

Contra Costa County Employees' Retirement Association

Actuarial Valuation and Review
As of December 31, 2013



This report has been prepared at the request of the Board of Retirement to assist in administering the Fund. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Board of Retirement and may only be provided to other parties in its entirety. The measurements shown in this actuarial valuation may not be applicable for other purposes.

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September 30, 2014

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

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of December 31, 2013. It summarizes the actuarial data used in the valuation, establishes the funding requirements for the fiscal year beginning July 1, 2015 and analyzes the preceding year's experience.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Plan. The census information on which our calculations were based was prepared by CCCERA and the financial information was provided by the Association's staff. That assistance is gratefully acknowledged.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in plan provisions or applicable law.

The actuarial calculations were completed under the supervision of John Monroe, ASA, MAAA, Enrolled Actuary. 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. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Plan.

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

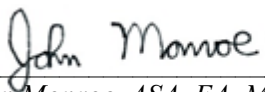
Sincerely,

SEGAL CONSULTING

By:



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



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

AW/bqb

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SECTION 1: Valuation Summary for the Contra Costa County Employees' Retirement Association

PURPOSE AND SCOPE

This report has been prepared by Segal Consulting to present a valuation of the Contra Costa County Employees' Retirement Association (CCCERA) as of December 31, 2013. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution rate requirements presented in this report are based on:

- The benefit provisions of the Retirement Association, as administered by the Board;
- The characteristics of covered active members, terminated members, and retired members and beneficiaries as of December 31, 2013, provided by the Association's staff;
- The assets of the Plan as of December 31, 2013, provided by the Association's staff;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

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

The actuarial valuation required for the Contra Costa County Employees' Retirement Association has been prepared as of December 31, 2013 by Segal Consulting. In preparing this valuation, we have employed generally accepted actuarial methods and assumptions to evaluate the Association's assets, liabilities and future contribution requirements. Our calculations are based upon member data and financial information provided to us by the Association's staff. This information has not been audited by us, but it has been reviewed and found to be reasonably consistent, both internally and with prior years' information.

SECTION 1: Valuation Summary for the Contra Costa County Employees' Retirement Association

The contribution requirements are determined as a percentage of payroll. The Association's employer rates provide for both normal cost and a contribution to amortize any unfunded or overfunded actuarial accrued liabilities. In 2008, the Board elected to amortize the remaining balance of the Association's unfunded actuarial accrued liability (UAAL) through December 31, 2007 over a decreasing period with 9 years remaining as of December 31, 2013. Any change in the UAAL that arises at each valuation after December 31, 2007 is amortized over its own separate declining 18-year period.

Effective with the December 31, 2013 valuation, any change in UAAL that arises due to plan amendments is amortized over its own declining 10-year period (with the exception of a change due to retirement incentives, which is to be funded in full upon adoption of the incentive).

We recommend that the rates calculated in this report be adopted by the Board for the fiscal year that extends from July 1, 2015 through June 30, 2016.

SIGNIFICANT ISSUES IN VALUATION YEAR

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

Ref: Pg. 89

- The results of this valuation reflect changes in the leave cashout (terminal pay) assumptions adopted by the Board. These changes were adopted in response to changes in leave cashouts (terminal pay) consistent with AB 197. They were documented in our letter dated August 5, 2014 and are also outlined in Section 4, Exhibit V of this report. These assumption changes resulted in a decrease in the average employer rate of 4.1% of payroll and a decrease in the average member rate of 0.3% of payroll. In addition, the results of the valuation also reflect changes as part of the Board's review of the funding policy. Those changes did not impact the employer contribution rate as they only changed amortization periods for possible future changes in liability.

*Ref: Pg. 80
Ref: Pg. 66*

- The ratio of the valuation value of assets to actuarial accrued liabilities increased from 70.6% to 76.4%. The Association's UAAL has decreased from \$2.3 billion to \$1.8 billion. This decrease is primarily due to changes in leave cashout assumptions, an investment return on actuarial value (i.e. after smoothing) greater than the 7.25% assumed rate and lower than expected individual salary increases. A reconciliation of the Association's UAAL is provided in Section 3, Exhibit I.

Ref: Pg. 32

- The average employer rate calculated in this valuation (excluding any employer subvention of member rates or member subvention of employer rates) has decreased from 49.82% of payroll to 43.58% of payroll. This decrease is primarily due to changes in leave cashout assumptions, the investment gain and lower than expected individual salary increases. A complete reconciliation of the Association's aggregate employer rate is provided in Section 2, Subsection D (see Chart 15).

SECTION 1: Valuation Summary for the Contra Costa County Employees' Retirement Association

Separate employer contribution rates are shown in Chart 14 for members with membership dates before January 1, 2013 (non-PEPRA members) and on or after January 1, 2013 (PEPRA members). However, the average employer contribution rates shown on page v are based on all members regardless of their membership date. The schedule of the employer contribution rates is provided in Section 2, Subsection D, Chart 14. Chart 14 no longer shows separate employer contribution rates based on a membership date breakpoint of January 1, 2011 as non-PEPRA members are no longer subject to different leave cashout assumptions depending on membership date.

Ref: Pg. 33

- The average member rate calculated in this valuation has decreased from 12.20% of payroll to 11.91% of payroll. This decrease is primarily due to changes in leave cashout assumptions. A complete reconciliation of the Association's aggregate member rate is provided in Section 2, Subsection D (see Chart 16).

Based on our recommendation, the Board has exercised the discretion made available by AB 1380 to no longer round the member's contribution rates for PEPRA members to the nearest 1/4% as previously required by the California Public Employees' Pension Reform Act of 2013 (PEPRA). This should allow for exactly one-half of the Normal Cost to be paid by the employees and by the employers covered under the PEPRA plans. The detailed member rates are provided in Appendix A and B of this report.

Ref: Pg. 5

- The total unrecognized net investment gain as of December 31, 2013 is about \$536 million as compared to an unrecognized net investment gain of \$157 million in the previous valuation. This net investment gain will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years. This means that if the Association earns the assumed rate of investment return of 7.25% per year (net of expenses) on a **market value** basis, then the net deferred gains of \$536 million would be recognized over the next few years as shown in the footnote in Chart 7.
- The net deferred gains of \$536 million represent about 8% of the market value of assets. Unless offset by future investment losses or other unfavorable experience, the recognition of the \$536 million market gains is expected to have an impact on the Association's future funded ratio and contribution rate requirements. This potential impact may be illustrated as follows:
 - If the net deferred gains were recognized immediately in the valuation value of assets, the funded percentage would increase from 76.4% to 83.3%.
 - If the net deferred gains were recognized immediately in the valuation value of assets, the average employer contribution rate would decrease from 43.6% to about 37.7% of payroll.
- The actuarial valuation report as of December 31, 2013 is based on financial information as of that date. Changes in the 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.

SECTION 1: Valuation Summary for the Contra Costa County Employees' Retirement Association

- PEPRA contribution rates for certain cost group without actual members (i.e., Cost Group #6) have been developed based on generally the same methodology used to estimate contribution rates for all of the PEPRA tiers in the December 31, 2012 valuation. We have assumed in this valuation that their demographic profiles (e.g., entry age, composition of male versus female, etc.) can be approximated by the data profiles of current active members with membership dates on and after January 1, 2011.
- This report reflects the \$2 million additional contribution made by the First-5 Children & Families Commission towards their UAAL. As adopted by the Board, this amount will be amortized as a level dollar amount over a period of eleven years beginning with the December 31, 2011 valuation. This report also reflects the \$5 million additional contribution made by the Central Contra Costa Sanitary District towards their UAAL. Based on CCCERA's funding policy, this amount will be amortized as a level percent of pay over a period of eighteen years beginning with the December 31, 2012 valuation.
- The Governmental Accounting Standards Board (GASB) approved two new Statements affecting the reporting of pension liabilities for accounting purposes. Statement 67 replaces Statement 25 and is for plan reporting. Statement 68 replaces Statement 27 and is for employer reporting. It is important to note that the new GASB rules only redefine pension expense for financial reporting purposes, and do not apply to contribution amounts for actual pension funding purposes. Employers and plans can still develop and adopt funding policies under current practices. Because these new statements are not effective until the calendar year ending December 31, 2014 for plan reporting and the fiscal year ending June 30, 2015 for employer reporting, the financial reporting information in this report continues to be prepared in accordance with Statements 25 and 27.

Ref: Pg. 79

Impact of Future Experience on Contribution Rates

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

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

SECTION 1: Valuation Summary for the Contra Costa County Employees' Retirement Association

Summary of Key Valuation Results

	December 31, 2013		December 31, 2012	
	Total Rate	Estimated Annual Amount	Total Rate	Estimated Annual Amount
Average Employer Contribution Rates⁽¹⁾:				
General				
Cost Group #1 – County and Small Districts (Tier 1 and 4)	35.48%	\$8,400,094	41.59%	\$10,611,239
Cost Group #2 – County and Small Districts (Tier 3 and 5)	32.28%	154,922,757	37.08%	168,815,252
Cost Group #3 – Central Contra Costa Sanitary District	60.51%	16,446,846	73.93%	17,620,915
Cost Group #4 – Contra Costa Housing Authority	43.65%	2,196,992	47.04%	2,377,319
Cost Group #5 – Contra Costa County Fire Protection District	35.04%	1,283,642	42.81%	1,522,178
Cost Group #6 – Small Districts (Non-Enhanced Tier 1 and 4)	29.13%	230,791	32.16%	240,133
Safety				
Cost Group #7 – County (Tier A and D)	80.27%	53,484,103	89.83%	59,805,301
Cost Group #8 – Contra Costa and East Fire Protection Districts	82.98%	26,034,468	89.79%	29,274,716
Cost Group #9 – County (Tier C and E)	74.50%	11,435,422	81.53%	11,166,934
Cost Group #10 – Moraga-Orinda Fire District	70.45%	5,293,654	80.03%	5,669,942
Cost Group #11 – San Ramon Valley Fire District	88.33%	14,581,928	95.39%	15,961,561
Cost Group #12 – Rodeo-Hercules Fire Protection District	110.23%	1,784,422	110.02%	1,865,548
All Employers combined	43.58%	\$296,095,119	49.82%	\$324,931,038
Average Member Contribution Rates⁽¹⁾:				
General				
Cost Group #1 – County and Small Districts (Tier 1 and 4)	10.58%	\$2,504,556	10.90%	\$2,781,559
Cost Group #2 – County and Small Districts (Tier 3 and 5)	10.60%	50,889,675	10.81%	49,226,376
Cost Group #3 – Central Contra Costa Sanitary District	11.10%	3,016,823	11.26%	2,684,595
Cost Group #4 – Contra Costa Housing Authority	11.17%	562,261	11.59%	585,541
Cost Group #5 – Contra Costa County Fire Protection District	11.05%	404,760	11.14%	396,160
Cost Group #6 – Small Districts (Non-Enhanced Tier 1 and 4)	12.41%	98,322	12.86%	96,073
Safety				
Cost Group #7 – County (Tier A and D)	17.41%	11,600,517	17.80%	11,851,328
Cost Group #8 – Contra Costa and East Fire Protection Districts	17.18%	5,390,352	17.43%	5,681,658
Cost Group #9 – County (Tier C and E)	13.66%	2,096,818	14.06%	1,926,255
Cost Group #10 – Moraga-Orinda Fire District	17.01%	1,278,057	17.31%	1,226,374
Cost Group #11 – San Ramon Valley Fire District	16.88%	2,786,567	17.20%	2,878,150
Cost Group #12 – Rodeo-Hercules Fire Protection District	15.90%	257,382	16.36%	277,408
All Categories Combined	11.91%	\$80,886,090	12.20%	\$79,611,477

(1) Based on projected payroll as of each valuation date shown. These rates do not include any employer subvention of member contributions or any member subvention of employer contributions. The rates shown are averages based on all members regardless of their membership date.

Note: Pages 19 and 20 contain a summary that shows which employers are in each cost group.

SECTION 1: Valuation Summary for the Contra Costa County Employees' Retirement Association

Summary of Key Valuation Results (continued)

	December 31, 2013		December 31, 2012	
Refundability Factors				
General	Legacy Tiers	PEPRA Tiers	Legacy Tiers	PEPRA Tiers
Cost Group #1 – County and Small Districts (Tier 1)	0.9603		0.9845	
PEPRA Tier 4 (2% COLA)		0.9598		0.9845
PEPRA Tier 4 (3% COLA)		0.9693		0.9845
Cost Group #2 – County and Small Districts (Tier 3)	0.9571		0.9360	
PEPRA Tier 5 (2% COLA)		0.9725		0.9360
PEPRA Tier 5 (3%/4% COLA)		0.9650		0.9360
Cost Group #3 – Central Contra Costa Sanitary District	0.9581	0.9650	0.9486	0.9486
Cost Group #4 – Contra Costa Housing Authority	0.9560	0.9769	0.9811	0.9811
Cost Group #5 – Contra Costa County Fire Protection District	0.9586		0.9602	
PEPRA Tier 4 (2% COLA)		0.9598		0.9602
PEPRA Tier 4 (3% COLA)		0.9646		0.9602
Cost Group #6 – Small Districts (Non-Enhanced Tier 1 and 4)	0.9546	0.9640	0.9338	0.9338
Safety				
Cost Group #7 – County (Tier A and D)	0.9741	0.9784	0.9924	0.9924
Cost Group #8 – Contra Costa and East Fire Protection Districts	0.9748	0.9811	0.9897	0.9897
Cost Group #9 – County (Tier C and E)	0.9755	0.9787	0.8718	0.8718
Cost Group #10 – Moraga-Orinda Fire District	0.9765	0.9828	0.9938	0.9938
Cost Group #11 – San Ramon Valley Fire District	0.9765	0.9831	0.9905	0.9905
Cost Group #12 – Rodeo-Hercules Fire Protection District	0.9754	0.9828	0.9860	0.9860
Funded Status:				
Actuarial accrued liability (AAL)	\$7,731,097,407		\$7,761,315,535	
Valuation value of assets (VVA)	\$5,907,416,432		\$5,482,257,062	
Market value of assets (MVA)	\$6,458,317,596		\$5,654,581,124	
Funded percentage on VVA basis (VVA/AAL)	76.4%		70.6%	
Funded percentage on MVA basis (MVA/AAL)	83.5%		72.9%	
Unfunded Actuarial Accrued Liability (UAAL) on VVA basis	\$1,823,680,975		\$2,279,058,473	
Unfunded Actuarial Accrued Liability (UAAL) on MVA basis	\$1,272,779,811		\$2,106,734,411	
Key Assumptions:				
Interest rate	7.25%		7.25%	
Inflation rate	3.25%		3.25%	
Across the board salary increase	0.75%		0.75%	

Note: Pages 19 and 20 contain a summary that shows which employers are in each cost group.

SECTION 1: Valuation Summary for the Contra Costa County Employees' Retirement Association

Summary of Key Valuation Demographic and Financial Data

	December 31, 2013	December 31, 2012	Percentage Change
Active Members:			
Number of members	9,124	8,640	5.6%
Average age	45.8	45.9	N/A
Average service	10.1	10.2	N/A
Projected total payroll (compensation)	\$679,428,911	\$652,312,178	4.2%
Average projected payroll	\$74,466	\$75,499	-1.4%
Retired Member and Beneficiaries:			
Number of members:			
Service retired	6,438	6,375	1.0%
Disability retired	927	923	0.4%
Beneficiaries	1,260	1,219	3.4%
Total	8,625	8,517	1.3%
Average age	69.3	69.0	N/A
Average Monthly Benefit	\$3,579	\$3,518	1.7%
Vested Terminated Members:			
Number of terminated vested members ⁽¹⁾	2,345	2,288	5.9%
Average age	47.0	46.8	N/A
Summary of Financial Data:			
Market value of assets	\$6,458,317,596	\$5,654,581,124	14.2%
Return on market value of assets	15.50%	13.31%	N/A
Actuarial value of assets	\$5,922,449,192	\$5,497,193,662	7.7%
Return on actuarial value of assets	9.01%	2.25%	N/A
Valuation value of assets	\$5,907,416,432	\$5,482,257,062	7.8%
Return on valuation value of assets	9.02%	2.24%	N/A

⁽¹⁾ Includes 933 terminated members with less than five years of service as of December 31, 2013 and 888 as of December 31, 2012.

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

A. MEMBER DATA

The Actuarial Valuation and Review considers the number and demographics 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, C and D.

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

CHART 1
Member Population: 2004 – 2013

Year Ended December 31	Active Members	Vested Terminated Members ⁽¹⁾	Retired Members and Beneficiaries	Ratio of Non-Actives to Actives
2004	9,358	1,517	6,118	0.82
2005	9,205	1,731	6,437	0.89
2006	9,210	1,919	6,646	0.93
2007	9,421	2,008	6,911	0.95
2008	9,385	2,153	7,012	0.98
2009	8,938	2,209	7,292	1.06
2010	8,811	2,231	7,559	1.11
2011	8,629	2,214	8,085	1.19
2012	8,640	2,288	8,517	1.25
2013	9,124	2,345	8,625	1.20

⁽¹⁾ Includes members who terminate with less than five years of service and leave accumulated contributions on deposit.

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

Active Members

Plan costs are affected by the age, years of service and payroll of active members. In this year's valuation, there are 9,124 active members with an average age of 45.8, average years of service of 10.1 years and average payroll of \$74,466. The 8,640 active members in the prior valuation had an average age of 45.9, average service of 10.2 years and average payroll of \$75,499.

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

Inactive Members

In this year's valuation, there were 2,345 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their employee contributions versus 2,288 in the prior valuation.

These graphs show a distribution of active members by age and by years of service.

CHART 2
Distribution of Active Members by Age as of December 31, 2013

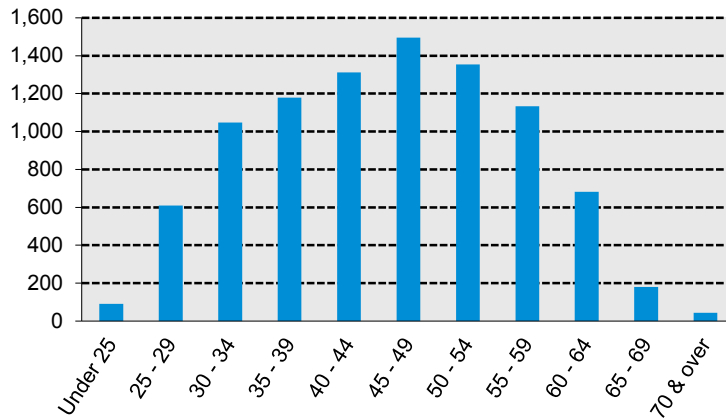
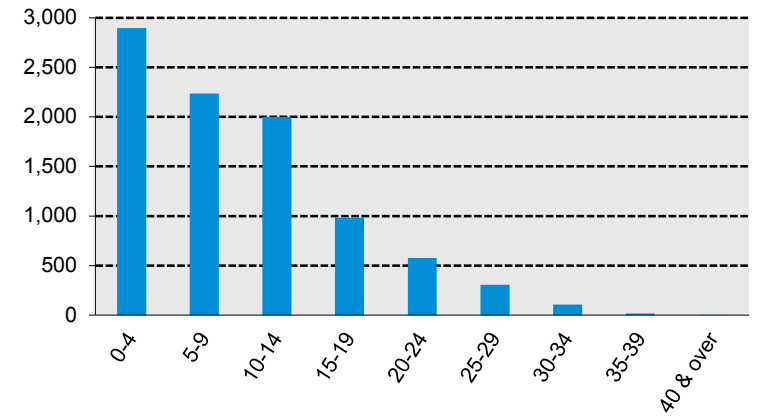


CHART 3
Distribution of Active Members by Years of Service as of December 31, 2013



SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

Retired Members and Beneficiaries

As of December 31, 2013, 7,365 retired members and 1,260 beneficiaries were receiving total monthly benefits of \$30,866,774. For comparison, in the previous valuation, there were 7,298 retired members and 1,219 beneficiaries receiving monthly benefits of \$29,964,786.

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

CHART 4

Distribution of Retired Members and Beneficiaries by Type and by Monthly Amount as of December 31, 2013

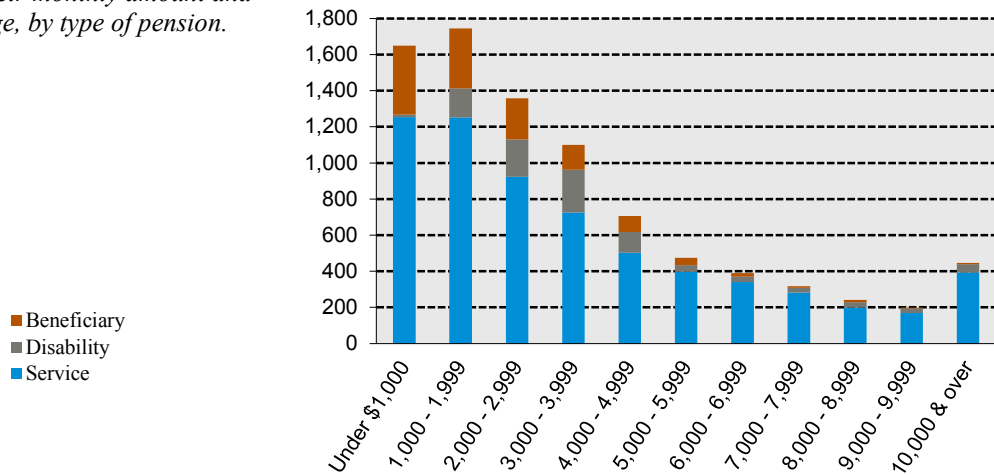
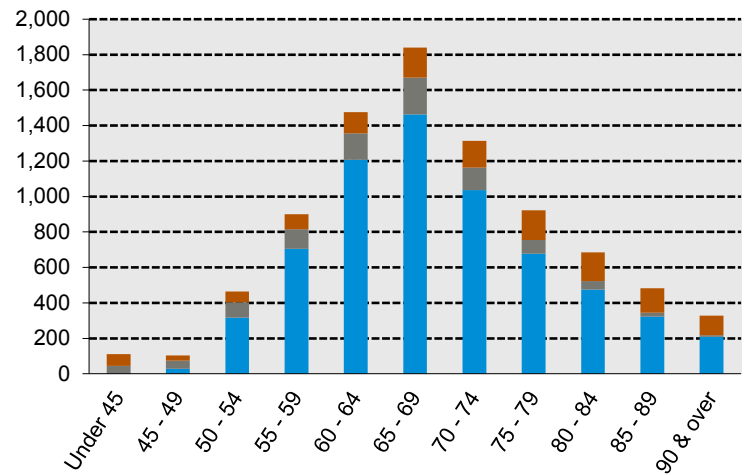


CHART 5

Distribution of Retired Members and Beneficiaries by Type and by Age as of December 31, 2013



SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

B. FINANCIAL INFORMATION

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

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

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

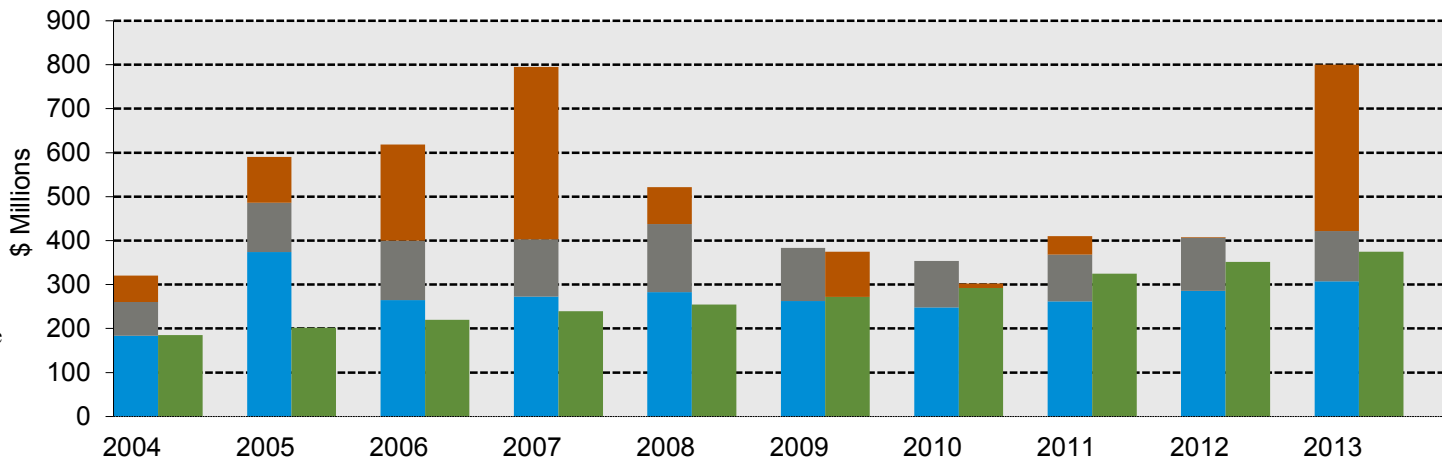
The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

The chart depicts the components of changes in the actuarial value of assets over the last ten years. Pension Obligation Bonds in the amount of \$153 million for 2005 and \$11.7 million for 2006 are included in the contributions. Also included are UAAL prepayments of \$8.6 million for 2006, \$3.0 million for 2007, and \$7.0 million for 2013.

- Adjustment toward market value
- Benefits paid
- Net interest and dividends
- Contributions

CHART 6

Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended December 31, 2004 - 2013



SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

CHART 7

Determination of Actuarial and Valuation Value of Assets for Year Ended December 31, 2013

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

Six Month Period		Total Actual Market	Expected Market	Investment	Deferred Factor	Deferred
From	To	Return (net)	Return (net)	Gain (Loss)		Return
7/2008	12/2008	\$(1,128,210,678)	\$189,989,366	\$(1,318,200,044)	0.0	\$0
1/2009	6/2009	106,872,212	146,385,892	(39,513,680)	0.0	0
7/2009	12/2009	628,870,712	150,326,140	478,544,572	0.1	47,854,457
1/2010	6/2010	(94,057,382)	174,278,387	(268,335,769)	0.2	(53,667,154)
7/2010	12/2010	687,503,854	169,679,293	517,824,561	0.3	155,347,368
1/2011	6/2011	292,872,483	195,544,414	97,328,069	0.4	38,931,228
7/2011	12/2011	(205,242,203)	204,284,793	(409,526,996)	0.5	(204,763,498)
1/2012	6/2012	296,675,568	195,294,521	101,381,047	0.6	60,828,628
7/2012	12/20/12	371,057,645	205,350,894	165,706,751	0.7	115,994,726
1/2013	6/2013	281,608,945	218,386,047	63,222,898	0.8	50,578,319
7/2013	12/20/13	588,758,958	227,909,702	360,849,256	0.9	<u>324,764,330</u>
1. Total Deferred Return ⁽¹⁾						\$535,868,404
2. Market Value of Assets						6,458,317,596
3. Actuarial Value of Assets (Item 2 – Item 1)						5,922,449,192
4. Actuarial Value as Percentage of Market Value (Item 3 / Item 2)						91.7%
5. Non-valuation Reserves and Designations:						
a. Post Retirement Death Benefit						\$15,032,760
b. Statutory Contingency						0
c. Additional One Percent Contingency						0
d. Unrestricted Designation						<u>0</u>
e. Total						\$15,032,760
6. Valuation Value of Assets (Item 3 – Item 5e)						<u>\$5,907,416,432</u>

⁽¹⁾ *Deferred Return Recognized in each of the next 5 years:*

(a) Amount Recognized during 2014	\$173,544,421
(b) Amount Recognized during 2015	127,574,660
(c) Amount Recognized during 2016	97,279,290
(d) Amount Recognized during 2017	101,385,107
(e) Amount Recognized during 2018	<u>36,084,926</u>
(f) Subtotal	\$535,868,404

Note: Results may not add due to rounding.

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

CHART 8

Allocation of Valuation Value of Assets as of December 31, 2013

The calculation of the valuation value of assets from December 31, 2012 to December 31, 2013 by cost groups is provided below.

	General				
	Cost Groups #1 and #2 General County and Small Districts	Cost Group #3 Central Contra Costa Sanitary District	Cost Group #4 Contra Costa Housing Authority	Cost Group #5 Contra Costa County Fire Protection District	Cost Group #6 Small Districts (General Non-Enhanced)
1 Allocated Valuation Value of Assets As of Beginning of Plan Year	\$3,053,006,557	\$184,214,514	\$36,238,717	\$36,092,223	\$4,423,558
2 Contributions:					
a. Total Member Contributions	43,834,901	1,509,131	345,520	364,139	60,400
b. Employer Contributions - Excludes POB and other Special Contributions	133,885,123	15,849,057	1,770,063	987,831	224,059
c. Employer Contributions - Special (POB, Termination, etc.)	2,154,061	5,000,000	0	0	0
d. Total Contributions	179,874,085	22,358,188	2,115,583	1,351,970	284,459
3 Total Payments Excluding Post- Retirement Death	201,574,588	16,738,898	2,536,209	2,555,015	269,144
4 Total Transfers Into or Out of Valuation Assets	0	0	0	0	0
5 Subtotal (Item 1 + 2d - 3 + 4)	3,031,306,054	189,833,804	35,818,091	34,889,178	4,438,873
6 Weighted Average Fund Balance	3,042,156,306	187,024,159	36,028,404	35,490,701	4,431,216
7 Earnings Allocated in Proportion to Item 6	274,295,733	16,863,015	3,248,498	3,200,016	399,540
8 Allocated Valuation Value of Assets As of End of Plan Year (Item 5 + 7)	\$3,305,601,787	\$206,696,819	\$39,066,589	\$38,089,194	\$4,838,413

Note: Results may not add due to rounding.

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

CHART 8 (continued)

Allocation of Valuation Value of Assets as of December 31, 2013

	Safety					Total
	Cost Groups #7 & 9 Safety County	Cost Group #8 Contra Costa & East Fire Protection Districts	Cost Group #10 Moraga-Orinda Fire District	Cost Group #11 San Ramon Valley Fire District	Cost Group #12 Rodeo-Hercules Fire Protection District	
1 Allocated Valuation Value of Assets As of Beginning of Plan Year	\$1,133,572,324	\$669,515,717	\$119,893,798	\$224,603,944	\$20,695,715	\$ 5,482,257,062
2 Contributions:						
a. Total Member Contributions	14,086,216	7,364,555	1,755,799	2,867,116	185,477	72,373,254
b. Employer Contributions - Excludes POB and other Special Contributions	45,993,091	14,907,649	2,848,910	10,248,331	1,149,277	227,863,391
c. Employer Contributions – Special (POB, Termination, etc.)	0	0	0	0	0	7,154,061
d. Total Contributions	60,079,307	22,272,204	4,604,709	13,115,447	1,334,754	307,390,706
3 Total Payments Excluding Post- Retirement Death	76,716,427	49,114,072	9,161,135	13,200,190	1,689,968	373,555,644
4 Total Transfers Into or Out of Valuation Assets	0	0	0	0	0	0
5 Subtotal (Item 1 + 2d – 3 + 4)	1,116,935,204	642,673,849	115,337,372	224,519,201	20,340,501	5,416,092,124
6 Weighted Average Fund Balance	1,125,253,764	656,094,783	117,615,585	224,561,573	20,518,108	5,449,174,593
7 Earnings Allocated in Proportion to Item 6	101,458,398	59,156,724	10,604,798	20,247,573	1,850,013	491,324,308
8 Allocated Valuation Value of Assets As of End of Plan Year (Item 5 + 7)	\$1,218,393,602	\$701,830,573	\$125,942,170	\$244,766,774	\$22,190,514	\$ 5,907,416,432

Note: Results may not add due to rounding.

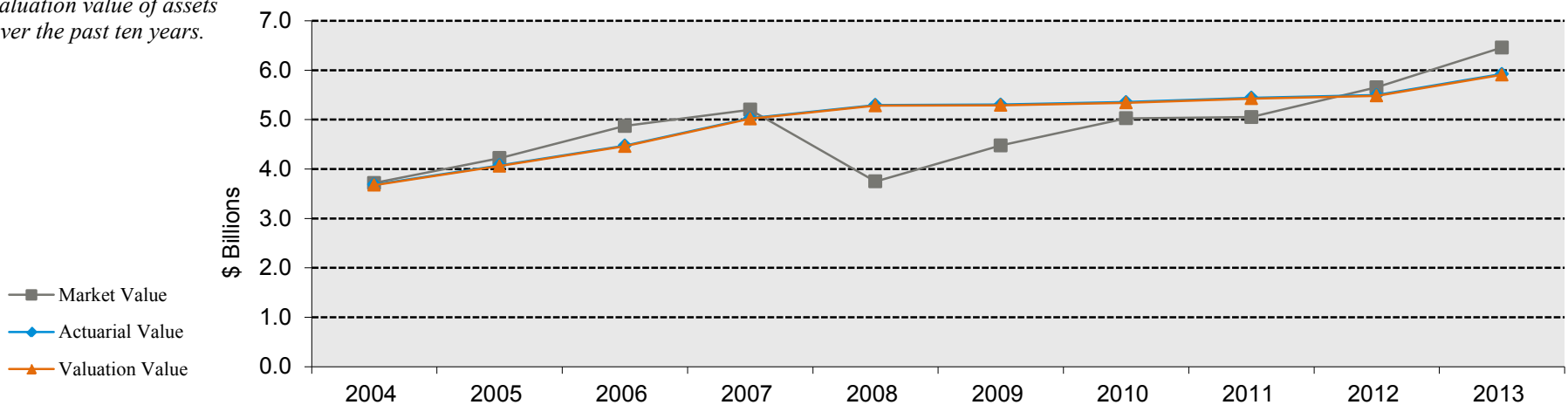
SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

The market value, actuarial value and valuation value of assets are representations of the Plan's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets, but with less volatility. The valuation value of assets is the actuarial value, excluding any non-valuation reserves.

The valuation value of assets is significant because the Plan's liabilities are compared to this measure of its assets to determine what portion, if any, remains unfunded. Amortization of the unfunded liability is an important element in determining the contribution requirement.

This chart shows the change in the relative values of market value, actuarial value and valuation value of assets over the past ten years.

CHART 9
Relative Values of Market Value, Actuarial Value and Valuation Value of Assets for Years Ended December 31, 2004 – 2013



SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

C. ACTUARIAL EXPERIENCE

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

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

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

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

The total gain is \$209.1 million, \$96.3 million gain from investments and \$112.8 million gain from all other sources. The net experience variation from individual sources other than investments was 1.5% 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 10
Actuarial Experience for Year Ended December 31, 2013

1. Net gain/(loss) from investments*	\$96,259,150
2. Net gain/(loss) from other experience**	<u>112,848,298</u>
3. Net experience gain/(loss): (1) + (2) + (3)	<u>\$209,107,448</u>

* Details in Chart 11

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

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

Investment Rate of Return

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the Plan's investment policy. For valuation purposes, the assumed rate of return on the actuarial value of assets during 2013 was 7.25%. The actual rate of return on the actuarial value for the 2013 Plan Year was 9.01%.

The market value return reflects the entire impact of the investment performance during the current year and ignores returns from prior years.

The actuarial and valuation value returns reflect the fact that investment gains and losses are gradually taken into account. This is because these returns reflect only a portion of the investment gain or loss from the current year as well as portions of the gains and losses from prior years in accordance with the Board's asset valuation method.

Since the actual return for the year was greater than the assumed return, the Plan experienced an actuarial gain on the actuarial and valuation value of assets during the year ended December 31, 2013.

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

CHART 11

Investment Experience for Year Ended December 31, 2013 – Market Value, Actuarial Value and Valuation Value of Assets

	Market Value	Actuarial Value	Valuation Value
1. Actual return	\$870,984,744	\$492,503,802	\$491,324,308
2. Average value of assets	5,620,956,988	5,463,569,526	5,449,174,593
3. Actual rate of return: (1) ÷ (2)	15.50%	9.01%	9.02%
4. Assumed rate of return	7.25%	7.25%	7.25%
5. Expected return: (2) x (4)	407,519,382	396,108,791	395,065,158
6. Actuarial gain/(loss): (1) – (5)	<u>\$463,465,362</u>	<u>\$96,395,011</u>	<u>\$96,259,150</u>

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rates of return on an actuarial, valuation and market value basis for the last ten years.

CHART 12

Investment Return – Market Value, Actuarial Value, and Valuation Value: 2004 – 2013

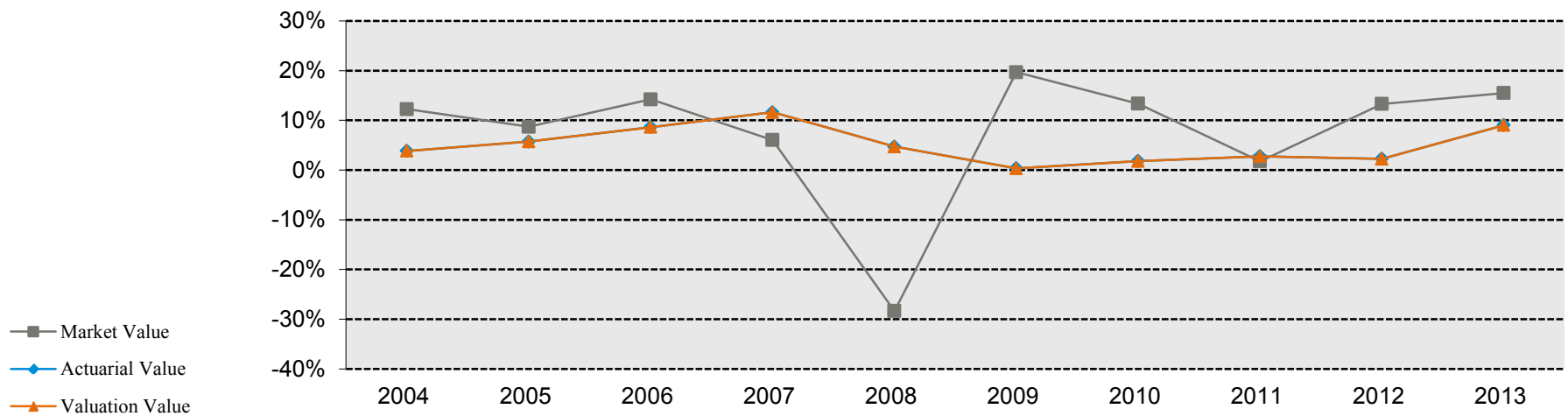
Year Ended December 31	Market Value Investment Return		Actuarial Value Investment Return		Valuation Value Investment Return	
	Amount	Percent of Assets	Amount	Percent of Assets	Amount	Percent of Assets
2004	\$406,427,237	12.27%	\$136,674,234	3.85%	\$135,741,405	3.84%
2005	331,400,271	8.71%	216,618,073	5.74%	215,737,484	5.74%
2006	603,899,378	14.23%	353,776,306	8.63%	352,838,472	8.64%
2007	294,694,885	6.03%	522,206,583	11.63%	521,211,436	11.64%
2008	(1,477,705,765)	(28.35%)	238,397,117	4.73%	237,402,129	4.72%
2009	736,956,891	19.68%	18,226,933	0.34%	17,021,116	0.32%
2010	594,637,090	13.35%	95,918,913	1.82%	94,835,030	1.80%
2011	88,042,268	1.76%	148,058,548	2.78%	146,988,614	2.77%
2012	668,138,997	13.31%	121,921,302	2.25%	120,826,177	2.24%
2013	870,984,744	15.50%	492,503,802	9.01%	491,324,308	9.02%
Total	\$3,117,475,996		\$2,344,301,811		\$2,333,926,171	
<i>Five-Year Average Return</i>		12.41%		3.27%		3.26%
<i>Ten-Year Average Return</i>		6.88%		4.90%		4.90%

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

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

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 13
Market, Actuarial and Valuation Value Rates of Return for Years Ended December 31, 2004 - 2013



SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

Other Experience

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

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

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

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

D. RECOMMENDED CONTRIBUTION

Employer contributions consist of two components:

Normal Cost

The annual contribution rate that, if paid annually from a member's first year of membership through the year of retirement, would accumulate to the amount necessary to fully fund the member's retirement-related benefits. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution rate is expressed as a level percentage of the member's compensation.

Contribution to the Unfunded Actuarial Accrued Liability (UAAL)

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 combined annual inflation and "across the board" salary increase rate of 4.00% along with expected payroll. The remaining balance of the December 31, 2007 UAAL is being amortized over a 9-year declining period as of December 31, 2013. Any change in the UAAL that arises at each valuation after December 31, 2007 is amortized over its own separate declining 18-year period. Effective with the December 31, 2013 valuation, any change in the UAAL that arises due to plan amendments is amortized over its own declining 10-year period (with the exception of a change due to retirement incentives, which is to be funded in full upon adoption of the incentive).

Employer Contribution Rates

The current and recommended employer contribution rates are shown in Chart 14. County contribution rates also include the Superior Court.

Separate rates for non-PEPRA members with membership dates prior to or on or after January 1, 2011 are no longer shown or necessary. This is because of the leave cashout assumption change that results in the same leave cashout assumption for both of these membership groups. Therefore, combined employer contribution rates for those groups have been determined effective with this valuation.

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

For the PEPRA cost groups without actual membership data (i.e. Cost Group #6), we have assumed in this valuation that their demographic profiles can be approximated by the data profiles of current active members with membership dates on or after January 1, 2011.

The amortization cost for the UAAL has been expressed as a percentage of total future payroll, including members with membership dates on or after January 1, 2013. This has been done in order to continue the open group level percent of payroll amortization methodology for the UAAL associated with members with membership dates before January 1, 2013. It is also consistent with the methodology applied when Safety Tier C was implemented.

The employer contribution rates shown in Chart 14 are the aggregate rates before reflecting the under and over \$350 of monthly compensation contribution provisions for members integrated with Social Security. The detailed contribution rates reflecting these provisions will be provided in the contribution rate packet that goes to the Board of Supervisors.

Member Contributions

Non-PEPRA Members

Articles 6 and 6.8 of the 1937 Act define the methodology to be used in the calculation of member basic contribution rates for non-PEPRA General and Safety members, respectively. The basic contribution rate is determined as that percentage of compensation which if paid annually from a member's first year of membership through the prescribed retirement age would accumulate to the amount necessary to fund a prescribed annuity.

The annuity is equal to:

- 1/120 of one year Final Average Salary per year of service at age 55 for General Tier 1 and Tier 3 Non-enhanced members
- 1/100 of one year Final Average Salary per year of service at age 50 for Safety Tier A Non-enhanced members
- 1/120 of one year Final Average Salary per year of service at age 60 for General Tier 1 and Tier 3 Enhanced members

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

- 1/100 of one year Final Average Salary per year of service at age 50 for Safety Tier A Enhanced
- 1/100 of three year Final Average Salary per year of service at age 50 for Safety Tier C Enhanced members

Member contributions are accumulated at an annual interest rate adopted annually by the Board. Note that recently negotiated MOU's for County General members no longer include the 50% employer subvention of the members' basic contributions. Districts pay varying portions, of the members' basic contributions on a nonrefundable basis. Members also pay 50% of the cost-of-living benefit. For most Safety Tier A employers, Safety members also subvent a portion of the employer rate, currently up to 9% of compensation (depending on their MOU). Chart 14 does not include any employer subvention of member contributions or any member subvention of employer contributions. The age specific contribution rates are provided in Appendix A.

For determining the cost of the basic benefit (i.e. non-COLA component), the cost of this pay element is currently recognized in the valuation as an employer only cost and does not affect member contribution rates. The leave cashout assumptions are only used in establishing cost-of-living member contributions. Note that the Board has adopted a change in this methodology effective with the next (December 31, 2014) valuation. Under that new methodology, the leave cashout assumptions will be included in the determination of the basis member contribution rates.

PEPRA Members

Pursuant to Section 7522.30(a) of the Government Code, PEPRA members are required to contribute at least 50% of the Normal Cost rate.

When previously calculating member rates, there were certain additional requirements that had to be met such as requiring the employee rates be rounded to the nearest one quarter of one percent and requiring the new employees to pay the contribution rate of "similarly situated employees", if it is greater. (reference: Section 7522.30(c)). Furthermore, Section 7522.30(d) indicated that "once established, the employee contribution rate described in subdivision (c) shall not be adjusted on account of a change to the normal cost rate unless the normal cost rate increases or decreases by more than 1 percent of payroll above or below the normal cost rate in effect at the

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

time the employee contribution rate is first established or, if later, the normal cost rate in effect at the time of the last adjustment to the employee contribution rate under this section.”

However, as we referenced in our letter dated December 17, 2013, Assembly Bill 1380 (AB 1380) was approved by the Governor on September 6, 2013. In particular, Section 31620.5(a) was added to the Government Code to provide the Board with the discretion to not apply the rounding previously required under Section 7522.30(c). We understand that our recommendation in that letter to no longer apply the rounding rule effective with the December 31, 2013 valuation was adopted by the Board, and the results in this valuation reflect that action taken by the Board.

Section 31620.5(b) of AB 1380 also stipulates that the “one percent rule” under Section 7522.30(d) “shall not apply to the contribution rates of members of retirement systems established pursuant to this chapter.”

Therefore, in preparing the Normal Cost rates in this report, we have assumed that exactly 50% of the Normal Cost would be paid by PEPRA members. In addition, we have calculated the total Normal Cost rate for the PEPRA tiers to the nearest one-fiftieth of one percent (i.e., the nearest even one-hundredth) as that will allow the Normal Cost rate to be shared exactly 50:50 without going beyond two decimal places.

Cost Sharing Adjustments

Starting with the December 31, 2009 Actuarial Valuation, the Board took action to depool CCCERA's assets, liabilities and normal cost by employer when determining employer contribution rates. The Board action included a review of experience back to December 31, 2002. This did not involve recalculation of any employer rates prior to December 31, 2009. However, it did involve reflecting the separate experience of the employers in each individual cost group back from December 31, 2002 through December 31, 2009. The cost groups are detailed on pages 19 and 20. In addition, the Board action called for a discontinuation of certain cost sharing adjustments for both member and employer contribution rates for General Tier 1 and Safety Tier A. Even under the depooling structure, there are a few remaining cost sharing arrangements.

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

Here is a summary of the cost sharing arrangements that were implemented in the December 31, 2009 Actuarial Valuation:

- Smaller employers (less than 50 active members as of December 31, 2009) were pooled with the applicable County tier. Safety members from the East Contra Costa Fire Protection District were pooled with Safety members of the Contra Costa County Fire Protection District.
- Due to a statutory requirement, the Superior Court was pooled with the County regardless of how many members the Court has.
- UAAL costs are pooled between Cost Group #1 and Cost Group #2 which represent General County and Small Districts. UAAL costs are also pooled for Cost Groups #7 and #9 which are Safety County tiers.

Other Adjustments

Other adjustments made in the determination of rates are as follows:

- Adjustments are made to some UAAL amounts for the County, the Contra Costa County Fire Protection District (CCCFPD), the Moraga-Orinda Fire District (Moraga) and First 5 – Children & Families Commission (First Five) to account for Pension Obligation Bonds (POBs) and any other any other special contributions that they previously made. These adjustments serve to reduce the UAAL contribution rate for these employers. The outstanding balances of these adjustments as of December 31, 2013 are as follows:

	<u>County General</u>	<u>Moraga General</u>	<u>First Five General</u>	<u>CCCFPD Safety</u>
Basic	\$212,288,457	\$373,847	\$890,704	\$60,934,463
COL	\$170,108,873	\$216,977	\$673,745	\$46,471,350

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

Summary of Cost Groups and Employers

GENERAL

Cost Group	Employer Name	Benefit Structure	Special Adjustment
(1)	County General	Tier 1 Enhanced/PEPRA Tier 4	Yes
	Local Agency Formation Commission	Tier 1 Enhanced/PEPRA Tier 4	
	Contra Costa Mosquito and Vector Control District	Tier 1 Enhanced/PEPRA Tier 4	
	Bethel Island Municipal District (Non-Integrated)	Tier 1 Enhanced/PEPRA Tier 4	
	First 5-Children & Families Commission	Tier 1 Enhanced/PEPRA Tier 4	Yes
	Contra Costa County Employees' Retirement Association	Tier 1 Enhanced/PEPRA Tier 4	
	Superior Court	Tier 1 Enhanced/PEPRA Tier 4	Yes
	East Contra Costa Fire Protection District (Non-Integrated)	Tier 1 Enhanced/PEPRA Tier 4	
	Moraga-Orinda Fire District (Non-Integrated)	Tier 1 Enhanced/PEPRA Tier 4	Yes
	Rodeo-Hercules Fire Protection District (Non-Integrated)	Tier 1 Enhanced/PEPRA Tier 4	
San Ramon Valley Fire District (Non-Integrated)	Tier 1 Enhanced/PEPRA Tier 4		
(2)	County General	Tier 3 Enhanced/PEPRA Tier 5	Yes
	In-Home Supportive Services Authority	Tier 3 Enhanced/PEPRA Tier 5	
	Contra Costa Mosquito and Vector Control District	Tier 3 Enhanced/PEPRA Tier 5	
	Superior Court	Tier 3 Enhanced/PEPRA Tier 5	Yes
(3)	Central Contra Costa Sanitary District (Non-Integrated)	Tier 1 Enhanced/PEPRA Tier 4	
(4)	Contra Costa Housing Authority	Tier 1 Enhanced/PEPRA Tier 4	
(5)	Contra Costa County Fire Protection District (Non-Integrated)	Tier 1 Enhanced/PEPRA Tier 4	
(6)	Rodeo Sanitary District	Tier 1 Non-Enhanced/PEPRA Tier 4	
	Byron Brentwood Cemetery	Tier 1 Non-Enhanced/PEPRA Tier 4	

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

Summary of Cost Groups and Employers (continued)

SAFETY

Cost Group	Employer Name	Benefit Structure	Special Adjustment
(7)	County Safety	Tier A Enhanced/PEPRA Tier D	
(8)	Contra Costa County Fire Protection District East Contra Costa Fire Protection District	Tier A Enhanced/PEPRA Tier D Tier A Enhanced/PEPRA Tier D	Yes
(9)	County Safety	Tier C Enhanced/PEPRA Tier E (Members hired on or after January 1, 2007)	
(10)	Moraga-Orinda Fire District	Tier A Enhanced/PEPRA Tier D	
(11)	San Ramon Valley Fire District	Tier A Enhanced/PEPRA Tier D	
(12)	Rodeo-Hercules Fire Protection District	Tier A Non-Enhanced/PEPRA Tier D	

A special adjustment is made for employers that have a remaining balance of a Pension Obligation Bond or any other special contributions as described on page 18.

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

**CHART 14
Components of Current and Recommended Employer Contribution Rates**

Cost Group #1	December 31, 2013 (Recommended Rates for FY 15-16)				December 31, 2012 (Current Rates for FY 14-15)			
	Basic	COLA	Total	Estimated Annual Amount	Basic	COLA	Total	Estimated Annual Amount
County General Tier 1 w/Courts								
Normal Cost	11.78%	3.62%	15.40%	\$2,233,850	13.19%	3.74%	16.93%	\$2,754,607
UAAL	<u>12.75%</u>	<u>4.77%</u>	<u>17.52%</u>	<u>2,541,367</u>	<u>15.00%</u>	<u>6.25%</u>	<u>21.25%</u>	<u>3,457,583</u>
Total Contributions	24.53%	8.39%	32.92%	\$4,775,217	28.19%	9.99%	38.18%	\$6,212,190
	Payroll = \$14,505,517				Payroll = \$16,269,974			
Cost Group #1 District General Tier 1 w/o POB								
Normal Cost	11.78%	3.62%	15.40%	\$1,053,061	13.19%	3.74%	16.93%	\$1,201,861
UAAL	<u>18.37%</u>	<u>9.27%</u>	<u>27.64%</u>	<u>1,890,039</u>	<u>20.67%</u>	<u>10.79%</u>	<u>31.46%</u>	<u>2,233,346</u>
Total Contributions	30.15%	12.89%	43.04%	\$2,943,100	33.86%	14.53%	48.39%	\$3,435,207
	Payroll = \$6,838,058				Payroll = \$7,099,001			
Cost Group #1 District General Tier 1 w/ POB (Moraga)								
Normal Cost	11.78%	3.62%	15.40%	\$74,942	13.19%	3.74%	16.93%	\$90,180
UAAL	<u>8.38%</u>	<u>3.46%</u>	<u>11.84%</u>	<u>57,618</u>	<u>11.89%</u>	<u>5.69%</u>	<u>17.58%</u>	<u>93,642</u>
Total Contributions	20.16%	7.08%	27.24%	\$132,560	25.08%	9.43%	34.51%	\$183,822
	Payroll = \$486,636				Payroll = \$532,663			
Cost Group #1 District General Tier 1 w/ UAAL Prepayment (First Five)								
Normal Cost	11.78%	3.62%	15.40%	\$244,640	13.19%	3.74%	16.93%	\$272,902
UAAL	<u>10.52%</u>	<u>3.34%</u>	<u>13.86%</u>	<u>220,176</u>	<u>20.67%</u>	<u>10.79%</u>	<u>31.46%</u>	<u>507,118</u>
Total Contributions	22.30%	6.96%	29.26%	\$464,816	33.86%	14.53%	48.39%	\$780,020
	Payroll = \$1,588,570				Payroll = \$1,611,944			

Note: The rates from the December 31, 2012 valuation for First Five are before reflecting their UAAL prepayment.

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

**CHART 14 (continued)
Components of Current and Recommended Employer Contribution Rates**

Cost Group #1	December 31, 2013 (Recommended Rates for FY 15-16)				December 31, 2012 (Current Rates for FY 14-15)			
	Basic	COLA	Total	Estimated Annual Amount	Basic	COLA	Total	Estimated Annual Amount
County General Tier 4 (3% COLA) w/ Courts								
Normal Cost	8.68%	3.27%	11.95%	\$0	7.97%	2.95%	10.92%	\$0
UAAL	<u>12.75%</u>	<u>4.77%</u>	<u>17.52%</u>	<u>0</u>	<u>15.00%</u>	<u>6.25%</u>	<u>21.25%</u>	<u>0</u>
Total Contributions	21.43%	8.04%	29.47%	\$0	22.97%	9.20%	32.17%	\$0
		Payroll = \$0				Payroll = \$0		
Cost Group #1 District General Tier 4 (3% COLA) w/o POB								
Normal Cost	8.68%	3.27%	11.95%	\$16,392	7.97%	2.95%	10.92%	\$0
UAAL	<u>18.37%</u>	<u>9.27%</u>	<u>27.64%</u>	<u>37,914</u>	<u>20.67%</u>	<u>10.79%</u>	<u>31.46%</u>	<u>0</u>
Total Contributions	27.05%	12.54%	39.59%	\$54,306	28.64%	13.74%	42.38%	\$0
		Payroll = \$137,172				Payroll = \$0		
Cost Group #1 District General Tier 4 (3% COLA) w/ POB (Moraga)								
Normal Cost	8.68%	3.27%	11.95%	\$0	7.97%	2.95%	10.92%	\$0
UAAL	<u>8.38%</u>	<u>3.46%</u>	<u>11.84%</u>	<u>0</u>	<u>11.89%</u>	<u>5.69%</u>	<u>17.58%</u>	<u>0</u>
Total Contributions	17.06%	6.73%	23.79%	\$0	19.86%	8.64%	28.50%	\$0
		Payroll = \$0				Payroll = \$0		
Cost Group #1 District General Tier 4 (3% COLA) with UAAL Prepayment (First Five)								
Normal Cost	8.68%	3.27%	11.95%	\$13,934	7.97%	2.95%	10.92%	\$0
UAAL	<u>10.52%</u>	<u>3.34%</u>	<u>13.86%</u>	<u>16,161</u>	<u>20.67%</u>	<u>10.79%</u>	<u>31.46%</u>	<u>0</u>
Total Contributions	19.20%	6.61%	25.81%	\$30,095	28.64%	13.74%	42.38%	\$0
		Payroll = \$116,599				Payroll = \$0		

Note: The rates from the December 31, 2012 valuation for First Five are before reflecting their UAAL prepayment.

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

**CHART 14 (continued)
Components of Current and Recommended Employer Contribution Rates**

	December 31, 2013 (Recommended Rates for FY 15-16)				December 31, 2012 (Current Rates for FY 14-15)			
	Basic	COLA	Total	Estimated Annual Amount	Basic	COLA	Total	Estimated Annual Amount
Cost Group #1								
County General Tier 4 (2% COLA) w/ Courts								
Normal Cost	8.25%	1.85%	10.10%	\$0	8.04%	1.81%	9.85%	\$0
UAAL	<u>12.75%</u>	<u>4.77%</u>	<u>17.52%</u>	<u>0</u>	<u>15.00%</u>	<u>6.25%</u>	<u>21.25%</u>	<u>0</u>
Total Contributions	21.00%	6.62%	27.62%	\$0	23.04%	8.06%	31.10%	\$0
	Payroll = \$0				Payroll = \$0			
Cost Group #2								
County General Tier 3 w/ Courts								
Normal Cost	11.50%	3.49%	14.99%	\$66,765,809	12.15%	3.62%	15.77%	\$71,268,528
UAAL	<u>12.75%</u>	<u>4.77%</u>	<u>17.52%</u>	<u>78,084,673</u>	<u>15.00%</u>	<u>6.25%</u>	<u>21.25%</u>	<u>96,128,635</u>
Total Contributions	24.25%	8.26%	32.51%	\$144,850,482	27.15%	9.87%	37.02%	\$167,397,163
	Payroll = \$445,733,711				Payroll = \$452,214,416			
Cost Group #2								
District General Tier 3 w/o POB								
Normal Cost	11.50%	3.49%	14.99%	\$464,123	12.15%	3.62%	15.77%	\$473,497
UAAL	<u>18.37%</u>	<u>9.27%</u>	<u>27.64%</u>	<u>855,795</u>	<u>20.67%</u>	<u>10.79%</u>	<u>31.46%</u>	<u>944,592</u>
Total Contributions	29.87%	12.76%	42.63%	\$1,319,918	32.82%	14.41%	47.23%	\$1,418,089
	Payroll = \$3,096,219				Payroll = \$3,002,517			
Cost Group #2								
County General Tier 5 (3%/4% COLA) w/ Courts								
Normal Cost	7.74%	2.79%	10.53%	\$3,172,436	7.61%	2.69%	10.30%	\$0
UAAL	<u>12.75%</u>	<u>4.77%</u>	<u>17.52%</u>	<u>5,278,355</u>	<u>15.00%</u>	<u>6.25%</u>	<u>21.25%</u>	<u>0</u>
Total Contributions	20.49%	7.56%	28.05%	\$8,450,791	22.61%	8.94%	31.55%	\$0
	Payroll = \$30,127,599				Payroll = \$0			

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

**CHART 14 (continued)
Components of Current and Recommended Employer Contribution Rates**

	December 31, 2013 (Recommended Rates for FY 15-16)				December 31, 2012 (Current Rates for FY 14-15)			
	Basic	COLA	Total	Estimated Annual Amount	Basic	COLA	Total	Estimated Annual Amount
Cost Group #2								
District General Tier 5								
(3%/4% COLA) w/o POB								
Normal Cost	7.74%	2.79%	10.53%	\$9,313	7.61%	2.69%	10.30%	\$0
UAAL	<u>18.37%</u>	<u>9.27%</u>	<u>27.64%</u>	<u>24,445</u>	<u>20.67%</u>	<u>10.79%</u>	<u>31.46%</u>	<u>0</u>
Total Contributions	26.11%	12.06%	38.17%	\$33,758	28.28%	13.48%	41.76%	\$0
			Payroll = \$88,441				Payroll = \$0	
Cost Group #2								
County General Tier 5								
(2% COLA) w/ Courts								
Normal Cost	6.58%	1.52%	8.10%	\$84,670	7.75%	1.66%	9.41%	\$0
UAAL	<u>12.75%</u>	<u>4.77%</u>	<u>17.52%</u>	<u>183,138</u>	<u>15.00%</u>	<u>6.25%</u>	<u>21.25%</u>	<u>0</u>
Total Contributions	19.33%	6.29%	25.62%	\$267,808	22.75%	7.91%	30.66%	\$0
			Payroll = \$1,045,307				Payroll = \$0	
Cost Group #2								
District General Tier 5								
(2% COLA) w/o POB								
Normal Cost	6.58%	1.52%	8.10%	\$0	7.75%	1.66%	9.41%	\$0
UAAL	<u>18.37%</u>	<u>9.27%</u>	<u>27.64%</u>	<u>0</u>	<u>20.67%</u>	<u>10.79%</u>	<u>31.46%</u>	<u>0</u>
Total Contributions	24.95%	10.79%	35.74%	\$0	28.42%	12.45%	40.87%	\$0
			Payroll = \$0				Payroll = \$0	

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

**CHART 14 (continued)
Components of Current and Recommended Employer Contribution Rates**

Cost Group #3	December 31, 2013 (Recommended Rates for FY 15-16)				December 31, 2012 (Current Rates for FY 14-15)			
	Basic	COLA	Total	Estimated Annual Amount	Basic	COLA	Total	Estimated Annual Amount
CCCSD General Tier 1								
Normal Cost	13.26%	4.20%	17.46%	\$4,680,654	15.89%	5.02%	20.91%	\$4,983,792
UAAL	<u>28.69%</u>	<u>14.43%</u>	<u>43.12%</u>	<u>11,559,552</u>	<u>35.10%</u>	<u>17.92%</u>	<u>53.02%</u>	<u>12,637,123</u>
Total Contributions	41.95%	18.63%	60.58%	\$16,240,206	50.99%	22.94%	73.93%	\$17,620,915
	Payroll = \$26,807,867				Payroll = \$23,833,773			
Cost Group #3 CCCSD General Tier 4 (3% COLA)								
Normal Cost	9.20%	3.42%	12.62%	\$46,785	7.97%	2.95%	10.92%	\$0
UAAL	<u>28.69%</u>	<u>14.43%</u>	<u>43.12%</u>	<u>159,855</u>	<u>35.10%</u>	<u>17.92%</u>	<u>53.02%</u>	<u>0</u>
Total Contributions	37.89%	17.85%	55.74%	\$206,640	43.07%	20.87%	63.94%	\$0
	Payroll = \$370,722				Payroll = \$0			
Note: The rates from the December 31, 2012 valuation for CCCSD are before reflecting their UAAL prepayment.								
Cost Group #4 Contra Costa Housing Authority General Tier 1								
Normal Cost	12.74%	3.78%	16.52%	\$806,784	12.83%	3.37%	16.20%	\$818,699
UAAL	<u>15.91%</u>	<u>11.44%</u>	<u>27.35%</u>	<u>1,335,687</u>	<u>18.03%</u>	<u>12.81%</u>	<u>30.84%</u>	<u>1,558,620</u>
Total Contributions	28.65%	15.22%	43.87%	\$2,142,471	30.86%	16.18%	47.04%	\$2,377,319
	Payroll = \$4,883,683				Payroll = \$5,054,117			
Cost Group #4 Contra Costa Housing Authority General Tier 4 (3% COLA)								
Normal Cost	6.55%	2.45%	9.00%	\$13,499	7.97%	2.95%	10.92%	\$0
UAAL	<u>15.91%</u>	<u>11.44%</u>	<u>27.35%</u>	<u>41,022</u>	<u>18.03%</u>	<u>12.81%</u>	<u>30.84%</u>	<u>0</u>
Total Contributions	22.46%	13.89%	36.35%	\$54,521	26.00%	15.76%	41.76%	\$0
	Payroll = \$149,988				Payroll = \$0			

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

**CHART 14 (continued)
Components of Current and Recommended Employer Contribution Rates**

Cost Group #5	December 31, 2013 (Recommended Rates for FY 15-16)				December 31, 2012 (Current Rates for FY 14-15)			
	Basic	COLA	Total	Estimated Annual Amount	Basic	COLA	Total	Estimated Annual Amount
CCCCFPD General Tier 1								
Normal Cost	12.00%	3.62%	15.62%	\$562,937	12.89%	3.67%	16.56%	\$588,816
UAAL	<u>11.93%</u>	<u>7.52%</u>	<u>19.45%</u>	<u>700,968</u>	<u>16.48%</u>	<u>9.77%</u>	<u>26.25%</u>	<u>933,362</u>
Total Contributions	23.93%	11.14%	35.07%	\$1,263,905	29.37%	13.44%	42.81%	\$1,522,178
	Payroll = \$3,603,948				Payroll = \$3,555,471			
Cost Group #5 CCCCFPD General Tier 4 (3% COLA)								
Normal Cost	10.15%	3.83%	13.98%	\$8,254	7.97%	2.95%	10.92%	\$0
UAAL	<u>11.93%</u>	<u>7.52%</u>	<u>19.45%</u>	<u>11,483</u>	<u>16.48%</u>	<u>9.77%</u>	<u>26.25%</u>	<u>0</u>
Total Contributions	22.08%	11.35%	33.43%	\$19,737	24.45%	12.72%	37.17%	\$0
	Payroll = \$59,039				Payroll = \$0			
Cost Group #5 CCCCFPD General Tier 4 (2% COLA)								
Normal Cost	8.25%	1.85%	10.10%	\$0	8.04%	1.81%	9.85%	\$0
UAAL	<u>11.93%</u>	<u>7.52%</u>	<u>19.45%</u>	<u>0</u>	<u>16.48%</u>	<u>9.77%</u>	<u>26.25%</u>	<u>0</u>
Total Contributions	20.18%	9.37%	29.55%	\$0	24.52%	11.58%	36.10%	\$0
	Payroll = \$0				Payroll = \$0			

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

**CHART 14 (continued)
Components of Current and Recommended Employer Contribution Rates**

	December 31, 2013 (Recommended Rates for FY 15-16)				December 31, 2012 (Current Rates for FY 14-15)			
	Basic	COLA	Total	Estimated Annual Amount	Basic	COLA	Total	Estimated Annual Amount
Cost Group #6								
Non-Enhanced District								
General Tier 1								
Normal Cost	12.32%	3.88%	16.20%	\$128,349	13.86%	4.22%	18.08%	\$134,999
UAAL	<u>10.78%</u>	<u>2.15%</u>	<u>12.93%</u>	<u>102,442</u>	<u>11.22%</u>	<u>2.86%</u>	<u>14.08%</u>	<u>105,134</u>
Total Contributions	23.10%	6.03%	29.13%	\$230,791	25.08%	7.08%	32.16%	\$240,133
	Payroll = \$792,280				Payroll = \$746,787			
Cost Group #6								
Non-Enhanced District General								
Tier 4 (3% COLA)								
Normal Cost	8.25%	3.01%	11.26%	\$0	7.97%	2.95%	10.92%	\$0
UAAL	<u>10.78%</u>	<u>2.15%</u>	<u>12.93%</u>	<u>0</u>	<u>11.22%</u>	<u>2.86%</u>	<u>14.08%</u>	<u>0</u>
Total Contributions	19.03%	5.16%	24.19%	\$0	19.19%	5.81%	25.00%	\$0
	Payroll = \$0				Payroll = \$0			
Cost Group #7								
County Safety Tier A								
Normal Cost	21.66%	7.39%	29.05%	\$19,122,294	24.29%	8.08%	32.37%	\$21,550,723
UAAL	<u>28.69%</u>	<u>22.62%</u>	<u>51.31%</u>	<u>33,775,039</u>	<u>32.80%</u>	<u>24.66%</u>	<u>57.46%</u>	<u>38,254,578</u>
Total Contributions	50.35%	30.01%	80.36%	\$52,897,333	57.09%	32.74%	89.83%	\$59,805,301
	Payroll = \$65,825,451				Payroll = \$66,575,441			
Cost Group #7								
County Safety Tier D								
Normal Cost	15.14%	6.36%	21.50%	\$173,267	11.88%	5.21%	17.09%	\$0
UAAL	<u>28.69%</u>	<u>22.62%</u>	<u>51.31%</u>	<u>413,503</u>	<u>32.80%</u>	<u>24.66%</u>	<u>57.46%</u>	<u>0</u>
Total Contributions	43.83%	28.98%	72.81%	\$586,770	44.68%	29.87%	74.55%	\$0
	Payroll = \$805,891				Payroll = \$0			

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

**CHART 14 (continued)
Components of Current and Recommended Employer Contribution Rates**

	December 31, 2013 (Recommended Rates for FY 15-16)				December 31, 2012 (Current Rates for FY 14-15)			
	Basic	COLA	Total	Estimated Annual Amount	Basic	COLA	Total	Estimated Annual Amount
Cost Group #8								
CCCYPD Safety Tier A								
Normal Cost	21.22%	7.39%	28.61%	\$8,057,977	22.86%	7.67%	30.53%	\$9,167,228
UAAL	<u>21.90%</u>	<u>27.67%</u>	<u>49.57%</u>	<u>13,961,339</u>	<u>26.63%</u>	<u>29.09%</u>	<u>55.72%</u>	<u>16,731,038</u>
Total Contributions	43.12%	35.06%	78.18%	\$22,019,316	49.49%	36.76%	86.25%	\$25,898,266
	Payroll = \$28,164,897				Payroll = \$30,027,438			
Cost Group #8								
East CCCYPD Safety Tier A								
Normal Cost	21.22%	7.39%	28.61%	\$797,446	22.86%	7.67%	30.53%	\$786,893
UAAL	<u>49.95%</u>	<u>49.06%</u>	<u>99.01%</u>	<u>2,759,704</u>	<u>52.02%</u>	<u>48.45%</u>	<u>100.47%</u>	<u>2,589,557</u>
Total Contributions	71.17%	56.45%	127.62%	\$3,557,150	74.88%	56.12%	131.00%	\$3,376,450
	Payroll = \$2,787,298				Payroll = \$2,577,443			
Cost Group #8								
CCCYPD Safety Tier D								
Normal Cost	14.28%	6.24%	20.52%	\$20,032	11.88%	5.21%	17.09%	\$0
UAAL	<u>21.90%</u>	<u>27.67%</u>	<u>49.57%</u>	<u>48,390</u>	<u>26.63%</u>	<u>29.09%</u>	<u>55.72%</u>	<u>0</u>
Total Contributions	36.18%	33.91%	70.09%	\$68,422	38.51%	34.30%	72.81%	\$0
	Payroll = \$97,620				Payroll = \$0			
Cost Group #8								
East CCCYPD Safety Tier D								
Normal Cost	14.28%	6.24%	20.52%	\$66,880	11.88%	5.21%	17.09%	\$0
UAAL	<u>49.95%</u>	<u>49.06%</u>	<u>99.01%</u>	<u>322,700</u>	<u>52.02%</u>	<u>48.45%</u>	<u>100.47%</u>	<u>0</u>
Total Contributions	64.23%	55.30%	119.53%	\$389,580	63.90%	53.66%	117.56%	\$0
	Payroll = \$325,927				Payroll = \$0			

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

**CHART 14 (continued)
Components of Current and Recommended Employer Contribution Rates**

Cost Group #9	December 31, 2013 (Recommended Rates for FY 15-16)				December 31, 2012 (Current Rates for FY 14-15)			
	Basic	COLA	Total	Estimated Annual Amount	Basic	COLA	Total	Estimated Annual Amount
County Safety Tier C								
Normal Cost	19.45%	4.00%	23.45%	\$3,448,703	19.96%	4.11%	24.07%	\$3,296,761
UAAL	<u>28.69%</u>	<u>22.62%</u>	<u>51.31%</u>	<u>7,545,969</u>	<u>32.80%</u>	<u>24.66%</u>	<u>57.46%</u>	<u>7,870,173</u>
Total Contributions	48.14%	26.62%	74.76%	\$10,994,672	52.76%	28.77%	81.53%	\$11,166,934
	Payroll = \$14,706,624				Payroll = \$13,697,308			
Cost Group #9								
County Safety Tier E								
Normal Cost	13.64%	3.55%	17.19%	\$110,606	11.54%	3.05%	14.59%	\$0
UAAL	<u>28.69%</u>	<u>22.62%</u>	<u>51.31%</u>	<u>330,144</u>	<u>32.80%</u>	<u>24.66%</u>	<u>57.46%</u>	<u>0</u>
Total Contributions	42.33%	26.17%	68.50%	\$440,750	44.34%	27.71%	72.05%	\$0
	Payroll = \$643,431				Payroll = \$0			
Cost Group #10								
Moraga-Orinda FD Safety Tier A								
Normal Cost	20.57%	7.23%	27.80%	\$1,956,557	23.29%	8.00%	31.29%	\$2,216,825
UAAL	<u>19.40%</u>	<u>23.83%</u>	<u>43.23%</u>	<u>3,042,517</u>	<u>23.16%</u>	<u>25.58%</u>	<u>48.74%</u>	<u>3,453,117</u>
Total Contributions	39.97%	31.06%	71.03%	\$4,999,074	46.45%	33.58%	80.03%	\$5,669,942
	Payroll = \$7,037,975				Payroll = \$7,084,771			
Cost Group #10								
Moraga-Orinda FD Safety Tier D								
Normal Cost	12.98%	5.73%	18.71%	\$88,983	11.88%	5.21%	17.09%	\$0
UAAL	<u>19.40%</u>	<u>23.83%</u>	<u>43.23%</u>	<u>205,597</u>	<u>23.16%</u>	<u>25.58%</u>	<u>48.74%</u>	<u>0</u>
Total Contributions	32.38%	29.56%	61.94%	\$294,580	35.04%	30.79%	65.83%	\$0
	Payroll = \$475,589				Payroll = \$0			

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

**CHART 14 (continued)
Components of Current and Recommended Employer Contribution Rates**

	December 31, 2013 (Recommended Rates for FY 15-16)				December 31, 2012 (Current Rates for FY 14-15)			
	Basic	COLA	Total	Estimated Annual Amount	Basic	COLA	Total	Estimated Annual Amount
Cost Group #11								
San Ramon FD Safety Tier A								
Normal Cost	20.93%	7.40%	28.33%	\$4,582,145	22.94%	7.92%	30.86%	\$5,163,752
UAAL	<u>36.46%</u>	<u>23.74%</u>	<u>60.20%</u>	<u>9,736,855</u>	<u>39.60%</u>	<u>24.93%</u>	<u>64.53%</u>	<u>10,797,809</u>
Total Contributions	57.39%	31.14%	88.53%	\$14,319,000	62.54%	32.85%	95.39%	\$15,961,561
	Payroll = \$16,174,178				Payroll = \$16,733,471			
Cost Group #11								
San Ramon FD Safety Tier D								
Normal Cost	12.84%	5.70%	18.54%	\$61,909	11.88%	5.21%	17.09%	\$0
UAAL	<u>36.46%</u>	<u>23.74%</u>	<u>60.20%</u>	<u>201,019</u>	<u>39.60%</u>	<u>24.93%</u>	<u>64.53%</u>	<u>0</u>
Total Contributions	49.30%	29.44%	78.74%	\$262,928	51.48%	30.14%	81.62%	\$0
	Payroll = \$333,919				Payroll = \$0			
Cost Group #12								
Non-Enhanced Rodeo-Hercules								
FPD Safety Tier A								
Normal Cost	17.29%	5.91%	23.20%	\$359,833	20.19%	6.60%	26.79%	\$454,263
UAAL	<u>52.98%</u>	<u>34.24%</u>	<u>87.22%*</u>	<u>1,352,787</u>	<u>51.45%</u>	<u>31.78%</u>	<u>83.23%</u>	<u>1,411,285</u>
Total Contributions	70.27%	40.15%	110.42%	\$1,712,620	71.64%	38.38%	110.02%	\$1,865,548
	Payroll = \$1,551,005				Payroll = \$1,695,645			
Cost Group #12								
Non-Enhanced Rodeo-Hercules								
FPD Safety Tier D								
Normal Cost	12.99%	5.77%	18.76%	\$12,710	11.88%	5.21%	17.09%	\$0
UAAL	<u>52.98%</u>	<u>34.24%</u>	<u>87.22%*</u>	<u>59,092</u>	<u>51.45%</u>	<u>31.78%</u>	<u>83.23%</u>	<u>0</u>
Total Contributions	65.97%	40.01%	105.98%	\$71,802	63.33%	36.99%	100.32%	\$0
	Payroll = \$67,750				Payroll = \$0			

* Total UAAL dollar contribution for Rodeo-Hercules FPD is \$1,497,433 for FY 15-16. It is based on the UAAL rate shown above multiplied by estimated payroll for FY 15-16. The estimated payroll for FY 15-16 was determined by increasing payroll amounts shown above for 2014 by 18-months of assumed wage inflation.

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

**CHART 14 (continued)
Components of Current and Recommended Employer Contribution Rates**

	<u>December 31, 2013 (Recommended Rates for FY 15-16)</u>				<u>December 31, 2012 (Current Rates for FY 14-15)</u>			
	Basic	COLA	Total	Estimated Annual Amount	Basic	COLA	Total	Estimated Annual Amount
Total All Employers Combined (Aggregate)								
Normal Cost	13.35%	4.20%	17.55%	\$119,239,774	14.70%	4.50%	19.20%	\$125,224,326
UAAL	<u>16.70%</u>	<u>9.33%</u>	<u>26.03%</u>	<u>176,855,345</u>	<u>19.55%</u>	<u>11.07%</u>	<u>30.62%</u>	<u>199,706,712</u>
Total Contributions	30.05%	13.53%	43.58%	\$296,095,119	34.25%	15.57%	49.82%	\$324,931,038
	Payroll = \$679,428,911				Payroll = \$652,312,180			

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

The employer contribution rates as of December 31, 2013 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

Reconciliation of Recommended Employer Contribution Rate

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

CHART 15

Reconciliation of Recommended Average Employer Contribution from December 31, 2012 to December 31, 2013 Valuation

	Contribution Rate*	Estimated Annual Dollar Cost**
Recommended Average Employer Contribution Rate in December 31, 2012 Valuation	49.82%	\$324,931,038
Effect of investment (gain)/loss ⁽¹⁾	(1.05%)	(7,134,004)
Effect of difference in actual versus expected contributions due to delay in implementation of contribution rates calculated in 12/31/2012 valuation	1.18%	8,017,261
Effect of lower than expected individual salary increases	(1.25%)	(8,492,861)
Effect of amortizing prior year's UAAL over a greater than expected projected total payroll	(0.05%)	7,986,910 ⁽²⁾
Effect of lower than expected COLA increases for retirees and beneficiaries	(0.52%)	(3,533,030)
Effect of mortality gain for retirees and beneficiaries	(0.37%)	(2,513,887)
Effect of net other experience (gains)/losses ⁽³⁾	(0.13%)	4,350,563
Effect of changes in actuarial assumptions ⁽⁴⁾	(4.05%)	<u>(27,516,871)</u>
Total change	(6.24%)	<u>\$(28,835,919)</u>
Recommended Average Employer Contribution Rate in December 31, 2013 Valuation	43.58%	\$296,095,119

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

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

(1) Return on the valuation value of assets of 9.02% was greater than the 7.25% assumed in the 2012 valuation.

(2) The dollar amount shown represents the dollar increase in UAAL amortization payments for amortization bases established prior to the December 31, 2013 valuation.

(3) Other differences in actual versus expected experience including (but not limited to) disability, withdrawal, retirement and leave cashout experience. Estimated annual dollar cost also reflects change in payroll from prior valuation.

(4) The Board approved changes in leave cashout assumptions.

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

The member contribution rates as of December 31, 2013 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.

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

**CHART 16
Reconciliation of Recommended Average Member Contribution from December 31, 2012 to December 31, 2013 Valuation**

	Contribution Rate*	Estimated Annual Dollar Cost**
Recommended Average Member Contribution Rate in December 31, 2012 Valuation	12.20%	\$79,611,477
Effect of changes in actuarial assumptions ⁽¹⁾	(0.30%)	(2,038,287)
Effect of other experience (gains)/losses ⁽²⁾	<u>0.01%</u>	<u>3,312,900</u>
Total change	<u>(0.29%)</u>	<u>\$1,274,613</u>
Recommended Average Member Contribution Rate in December 31, 2013 Valuation	11.91%	\$80,886,090

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

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

(1) The Board approved changes in leave cashout assumptions.

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

SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

E. INFORMATION REQUIRED BY GASB

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

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

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

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

These graphs show key GASB factors.

CHART 17
Required Versus Actual Contributions

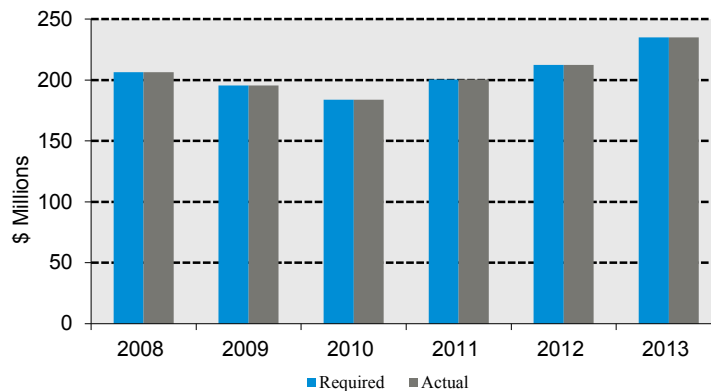
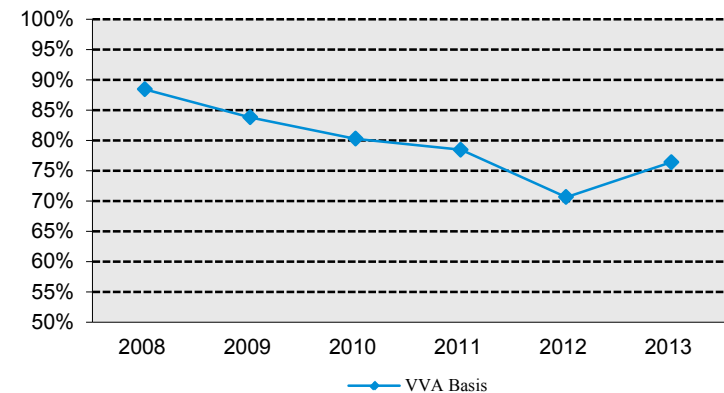


CHART 18
Funded Ratio



SECTION 2: Valuation Results for the Contra Costa County Employees' Retirement Association

F. VOLATILITY RATIOS

Retirement plans are subject to volatility in the level of required contributions. This volatility tends to increase as retirement plans become more mature.

The Asset Volatility Ratio (AVR), which is equal to the market value of assets divided by total payroll, provides an indication of the potential contribution volatility for any given level of investment volatility. A higher AVR indicates that the plan is subject to a greater level of contribution volatility. This is a current measure since it is based on the current level of assets.

For CCCERA, the current AVR is about 9.5. This means that a 1% asset gain/(loss) (relative to the assumed investment return) translates to about 9.5% of one-year's payroll. Since CCCERA amortizes actuarial gains and losses over a 18-year period, there would be a 0.7% of payroll decrease/(increase) in the required contribution for each 1% asset gain/(loss).

The Liability Volatility Ratio (LVR), which is equal to the Actuarial Accrued Liability divided by payroll, provides an indication of the longer-term potential for contribution volatility for any given level of investment volatility. This is because, over an extended period of time, the plan's assets should track the plan's liabilities. For example, if a plan is 50% funded on a market value basis, the liability volatility ratio would be double the asset volatility ratio and the plan sponsor should expect contribution volatility to increase over time as the plan becomes better funded.

The LVR also indicates how volatile contributions will be in response to changes in the Actuarial Accrued Liability due to actual experience or to changes in actuarial assumptions.

For CCCERA, the current LVR is about 11.4. This is about 20% higher than the AVR. Therefore, we would expect that contribution volatility will increase over the long-term.

This chart shows how the asset and liability volatility ratios have varied over time.

CHART 19
Volatility Ratios for Years Ended December 31, 2008 – 2013

Year Ended December 31	Asset Volatility Ratio	Liability Volatility Ratio
2008	5.3	8.5
2009	6.4	9.1
2010	7.3	9.7
2011	7.6	10.4
2012	8.7	11.9
2013	9.5	11.4

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

EXHIBIT A

Table of Plan Coverage

i. General Tier 1

Category	Year Ended December 31		Change From Prior Year
	2013	2012	
Active members in valuation			
Number	661	686	-3.6%
Average age	48.7	48.2	N/A
Average service	14.1	13.6	N/A
Projected total payroll ⁽¹⁾	\$59,506,557	\$58,703,729	1.4%
Projected average payroll	\$90,025	\$85,574	5.2%
Account balances	\$50,639,503	\$46,348,419	9.3%
Total active members with at least five years of service	554	544	1.8%
Vested terminated members	260	267	-2.6%
Retired members			
Number in pay status	2,647	2,726	-2.9%
Average age	73.7	73.6	N/A
Average monthly benefit	\$3,735	\$3,634	2.8%
Disabled members			
Number in pay status ⁽²⁾	292	307	-4.9%
Average age	70.1	69.6	N/A
Average monthly benefit	\$2,599	\$2,534	2.6%
Beneficiaries			
Number in pay status	694	690	0.6%
Average age	76.8	76.6	N/A
Average monthly benefit	\$1,975	\$1,915	3.1%

⁽¹⁾ Calculated by increasing actual calendar year salaries by the assumed salary scale.

⁽²⁾ For 2013, includes 219 members receiving a service-connected disability and 73 members receiving an ordinary disability.

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

EXHIBIT A (continued)

Table of Plan Coverage

ii. General Tier 2

Category	Year Ended December 31		Change From Prior Year
	2013	2012	
Active members in valuation			
Number ⁽¹⁾	0	0	0.0%
Average age	N/A	N/A	N/A
Average service	N/A	N/A	N/A
Projected total payroll ⁽²⁾	N/A	N/A	N/A
Projected average payroll	N/A	N/A	N/A
Account balances	N/A	N/A	N/A
Total active members with at least five years of service	0	0	0.0%
Vested terminated members	259	266	-2.6%
Retired members			
Number in pay status	420	428	-1.9%
Average age	73.2	72.6	N/A
Average monthly benefit	\$812	\$800	1.5%
Disabled members			
Number in pay status ⁽³⁾	43	46	-6.5%
Average age	69.4	68.8	N/A
Average monthly benefit	\$2,023	\$1,982	2.1%
Beneficiaries			
Number in pay status	100	97	3.1%
Average age	65.5	63.5	N/A
Average monthly benefit	\$820	\$849	-3.4%

⁽¹⁾ As of the December 31, 2005 valuation, there are no longer any Tier 2 Active Members since they have all transferred to Tier 3.

⁽²⁾ Calculated by increasing actual calendar year salaries by the assumed salary scale.

⁽³⁾ For 2013, includes 25 members receiving a service-connected disability and 18 members receiving an ordinary disability.

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

EXHIBIT A (continued)

Table of Plan Coverage

iii. General Tier 3

Category	Year Ended December 31		Change From Prior Year
	2013	2012	
Active members in valuation			
Number	6,222	6,558	-5.1%
Average age	47.6	46.8	N/A
Average service	10.6	9.7	N/A
Projected total payroll ⁽¹⁾	\$448,829,930	\$455,216,933	-1.4%
Projected average payroll	\$72,136	\$69,414	3.9%
Account balances	\$381,375,951	\$334,502,172	14.0%
Total active members with at least five years of service	4,656	4,562	2.1%
Vested terminated members			
	1,460	1,435	1.7%
Retired members			
Number in pay status	2,181	2,054	6.2%
Average age	65.8	65.2	N/A
Average monthly benefit	\$2,542	\$2,527	0.6%
Disabled members			
Number in pay status ⁽²⁾	87	78	11.5%
Average age	61.6	61.5	N/A
Average monthly benefit	\$2,146	\$2,174	-1.3%
Beneficiaries			
Number in pay status	116	101	14.9%
Average age	59.4	58.5	N/A
Average monthly benefit	\$1,518	\$1,475	2.9%

⁽¹⁾ Calculated by increasing actual calendar year salaries by the assumed salary scale.

⁽²⁾ For 2013, include 28 members receiving a service-connected disability and 59 members receiving an ordinary disability.

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

EXHIBIT A (continued)

Table of Plan Coverage

iv. General Tier 4 – 3% COLA

Category	Year Ended December 31		Change From Prior Year
	2013	2012	
Active members in valuation			
Number	16	0	N/A
Average age	39.3	N/A	N/A
Average service	0.5	N/A	N/A
Projected total payroll ⁽¹⁾	\$833,519	N/A	N/A
Projected average payroll	\$52,095	N/A	N/A
Account balances	\$29,905	N/A	N/A
Total active members with at least five years of service	0	0	0.0%
Vested terminated members	0	0	0.0%
Retired members			
Number in pay status	0	0	0.0%
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Disabled members			
Number in pay status	0	0	0.0%
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Beneficiaries			
Number in pay status	0	0	0.0%
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A

⁽¹⁾ Calculated by increasing actual calendar year salaries by the assumed salary scale. Projected compensation for 2014 has been limited. It is our understanding that in the determination of pension benefits under the PEPRAs formulas, the compensation that can be taken into account for 2014 is equal to \$115,064. (For an employer that is not enrolled in Social Security, the maximum amount is 120% of \$115,064, or \$138,077). (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2014. (reference: Section 7522.10(d))

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

EXHIBIT A (continued)

Table of Plan Coverage

v. General Tier 5 – 2% COLA

Category	Year Ended December 31		Change From Prior Year
	2013	2012	
Active members in valuation			
Number	19	0	N/A
Average age	31.5	N/A	N/A
Average service	0.4	N/A	N/A
Projected total payroll ⁽¹⁾	\$1,045,307	N/A	N/A
Projected average payroll	\$55,016	N/A	N/A
Account balances	\$47,453	N/A	N/A
Total active members with at least five years of service	0	0	0.0%
Vested terminated members			
	1	0	N/A
Retired members			
Number in pay status	0	0	0.0%
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Disabled members			
Number in pay status	0	0	0.0%
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Beneficiaries			
Number in pay status	0	0	0.0%
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A

⁽¹⁾ Calculated by increasing actual calendar year salaries by the assumed salary scale. Projected compensation for 2014 has been limited. It is our understanding that in the determination of pension benefits under the PEPPRA formulas, the compensation that can be taken into account for 2014 is equal to \$115,064. (For an employer that is not enrolled in Social Security, the maximum amount is 120% of \$115,064, or \$138,077). (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2014. (reference: Section 7522.10(d))

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

EXHIBIT A (continued)

Table of Plan Coverage

vi. General Tier 5 – 3% COLA

Category	Year Ended December 31		Change From Prior Year
	2013	2012	
Active members in valuation			
Number	764	0	N/A
Average age	39.1	N/A	N/A
Average service	0.4	N/A	N/A
Projected total payroll ⁽¹⁾	\$30,216,040	N/A	N/A
Projected average payroll	\$39,550	N/A	N/A
Account balances	\$1,192,204	N/A	N/A
Total active members with at least five years of service	1	0	N/A
Vested terminated members	40	0	N/A
Retired members			
Number in pay status	0	0	0.0%
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Disabled members			
Number in pay status	0	0	0.0%
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Beneficiaries			
Number in pay status	0	0	0.0%
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A

⁽¹⁾ Calculated by increasing actual calendar year salaries by the assumed salary scale. Projected compensation for 2014 has been limited. It is our understanding that in the determination of pension benefits under the PEPRAs formulas, the compensation that can be taken into account for 2014 is equal to \$115,064. (For an employer that is not enrolled in Social Security, the maximum amount is 120% of \$115,064, or \$138,077). (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2014. (reference: Section 7522.10(d))

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

EXHIBIT A (continued)

Table of Plan Coverage

vii. Safety Tier A

Category	Year Ended December 31		Change From Prior Year
	2013	2012	
Active members in valuation			
Number	1,176	1,209	-2.7%
Average age	42.3	41.9	N/A
Average service	13.0	12.6	N/A
Projected total payroll ⁽¹⁾	\$121,540,804	\$124,694,208	-2.5%
Projected average payroll	\$103,351	\$103,138	0.2%
Account balances	\$292,572,360	\$268,197,775	9.1%
Total active members with at least five years of service	1,067	1,086	-1.7%
Vested terminated members			
	300	304	-1.3%
Retired members			
Number in pay status	1,190	1,167	2.0%
Average age	65.1	64.7	N/A
Average monthly benefit	\$7,210	\$7,122	1.2%
Disabled members			
Number in pay status ⁽²⁾	504	492	2.4%
Average age	61.9	61.6	N/A
Average monthly benefit	\$5,350	\$5,209	2.7%
Beneficiaries			
Number in pay status	350	331	5.7%
Average age	67.9	68.1	N/A
Average monthly benefit	\$3,302	\$3,204	3.1%

⁽¹⁾ Calculated by increasing actual calendar year salaries by the assumed salary scale.

⁽²⁾ For 2013, include 483 members receiving a service-connected disability and 21 members receiving an ordinary disability.

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

EXHIBIT A (continued)

Table of Plan Coverage

viii. Safety Tier C

Category	Year Ended December 31		Change From Prior Year
	2013	2012	
Active members in valuation			
Number	195	187	4.3%
Average age	32.5	31.8	N/A
Average service	3.4	2.7	N/A
Projected total payroll ⁽¹⁾	\$14,706,624	\$13,697,308	7.4%
Projected average payroll	\$75,419	\$73,248	3.0%
Account balances	\$6,132,795	\$4,188,009	46.4%
Total active members with at least five years of service	58	26	123.1%
Vested terminated members	24	16	50.0%
Retired members			
Number in pay status	0	0	0.0%
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Disabled members			
Number in pay status ⁽²⁾	1	0	N/A
Average age	37.7	N/A	N/A
Average monthly benefit	\$3,640	N/A	N/A
Beneficiaries			
Number in pay status	0	0	0.0%
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A

⁽¹⁾ Calculated by increasing actual calendar year salaries by the assumed salary scale.

⁽²⁾ For 2013, include 1 member receiving a service-connected disability.

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

EXHIBIT A (continued)

Table of Plan Coverage

ix. Safety Tier D

Category	Year Ended December 31		Change From Prior Year
	2013	2012	
Active members in valuation			
Number	45	0	0%
Average age	33.4	N/A	N/A
Average service	0.4	N/A	N/A
Projected total payroll ⁽¹⁾	\$2,106,696	N/A	N/A
Projected average payroll	\$46,815	N/A	N/A
Account balances	\$198,045	N/A	N/A
Total active members with at least five years of service	0	0	0.0%
Vested terminated members	1	0	N/A
Retired members			
Number in pay status	0	0	0.0%
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Disabled members			
Number in pay status	0	0	0.0%
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Beneficiaries			
Number in pay status	0	0	0.0%
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A

⁽¹⁾ Calculated by increasing actual calendar year salaries by the assumed salary scale. Projected compensation for 2014 has been limited. It is our understanding that in the determination of pension benefits under the PEPPRA formulas, the compensation that can be taken into account for 2014 is equal to \$115,064. (For an employer that is not enrolled in Social Security, the maximum amount is 120% of \$115,064, or \$138,077). (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2014. (reference: Section 7522.10(d))

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

EXHIBIT A (continued)

Table of Plan Coverage

x. Safety Tier E

Category	Year Ended December 31		Change From Prior Year
	2013	2012	
Active members in valuation			
Number	26	0	N/A
Average age	30.5	N/A	N/A
Average service	0.3	N/A	N/A
Projected total payroll ⁽¹⁾	\$643,431	N/A	N/A
Projected average payroll	\$24,747	N/A	N/A
Account balances	\$54,160	N/A	N/A
Total active members with at least five years of service	0	0	0.0%
Vested terminated members			
	0	0	0.0%
Retired members			
Number in pay status	0	0	0.0%
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Disabled members			
Number in pay status	0	0	0.0%
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Beneficiaries			
Number in pay status	0	0	0.0%
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A

⁽¹⁾ Calculated by increasing actual calendar year salaries by the assumed salary scale. Projected compensation for 2014 has been limited. It is our understanding that in the determination of pension benefits under the PEPPRA formulas, the compensation that can be taken into account for 2014 is equal to \$115,064. (For an employer that is not enrolled in Social Security, the maximum amount is 120% of \$115,064, or \$138,077). (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2014. (reference: Section 7522.10(d))

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

EXHIBIT B

**Members in Active Service and Projected Payroll as of December 31, 2013
By Age and Years of Service**

i. General Tier 1 Non-Enhanced

Age	Total	Years of Service								
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	--	--	--	--	--	--	--	--	--	--
25 - 29	--	--	--	--	--	--	--	--	--	--
30 - 34	2	2	--	--	--	--	--	--	--	--
	\$36,694	\$36,694	--	--	--	--	--	--	--	--
35 - 39	--	--	--	--	--	--	--	--	--	--
40 - 44	2	--	1	1	--	--	--	--	--	--
	114,879	--	\$72,622	\$157,135	--	--	--	--	--	--
45 - 49	1	--	--	--	1	--	--	--	--	--
	70,293	--	--	--	\$70,293	--	--	--	--	--
50 - 54	4	3	1	--	--	--	--	--	--	--
	63,688	58,288	79,889	--	--	--	--	--	--	--
55 - 59	--	--	--	--	--	--	--	--	--	--
60 - 64	2	--	1	--	--	--	--	1	--	--
	58,348	--	38,214	--	--	--	--	\$78,483	--	--
65 & over	1	--	1	--	--	--	--	--	--	--
	47,391	--	47,391	--	--	--	--	--	--	--
Total	12	5	4	1	1	--	--	1	--	--
	\$66,023	\$49,651	\$59,529	\$157,135	\$70,293	--	--	\$78,483	--	--

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

EXHIBIT B (continued)

**Members in Active Service and Projected Payroll as of December 31, 2013
By Age and Years of Service**

ii. General Tier 1 Enhanced

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	4	4	--	--	--	--	--	--	--	--
	\$76,619	\$76,619	--	--	--	--	--	--	--	--
25 - 29	24	21	3	--	--	--	--	--	--	--
	79,860	79,979	\$79,024	--	--	--	--	--	--	--
30 - 34	51	22	24	5	--	--	--	--	--	--
	81,837	72,820	89,245	\$85,961	--	--	--	--	--	--
35 - 39	57	16	17	21	3	--	--	--	--	--
	83,943	77,409	86,818	86,559	\$84,182	--	--	--	--	--
40 - 44	78	15	19	31	12	1	--	--	--	--
	90,160	82,054	90,049	93,088	87,993	\$149,074	--	--	--	--
45 - 49	118	10	18	52	18	16	4	--	--	--
	95,971	113,975	95,840	97,567	87,332	86,214	\$108,718	--	--	--
50 - 54	123	12	22	34	20	18	13	4	--	--
	94,379	94,083	81,933	93,440	89,108	110,880	112,388	\$65,253	--	--
55 - 59	116	14	16	31	18	13	12	6	6	--
	91,586	84,753	99,778	99,198	78,682	106,135	90,553	88,486	\$58,718	--
60 - 64	62	4	17	18	7	8	2	3	3	--
	92,874	91,557	91,861	90,920	69,634	89,740	111,522	158,220	96,888	--
65 - 69	12	--	3	3	3	2	--	--	1	--
	82,799	--	64,705	118,017	80,486	65,782	--	--	72,399	--
70 & over	4	2	--	1	1	--	--	--	--	--
	47,837	32,770	--	77,860	47,947	--	--	--	--	--
Total	649	120	139	196	82	58	31	13	10	--
	\$90,469	\$82,871	\$89,537	\$94,527	\$83,606	\$99,200	\$103,406	\$97,430	\$71,537	--

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

EXHIBIT B (continued)

**Members in Active Service and Projected Payroll as of December 31, 2013
By Age and Years of Service**

iii. General Tier 3 Enhanced

Age	Total	Years of Service								
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	24	24	--	--	--	--	--	--	--	--
	\$42,236	\$42,236	--	--	--	--	--	--	--	--
25 - 29	252	211	41	--	--	--	--	--	--	--
	54,137	53,285	\$58,522	--	--	--	--	--	--	--
30 - 34	607	298	264	45	--	--	--	--	--	--
	65,550	64,805	66,431	\$65,312	--	--	--	--	--	--
35 - 39	760	262	297	173	28	--	--	--	--	--
	71,858	69,105	76,643	68,317	\$68,751	--	--	--	--	--
40 - 44	821	211	260	230	104	14	2	--	--	--
	74,185	69,286	73,560	78,032	79,046	\$61,245	\$67,877	--	--	--
45 - 49	1,011	203	245	276	169	88	29	1	--	--
	74,327	65,677	70,424	74,422	82,259	87,950	79,754	\$63,387	--	--
50 - 54	1,062	168	223	248	171	133	83	36	--	--
	76,291	64,984	70,125	76,832	80,379	90,083	87,861	66,469	--	--
55 - 59	912	129	204	224	130	105	80	36	4	--
	74,571	68,620	68,532	72,707	74,338	81,687	91,899	80,958	\$95,573	--
60 - 64	576	94	146	131	103	60	28	12	2	--
	71,181	66,026	68,161	74,397	73,839	75,863	71,613	68,240	57,644	--
65 - 69	159	21	44	51	20	11	8	2	1	1
	69,970	67,019	69,292	64,970	75,601	70,187	97,506	48,806	97,836	\$95,953
70 & over	38	3	12	15	4	3	--	1	--	--
	67,552	98,424	72,745	66,774	55,080	45,732	--	39,628	--	--
Total	6,222	1,624	1,736	1,393	729	414	230	88	7	1
	\$72,136	\$64,843	\$70,606	\$73,688	\$77,907	\$83,614	\$86,427	\$71,896	\$85,060	\$95,953

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

EXHIBIT B (continued)

**Members in Active Service and Projected Payroll as of December 31, 2013
By Age and Years of Service**

iv. General Tier 4 – 3% COLA

Age	Total	Years of Service								
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	1	1	--	--	--	--	--	--	--	--
	\$30,993	\$30,993	--	--	--	--	--	--	--	--
25 - 29	2	2	--	--	--	--	--	--	--	--
	42,096	42,096	--	--	--	--	--	--	--	--
30 - 34	4	4	--	--	--	--	--	--	--	--
	42,993	42,993	--	--	--	--	--	--	--	--
35 - 39	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
40 - 44	2	2	--	--	--	--	--	--	--	--
	71,460	71,460	--	--	--	--	--	--	--	--
45 - 49	5	5	--	--	--	--	--	--	--	--
	62,132	62,132	--	--	--	--	--	--	--	--
50 - 54	1	1	--	--	--	--	--	--	--	--
	45,310	45,310	--	--	--	--	--	--	--	--
55 - 59	1	1	--	--	--	--	--	--	--	--
	47,471	47,471	--	--	--	--	--	--	--	--
60 - 64	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
65 - 69	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
70 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Total	16	16	--	--	--	--	--	--	--	--
	\$52,095	\$52,095	--	--	--	--	--	--	--	--

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

EXHIBIT B (continued)

**Members in Active Service and Projected Payroll as of December 31, 2013
By Age and Years of Service**

v. General Tier 5 – 2% COLA

Age	Total	Years of Service								
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	--	--	--	--	--	--	--	--	--	--
25 - 29	9	9	--	--	--	--	--	--	--	--
30 - 34	8	8	--	--	--	--	--	--	--	--
35 - 39	1	1	--	--	--	--	--	--	--	--
40 - 44	--	--	--	--	--	--	--	--	--	--
45 - 49	1	1	--	--	--	--	--	--	--	--
50 - 54	--	--	--	--	--	--	--	--	--	--
55 - 59	--	--	--	--	--	--	--	--	--	--
60 - 64	--	--	--	--	--	--	--	--	--	--
65 - 69	--	--	--	--	--	--	--	--	--	--
70 & over	--	--	--	--	--	--	--	--	--	--
Total	19	19	--	--	--	--	--	--	--	--
	\$55,016	\$55,016	--	--	--	--	--	--	--	--

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

EXHIBIT B (continued)

**Members in Active Service and Projected Payroll as of December 31, 2013
By Age and Years of Service**

vi. General Tier 5 – 3% COLA

Age	Total	Years of Service								
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	33	33	--	--	--	--	--	--	--	--
	\$33,259	\$33,259	--	--	--	--	--	--	--	--
25 - 29	142	142	--	--	--	--	--	--	--	--
	36,401	36,401	--	--	--	--	--	--	--	--
30 - 34	158	158	--	--	--	--	--	--	--	--
	41,649	41,649	--	--	--	--	--	--	--	--
35 - 39	116	116	--	--	--	--	--	--	--	--
	43,030	43,030	--	--	--	--	--	--	--	--
40 - 44	91	91	--	--	--	--	--	--	--	--
	39,464	39,464	--	--	--	--	--	--	--	--
45 - 49	82	82	--	--	--	--	--	--	--	--
	40,837	40,837	--	--	--	--	--	--	--	--
50 - 54	57	57	--	--	--	--	--	--	--	--
	36,131	36,131	--	--	--	--	--	--	--	--
55 - 59	55	55	--	--	--	--	--	--	--	--
	39,542	39,542	--	--	--	--	--	--	--	--
60 - 64	24	24	--	--	--	--	--	--	--	--
	39,212	39,212	--	--	--	--	--	--	--	--
65 - 69	6	6	--	--	--	--	--	--	--	--
	43,723	43,723	--	--	--	--	--	--	--	--
70 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Total	764	764	--	--	--	--	--	--	--	--
	\$39,550	\$39,550	--	--	--	--	--	--	--	--

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

EXHIBIT B (continued)

Members in Active Service and Projected Payroll as of December 31, 2013

By Age and Years of Service

vii. Safety Tier A Non-Enhanced

Age	Total	Years of Service						
		0-4	5-9	10-14	15-19	20-24	25-29	30 & over
Under 25	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
25 - 29	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
30 - 34	1	1	--	--	--	--	--	--
	\$36,383	\$36,383	--	--	--	--	--	--
35 - 39	2	--	--	2	--	--	--	--
	119,181	--	--	\$119,181	--	--	--	--
40 - 44	2	--	--	2	--	--	--	--
	126,985	--	--	126,985	--	--	--	--
45 - 49	5	1	--	--	--	3	1	--
	104,977	19,055	--	--	--	\$120,564	\$144,141	--
50 - 54	2	--	--	--	--	1	1	--
	142,114	--	--	--	--	152,570	131,657	--
55 - 59	1	1	--	--	--	--	--	--
	213,176	213,176	--	--	--	--	--	--
60 - 64	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
65 & over	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
Total	13	3	--	4	--	4	2	--
	\$119,308	\$89,538	--	\$123,083	--	\$128,566	\$137,899	--

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

EXHIBIT B (continued)

Members in Active Service and Projected Payroll as of December 31, 2013

By Age and Years of Service

viii. Safety Tier A Enhanced

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	5	5	--	--	--	--	--	--	--	--
	\$82,544	\$82,544	--	--	--	--	--	--	--	--
25 - 29	73	52	21	--	--	--	--	--	--	--
	89,610	86,872	\$96,389	--	--	--	--	--	--	--
30 - 34	149	41	87	21	--	--	--	--	--	--
	96,190	88,117	98,765	\$101,278	--	--	--	--	--	--
35 - 39	214	10	73	123	8	--	--	--	--	--
	97,975	86,684	99,291	97,232	\$111,515	--	--	--	--	--
40 - 44	298	12	62	140	67	16	1	--	--	--
	104,192	111,182	100,356	101,072	107,363	\$122,132	\$195,539	--	--	--
45 - 49	266	2	32	77	65	61	28	1	--	--
	111,132	90,797	97,967	103,657	105,110	124,808	131,864	\$125,210	--	--
50 - 54	97	6	9	31	19	20	11	1	--	--
	109,388	102,117	97,753	99,178	109,653	121,085	128,482	125,210	--	--
55 - 59	42	3	13	10	9	4	2	1	--	--
	105,535	129,628	100,206	85,676	99,247	162,169	136,758	68,724	--	--
60 - 64	17	2	6	4	4	--	1	--	--	--
	110,555	130,654	91,541	126,852	112,583	--	111,150	--	--	--
65 - 69	1	--	--	1	--	--	--	--	--	--
	126,299	--	--	126,299	--	--	--	--	--	--
70 & over	1	--	1	--	--	--	--	--	--	--
	77,601	--	77,601	--	--	--	--	--	--	--
Total	1,163	133	304	407	172	101	43	3	--	--
	\$103,173	\$91,642	\$98,787	\$100,204	\$106,654	\$125,126	\$132,226	\$106,381	--	--

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

EXHIBIT B (continued)

Members in Active Service and Projected Payroll as of December 31, 2013

By Age and Years of Service

ix. Safety Tier C Enhanced

Age	Total	Years of Service								
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	17	17	--	--	--	--	--	--	--	--
	\$56,883	\$56,883	--	--	--	--	--	--	--	--
25 - 29	77	70	7	--	--	--	--	--	--	--
	71,987	70,237	\$89,483	--	--	--	--	--	--	--
30 - 34	47	31	16	--	--	--	--	--	--	--
	74,398	69,340	84,197	--	--	--	--	--	--	--
35 - 39	25	9	16	--	--	--	--	--	--	--
	81,624	71,128	87,528	--	--	--	--	--	--	--
40 - 44	15	7	8	--	--	--	--	--	--	--
	85,498	81,577	88,929	--	--	--	--	--	--	--
45 - 49	6	3	3	--	--	--	--	--	--	--
	110,559	129,498	91,621	--	--	--	--	--	--	--
50 - 54	4	3	1	--	--	--	--	--	--	--
	88,776	88,982	88,155	--	--	--	--	--	--	--
55 - 59	4	1	3	--	--	--	--	--	--	--
	89,599	89,558	89,613	--	--	--	--	--	--	--
60 - 64	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
65 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Total	195	141	54	--	--	--	--	--	--	--
	\$75,419	\$70,846	\$87,357	--	--	--	--	--	--	--

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

EXHIBIT B (continued)

Members in Active Service and Projected Payroll as of December 31, 2013

By Age and Years of Service

x. Safety Tier D

Age	Total	Years of Service								
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	2	2	--	--	--	--	--	--	--	--
	\$46,561	\$46,561	--	--	--	--	--	--	--	--
25 - 29	18	18	--	--	--	--	--	--	--	--
	43,444	43,444	--	--	--	--	--	--	--	--
30 - 34	14	14	--	--	--	--	--	--	--	--
	41,935	41,935	--	--	--	--	--	--	--	--
35 - 39	4	4	--	--	--	--	--	--	--	--
	58,052	58,052	--	--	--	--	--	--	--	--
40 - 44	3	3	--	--	--	--	--	--	--	--
	52,547	52,547	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
50 - 54	2	2	--	--	--	--	--	--	--	--
	69,229	69,229	--	--	--	--	--	--	--	--
55 - 59	1	1	--	--	--	--	--	--	--	--
	67,637	67,637	--	--	--	--	--	--	--	--
60 - 64	1	1	--	--	--	--	--	--	--	--
	48,550	48,550	--	--	--	--	--	--	--	--
65 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Total	45	45	--	--	--	--	--	--	--	--
	\$46,815	\$46,815	--	--	--	--	--	--	--	--

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

EXHIBIT B (continued)

Members in Active Service and Projected Payroll as of December 31, 2013

By Age and Years of Service

xi. Safety Tier E

Age	Total	Years of Service								
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	4	4	--	--	--	--	--	--	--	--
	\$24,476	\$24,476	--	--	--	--	--	--	--	--
25 - 29	13	13	--	--	--	--	--	--	--	--
	24,485	24,485	--	--	--	--	--	--	--	--
30 - 34	6	6	--	--	--	--	--	--	--	--
	18,754	18,754	--	--	--	--	--	--	--	--
35 - 39	--	--	--	--	--	--	--	--	--	--
40 - 44	--	--	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--	--	--
50 - 54	2	2	--	--	--	--	--	--	--	--
	50,312	50,312	--	--	--	--	--	--	--	--
55 - 59	1	1	--	--	--	--	--	--	--	--
	14,074	14,074	--	--	--	--	--	--	--	--
60 - 64	--	--	--	--	--	--	--	--	--	--
65 & over	--	--	--	--	--	--	--	--	--	--
Total	26	26	--	--	--	--	--	--	--	--
	\$24,747	\$24,747	--	--	--	--	--	--	--	--

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

EXHIBIT C

Average Monthly Benefit and Membership Distribution of Retired Members and Beneficiaries

i. General Tier 1 as of December 31, 2013

Age	Total	Years of Retirement								
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	1	--	--	--	1	--	--	--	--	--
	\$390	--	--	--	\$390	--	--	--	--	--
25 - 29	4	3	--	--	1	--	--	--	--	--
	789	\$922	--	--	390	--	--	--	--	--
30 - 34	3	--	1	--	2	--	--	--	--	--
	739	--	\$601	--	808	--	--	--	--	--
35 - 39	5	--	--	--	3	1	--	1	--	--
	698	--	--	--	556	\$917	--	\$906	--	--
40 - 44	4	--	1	--	2	1	--	--	--	--
	1,253	--	2,194	--	948	923	--	--	--	--
45 - 49	9	--	1	3	3	2	--	--	--	--
	1,183	--	1,960	\$1,333	714	1,274	--	--	--	--
50 - 54	54	33	6	4	6	2	3	--	--	--
	1,636	1,800	1,361	1,514	1,583	1,341	\$853	--	--	--
55 - 59	225	153	40	12	8	6	3	2	--	1
	3,512	4,186	2,116	2,147	2,475	1,843	1,524	\$1,772	--	\$355
60 - 64	494	208	163	77	16	16	6	4	1	3
	3,890	4,949	3,804	2,262	2,547	2,293	1,824	1,669	\$355	843
65 - 69	643	89	232	187	84	18	14	9	9	1
	4,062	5,060	5,147	3,734	1,973	2,019	2,684	1,607	1,441	\$1,732
70 - 74	542	13	95	196	123	74	21	14	4	2
	3,624	6,379	4,747	4,452	2,679	1,877	1,949	2,627	1,973	1,829
75 - 80	507	1	14	102	168	108	87	19	5	3
	3,331	230	4,642	4,780	3,825	2,697	1,638	2,398	1,781	1,608
80 - 84	471	--	3	17	97	143	116	66	20	9
	2,773	--	6,837	3,084	3,849	3,333	2,079	1,314	1,976	1,730
85 - 89	381	--	3	1	11	106	119	91	46	4
	2,551	--	6,894	1,320	4,504	3,091	2,760	1,764	1,659	1,839
90 & over	290	--	--	3	3	10	66	111	73	24
	2,236	--	--	815	3,396	3,017	2,510	2,136	2,328	1,368
Total	3,633	500	559	602	528	487	435	317	158	47
	\$3,307	\$4,531	\$4,417	\$3,861	\$3,123	\$2,784	\$2,240	\$1,868	\$1,999	\$1,465

Note: Total retired benefit \$12,015,502, average age 74.0 and average years retired 17.5.

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

EXHIBIT C (continued)

Average Monthly Benefit and Membership Distribution of Retired Members and Beneficiaries

ii. General Tier 2 as of December 31, 2013

Age	Total	Years of Retirement								
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
25 - 29	1	--	--	1	--	--	--	--	--	--
	\$1,716	--	--	\$1,716	--	--	--	--	--	--
30 - 34	2	--	--	1	1	--	--	--	--	--
	739	--	--	992	\$485	--	--	--	--	--
35 - 39	4	--	--	--	2	2	--	--	--	--
	836	--	--	--	\$649	\$1,022	--	--	--	--
40 - 44	11	--	--	2	6	3	--	--	--	--
	887	--	--	692	984	822	--	--	--	--
45 - 49	5	--	1	--	2	2	--	--	--	--
	1,079	--	\$575	--	1,313	1,098	--	--	--	--
50 - 54	11	9	--	--	2	--	--	--	--	--
	582	\$212	--	--	2,250	--	--	--	--	--
55 - 59	32	10	13	2	5	2	--	--	--	--
	753	407	662	1,161	1,294	1,310	--	--	--	--
60 - 64	55	11	20	17	6	1	--	--	--	--
	717	445	695	567	1,481	2,096	--	--	--	--
65 - 69	110	13	25	26	36	7	3	--	--	--
	849	617	614	791	951	1,602	\$1,359	--	--	--
70 - 74	102	1	15	31	45	9	1	--	--	--
	937	76	583	1,089	951	1,084	432	--	--	--
75 - 80	107	1	3	41	42	16	4	--	--	--
	1,018	836	1,053	998	1,054	916	1,259	--	--	--
80 - 84	81	--	--	13	39	24	3	2	--	--
	1,051	--	--	920	1,050	1,258	315	\$530	--	--
85 - 89	33	--	--	2	14	13	3	1	--	--
	794	--	--	886	654	897	1,027	513	--	--
90 & over	9	--	--	--	2	6	1	--	--	--
	1,026	--	--	--	466	1,341	254	--	--	--
Total	563	45	77	136	202	85	15	3	--	--
	\$906	\$440	\$654	\$919	\$1,003	\$1,140	\$922	\$524	--	--

Note: Total retired benefit \$510,000, average age 71.5 and average years retired 14.8.

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

EXHIBIT C (continued)

Average Monthly Benefit and Membership Distribution of Retired Members and Beneficiaries

iii. General Tier 3 as of December 31, 2013

Age	Total	Years of Retirement								
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	2	2	--	--	--	--	--	--	--	--
	\$1,006	\$1,006	--	--	--	--	--	--	--	--
25 - 29	3	--	1	1	1	--	--	--	--	--
	1,234	--	\$1,272	\$1,736	\$694	--	--	--	--	--
30 - 34	3	--	2	1	--	--	--	--	--	--
	857	--	546	\$1,479	--	--	--	--	--	--
35 - 39	5	2	2	1	--	--	--	--	--	--
	1,523	2,011	1,056	\$1,479	--	--	--	--	--	--
40 - 44	6	1	2	3	--	--	--	--	--	--
	1,071	1,645	828	1,041	--	--	--	--	--	--
45 - 49	17	7	8	2	--	--	--	--	--	--
	2,089	2,570	1,936	1,022	--	--	--	--	--	--
50 - 54	114	105	5	4	--	--	--	--	--	--
	1,506	1,500	1,949	1,115	--	--	--	--	--	--
55 - 59	345	262	70	13	--	--	--	--	--	--
	2,522	2,783	1,620	2,113	--	--	--	--	--	--
60 - 64	602	389	172	40	1	--	--	--	--	--
	2,677	3,041	2,185	1,219	3,813	--	--	--	--	--
65 - 69	684	385	226	73	--	--	--	--	--	--
	2,834	3,036	2,890	1,592	--	--	--	--	--	--
70 - 74	431	120	217	91	1	2	--	--	--	--
	2,243	2,275	2,484	1,658	525	1,594	--	--	--	--
75 - 80	147	21	59	67	--	--	--	--	--	--
	1,634	2,104	1,786	1,354	--	--	--	--	--	--
80 - 84	20	2	9	9	--	--	--	--	--	--
	1,821	4,490	1,520	1,529	--	--	--	--	--	--
85 - 89	5	1	3	1	--	--	--	--	--	--
	2,757	844	3,515	2,396	--	--	--	--	--	--
90 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Total	2,384	1,297	776	306	3	2	--	--	--	--
	\$2,477	\$2,769	\$2,374	\$1,518	\$1,677	\$1,594	--	--	--	--

Note: Total retired benefit \$5,906,262, average age 65.3 and average years retired 5.4.

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

EXHIBIT C (continued)

**Average Monthly Benefit and Membership Distribution of Retired Members and Beneficiaries
iv. Safety Tier A and Tier C as of December 31, 2013**

Age	Total	Years of Retirement								
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	6	3	3	--	--	--	--	--	--	--
	\$1,688	\$2,098	\$1,278	--	--	--	--	--	--	--
25 - 29	1	--	1	--	--	--	--	--	--	--
	800	--	800	--	--	--	--	--	--	--
30 - 34	5	3	--	--	--	2	--	--	--	--
	2,527	\$3,474	--	--	--	\$1,106	--	--	--	--
35 - 39	12	4	7	--	--	1	--	--	--	--
	3,572	3,563	3,973	--	--	\$803	--	--	--	--
40 - 44	33	12	12	8	--	1	--	--	--	--
	3,466	3,027	4,365	3,110	--	803	--	--	--	--
45 - 49	73	44	12	10	4	3	--	--	--	--
	4,911	5,622	4,580	3,937	3,555	873	--	--	--	--
50 - 54	284	216	26	23	14	5	--	--	--	--
	6,310	7,188	3,530	3,611	3,555	3,011	--	--	--	--
55 - 59	297	130	118	24	10	10	4	1	--	--
	7,091	7,714	7,862	3,935	2,876	3,232	\$4,378	\$2,557	--	--
60 - 64	325	53	142	76	28	12	11	1	1	1
	6,863	7,143	8,277	6,748	2,879	3,514	2,946	3,485	\$3,565	\$1,291
65 - 69	403	18	82	183	55	25	20	13	6	1
	6,225	5,461	7,526	7,481	3,927	3,609	2,744	3,073	3,347	3,185
70 - 74	239	7	16	67	73	47	15	5	7	2
	6,061	3,209	3,323	7,114	7,719	4,948	3,463	2,949	4,030	2,732
75 - 80	161	3	2	12	31	62	29	15	4	3
	5,381	3,809	1,500	4,191	5,303	6,944	4,396	3,693	3,491	3,294
80 - 84	113	--	--	1	11	17	35	27	20	2
	4,660	--	--	8,824	4,250	5,975	5,019	4,419	3,420	3,009
85 - 89	64	--	--	--	--	1	8	23	20	12
	4,524	--	--	--	--	971	5,956	5,098	4,248	3,225
90 & over	29	--	--	--	--	--	1	5	11	12
	4,385	--	--	--	--	--	3,489	6,057	5,080	3,127
Total	2,045	493	421	404	226	186	123	90	69	33
	\$6,081	\$6,858	\$7,145	\$6,583	\$5,150	\$5,117	\$4,155	\$4,255	\$3,986	\$3,093

Note: Total retired benefit \$12,435,009, average age 64.8 and average years retired 13.6.

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

EXHIBIT D

Reconciliation of Member Data – December 31, 2012 to December 31, 2013

	Active Participants	Vested Terminated Members	Pensioners	Disableds	Beneficiaries	Total
Number as of December 31, 2012	8,640	2,288	6,375	923	1,219	19,445
New participants	960	54	0	0	100	1,114
Terminations – with vested rights	-179	179	0	0	0	0
Contributions Refunds	-110	-82	0	0	0	-192
Retirements	-200	-56	256	0	0	0
New disabilities	-17	-3	-15	35	0	0
Return to work	37	-32	-5	0	0	0
Died with or without beneficiary	-7	-3	-171	-31	-62	-274
Data adjustments	<u>0</u>	<u>0</u>	<u>-2</u>	<u>0</u>	<u>3</u>	<u>1</u>
Number as of December 31, 2013	9,124	2,345	6,438	927	1,260	20,094

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

EXHIBIT E

Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended December 31, 2013	Year Ended December 31, 2012
Contribution income:		
Employer contributions	\$235,017,452	\$212,321,325
Employee contributions	<u>72,373,254</u>	<u>73,361,712</u>
Net contribution income	\$307,390,706	\$285,683,037
Investment income:		
Interest, dividends and other income	\$158,886,435	\$161,163,771
Adjustment toward market value ⁽¹⁾	378,551,480	1,151,230
Less investment and administrative fees	<u>(44,934,113)</u>	<u>(40,393,699)</u>
Net investment income	<u>492,503,802</u>	<u>121,921,302</u>
Total income available for benefits	\$799,894,508	\$407,604,339
Less benefit payments:		
Benefits paid	\$(369,809,403)	\$(347,569,044)
Refunds of contributions	(3,844,376)	(3,275,968)
Adjustments/transfers	<u>(985,199)</u>	<u>(685,356)</u>
Net benefit payments	\$(374,638,978)	\$(351,530,368)
Change in reserve for future benefits	\$425,255,530	\$56,073,971

⁽¹⁾ Equals the "non-cash" earnings on investments implicitly included in the Actuarial Value of Assets.

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

EXHIBIT F

Summary Statement of Assets

	Year Ended December 31, 2013	Year Ended December 31, 2012
Cash equivalents	\$856,340,856	\$375,051,326
Other Assets	1,444,726	1,682,574
Accounts receivable:		
Investment trades	\$560,196,591	\$349,375,172
Investment income	30,970,440	19,631,875
Employee and employer contributions	8,067,883	8,105,409
Additional contributions ⁽¹⁾	<u>20,267,913</u>	<u>21,048,104</u>
Total accounts receivable	619,502,828	398,160,560
Investments:		
Stocks	\$2,523,485,927	\$2,733,435,352
Bonds	1,868,682,216	1,688,952,924
Real estate	828,561,519	741,660,064
Alternative investments and real assets	<u>760,678,445</u>	<u>396,452,549</u>
Total investments at market value	<u>5,981,408,107</u>	<u>5,560,500,889</u>
Total assets	\$7,458,696,517	\$6,335,395,349
Less accounts payable:		
Investment trades	\$(610,567,716)	\$(429,062,199)
Security lending	(262,983,553)	(145,423,087)
Employer contributions unearned	(112,308,231)	(92,762,859)
Other	<u>(14,519,421)</u>	<u>(13,566,080)</u>
Total accounts payable	\$(1,000,378,921)	\$(680,814,225)
Net assets at market value	<u>\$6,458,317,596</u>	<u>\$5,654,581,124</u>
Net assets at actuarial value	<u>\$5,922,449,192</u>	<u>\$5,497,193,662</u>
Net assets at valuation value	<u>\$5,907,416,432</u>	<u>\$5,482,257,062</u>

⁽¹⁾ Equals the sum of additional contribution receivables for the final Paulson Settlement.

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

EXHIBIT G

Actuarial Balance Sheet

An overview of the Plan's funding is given by an Actuarial Balance Sheet. In this approach, we first determine the amount and timing of all future payments that are projected/anticipated to be made by the Plan for current participants. We then discount these payments at the valuation interest rate to the date of the valuation, thereby determining their present value. We refer to this present value as the "liability" of the Plan.

Second, we determine how this liability will be met. These actuarial "assets" include the net amount of assets already accumulated by the Plan, the present value of future member contributions, the present value of future employer normal cost contributions, and the present value of future employer amortization payments.

Assets	<u>Basic</u>	<u>COLA</u>	<u>Total</u>
1. Total valuation value of assets	\$3,733,792,771	\$2,173,623,661	\$5,907,416,432
2. Present value of future contributions by members	\$409,710,887	\$221,299,897	\$631,010,784
3. Present value of future employer contributions for:			
(a) entry age normal cost	\$690,116,394	\$212,936,153	\$903,052,547
(b) unfunded actuarial accrued liability	\$1,181,199,068	\$642,481,907	\$1,823,680,975
4. Total actuarial assets	<u>\$6,014,819,120</u>	<u>\$3,250,341,618</u>	<u>\$9,265,160,738</u>
Liabilities			
5. Present value of benefits for retirees and beneficiaries	\$3,026,801,664	\$2,059,727,000	\$5,086,528,664
6. Present value of benefits for vested terminated members ⁽¹⁾	\$153,739,346	\$60,092,722	\$213,832,068
7. Present value of benefits for active members	\$2,834,278,110	\$1,130,521,896	\$3,964,800,006
8. Total present value of benefits	<u>\$6,014,819,120</u>	<u>\$3,250,341,618</u>	<u>\$9,265,160,738</u>

⁽¹⁾ Includes nonvested terminated members.

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

EXHIBIT H

Summary of Total Allocated Reserves

Reserves	December 31, 2013	December 31, 2012
Member Deposits ⁽¹⁾	\$554,688,703	\$698,208,398
Member Cost of Living ⁽¹⁾	289,979,180	334,087,401
Employer Advance ⁽¹⁾	1,919,723,014	2,526,748,906
Employer Cost of Living ⁽¹⁾	1,370,664,993	1,568,890,491
Retired Members ⁽¹⁾	2,409,084,264	1,332,381,216
Retired Cost of Living ⁽¹⁾	1,164,711,751	698,157,521
Smoothed Market Value Valuation ⁽¹⁾⁽²⁾	0	0
Dollar Power Cost of Living Supplement Pre-Funding ⁽¹⁾	10,330,314	12,253,103
Post Retirement Death Benefit ⁽³⁾	15,032,760	14,936,600
Statutory Contingency (one percent) ⁽³⁾	0	0
Additional One Percent Contingency Designation ⁽³⁾	0	0
Contra Tracking Account ⁽¹⁾	(1,811,765,783)	(1,688,469,971)
Total Allocated Reserves	\$5,922,449,192	\$5,497,193,662
Total Deferred Return	535,868,404	157,387,462
Net Market Value	\$6,458,317,596	\$5,654,581,124

Note: Results may not add due to rounding.

⁽¹⁾ *Included in valuation value of assets.*

⁽²⁾ *The balance in this reserve was transferred to the Employer Advance reserve.*

⁽³⁾ *Not included in valuation value of assets.*

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

EXHIBIT I

Development of Unfunded Actuarial Accrued Liability

	Year Ended December 31, 2013
1. Unfunded actuarial accrued liability at beginning of year	\$2,279,058,473
2. Gross Normal Cost at middle of year	212,718,379
3. Expected employer and member contributions	(411,675,942)
4. Interest (whole year on (1) plus half year on (2) - (3))	<u>158,019,528</u>
5. Expected unfunded actuarial accrued liability at end of year	<u>\$2,238,120,438</u>
6. Actuarial (gain)/loss due to all changes:	
(a) Investment return	\$(96,259,150)
(b) Actual contributions less than expected ⁽¹⁾	107,999,434
(c) Lower than expected individual salary increases	(114,770,746)
(d) Lower than expected COLA increases for retirees and beneficiaries	(47,612,620)
(e) Mortality gain for retirees and beneficiaries	(33,713,727)
(f) Other experience (gain)/loss ⁽²⁾	(24,750,639)
(g) Changes in actuarial assumptions	<u>(205,332,015)</u>
(h) Total changes	<u>\$(414,439,463)</u>
7. Unfunded actuarial accrued liability at end of year	<u>\$1,823,680,975</u>

Note: The "net gain from other experience" of \$112,848,298 shown in Section 2, Chart 10 is equal to the sum of items 6(b), (c), (d), (e) and (f).

⁽¹⁾ Includes additional contributions of \$2 million by First-5 Children & Families Commission and \$5 million from Central Contra Costa Sanitary District.

⁽²⁾ Other differences in actual versus expected experience including (but not limited to) disability, withdrawal, retirement and leave cashout experience.

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

EXHIBIT J

Table of Amortization Bases

	Date Established	Source	Initial Amount	Outstanding Balance	Years Remaining	Annual Payment⁽¹⁾
Cost Groups #1 and #2	December 31, 2007	Restart of Amortization	\$789,616,678	\$665,123,524	9	\$86,535,429
General County and Small Districts	December 31, 2008	Actuarial (Gain)/Loss	80,496,792	76,958,689	13	7,346,348
	December 31, 2009	Actuarial (Gain)/Loss	165,997,327	161,425,775	14	14,515,189
	December 31, 2009	Assumption Change ⁽²⁾	39,793,000	38,697,104	14	3,479,592
	December 31, 2009	Depooling Implementation	-75,134,625	-73,065,424	14	-6,569,945
	December 31, 2010	Actuarial (Gain)/Loss	153,957,206	151,552,636	15	12,901,399
	December 31, 2011	Actuarial (Gain)/Loss	95,298,919	94,546,968	16	7,653,234
	December 31, 2012	Actuarial (Gain)/Loss	117,707,008	117,245,781	17	9,059,092
	December 31, 2012	Assumption Change ⁽²⁾	290,475,776	289,337,567	17	22,355,905
	December 31, 2013	Actuarial (Gain)/Loss	-135,591,002	-135,591,002	18	-10,034,133
	December 31, 2013	Assumption Change ⁽³⁾	-108,176,293	<u>-108,176,293</u>	18	<u>-8,005,364</u>
Total for Cost Groups #1 and #2				\$1,278,055,326		\$139,236,746

Note: Results may not add due to rounding.

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

	Date Established	Source	Initial Amount	Outstanding Balance	Years Remaining	Annual Payment⁽¹⁾
Cost Group #3	December 31, 2007	Restart of Amortization	\$36,185,000	\$30,479,973	9	\$3,965,575
Central Contra Costa	December 31, 2008	Actuarial (Gain)/Loss	3,709,835	3,546,775	13	338,569
Sanitary District	December 31, 2009	Actuarial (Gain)/Loss	10,118,261	9,839,605	14	884,764
	December 31, 2009	Assumption Change ⁽²⁾	2,003,000	1,947,838	14	175,147
	December 31, 2009	Depooling Implementation	20,037,235	19,485,411	14	1,752,102
	December 31, 2010	Actuarial (Gain)/Loss	18,178,489	17,894,570	15	1,523,332
	December 31, 2010	Assumption Change ⁽³⁾	11,479,648	11,300,354	15	961,979
	December 31, 2011	Actuarial (Gain)/Loss	10,514,535	10,431,571	16	844,398
	December 31, 2012	Actuarial (Gain)/Loss	12,564,241	12,515,009	17	966,982
	December 31, 2012	Assumption Change ⁽²⁾	22,455,342	22,367,352	17	1,728,232
	December 31, 2012	UAAL Prepayment	-4,666,477	-4,648,192	17	-359,146
	December 31, 2013	Actuarial (Gain)/Loss	582,962	582,962	18	43,141
	December 31, 2013	Assumption Change ⁽³⁾	-14,950,866	<u>-14,950,866</u>	18	<u>-1,106,408</u>
Total for Cost Group #3				\$120,792,362		\$11,718,667
Cost Group #4	December 31, 2007	Restart of Amortization	\$7,770,000	\$6,544,960	9	\$851,527
Contra Costa Housing	December 31, 2008	Actuarial (Gain)/Loss	1,573,513	1,504,352	13	143,603
Authority	December 31, 2009	Actuarial (Gain)/Loss	1,277,079	1,241,908	14	111,671
	December 31, 2009	Assumption Change ⁽²⁾	425,000	413,296	14	37,163
	December 31, 2009	Depooling Implementation	-189,275	-184,062	14	-16,551
	December 31, 2010	Actuarial (Gain)/Loss	619,697	610,018	15	51,930
	December 31, 2010	Assumption Change ⁽³⁾	-920,656	-906,277	15	-77,150
	December 31, 2011	Actuarial (Gain)/Loss	1,059,328	1,050,970	16	85,072
	December 31, 2012	Actuarial (Gain)/Loss	1,912,999	1,905,503	17	147,230
	December 31, 2012	Assumption Change ⁽²⁾	3,722,862	3,708,274	17	286,523
	December 31, 2013	Actuarial (Gain)/Loss	-2,220,704	-2,220,704	18	-164,339
	December 31, 2013	Assumption Change ⁽³⁾	-1,077,289	<u>-1,077,289</u>	18	<u>-79,723</u>
Total for Cost Group #4				\$12,590,949		\$1,376,956

Note: Results may not add due to rounding.

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

	Date Established	Source	Initial Amount	Outstanding Balance	Years Remaining	Annual Payment⁽¹⁾
Cost Group #5	December 31, 2007	Restart of Amortization	-\$1,011,000	-\$851,603	9	-\$110,797
Contra Costa County Fire Protection District	December 31, 2008	Actuarial (Gain)/Loss	45,963	43,942	13	4,195
	December 31, 2009	Actuarial (Gain)/Loss	1,614,180	1,569,726	14	141,148
	December 31, 2009	Assumption Change ⁽²⁾	336,000	326,747	14	29,381
	December 31, 2009	Depooling Implementation	2,142,538	2,083,533	14	187,348
	December 31, 2010	Actuarial (Gain)/Loss	2,722,306	2,679,788	15	228,125
	December 31, 2011	Actuarial (Gain)/Loss	1,350,620	1,339,963	16	108,465
	December 31, 2012	Actuarial (Gain)/Loss	1,787,426	1,780,422	17	137,566
	December 31, 2012	Assumption Change ⁽²⁾	3,184,172	3,171,695	17	245,064
	December 31, 2013	Actuarial (Gain)/Loss	-2,500,665	-2,500,665	18	-185,057
	December 31, 2013	Assumption Change ⁽³⁾	-985,653	<u>-985,653</u>	18	<u>-72,941</u>
Total for Cost Group #5				\$8,657,894		\$712,497
Cost Group #6	December 31, 2007	Restart of Amortization	\$1,028,000	\$865,923	9	\$112,660
Small Districts (General Non-enhanced)	December 31, 2008	Actuarial (Gain)/Loss	61,240	58,548	13	5,589
	December 31, 2009	Actuarial (Gain)/Loss	385,148	374,541	14	33,678
	December 31, 2009	Assumption Change ⁽²⁾	126,000	122,530	14	11,018
	December 31, 2009	Depooling Implementation	-1,028,581	-1,000,254	14	-89,941
	December 31, 2010	Actuarial (Gain)/Loss	194,488	191,450	15	16,298
	December 31, 2011	Actuarial (Gain)/Loss	-137,086	-136,005	16	-11,009
	December 31, 2012	Actuarial (Gain)/Loss	177,439	176,744	17	13,656
	December 31, 2012	Assumption Change ⁽²⁾	225,958	225,073	17	17,390
	December 31, 2013	Actuarial (Gain)/Loss	59,503	59,503	18	4,403
	December 31, 2013	Assumption Change ⁽³⁾	-152,973	<u>-152,973</u>	18	<u>-11,320</u>
Total for Cost Group #6				\$785,080		\$102,422

Note: Results may not add due to rounding.

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

	Date Established	Source	Initial Amount	Outstanding Balance	Years Remaining	Annual Payment⁽¹⁾
Cost Groups #7 and #9	December 31, 2007	Restart of Amortization	\$129,233,744	\$108,858,394	9	\$14,162,945
County Safety	December 31, 2008	Actuarial (Gain)/Loss	25,934,594	24,794,682	13	2,366,859
	December 31, 2009	Actuarial (Gain)/Loss	55,813,557	54,276,456	14	4,880,466
	December 31, 2009	Assumption Change ⁽²⁾	11,213,000	10,904,195	14	980,491
	December 31, 2009	Depooling Implementation	24,145,656	23,480,687	14	2,111,352
	December 31, 2010	Actuarial (Gain)/Loss	57,993,092	57,087,331	15	4,859,740
	December 31, 2011	Actuarial (Gain)/Loss	45,765,799	45,404,686	16	3,675,345
	December 31, 2012	Actuarial (Gain)/Loss	53,914,024	53,702,766	17	4,149,388
	December 31, 2012	Assumption Change ⁽²⁾	140,056,457	139,507,656	17	10,779,174
	December 31, 2013	Actuarial (Gain)/Loss	-35,456,009	-35,456,009	18	-2,623,849
	December 31, 2013	Assumption Change ⁽³⁾	-44,310,461	<u>-44,310,461</u>	18	<u>-3,279,105</u>
Total for Cost Groups #7 and #9				\$438,250,383		\$42,062,806
Cost Group #8	December 31, 2007	Restart of Amortization	\$124,138,710	\$104,566,657	9	\$13,604,571
Contra Costa and East Fire	December 31, 2008	Actuarial (Gain)/Loss	6,780,436	6,482,414	13	618,800
Protection Districts	December 31, 2009	Actuarial (Gain)/Loss	27,018,706	26,274,613	14	2,362,578
	December 31, 2009	Assumption Change ⁽²⁾	4,945,000	4,808,815	14	432,402
	December 31, 2009	Depooling Implementation	47,818,666	46,501,744	14	4,181,375
	December 31, 2010	Actuarial (Gain)/Loss	38,165,445	37,569,360	15	3,198,211
	December 31, 2010	Assumption Change ⁽³⁾	-1,599,051	-1,574,076	15	-133,998
	December 31, 2011	Actuarial (Gain)/Loss	26,533,166	26,323,808	16	2,130,817
	December 31, 2012	Actuarial (Gain)/Loss	31,501,440	31,378,004	17	2,424,447
	December 31, 2012	Assumption Change ⁽²⁾	68,193,356	67,926,145	17	5,248,369
	December 31, 2013	Actuarial (Gain)/Loss	-22,661,640	-22,661,640	18	-1,677,028
	December 31, 2013	Assumption Change ⁽³⁾	-17,910,676	<u>-17,910,676</u>	18	<u>-1,325,443</u>
Total for Cost Group #8				\$309,685,168		\$31,065,101

Note: Results may not add due to rounding.

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

	Date Established	Source	Initial Amount	Outstanding Balance	Years Remaining	Annual Payment⁽¹⁾
Cost Group #10	December 31, 2007	Restart of Amortization	-\$2,591,000	-\$2,182,496	9	-\$283,952
Moraga-Orinda Fire District	December 31, 2008	Actuarial (Gain)/Loss	2,002,150	1,914,149	13	182,721
	December 31, 2009	Actuarial (Gain)/Loss	5,671,684	5,515,486	14	495,945
	December 31, 2009	Assumption Change ⁽²⁾	1,012,000	984,130	14	88,492
	December 31, 2009	Depooling Implementation	4,873,631	4,739,412	14	426,162
	December 31, 2010	Actuarial (Gain)/Loss	5,334,964	5,251,640	15	447,063
	December 31, 2010	Assumption Change ⁽³⁾	806,018	793,429	15	67,543
	December 31, 2011	Actuarial (Gain)/Loss	6,791,005	6,737,421	16	545,370
	December 31, 2012	Actuarial (Gain)/Loss	8,924,598	8,889,628	17	686,864
	December 31, 2012	Assumption Change ⁽²⁾	12,149,892	12,102,284	17	935,093
	December 31, 2013	Actuarial (Gain)/Loss	-1,027,440	-1,027,440	18	-76,034
	December 31, 2013	Assumption Change ⁽³⁾	-3,613,981	<u>-3,613,981</u>	18	<u>-267,445</u>
Total for Cost Group #10				\$40,103,662		\$3,247,822
Cost Group #11	December 31, 2007	Restart of Amortization	\$58,766,000	\$49,500,790	9	\$6,440,265
San Ramon Valley	December 31, 2008	Actuarial (Gain)/Loss	10,216,694	9,767,637	13	932,402
Fire District	December 31, 2009	Actuarial (Gain)/Loss	9,262,105	9,007,027	14	809,900
	December 31, 2009	Assumption Change ⁽²⁾	2,453,000	2,385,445	14	214,496
	December 31, 2009	Depooling Implementation	-20,174,500	-19,618,896	14	-1,764,105
	December 31, 2010	Actuarial (Gain)/Loss	6,585,812	6,482,952	15	551,882
	December 31, 2010	Assumption Change ⁽³⁾	5,093,420	5,013,869	15	426,822
	December 31, 2011	Actuarial (Gain)/Loss	5,513,071	5,469,570	16	442,742
	December 31, 2012	Actuarial (Gain)/Loss	14,600,741	14,543,529	17	1,123,718
	December 31, 2012	Assumption Change ⁽²⁾	26,672,143	26,567,630	17	2,052,770
	December 31, 2013	Actuarial (Gain)/Loss	-4,492,900	-4,492,900	18	-332,488
	December 31, 2013	Assumption Change ⁽³⁾	-12,984,002	<u>-12,984,002</u>	18	<u>-960,854</u>
Total for Cost Group #11				\$91,642,651		\$9,937,550

Note: Results may not add due to rounding.

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

	Date Established	Source	Initial Amount	Outstanding Balance	Years Remaining	Annual Payment⁽¹⁾
Cost Group #12	December 31, 2007	Restart of Amortization	\$3,960,000	\$3,335,655	9	\$433,983
Rodeo-Hercules Fire	December 31, 2008	Actuarial (Gain)/Loss	957,150	915,080	13	87,352
Protection District	December 31, 2009	Actuarial (Gain)/Loss	2,872,360	2,793,256	14	251,166
	December 31, 2009	Assumption Change ⁽²⁾	1,154,000	1,122,219	14	100,908
	December 31, 2009	Depooling Implementation	-1,809,374	-1,759,544	14	-158,216
	December 31, 2010	Actuarial (Gain)/Loss	1,502,503	1,479,037	15	125,908
	December 31, 2010	Assumption Change ⁽³⁾	662,085	651,744	15	55,482
	December 31, 2011	Actuarial (Gain)/Loss	2,067,217	2,050,906	16	166,013
	December 31, 2012	Actuarial (Gain)/Loss	2,246,131	2,237,329	17	172,869
	December 31, 2012	Assumption Change ⁽²⁾	3,018,796	3,006,967	17	232,336
	December 31, 2013	Actuarial (Gain)/Loss	413,088	413,088	18	30,570
	December 31, 2013	Assumption Change ⁽³⁾	-1,169,821	<u>-1,169,821</u>	18	<u>-86,570</u>
Total for Cost Group #12				\$15,075,916		\$1,411,801

Note: Results may not add due to rounding.

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

	Date Established	Source	Initial Amount	Outstanding Balance	Years Remaining	Annual Payment ⁽¹⁾
All Cost Groups Combined	December 31, 2007	Restart of Amortization	\$1,147,096,132	\$966,241,777	9	\$125,712,206
	December 31, 2008	Actuarial (Gain)/Loss	131,778,368	125,986,268	13	12,026,438
	December 31, 2009	Actuarial (Gain)/Loss	280,030,406	272,318,394	14	24,486,505
	December 31, 2009	Assumption Change ⁽²⁾	63,460,000	61,712,317	14	5,549,090
	December 31, 2009	Depooling Implementation	681,371	662,606	14	59,581
	December 31, 2010	Actuarial (Gain)/Loss	285,254,002	280,798,783	15	23,903,888
	December 31, 2010	Assumption Change ⁽³⁾	15,521,464	15,279,043	15	1,300,678
	December 31, 2011	Actuarial (Gain)/Loss	194,756,575	193,219,858	16	15,640,447
	December 31, 2012	Actuarial (Gain)/Loss	245,336,047	244,374,715	17	18,881,812
	December 31, 2012	Assumption Change ⁽²⁾	570,154,754	567,920,643	17	43,880,856
	December 31, 2012	UAAL Prepayment	-4,666,477	-4,648,192	17	-359,146
	December 31, 2013	Actuarial (Gain)/Loss	-202,894,807	-202,894,807	18	-15,014,814
	December 31, 2013	Assumption Change ⁽³⁾	-205,332,015	<u>-205,332,015</u>	18	<u>-15,195,173</u>
Total for All Cost Groups				\$2,315,639,391		\$240,872,368
Special Adjustments⁽⁴⁾	December 31, 2007	County General POBs	-\$453,973,319	-\$382,397,332	9	-\$49,751,536
	December 31, 2007	Moraga General POBs	-701,412	-590,823	9	-76,869
	December 31, 2007	CCCFPD Safety POBs	-127,509,711	-107,405,812	9	-13,973,958
	December 31, 2011	First Five UAAL Prepayment	-1,794,205	<u>-1,564,449</u>	9	<u>-234,972</u>
Total for Special Adjustments				-\$491,958,416		-\$64,037,335
Grand Total				\$1,823,680,975		\$176,835,033

⁽¹⁾ As of middle of year. The annual payment amounts shown for the Special Adjustments represent the credit allocated to the employer to reflect the receipt of the proceeds for Pension Obligation Bonds (POBs) or any other special contributions. These adjustments serve to reduce the UAAL contribution rate for these employers. The cost of debt service associated with the POBs is not reflected in this report.

⁽²⁾ Changes in actuarial assumptions and methods from actuarial experience study.

⁽³⁾ The Board approved changes in actuarial assumptions. Effective with the December 31, 2010 valuation, leave cashouts (terminal pay) assumptions are now based on cost groups. Effective with the December 31, 2013 valuation, the leave cashout assumption were reduced to reflect AB 197.

⁽⁴⁾ Includes remaining balance of POBs and any other special contributions made by the County (including Courts), First 5 – Children & Families Commission or Moraga-Orinda Fire District that have been allocated to the County General cost groups or for Contra Costa Fire Protection District that have been allocated to their Safety cost group.

Note: Results may not add due to rounding.

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

EXHIBIT K

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 non-compliance is disqualification: active participants could be taxed on their vested benefits and the IRS may seek to tax the income earned on the plan's assets.

In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar limit of \$160,000 indexed for inflation. That limit is \$210,000 for 2014. Normal Retirement Age for these purposes is age 62. These are the limits in simplified terms. They must generally be adjusted based on each participant's circumstances, for such things as age at retirement, form of benefits chosen and after tax contributions. Limits are also affected by the "grandfather" election under Section 415(b)(10).

For non-PEPRA members, benefits in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m).

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

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

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

EXHIBIT L

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

Normal Cost:

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

Actuarial Accrued Liability For Actives:

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

Actuarial Accrued Liability For Pensioners:

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 of the interest that the sum is expected to earn before it is entirely paid out in benefits.

Unfunded Actuarial Accrued Liability:

The extent to which the actuarial accrued liability of the Plan exceeds the assets of the Plan.

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

Amortization of the Unfunded

Actuarial Accrued Liability: Payments made over a period of years equal in value to the Plan's unfunded actuarial accrued liability.

Investment Return:

The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the market gains and losses to avoid significant swings in the value of assets from one year to the next.

Payroll or Compensation:

Payroll for pension purposes expected to be paid to active members during the twelve months following the valuation date. Only pay that would possibly go into the determination of retirement benefits is included.

Asset Volatility Ratio:

Equal to the market value of assets divided by total projected payroll. This provides an indication of the potential contribution volatility for any given level of investment volatility.

Liability Volatility Ratio:

Equal to the Actuarial Accrued Liability divided by total projected payroll. This provides an indication of the longer-term potential for contribution volatility for any given level of investment volatility. It also indicates how volatile contributions will be in response to changes in the Actuarial Accrued Liability due to actual experience or to changes in actuarial assumptions.

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

EXHIBIT I

Summary of Actuarial Valuation Results

The valuation was made with respect to the following data supplied to us:

1. Retired members as of the valuation date (including 1,260 beneficiaries in pay status)	8,625
2. Members inactive during year ended December 31, 2013 with vested rights	2,345
3. Members active during the year ended December 31, 2013	9,124

The actuarial factors as of the valuation date are as follows (amounts in 000s):

1. Normal cost	\$200,126
2. Present value of future benefits	9,265,161
3. Present value of future normal costs	1,534,064
4. Actuarial accrued liability*	7,731,097
Retired members and beneficiaries	\$5,086,528
Inactive members with vested rights	213,832
Active members	2,430,737
5. Valuation value of assets** (\$6,458,318 at market value as reported by Retirement Association)	5,907,416
6. Unfunded actuarial accrued liability	\$1,823,681

* Excludes liabilities for non-valuation reserves

** Excludes assets for non-valuation reserves

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

EXHIBIT I (continued)

Summary of Actuarial Valuation Results

The determination of the recommended average employer contribution is as follows
(amounts in 000s):

	Dollar Amount	% of Payroll
1. Total normal cost	\$200,126	29.46%
2. Expected employee contributions	<u>-80,886</u>	<u>-11.91%</u>
3. Employer normal cost: (1) + (2)	\$119,240	17.55%
4. Amortization of unfunded actuarial accrued liability	<u>176,855</u>	<u>26.03%</u>
5. Total recommended average employer contribution: (3) + (4)	\$296,095	43.58%
6. Projected payroll	\$679,429	

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

EXHIBIT II

Supplementary Information Required by GASB – Schedule of Employer Contributions

Plan Year Ended December 31	Annual Required Contributions	Actual Contributions	Percentage Contributed
2008	\$206,518,693	\$206,518,693	100.0%
2009	195,613,673	195,613,673	100.0%
2010	183,950,930	183,950,930	100.0%
2011	200,388,994	200,388,994	100.0%
2012	212,321,325	212,321,325	100.0%
2013	228,017,452	228,017,452 ⁽¹⁾	100.0%

⁽¹⁾Excludes additional contributions towards UAAL of \$7 million.

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

EXHIBIT III

Supplementary Information Required by GASB – Schedule of Funding Progress

Actuarial Valuation Date	Valuation Value of Assets⁽¹⁾ (a)	Actuarial Accrued Liability (AAL)⁽²⁾ (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b) - (a)] / (c)
12/31/2008	\$5,282,505,159	\$5,972,471,074	\$689,965,915	88.45%	\$704,947,668	97.87%
12/31/2009	5,290,114,102	6,314,787,187	1,024,673,085	83.77%	694,443,999	147.55%
12/31/2010	5,341,821,711	6,654,036,801	1,312,215,090	80.28%	687,443,206	190.88%
12/31/2011	5,426,719,066	6,915,311,649	1,488,592,583	78.47%	666,394,146	223.38%
12/31/2012	5,482,257,062	7,761,315,535	2,279,058,473	70.64%	652,312,180	349.38%
12/31/2013	5,907,416,432	7,731,097,407	1,823,680,975	76.41%	679,428,911	268.41%

⁽¹⁾ Excludes assets for non-valuation reserves.

⁽²⁾ Excludes liabilities for non-valuation reserves.

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

EXHIBIT IV

Supplementary Information Required by GASB

Valuation date	December 31, 2013
Actuarial cost method	Entry Age Actuarial Cost Method
Amortization method	Level percent of payroll for total unfunded liability (4.00% payroll growth assumed)
Remaining amortization period	Remaining balance of December 31, 2007 UAAL is amortized over a fixed (decreasing or closed) period with 9 years remaining as of December 31, 2013. Any changes in UAAL after December 31, 2007 will be separately amortized over a fixed 18-year period effective with that valuation. Effective December 31, 2013, any changes in UAAL due to plan amendments (with the exception of a change due to retirement incentives) will be amortized over a 10-year fixed period effective with that valuation. The entire increase in UAAL resulting from a temporary retirement incentive will be funded in full upon adoption of the incentive.
Asset valuation method	Market value of assets less unrecognized returns in each of the last nine semi-annual accounting periods. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized semi-annually over a five-year period. The Actuarial Value of Assets is reduced by the value of the non-valuation reserves and designations.
Actuarial assumptions:	
Investment rate of return	7.25%
Inflation rate	3.25%
Projected salary increases ⁽¹⁾	General: 4.75% to 13.50%; Safety: 4.75% to 14.00%
Cost of living adjustments	3% per year except for Tier 3 disability benefits and Tier 2 benefits that are valued as a 3.25% increase per year. Safety Tier C and E benefits and benefits for PEPRAs Tier 4 and Tier 5 members covered under certain memoranda of understanding are assumed to increase at 2% per year. All increases are contingent upon actual increases in CPI.
Plan membership:	
Retired members and beneficiaries receiving benefits	8,625
Terminated members entitled to, but not yet receiving benefits	2,345
Active members	<u>9,124</u>
Total	20,094

⁽¹⁾ Includes inflation at 3.25%, plus “across the board” salary increases of 0.75%, plus merit and promotional increases. See Exhibit V for these increases. The average total assumed salary increase for active members in the December 31, 2013 valuation is 5.7%.

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

EXHIBIT V

Actuarial Assumptions and Methods

Actuarial Assumptions

Post – Retirement Mortality Rates:

Healthy:

For General Members: RP-2000 Combined Healthy Mortality Table projected to 2030 with Scale AA, set back one year.

For Safety Members: RP-2000 Combined Healthy Mortality Table projected to 2030 with Scale AA, set back two years.

Disabled:

For General Members: RP-2000 Combined Healthy Mortality Table projected to 2030 with Scale AA, set forward six years for males and set forward seven years for females.

For Safety Members: RP-2000 Combined Healthy Mortality Table projected to 2030 with Scale AA, set forward three years.

Beneficiaries:

Beneficiaries are assumed to have the same mortality as a General Member of the opposite sex who has taken a service (non-disability) retirement.

The mortality tables projected with Scale AA to 2015 and adjusted by the applicable set backs and set forwards shown above reasonably reflect the projected mortality experience as of the measurement date. The additional projection to 2030 is a provision for future mortality improvement.

Member Contribution Rates:

For General Members: RP-2000 Combined Healthy Mortality Table projected to 2030 with Scale AA, set back one year, weighted 30% male and 70% female.

For Safety Members: RP-2000 Combined Healthy Mortality Table projected to 2030 with Scale AA, set back two years, weighted 85% male and weighted 15% female.

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

Termination Rates Before Retirement:

Age	Rate (%) Mortality			
	General		Safety	
	Male	Female	Male	Female
25	0.03	0.01	0.02	0.01
30	0.04	0.02	0.03	0.02
35	0.06	0.03	0.05	0.03
40	0.08	0.04	0.08	0.04
45	0.10	0.07	0.09	0.06
50	0.12	0.09	0.11	0.08
55	0.17	0.18	0.16	0.15
60	0.37	0.38	0.33	0.34
65	0.74	0.74	0.66	0.66

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

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

Termination Rates Before Retirement (continued):

Age	Rate (%)		
	Disability		
	General Tier 1⁽¹⁾	General Tier 3⁽²⁾	Safety⁽³⁾
20	0.01	0.01	0.02
25	0.02	0.02	0.22
30	0.04	0.03	0.42
35	0.08	0.05	0.56
40	0.16	0.08	0.66
45	0.32	0.13	0.94
50	0.52	0.17	2.54
55	0.66	0.21	4.10
60	0.70	0.27	4.80
65	0.70	0.36	5.00
70	0.70	0.44	5.00

⁽¹⁾ 70% of General Tier 1 disabilities are assumed to be duty disabilities. The other 30% are assumed to be ordinary disabilities.

⁽²⁾ 35% of General Tier 3 disabilities are assumed to be duty disabilities. The other 65% are assumed to be ordinary disabilities.

⁽³⁾ 100% of Safety disabilities are assumed to be duty disabilities.

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

Termination Rates Before Retirement (continued):

Years of Service	Rate (%)	
	Withdrawal*	
	General	Safety
Less than 1	13.50	11.50
1	9.00	6.50
2	9.00	5.00
3	6.00	4.00
4	4.50	3.50
5	4.00	3.00
6	3.75	2.75
7	3.50	2.50
8	3.25	2.25
9	3.00	2.00
10	2.75	1.90
11	2.50	1.80
12	2.40	1.70
13	2.30	1.60
14	2.20	1.50
15	2.10	1.40
16	2.00	1.30
17	2.00	1.20
18	2.00	1.10
19	2.00	1.00
20 or more	2.00	1.00

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

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

Retirement Rates (General):

Age	Rate (%)			
	General Tier 1 (Enhanced)	General Tier 3 (Enhanced)	General Tier 1 (Non-enhanced)	PEPRA General Tiers 4 and 5
50	5.00	4.00	3.00	0.00
51	4.00	3.00	3.00	0.00
52	6.00	3.00	3.00	2.00
53	6.00	5.00	3.00	3.00
54	12.00	5.00	3.00	3.00
55	20.00	10.00	10.00	5.00
56	20.00	10.00	10.00	5.00
57	20.00	10.00	10.00	6.00
58	22.00	12.00	10.00	8.00
59	25.00	12.00	10.00	9.00
60	30.00	15.00	25.00	10.00
61	35.00	20.00	15.00	14.00
62	35.00	27.00	40.00	21.00
63	35.00	27.00	25.00	21.00
64	35.00	30.00	30.00	21.00
65	40.00	40.00	40.00	27.00
66	40.00	40.00	35.00	33.00
67	40.00	40.00	35.00	33.00
68	40.00	40.00	35.00	33.00
69	40.00	40.00	35.00	33.00
70	100.00	40.00	100.00	50.00
71	100.00	40.00	100.00	50.00
72	100.00	40.00	100.00	50.00
73	100.00	40.00	100.00	50.00
74	100.00	40.00	100.00	50.00
75	100.00	100.00	100.00	100.00

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

Retirement Rates (Safety):

Age	Rate (%)			
	Safety Tier A (Enhanced)	Safety Tier C (Enhanced)	Safety Tier A (Non-enhanced)	PEPRA Safety Tiers D and E
45	2.00	1.00	0.00	0.00
46	2.00	1.00	0.00	0.00
47	7.00	3.00	0.00	0.00
48	7.00	3.00	0.00	0.00
49	20.00	10.00	0.00	0.00
50	25.00	15.00	5.00	5.00
51	25.00	15.00	4.00	4.00
52	25.00	15.00	4.00	4.00
53	25.00	15.00	5.00	5.00
54	25.00	15.00	5.00	5.00
55	30.00	20.00	6.00	6.00
56	25.00	15.00	8.00	8.00
57	25.00	15.00	12.00	12.00
58	35.00	25.00	18.00	18.00
59	35.00	25.00	20.00	20.00
60	40.00	35.00	20.00	20.00
61	40.00	35.00	20.00	20.00
62	40.00	35.00	20.00	20.00
63	40.00	35.00	20.00	20.00
64	40.00	35.00	100.00	100.00
65	100.00	100.00	100.00	100.00

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

**Retirement Age and Benefit for
Deferred Vested Members:**

For deferred vested benefits, we make the following retirement assumption:

General: Age 59
Safety: Age 54

We assume that 40% and 60% of future General and Safety deferred vested members, respectively, will continue to work for a reciprocal employer. For reciprocals, we assume 5.25% compensation increases per annum.

Future Benefit Accruals:

1.0 year of service per year for the full-time employees. Continuation of current partial service accrual for part-time employees.

Unknown Data for Members:

Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.

Percent Married:

75% of male members and 50% of female members are assumed to be married at pre-retirement death or retirement. There is no explicit assumption for children's benefits.

Age of Spouse:

Females are 3 years younger than their spouses.

**Offsets by Other Plans of the
Employer for Disability Benefits:**

The Plan requires members who retire because of disability from General Tier 3 and PEPRA General Tier 5 to offset the Plan's disability benefits with other Plans of the employer. We have not assumed any offsets in this valuation.

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

Leave Cashout Assumptions:

The following assumptions for leave cashouts as a percentage of final average pay are used:

General Tiers 1, 2 and 3
Safety Tiers A and C

	Membership Date before January 1, 2013
Cost Group 1:	1.50%
Cost Group 2:	0.50% for Tier 2 0.75% for Tier 3
Cost Group 3:	6.50%
Cost Group 4:	0.25%
Cost Group 5:	1.50%
Cost Group 6:	1.25%
Cost Group 7:	0.75%
Cost Group 8:	0.75%
Cost Group 9:	0.25%
Cost Group 10:	1.50%
Cost Group 11:	3.00%
Cost Group 12:	3.50%

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

PEPRA General Tiers 4 and 5
PEPRA Safety Tiers D and E

None

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

Service From Accumulated Sick Leave:

The following assumptions for additional service due to accumulated sick leave as a percentage of service at retirement are used:

All Retirements Excluding Disability:

General:	1.25%
Safety:	2.00%

Disability Retirements:

General:	0.10%
Safety:	1.25%

Pursuant to Section 31641.01, the cost of this benefit for the non-PEPRA tiers will be charged only to employers and will not affect member contribution rates.

Net Investment Return:

7.25%, net of administration and investment expenses.

Employee Contribution Crediting Rate:

7.25%, compounded semi-annually.

Consumer Price Index:

Increase of 3.25% per year; retiree COLA increases due to CPI subject to a 3.00% maximum change per year except for Tier 3 and PEPRA Tier 5 disability benefits and Tier 2 benefits which are subject to a 4.00% maximum change per year (valued as a 3.25% increase). Safety Tier C benefits and benefits for PEPRA Tier 4 and Tier 5 members covered under certain memoranda of understanding are subject to a 2.00% maximum change per year.

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

Salary Increases:

Annual Rate of Compensation Increase

Inflation: 3.25% per year, plus “across the board” salary increases of 0.75% per year, plus the following merit and promotional increases.

Years of Service	General	Safety
Less than 1	9.50%	10.00%
1	6.50	6.50
2	4.75	5.25
3	3.25	4.00
4	2.25	2.25
5	1.50	1.00
6	1.25	0.75
7	1.00	0.75
8	0.75	0.75
9	0.75	0.75
10	0.75	0.75
11	0.75	0.75
12	0.75	0.75
13	0.75	0.75
14	0.75	0.75
15	0.75	0.75
16	0.75	0.75
17	0.75	0.75
18	0.75	0.75
19	0.75	0.75
20 & over	0.75	0.75

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

Actuarial Methods

- Actuarial Cost Method:** Entry Age Actuarial Cost Method. Entry Age is calculated as age on the valuation date minus years of service. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are based on costs allocated as a level percent of compensation, as if the current benefit formulas have always been in effect (i.e., “replacement life”).
- Actuarial Value of Assets:** Market value of assets less unrecognized returns in each of the last nine semi-annual accounting periods. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized semi-annually over a five-year period.
- Valuation Value of Assets:** Actuarial Value of Assets reduced by the value of the non-valuation reserves and designations.
- Amortization Policy:** The UAAL (i.e., the difference between the AAL and the Valuation Value of Assets) as of December 31, 2012 will continue to be amortized over separate amortization layers based on the valuations during which each separate layer was previously established.
- Any new UAAL as a result of actuarial gains or losses identified in the annual valuation as of December 31 will be amortized over a period of 18 years.
- Any new UAAL as a result of change in actuarial assumptions or methods will be amortized over a period of 18 years.
- Unless the Board adopts an alternative amortization period after receiving an actuarial analysis:
- i. With the exception noted in ii., below, the increase in UAAL as a result of any plan amendments will be amortized over a period of 10 years;
 - ii. The entire increase in UAAL resulting from a temporary retirement incentive will be funded in full upon adoption of the incentive. If the increase in UAAL is due to the impact of benefits resulting from additional service permitted in Section 31641.04 of the 1937 CERL (Golden Handshake), the entire increase in UAAL will be funded in full upon adoption of the Golden Handshake.

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

The UAAL will be amortized over “closed” amortization periods so that the amortization period for each layer decreases by one year with each actuarial valuation.

The UAAL will be amortized as a level percentage of payroll so that the amortization amount in each year during the amortization period shall be expected to be a level percentage of covered payroll, taking into consideration the current assumption for general payroll increase (i.e., wage inflation).

If an overfunding or “surplus” exists (i.e., the Valuation Value of Assets exceeds the AAL, so that the total of all UAAL amortization layers become negative), any prior UAAL amortization layers will be considered fully amortized, and any subsequent UAAL will be amortized as the first of a new series of amortization layers, using the above amortization periods.

If the surplus exceeds 20% of the AAL per Section 7522.52 of the Government Code, then the amount of surplus in excess of 20% of the AAL (and any subsequent surpluses in excess of that amount) will be amortized over an “open” amortization period of 30 years, but only if the other conditions of Section 7522.52 have also been met. If those conditions are not met, then the surplus will not be amortized and the full Normal Cost will be contributed.

These amortization policy components will generally apply separately to each of CCCERA's UAAL cost groups with the exception that the conditions of Section 7522.32 apply to the total plan.

Changes in Actuarial Assumptions and Methods:

Based on a review of CCCERA's funding policy, changes in the amortization periods for future plan amendments and surplus were adopted. In addition, changes in the leave cashout assumption were adopted in response to changes in leave cashouts consistent with AB 197. Previously, this assumption was as follows:

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

Changes in Actuarial Assumptions and Methods – Prior Assumptions:

Leave Cashout (Terminal Pay) Assumptions:

General Tiers 1, 2 and 3

Safety Tiers A and C

The following assumptions for leave cashout as a percentage of final average pay are used:

	Membership Date before January 1, 2011	Membership Date on or after January 1, 2011
Cost Group 1:	12.50%	3.00%
Cost Group 2:	4.00% for Tier 2 8.00% for Tier 3	1.00%
Cost Group 3:	24.00%	8.75%
Cost Group 4:	5.75%	0.75%
Cost Group 5:	11.50%	2.75%
Cost Group 6:	9.00%	2.25%
Cost Group 7:	12.00%	1.50%
Cost Group 8:	10.50%	1.25%
Cost Group 9:	4.00%	0.50%
Cost Group 10:	13.00%	1.50%
Cost Group 11:	14.00%	3.50%
Cost Group 12:	15.50%	6.25%

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

EXHIBIT VI

Summary of Plan Provisions

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

Membership Eligibility:

<i>General Tier 1</i>	General members hired before July 1, 1980 and electing not to transfer to Tier 2 Plan. Certain General members with membership dates before January 1, 2013 hired by specific employers who did not adopt Tier 2 are placed in Tier 1.
<i>General Tier 2</i>	Most General members hired on or after August 1, 1980 and all General members hired before July 1, 1980 electing to transfer to the Tier 2 Plan. Effective October 1, 2002, for the County, Tier 2 was eliminated and all County employees (excluding CNA employees) in Tier 2 were placed in Tier 3. Effective January 1, 2005, all CNA employees in Tier 2 were placed in Tier 3.
<i>General Tier 3</i>	General members with membership dates before January 1, 2013 who are not placed in Tier 1 are placed in Tier 3.
<i>PEPRA General Tier 4</i>	General members with membership dates on or after January 1, 2013 hired by specific employers who did not adopt Tier 2 are placed in Tier 4.
<i>PEPRA General Tier 5</i>	General members with membership dates on or after January 1, 2013 who are not placed in Tier 4 are placed in Tier 5.
<i>Safety Tiers A and C</i>	Safety members with membership dates before January 1, 2013. County Sheriff's Department Safety members hired on or after January 1, 2007, but before January 1, 2013 are placed in Safety Tier C Enhanced.
<i>PEPRA Safety Tiers D and E</i>	Safety members with membership dates on or after January 1, 2013. Safety members from certain bargaining units are placed in Safety Tier E.

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

**Final Compensation for
Benefit Determination:**

<i>General Tier 1, Tier 3 (non-disability), and Safety Tier A</i>	Highest consecutive twelve months of compensation earnable. (FAS1) (§31462.1)
<i>General Tier 2, Tier 3 (disability), and Safety Tier C</i>	Highest consecutive thirty-six months of compensation earnable. (FAS3) (§31462)
<i>PEPRA General Tiers 4 and 5 PEPRA Safety Tiers D and E</i>	Highest consecutive thirty-six months of pensionable compensation. (FAS3) (§7522.10(c), §7522.32 and §7522.34)

Social Security Primary Insurance Amount:

<i>General Tier 2</i>	Estimated Social Security award at age 62 assuming level future earnings. (PIA)
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Service:

<i>All tiers</i>	Years of service*. (Yrs)
<i>General Tier 2</i>	Years of service up to a maximum of 30 years*. (Yrs30)

*Includes accumulated sick leave as of the date of retirement (§31641.01).

Service Retirement Eligibility:

<i>General Tiers 1, 2 and 3</i>	Age 50 with 10 years of service, or age 70 regardless of service, or after 30 years of service, regardless of age. (§31672)
<i>PEPRA General Tiers 4 and 5</i>	Age 52 with 5 years of service, or age 70 regardless of service. (§7522.20(a) and §31672.3)
<i>Safety Tiers A and C</i>	Age 50 with 10 years of service, or age 70 regardless of service, or after 20 years of service, regardless of age. (§31663.25)
<i>PEPRA Safety Tiers D and E</i>	Age 50 with 5 years of service, or age 70 regardless of service. (§7522.25(a) and §31672.3)

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Benefit Formula:

General Tiers 1 and 3 (Non-enhanced)(§31676.11)

Retirement Age	Benefit Formula
50	(1.24%xFAS1 – 1/3x1.24%x\$350x12)xYrs
55	(1.67%xFAS1 – 1/3x1.67%x\$350x12)xYrs
60	(2.18%xFAS1 – 1/3x2.18%x\$350x12)xYrs
62	(2.35%xFAS1 – 1/3x2.35%x\$350x12)xYrs
65 or later	(2.61%xFAS1 – 1/3x2.61%x\$350x12)xYrs

General Tier 1 and Tier 3 (Enhanced) (§31676.16)

50	(1.43%xFAS1 – 1/3x1.43%x\$350x12)xYrs
55	(2.00%xFAS1 – 1/3x2.00%x\$350x12)xYrs
60	(2.26%xFAS1 – 1/3x2.26%x\$350x12)xYrs
62	(2.37%xFAS1 – 1/3x2.37%x\$350x12)xYrs
65 or later	(2.42%xFAS1 – 1/3x2.42%x\$350x12)xYrs

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

General Tier 2 (§31752)

50	0.83%xFAS3xYrs – 0.57%xYrs30xPIA
55	1.13%xFAS3xYrs – 0.87%xYrs30xPIA
60	1.43%xFAS3xYrs – 1.37%xYrs30xPIA
62	1.55%xFAS3xYrs – 1.67%xYrs30xPIA
65 or later	1.73%xFAS3xYrs – 1.67%xYrs30xPIA

The offsets shown in all of the above formulas only apply to members integrated with Social Security.

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

Benefit Formula:

<i>PEPRA General Tiers 4 and 5</i> (§7522.20(a))	Retirement Age	Benefit Formula
	52	1.00%xFAS3xYrs
	55	1.30%xFAS3xYrs
	60	1.80%xFAS3xYrs
	62	2.00%xFAS3xYrs
	65	2.30%xFAS3xYrs
	67 or later	2.50%xFAS3xYrs
<i>Safety Tier A (Non-enhanced)(§31664)</i>	50	2.00%xFAS1xYrs
	55 or later	2.62%xFAS1xYrs
<i>Safety Tier A (Enhanced)(§31664.1)</i>	50 or later	3.00%xFAS1xYrs
<i>Safety Tier C (Enhanced)(§31664.1)</i>	50 or later	3.00%xFAS3xYrs
<i>PEPRA Safety Tiers D and E</i> (§7522.25(d))	50	2.00%xFAS3xYrs
	55	2.50%xFAS3xYrs
	57 or later	2.70%xFAS3xYrs

Maximum Benefit:

<i>General Tiers 1 and 3</i> <i>Safety Tiers A and C</i>	100% of Final Compensation (§31676.11, §31676.16, §31664, §31664.1)
<i>General Tier 2</i> <i>PEPRA General Tiers 4 and 5</i> <i>PEPRA Safety Tiers D and E</i>	None

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Ordinary Disability:

General Tiers 1 and 4

Eligibility

Five years of service (§31720).

Benefit Formula

1.5% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 65, but total benefit cannot be more than one-third of Final Compensation (§31727).

General Tiers 2, 3 and 5

Eligibility

Ten years of service (definition of disability is more strict than Tier 1 Plan) (§31720.1).

Benefit Formula

40% of Final Compensation plus 10% of Final Compensation used in the benefit determination for each minor child (maximum of three) (§31727.01).

Offset

Disability benefits are offset by other plans of the employer except Workers Compensation and Social Security.

Safety

Eligibility

Five years of service (§31720).

Benefit Formula

1.8% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 55, but total benefit cannot be more than one-third of Final Compensation (§31727.2).

Line-of-Duty Disability:

General Tiers 1 and 4, and Safety

Eligibility

No age or service requirements (§31720).

Benefit Formula

50% of the Final Compensation (§31727.4).

General Tiers 2, 3 and 5

Eligibility

No age or service requirements (§31720).

Benefit Formula

40% of Final Compensation plus 10% of Final Compensation for each minor child (maximum of three) (§31727.01).

Offset

Disability benefits are offset by other plans of the Employer except Workers Compensation and Social Security.

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

Pre-Retirement Death:

Non-General Tier 2

Eligibility - A

None.

Benefit - A

Refund of employee contributions with interest plus one month's compensation for each year of service to a maximum of six month's compensation (§31781); 50% of Final Compensation payable to spouse if Line of Duty death (§31787).

OR

Eligibility - B

Five years of service (Ten years for Tiers 3 and 5).

Benefit - B

Option 2 (100% continuation) of Service Retirement or Ordinary Disability benefit payable to designated beneficiary.

Death in line of duty

50% of Final compensation.

General Tier 2

Eligibility - A

None.

Benefit - A

Refund of employee contributions with interest plus \$2,000 lump sum benefit offset by any Social Security payment. (§31781.01); If a Line of Duty death, then 60% of Service or Disability Retirement Benefit (minimum benefit is 24% of Final Compensation) plus, for each minor child, 10% of the allowance otherwise paid to the member. Minimum family benefit is 60% of the member's allowance. Maximum family benefit is 100% of member's allowance.

OR

Eligibility - B

Ten years of service.

Benefit - B

Option 2 (100% continuation) of Service Retirement or Ordinary Disability benefit payable to designated beneficiary.

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

Death After Retirement:

Non-General Tier 2

Service or

Ordinary Disability Retirement

60% of member's unmodified allowance continued to eligible spouse. An eligible spouse is a surviving spouse who was married to the member one year prior to member's retirement or at least two years prior to the date of death and has attained age 55 on or prior to the date of death (§31760.2). An additional lump sum benefit of \$5,000 is payable to the member's beneficiary (§31789.12).

Line-of-Duty Disability

100% of members allowance continued to eligible spouse (§31786). An additional lump sum benefit of \$5,000 is payable to the member's beneficiary (§31789.12).

General Tier 2

Service or

Disability Retirement

60% of member's unmodified allowance continued to eligible spouse plus 10% of allowance to each minor child. Minimum benefit is 60% of allowance. Maximum benefit is 100% of allowance. \$7,000 lump sum benefit, less any Social Security Lump sum payment payable to member's beneficiary.

Withdrawal Benefits:

Less than Five Years of Service

Refund of accumulated employee contributions with interest, or earned benefit at age 70 (§31628).

Five or More Years of Service

If contributions left on deposit, entitled to earned benefits commencing at any time after eligible to retire (§31700).

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Post-Retirement

Cost-of-Living Benefits:

General Tiers 1, 3, 4 and 5

Safety Tiers A and D

Future changes based on Consumer Price Index to a maximum of 3% per year, excess "banked." Tier 3 and PEPRAs Tier 5 disability benefits have a maximum of 4% per year, excess "banked." Benefits for PEPRAs Tier 4 and Tier 5 members covered under certain memoranda of understanding have a maximum of 2% per year, excess "banked".

General Tier 2

Future changes based on Consumer Price Index to a maximum of 4% per year, excess "banked."

Safety Tiers C and E

Future changes based on Consumer Price Index to a maximum of 2% per year, excess "banked."

Member Contributions:

Please refer to Appendices A and B for the specific rates.

General Tiers 1 and 3 (Non-enhanced)

Basic

Provide for one-half of the \$31676.11 benefit payable at age 55.

Cost-of-Living

Provide for one-half of future Cost-of-Living costs.

General Tiers 1 and 3 (Enhanced)

Basic

Provide for an average annuity at age 60 equal to 1/120 of FAS1.

Cost-of-Living

Provide for one-half of future Cost-of-Living costs.

PEPRAs General Tiers 4 and 5

50% of the total Normal Cost rate.

Safety Tier A (Non-enhanced)

Basic

Provide for one-half of the \$31664 benefit payable at age 50.

Cost-of-Living

Provide for one-half of future Cost-of-Living costs.

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Member Contributions (continued):

Safety Tier A (Enhanced)

Basic

Provide for an average annuity at age 50 equal to 1/100 of FAS1.

Cost-of-Living

Provide for one-half of future Cost-of-Living costs.

Safety Tier C (Enhanced)

Basic

Provide for an average annuity at age 50 equal to 1/100 of FAS3.

Cost-of-Living

Provide for one-half of future Cost-of-Living costs.

PEPRA Safety Tiers D and E

50% of the total Normal Cost rate.

Other Information:

Transfers from the Tier 1 Plan to the Tier 2 Plan were made on an individual voluntary irrevocable basis. Credit is given under the Tier 2 Plan for future service only. The Cost-of-Living maximum is 4% only for the credit under the Tier 2 Plan. Transferred Tier 2 Plan members keep the five-year requirement for nonservice-connected disability. Those who were members on or before March 7, 1973 and Safety members under the enhanced benefit formula with membership dates on or before January 1, 2013 will be exempt from paying member contributions after 30 years of service.

Plan Provisions Not Valued:

Additional \$5,000 lump sum post-retirement death benefit payable to a member's beneficiary. This benefit is paid from a reserve that is not included in the Valuation Value of Assets and is subject at all times to the availability of funds.

Plan Changes:

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

NOTE:

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

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

Appendix A

Member Contribution Rates for Members with Membership Dates before January 1, 2013

**General Tier 1 (Non-enhanced) Members' Contribution Rates for Members Not Receiving Benefits under
2% at 55 Formula (Expressed as a Percentage of Monthly Payroll)
For Members with Membership Dates before January 1, 2013**

Calculated Under Recommended Assumptions

Entry Age	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
15	4.05%	6.07%	1.90%	2.85%	5.95%	8.92%
16	4.10%	6.15%	1.93%	2.89%	6.03%	9.04%
17	4.16%	6.24%	1.95%	2.93%	6.11%	9.17%
18	4.22%	6.33%	1.99%	2.98%	6.21%	9.31%
19	4.27%	6.41%	2.01%	3.01%	6.28%	9.42%
20	4.33%	6.50%	2.04%	3.06%	6.37%	9.56%
21	4.39%	6.59%	2.07%	3.10%	6.46%	9.69%
22	4.46%	6.69%	2.09%	3.14%	6.55%	9.83%
23	4.52%	6.78%	2.13%	3.19%	6.65%	9.97%
24	4.58%	6.87%	2.15%	3.23%	6.73%	10.10%
25	4.65%	6.97%	2.19%	3.28%	6.84%	10.25%
26	4.71%	7.06%	2.21%	3.32%	6.92%	10.38%
27	4.77%	7.16%	2.25%	3.37%	7.02%	10.53%
28	4.84%	7.26%	2.27%	3.41%	7.11%	10.67%
29	4.91%	7.36%	2.31%	3.46%	7.22%	10.82%
30	4.97%	7.46%	2.34%	3.51%	7.31%	10.97%
31	5.04%	7.56%	2.37%	3.55%	7.41%	11.11%
32	5.11%	7.67%	2.40%	3.60%	7.51%	11.27%
33	5.18%	7.77%	2.43%	3.65%	7.61%	11.42%
34	5.25%	7.88%	2.47%	3.70%	7.72%	11.58%
35	5.33%	8.00%	2.51%	3.76%	7.84%	11.76%
36	5.41%	8.11%	2.54%	3.81%	7.95%	11.92%
37	5.49%	8.23%	2.58%	3.87%	8.07%	12.10%
38	5.56%	8.34%	2.61%	3.92%	8.17%	12.26%

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

**General Tier 1 (Non-enhanced) Members' Contribution Rates for Members Not Receiving Benefits under
2% at 55 Formula (Expressed as a Percentage of Monthly Payroll)
For Members with Membership Dates before January 1, 2013**

Calculated Under Recommended Assumptions

Entry Age	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
39	5.64%	8.46%	2.65%	3.98%	8.29%	12.44%
40	5.73%	8.59%	2.69%	4.04%	8.42%	12.63%
41	5.81%	8.72%	2.73%	4.10%	8.54%	12.82%
42	5.90%	8.85%	2.77%	4.16%	8.67%	13.01%
43	5.99%	8.99%	2.82%	4.23%	8.81%	13.22%
44	6.09%	9.13%	2.86%	4.29%	8.95%	13.42%
45	6.19%	9.29%	2.91%	4.37%	9.10%	13.66%
46	6.31%	9.47%	2.97%	4.45%	9.28%	13.92%
47	6.41%	9.62%	3.01%	4.52%	9.42%	14.14%
48	6.53%	9.80%	3.07%	4.61%	9.60%	14.41%
49	6.63%	9.94%	3.11%	4.67%	9.74%	14.61%
50	6.74%	10.11%	3.17%	4.75%	9.91%	14.86%
51	6.76%	10.14%	3.18%	4.77%	9.94%	14.91%
52	6.80%	10.20%	3.19%	4.79%	9.99%	14.99%
53	6.71%	10.07%	3.15%	4.73%	9.86%	14.80%
54	6.47%	9.70%	3.04%	4.56%	9.51%	14.26%
55	6.47%	9.70%	3.04%	4.56%	9.51%	14.26%
56	6.47%	9.70%	3.04%	4.56%	9.51%	14.26%
57	6.47%	9.70%	3.04%	4.56%	9.51%	14.26%
58	6.47%	9.70%	3.04%	4.56%	9.51%	14.26%
59	6.47%	9.70%	3.04%	4.56%	9.51%	14.26%
60	6.47%	9.70%	3.04%	4.56%	9.51%	14.26%

Interest: 7.25%
 Salary Increase: See Exhibit V.
 COLA Loading: 47.00%
 Mortality: RP-2000 Combined Healthy Mortality Table Projected to 2030 with Scale AA, set back one year, weighted 30% Male and 70% Female.

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

**General Tier 1 (Enhanced) Members' Contribution Rates for Members Receiving Benefits under 2% at 55 Formula
(Expressed as a Percentage of Monthly Payroll)
For Members with Membership Dates before January 1, 2013**

Calculated Under Recommended Assumptions

Entry Age	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
15	3.54%	5.31%	2.03%	3.05%	5.57%	8.36%
16	3.59%	5.39%	2.07%	3.10%	5.66%	8.49%
17	3.65%	5.47%	2.09%	3.14%	5.74%	8.61%
18	3.69%	5.54%	2.12%	3.18%	5.81%	8.72%
19	3.75%	5.62%	2.15%	3.23%	5.90%	8.85%
20	3.80%	5.70%	2.18%	3.27%	5.98%	8.97%
21	3.85%	5.78%	2.21%	3.32%	6.06%	9.10%
22	3.91%	5.86%	2.25%	3.37%	6.16%	9.23%
23	3.96%	5.94%	2.27%	3.41%	6.23%	9.35%
24	4.01%	6.02%	2.31%	3.46%	6.32%	9.48%
25	4.07%	6.11%	2.34%	3.51%	6.41%	9.62%
26	4.13%	6.19%	2.37%	3.55%	6.50%	9.74%
27	4.19%	6.28%	2.41%	3.61%	6.60%	9.89%
28	4.25%	6.37%	2.44%	3.66%	6.69%	10.03%
29	4.30%	6.45%	2.47%	3.70%	6.77%	10.15%
30	4.36%	6.54%	2.51%	3.76%	6.87%	10.30%
31	4.42%	6.63%	2.54%	3.81%	6.96%	10.44%
32	4.48%	6.72%	2.57%	3.86%	7.05%	10.58%
33	4.55%	6.82%	2.61%	3.92%	7.16%	10.74%
34	4.61%	6.91%	2.65%	3.97%	7.26%	10.88%
35	4.67%	7.01%	2.69%	4.03%	7.36%	11.04%
36	4.73%	7.10%	2.72%	4.08%	7.45%	11.18%
37	4.80%	7.20%	2.75%	4.13%	7.55%	11.33%
38	4.87%	7.30%	2.79%	4.19%	7.66%	11.49%
39	4.93%	7.40%	2.83%	4.25%	7.76%	11.65%
40	5.01%	7.51%	2.87%	4.31%	7.88%	11.82%
41	5.07%	7.61%	2.91%	4.37%	7.98%	11.98%

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

**General Tier 1 (Enhanced) Members' Contribution Rates for Members Receiving Benefits under 2% at 55 Formula
(Expressed as a Percentage of Monthly Payroll)
For Members with Membership Dates before January 1, 2013**

Calculated Under Recommended Assumptions

Entry Age	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
42	5.15%	7.73%	2.96%	4.44%	8.11%	12.17%
43	5.22%	7.83%	3.00%	4.50%	8.22%	12.33%
44	5.30%	7.95%	3.05%	4.57%	8.35%	12.52%
45	5.38%	8.07%	3.09%	4.63%	8.47%	12.70%
46	5.46%	8.19%	3.13%	4.70%	8.59%	12.89%
47	5.54%	8.31%	3.18%	4.77%	8.72%	13.08%
48	5.63%	8.44%	3.23%	4.85%	8.86%	13.29%
49	5.72%	8.58%	3.29%	4.93%	9.01%	13.51%
50	5.82%	8.73%	3.34%	5.01%	9.16%	13.74%
51	5.93%	8.90%	3.41%	5.11%	9.34%	14.01%
52	6.03%	9.04%	3.46%	5.19%	9.49%	14.23%
53	6.13%	9.20%	3.52%	5.28%	9.65%	14.48%
54	6.23%	9.34%	3.57%	5.36%	9.80%	14.70%
55	6.33%	9.49%	3.63%	5.45%	9.96%	14.94%
56	6.35%	9.52%	3.65%	5.47%	10.00%	14.99%
57	6.39%	9.58%	3.67%	5.50%	10.06%	15.08%
58	6.30%	9.45%	3.62%	5.43%	9.92%	14.88%
59	6.07%	9.11%	3.49%	5.23%	9.56%	14.34%
60	6.07%	9.11%	3.49%	5.23%	9.56%	14.34%

Interest: 7.25%
 Salary Increase: See Exhibit V.
 COLA Loading: 57.43%
 Mortality: RP-2000 Combined Healthy Mortality Table Projected to 2030 with Scale AA, set back one year, weighted 30% Male and 70% Female.

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

**General Tier 3 (Enhanced) Members' Contribution Rates for Members Receiving Benefits under 2% at 55 Formula
(Expressed as a Percentage of Monthly Payroll)
For Members with Membership Dates before January 1, 2013**

Calculated Under Recommended Assumptions

Entry Age	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
15	3.54%	5.31%	1.78%	2.67%	5.32%	7.98%
16	3.59%	5.39%	1.81%	2.71%	5.40%	8.10%
17	3.65%	5.47%	1.83%	2.75%	5.48%	8.22%
18	3.69%	5.54%	1.86%	2.79%	5.55%	8.33%
19	3.75%	5.62%	1.89%	2.83%	5.64%	8.45%
20	3.80%	5.70%	1.91%	2.87%	5.71%	8.57%
21	3.85%	5.78%	1.94%	2.91%	5.79%	8.69%
22	3.91%	5.86%	1.97%	2.95%	5.88%	8.81%
23	3.96%	5.94%	1.99%	2.99%	5.95%	8.93%
24	4.01%	6.02%	2.02%	3.03%	6.03%	9.05%
25	4.07%	6.11%	2.05%	3.07%	6.12%	9.18%
26	4.13%	6.19%	2.07%	3.11%	6.20%	9.30%
27	4.19%	6.28%	2.11%	3.16%	6.30%	9.44%
28	4.25%	6.37%	2.14%	3.21%	6.39%	9.58%
29	4.30%	6.45%	2.17%	3.25%	6.47%	9.70%
30	4.36%	6.54%	2.19%	3.29%	6.55%	9.83%
31	4.42%	6.63%	2.23%	3.34%	6.65%	9.97%
32	4.48%	6.72%	2.25%	3.38%	6.73%	10.10%
33	4.55%	6.82%	2.29%	3.43%	6.84%	10.25%
34	4.61%	6.91%	2.32%	3.48%	6.93%	10.39%
35	4.67%	7.01%	2.35%	3.53%	7.02%	10.54%
36	4.73%	7.10%	2.38%	3.57%	7.11%	10.67%
37	4.80%	7.20%	2.41%	3.62%	7.21%	10.82%
38	4.87%	7.30%	2.45%	3.67%	7.32%	10.97%
39	4.93%	7.40%	2.48%	3.72%	7.41%	11.12%

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

**General Tier 3 (Enhanced) Members' Contribution Rates for Members Receiving Benefits under 2% at 55 Formula
(Expressed as a Percentage of Monthly Payroll)
For Members with Membership Dates before January 1, 2013**

Calculated Under Recommended Assumptions

Entry Age	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
40	5.01%	7.51%	2.52%	3.78%	7.53%	11.29%
41	5.07%	7.61%	2.55%	3.83%	7.62%	11.44%
42	5.15%	7.73%	2.59%	3.89%	7.74%	11.62%
43	5.22%	7.83%	2.63%	3.94%	7.85%	11.77%
44	5.30%	7.95%	2.67%	4.00%	7.97%	11.95%
45	5.38%	8.07%	2.71%	4.06%	8.09%	12.13%
46	5.46%	8.19%	2.75%	4.12%	8.21%	12.31%
47	5.54%	8.31%	2.79%	4.18%	8.33%	12.49%
48	5.63%	8.44%	2.83%	4.25%	8.46%	12.69%
49	5.72%	8.58%	2.88%	4.32%	8.60%	12.90%
50	5.82%	8.73%	2.93%	4.39%	8.75%	13.12%
51	5.93%	8.90%	2.99%	4.48%	8.92%	13.38%
52	6.03%	9.04%	3.03%	4.55%	9.06%	13.59%
53	6.13%	9.20%	3.09%	4.63%	9.22%	13.83%
54	6.23%	9.34%	3.13%	4.70%	9.36%	14.04%
55	6.33%	9.49%	3.19%	4.78%	9.52%	14.27%
56	6.35%	9.52%	3.19%	4.79%	9.54%	14.31%
57	6.39%	9.58%	3.21%	4.82%	9.60%	14.40%
58	6.30%	9.45%	3.17%	4.76%	9.47%	14.21%
59	6.07%	9.11%	3.05%	4.58%	9.12%	13.69%
60	6.07%	9.11%	3.05%	4.58%	9.12%	13.69%

Interest: 7.25%
 Salary Increase: See Exhibit V.
 COLA Loading: 50.32%
 Mortality: RP-2000 Combined Healthy Mortality Table Projected to 2030 with Scale AA, set back one year, weighted 30% Male and 70% Female.

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

**Safety Tier A (Non-enhanced) Members' Contribution Rates for Members Not Receiving Benefits under 3% at 50
(Expressed as a Percentage of Monthly Payroll)
For Members with Membership Dates before January 1, 2013**

Calculated Under Recommended Assumptions

Entry Age	Basic	COLA	Total
15	8.90%	5.32%	14.22%
16	8.90%	5.32%	14.22%
17	8.90%	5.32%	14.22%
18	8.90%	5.32%	14.22%
19	8.90%	5.32%	14.22%
20	8.90%	5.32%	14.22%
21	8.90%	5.32%	14.22%
22	9.02%	5.40%	14.42%
23	9.15%	5.47%	14.62%
24	9.27%	5.55%	14.82%
25	9.40%	5.62%	15.02%
26	9.53%	5.70%	15.23%
27	9.66%	5.78%	15.44%
28	9.80%	5.86%	15.66%
29	9.94%	5.95%	15.89%
30	10.07%	6.02%	16.09%
31	10.21%	6.11%	16.32%
32	10.36%	6.20%	16.56%
33	10.50%	6.28%	16.78%
34	10.66%	6.38%	17.04%
35	10.81%	6.47%	17.28%
36	10.98%	6.57%	17.55%
37	11.14%	6.67%	17.81%
38	11.31%	6.77%	18.08%
39	11.50%	6.88%	18.38%
40	11.70%	7.00%	18.70%
41	11.90%	7.12%	19.02%
42	12.13%	7.26%	19.39%
43	12.38%	7.41%	19.79%
44	12.65%	7.57%	20.22%

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

**Safety Tier A (Non-enhanced) Members' Contribution Rates for Members Not Receiving Benefits under 3% at 50
(Expressed as a Percentage of Monthly Payroll)
For Members with Membership Dates before January 1, 2013**

Calculated Under Recommended Assumptions

Entry Age	Basic	COLA	Total
45	12.86%	7.69%	20.55%
46	12.86%	7.69%	20.55%
47	12.87%	7.70%	20.57%
48	12.80%	7.66%	20.46%
49	12.51%	7.48%	19.99%
50	12.51%	7.48%	19.99%
51	12.51%	7.48%	19.99%
52	12.51%	7.48%	19.99%
53	12.51%	7.48%	19.99%
54	12.51%	7.48%	19.99%
55	12.51%	7.48%	19.99%
56	12.51%	7.48%	19.99%
57	12.51%	7.48%	19.99%
58	12.51%	7.48%	19.99%
59	12.51%	7.48%	19.99%
60	12.51%	7.48%	19.99%

Interest: 7.25%
 Salary Increase: See Exhibit V.
 COLA Loading: 59.83%
 Mortality: RP-2000 Combined Healthy Mortality Table Projected to 2030 with Scale AA, set back two years, weighted 85% Male and 15% Female.

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

**Safety Tier A (Enhanced) Members' Contribution Rates for Members Receiving Benefits under 3% at 50 Formula
(Expressed as a Percentage of Monthly Payroll)
For Members with Membership Dates before January 1, 2013**

Calculated Under Recommended Assumptions

Entry Age	Basic	COLA	Total
15	8.90%	6.61%	15.51%
16	8.90%	6.61%	15.51%
17	8.90%	6.61%	15.51%
18	8.90%	6.61%	15.51%
19	8.90%	6.61%	15.51%
20	8.90%	6.61%	15.51%
21	8.90%	6.61%	15.51%
22	9.02%	6.70%	15.72%
23	9.15%	6.80%	15.95%
24	9.27%	6.89%	16.16%
25	9.40%	6.99%	16.39%
26	9.53%	7.08%	16.61%
27	9.66%	7.18%	16.84%
28	9.80%	7.28%	17.08%
29	9.94%	7.39%	17.33%
30	10.07%	7.48%	17.55%
31	10.21%	7.59%	17.80%
32	10.36%	7.70%	18.06%
33	10.50%	7.80%	18.30%
34	10.66%	7.92%	18.58%
35	10.81%	8.03%	18.84%
36	10.98%	8.16%	19.14%
37	11.14%	8.28%	19.42%
38	11.31%	8.41%	19.72%
39	11.50%	8.55%	20.05%
40	11.70%	8.70%	20.40%
41	11.90%	8.84%	20.74%
42	12.13%	9.02%	21.15%
43	12.38%	9.20%	21.58%
44	12.65%	9.40%	22.05%

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

**Safety Tier A (Enhanced) Members' Contribution Rates for Members Receiving Benefits under 3% at 50 Formula
(Expressed as a Percentage of Monthly Payroll)
For Members with Membership Dates before January 1, 2013**

Calculated Under Recommended Assumptions

Entry Age	Basic	COLA	Total
45	12.86%	9.56%	22.42%
46	12.86%	9.56%	22.42%
47	12.87%	9.56%	22.43%
48	12.80%	9.51%	22.31%
49	12.51%	9.30%	21.81%
50	12.51%	9.30%	21.81%
51	12.51%	9.30%	21.81%
52	12.51%	9.30%	21.81%
53	12.51%	9.30%	21.81%
54	12.51%	9.30%	21.81%
55	12.51%	9.30%	21.81%
56	12.51%	9.30%	21.81%
57	12.51%	9.30%	21.81%
58	12.51%	9.30%	21.81%
59	12.51%	9.30%	21.81%
60	12.51%	9.30%	21.81%

Interest: 7.25%
 Salary Increase: See Exhibit V.
 COLA Loading: 74.32%
 Mortality: RP-2000 Combined Healthy Mortality Table Projected to 2030 with Scale AA, set back two years, weighted 85% Male and 15% Female.
 These rates exclude up to an extra 9% of compensation (depending on their MOU) that most Safety Tier A (Enhanced) members contribute that reduces the employer's contribution rate.

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

**Safety Tier C (Enhanced) Members' Contribution Rates for Members Receiving Benefits under 3% at 50 Formula
(Expressed as a Percentage of Monthly Payroll)
For Members with Membership Dates before January 1, 2013**

Calculated Under Recommended Assumptions

Entry Age	Basic	COLA	Total
15	8.50%	3.55%	12.05%
16	8.50%	3.55%	12.05%
17	8.50%	3.55%	12.05%
18	8.50%	3.55%	12.05%
19	8.50%	3.55%	12.05%
20	8.50%	3.55%	12.05%
21	8.50%	3.55%	12.05%
22	8.62%	3.60%	12.22%
23	8.74%	3.65%	12.39%
24	8.86%	3.70%	12.56%
25	8.98%	3.75%	12.73%
26	9.11%	3.80%	12.91%
27	9.23%	3.85%	13.08%
28	9.36%	3.91%	13.27%
29	9.49%	3.96%	13.45%
30	9.62%	4.01%	13.63%
31	9.76%	4.07%	13.83%
32	9.90%	4.13%	14.03%
33	10.04%	4.19%	14.23%
34	10.18%	4.25%	14.43%
35	10.33%	4.31%	14.64%
36	10.49%	4.38%	14.87%
37	10.64%	4.44%	15.08%
38	10.81%	4.51%	15.32%
39	10.99%	4.59%	15.58%
40	11.17%	4.66%	15.83%
41	11.38%	4.75%	16.13%
42	11.57%	4.83%	16.40%
43	11.76%	4.91%	16.67%
44	11.87%	4.95%	16.82%

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

**Safety Tier C (Enhanced) Members' Contribution Rates for Members Receiving Benefits under 3% at 50 Formula
(Expressed as a Percentage of Monthly Payroll)
For Members with Membership Dates before January 1, 2013**

Calculated Under Recommended Assumptions

Entry Age	Basic	COLA	Total
45	11.89%	4.96%	16.85%
46	11.80%	4.92%	16.72%
47	11.51%	4.80%	16.31%
48	11.90%	4.97%	16.87%
49	12.51%	5.22%	17.73%
50	12.51%	5.22%	17.73%
51	12.51%	5.22%	17.73%
52	12.51%	5.22%	17.73%
53	12.51%	5.22%	17.73%
54	12.51%	5.22%	17.73%
55	12.51%	5.22%	17.73%
56	12.51%	5.22%	17.73%
57	12.51%	5.22%	17.73%
58	12.51%	5.22%	17.73%
59	12.51%	5.22%	17.73%
60	12.51%	5.22%	17.73%

Interest: 7.25%
 Salary Increase: See Exhibit V.
 COLA Loading: 41.73%
 Mortality: RP-2000 Combined Healthy Mortality Table Projected to 2030 with Scale AA, set back two years, weighted 85% Male and 15% Female.

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

Appendix B

Member Contribution Rates for Members with Membership Dates on or after January 1, 2013

**General Members' Contribution Rates for Members with Membership Dates on or after January 1, 2013
(Expressed as a Percentage of Monthly Payroll)**

Calculated Under Recommended Assumptions

	Basic	COLA	Total
Cost Group #1 – PEPRA Tier 4 (3% COLA)	8.68%	3.27%	11.95%
Cost Group #2 - PEPRA Tier 5 (2% COLA)	6.58%	1.52%	8.10%
Cost Group #2 - PEPRA Tier 5 (3%/4% COLA)	7.74%	2.79%	10.53%
Cost Group #3 - PEPRA Tier 4 (3% COLA)	9.20%	3.42%	12.62%
Cost Group #4 - PEPRA Tier 4 (3% COLA)	6.55%	2.45%	9.00%
Cost Group #5 - PEPRA Tier 4 (2% COLA)	8.25%	1.85%	10.10%
Cost Group #5 - PEPRA Tier 4 (3% COLA)	10.15%	3.83%	13.98%
Cost Group #6 - PEPRA Tier 4 (3% COLA)	8.25%	3.01%	11.26%

Note: It is our understanding that in the determination of pension benefits under the PEPRA formulas, the compensation that can be taken into account for 2014 is equal to the Social Security Taxable Wage Base or \$115,064. (For an employer that is not enrolled in Social Security, the maximum amount is \$138,077 or 120% of the Social Security Taxable Wage Base). (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2014. (reference: Section 7522.10(d))

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

**Safety Members' Contribution Rates for Members with Membership Dates on or after January 1, 2013
(Expressed as a Percentage of Monthly Payroll)**

Calculated Under Recommended Assumptions

	Basic	COLA	Total
Cost Group #7 - PEPRA Tier D	15.14%	6.36%	21.50%
Cost Group #8 - PEPRA Tier D	14.28%	6.24%	20.52%
Cost Group #9 - PEPRA Tier E	13.64%	3.55%	17.19%
Cost Group #10 - PEPRA Tier D	12.98%	5.73%	18.71%
Cost Group #11 - PEPRA Tier D	12.84%	5.70%	18.54%
Cost Group #12 - PEPRA Tier D	12.99%	5.77%	18.76%

Note: It is our understanding that in the determination of pension benefits under the PEPRA formulas, the compensation that can be taken into account for 2014 is equal to the Social Security Taxable Wage Base or \$115,064. (For an employer that is not enrolled in Social Security, the maximum amount is \$138,077 or 120% of the Social Security Taxable Wage Base). (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2014. (reference: Section 7522.10(d))

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