increased to \$893.9 million.
Ref: Pg. 40	The Plan has a net actuarial experience loss of about \$345.2 million. A reconciliation of the Association's UAAL is provided in Section 3, Exhibit H.
	Employer rates for ACMC/Court/First 5 are higher than the County's rates to reflect that only the County has received a reimbursement of \$4.1 million for the implicit retiree health benefit subsidy paid by the County for 2008. The \$4.1 million together with the unused credit from prior years' transfer have been amortized over 24 years.
Ref: Pg. 21	The aggregate employer rate calculated in this valuation has increased from 14.92% of payroll to 16.91% of payroll. The reasons for this change are: (i) lower than expected return on investments, (ii) higher than expected salary increase, and (iii) other actuarial losses, offset by (iv) change in the market value corridor from 80%-120% to 60%-140% and (v) change in actuarial assumptions as a result of the triennial experience study. A reconciliation of the Association's aggregate employer rate is provided in Section 2, Subsection D (see Chart 15). A schedule of the projected contributions by each participating employer is provided in Appendix B.
<i>Ref: Pg. 22 and Pg. 70</i>	The <u>aggregate</u> member rate calculated in this valuation has remained unchanged at 8.66% of payroll, because the changes in member rate due to change in membership demographics and change in actuarial assumptions offset each other. A reconciliation of the Association's aggregate member rate is provided in Section 2, Subsection D (see Chart 16). The member rates have been updated to reflect the triennial experience study as of November 30, 2007 and the valuation as of December 31, 2008. These rates are provided in Appendix A of this report.
	> When we prepared our triennial experience study as of November 30, 2007, we pointed out in that report that the aggregate employer rate would slightly decrease and the aggregate member rate would stay unchanged as a result of applying the assumptions recommended in that study. However, as we also pointed out in that report, the Safety employer and member

rates would be expected to increase while the General employer and member rates would be expected to decrease. The Board may want to keep these points in mind when reviewing the results in this report.

Ref: Pg. 6

As indicated in Section 2, Subsection B (see Chart 7) of this report, the total unrecognized investment losses as of December 31, 2008 is \$1,522.4 million. These investment losses will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, and will offset any investment gains that may occur after December 31, 2008. This implies that if the Association earns the assumed net rate of investment return of 8.00% per year on a **market value** basis, it will result in investment losses on the actuarial value of assets in the next few years. So, if the actual market return is equal to the assumed 8.00% rate and all other actuarial assumptions are met, the contribution requirements would increase in each of the next few years.

The deferred losses of \$1,522.4 million represent 40% of the market value of assets as of December 31, 2008. Unless offset by future investment gains or other favorable experience, the recognition of the \$1,522.4 million market losses is expected to have a significant impact on the Association's future funded percentage and contribution rate requirements. This potential impact may be illustrated as follows:

- If the deferred losses were recognized immediately in the valuation value of assets, the funded percentage would decrease from 83.9% to 56.4%.
- If the deferred losses were recognized immediately in the valuation value of assets, the aggregate employer rate would increase from 16.91% to about 28% of payroll.
- > The actuarial valuation report as of December 31, 2008 is based on financial information as of that date. Changes in the value of assets subsequent to that date, to the extent that they exist, are not reflected. Declines in asset values will increase the actuarial cost of the plan, while increases will decrease the actuarial cost of the plan.
- Effective October 1, 2008, electing General active members of the Livermore Area Recreation and Park District (LARPD) have been granted a benefit improvement for all service under the 2.5% @ 55 formula. These members and all new LARPD members hired after that date have been placed in the new General Tier 3. In the prior valuation, all LARPD members were classified as General Tier 1.

#### Impact of Future Experience on Contribution Rates

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

- 1) difference between actual experience and anticipated experience;
- 2) changes in actuarial assumptions or methods;
- 3) changes in statutory provisions; and
- 4) difference between the contribution rates determined by the valuation and those adopted by the Board.

#### SECTION 1: Valuation Summary for the Alameda County Employees' Retirement Association

	Decemi	December 31, 2007		
Employer Contribution Rates:		Estimated		Estimated
<u>County</u>	Total Rate	Annual Amount <sup>(1)</sup>	Total Rate	Annual Amount (1)
General Tier 1	14.60%	\$8,083	13.81%	\$7,645
General Tier 2	13.05	54,376	11.89	49,543
Safety Tier 1	43.51	4,412	34.90	3,539
Safety Tier 2	33.51	46,044	27.46	37,731
County Combined	18.23	112,915	15.89	98,458
ACMC/Court/First 5				
General Tier 1	14.74	2,983	13.92	2,817
General Tier 2	13.19	28,386	12.00	25,824
District				
General Tier 1	19.50	1,092	18.89	1,057
General Tier 3	22.65	826	22.11	806
All Combined	16.91	146,202	14.92	128,962
Average Member Contribution Rates:		Estimated		Estimated
0	Total Rate	Annual Amount <sup>(1)</sup>	Total Rate <sup>(2)</sup>	Annual Amount (1
General Tier 1	9.42%	\$7,649	9.74%	\$7,909
General Tier 2	7.22	45,621	7.36	46,506
General Tier 3	12.44	454	12.80	467
Safety Tier 1	14.37	1,457	13.85	1,405
Safety Tier 2	14.29	19,635	13.49	18,536
All categories combined	8.66	74,816	8.66	74,823
Funded Status:				
Actuarial accrued liability <sup>(3)</sup>	\$5,537,919		\$5,112,403	
Valuation value of assets <sup>(4)</sup>	4,644,010		4,560,213	
Funded percentage	83.9%		89.2%	
Unfunded Actuarial Accrued Liability	\$893,909		\$552,190	
Key Economic Assumptions:				
Interest rate	8.00%		8.00%	
Inflation rate	3.75%		3.75%	
Across-the-board salary increase	0.25%		0.25%	

(1) Based on December 31, 2008 projected annual compensation.

<sup>(2)</sup> Average rates have been recalculated by applying the individual entry age based member rates determined in the December 31, 2007 valuation to the Association membership as of December 31, 2008.

<sup>(3)</sup> Excludes liabilities held for SRBR and other non-valuation reserves.

<sup>(4)</sup> Excludes Reserve for Interest Fluctuations (Contingency Reserve) if positive, Supplemental Retirees Benefit Reserve, and other nonvaluation reserves (Death Benefit – Burial & 401 (h) Reserves).

	December 31, 2008	December 31, 2007	Percentage Change
Active Members:			
Number of members	11,173	10,912	2.4%
Average age	46.7	46.6	N/A
Average service	11.0	10.9	N/A
Projected total compensation	\$864,260,000	\$793,558,000	8.9%
Average projected compensation	\$77,353	\$72,723	6.4%
Retired Member and Beneficiaries:			
Number of members:			
Service retired	5,404	5,280	2.3%
Disability retired	788	774	1.8%
Beneficiaries	1,054	1,129	-6.6%
Total	7,246	7,183	0.9%
Average age	70.5	70.8	N/A
Average monthly benefit <sup>(1)</sup>	\$2,825	\$2,630	7.4%
Vested Terminated Members:			
Number of vested terminated members (2)	1,773	1,730	2.5%
Average age	47.6	47.2	N/A
Summary of Financial Data (dollar amounts in thousands):			
Market value of assets	\$3,805,950	\$5,574,780	-31.7%
Return on market value of assets	-30.65%	8.10%	N/A
Actuarial value of assets	\$5,328,330	\$5,317,636	0.2%
Return on actuarial value of assets	1.54%	13.16%	N/A
Valuation value of assets	\$4,644,010	\$4,560,214	1.8%
Return on valuation value of assets	2.61%	11.03%	N/A

(1) Excludes monthly benefits payable from the SRBR.

(2) Includes members who left their contributions on deposit even though they have less than five years of service.

#### A. MEMBER DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, 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, and C.

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

CHART 1

Member Population: 2001 – 2008

Year Ended December 31	Active Members	Vested Terminated Members*	Retired Members and Beneficiaries	Ratio of Non-Actives to Actives
2001	10,974	1,025	5,867	0.63
2002	11,338	1,141	5,996	0.63
2003	11,220	1,224	6,287	0.67
2004	10,556	1,361	6,475	0.74
2005	10,503	1,522	6,718	0.78
2006	10,662	1,722	6,936	0.81
2007	10,912	1,730	7,183	0.82
2008	11,173	1,773	7,246	0.81

\*Includes terminated members due a refund of member contributions

#### **Active Members**

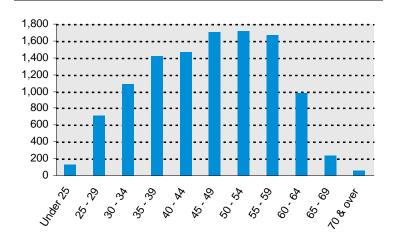
Plan costs are affected by the age, years of service and compensation of active members. In this year's valuation, there were 11,173 active members with an average age of 46.7 years, average years of service of 11.0 and average compensation of \$77,353. The 10,912 active members in the prior valuation had an average age of 46.6 years, average service of 10.9 and average compensation of \$72,723.

#### **Inactive Members**

In this year's valuation, there were 1,773 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their member contributions versus 1,730 in the prior valuation

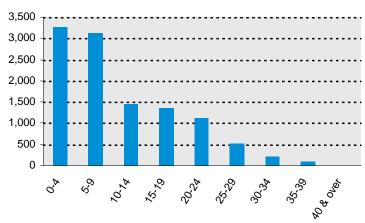
### CHART 2

Distribution of Active Members by Age as of December 31, 2008



#### CHART 3

Distribution of Active Members by Years of Service as of December 31, 2008



*These graphs show a distribution of active* 

members by age and by

years of service. Age and years of service have been projected to December 31,

2008 based on census data

collected as of

November 30, 2008.

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

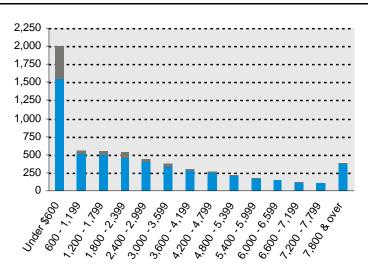
As of December 31, 2008, 6,192 retired members and 1,054 beneficiaries were receiving total monthly benefits of \$20,469,375. For comparison, in the previous valuation, there were 6,054 retired members and 1,129 beneficiaries receiving monthly benefits of \$18,901,954. These monthly benefits exclude supplemental COLA benefits payable from the Supplemental Retirees Benefit Reserve (SRBR).

#### These graphs show a distribution of the current retired members based on their monthly amount and age, by type of pension. Age has been projected to December 31, 2008 based on census data collected as of November 30, 2008.

Disability
Regular

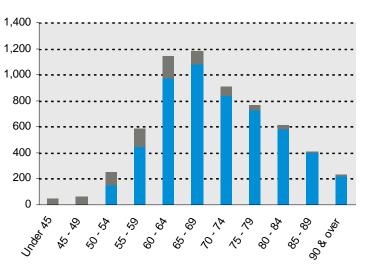
Distribution of Retired Members (Excl. Beneficiaries) by Type and by Monthly Amount as of December 31, 2008

CHART 4





Distribution of Retired Members (Excl. Beneficiaries) by Type and by Age as of December 31, 2008



3

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

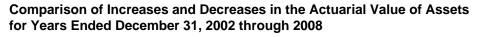
Retirement plan funding anticipates that, over the long term, both contributions and net investment earnings (less investment fees and administrative expenses) will be needed to cover benefit payments.

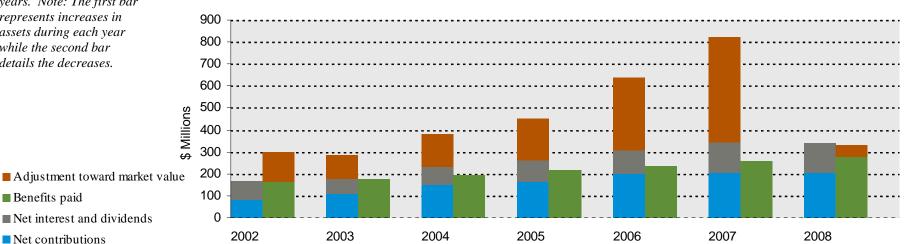
Retirement plan assets change as a result of the net impact of these income and expense components. The adjustment toward market value shown in the chart is the "non-cash" earnings on investments implicitly included in the actuarial value of assets. Additional financial information, including a summary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

#### **CHART 6**

components of changes in the actuarial value of assets over the last seven years. Note: The first bar represents increases in assets during each year while the second bar details the decreases.

The chart depicts the





Benefits paid

Net contributions

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 fluctuations 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 of assets.

The determination of the Actuarial Value of Assets is provided on the following page.

#### CHART 7

Determination of Actuarial Value of Assets for Year Ended December 31, 2008

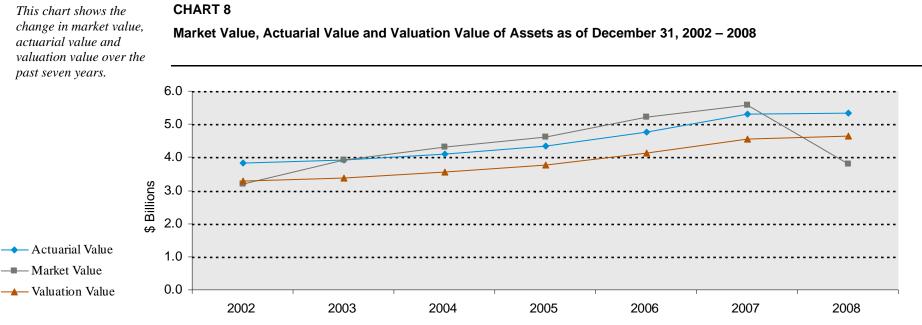
Six Month Period			x Month Period Total Actual Expected Market Market		Investment	Deferred	Deferred
	From	То	Return (net)	Return (net)	Gain (Loss)	Factor	Return
	01/01/2004	06/30/2004	\$94,823,439	\$156,374,705	\$(61,551,266)	0.0	\$0
	07/01/2004	12/31/2004	352,972,448	159,211,156	193,607,452 <sup>(1)</sup>	0.1	19,360,745
	01/01/2005	06/30/2005	33,986,034	172,336,225	(138,350,191)	0.2	(27,670,038)
	07/01/2005	12/31/2005	313,736,548	168,257,993	145,478,556	0.3	43,643,567
	01/01/2006	06/30/2006	156,835,279	179,867,988	(23,032,709)	0.4	(9,213,083)
	07/01/2006	12/31/2006	470,691,714	187,573,480	283,118,234	0.5	141,559,117
	01/01/2007	06/30/2007	365,085,677	205,298,089	159,787,588	0.6	95,872,553
	07/01/2007	12/31/2007	54,493,128	221,394,733	(166,901,605)	0.7	(116,831,124)
	01/01/2008	06/30/2008	(440,360,426)	222,347,812	(662,708,239)	0.8	(530,166,591)
	07/01/2008	12/31/2008	(1,257,698,668)	203,277,365	(1,460,976,033)	0.9	(1,314,878,430)
1.	Total Deferred Re	eturn					\$(1,698,323,284)
2.	Net Market Value	;					3,805,950,089
3.	Actuarial Value o	f Assets (Item 2 – Ite	em 1)				5,504,273,373
4.	Actuarial Value of Assets – Corridor Limits:						
	a. Lower Limit	- 60% of Net Marke	et Value				2,283,570,053
	b. Upper Limit	– 140% of Net Mark	et Value				5,328,330,124
5.	Actuarial Value o	f Assets (within corr	idor)				5,328,330,124
6.	Non-valuation res	erves and designatio	ns:				
	a. Reserve for l	Interest Fluctuations	(Contingency Reserve)	, but no less than \$0			0
	b. Supplementa	l Retirees Benefit Re	eserve (SRBR)				677,383,980
	c. Other Non-W	aluation Reserves (I	Death Benefit-Burial &	401(h) Reserves)			11,084,789
	d. SRBR Trans	fer to Employer Adv	ance Reserve				(4,149,463)
	e. Subtotal						\$684,319,306
7.	Valuation Value of	of Assets (Item 5 – It	em 6e)				\$4,644,010,818

<sup>(2)</sup>The deferred return is \$1,522,380,035 after the application of the 60%-140% market value corridor.

Note: Results may not add due to rounding.

The chart shows the determination of the

The market value, actuarial value, and valuation value of assets are representations of ACERA'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 asset value is significant because ACERA's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.



\*segal

#### 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 experience loss was \$336.5 million, a net loss of \$244.5 million from investments (which is after an adjustment of \$761.2 million due to a change in the market value corridor from 80%-120% to 60%-140%) and a loss of \$92.0 million from all other sources. The net experience variation from individual sources other than investments was 1.66% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

# This chart provides a summary of the actuarial experience during the past year.

#### CHART 9

Actuarial Experience for Year Ended December 31, 2008

1.	Net loss from investments <sup>(1)</sup>	\$244,549,000
2.	Net loss from other experience <sup>(2)</sup>	<u>91,981,000</u>
3.	Net experience loss: $(1) + (2)$	\$336,530,000

<sup>(1)</sup> Details in Chart 10.

<sup>(2)</sup> See Section 3, Exhibit H.

#### **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 ACERA's investment policy. For valuation purposes, the assumed rate of return on the valuation value of assets was 8.00%. The actual rate of return on a valuation basis for the 2008 plan year was 2.61%.

Since the actual return for the year was less than the assumed return, ACERA experienced an actuarial loss during the year ended December 31, 2008 with regard to its investments.

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

Investment Experience for Year Ended December 31, 2008 – Valuation Value and Actuarial Value of Assets

Voluction Voluc	Actuarial Value
valuation value	Actuariai value
\$118,705,974	\$81,465,408
4,540,684,517	5,282,250,119
2.61%	1.54%
8.00%	8.00%
363,254,761	422,580,009
<u>\$(244,548,787)</u>	<u>\$(341,114,601)</u>
	4,540,684,517 2.61% 8.00% 363,254,761

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 rate of return on an actuarial, valuation, and market basis for the last seven years. Based on the assumptions adopted by the Board for the December 31, 2008 valuation, the investment return assumption is 8.00%.

#### CHART 11

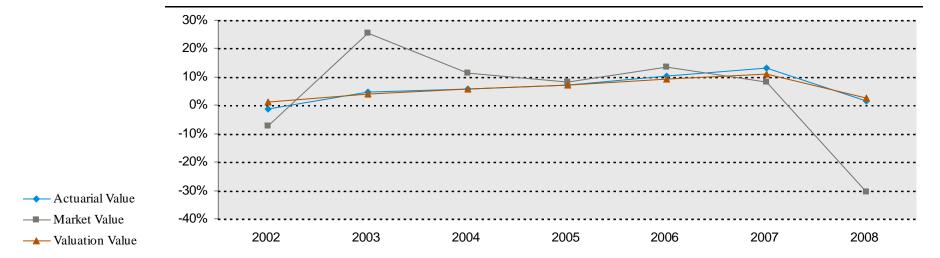
Investment Return – Valuation Value, Actuarial Value and Market Value: 2002 - 2008

	Valuatior Investmen		Actuarial Value Investment Return		Market Value Investment Return	
Year Ended December 31	Amount	Percent	Amount	Percent	Amount	Percent
2002	\$ 35,537,359	1.08%	-\$47,643,106	-1.22%	-\$252,420,614	-7.26%
2003	128,596,301	3.93%	173,434,404	4.58%	802,017,260	25.46%
2004	195,406,503	5.79%	229,088,351	5.87%	447,795,887	11.49%
2005	247,067,988	6.97%	285,732,957	6.99%	347,722,582	8.09%
2006	355,019,495	9.40%	440,937,597	10.19%	627,526,993	13.64%
2007	454,105,997	11.03%	621,715,716	13.16%	419,578,805	8.10%
2008	118,705,974	2.61%	81,465,408	1.54%	-1,698,059,095	-30.65%
Total	\$1,534,439,617		\$1,784,731,327		\$694,161,818	

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 Rates of Return for Years Ended December 31, 2002 - 2008



#### **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:

- > actual 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.

The net loss from this other experience for the year ended December 31, 2008 amounted to \$92.0 million which is 1.66% of the actuarial accrued liability. See Exhibit H for a detailed development of the Unfunded Actuarial Accrued Liability.

#### **D.** EMPLOYER AND MEMBER CONTRIBUTIONS

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)	The 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 annual rate of 4.00% (i.e., 3.75% inflation plus 0.25% across-the-board salary increase). The current UAAL is being recognized over a declining 24-year period.

The recommended employer contributions are provided on Chart 13.

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 members and Safety members, respectively. The basic contribution rate is determined so that the accumulation of a member's basic contributions made in a given year until a certain age will be sufficient to fund an annuity at that age that is equal to 1/100 of Final Average Salary for General Tier 1, General Tier 3, and all Safety members and 1/120 of Final Average Salary for General Tier 2 members. That age is 60 for General Tier 1 and Tier 2, 55 for General Tier 3, and 50 for all Safety members. It is assumed that contributions are made annually at the same rate, starting at entry age. In addition to the basic contributions, members pay one-half of the total normal cost necessary to fund cost-of-living benefits. As instructed by ACERA, we have also included a 3% cost-sharing contribution that we understand will be paid by Safety members even after they attain 30 years of service. Accumulation includes semi-annual crediting of interest at the assumed investment earnings rate. Following the procedure established by the Board, basic member rates have been adjusted to anticipate conversion of terminal pay at retirement.

The member contribution rates provided in Appendix A.

#### CHART 13

#### **Recommended Employer Contribution Rates (Dollar Amounts in Thousands)**

			Decembe	er 31, 2008			December	31, 2007
County Only	B	ASIC	CC	DLA	ТО	TAL	BASIC AN COMB	
	Rate	Estimated Annual <u>Amount</u> *	<u>Rate</u>	Estimated Annual <u>Amount*</u>	Rate	Estimated Annual <u>Amount*</u>	Rate	Estimated Annual <u>Amount*</u>
General Tier 1 Members								
Normal Cost	7.97%	\$4,412	2.49%	\$1,379	10.46%	\$5,791	11.45%	\$6,339
UAAL (Before POB Credit)	7.79%	4,313	1.25%	692	9.04%	5,005	7.44%	4,119
Pension Obligation Bond Credit	-3.20%	-1,772	-1.56%	-863	-4.76%	-2,635	-4.97%	-2,752
Implicit Retiree Health Benefit Subsidy	-0.14%	<u>-78</u>	0.00%	<u>0</u>	-0.14%	<u>-78</u>	<u>-0.11%</u>	<u>-61</u>
Total Contribution	12.42%	\$6,875	2.18%	\$1,208	14.60%	\$8,083	13.81%	\$7,645
General Tier 2 Members								
Normal Cost	7.51%	\$31,292	1.40%	\$5,833	8.91%	\$37,125	9.53%	\$39,709
UAAL (Before POB Credit)	7.79%	32,459	1.25%	5,208	9,04%	37,667	7.44%	31,000
Pension Obligation Bond Credit	-3.20%	-13,333	-1.56%	-6,500	-4.76%	-19,833	-4.97%	-20,708
Implicit Retiree Health Benefit Subsidy	-0.14%	<u>-583</u>	0.00%	<u>0</u>	-0.14%	<u>-583</u>	-0.11%	<u>-458</u>
Total Contribution	11.96%	\$49,835	1.09%	\$4,541	13.05%	\$54,376	11.89%	\$49,543
Safety Tier 1 Members								
Normal Cost	20.49%	\$2,078	7.39%	\$749	27.88%	\$2,827	23.75%	\$2,408
Member Cost Sharing Contributions	-3.00%	-304	0.00%	0	-3.00%	-304	-3.00%	-304
(Adjusted for Refunds)								
UAAL (Before POB Credit)	18.84%	1,911	4.18%	423	23.02%	2,334	18.88%	1,915
Pension Obligation Bond Credit	-2.66%	-270	-1.59%	-161	-4.25%	-431	-4.62%	-469
Implicit Retiree Health Benefit Subsidy	<u>-0.14%</u>	<u>-14</u>	0.00%	<u>0</u>	-0.14%	<u>-14</u>	-0.11%	<u>-11</u>
Total Contribution	33.53%	\$3,401	9.98%	\$1,011	43.51%	\$4,412	34.90%	\$3,539

#### **Recommended Employer Contribution Rates (Dollar Amounts in Thousands)**

				December 31, 2008			December 31, 2007	
County Only	В	BASIC COLA		DLA	A TOTAL		BASIC AND COLA COMBINED	
	Rate	Estimated Annual <u>Amount</u> *	Rate	Estimated Annual <u>Amount*</u>	Rate	Estimated Annual <u>Amount*</u>	Rate	Estimated Annual <u>Amount*</u>
Safety Tier 2 Members								
Normal Cost	14.97%	\$20,569	2.86%	\$3,930	17.83%	\$24,499	16.26%	\$22,342
Member Cost Sharing Contributions	-2.95%	-\$4,053	0.00%	0	-2.95%	-\$4,053	-2.95%	-\$4,053
(Adjusted for Refunds)								
UAAL (Before POB Credit)	18.84%	25,887	4.18%	5,743	23.02%	31,630	18.88%	25,941
Pension Obligation Bond Credit	-2.66%	-3,655	-1.59%	-2,185	-4.25%	-5,840	-4.62%	-6.348
Implicit Retiree Health Benefit Subsidy	<u>-0.14%</u>	<u>-192</u>	0.00%	<u>0</u>	-0.14%	<u>-192</u>	<u>-0.11%</u>	<u>-151</u>
Total Contribution	28.06%	\$38,556	5.45%	\$7,488	33.51%	\$46,044	27.46%	\$37,731
All County Categories Combined								
Normal Cost	9.42%	\$58,351	1.92%	\$11,891	11.34%	\$70,242	11.43%	\$70,798
Member Cost Sharing Contributions	-0.70%	-\$4,357	0.00%	0	-0.70%	-\$4,357	-0.70%	-\$4,357
(Adjusted for Refunds)								
UAAL (Before POB Credit)	10.42%	64,570	1.95%	12,066	12.37%	76,636	10.16%	62,975
Pension Obligation Bond Credit	-3.07%	-19,030	-1.57%	-9,709	-4.64%	-28,739	-4.89%	-30,277
Implicit Retiree Health Benefit Subsidy	<u>-0.14%</u>	<u>-867</u>	0.00%	<u>0</u>	<u>-0.14%</u>	<u>-867</u>	-0.11%	<u>-681</u>
Total Contribution	15.93%	\$98,667	2.30%	\$14,248	18.23%	\$112,915	15.89%	\$98,458

#### Recommended Employer Contribution Rates (Dollar Amounts in Thousands)

			Decembe	er 31, 2008			December	31, 2007
ACMC, Court & First 5 Only	B	ASIC	CC	DLA	то	TAL	BASIC AN COMB	
	Rate	Estimated Annual <u>Amount*</u>	<u>Rate</u>	Estimated Annual <u>Amount*</u>	Rate	Estimated Annual <u>Amount*</u>	Rate	Estimated Annual <u>Amount*</u>
General Tier 1 Members								
Normal Cost	7.97%	\$1,613	2.49%	\$504	10.46%	\$2,117	11.45%	\$2,317
UAAL (Before POB Credit)	7.79%	1,576	1.25%	253	9.04%	1,829	7.44%	1,506
Pension Obligation Bond Credit	-3.20%	<u>-648</u>	-1.56%	<u>-315</u>	-4.76%	<u>-963</u>	<u>-4.97%</u>	<u>-1,006</u>
Total Contribution	12.56%	\$2,541	2.18%	\$442	14.74%	\$2,983	13.92%	\$2,817
General Tier 2 Members								
Normal Cost	7.51%	\$16,162	1.40%	\$3,013	8.91%	\$19,175	9.53%	\$20,509
UAAL (Before POB Credit)	7.79%	16,764	1.25%	2,691	9.04%	19,455	7.44%	16,011
Pension Obligation Bond Credit	-3.20%	<u>-6,887</u>	-1.56%	<u>-3,357</u>	<u>-4.76%</u>	-10,244	<u>-4.97%</u>	<u>-10,696</u>
Total Contribution	12.10%	\$26,039	1.09%	\$2,347	13.19%	\$28,386	12.00%	\$25,824

#### **Recommended Employer Contribution Rates (Dollar Amounts in Thousands)**

		December 31, 2008					December 31, 2007	
Other Districts	В	BASIC COLA		DLA	TOTAL		BASIC AND COLA COMBINED	
	Rate	Estimated Annual <u>Amount*</u>	<u>Rate</u>	Estimated Annual <u>Amount*</u>	Rate	Estimated Annual <u>Amount*</u>	Rate	Estimated Annual <u>Amount*</u>
General Tier 1 Members								
Normal Cost	7.97%	\$446	2.49%	\$140	10.46%	\$586	11.45%	\$641
UAAL	<u>7.79%</u>	<u>436</u>	1.25%	<u>70</u>	<u>9.04%</u>	<u>506</u>	7.44%	<u>416</u>
Total Contribution	15.76%	\$882	3.74%	\$210	19.50%	\$1,092	18.89%	\$1,057
General Tier 3 Members								
Normal Cost	10.33%	\$377	3.51%	\$128	13.84%	\$505	14.50%	\$529
UAAL (Before POB Credit)	7.43%	<u>271</u>	<u>1.38%</u>	<u>50</u>	<u>8.81%</u>	<u>321</u>	7.61%	<u>277</u>
Total Contribution	17.76%	\$648	4.89%	\$178	22.65%	\$826	22.11%	\$806
All Categories Combined								
All Categories Combined								
Normal Cost (Net)	8.40%	\$72,592	1.81%	\$15,676	10.21%	\$88,268	10.46%	\$90,437
UAAL (Net)	<u>6.50%</u>	<u>56,185</u>	0.20%	<u>1,749</u>	<u>6.70%</u>	<u>57,934</u>	4.46%	<u>38,525</u>
Total Contribution	14.90%	\$128,777	2.01%	\$17,425	16.91%	\$146,202	14.92%	\$128,962

\* Amounts are in thousands and are based on the December 31, 2008 annual payroll (also in thousands) shown on the following page.

**Recommended Employer Contribution Rates (Dollar Amounts in Thousands)** 

#### Payroll Breakdown

	County Only	ACMC, Court <u>&amp; First 5</u>	Other <u>Districts</u>	<u>Total</u>
General Tier 1	\$55,363	\$20,236	\$5,598	\$81,197
General Tier 2	416,669	215,205		631,874
General Tier 3			3,646	3,646
Safety Tier 1	10,141			10,141
Safety Tier 2	137,402			137,402
Total	\$619,575	\$235,441	\$9,244	\$864,260

#### CHART 14

#### Breakdown of Employer Contribution Rate by Types of Benefit (For information purposes only)

A breakdown of the approximate portion of the employer contribution rate by the various types of benefit is as follows:

	General	Safety
Service and non-service connected disability benefits	17%	21%
Service retirement and other benefits	83%	79%_
	100%	100%

Note: In developing these percentages, we made the simplifying assumption that the liability for active and inactive members (including members who have already retired) can be approximated by the proportion of the normal cost required to fund disability and non-disability benefits.

The employer contribution rates as of December 31, 2008 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**

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

#### CHART 15

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

Reconciliation of Recommended Employer Contribution from December 31, 2007 to December 31, 2008 (Dollars in Thousands)

	Contribution Rate	Estimated Amount*
Recommended Contribution Rate as of December 31, 2007	14.92%	\$128,962
Effect of actuarial experience during 2008:		
1. Effect of investment loss under the 80%-120% market value corridor	7.54%	\$65,165
2. Effect of change to a 60%-140% market value corridor	-5.71	-49,349
3. Effect of higher than expected salary increases	0.29	2,506
4. Effect of change in assumptions	-0.14	-1,210
5. Effect of other experience (gain)/loss	0.01	128
Subtotal	1.99%	\$17,240
Recommended Contribution Rate as of December 31, 2008	16.91%	\$146,202

\* Based on December 31, 2008 projected compensation.

The member contribution rates as of December 31, 2008 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 Member Contribution from December 31, 2007 to December 31, 2008 (Dollar Amounts in Thousands)

	Contribution Rate	Estimated Amount*
Average Contribution Rate as of December 31, 2007	8.66%	\$74,823
1. Effect of change in membership demographics	-0.01%	-86
2. Effect of change in actuarial assumptions	0.01%	79
Average Contribution Rate as of December 31, 2008	8.66%	\$74,816

\* Based on December 31, 2008 projected compensation.

#### E. INFORMATION REQUIRED BY THE GASB

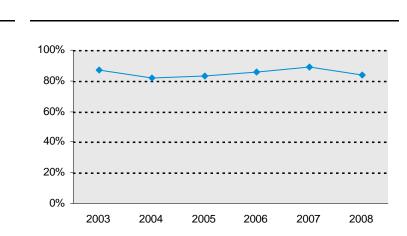
Governmental Accounting Standards Board (GASB) reporting information provides standardized information for comparative purposes of governmental pension plans. This information allows a reader of the financial statements to compare the funding status of one governmental plan to another on relatively equal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

Critical information to the 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 GASB funding requirements. Chart 17 below presents a graphical representation of this information for the Plan. The other critical piece of information regarding the Plan's financial status is the funded ratio. This ratio compares the actuarial value of assets to the actuarial accrued liabilities of the plan as calculated under the 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 funded ratio as of December 31, 2007 was 89.2%. This year's funded ratio decreased to 83.9%.

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

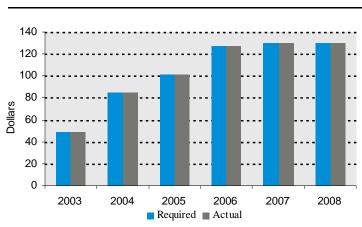
**CHART 18** 

Funded Ratio



## These graphs show key GASB factors.

CHART 17



**Required Versus Actual Contributions** 

#### EXHIBIT A

Table of Plan Coverage

i. General Tier 1

	Year Ended	December 31		
Category	2008	2007	Change From Prior Year	
Active members in valuation				
Number	978	1,109	-11.8%	
Average age	55.7	55.1	N/A	
Average service	25.6	24.9	N/A	
Projected total compensation	\$81,196,638	\$86,888,235	-6.6%	
Projected average compensation	\$83,023	\$78,348	6.0%	
Member account balances	\$270,381,879	\$279,263,747	-3.2%	
Total active vested members	906	1,029	-12.0%	
Vested terminated members				
Number	207	228	-9.2%	
Average age	56.7	56.3	N/A	
Retired members				
Number in pay status	3,640	3,661	-0.6%	
Average age	73.9	73.8	N/A	
Average monthly benefit <sup>(1)</sup>	\$3,026	\$2,820	7.3%	
Disabled members				
Number in pay status	243	246	-1.2%	
Average age	68.4	67.8	N/A	
Average monthly benefit <sup>(1)</sup>	\$2,236	\$2,117	5.6%	
Beneficiaries				
Number in pay status	792	873	-9.3%	
Average age	77.6	79.0	N/A	
Average monthly benefit <sup>(1)</sup>	\$1,393	\$1,267	9.9%	

<sup>(1)</sup> Excludes supplemental benefits paid from SRBR.

Note: Based on the data provided for the December 31, 2008 actuarial valuation, the average age at retirement for the General Tier 1 service retirees and disabled retirees was 59.1 and 52.1, respectively.

#### SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

	Year Ended	December 31	
Category	2008	2007	Change From Prior Year
Active members in valuation			
Number	8,566	8,306	3.1%
Average age	46.6	46.4	N/A
Average service	9.4	9.1	N/A
Projected total compensation	\$631,874,480	\$575,420,739	9.8%
Projected average compensation	\$73,765	\$69,278	6.5%
Member account balances	\$487,871,542	\$431,996,552	12.9%
Total active vested members	5,864	5,774	1.6%
Vested terminated members			
Number	1,394	1,328	5.0%
Average age	46.6	46.0	N/A
Retired members			
Number in pay status	981	871	12.6%
Average age	66.0	65.5	N/A
Average monthly benefit <sup>(1)</sup>	\$1,557	\$1,388	12.2%
Disabled members			
Number in pay status	352	335	5.1%
Average age	57.7	57.1	N/A
Average monthly benefit <sup>(1)</sup>	\$1,952	\$1,889	3.3%
Beneficiaries			
Number in pay status	98	94	4.3%
Average age	60.4	61.0	N/A
Average monthly benefit <sup>(1)</sup>	\$946	\$877	7.9%

<sup>(1)</sup> Excludes supplemental benefits paid from SRBR.

EXHIBIT A

Note: Based on the data provided for the December 31, 2008 actuarial valuation, the average age at retirement for the General Tier 2 service retirees and disabled retirees was 60.9 and 50.1, respectively.

#### Supplemental Information for the Alameda County Employees' Retirement Association **SECTION 3:**

	Year Ended I	December 31	
Category	2008	<b>2007</b> <sup>(2)</sup>	Change From Prior Year
Active members in valuation			
Number	55	55	0.0%
Average age	47.5	47.5	N/A
Average service	12.1	12.3	N/A
Projected total compensation	\$3,645,994	\$3,541,271	3.0%
Projected average compensation	\$66,291	\$64,387	3.0%
Member account balances	\$6,184,250	\$6,172,514	0.2%
Total active vested members	37	38	-2.6%
Vested terminated members			
Number	0	0	N/A
Average age	N/A	N/A	N/A
Retired members			
Number in pay status	1	0	N/A
Average age	60.8	N/A	N/A
Average monthly benefit <sup>(1)</sup>	\$5,995	N/A	N/A
Disabled members			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit <sup>(1)</sup>	N/A	N/A	N/A
Beneficiaries			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit <sup>(1)</sup>	N/A	N/A	N/A

<sup>(1)</sup> Excludes supplemental benefits paid from SRBR.

**EXHIBIT A** 

<sup>(2)</sup> These members were also included in the General Tier 1 demographic information for the December 31, 2007 valuation shown on page 24.

Based on the data provided for the December 31, 2008 actuarial valuation, the average age at retirement for the General Tier 3 service retirees Note: was 60.7.

For all the General Tiers combine, the average age at retirement for the service retirees and disabled retirees was 59.5 and 50.9, respectively.

#### SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

Category	Year Ended December 31		
	2008	2007	Change From Prior Year
Active members in valuation			
Number	82	109	-24.8%
Average age	54.3	53.5	N/A
Average service	26.1	25.6	N/A
Projected total compensation	\$10,140,923	\$12,195,327	-16.8%
Projected average compensation	\$123,670	\$111,884	10.5%
Member account balances	\$37,965,084	\$45,758,989	-17.0%
Total active vested members	82	106	-22.6%
Vested terminated members			
Number	33	38	-13.2%
Average age	51.8	51.7	N/A
Retired members			
Number in pay status	660	643	2.6%
Average age	65.3	65.2	N/A
Average monthly benefit <sup>(1)</sup>	\$6,065	\$5,740	5.7%
Disabled members			
Number in pay status	102	104	-1.9%
Average age	62.5	61.5	N/A
Average monthly benefit <sup>(1)</sup>	\$4,474	\$4,166	7.4%
Beneficiaries			
Number in pay status	134	133	0.8%
Average age	69.6	70.8	N/A
Average monthly benefit <sup>(1)</sup>	\$2,212	\$2,127	4.0%

<sup>(1)</sup> Excludes supplemental benefits paid from SRBR.

EXHIBIT A

Note: Based on the data provided for the December 31, 2008 actuarial valuation, the average age at retirement for the Safety Tier 1 service retirees and disabled retirees was 54.7 and 48.0, respectively.

Table of Plan Coverage			
v. Safety Tier 2			
	Year Ended	December 31	_
			Change From
Category	2008	2007	Prior Year
Active members in valuation			
Number	1,492	1,388	7.5%
Average age	40.8	40.7	N/A
Average service	9.7	9.5	N/A
Projected total compensation	\$137,401,866	\$119,053,779	15.4%
Projected average compensation	\$92,092	\$85,774	7.4%
Member account balances	\$167,749,533	\$141,301,784	18.7%
Total active vested members	1,023	1,007	1.6%
Vested terminated members			
Number	139	136	2.2%
Average age	42.7	42.3	N/A
Retired members			
Number in pay status	122	105	16.2%
Average age	60.9	60.6	N/A
Average monthly benefit <sup>(1)</sup>	\$3,460	\$3,099	11.6%
Disabled members			
Number in pay status	91	89	2.2%
Average age	53.2	52.6	N/A
Average monthly benefit <sup>(1)</sup>	\$2,935	\$2,827	3.8%
Beneficiaries			
Number in pay status	30	29	3.4%
Average age	60.0	57.4	N/A
Average monthly benefit <sup>(1)</sup>	\$1,677	\$1,615	3.8%

<sup>(1)</sup> Excludes supplemental benefits paid from SRBR.

Note: Based on the data provided for the December 31, 2008 actuarial valuation, the average age at retirement for the Safety Tier 2 service retirees and disabled retirees was 56.5 and 45.9, respectively.

For all the Safety Tiers combined, the average age at retirement for the service retirees and disabled retirees was 55.0 and 47.0, respectively.

For all the General and Safety Tiers combined, the average age at retirement for the service retirees and disabled retirees was 58.8 and 50.0, respectively.

Members in Active Service and Projected Average Compensation By Age, Years of Service as of December 31, 2008

#### i. General Tier 1

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	2	2								
	\$42,473	\$42,473								
25 - 29	8	8								
	65,866	65,866								
30 - 34	12	11	1							
	69,955	71,204	\$56,216							
35 - 39	13	10	3							
	73,716	73,176	75,515							
40 - 44	25	11	8	2		2	2			
	61,487	66,347	57,249	\$54,190		\$52,482	\$68,016			
45 - 49	62	6	2	3	4	11	35	1		
	69,180	65,699	59,912	56,022	\$77,344	73,914	69,108	\$65,890		
50 - 54	253	11	5	7	14	41	123	38	14	
	81,600	73,249	65,605	63,867	61,087	89,571	82,936	84,512	\$80,272	
55 - 59	357	8	5	9	20	45	143	87	40	
	83,662	73,618	70,169	70,246	80,215	72,206	86,146	91,354	79,379	
60 - 64	208	3	6	6	2	27	65	63	33	3
	91,515	91,634	61,691	80,629	92,751	80,588	91,982	98,401	93,792	\$90,575
65 - 69	30	2		1	2	2	8	6	8	1
	97,054	66,912		53,265	90,831	81,825	92,455	59,434	145,565	118,447
70 & over	8		1		1		1		2	3
	62,702		96,420		47,076		46,703		68,247	58,308
Total	978	72	31	28	43	128	377	195	97	7
	\$83,023	\$70,199	\$64,710	\$67,599	\$74,026	\$79,525	\$84,456	\$91,185	\$89,640	\$80,728

Note: Age and years of service were projected from November 30, 2008 to December 31, 2008.

Members in Active Service and Projected Average Compensation By Age, Years of Service as of December 31, 2008

#### ii. General Tier 2

Years of Service										
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & over	
Under 25	103	103								
	\$51,672	\$51,672								
25 - 29	513	449	63	1						
	58,448	58,845	\$55,569	\$61,758						
30 - 34	827	492	307	28						
	67,161	68,178	65,998	62,046						
35 - 39	1,107	431	487	142	46	1				
	72,704	70,866	72,820	80,208	\$66,126	\$45,388				
40 - 44	1,168	324	406	223	168	47				
	74,658	73,206	73,488	80,081	72,910	75,301				
45 - 49	1,382	309	417	195	258	199	4			
	75,348	75,810	71,600	74,019	79,237	78,923	\$66,644			
50 - 54	1,309	254	372	201	260	206	16			
	78,233	72,798	77,273	75,822	80,416	83,500	113,818			
55 - 59	1,194	209	328	175	253	215	13		1	
	78,137	74,786	72,604	79,949	78,817	86,363	98,120		\$75,557	
60 - 64	712	110	198	117	158	112	15	1	1	
	77,081	79,392	73,131	79,013	74,566	80,861	92,842	\$68,438	125,217	
65 - 69	201	24	64	38	41	31	3			
	74,477	83,859	69,815	77,209	66,529	81,925	95,965			
70 & over	50	8	12	5	18	6		1		
	73,131	47,746	73,250	70,060	88,995	64,841		54,355		
Total	8,566	2,713	2,654	1,125	1,202	817	51	2	2	
	\$73,765	\$69,378	\$72,082	\$77,547	\$77,116	\$82,062	\$98,897	\$61,397	\$100,387	

Note: Age and years of service were projected from November 30, 2008 to December 31, 2008.

Members in Active Service and Projected Average Compensation By Age, Years of Service as of December 31, 2008

#### iii. General Tier 3

Years of Service									
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & ove
Under 25									
25 - 29	3	3							
	\$54,832	\$54,832							
30 - 34	3	3							
	54,485	54,485							
35 - 39	3		1	2					
	67,575		\$76,773	\$62,976					
40 - 44	11	6	3		1	1			
	57,883	59,255	54,058		\$59,780	\$59,221			
45 - 49	11	2	4		4	1			
	66,484	67,840	68,097		65,312	62,011			
50 - 54	9	3		4		1		1	
	68,374	73,036		66,274		61,776		\$69,392	
55 - 59	13	1	3		1	2	3	1	2
	73,305	58,773	81,251		75,834	76,413	\$64,953	89,477	\$68,721
60 - 64	2					1	1		
	89,477					89,477	89,477		
65 - 69									
70 & over									
Total	55	18	11	6	6	6	4	2	2
	\$66,291	\$60,947	\$68,644	\$65,174	\$66,144	\$70,885	\$71,084	\$79,435	\$68,721

Note: Age and years of service were projected from November 30, 2008 to December 31, 2008

Members in Active Service and Projected Average Compensation By Age, Years of Service as of December 31, 2008

#### iv. Safety Tier 1

	Years of Service											
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & ove		
Under 25												
25 - 29												
30 - 34												
35 - 39												
40 - 44												
45 - 49	18				3	1	14					
	\$138,241				\$146,003	\$102,782	\$139,110					
50 - 54	30		1		1	5	21	2				
	138,474		\$120,983		95,794	95,691	151,625	\$137,433				
55 - 59	23		3			3	13	4				
	104,751		124,146			87,205	97,349	127,418				
60 - 64	10					1	5	3	1			
	101,493					87,170	93,105	88,686	\$196,173			
65 - 69												
70 & over	1									1		
	74,191									\$74,191		
Total	82		4		4	10	53	9	1	1		
	\$123,670	\$0	\$123,355	\$0	\$133,451	\$93,002	\$129,485	\$116,733	\$196,173	\$74,191		

Note: Age and years of service were projected from November 30, 2008 to December 31, 2008.

Members in Active Service and Projected Average Compensation By Age, Years of Service as of December 31, 2008

v.	Safety	Tier	2
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Years of Service										
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30 & Over		
Under 25	25	25								
	\$72,274	\$72,274								
25 - 29	185	165	20							
	76,662	73,839	\$99,954							
30 - 34	244	115	102	27						
	86,516	74,886	95,445	\$102,316						
35 - 39	297	76	130	88	3					
	89,940	73,292	92,210	100,491	\$103,817					
40 - 44	262	31	95	78	25	33				
	96,460	75,751	91,505	101,185	98,948	\$117,128				
45 - 49	229	21	31	49	42	79	7			
	101,907	81,175	96,441	97,236	107,144	107,855	\$122,452			
50 - 54	112	22	12	18	15	37	8			
	97,443	91,378	81,234	90,352	107,503	106,103	95,473			
55 - 59	77	12	15	15	14	16	4	1		
	100,891	103,343	113,946	93,755	100,797	95,244	92,390	\$108,349		
60 - 64	54	2	15	9	14	11	3			
	104,078	128,207	104,564	120,758	93,203	106,244	78,319			
65 - 69	7		2	3	1	1				
	96,991		83,135	106,431	110,352	83,019				
70 & over										
Total	1,492	469	422	287	114	177	22	1		
	\$92,092	\$76,188	\$94,368	\$100,005	\$102,843	\$107,837	\$101,158	\$108,349		

Note: Age and years of service were projected from November 30, 2008 to December 31, 2008.

## SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

#### EXHIBIT C

	Active Members	Vested Terminated Members	Pensioners	Disableds	Beneficiaries	Total
Number as of December 31, 2007	10,912	1,730	5,280	774	1,129	19,825
New members	886	0	0	0	69	955
Terminations – with vested rights	-188	188	0	0	0	0
Contributions refunds	-195	-85	0	0	0	-280
Retirements	-250	-55	305	0	0	0
New disabilities	-17	-2	-10	29	0	0
Return to work	39	-39	0	0	0	0
Died with or without beneficiary	-14	-6	-181	-15	-56	-272
Data adjustments	0	42*	10	0	-88**	-36
Number as of December 31, 2008	11,173	1,773	5,404	788	1,054	20,192

Reconciliation of Member Data – December 31, 2007 to December 31, 2008

\* Out of the 42 data adjustments, 9 were for members who were hired and terminated employment during 2008.

\*\* Data cleanup by ACERA.

#### EXHIBIT D

Summary Statement of Income and Expenses on an Actuarial Value Basis

		Year Ended D	December 31,		
	200	08	2007		
Contribution income:					
Employer contributions	\$129,660,363		\$130,039,582		
Employee contributions	75,607,686		72,342,267		
Contribution income		\$205,268,049		\$202,381,849	
Investment income:					
Interest, dividends and other income	\$172,465,954		\$177,836,032		
Adjustment toward market value	-54,254,581		480,445,303		
Less investment and administrative fees	<u>-36,745,965</u>		-36,565,619		
Net investment income		<u>\$81,465,408</u>		<u>\$621,715,716</u>	
Total income available for benefits		\$286,733,457		\$824,097,565	
Less benefit payments:					
Service retirement	-\$235,897,822		-\$217,646,365		
Death payments	-2,796,417		-2,813,425		
Supplemental cost of living	-4,135,288		-4,374,489		
Members refunds	-6,527,084		-7,778,155		
Health insurance subsidies	-26,682,245		-24,668,273		
Benefit payments		-\$276,038,856		-\$257,280,707	
Change in reserve for future benefits		\$10,694,601		\$566,816,858	

#### EXHIBIT E

# Summary Statement of Assets

	Year Ended December 31,							
ASSETS	20	08	20	07				
Cash		\$7,221,876		\$7,094,170				
Securities Lending Collateral		472,008,492		754,202,310				
Accounts Receivable:								
Contributions	\$9,789,243		\$15,203,213					
Investment Receivables	28,538,974		139,198,395					
Investments Sold	7,111,942		7,229,446					
Others	<u>302,920</u>		343,774					
Total Accounts Receivable		\$45,743,079		\$161,974,828				
Prepaid Expenses		550,340		512,891				
Investments:								
Short-Term Investments	\$147,896,706		\$164,744,862					
Equities	2,323,345,424		3,559,090,862					
Fixed Income Investments	953,347,472		1,423,689,353					
Real Estate	352,955,943		376,960,832					
Currency Swaps	6,717,723		4,417,236					
Equity Swaps	134,309		476,410					
Capital Assets	2,951,500		1,987,677					
Alternative Investments	2,659,969		0					
Total Investments at Market Value		<u>\$3,790,009,046</u>		<u>\$5,531,367,232</u>				
Total Assets		\$4,315,532,833		\$6,455,151,431				

## EXHIBIT E (Continued)

**Summary Statement of Assets** 

	Year Ended December 31,						
LIABILITIES	20	08	2007				
Less Accounts Payable:							
Securities Lending & Investments Purchased	-\$478,252,248		-\$763,452,577				
Investment-Related Payables	-6,456,510		-110,245,182				
Futures Contracts	-16,162,538		-1,765,324				
Currency Swaps	-4,079,191		-89,357				
Equity Swaps	-366,272		-528,024				
Accrued Administration Expense	-2,248,342		-1,693,206				
Members Benefits & Refunds, and Retirement Payroll Deductions Payable	-2,017,642		-1,800,537				
Others	0		-797,234				
Total Accounts Payable		-\$509,582,744		-\$880,371,441			
NET ASSETS							
Net Assets at Market Value		<u>\$3,805,950,089</u>		<u>\$5,574,779,990</u>			
Net Assets at Actuarial Value		<u>\$5,328,330,124</u>		<u>\$5,317,635,523</u>			
Net Assets at Valuation Value		<u>\$4,644,010,818</u>		<u>\$4,560,213,653</u>			

Notes: (1) Results may not total properly due to rounding.

#### **EXHIBIT F**

#### **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 will 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.

Assets	Basic	COLA	<u>Total</u>
1. Total valuation assets	\$3,073,982	\$1,570,028	\$4,644,010
2. Present value of future contributions by members	552,071	129,586	681,657
3. Present value of future employer contributions for:			
a. entry age normal cost	614,229	126,858	741,087
b unfunded actuarial accrued liability	866,465	27,444	893,909
4. Total current and future assets	\$5,106,747	\$1,853,916	\$6,960,663
Liabilities			
5. Present value of benefits already granted	\$1,790,536	\$1,080,726	\$2,871,262
6. Present value of benefits to be granted to present non-retired members	3,316,211	773,190	4,089,401
– 7. Total liabilities	\$5,106,747	\$1,853,916	\$6,960,663

## Actuarial Balance Sheet (Dollar Amounts in Thousands)

#### EXHIBIT G

## Summary of Reported Asset Information as of December 31, 2008

	Reserves
Used in Development of Valuation Value of Assets	
Members deposit-basic	\$905,722,013
Members cost-of-living	213,982,198
Employer advance (before transfer from SRBR to employer advance)	432,011,056
Pension reserve-current	1,106,573,929
Pension reserve-prior	3,248,284
Annuity reserve	655,968,646
Cost-of-living reserve	1,377,865,485
Survivor death benefit	8,659,727
SRBR transfer to employer advance	4,149,463
Reserve for interest fluctuations (contingency reserve), if negative	-64,169,983
Subtotal	\$4,644,010,818
Not Used in Development of Valuation Value of Assets	
401(h) account	\$4,961,868
Death benefit-burial	6,122,921
Supplemental retirees benefit reserve (before transfer from SRBR to employer advance)	677,383,980
Reserve for interest fluctuations (contingency reserve), if positive	0
Market stabilization reserve	-1,522,380,035*
SRBR transfer to employer advance	-4,149,463
Subtotal	-\$838,060,729

\* After the application of the 60%-140% market value corridor.

## EXHIBIT H

## Development of Unfunded Actuarial Accrued Liability as of December 31, 2008

		(Dollar amounts in Thousands)
1.	Unfunded actuarial accrued liability at beginning of year	\$552,190
2.	Increase in unfunded actuarial accrued liability due to General Tier 3 improvement	1,060
3.	Gross Normal Cost at middle of year	158,304
4.	Actual employer and member contributions	-205,268
5.	Interest (whole year on $(1)$ and $(2)$ plus half year on $(3) + (4)$ )	<u>42,381</u>
6.	Expected unfunded actuarial accrued liability at end of year	\$548,667
7.	Actuarial (gain)/loss due to all changes*:	
	a. Loss from investments as recognized on December 31, 2008 under the 80%-120% market value corridor	\$1,005,739
	b. Reduction in losses recognized on December 31, 2008 due to change to a 60%-140% market value corridor	-761,190
	c. Loss from higher than expected salary increases	38,008
	d. Effect of data adjustments made by ACERA	8,937
	e. Effect of larger than expected pensions for new retirees	16,092
	f. Other experience (gain)/loss	28,944
	g. Effect of change in assumptions	<u>8,712</u>
	h. Subtotal	\$345,242
8.	Actual unfunded actuarial accrued liability at end of year (6) + (7h)	\$893,909

\* The "net loss from other experience" of \$91,981,000 from Chart 9 is equal to the sum of items c through f.

#### EXHIBIT I

#### **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 indexed for inflation. That limit is \$185,000 for 2008 and \$195,000 for 2009. 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.

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.

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

## EXHIBIT J

Normal Cost:

#### **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:

- (a) <u>Investment return</u> the rate of investment yield that the Plan will earn over the long-term future net, in this case, of investment and administrative expenses.
- (b) <u>Mortality rates</u> the death rates of employees and pensioners; life expectancy is based on these rates;
- (c) <u>Retirement rates</u> the rate or probability of retirement at a given age; and
- (d) <u>Turnover rates</u> the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

The amount of contributions required to fund the level cost allocated to the current year of service.

The equivalent of the accumulated normal costs allocated to the years before the valuation date.

The single sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

#### Unfunded (Overfunded) Actuarial Accrued Liability:

Actuarial Accrued Liability For Actives:

**Actuarial Accrued Liability** 

For Pensioners:

The extent to which the actuarial accrued liability of the Plan exceeds (or is exceeded by) the assets of the Plan. There are many approaches to paying off the unfunded or overfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

Amortization of the Unfunded (Overfunded) Actuarial Accrued Liability:	Payments made over a period of years equal in value to the Plan's unfunded or overfunded 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 capital 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 (Dollar Amounts in Millions)

Plan Year Ended December 31	Annual Required Contributions	Actual Contributions	Percentage Contributed
2003	\$49	\$49	100.0%
2004	85	85	100.0%
2005	101	101	100.0%
2006	127	127	100.0%
2007	130	130	100.0%
2008	130	130	100.0%

### EXHIBIT II

Supplementary Information Required by GASB – Schedule of Funding Progress (Dollar Amounts in Thousands)

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)
12/31/2003	\$3,381,757	\$3,890,043	\$508,286	86.9%	\$714,344	71.2%
12/31/2004 <sup>(3)</sup>	3,557,918	4,336,123	778,205	82.1	694,626	112.0
12/31/2005	3,781,843	4,548,213	766,370	83.2	709,783	108.0
12/31/2006	4,127,841 <sup>(4)</sup>	4,825,157	697,316	85.5	762,139	91.5
12/31/2007	4,560,213 <sup>(5)</sup>	5,112,403	552,190	89.2	793,558	69.6
12/31/2008	4,644,010 <sup>(6)</sup>	5,537,919	893,909	83.9	864,260	103.4

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

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

(3) After reflecting Safety improvement for all active Safety members as of December 31, 2004. Before reflecting the improvement, the UAAL was \$682,635,000 and the funded ratio was 83.9%.

<sup>(4)</sup> Includes \$6,303,514 in reimbursement of implicit retiree health benefit subsidy paid by the County for 2005 and 2006.

<sup>(5)</sup> Includes \$3,091,493 in reimbursement of implicit retiree health benefit subsidy paid by the County for 2007.

<sup>(6)</sup> Includes \$4,149,463 in reimbursement of implicit retiree health benefit subsidy paid by the County for 2008.

# EXHIBIT III

## Supplementary Information Required by GASB

Valuation date	December 31, 2008		
Actuarial cost method	Entry Age Normal Cost Method		
Amortization method	Level percent of payroll for total unfunded liability		
Remaining amortization period	24 years (declining) for all UAAL		
Asset valuation method	The Actuarial Value of Assets is determined by phasing in any difference between actual and expected market return over 10 six-month interest crediting periods. The Valuation Value of Assets is the Actuarial Value of Assets reduced by the value of the non-valuation reserves.		
Actuarial assumptions:			
Investment rate of return	8.00%		
Inflation rate	3.75%		
Real across-the-board salary increase	0.25%		
Projected salary increases*	General: 4.70% to 8.00% and Safety: 5.30% to 9.10%		
Cost of living adjustments	3.00% of Tier 1 and Tier 3 retirement income and 2.00% of Tier 2 retirement income		
Plan membership:			
Retired members and beneficiaries receiving benefits	7,246		
Terminated members entitled to, but not yet receiving benefits	1,773		
Active members	<u>11,173</u>		
Total	20,192		

\* Includes inflation at 3.75% plus real across-the-board salary increase of 0.25% plus merit and longevity increases. See Exhibit IV for these increases.

# EXHIBIT IV

# Actuarial Assumptions and Actuarial Cost Method

# **Post-Retirement Mortality Rates**

Healthy:	For General members and all beneficiaries: RP-2000 Combined Healthy Mortality Table set back one year.
	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 four years.
	For Safety members: RP-2000 Combined Healthy Mortality Table set forward three years.
Employee Contribution Rates:	For General members: RP-2000 Combined Healthy Mortality Table set back one year, weighted 30% male and 70% female.
	For Safety members: RP-2000 Combined Healthy Mortality Table set back two years, weighted 75% male and 25% female.

# **Termination Rates Before Retirement:**

Rate (%) Mortality					
	Gen	Saf	ety		
Age	Male	Female	Male	Female	
25	0.04	0.02	0.04	0.02	
30	0.04	0.02	0.04	0.02	
35	0.07	0.04	0.06	0.04	
40	0.10	0.06	0.10	0.06	
45	0.14	0.10	0.13	0.09	
50	0.20	0.16	0.19	0.14	
55	0.32	0.24	0.29	0.22	
60	0.59	0.44	0.53	0.39	
65	1.13	0.86	1.00	0.76	

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

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

Rate (%)					
Disability					
Age	General <sup>(1)</sup>	Safety <sup>(2)</sup>			
20	0.00	0.00			
25	0.01	0.00			
30	0.07	0.24			
35	0.16	0.46			
40	0.26	0.62			
45	0.36	0.94			
50	0.49	1.34			
55	0.67	1.68			
60	0.84	0.72			

- <sup>(1)</sup> 80% of General disabilities are assumed to be service connected disabilities. The other 20% are assumed to be nonservice connected disabilities.
- <sup>(2)</sup> 100% of Safety disabilities are assumed to be service connected disabilities.

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

Termination (< 5 Years of Service) <sup>(1)</sup>				
Years of Service	General	Safety		
0	13.00	5.00		
1	10.00	5.00		
2	9.00	5.00		
3	7.00	3.00		
4	5.00	3.00		

Rate (%)

# Termination (5+ Years of Service)<sup>(2)</sup>

	•	,		
Age	General	Safety		
20	5.00	3.00		
25	5.00	3.00		
30	5.00	2.40		
35	4.70	1.70		
40	3.72	1.20		
45	2.54	1.00		
50	1.92	1.00		
55	1.62	1.00		
60	1.20	0.40		

- <sup>(1)</sup> 80% of all terminated members will choose a refund of contributions and 20% will choose a deferred vested benefit.
- <sup>(2)</sup> 30% of all terminated members will choose a refund of contributions and 70% will choose a deferred vested benefit. No termination is assumed after a member is eligible for retirement.

	Rate (%)				
Age	General Tier 1	General Tier 2	General Tier 3	Safety Tier 1 <sup>(1)</sup>	Safety Tier 2 <sup>(1)</sup>
 50	3.00	2.00	6.00	35.00	4.00
51	3.00	2.00	3.00	25.00	4.00
52	3.00	2.00	5.00	25.00	5.00
53	3.00	2.00	6.00	30.00	5.00
54	4.00	3.00	6.00	35.00	6.00
55	6.00	3.00	12.00	35.00	10.00
56	8.00	4.00	13.00	35.00	15.00
57	10.00	5.00	13.00	35.00	20.00
58	10.00	6.00	14.00	40.00	10.00
59	13.00	6.00	16.00	40.00	15.00
60	20.00	6.00	21.00	100.00	60.00
61	20.00	8.00	20.00	100.00	60.00
62	30.00	20.00	30.00	100.00	60.00
63	30.00	16.00	25.00	100.00	60.00
64	30.00	20.00	25.00	100.00	100.00
65	35.00	25.00	30.00	100.00	100.00
66	30.00	20.00	25.00	100.00	100.00
67	25.00	20.00	25.00	100.00	100.00
68	20.00	30.00	25.00	100.00	100.00
69	45.00	40.00	50.00	100.00	100.00
70	100.00	100.00	100.00	100.00	100.00

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

**Retirement Rates:** 

<sup>(1)</sup> Retirement rate is 100% after a member accrues a benefit of 100% of final average earnings.

Retirement Age and Benefit for Deferred Vested Members:	For current deferred vested n	nembers, retirement age assumptions are as follows:
	General Age: Safety Age:	58 55
	and are not vested, we assume	with less than five years of service after January 1, 2003 the that they will retire at age 70 for both General and their contributions on deposit.
	members will continue to wo	re General and 45% of future Safety deferred vested ork for a reciprocal employer. For reciprocals, we assume tion increases per annum for General and Safety,
Future Benefit Accruals:		f employment plus 0.008 year of additional service to sed sick leave for each year of employment.
Unknown Data for Members:	Same as those exhibited by n specified, members are assur	nembers with similar known characteristics. If not need to be male.
Inclusion of Deferred Vested Members:	All deferred vested members	are included in the valuation.
Percent Married:	75% of male members; 55%	of female members.
Age of Spouse:	Female (or male) spouses are	e 3 years younger (or older) than their spouses.
Net Investment Return:	8.00%, net of administration	and investment expenses (approximately 1% of assets)
Employee Contribution Crediting Rate:	8.00%, compounded semi-an	nually.
<b>Consumer Price Index:</b>	Increase of 3.75% per year, r	etiree COLA increases due to CPI subject to a 3%

maximum change per year for General Tier 1, General Tier 3 and Safety Tier 1 and

2% maximum change per year for General and Safety Tier 2.

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

#### **Salary Increases:**

Annual Rate of Compensation Increase (%)

Inflation: 3.75%; an additional 0.25% "across the board" salary increases (other than inflation); plus the following Merit and Promotional increases based on age.

	Age	General	Safety	
	25	4.00%	5.10%	
	30	3.00%	3.50%	
	35	2.40%	2.20%	
	40	1.80%	1.50%	
	45	1.50%	1.50%	
	50	1.10%	1.40%	
	55	1.00%	1.30%	
	60	0.80%	0.00%	
	65	0.70%	0.00%	
Actuarial Value of Assets:			ed by phasing in any different six-month interest crediting	
Valuation Value of Assots.	The Actuarial V	Value of Assets reduced by	the value of the non-valuat	tion rosor

Valuation Value of Assets: The

**Actuarial Cost Method:** 

The Actuarial Value of Assets reduced by the value of the non-valuation reserves.

Entry Age Normal Actuarial Cost Method. Entry Age is the age at the member's hire date. Actuarial Accrued Liability is calculated on an individual basis and is based on costs allocated as a level percentage of compensation. The Normal Cost is calculated on an aggregate basis by taking the Present Value of Future Normal Costs divided by the Present Value of Future Salaries to obtain in a normal cost rate. This normal cost rate is then multiplied by the total of current salaries.

<b>Terminal Pay Assumptions:</b>	Additional pay elements are expected to be received during a member's final average
	earnings period. The percentages, added to the final year salary, used in this valuation
	are:

	<u>Service</u> <u>Retirement</u>	<u>Disability</u> <u>Retirement</u>
General Tier 1	8.0%	7.0%
General Tier 2	3.0%	2.8%
General Tier 3	8.0%	7.0%
Safety Tier 1	9.5%	8.5%
Safety Tier 2	4.0%	2.8%

Changes in Actuarial Assumptions:	Based on the Experience Study, the following assumptions were changed. Previously, these assumptions were as follows:
Post-Retirement Mortality Rates:	
Healthy:	For General members and beneficiaries: 1994 Group Annuity Mortality Table.
	For Safety members and beneficiaries: 1994 Group Annuity Mortality Table.
Disabled:	For General members: 1981 General Disability Mortality Table set back seven years.
	For Safety members: 1981 Safety Disability Mortality Table set back two years.
Employee Contribution Rates:	For General members, 1994 Group Annuity Mortality Table weighted 30% male and 70% female.
	For Safety members, 1994 Group Annuity Mortality Table weighted 75% male and 25% female.

**Termination Rates Before Retirement:** 

		Mortality		
	Gen	eral	Sat	fety
Age	Male	Female	Male	Female
25	0.07	0.03	0.07	0.03
30	0.08	0.04	0.08	0.04
35	0.09	0.05	0.09	0.05
40	0.11	0.07	0.11	0.07
45	0.16	0.10	0.16	0.10
50	0.26	0.14	0.26	0.14
55	0.44	0.23	0.44	0.23
60	0.80	0.44	0.80	0.44
65	1.45	0.86	1.45	0.86

Rate	(%)
Mauta	124

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

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

Rate (%)	
Disability	
General <sup>(1)</sup>	Safety <sup>(2)</sup>
0.00	0.00
0.01	0.00
0.07	0.24
0.22	0.46
0.36	0.62
0.46	0.94
0.56	1.16
0.78	1.20
1.02	0.48
	Disability <u>General<sup>(1)</sup></u> 0.00 0.01 0.07 0.22 0.36 0.46 0.56 0.78

<sup>(1)</sup> 80% of General disabilities are assumed to be duty disabilities. The other 20% are assumed to be ordinary disabilities.
<sup>(2)</sup> 100% of Safety disabilities are assumed to be duty disabilities.

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

Rate (%)

Years of Service	General	Safety
0	12.00	5.00
1	10.00	5.00
2	9.00	5.00
3	7.00	4.00
4	4.00	4.00

Withdrawal (	(< 5	Years	of Service)	
· · IVII CAL CO · · COI ·		I CHID	or ber thee,	

Withdrawal (5+ Years of Service) <sup>(1)</sup>	( <sup>(1)</sup> ) ( <sup>(1)</sup>
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Age	General	Safety
20	4.00	3.00
25	4.00	3.00
30	4.00	3.00
35	4.00	2.10
40	3.40	1.20
45	2.40	1.00
50	2.00	1.00
55	2.00	1.00
60	1.40	0.40

<sup>(1)</sup> 25% of all terminated members will choose a refund of contributions and 75% will choose a deferred vested benefit. No withdrawal is assumed after a member is eligible for retirement.

**Retirement Rates:** 

	Rate(%)			
Age	General Tier 1	General Tier 2	Safety Tier 1	Safety Tier 2
50	3.00	2.00	33.00	4.00
51	2.00	2.00	25.00	2.00
52	2.00	2.00	25.00	2.00
53	3.00	2.00	33.00	3.00
54	3.00	2.00	33.00	8.00
55	7.00	3.00	50.00	15.00
56	7.00	4.00	50.00	12.00
57	8.00	5.00	50.00	25.00
58	10.00	6.00	50.00	11.00
59	15.00	6.00	50.00	27.00
60	20.00	8.00	100.00	100.00
61	20.00	10.00	100.00	100.00
62	30.00	20.00	100.00	100.00
63	25.00	16.00	100.00	100.00
64	25.00	20.00	100.00	100.00
65	30.00	25.00	100.00	100.00
66	25.00	20.00	100.00	100.00
67	25.00	35.00	100.00	100.00
68	25.00	45.00	100.00	100.00
69	50.00	55.00	100.00	100.00
70	100.00	100.00	100.00	100.00

Note: Retirement rate is 100% after a member attains 100% of FAS and this 100% retirement assumption is applied to both Safety Tier 1 and Tier 2 members.

Retirement Age and Benefit for Deferred Vested Members	For current deferred vested members, retirement assumptions are as follows:	
	General: Safety:	Age 58 Age 55
	We assume that 40% of future General and Safety deferred vested men continue to work for a reciprocal employer. For these, we assume 5.40 compensation increases per annum.	
Percent Married:	80% of male members; 55% of female members	

**Salary Increases:** 

Annual Rate of Compensation Increase			
salary increases (o	Inflation: 3.75%; an additional 0.25% "across the board" salary increases (other than inflation); plus the following Merit and Longevity increases based on age.		
Age	General	Safety	
25	3.68%	3.61%	
30	2.82%	2.70%	
35	2.31%	1.57%	
40	1.99%	1.15%	
45	1.60%	1.13%	
50	1.40%	0.95%	
55	1.12%	0.73%	
60	0.86%	0.26%	
65	0.73%	0.00%	

**Terminal Pay Assumptions:** Additional pay elements are expected to be received during a member's final average earnings period. The percentages, added to the final year salary, used in this valuation are:

	<u>Service</u> <u>Retirement</u>	<u>Disability</u> <u>Retirement</u>
General Tier 1	8.8%	7.0%
General Tier 2	3.0%	2.8%
Safety Tier 1	9.5%	8.5%
Safety Tier 2	3.0%	2.8%

#### EXHIBIT V

**Summary of Plan Provisions** 

This exhibit summarizes the major provisions of ACERA 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:			
	Membership with ACERA usually begins with the second pay period following appointment to a full time County or member District position. ACERA members who change from full time to part time may elect to continue membership at ACERA.		
General and Safety Tier 1	All General and Safety members hired on or before June 30, 1983.		
General and Safety Tier 2	All General and Safety members hired after June 30, 1983.		
General Tier 3	Only General LARPD members hired before October 1, 2008 who elected the 2.5% at 55 formula and all General LARPD members hired after that date.		
Final Compensation for Benefit Determination:			
General Tier 1, General Tier 3 and Safety Tier 1	Highest consecutive twelve months of compensation earnable (§31462.1) (FAS1).		
General and Safety Tier 2	Highest consecutive thirty-six months of compensation earnable (§31462) (FAS3).		
Service:	Years of service (Yrs).		
Service Retirement Eligibility:			
General	Age 50 with 10 years of service, or age 70 regardless of service, or after 30 years, regardless of age (§31672).		
Safety	Age 50 with 10 years of service, or after 20 years, regardless of age (§31663.25).		

Benefit	Formula:
---------	----------

	<b>Retirement Age</b>	Benefit Formula
General Tier 1 (§31676.12)	50	(1.34% x FAS1 – 1/3 x 1.34% x \$350 x 12) x Yrs
	55	(1.77% x FAS1 – 1/3 x 1.77% x \$350 x 12) x Yrs
	60	(2.34% x FAS1 – 1/3 x 2.34% x \$350 x 12) x Yrs
	62 or later	(2.62% x FAS1 – 1/3 x 2.62% x \$350 x 12) x Yrs
	<b>Retirement Age</b>	Benefit Formula
General Tier 2 (§31676.1)	50	(1.18% x FAS3 – 1/3 x 1.18% x \$350 x 12) x Yrs
	55	(1.49% x FAS3 – 1/3 x 1.49% x \$350 x 12) x Yrs
	60	(1.92% x FAS3 – 1/3 x 1.92% x \$350 x 12) x Yrs
	62	(2.09% x FAS3 – 1/3 x 2.09% x \$350 x 12) x Yrs
	65	(2.43% x FAS3 – 1/3 x 2.43% x \$350 x 12) x Yrs
General Tier 3 (§31676.18)	<b>Retirement Age</b>	Benefit Formula
	50	(2.00% x FAS1 x Yrs)
	55 or later	(2.50% x FAS1 x Yrs)

	Retirement Age	Benefit Formula			
Safety Tier 1 (Non-Integrated)	_				
(§31664.1)	50	(3.00%xFAS1xYrs)			
	55 or later	(3.00%xFAS1xYrs)			
Safety Tier 2 (Non-Integrated)					
(§31664.1)	50	(3.00%xFAS3xYrs)			
	55 or later	(3.00%xFAS3xYrs)			
Maximum Benefit:	100% of Highest Average §31664.1).	Compensation (§31676.1, §31676.12, §31676.18			
Ordinary Disability:					
<u>General Tier 1, Tier 2 and Tier 3</u>					
Eligibility	Five years of service (§3172	20).			
Benefit Formula	1.8% per year of service for General Tier 1 and Tier 3 and 1.5% per year of service for General Tier 2. If the benefit does not exceed one-third of Final Compensation, the service is projected to 62 for General Tier 1 and Tier 3, and to age 65 for General Tier 2, but the total benefit cannot be more than one-third of Final Compensation (§31727 and §31727.2).				
<u>Safety Tier 1 and Tier 2</u>					
Eligibility	Five years of service (§3172	20).			
Benefit Formula1.8% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 55, but the total benefit cannot be me one-third of Final Compensation (§31727.2).					

Line-of-Duty Disability:	
<u>All Members</u>	
Eligibility	No age or service requirements (§31720).
Benefit Formula	50% of the Final Compensation or 100% of Service Retirement benefit, if greater (§31727.4).
Pre-Retirement Death:	
<u>All Members</u>	
Eligibility	None.
Basic lump sum benefit	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).
Death in line of duty	50% of Final Compensation or 100% of Service Retirement benefit, if greater, payable to spouse or minor children (§31787).
	OR
Vested Members	
Eligibility	Five years of service.
<i>Basic benefit</i> 60% <sup>(1)</sup> of the greater of Service or Ordinary Disability Retirement benefit p surviving eligible spouse (§31765.1, §31781.1), in lieu of the basic lump su above.	
Death in line of duty	50% of Final compensation or 100% of Service Retirement benefit, if greater, payable to spouse or minor children (§31787).

<sup>(1)</sup> The Retirement Board also provides an Active Death Equity Benefit (ADEB) that increases the 60% continuance to 100% continuance. The ADEB benefit is funded by the Supplemental Retirees Benefit Reserve (SRBR) and the cost associated with the ADEB is excluded from this valuation.

All Members				
Service or Ordinary Disability Retirement	60% of member's unmodified allowance continued to eligible spouse ( $\$31760.1$ ) and $\$5,000^{(1)}$ lump sum benefit payable to member's beneficiary ( $\$31789.3$ ). An eligible spouse is a surviving spouse who was married to the member at least one year prior to the date of retirement ( $\$31760.1$ ).			
Line-of-Duty Disability	100% of member's allowance continued to eligible spouse (§31786).			
Withdrawal Benefits:				
Less than Five Years of Service	Refund of accumulated employee contributions with interest, or earned benefit at age 70 (§31628). Effective January 1, 2003, a member may also elect to leave contributions on deposit in the retirement fund (§31629.5).			
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, General Tier 3 and Safety Tier 1	Future changes based on Consumer Price Index to a maximum of 3% per year; excess "banked" (§31870.1).			
General and Safety Tier 2	Future changes based on Consumer Price Index to a maximum of 2% per year; excess "banked" (§31870).			
<b>County Contributions:</b>	The amortization period for Unfunded Actuarial Accrued Liability is amortized over a declining 24-year period.			

<sup>(1)</sup> \$750 is funded by the employer. \$4,250 is funded by the Supplement Retirees Benefit Reserve. These benefits are excluded from the valuation.

Supplemental Benefit:		Non-vested supplemental COLA and medical benefits are also paid from the Supplemental Retirees Benefit Reserve to eligible retirees and survivors. These benefits have been excluded from this valuation.				
Member (	Contributions:	Please refer to Appendix A for specific rates.				
General T	ier 1					
Basic		Provide for an average annuity at age 60 equal to 1/100 of FAS1 (§31621.2).				
Cost-o	of-Living	Provide for one-half of future Cost-of-Living costs.				
General T	ier 2					
Basic		Provide for an average annuity at age 60 equal to 1/120 of FAS3 (§31621).				
Cost-o	of-Living	Provide for one-half of future Cost-of-Living costs.				
General T	ier 3					
Basic		Provide for an average annuity at age 55 equal to 1/100 of FAS1 (§31621.8).				
Cost-o	of-Living	Provide for one-half of future Cost-of-Living costs.				
Safety						
Basic		Provide for an average annuity at age 50 equal to 1/100 of FAS1 (FAS3 for Tier 2) (§31639.25). As instructed by ACERA, we have also included a 3% cost sharing contribution that we understand will be paid by members even after they attain 30 years of service.				
Cost-o	of-Living	Provide for one-half of future Cost-of-Living costs.				
Other Info	ormation:	Safety members with 30 or more years of service are exempt from paying member contributions. This also applies for General members hired on or before March 7, 1973.				
Plan Amendment:		Effective October 1, 2008, electing General active members of the Livermore Area Recreation and Park District (LARPD) have been granted a benefit improvement for all service under the 2.5% @ 55 formula.				
of the actuarial valuation.		jor plan provisions is designed to outline principal plan benefits as interpreted for purposes nation. If the Association should find the plan summary not in accordance with the actual ciation should alert the actuary so they can both be sure the proper provisions are valued.				

#### Member Contribution Rates

Comparison of Total Member Rate<sup>(1)</sup> from December 31, 2008 (New) and December 31, 2007 (Current) Valuations

	Genera	l Tier 1		General Tier 2				
Entry Age	Current	New	Change	Entry Age	Current	New	Change	
25	10.00%	9.64%	-0.36%	25	6.71%	6.53%	-0.18%	
35	10.98%	10.59%	-0.39%	35	7.36%	7.18%	-0.18%	
45	12.32%	12.00%	-0.32%	45	8.27%	8.13%	-0.14%	

General Tier 3								
Entry Age	Current	New	Change					
25	11.65%	11.28%	-0.37%					
35	12.71%	12.29%	-0.42%					
45	14.15%	13.79%	-0.36%					

	Safety	Tier 1		Safety Tier 2					
Entry Age	Current	New	Change	Entry Age	Current	New	Change		
25	16.37%	17.59%	1.22%	25	13.32%	14.31%	0.99%		
30	17.01%	18.02%	1.01%	30	13.81%	14.64%	0.83%		
35	17.89%	18.74%	0.85%	35	14.49%	15.20%	0.71%		

<sup>(1)</sup> Contributions for the first \$161 of biweekly payroll are based on 2/3 of the above rates for integrated members.

			mber 31, 200	I Valuation		December 31, 2007 Actuarial Valuation <sup>(1)</sup>										
	BASIC		С	OLA		SHARING RIBUTIONS	тс	DTAL	В	ASIC	c	OLA		SHARING RIBUTIONS	тс	DTAL
	Rate	Estimated Annual Amount*	Rate	Estimated Annual Amount*	Rate	Estimated Annual Amount*	Rate	Estimated Annual Amount*	Rate	Estimated Annual Amount*	Rate	Estimated Annual Amount*	Rate	Estimated Annual Amount*	Rate	Estimated Annual Amount*
General Tier 1 Members	6.88%	\$5,586	2.54%	\$2,063			9.42%	\$7,649	7.04%	\$5,716	2.70%	\$2,193			9.74%	\$7,909
General Tier 2 Members	5.90%	37,281	1.32%	8,340			7.22%	45,621	5.97%	37,723	1.39%	8,783			7.36%	46,506
General Tier 3 Members	9.11%	332	3.33%	122			12.44%	454	9.27%	338	3.53%	129			12.80%	467
Safety Tier 1 Members	7.42%	752	3.95%	401	3.00%	\$304	14.37%	1,457	7.15%	725	3.70%	376	3.00%	\$304	13.85%	1,405
Safety Tier 2 Members	8.56%	11,762	2.73%	3,751	3.00%	4,122	14.29%	19,635	8.02%	11,020	2.47%	3,394	3.00%	4,122	13.49%	18,536
All Member Categories Combined	6.45%	\$55,713	1.70%	\$14,677	0.51%	\$4,426	8.66%	\$74,816	6.42%	\$55,522	1.73%	\$14,875	0.51%	\$4,426	8.66%	\$74,823

Breakdown of member rate between basic and COLA calculated in the December 31, 2008 and December 31, 2007 valuations:

\* Amounts are in thousands and are based on December 31, 2008 annual payroll (also in thousands):

	County Only	ACMC, Court & First 5	Other Districts	<u>Total</u>	
General Tier 1	\$55,363	\$20,236	\$5,598	\$81,197	
General Tier 2	416,669	215,205		631,874	
General Tier 3			3,646	3,646	
Safety Tier 1	10,141			10,141	
Safety Tier 2	137,402			137,402	
Total	\$ 619,575	\$235,441	\$9,244	\$864,260	

<sup>(1)</sup>These rates have been re-calculated by applying the individual entry age based member rates determined in December 31, 2007 valuation to the Association membership as of December 31, 2008.

Member Contribution Rates (Continued)

		a	s a percentage of payro	oll			
	Basi	c Only	COLA	Only	Total		
Entry Age	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>	
15	4.43%	6.65%	1.63%	2.45%	6.06%	9.10%	
16	4.43%	6.65%	1.63%	2.45%	6.06%	9.10%	
17	4.47%	6.70%	1.65%	2.47%	6.12%	9.17%	
18	4.50%	6.75%	1.66%	2.49%	6.16%	9.24%	
19	4.53%	6.80%	1.67%	2.51%	6.20%	9.31%	
20	4.56%	6.84%	1.68%	2.52%	6.24%	9.36%	
21	4.58%	6.87%	1.69%	2.53%	6.27%	9.40%	
22	4.61%	6.91%	1.70%	2.55%	6.31%	9.46%	
23	4.63%	6.95%	1.71%	2.56%	6.34%	9.51%	
24	4.66%	7.00%	1.72%	2.58%	6.38%	9.58%	
25	4.70%	7.04%	1.73%	2.60%	6.43%	9.64%	
26	4.73%	7.10%	1.75%	2.62%	6.48%	9.72%	
27	4.77%	7.15%	1.76%	2.64%	6.53%	9.79%	
28	4.81%	7.21%	1.77%	2.66%	6.58%	9.87%	
29	4.85%	7.28%	1.79%	2.68%	6.64%	9.96%	
30	4.90%	7.35%	1.81%	2.71%	6.71%	10.06%	
31	4.95%	7.42%	1.82%	2.73%	6.77%	10.15%	
32	5.00%	7.49%	1.84%	2.76%	6.84%	10.25%	
33	5.05%	7.57%	1.86%	2.79%	6.91%	10.36%	
34	5.10%	7.66%	1.88%	2.82%	6.98%	10.48%	
35	5.16%	7.74%	1.90%	2.85%	7.06%	10.59%	
36	5.22%	7.83%	1.93%	2.89%	7.15%	10.72%	
37	5.28%	7.92%	1.95%	2.92%	7.23%	10.84%	
38	5.34%	8.02%	1.97%	2.95%	7.31%	10.97%	
39	5.41%	8.12%	1.99%	2.99%	7.40%	11.11%	

General Tier 1 Members' Contribution Rates Based on the December 31, 2008 Actuarial Valuation

Member Contribution Rates (Continued)

	Basic Only		COLA	Only	Т	otal
Entry Age	<u>First \$161</u>	Over \$161*	<u>First \$161</u>	Over \$161*	<u>First \$161</u>	Over \$161*
40	5.48%	8.22%	2.02%	3.03%	7.50%	11.25%
41	5.55%	8.32%	2.05%	3.07%	7.60%	11.39%
42	5.62%	8.43%	2.07%	3.11%	7.69%	11.54%
43	5.69%	8.54%	2.10%	3.15%	7.79%	11.69%
44	5.77%	8.65%	2.13%	3.19%	7.90%	11.84%
45	5.84%	8.77%	2.15%	3.23%	7.99%	12.00%
46	5.92%	8.89%	2.18%	3.27%	8.10%	12.16%
47	6.00%	9.01%	2.21%	3.32%	8.21%	12.33%
48	6.09%	9.13%	2.24%	3.36%	8.33%	12.49%
49	6.17%	9.26%	2.27%	3.41%	8.44%	12.67%
50	6.26%	9.39%	2.31%	3.46%	8.57%	12.85%
51	6.34%	9.52%	2.34%	3.51%	8.68%	13.03%
52	6.43%	9.65%	2.37%	3.55%	8.80%	13.20%
53	6.52%	9.78%	2.40%	3.60%	8.92%	13.38%
54	6.60%	9.90%	2.43%	3.65%	9.03%	13.55%
55	6.68%	10.02%	2.46%	3.69%	9.14%	13.71%
56	6.75%	10.13%	2.49%	3.73%	9.24%	13.86%
57	6.81%	10.21%	2.51%	3.76%	9.32%	13.97%
58	6.82%	10.23%	2.51%	3.77%	9.33%	14.00%
59 & Over	6.67%	10.00%	2.45%	3.68%	9.12%	13.68%

Interest:	8.00% per annum
COLA:	3.00%
Mortality:	RP-2000 Combined Healthy Mortality Table set back one year weighted 30% male and 70% female
Salary Increase:	Inflation (3.75%) + Across-the-Board Increase (0.25%) + Merit (See Exhibit IV)
COLA Loading Factor:	36.85%
Terminal Pay:	8.0%

Member Contribution Rates (Continued)

			as a percentage of p	ayroll			
	Basi	c Only	COL	A Only	Total		
Entry Age	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	Over \$161*	<u>First \$161</u>	<u>Over \$161*</u>	
15	3.36%	5.04%	0.75%	1.12%	4.11%	6.16%	
16	3.36%	5.04%	0.75%	1.12%	4.11%	6.16%	
17	3.39%	5.09%	0.75%	1.13%	4.14%	6.22%	
18	3.42%	5.12%	0.76%	1.14%	4.18%	6.26%	
19	3.44%	5.16%	0.77%	1.15%	4.21%	6.31%	
20	3.46%	5.19%	0.77%	1.16%	4.23%	6.35%	
21	3.48%	5.21%	0.77%	1.16%	4.25%	6.37%	
22	3.50%	5.24%	0.78%	1.17%	4.28%	6.41%	
23	3.52%	5.27%	0.79%	1.18%	4.31%	6.45%	
24	3.54%	5.31%	0.79%	1.18%	4.33%	6.49%	
25	3.56%	5.34%	0.79%	1.19%	4.35%	6.53%	
26	3.59%	5.38%	0.80%	1.20%	4.39%	6.58%	
27	3.62%	5.43%	0.81%	1.21%	4.43%	6.64%	
28	3.65%	5.47%	0.81%	1.22%	4.46%	6.69%	
29	3.68%	5.52%	0.82%	1.23%	4.50%	6.75%	
30	3.72%	5.57%	0.83%	1.24%	4.55%	6.81%	
31	3.75%	5.63%	0.83%	1.25%	4.58%	6.88%	
32	3.79%	5.69%	0.85%	1.27%	4.64%	6.96%	
33	3.83%	5.75%	0.85%	1.28%	4.68%	7.03%	
34	3.87%	5.81%	0.86%	1.29%	4.73%	7.10%	
35	3.91%	5.87%	0.87%	1.31%	4.78%	7.18%	
36	3.96%	5.94%	0.88%	1.32%	4.84%	7.26%	
37	4.01%	6.01%	0.89%	1.34%	4.90%	7.35%	
38	4.05%	6.08%	0.91%	1.36%	4.96%	7.44%	
39	4.10%	6.16%	0.91%	1.37%	5.01%	7.53%	

### General Tier 2 Members' Contribution Rates Based on the December 31, 2008 Actuarial Valuation

Member Contribution Rates (Continued)

	Basic Only		COL	A Only	Total		
Entry Age	<u>First \$161</u>	Over \$161*	<u>First \$161</u>	Over \$161*	<u>First \$161</u>	<u>Over \$161*</u>	
40	4.16%	6.23%	0.93%	1.39%	5.09%	7.62%	
41	4.21%	6.31%	0.94%	1.41%	5.15%	7.72%	
42	4.26%	6.39%	0.95%	1.43%	5.21%	7.82%	
43	4.32%	6.48%	0.96%	1.44%	5.28%	7.92%	
44	4.37%	6.56%	0.97%	1.46%	5.34%	8.02%	
45	4.43%	6.65%	0.99%	1.48%	5.42%	8.13%	
46	4.49%	6.74%	1.00%	1.50%	5.49%	8.24%	
47	4.55%	6.83%	1.01%	1.52%	5.56%	8.35%	
48	4.62%	6.92%	1.03%	1.54%	5.65%	8.46%	
49	4.68%	7.02%	1.04%	1.56%	5.72%	8.58%	
50	4.74%	7.12%	1.06%	1.59%	5.80%	8.71%	
51	4.81%	7.21%	1.07%	1.61%	5.88%	8.82%	
52	4.87%	7.31%	1.09%	1.63%	5.96%	8.94%	
53	4.94%	7.41%	1.10%	1.65%	6.04%	9.06%	
54	5.00%	7.50%	1.11%	1.67%	6.11%	9.17%	
55	5.06%	7.59%	1.13%	1.69%	6.19%	9.28%	
56	5.11%	7.66%	1.14%	1.71%	6.25%	9.37%	
57	5.15%	7.72%	1.15%	1.72%	6.30%	9.44%	
58	5.35%	8.02%	1.19%	1.79%	6.54%	9.81%	
59 & Over	5.56%	8.33%	1.24%	1.86%	6.80%	10.19%	

Interest:	8.00% per annum
COLA:	2.00%
Mortality:	RP-2000 Combined Healthy Mortality Table set back one year weighted 30% male and 70% female
Salary Increase:	Inflation (3.75%) + Across-the-Board Increase (0.25%) + Merit (See Exhibit IV)
COLA Loading Factor:	22.29%
Terminal Pay:	3.0%

Member Contribution Rates (Continued)

General Tier 3 Members' Contribution Rates Based on the December 31, 2008 Actuarial Valuation								
			as a percentage of p	ayroll				
	Basi	ic Only	COL	A Only	То	otal		
Entry Age	<u>First \$161</u>	Over \$161*	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	Over \$161*		
15	5.23%	7.85%	1.91%	2.87%	7.14%	10.72%		
16	5.23%	7.85%	1.91%	2.87%	7.14%	10.72%		
17	5.27%	7.91%	1.93%	2.89%	7.20%	10.80%		
18	5.31%	7.96%	1.94%	2.91%	7.25%	10.87%		
19	5.34%	8.01%	1.95%	2.93%	7.29%	10.94%		
20	5.37%	8.05%	1.96%	2.94%	7.33%	10.99%		
21	5.39%	8.09%	1.97%	2.95%	7.36%	11.04%		
22	5.42%	8.12%	1.98%	2.97%	7.40%	11.09%		
23	5.44%	8.17%	1.99%	2.98%	7.43%	11.15%		
24	5.47%	8.21%	2.00%	3.00%	7.47%	11.21%		
25	5.51%	8.26%	2.01%	3.02%	7.52%	11.28%		
26	5.54%	8.32%	2.03%	3.04%	7.57%	11.36%		
27	5.58%	8.37%	2.04%	3.06%	7.62%	11.43%		
28	5.63%	8.44%	2.05%	3.08%	7.68%	11.52%		
29	5.67%	8.51%	2.07%	3.11%	7.74%	11.62%		
30	5.72%	8.58%	2.09%	3.14%	7.81%	11.72%		
31	5.77%	8.66%	2.11%	3.16%	7.88%	11.82%		
32	5.83%	8.74%	2.13%	3.19%	7.96%	11.93%		
33	5.88%	8.82%	2.15%	3.22%	8.03%	12.04%		
34	5.94%	8.91%	2.17%	3.26%	8.11%	12.17%		
35	6.00%	9.00%	2.19%	3.29%	8.19%	12.29%		
36	6.07%	9.10%	2.21%	3.32%	8.28%	12.42%		
37	6.13%	9.20%	2.24%	3.36%	8.37%	12.56%		
38	6.20%	9.30%	2.27%	3.40%	8.47%	12.70%		
39	6.27%	9.41%	2.29%	3.44%	8.56%	12.85%		

Member Contribution Rates (Continued)

	Basi	c Only	COL	A Only	То	Total	
Entry Age	<u>First \$161</u>	Over \$161*	<u>First \$161</u>	Over \$161*	<u>First \$161</u>	<u>Over \$161*</u>	
40	6.34%	9.52%	2.32%	3.48%	8.66%	13.00%	
41	6.42%	9.63%	2.35%	3.52%	8.77%	13.15%	
42	6.50%	9.74%	2.37%	3.56%	8.87%	13.30%	
43	6.57%	9.86%	2.40%	3.60%	8.97%	13.46%	
44	6.65%	9.98%	2.43%	3.65%	9.08%	13.63%	
45	6.73%	10.10%	2.46%	3.69%	9.19%	13.79%	
46	6.82%	10.23%	2.49%	3.74%	9.31%	13.97%	
47	6.90%	10.35%	2.52%	3.78%	9.42%	14.13%	
48	6.98%	10.48%	2.55%	3.83%	9.53%	14.31%	
49	7.07%	10.60%	2.58%	3.87%	9.65%	14.47%	
50	7.15%	10.72%	2.61%	3.92%	9.76%	14.64%	
51	7.22%	10.83%	2.64%	3.96%	9.86%	14.79%	
52	7.28%	10.92%	2.66%	3.99%	9.94%	14.91%	
53	7.29%	10.93%	2.66%	3.99%	9.95%	14.92%	
54 & over	7.11%	10.67%	2.60%	3.90%	9.71%	14.57%	

Interest:	8.00% per annum
COLA:	3.00%
Mortality:	RP-2000 Combined Healthy Mortality Table set back one year weighted 30% male and 70% female
Salary Increase:	Inflation (3.75%) + Across-the-Board Increase (0.25%) + Merit (See Exhibit IV)
COLA Loading Factor:	36.54%
Terminal Pay:	8.0%

### Member Contribution Rates (Continued)

#### Safety Tier 1 Members' Contribution Rates Based on the December 31, 2008 Actuarial Valuation

#### as a percentage of payroll

	Basi	c Only	Cost Sharing	g Contributions	COI	LA Only	То	otal
Entry Age	<u>First \$161</u>	<u>Over \$161*</u>						
15	6.22%	9.33%	3.00%	3.00%	3.31%	4.97%	12.53%	17.30%
16	6.22%	9.33%	3.00%	3.00%	3.31%	4.97%	12.53%	17.30%
17	6.25%	9.38%	3.00%	3.00%	3.33%	5.00%	12.58%	17.38%
18	6.27%	9.41%	3.00%	3.00%	3.34%	5.01%	12.61%	17.42%
19	6.29%	9.43%	3.00%	3.00%	3.35%	5.03%	12.64%	17.46%
20	6.30%	9.44%	3.00%	3.00%	3.35%	5.03%	12.65%	17.47%
21	6.30%	9.44%	3.00%	3.00%	3.35%	5.03%	12.65%	17.47%
22	6.30%	9.45%	3.00%	3.00%	3.36%	5.04%	12.66%	17.49%
23	6.31%	9.46%	3.00%	3.00%	3.36%	5.04%	12.67%	17.50%
24	6.33%	9.49%	3.00%	3.00%	3.37%	5.06%	12.70%	17.55%
25	6.35%	9.52%	3.00%	3.00%	3.38%	5.07%	12.73%	17.59%
26	6.37%	9.56%	3.00%	3.00%	3.39%	5.09%	12.76%	17.65%
27	6.40%	9.61%	3.00%	3.00%	3.41%	5.12%	12.81%	17.73%
28	6.44%	9.66%	3.00%	3.00%	3.43%	5.15%	12.87%	17.81%
29	6.49%	9.73%	3.00%	3.00%	3.45%	5.18%	12.94%	17.91%
30	6.53%	9.80%	3.00%	3.00%	3.48%	5.22%	13.01%	18.02%
31	6.59%	9.88%	3.00%	3.00%	3.51%	5.27%	13.10%	18.15%
32	6.65%	9.97%	3.00%	3.00%	3.54%	5.31%	13.19%	18.28%
33	6.71%	10.06%	3.00%	3.00%	3.57%	5.36%	13.28%	18.42%
34	6.78%	10.17%	3.00%	3.00%	3.61%	5.42%	13.39%	18.59%
35	6.85%	10.27%	3.00%	3.00%	3.65%	5.47%	13.50%	18.74%
36	6.92%	10.38%	3.00%	3.00%	3.69%	5.53%	13.61%	18.91%
37	7.00%	10.50%	3.00%	3.00%	3.73%	5.60%	13.73%	19.10%
38	7.08%	10.62%	3.00%	3.00%	3.77%	5.66%	13.85%	19.28%
39	7.16%	10.74%	3.00%	3.00%	3.81%	5.72%	13.97%	19.46%

### Member Contribution Rates (Continued)

	Basi	c Only	Cost Sharing	contributions	COL	LA Only	То	tal
Entry Age	<u>First \$161</u>	<u>Over \$161*</u>						
40	7.24%	10.86%	3.00%	3.00%	3.86%	5.79%	14.10%	19.65%
41	7.32%	10.98%	3.00%	3.00%	3.90%	5.85%	14.22%	19.83%
42	7.40%	11.11%	3.00%	3.00%	3.95%	5.92%	14.35%	20.03%
43	7.48%	11.22%	3.00%	3.00%	3.99%	5.98%	14.47%	20.20%
44	7.55%	11.33%	3.00%	3.00%	4.03%	6.04%	14.58%	20.37%
45	7.62%	11.43%	3.00%	3.00%	4.06%	6.09%	14.68%	20.52%
46	7.68%	11.52%	3.00%	3.00%	4.09%	6.14%	14.77%	20.66%
47	7.71%	11.57%	3.00%	3.00%	4.11%	6.17%	14.82%	20.74%
48	7.69%	11.53%	3.00%	3.00%	4.10%	6.15%	14.79%	20.68%
49 & Over	7.44%	11.16%	3.00%	3.00%	3.97%	5.95%	14.41%	20.11%

Interest:	8.00% per annum
COLA:	3.00%
Mortality:	RP-2000 Combined Healthy Mortality Table set back two years weighted 75% male and 25% female
Salary Increase:	Inflation (3.75%) + Across-the-Board Increase (0.25%) + Merit (See Exhibit IV)
COLA Loading Factor:	53.30%
Terminal Pay:	9.5%

# Member Contribution Rates (Continued)

#### Safety Tier 2 Members' Contribution Rates Based on the December 31, 2008 Actuarial Valuation

### as percentage of payroll

	Basic	c Only	Cost Sharing	g Contributions	COLA	Only	Т	otal
Entry Age	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	Over \$161*	<u>First \$161</u>	Over \$161*	<u>First \$161</u>	Over \$161*
15	5.61%	8.41%	3.00%	3.00%	1.79%	2.68%	10.40%	14.09%
16	5.61%	8.41%	3.00%	3.00%	1.79%	2.68%	10.40%	14.09%
17	5.63%	8.45%	3.00%	3.00%	1.79%	2.69%	10.42%	14.14%
18	5.65%	8.48%	3.00%	3.00%	1.80%	2.70%	10.45%	14.18%
19	5.67%	8.50%	3.00%	3.00%	1.81%	2.71%	10.48%	14.21%
20	5.67%	8.51%	3.00%	3.00%	1.81%	2.71%	10.48%	14.22%
21	5.67%	8.51%	3.00%	3.00%	1.81%	2.71%	10.48%	14.22%
22	5.68%	8.52%	3.00%	3.00%	1.81%	2.71%	10.49%	14.23%
23	5.69%	8.53%	3.00%	3.00%	1.81%	2.72%	10.50%	14.25%
24	5.70%	8.55%	3.00%	3.00%	1.81%	2.72%	10.51%	14.27%
25	5.72%	8.58%	3.00%	3.00%	1.82%	2.73%	10.54%	14.31%
26	5.74%	8.61%	3.00%	3.00%	1.83%	2.74%	10.57%	14.35%
27	5.77%	8.66%	3.00%	3.00%	1.84%	2.76%	10.61%	14.42%
28	5.80%	8.71%	3.00%	3.00%	1.85%	2.77%	10.65%	14.48%
29	5.84%	8.76%	3.00%	3.00%	1.86%	2.79%	10.70%	14.55%
30	5.89%	8.83%	3.00%	3.00%	1.87%	2.81%	10.76%	14.64%
31	5.93%	8.90%	3.00%	3.00%	1.89%	2.84%	10.82%	14.74%
32	5.99%	8.98%	3.00%	3.00%	1.91%	2.86%	10.90%	14.84%
33	6.04%	9.07%	3.00%	3.00%	1.93%	2.89%	10.97%	14.96%
34	6.10%	9.16%	3.00%	3.00%	1.95%	2.92%	11.05%	15.08%
35	6.17%	9.25%	3.00%	3.00%	1.97%	2.95%	11.14%	15.20%
36	6.23%	9.35%	3.00%	3.00%	1.99%	2.98%	11.22%	15.33%
37	6.30%	9.45%	3.00%	3.00%	2.01%	3.01%	11.31%	15.46%
38	6.37%	9.56%	3.00%	3.00%	2.03%	3.05%	11.40%	15.61%
39	6.44%	9.66%	3.00%	3.00%	2.05%	3.08%	11.49%	15.74%

### Member Contribution Rates (Continued)

	Basic	c Only	Cost Sharing	g Contributions	COLA	Only	Т	otal
Entry Age	<u>First \$161</u>	<u>Over \$161*</u>						
40	6.51%	9.77%	3.00%	3.00%	2.07%	3.11%	11.58%	15.88%
41	6.59%	9.88%	3.00%	3.00%	2.10%	3.15%	11.69%	16.03%
42	6.66%	9.98%	3.00%	3.00%	2.12%	3.18%	11.78%	16.16%
43	6.72%	10.08%	3.00%	3.00%	2.14%	3.21%	11.86%	16.29%
44	6.78%	10.18%	3.00%	3.00%	2.16%	3.24%	11.94%	16.42%
45	6.84%	10.26%	3.00%	3.00%	2.18%	3.27%	12.02%	16.53%
46	6.88%	10.32%	3.00%	3.00%	2.19%	3.29%	12.07%	16.61%
47	6.89%	10.34%	3.00%	3.00%	2.20%	3.30%	12.09%	16.64%
48	7.16%	10.74%	3.00%	3.00%	2.28%	3.42%	12.44%	17.16%
49 & Over	7.44%	11.16%	3.00%	3.00%	2.37%	3.56%	12.81%	17.72%

Interest:	8.00% per annum
COLA:	2.00%
Mortality:	RP-2000 Combined Healthy Mortality Table set back two years weighted 75% male and 25% female
Salary Increase:	Inflation (3.75%) + Across-the-Board Increase (0.25%) + Merit (See Exhibit IV)
COLA Loading Factor:	31.87%
Terminal Pay:	4.0%

### Appendix B

### Projected Employer Contributions By Each Participating Employer

Estimated Employer Contribution Requirement for Each Participating Employer in ACERA (\$000s)													
Calculated Based on Projected Employer Compensation Used in the December 31, 2008 Actuarial Valuation													
	Dol	Dollar Contribution <sup>(1)</sup> Based on December 31, 2008 Valuation					Dollar Contribution <sup>(1)</sup> Based on December 31, 2007 Valuation						
		General		Safety		General			Safety				
Employer Name (Code)	<u>Tier 1</u>	Tier 2	Tier 3	Tier 1	Tier 2	Total	Tier 1	Tier 2	Tier 3	Tier 1	Tier 2	Total	
Alameda County (101)	\$8,083	\$54,376		\$4,412	\$46,044	\$112,915	\$7,645	\$49,543		\$3,539	\$37,731	\$98,458	
Medical Center (106)	1,805	21,084				22,889	1,704	19,181				20,885	
Superior Court (632)	1,178	6,670				7,848	1,113	6,068				7,181	
First 5 (714)		632				632		575				575	
Housing Authority (103)	870					870	842					842	
LARPD (104)	210		\$826			1,036	204		\$806			1,010	
Office of Education (105)	12					12	11					11	
Total	\$12,158	\$82,762	\$826	\$4,412	\$46,044	\$146,202	\$11,519	\$75,367	\$806	\$3,539	\$37,731	\$128,962	

<sup>(1)</sup> Contribution calculated using projected compensation provided below for the December 31, 2008 valuation:

#### December 31, 2008 Projected Total Compensation (\$000s)

		General				
Employer Name (Code)	Tier 1	Tier 2	Tier 3	Tier 1	Tier 2	<u>Total</u>
Alameda County (101)	\$55,363	\$416,669		\$10,141	\$137,402	\$619,575
Medical Center (106)	12,242	159,849				172,091
Superior Court (632)	7,994	50,566				58,560
First 5 (714)		4,790				4,790
Housing Authority (103)	4,460					4,460
LARPD (104)	1,078		\$3,646			4,724
Office of Education (105)	60					60
Total	\$81,197	\$631,874	\$3,646	\$10,141	\$137,402	\$864,260

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