

# **Sonoma County Employees' Retirement Association**

**Actuarial Valuation and Review  
as of December 31, 2012**

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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April 22, 2013  
Board of Retirement  
Sonoma County Employees' Retirement Association  
433 Aviation Boulevard, Suite 100  
Santa Rosa, CA 95403

Dear Board Members:

*We are pleased to submit this Actuarial Valuation and Review as of December 31, 2012. It summarizes the actuarial data used in the valuation, establishes the funding requirements for the fiscal year beginning July 1, 2014 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 and financial information on which our calculations were based was prepared by SCERA. That assistance is gratefully acknowledged. The actuarial calculations were completed under the supervision of Andy Yeung, ASA, MAAA, FCA, Enrolled Actuary.*

*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.*

*We are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board of Retirement are reasonably related to the experience of and the expectations for the Plan.*

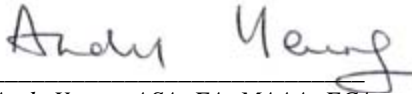
*We look forward to reviewing this report at your next meeting and to answering any questions.*

Sincerely,

THE SEGAL COMPANY

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

EK/hy

By:   
Andy Yeung, ASA, EA, MAAA, FCA  
Vice President and Associate Actuary

## SECTION 1

### VALUATION SUMMARY

Purpose .....	i
Significant Issues in Valuation Year .....	ii
Summary of Key Valuation Results .....	vii
Summary of Key Valuation Demographic and Financial Data .....	ix

## SECTION 2

### VALUATION RESULTS

A. Member Data .....	1
B. Financial Information .....	4
C. Actuarial Experience .....	8
D. Employer and Member Contributions .....	13
E. Information Required by GASB .....	20
F. Volatility Ratios .....	21

## SECTION 3

### SUPPLEMENTAL INFORMATION

EXHIBIT A Table of Plan Coverage i. General .....	22
ii. Safety .....	23
EXHIBIT B Members in Active Service and Projected Average Compensation as of December 31, 2012 i. General .....	24
ii. Safety .....	25
EXHIBIT C Reconciliation of Member Data – December 31, 2011 to December 31, 2012 .....	26
EXHIBIT D Summary Statement of Income and Expenses on an Actuarial Value Basis .....	27
EXHIBIT E Summary Statement of Plan Assets .....	28
EXHIBIT F Actuarial Balance Sheet .....	29
EXHIBIT G Summary of Reported Reserve Information as of December 31, 2012 .....	30
EXHIBIT H Development of Unfunded Actuarial Accrued Liability for Year Ended December 31, 2012 .....	31
EXHIBIT I Section 415 Limitations .....	32
EXHIBIT J Definitions of Pension Terms .....	33

## SECTION 4

### REPORTING INFORMATION

EXHIBIT I Summary of Actuarial Valuation Results .....	35
EXHIBIT II Supplementary Information Required by GASB – Schedule of Employer Contributions .....	37
EXHIBIT III Supplementary Information Required by GASB – Schedule of Funding Progress .....	38
EXHIBIT IV Supplementary Information Required by GASB .....	39
EXHIBIT V Actuarial Assumptions and Actuarial Cost Method .....	40
EXHIBIT VI Summary of Plan Provisions .....	55
Appendix A Member Contribution Rates .....	62
i. General .....	63
ii. Safety .....	65
Appendix B Schedule of Additional (non-SCERA) Employer Contributions .....	67
Appendix C Average Employer Contribution Rates .....	68
Appendix D Reserves .....	69
Appendix E Amortization Schedule for UAAL .....	70

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

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### **Purpose**

This report has been prepared by The Segal Company to present a valuation of the Sonoma County Employees' Retirement Association as of December 31, 2012. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- The benefit provisions of the Retirement Association, as administered by the Board of Retirement;
- The characteristics of covered active members, inactive vested members, retired members and beneficiaries as of December 31, 2012, provided by the Retirement Association;
- The assets of the Plan as of December 31, 2012, provided by the Retirement Association;
- 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 Association's liabilities, and that, as a percentage of payroll, remain as level as possible for each generation of active members. Annual actuarial valuations measure the progress toward this goal, as well as test the adequacy of the contribution rates.

In preparing this valuation, we have employed generally accepted actuarial methods and assumptions to evaluate the Association's assets, liabilities and future contribution requirements. Our calculations are based upon member data and financial information provided to us by the Association's staff. This information has not been audited by us, but it has been reviewed and found to be reasonably consistent, both internally and with prior years' information.

The contribution requirements are determined as a percentage of payroll. The Association's employer rates provide for both normal cost and a contribution to amortize any unfunded or overfunded actuarial accrued liabilities. Consistent with previous valuations, we have applied the funding policy adopted by the Board to amortize the Association's outstanding balance of the December 31, 2007 unfunded actuarial accrued liability (UAAL) as well as any new UAAL established on each subsequent actuarial valuation after the December 31, 2007 valuation over separate 20-year declining periods.

The rates calculated in this report may be adopted by the Board for the fiscal year that extends from July 1, 2014 through June 30, 2015.

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

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### Significant Issues in This Valuation

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

- The California Public Employees' Pension Reform Act (CalPEPRA) of 2013 (AB340) was passed on September 12, 2012 and became effective on January 1, 2013. In general, it affects new members who enter the plan on or after January 1, 2013. New plan provisions include new benefit formulas, a limit on pensionable income, 3-year final average salary, and new cost sharing by members. The impact of AB340 has been addressed in this report. We understand that SCERA has created new CalPEPRA Plans for members covered under AB340, and we have included in this report employee and employer rates for members who will be covered under those Plans.

In this report, the CalPEPRA Plan contribution rates have been developed based on the same methods and assumptions used to estimate the costs in our new plan report dated November 21, 2012. In particular, as the new plan formulas are only offered to new employees, and since data for such employees is not yet available, we have continued to assume in this valuation that the demographic profiles (e.g., entry age, composition of male versus female, etc.) of the new General and Safety employees can be approximated by the data profiles of current active members hired after January 1, 2011 as reported in the December 31, 2011 valuation<sup>1</sup>. With the exception of the service retirement assumptions and the elimination of a "load" on the Normal Cost to anticipate cashouts under the new plan formulas, the CalPEPRA Plan rates in this report are based on the actuarial assumptions and methodologies adopted by the SCERA Board of Retirement for use in the December 31, 2012 valuation.

- After discussions with SCERA, we have continued to assume in this valuation that the current members in the non-CalPEPRA Plans will have the same amount of cashouts to convert during their final average compensation period as anticipated in the cashout assumptions approved by the Board for the December 31, 2012 valuation. We note that some General employee groups within the County (including SEIU and employees covered by the County's Salary Resolution) have agreed since the valuation date to the elimination of the cashouts. As the discussions are still ongoing with other County groups, and such discussions may be carried out by the other employers, we have not yet applied any new adjustments in the contribution rate setting process so that the Board may have more time to determine if such an adjustment is warranted.

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<sup>1</sup> We have examined the demographic profiles of members hired during 2012. For General employees, there was no material difference in the demographic profile between those employees hired in 2011 and 2012. However, for Safety employees, we observed that the merger of the Valley of the Moon with another Fire Protection Group serving the City of Sonoma has resulted in a material difference in the demographic profile between those employees hired in 2011 and 2012. As a result, we have decided to use the original data used in the November 21, 2012 study to update the contribution rates for the CalPEPRA Plans in this report.

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

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- For the current members in the non-CalPEPRA Plans, their final average compensation will have to be calculated using the provisions pertaining to compensation earnable as found in AB 197. In order to comply with AB 197 (effective January 1, 2013), the Board has conducted a comprehensive review of all the elements of compensation that have been counted as pensionable and reported in the data for the actuarial valuation. As a result of that review, certain compensation elements will no longer be counted. In particular, employer paid deferred compensation will no longer be counted as compensation earnable effective January 1, 2013 and we have made an adjustment to exclude those amounts in projecting future compensation in this valuation.
- Reference: Pg. 40* ➤ The results of this valuation reflect changes in non-economic and economic actuarial assumptions adopted by the Board for the December 31, 2012 valuation. All of the assumptions recommended by Segal in the December 31, 2011 triennial experience study and the economic assumptions study were adopted by the Board and have been applied in this valuation. The adopted changes were documented in our Actuarial Experience Study and our Review of Economic Assumptions and are also outlined in Section 4, Exhibit V of this report.
- Reference: Pg. 31* ➤ The ratio of the valuation value of assets to actuarial accrued liabilities decreased from 84.1% to 77.9%. The funded ratio measured on a market value basis increased from 77.0% to 79.9%. The Association's unfunded actuarial accrued liability increased from \$353.4 million as of December 31, 2011 to \$526.9 million as of December 31, 2012. A complete reconciliation of the Association's unfunded actuarial accrued liability is provided in Section 3, Exhibit H.
- Reference: Pg. 18* ➤ The average employer contribution rate calculated in this valuation increased from 19.97% of payroll to 24.47% of payroll. This change was primarily due to: (i) lower than expected returns on the smoothed value of investments, (ii) increase in UAAL rate due to lower than expected increases in total payroll, (iii) demographic changes, (iv) contribution losses due to 18-month delay between the date of the valuation and the date of rate implementation, (v) changes in actuarial assumptions and (vi) other experience losses, offset to some degree by (vii) lower than expected individual salary increases and (viii) the elimination of employer paid deferred compensation as compensation earnable. A complete reconciliation of the Association's aggregate employer rate is provided in Section 2, Subsection D (see Chart 14).
- There was an increase in the employer rates for the December 31, 2012 valuation of 1.79% of payroll as a result of the assumption changes adopted by the Board. According to the Association's May 19, 2011 Actuarial Funding Policy, a change greater than 0.50% of payroll due to assumption changes should be phased-in over a period of three years. Note that this phase-in has not been reflected in the employer contribution rates shown in this report.
- Reference: Pg. 19* ➤ The average member rate calculated in this valuation has increased from 12.19% of payroll to 12.43% of payroll. A complete reconciliation of the Association's average member rate is provided in Section 2, Subsection D (see Chart 15).
- Reference: Pg. 6* ➤ As indicated in Section 2, Subsection B (see Chart 7) of this report, the total unrecognized investment gain as of December 31, 2012 was \$48.1 million (as compared to an unrecognized loss of \$157.3 million in the December 31, 2011 valuation). This investment gain will be recognized in the determination of the actuarial value of assets for funding purposes over the next few years, and will help offset any investment losses that may occur after December 31, 2012. This

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

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implies that earning the assumed rate of investment return of 7.50% per year (net of expenses) on a **market value** basis will result in investment gains on the actuarial value of assets in the next few years. So, if the actuarial market return is equal to the assumed 7.50% rate and all other actuarial assumptions are met, the contribution requirements would decrease in the next few years. The potential impact associated with the deferred investment gains may be illustrated as follows:

- If the net deferred gains were recognized immediately and entirely in the valuation value of assets, the funded ratio would increase from 77.9% to 79.9%.
  - If the net deferred gains were recognized immediately and entirely in the valuation value of assets, the aggregate employer rate would decrease from 24.47% to 23.4%.
- The actuarial valuation report as of December 31, 2012 is based on financial information as of that date. Changes in the value of assets subsequent to that date 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.
- Safety-County members pay an additional contribution amount equal to 3.00% of payroll effective February 1, 2005.
- General-County and General-Court members pay an additional contribution amount equal to 3.03% of payroll from July 1, 2004 to June 30, 2024. Effective July 1, 2024, the employer contribution rate will have to increase to offset for this expiration of the 3.03% rate paid by the General-County and General-Court members.
- As disclosed in our prior valuation reports, the approach used in the 2011 and prior valuations was to apply the adjustments for the supplemental contributions of 3.03% and 3.00% of payroll, for General and Safety members, respectively, to the member and the employer normal cost rates. Consistent with our discussions with SCERA as part of the implementation of the CalPEPRA Plans, in the December 31, 2012 valuation we have applied the 3.03% and 3.00% of payroll as contributions to the unfunded actuarial accrued liability rates instead of to the normal cost rates. Accordingly, we have added the 3.03% and 3.00% of payroll contributions to the General and Safety member UAAL rates. We have also subtracted those rates, after adjustment for refundability, from the employer's UAAL rates.
- Reference: Pg. 30* ➤ In this report, we have provided the amount of transfer that would be required to “true-up” the COLA and the Retired Member reserves so that the reserves after the “true-up” are equal to the present value of the COLA and retiree benefits for members currently receiving such benefits.
- Reference: Pg. 16* ➤ Effective with the December 31, 2007 valuation, we have calculated a separate normal cost rate for Safety-Valley of the Moon (VOM) based on the demographics of Safety employees of VOM. Of note is that there is a relatively large increase in the normal cost rate for Safety-VOM when compared to Safety-County in this valuation because there is an increase in the average entry age that was used in determining the normal cost rate as a result of their merger previously discussed. Note that that increase in the normal cost rate is offset by a decrease in the UAAL rate for Safety-VOM due to the increase in their payroll.

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

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Any new Safety UAAL will continue to be allocated to Safety-County and Safety-VOM based on their proportions of payroll to the total Safety payroll.

- Note that the normal cost rate for all General employers continues to be developed on a pooled basis. For example, the employer normal cost for the employees at General-VOM is the same as that calculated for General-County and General-Court. In particular, since the normal cost for all General employers is pooled, there is no adjustment made to the General-VOM normal cost rate even though there is also an increase in the average General-VOM entry age used in determining the normal cost rate as a result rate of the merger. However, there is a decrease in the UAAL rate for General-VOM due to the increase in their payroll.

Similar to Safety, any new General UAAL will continue to be allocated to General-County, General-Court and General-VOM based on their proportions of payroll to the total General payroll.

*Reference:* Pg. 37

- As a result of the phase-in of the employer's rates for the calendar year 2012 (determined in the December 31, 2009 valuation and the December 31, 2010 valuation), we have determined that the employer's actual contributions do equal 100% of an Annual Required Contributions but determined using an amortization period of about 26 years (an amortization period of up to 30 years is allowed by the Governmental Accounting Standards Board or GASB under Statements 25 and 27). This is noted in Section 4, Exhibit II.

*Reference:* Pg. 21

- The California Actuarial Advisory Panel (CAAP) has recently adopted a set of model disclosure elements recommended for actuarial valuation reports for public retirement systems in California. Information has been added to this valuation report consistent with the recommendations regarding basic disclosure elements. In particular, we are now including new information regarding measures of plan volatility.
- The Governmental Accounting Standards Board (GASB) recently 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. While the new Statements are applicable for preparing the 2014 calendar year financial statement for the Plan's reporting and for the 2014/2015 fiscal year financial statements for the employer's reporting, the actual preparation of schedules in compliance with those Statements will depend upon GASB's issuance of detailed implementation guides for the Plan and the employer, anticipated around June 2013 and January 2014, respectively. As a results, we have continued to use Statements 25 and 27 in preparing the financial reporting information in this report.



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

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### Impact of Future Experience on Contribution Rates

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

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

**SECTION 1: Valuation Summary for the Sonoma County Employees' Retirement Association**

**Summary of Key Valuation Results (Dollar amounts in thousands)**

	December 31, 2012		December 31, 2011	
	Total Rate	Estimated Annual Amount <sup>(1)</sup>	Total Rate	Estimated Annual Amount <sup>(1)</sup>
<b>Employer Contribution Rates:</b>				
General – County	22.35%	\$49,577	17.87%	\$39,640
General – Court	29.42%	3,817	23.24%	3,015
General – Valley of the Moon	18.62%	57	16.51%	51
General CalPEPRA – County	17.17%	0	12.47%	0
General CalPEPRA – Court	24.24%	0	17.84%	0
General CalPEPRA – Valley of the Moon	13.44%	0	14.00%	0
Safety – County	30.18%	19,346	25.70%	16,474
Safety – Valley of the Moon	35.55%	1,265	35.77%	1,273
Safety CalPEPRA – County	22.17%	0	17.79%	0
Safety CalPEPRA – Valley of the Moon	24.50%	0	29.85%	0
All Categories combined	24.47%	74,062	19.97%	60,453
<b>Average Member Contribution Rates<sup>(2)</sup>:</b>				
	Total Rate	Estimated Annual Amount <sup>(1)</sup>	Total Rate	Estimated Annual Amount <sup>(1)</sup>
General – County (Average Entry Age: 37)	12.45%	\$27,617	12.17%	\$26,996
General – Court (Average Entry Age: 36)	12.30%	1,596	12.02%	1,559
General – Valley of the Moon (Average Entry Age: 51)	11.92%	37	11.54%	36
General CalPEPRA – County	10.28%	0	10.28%	0
General CalPEPRA – Court	10.28%	0	10.28%	0
General CalPEPRA – Valley of the Moon	7.25%	0	7.25%	0
Safety – County (Average Entry Age: 30)	12.50%	8,013	12.43%	7,968
Safety – Valley of the Moon (Average Entry Age: 35)	10.31%	367	10.15%	361
Safety CalPEPRA – County	14.75%	0	14.75%	0
Safety CalPEPRA – Valley of the Moon	11.75%	0	11.75%	0
All Categories combined	12.43%	37,630	12.19%	36,920

<sup>(1)</sup> Based on December 31, 2012 projected annual compensation.

<sup>(2)</sup> Includes an additional 3.03% and 3.00% of payroll for General (County and Court) and Safety-County members, respectively.

**SECTION 1: Valuation Summary for the Sonoma County Employees' Retirement Association**

**Summary of Key Valuation Results – continued (Dollar amounts in thousands)**

	December 31, 2012	December 31, 2011
<b>Funded Status:</b>		
Actuarial accrued liability (AAL)	\$2,383,700	\$2,220,520
Valuation value of assets (VVA) <sup>(3)</sup>	1,856,847	1,867,117
Market value of assets (MVA) <sup>(3)</sup>	1,904,927	1,709,875
Funded percentage on a VVA basis	77.9%	84.1%
Funded percentage on a MVA basis	79.9%	77.0%
Unfunded Actuarial Accrued Liability on a VVA basis	\$526,853	\$353,403
Unfunded Actuarial Accrued Liability on a MVA basis	478,773	510,645
<b>Key Assumptions:</b>		
Interest rate	7.50%	7.75%
Inflation rate	3.25%	3.50%
Across the board inflation	0.75%	0.75%

<sup>(3)</sup> Excludes non-valuation reserves.

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

### Summary of Key Valuation Demographic and Financial Data

	December 31, 2012	December 31, 2011	Percentage Change
<b>Active Members:</b>			
Number of members	3,620	3,587	0.9%
Average age	46.1	46.5	N/A
Average service	10.2	10.7	N/A
Projected total compensation	\$302,764,028	\$308,643,667	-1.9%
Average projected compensation	\$83,636	\$86,045	-2.8% <sup>(2)</sup>
<b>Retired Member and Beneficiaries:</b>			
Number of members:			
Service retired	3,194	2,972	7.5%
Disability retired	610	604	1.0%
Beneficiaries	454	445	2.0%
Total	4,258	4,021	5.9%
Average age	67.0	66.9	N/A
Average monthly benefit	\$2,565	\$2,461	4.2%
<b>Vested Terminated Members:</b>			
Number of terminated vested members <sup>(1)</sup>	876	919	-4.7%
Average age	46.8	46.7	N/A
<b>Summary of Financial Data (dollar amounts in thousands):</b>			
Market value of assets	\$1,904,927	\$1,709,785	11.4%
Return on market value of assets	14.16%	0.07%	N/A
Actuarial value of assets	\$1,856,847	\$1,867,117	-0.6%
Return on actuarial value of assets	1.82%	1.04%	N/A
Valuation value of assets	\$1,856,847	\$1,867,117	-0.6%
Return on valuation value of assets	1.82%	1.04%	N/A

<sup>(1)</sup> Includes members who choose to leave their contributions on deposit even though they have less than five years of service.

<sup>(2)</sup> Reflects the elimination of employer paid deferred compensation.

**SECTION 2: Valuation Results for the Sonoma County Employees' Retirement Association**

**A. MEMBER DATA**

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, vested terminated members, retired members and beneficiaries.

This section presents a summary of significant statistical data on these member groups.

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

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

**CHART 1**  
**Member Population: 2005 – 2012**

<b>Year Ended December 31</b>	<b>Active Members</b>	<b>Vested Terminated Members</b>	<b>Retired Members and Beneficiaries</b>	<b>Ratio of Non-Actives to Actives</b>
2005	4,230	589	2,939	0.83
2006	4,212	729	3,095	0.91
2007	4,246	763	3,282	0.95
2008	4,193	853	3,399	1.01
2009	3,984	881	3,570	1.12
2010	3,780	904	3,780	1.24
2011	3,587	919	4,021	1.38
2012	3,620	876	4,258	1.42

**SECTION 2: Valuation Results for the Sonoma County Employees' Retirement Association**

**Active Members**

Plan costs are affected by the age, years of service and compensation of active members. In this year's valuation, there were 3,620 active members with an average age of 46.1, average years of service of 10.2 years and average projected compensation of \$83,636. The 3,587 active members in the prior valuation had an average age of 46.5, average service of 10.7 years and average projected compensation of \$86,045.

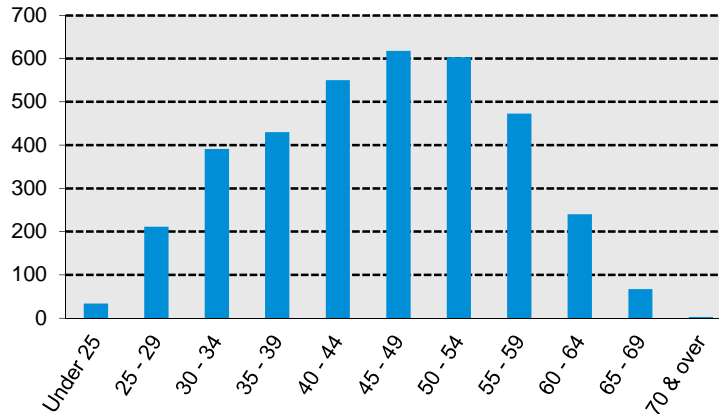
Among the active members, there were none with unknown age.

**Inactive Members**

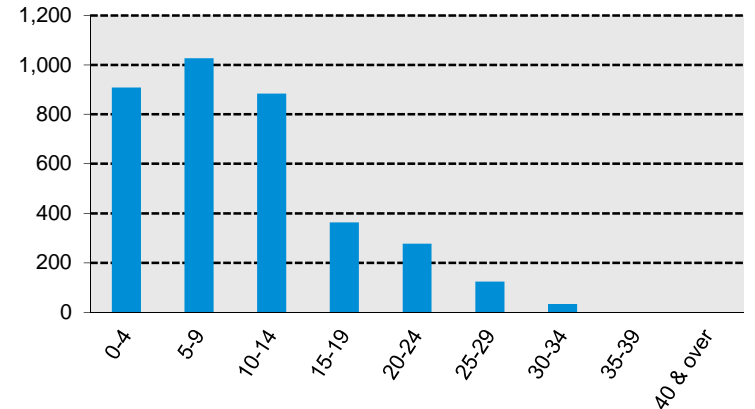
In this year's valuation, there were 876 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their member contributions versus 919 in the prior valuation.

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

**CHART 2**  
**Distribution of Active Members by Age as of December 31, 2012**



**CHART 3**  
**Distribution of Active Members by Years of Service as of December 31, 2012**



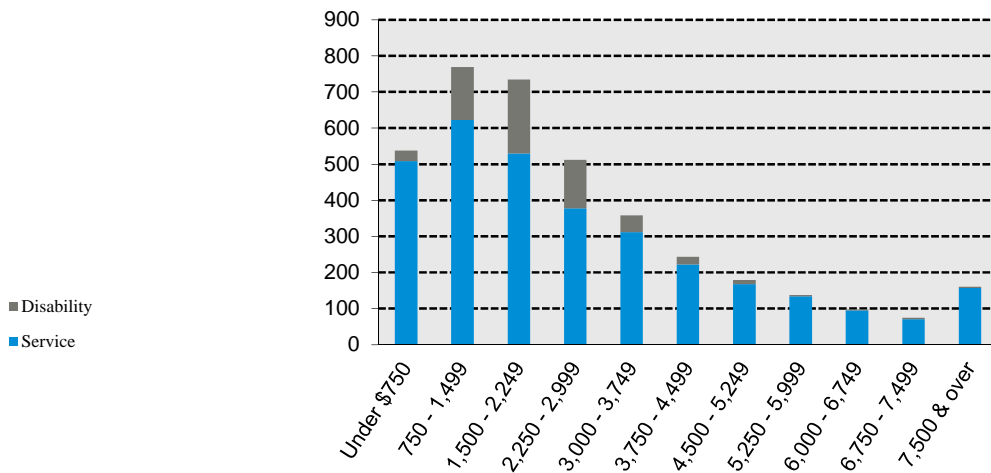
**SECTION 2: Valuation Results for the Sonoma County Employees' Retirement Association**

**Retired Members and Beneficiaries**

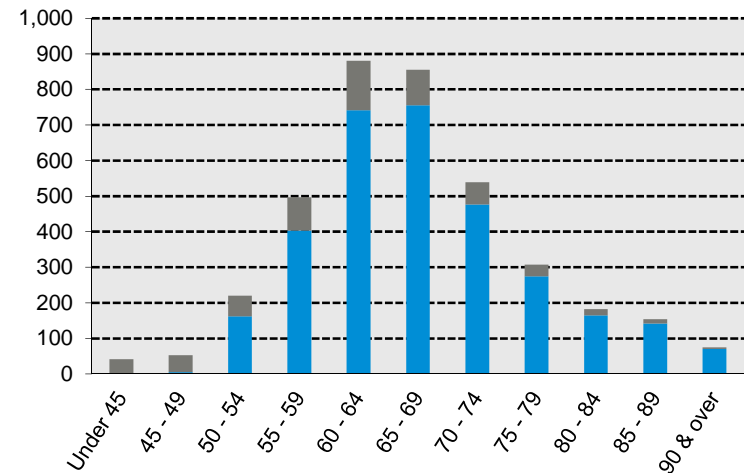
As of December 31, 2012, 3,804 retired members and 454 beneficiaries were receiving total monthly benefits of \$10,920,118. For comparison, in the previous valuation, there were 3,576 retired members and 445 beneficiaries receiving monthly benefits of \$9,895,491.

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

**CHART 4**  
**Distribution of Retired Members by Type and by Monthly Amount as of December 31, 2012**



**CHART 5**  
**Distribution of Retired Members by Type and by Age as of December 31, 2012**



**SECTION 2: Valuation Results for the Sonoma County Employees' Retirement Association**

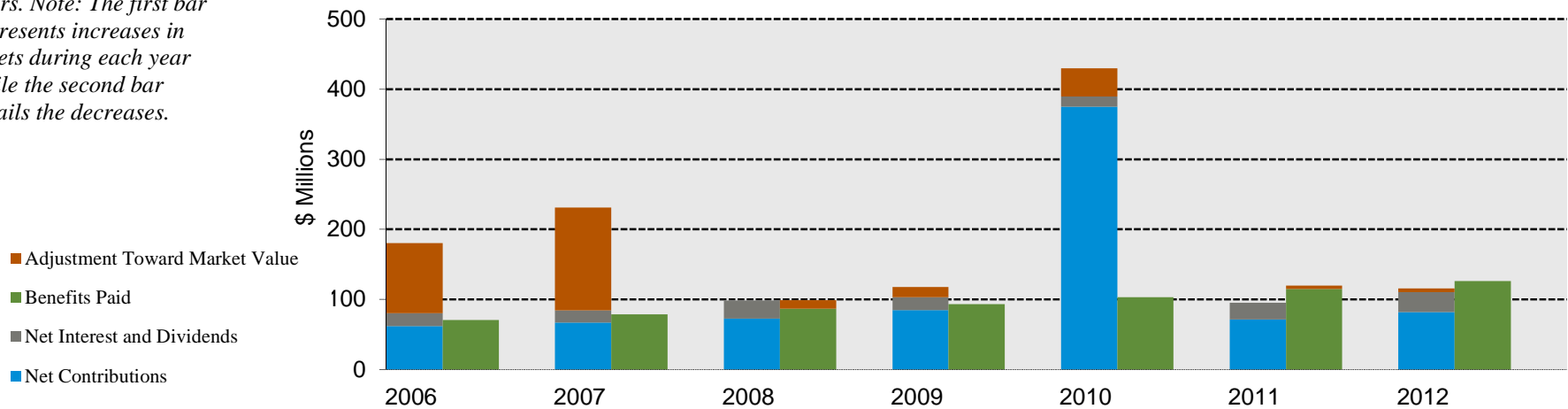
**B. FINANCIAL INFORMATION**

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

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

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

**CHART 6**  
**Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended December 31, 2006 - 2012**





## SECTION 2: Valuation Results for the Sonoma County Employees' Retirement Association

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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 method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable.

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

The determination of the actuarial and valuation value of assets is provided on the following page.

The following are points of note in the asset smoothing method used by the actuary in developing the actuarial value and valuation value of assets: (1) the non-investment cash flow included contributions received, benefit payments and administrative expenses made during the last calendar year and (2) the amount subject to smoothing is the actual market return earned during the last calendar year that was in excess/below the expected return on the valuation value of assets.

**SECTION 2: Valuation Results for the Sonoma County Employees' Retirement Association**

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

**CHART 7**

**Determination of Actuarial and Valuation Value of Assets for Year Ended December 31, 2012**

Plan Year Ending December 31	Actual Return On Market Value	Expected Return On Valuation Value	Investment Gain/(Loss)	Deferred Factor	Deferred Return
2008	\$(553,405,772)	\$117,449,654	\$(670,855,426)	0.0	\$0
2009	227,013,233	122,788,085	104,225,148	0.2	20,845,030
2010	210,445,768	132,039,061	78,406,707	0.4	31,362,683
2011	4,854,307	144,723,796	(139,869,489)	0.6	(83,921,693)
2012	242,604,327	142,862,439	99,741,888	0.8	79,793,510
1. Total Deferred Return					\$48,079,530
2. Net Market Value of Assets					1,904,926,964
3. Actuarial Value of Assets (Item 2 – Item 1)					\$1,856,847,434
4. Ratio of Actuarial Value to Market Value					97.5%
5. Non-Valuation Reserves and Other Adjustments					
a. Interest Fluctuation Reserve					\$0
b. Undistributed Reserve					0
c. Negative Contingency Reserve (Before Any Transfer)					(500,407,718)
d. Transfer to True-Up Reserves					(2,249,786)
e. Negative Contingency Reserve (After Transfers) (Item 5c + Item 5d)					(502,657,504)
f. Total (Item 5a + Item 5b + Max (Item 5e,0))					\$0
6. Valuation Value of Assets (Item 3 – Item 5f)					\$1,856,847,434

The amounts of deferred return as of December 31, 2012 to be recognized in each subsequent valuation are as follows:

December 31, 2013	\$28,500,851
December 31, 2014	7,655,821
December 31, 2015	(8,025,520)
December 31, 2016	19,948,378
Total	\$48,079,530

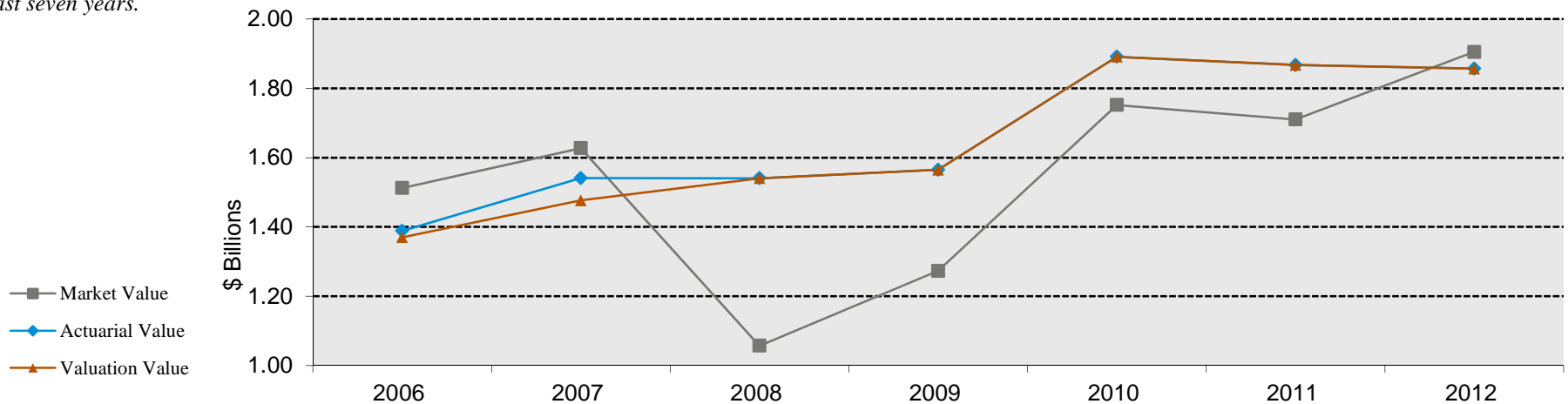
## SECTION 2: Valuation Results for the Sonoma County Employees' Retirement Association

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

*This chart shows the change in market value, actuarial value and valuation value over the past seven years.*

**CHART 8**

**Market Value, Actuarial Value and Valuation Value of Assets as of December 31, 2006 – 2012**



## SECTION 2: Valuation Results for the Sonoma County Employees' Retirement Association

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### C. ACTUARIAL EXPERIENCE

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

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

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

The total experience loss was \$85.7 million, a loss of \$109.3 million from investments (after smoothing and relative to a return of 7.75% assumed in the valuation) and a gain of \$23.6 million from all other sources. The gain from all other sources was 1.0% 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.*

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### CHART 9 Actuarial Experience for Year Ended December 31, 2012

1. Net loss from investments on valuation value of assets <sup>(1)</sup>	-\$109,347,000
2. Net gain from other experience <sup>(2)</sup>	<u>23,626,000</u>
3. Net experience loss: (1) + (2)	<u>-\$85,721,000</u>

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

<sup>(2)</sup> See Section 3, Exhibit H. This does not include contribution loss of \$13.9 million due to the 18-month delay in implementing higher contribution rates.

**SECTION 2: Valuation Results for the Sonoma County Employees' Retirement Association**

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**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 SCERA's investment policy. For valuation purposes, the assumed rate of return on the valuation value of assets was 7.75%. The actual rate of return on a valuation basis for the 2012 plan year was 1.82%.

Since the actual return for the year was less than the assumed return, SCERA experienced an actuarial loss during the year ended December 31, 2012 with regard to its investments.

For this valuation, there is no difference between the return on the valuation value of assets and the return on the actuarial value of assets.

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**CHART 10**

**Investment Experience for Year Ended December 31, 2012 – Valuation Value and Actuarial Value of Assets**

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

	<b>Valuation Value</b>	<b>Actuarial Value</b>
1. Actual return	\$33,652,000	\$33,652,000
2. Average value of assets	1,845,156,000	1,845,156,000
3. Actual rate of return: (1) ÷ (2)	1.82%	1.82%
4. Assumed rate of return	7.75%	7.75%
5. Expected return: (2) x (4)	142,999,000	142,999,000
6. Actuarial gain/(loss): (1) – (5)	<u>-\$109,347,000</u>	<u>-\$109,347,000</u>

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**SECTION 2: Valuation Results for the Sonoma 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 rate of return on an actuarial, valuation and market basis for the last seven years.

Based on future expectations, we have lowered the assumed rate of return of 7.75% to 7.50% for this valuation.

**CHART 11**

**Investment Return – Actuarial Value, Valuation Value and Market Value: 2006 – 2012 (Dollar amount in thousands)**

Year Ended December 31	Valuation Value Investment Return <sup>(1)</sup>		Actuarial Value Investment Return <sup>(1)</sup>		Market Value Investment Return <sup>(1)</sup>	
	Amount	Percent	Amount	Percent	Amount	Percent
2006	\$102,056	8.02%	\$118,855	9.33%	\$193,809	14.64%
2007	111,564	8.15%	163,919	11.86%	126,599	8.40%
2008	70,012	4.75%	13,753	0.90%	-556,235	-34.33%
2009	32,771	2.13%	32,771	2.13%	224,056	21.28%
2010	54,093	3.27%	54,093	3.27%	207,173	15.23%
2011	19,508	1.04%	19,508	1.04%	1,179	0.07%
2012	33,652	1.82%	33,652	1.82%	239,065	14.16%
Annualized Return over 7 years		4.13%			4.26%	3.85%

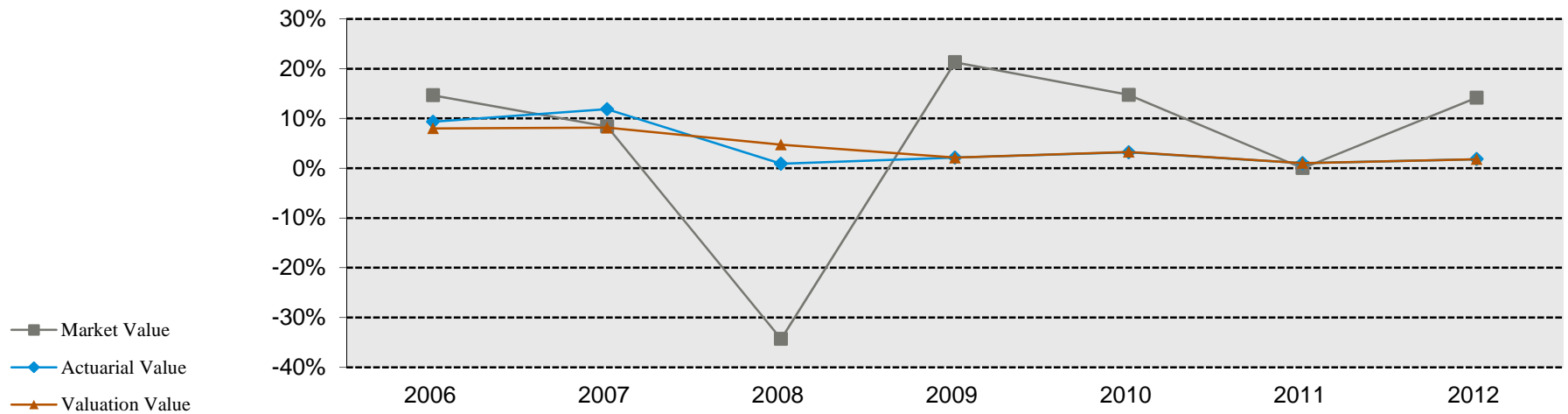
<sup>(1)</sup> Net of administrative and investment expenses.

## SECTION 2: Valuation Results for the Sonoma 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.

*This chart illustrates how this leveling effect has actually worked over the last seven years.*

**CHART 12**  
**Market, Actuarial and Valuation Rates of Return for Years Ended December 31, 2006 - 2012**



## SECTION 2: Valuation Results for the Sonoma County Employees' Retirement Association

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### 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 may 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.

The net gain from this other experience for the year ended December 31, 2012 amounted to \$23.6 million, which was 1.0% of the actuarial accrued liability. See Exhibit H for a detailed development of the changes in the Unfunded Actuarial Accrued Liability.



**SECTION 2: Valuation Results for the Sonoma County Employees' Retirement Association**

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**D. EMPLOYER AND MEMBER CONTRIBUTIONS**

Employer contributions consist of two components:

*Normal Cost*

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

*Contribution to the Unfunded Actuarial Accrued Liability (UAAL)*

The annual contribution rate that, if paid annually over the UAAL amortization period, would accumulate to the amount necessary to fully fund the UAAL. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution (or rate credit in the case of a negative unfunded actuarial accrued liability) is calculated to remain as a level percentage of future active member payroll (including payroll for new members as they enter the Association) assuming a constant number of active members. In order to remain as a level percentage of payroll, amortization payments (credits) are scheduled to increase at the annual rate of 4.00% (i.e., 3.25% inflation plus 0.75% across-the-board salary increase). The outstanding balance of the December 31, 2007 UAAL as well as any new UAAL established on each subsequent valuation after December 31, 2007 is amortized over separate 20-year declining periods. The UAAL established as a result of including as pensionable salary a cash allowance of \$3.45 per hour for General-County and Safety-County members only is amortized over a 20-year declining period with 15 years remaining as of December 31, 2012.

The recommended employer contributions are provided on Charts 13a and 13b.

## SECTION 2: Valuation Results for the Sonoma County Employees' Retirement Association

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### Member Contributions

#### *Normal Cost*

##### *Non-CalPEPRA 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 General members and Safety members, respectively. The basic contribution rate is determined so that the accumulation of a member's basic contributions made in a given year until a certain age will be sufficient to fund an annuity at that age that is equal to 1/100 of Final Average Compensation for General and Safety members. That age is 55 for General members and 50 for Safety members. It is assumed that contributions are made annually at the same rate, starting at entry age. Accumulation includes semi-annual crediting of interest at one-half of the assumed investment earning rate. The member contribution rates are provided in Appendix A.

##### *CalPEPRA Members*

Pursuant to Section 7522.30(a) of the Government Code, CalPEPRA members are required to contribute at least 50% of the Normal Cost rate. In addition, there are certain additional requirements that would have 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)). We further understand that different rules may have to be applied for collectively bargained employees, non-represented, managerial or other supervisory employees. (reference: section 7522.30(e)). In preparing the Normal Cost rates in this report, we have assumed that exactly 50% of the Normal Cost would be paid by the new members and we have taken into account in this valuation only the requirements of Section 7522.30(c), but not requirements of Section 7522.30(e). We have also compared the total Normal Cost rates between the current and the prior valuations so that a rate increase of less than 1% of payroll would result in no change to the member's rate (reference: Section 7522.30(d)).

#### *Contribution to the Unfunded*

##### *Actuarial Accrued Liability (UAAL)*

General County and Court members pay an additional contribution amount equal to 3.03% of payroll for a 20-year period from July 1, 2004 to June 30, 2024 while Safety-County members (excluding Valley of the Moon) pay an additional contribution amount equal to 3.00% of payroll effective February 1, 2005. These rates are subtracted from the employer's UAAL rates, after adjustment for refundability.

**SECTION 2: Valuation Results for the Sonoma County Employees' Retirement Association**

**CHART 13a**

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

	December 31, 2012 Actuarial Valuation		December 31, 2011 Actuarial Valuation	
	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>
<b>General-County Members</b>				
Normal Cost	12.97%	\$28,770	9.98%	\$22,138
UAAL	<u>9.38%</u>	<u>20,807</u>	<u>7.89%</u>	<u>17,502</u>
Total Contribution	22.35%	\$49,577	17.87%	\$39,640
<b>General-Court Members</b>				
Normal Cost	12.97%	\$1,683	9.98%	\$1,295
UAAL	<u>16.45%</u>	<u>2,134</u>	<u>13.26%</u>	<u>1,720</u>
Total Contribution	29.42%	\$3,817	23.24%	\$3,015
<b>General-Valley of the Moon Members</b>				
Normal Cost	12.97%	\$40	9.98%	\$31
UAAL	<u>5.65%</u>	<u>17</u>	<u>6.53%</u>	<u>20</u>
Total Contribution	18.62%	\$57	16.51%	\$51
<b>General CalPEPRA-County Members</b>				
Normal Cost	7.79%	\$0	7.47% <sup>(2)</sup>	\$0
UAAL	<u>9.38%</u>	<u>0</u>	<u>5.00%</u> <sup>(3)</sup>	<u>0</u>
Total Contribution	17.17%	\$0	12.47%	\$0
<b>General CalPEPRA-Court Members</b>				
Normal Cost	7.79%	\$0	7.47% <sup>(2)</sup>	\$0
UAAL	<u>16.45%</u>	<u>0</u>	<u>10.37%</u> <sup>(3)</sup>	<u>0</u>
Total Contribution	24.24%	\$0	17.84%	\$0
<b>General CalPEPRA-Valley of the Moon Members</b>				
Normal Cost	7.79%	\$0	7.47% <sup>(2)</sup>	\$0
UAAL	<u>5.65%</u>	<u>0</u>	<u>6.53%</u>	<u>0</u>
Total Contribution	13.44%	\$0	14.00%	\$0

<sup>(1)</sup> Amounts are in thousands and are based on December 31, 2012 projected annual payroll (also in thousands) as shown on page 16.

<sup>(2)</sup> Normal cost rate was calculated in our CalPEPRA study dated November 21, 2012.

<sup>(3)</sup> Based on UAAL rates determined in the December 31, 2011 valuation for the non-CalPEPRA Plans adjusted to assume that the 3.03% supplemental contributions paid by members are used to reduce the employer's UAAL rate.

**SECTION 2: Valuation Results for the Sonoma County Employees' Retirement Association**

**CHART 13a (continued)**

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

	December 31, 2012 Actuarial Valuation		December 31, 2011 Actuarial Valuation	
	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>
<b>Safety-County Members</b>				
Normal Cost	19.28%	\$12,359	16.58%	\$10,628
UAAL	<u>10.90%</u>	<u>6,987</u>	<u>9.12%</u>	<u>5,846</u>
Total Contribution	30.18%	\$19,346	25.70%	\$16,474
<b>Safety-Valley of the Moon Members</b>				
Normal Cost	22.32%	\$794	17.49%	\$622
UAAL	<u>13.23%</u>	<u>471</u>	<u>18.28%</u>	<u>651</u>
Total Contribution	35.55%	\$1,265	35.77%	\$1,273
<b>Safety CalPEPRA-County Members</b>				
Normal Cost	11.27%	\$0	11.57% <sup>(2)</sup>	\$0
UAAL	<u>10.90%</u>	<u>0</u>	<u>6.22%</u> <sup>(3)</sup>	<u>0</u>
Total Contribution	22.17%	\$0	17.79%	\$0
<b>Safety CalPEPRA-Valley of the Moon Members</b>				
Normal Cost	11.27%	\$0	11.57% <sup>(2)</sup>	\$0
UAAL	<u>13.23%</u>	<u>0</u>	<u>18.28%</u>	<u>0</u>
Total Contribution	24.50%	\$0	29.85%	\$0
<b>All Categories Combined</b>				
Normal Cost	14.42%	\$43,646	11.47%	\$34,714
UAAL	<u>10.05%</u>	<u>30,416</u>	<u>8.50%</u>	<u>25,739</u>
Total Contribution	24.47%	\$74,062	19.97%	\$60,453

<sup>(1)</sup> Amounts are in thousands and are based on December 31, 2012 projected annual payroll (also in thousands):

General-County	\$221,821
General-Court	12,973
General-Valley of the Moon	308
General CalPEPRA-County	0
General CalPEPRA-Court	0
General CalPEPRA-Valley of the Moon	0
Safety-County	64,103
Safety-Valley of the Moon	3,559
Safety CalPEPRA-County	0
Safety CalPEPRA-Valley of the Moon	0
Total	\$302,764

<sup>(2)</sup> Normal cost rate was calculated in our CalPEPRA study dated November 21, 2012.

<sup>(3)</sup> Based on UAAL rates determined in the December 31, 2011 valuation for the non-CalPEPRA Plans adjusted to assume that the 3.00% supplemental contributions paid by members are used to reduce the employer's UAAL rate.

**SECTION 2: Valuation Results for the Sonoma County Employees' Retirement Association**

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**CHART 13b**

**Breakdown of the Employers' Plus Employees' Normal Cost Contributions to Fund for Each Type of Benefit (% of Payroll)**

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Normal Cost	Elements of Normal Cost for Non-CalPEPRA Members			
	All General	Safety-County	Safety-Valley of the Moon	Overall
Service Retirement	81%	61%	63%	76%
Vested Termination and Ordinary Withdrawal	10%	7%	6%	9%
Non Service and Service Connected Disability	8%	32%	31%	14%
Non Service and Service Connected Death	1%	0%	0%	1%
Total Employer Plus Employee Normal Cost	100%	100%	100%	100%

## SECTION 2: Valuation Results for the Sonoma County Employees' Retirement Association

The contribution rates as of December 31, 2012 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 Contribution

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

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

#### CHART 14

#### Reconciliation of Recommended Contribution from December 31, 2011 to December 31, 2012 (Dollar Amounts in Thousands)

	<u>Contribution Rate</u>	<u>Estimated Annual Dollar Cost<sup>(1)</sup></u>
<b>Recommended Average Employer Contribution Rate as of December 31, 2011</b>	19.97%	\$60,453
Effect of investment loss <sup>(2)</sup>	2.44%	\$7,387
Effect of difference in actual versus expected individual salary increases	-0.63%	-\$1,907
Effect of increase in UAAL rate from lower than expected increases in total payroll	0.22%	\$666
Effect of contribution losses due to 18-month delay in implementing higher contribution rates	0.32%	\$969
Effect of demographic changes	0.11%	\$333
Effect of assumption changes	1.79%	\$5,419
Effect of elimination of employer paid deferred compensation as compensation earnable	-0.14%	-\$424
Effect of other experience losses <sup>(3)</sup>	0.39%	\$1,166
Subtotal	4.50%	\$13,609
<b>Recommended Average Employer Contribution Rate as of December 31, 2012</b>	<b>24.47%</b>	<b>\$74,062</b>

<sup>(1)</sup> Based on December 31, 2012 projected annual payroll of \$302,764.

<sup>(2)</sup> Return on valuation assets was 1.82% and so was less than the 7.75% assumed in the valuation.

<sup>(3)</sup> Other differences in actual versus expected actuarial experience, including a 0.26% increase in contribution rate as a result of a correction regarding which current deferred vested participants were indicated as having continued in reciprocal employment as reported in the December 31, 2011 valuation. About 0.12% of this increase was offset and reported under the "effect of assumption changes" when a reduction was also made in the assumptions to anticipate the percentage of future deferred vested participants who continue to work at a reciprocal employer after terminating covered employment at SCERA. These were noted in the most recent triennial experience study.

**SECTION 2: Valuation Results for the Sonoma County Employees' Retirement Association**

**Reconciliation of Recommended Contribution Rate**

The chart below details the changes in the aggregate 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 15**  
**Reconciliation of Recommended Member Contribution from December 31, 2011 to December 31, 2012**

	General-County Contribution Rate <sup>(1)</sup>	General-Court Contribution Rate <sup>(1)</sup>	General-Valley of the Moon Contribution Rate	Safety-County Contribution Rate <sup>(2)</sup>	Safety-Valley of the Moon Contribution Rate	Total Contribution Rate
<b>Recommended Average Member Contribution Rate as of December 31, 2011<sup>(3)</sup></b>	12.17%	12.02%	11.54%	12.43%	10.15%	12.19%
Effect of demographic changes	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Effect of changes in assumptions	0.28%	0.28%	0.38%	0.07%	0.16%	0.24%
<b>Recommended Average Member Contribution Rate as of December 31, 2012<sup>(4)</sup></b>	12.45%	12.30%	11.92%	12.50%	10.31%	12.43%

<sup>(1)</sup> Rates include an additional 3.03% of payroll.

<sup>(2)</sup> Rates include an additional 3.00% of payroll.

<sup>(3)</sup> The above rates are based on average entry age. The weighted average member contribution rates as of December 31, 2011 are 12.00%, 12.08% and 8.59% for all General (i.e., County, Court, and Valley of the Moon) Safety-County and Safety-Valley of the Moon, respectively.

<sup>(4)</sup> The above rates are based on average entry age. The weighted average member contribution rates as of December 31, 2012 are 12.28%, 12.11% and 9.33% for all General (i.e., County, Court, and Valley of the Moon), Safety-County and Safety-Valley of the Moon, respectively.

Note: There are no CalPEPRA members enrolled as of December 31, 2012.

**SECTION 2: Valuation Results for the Sonoma County Employees' Retirement Association**

**E. INFORMATION REQUIRED BY GASB**

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

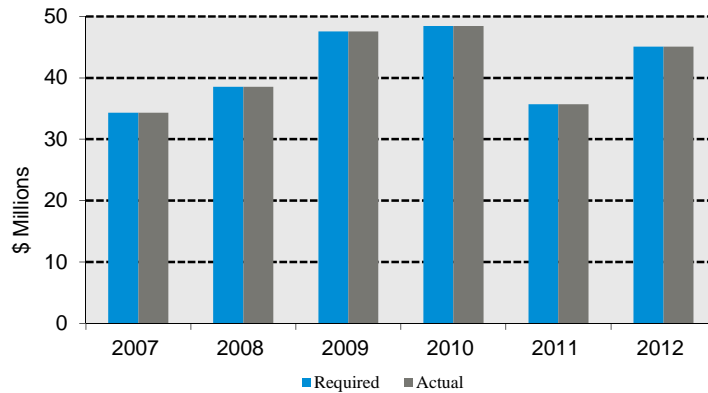
Critical information to GASB is the historical comparison of the GASB required contributions to the actual contributions. This comparison demonstrates whether a plan is being funded on an actuarially sound basis and in accordance with the GASB funding requirements. Chart 16 below presents a graphical 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 to the actuarial accrued liabilities of the plan as calculated under GASB. High ratios indicate a well-funded plan with assets sufficient to pay most benefits. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other changes.

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

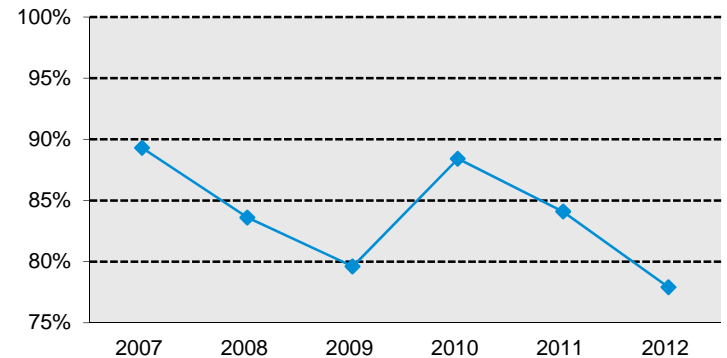
*These graphs show key GASB factors.*

**CHART 16**  
**Required Versus Actual Contributions**



*Note: Results for 2010 excludes \$289.3 million in proceeds from issuance of Pension Obligation Bonds.*

**CHART 17**  
**Funded Ratio**





**SECTION 2: Valuation Results for the Sonoma 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 SCERA, the current AVR is about 6.3. This means that a 1% asset gain/(loss) (relative to the assumed investment return) translates to about 6.3% of one-year's payroll. Since SCERA amortizes actuarial gains and losses over a 20-year period, there would be a 0.4% 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 SCERA, the current LVR is about 7.9. This is about 25% 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 – 2012**

Year Ended December 31	Asset Volatility Ratio	Liability Volatility Ratio
2008	3.2	5.5
2009	3.9	6.1
2010	5.4	6.6
2011	5.5	7.2
2012	6.3	7.9

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

**EXHIBIT A**

**Table of Plan Coverage**

**i. General**

<b>Category</b>	<b>Year Ended December 31</b>		<b>Change From Prior Year</b>
	<b>2012</b>	<b>2011</b>	
<b>Active members in valuation</b>			
Number	2,928	2,900	1.0%
Average age	47.1	47.7	N/A
Average service	9.9	10.6	N/A
Projected total compensation	\$235,101,703	\$239,781,192	-2.0%
Projected average compensation	\$80,294	\$82,683	-2.9% <sup>(1)</sup>
Account balances	\$280,963,356	\$279,313,216	0.6%
Total active vested members	2,140	2,151	-0.5%
<b>Vested terminated members</b>	712	750	-5.1%
<b>Retired members</b>			
Number in pay status	2,821	2,624	7.5%
Average age	68.2	68.2	N/A
Average monthly benefit	\$2,627	\$2,505	4.9%
<b>Disabled members</b>			
Number in pay status	358	358	0.0%
Average age	64.0	63.1	N/A
Average monthly benefit	\$1,696	\$1,692	0.2%
<b>Beneficiaries</b>			
Number in pay status	378	372	1.6%
Average age	71.8	71.6	N/A
Average monthly benefit	\$1,083	\$1,067	1.5%

<sup>(1)</sup> Reflects the elimination of employer paid deferred compensation.

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

**EXHIBIT A**

**Table of Plan Coverage**

**ii. Safety**

<b>Category</b>	<b>Year Ended December 31</b>		<b>Change From Prior Year</b>
	<b>2012</b>	<b>2011</b>	
<b>Active members in valuation</b>			
Number	692	687	0.7%
Average age	41.9	41.5	N/A
Average service	11.3	11.3	N/A
Projected total compensation	\$67,662,324	\$68,862,475	-1.7%
Projected average compensation	\$97,778	\$100,236	-2.5% <sup>(1)</sup>
Account balances	\$95,273,435	\$88,453,578	7.7%
Total active vested members	584	550	6.2%
<b>Vested terminated members</b>	164	169	-3.0%
<b>Retired members</b>			
Number in pay status	373	348	7.2%
Average age	62.9	62.9	N/A
Average monthly benefit	\$4,410	\$4,304	2.5%
<b>Disabled members</b>			
Number in pay status	252	246	2.4%
Average age	58.0	57.5	N/A
Average monthly benefit	\$2,809	\$2,796	0.5%
<b>Beneficiaries</b>			
Number in pay status	76	73	4.1%
Average age	63.0	63.3	N/A
Average monthly benefit	\$1,843	\$1,842	0.1%

<sup>(1)</sup> Reflects the elimination of employer paid deferred compensation.

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

**EXHIBIT B**

**Members in Active Service and Projected Average Compensation as of December 31, 2012  
By Age and Years of Service**

**i. General**

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	30	30	--	--	--	--	--	--	--	--	--
	\$54,424	\$54,424	--	--	--	--	--	--	--	--	--
25 - 29	159	132	27	--	--	--	--	--	--	--	--
	62,080	61,837	\$63,269	--	--	--	--	--	--	--	--
30 - 34	282	143	116	23	--	--	--	--	--	--	--
	72,253	70,340	74,397	\$73,337	--	--	--	--	--	--	--
35 - 39	303	112	116	69	6	--	--	--	--	--	--
	77,410	71,853	81,567	79,598	\$75,603	--	--	--	--	--	--
40 - 44	396	100	133	110	37	16	--	--	--	--	--
	80,194	77,585	82,869	79,788	80,033	\$77,425	--	--	--	--	--
45 - 49	489	96	127	131	60	55	20	--	--	--	--
	81,444	76,000	79,523	80,643	94,824	85,965	\$72,453	--	--	--	--
50 - 54	532	91	119	146	62	57	45	12	--	--	--
	85,301	83,235	85,052	80,173	87,159	86,015	100,887	\$94,369	--	--	--
55 - 59	440	61	94	130	64	54	24	12	1	--	--
	86,826	85,007	83,856	82,235	95,525	90,493	89,872	101,485	\$70,177	--	--
60 - 64	229	24	61	75	34	21	9	5	--	--	--
	81,593	85,752	79,071	77,597	86,092	87,115	89,297	84,680	--	--	--
65 - 69	65	9	20	26	4	3	1	1	--	1	--
	87,971	104,228	91,575	78,253	112,154	88,346	73,123	57,931	--	\$69,268	--
70 & over	3	--	--	1	--	1	1	--	--	--	--
	66,123	--	--	50,187	--	88,158	60,026	--	--	--	--
Total	2,928	798	813	711	267	207	100	30	1	1	1
	\$80,294	\$73,574	\$80,664	\$79,916	\$89,878	\$86,661	\$90,827	\$94,386	\$70,177	\$69,268	\$69,268

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

**EXHIBIT B**

**Members in Active Service and Projected Average Compensation as of December 31, 2012  
By Age and Years of Service**

**ii. Safety**

Age	Years of Service								
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & over
Under 25	4	4	--	--	--	--	--	--	--
	\$79,671	\$79,671	--	--	--	--	--	--	--
25 - 29	52	28	24	--	--	--	--	--	--
	83,596	82,198	\$85,226	--	--	--	--	--	--
30 - 34	109	33	65	11	--	--	--	--	--
	88,036	79,370	91,285	\$94,840	--	--	--	--	--
35 - 39	127	11	54	56	6	--	--	--	--
	96,516	89,846	97,174	96,031	\$107,346	--	--	--	--
40 - 44	154	12	32	50	41	18	1	--	--
	100,074	93,942	95,920	95,380	105,030	\$112,946	\$106,350	--	--
45 - 49	129	6	9	36	36	29	13	--	--
	106,000	90,657	91,827	99,438	100,508	120,735	123,405	--	--
50 - 54	71	9	12	11	9	19	8	3	--
	102,030	101,148	97,822	97,319	106,648	99,908	112,987	\$109,143	--
55 - 59	33	6	9	8	4	4	1	1	--
	102,165	132,773	100,564	90,831	80,689	97,549	110,054	120,080	--
60 - 64	11	1	8	1	1	--	--	--	--
	116,772	122,660	111,049	193,308	80,130	--	--	--	--
65 - 69	2	--	1	--	--	--	1	--	--
	78,867	--	71,441	--	--	--	86,292	--	--
70 & over	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
Total	692	110	214	173	97	70	24	4	--
	\$97,778	\$88,442	\$94,210	\$96,880	\$102,385	\$111,754	\$117,119	\$111,877	--

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

**EXHIBIT C**

**Reconciliation of Member Data – December 31, 2011 to December 31, 2012**

	<b>Active Members</b>	<b>Vested Terminated Members</b>	<b>Disabled Pensioners</b>	<b>Retired Members</b>	<b>Beneficiaries</b>	<b>Total</b>
Number as of December 31, 2011	3,587	919	604	2,972	445	8,527
New members	349	9 <sup>(1)</sup>	N/A	N/A	N/A	358
Terminations – with vested rights	-58	58	N/A	N/A	N/A	0
Contribution refunds	-39	-36	N/A	N/A	N/A	-75
Retirements	-233	-45	N/A	278	N/A	0
New disabilities	-10	-1	12	-1	N/A	0
Return to work	25	-25	0	0	N/A	0
Died with or without beneficiary	-1	-3	-6	-55	9 <sup>(2)</sup>	-56
Data adjustments	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Number as of December 31, 2012	3,620	876	610	3,194	454	8,754

<sup>(1)</sup> Included for the first time in this year's valuation as they were hired and terminated in the 2012 calendar year.

<sup>(2)</sup> This is the net increase in the number of beneficiaries after subtracting the number of beneficiaries who died during the year.

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

**EXHIBIT D**

**Summary Statement of Income and Expenses on an Actuarial Value Basis**

	Year Ended December 31, 2012	Year Ended December 31, 2011
<b>Contribution income:</b>		
Employer contributions	\$45,078,748	\$35,710,655
Employee contributions	<u>36,963,228</u>	<u>35,943,823</u>
Net contribution income	\$82,041,977	\$71,654,478
<b>Investment income:</b>		
Interest, dividends and other income	\$47,380,824	\$42,340,326
Recognition of capital appreciation	5,148,858	-3,863,076
Less investment fees and administrative expenses	<u>-18,877,212</u>	<u>-18,968,956</u>
Net investment income	<u>33,652,470</u>	<u>19,508,294</u>
<b>Total income available for benefits</b>	<b>\$115,694,447</b>	<b>\$91,162,772</b>
<b>Less benefit payments:</b>		
Service retirement and disability benefits	-\$123,831,668	-\$113,000,246
Member refunds	<u>-2,132,731</u>	<u>-1,918,882</u>
Net benefit payments	-\$125,964,399	-\$114,919,128
<b>Change in assets held for future benefits</b>	<b>-\$10,269,952</b>	<b>-\$23,756,356</b>

*Results may be off due to rounding.*

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

**EXHIBIT E**

**Summary Statement of Plan Assets**

	Year Ended December 31, 2012	Year Ended December 31, 2011
<b>Cash equivalents</b>	\$46,717,860	\$92,205,566
<b>Accounts receivable:</b>		
Contributions, interest and dividends, and securities sold	\$29,845,100	\$74,822,085
Other receivable	<u>95,888</u>	<u>92,294</u>
Total accounts receivable	29,940,988	74,914,379
<b>Investments:</b>		
Domestic and international stocks	\$1,257,552,408	\$1,093,474,722
Domestic bonds	369,645,769	343,577,066
Real estate	305,868,801	288,235,894
Securities lending collateral	67,528,455	101,544,632
Miscellaneous	<u>4,215,652</u>	<u>4,602,470</u>
Total investments at market value	<u>2,004,811,085</u>	<u>1,831,434,784</u>
<b>Total assets</b>	\$2,081,469,934	\$1,998,554,729
<b>Less accounts payable</b>	-\$176,542,970	-\$288,769,936
<b>Net assets at market value</b>	<u>\$1,904,926,964</u>	<u>\$1,709,784,793*</u>
<b>Net assets at actuarial value</b>	<u>\$1,856,847,434</u>	<u>\$1,867,117,386</u>
<b>Net assets at valuation value</b>	<u>\$1,856,847,434</u>	<u>\$1,867,117,386</u>

\* This was the original market value reported to Segal for the December 31, 2011 valuation. The beginning of year (January 1, 2012) market value reported to Segal for the December 31, 2012 valuation was higher by \$552.

Results may be off due to rounding.



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

**EXHIBIT F**

**Actuarial Balance Sheet**

An overview of the Plan's funding is given by an Actuarial Balance Sheet. In this approach, we first determine the amount and timing of all future payments that are 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.

**Actuarial Balance Sheet (Dollar Amounts in Thousands)**

<b>Assets</b>	Basic	COLA	Total
1 Total valuation assets	\$1,803,883	\$52,964	\$1,856,847
2 Present value of future contributions by members <sup>(1)</sup>	\$200,117	\$0	\$200,117
3 Present value of future employer contributions for:			
a Entry age normal cost	\$288,173	\$0	\$288,173
b Unfunded actuarial accrued liability <sup>(1)</sup>	<u>\$526,853</u>	<u>\$0</u>	<u>\$526,853</u>
4 Total current and future assets	\$2,819,026	\$52,964	\$2,871,990
<b>Liabilities</b>			
5 Present value of benefits already granted	\$1,336,513	\$52,964	\$1,389,477
6 Present value of benefits to be granted	<u>\$1,482,513</u>	<u>\$0</u>	<u>\$1,482,513</u>
7 Total liabilities	\$2,819,026	\$52,964	\$2,871,990

<sup>(1)</sup> Before reflecting supplemental contributions payable by certain members for the UAAL.

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

**EXHIBIT G**

**Summary of Reported Reserve Information as of December 31, 2012**

<b>Reserves</b>			
	Before True-Up	After True-Up	Transfer Amount
Member reserves <sup>(1)</sup>			
General	\$323,970,004	\$323,970,004	\$0
Safety	104,437,325	104,437,325	0
Employer reserves <sup>(1)</sup>			
General	439,880,912	378,903,485	-60,977,426
Safety	178,481,966	162,717,122	-15,764,844
Retired member reserve <sup>(1)</sup>			
General	953,186,574	1,014,164,000	60,977,426 <sup>(3)</sup>
Safety	306,584,156	322,349,000	15,764,844 <sup>(3)</sup>
COLA	51,631,480	52,964,000	1,332,520
Negative contingency reserve <sup>(1)</sup>	-500,407,718	-502,657,504	-2,249,786
Total valuation reserve <sup>(1)</sup>	\$1,857,764,700	\$1,856,847,434	-917,266
Undistributed reserve <sup>(2)</sup>	0	0	0
Interest fluctuation reserve <sup>(2)</sup>	0	0	0
Market stabilization reserve <sup>(2)</sup>	47,162,264	48,079,530	917,266
Net market value	\$1,904,926,964	\$1,904,926,964	0

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

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

<sup>(3)</sup> *Includes the impact from the changes in actuarial assumptions adopted for the December 31, 2012 valuation.*

*Results may be off due to rounding.*

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

**EXHIBIT H**

**Development of Unfunded Actuarial Accrued Liability for Year Ended December 31, 2012**

	<b>(Dollar Amounts in Thousands)</b>
1 Unfunded Actuarial Accrued Liability as of December 31, 2011	\$353,403
2 Normal Cost	72,989
3 Total employer and member contributions	-82,042
4 Interest	27,038
5 Expected Unfunded Actuarial Accrued Liability	\$371,388
6 Actuarial (gains)/losses due to all changes:	
<u>Experience (gains)/losses</u>	
(a) Investment loss	\$109,347
(b) Lower than expected salary increase	-39,901
(c) Other experience losses <sup>(1)</sup>	<u>16,275</u>
(d) Total experience gains and losses	85,721
7 Assumption changes	81,147
8 Elimination of employer paid deferred compensation as compensation earnable	-11,403
Total changes	<u>155,465</u>
9 Unfunded Actuarial Accrued Liability as of December 31, 2012	\$526,853

*Note: Net from other non-investment experience of \$23.6 million (as shown on page 8) is equal to 6(b) + 6(c).*

<sup>(1)</sup> *This amount does not include a contribution loss of \$13.9 million due to the 18-month delay in implementing higher contribution rates. It does include a loss of \$11,886 as a result of a correction noted in the most recent triennial experience study regarding which current deferred vested participants were indicated as having continued in reciprocal employment as reported in the December 31, 2011 valuation.*

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

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#### EXHIBIT I

#### Section 415 Limitations

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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 indexed for inflation. That limit is \$200,000 for 2012 and \$205,000 for 2013. Normal Retirement Age for these purposes is age 62. These are the limits in simplified terms. They must be adjusted based on each participant's circumstances, for such things as age at retirement, form of benefits chosen and after tax contributions.

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

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

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

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

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**EXHIBIT J**

**Definitions of Pension Terms**

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

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

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**Amortization of the Unfunded  
(Overfunded) Actuarial  
Accrued Liability:**

Payments made over a period of years equal in value to the Plan's unfunded or overfunded actuarial accrued liability.

**Investment Return:**

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

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

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### EXHIBIT I

#### Summary of Actuarial Valuation Results

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

1. Retired members as of the valuation date (including 454 beneficiaries in pay status)	4,258
2. Members inactive during year ended December 31, 2012 with vested rights*	876
3. Members active during the year ended December 31, 2012	3,620

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

1. Normal cost	\$71,584
2. Present value of future benefits	2,871,990
3. Present value of future normal costs	488,290
4. Actuarial accrued liability	2,383,700
Retired members and beneficiaries	\$1,389,477
Inactive members with vested rights	65,583
Active members	928,640
5. Valuation value of assets** (\$1,904,927 at market value as reported by Retirement Association)	1,856,847
6. Unfunded actuarial accrued liability	\$526,853

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\* Includes members who choose to leave their contributions on deposit even though they may have less than five years of service.

\*\* Excludes non-valuation reserves.

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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**EXHIBIT I (continued)**

**Summary of Actuarial Valuation Results**

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

	<b>Dollar Amount</b>	<b>% of Payroll</b>
1. Total normal cost	\$71,584	23.65%
2. Expected employee normal cost contributions (excluding expected employee supplemental contributions)	<u>-27,938</u>	<u>-9.23%</u>
3. Employer normal cost: (1) + (2)	\$43,646	14.42%
4. Amortization of unfunded actuarial accrued liability (less expected employee supplemental contributions to reduce the employer's UAAL)	<u>30,416</u>	<u>10.05%</u>
5. Total recommended average employer contribution: (3) + (4)	\$74,062	24.47%
6. Projected compensation	\$302,764	

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**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

**EXHIBIT II**

**Supplementary Information Required by GASB – Schedule of Employer Contributions (Dollar Amounts in Thousands)**

<b>Plan Year Ended December 31</b>	<b>Annual Required Contributions</b>	<b>Actual Contributions</b>	<b>Percentage Contributed</b>
2007	\$34,273	\$34,273	100.0%
2008	38,553 <sup>(1)</sup>	38,553	100.0% <sup>(1)</sup>
2009	47,577 <sup>(1)</sup>	47,577	100.0% <sup>(1)</sup>
2010	48,426 <sup>(2)</sup>	48,426 <sup>(3)</sup>	100.0% <sup>(2)</sup>
2011	35,711 <sup>(4)</sup>	35,711	100.0% <sup>(4)</sup>
2012	45,079 <sup>(2)</sup>	45,079	100.0% <sup>(2)</sup>

<sup>(1)</sup> Determined using an amortization period of about 29 years (an amortization period of up to 30 years is allowed by GASB).

<sup>(2)</sup> Determined using an amortization period of about 26 years (an amortization period of up to 30 years is allowed by GASB).

<sup>(3)</sup> Excludes \$289.3 million in proceeds from issuance of Pension Obligation Bonds.

<sup>(4)</sup> Determined using an amortization period of about 23 years (an amortization period of up to 30 years is allowed by GASB).

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

**EXHIBIT III**

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

<b>Actuarial Valuation Date</b>	<b>Valuation Value of Assets (a)</b>	<b>Actuarial Accrued Liability (AAL) (b)</b>	<b>Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)</b>	<b>Funded Ratio (a) / (b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a Percentage of Covered Payroll [(b) - (a)] / (c)</b>
12/31/2007	\$1,476,496	\$1,653,847	\$177,351	89.3%	\$292,772	60.6%
12/31/2008	1,540,461	1,842,404	301,943	83.6%	334,391	90.3%
12/31/2009	1,564,970	1,967,058	402,088	79.6%	322,484	124.7%
12/31/2010	1,890,874	2,139,460	248,586	88.4%	323,601	76.8%
12/31/2011	1,867,117	2,220,520	353,403	84.1%	308,644	114.5%
12/31/2012	1,856,847	2,383,700	526,853	77.9%	302,764	174.0%

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

**EXHIBIT IV**

**Supplementary Information Required by GASB**

<b>Valuation date</b>	December 31, 2012
<b>Actuarial cost method</b>	Entry Age Normal Cost Method
<b>Amortization method</b>	Level percent of payroll for total unfunded liability
<b>Remaining amortization period</b>	20 years (declining) for outstanding balance of the December 31, 2007 UAAL and for UAAL established on each subsequent valuation plus 20 years (declining) with 15 years remaining as of December 31, 2012 for UAAL established as a result of including as pensionable salary a cash allowance.
<b>Asset valuation method</b>	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on valuation value of assets and is recognized over a five-year period. The Valuation Value of Assets is the Actuarial Value of Assets reduced by the value of the non-valuation reserves and designations.
<b>Actuarial assumptions:</b>	
Investment rate of return	7.50%
Inflation rate	3.25%
Across the board salary increase	0.75%
Projected salary increases*	General: 4.50% to 10.00% and Safety: 4.50% to 12.50%
Cost of living adjustments	0.00% of retirement income
<b>Plan membership:</b>	
Retired members and beneficiaries receiving benefits	4,258
Terminated members entitled to, but not yet receiving benefits	876
Active members	<u>3,620</u>
Total	8,754

\* Includes inflation at 3.25%, across the board increase of 0.75%, plus merit and longevity increases. See Exhibit V for these increases.

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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**EXHIBIT V**

**Actuarial Assumptions and Actuarial Cost Method**

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**Mortality Rates:**

**Healthy Retirement:**

For General Members – RP-2000 Combined Healthy Mortality Table projected with Scale AA to 2015 set back two years.  
For Safety Members – RP-2000 Combined Healthy Mortality Table projected with Scale AA to 2015.

**Disabled Retirement:**

For General Members – RP-2000 Disabled Retiree Mortality Table projected with Scale AA to 2015 set back four years.  
For Safety Members – RP-2000 Combined Healthy Mortality Table projected with Scale AA to 2015 set forward six years.

The mortality tables shown above were determined so as to reasonably reflect future mortality improvement, based on a review of the mortality experience in the January 1, 2009 – December 31, 2011 Actuarial Experience Study.

**Employee Contribution Rates:**

For General Members – RP-2000 Combined Healthy Mortality Table projected with Scale AA to 2015 set back two years weighted 30% male and 70% female.  
For Safety Members – RP-2000 Combined Healthy Mortality Table projected with Scale AA to 2015 weighted 75% male and 25% female.

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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**Termination Rates Before Retirement:**

**Mortality Rates:**

Age	Rate (%)			
	General		Safety	
	Male	Female	Male	Female
30	0.02	0.01	0.02	0.01
35	0.03	0.02	0.04	0.02
40	0.04	0.02	0.05	0.03
45	0.06	0.04	0.06	0.04
50	0.07	0.05	0.08	0.06
55	0.11	0.09	0.14	0.12
60	0.21	0.18	0.26	0.23

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

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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**Disability Rates:**

Age	Rate (%)	
	General <sup>(1)</sup>	Safety <sup>(2)</sup>
20	0.05	0.06
25	0.05	0.16
30	0.06	0.38
35	0.12	0.95
40	0.24	1.40
45	0.33	1.80
50	0.41	2.30
55	0.51	2.80
60	0.70	0.00

<sup>(1)</sup> 50% of General disabilities are assumed to be service connected disabilities. The other 50% are assumed to be non-service connected disabilities.

<sup>(2)</sup> 90% of Safety disabilities are assumed to be service connected disabilities. The other 10% are assumed to be non-service connected disabilities.

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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**Withdrawal Rates:**

Rate (%)		
Years of Service	Withdrawal (< 5 Years of Service)	
	General	Safety
0	7.0	5.0
1	5.0	3.0
2	4.0	2.0
3	3.0	2.0
4	2.5	2.0

Rate (%)		
Age	Withdrawal (5+ Years of Service)	
	General	Safety
20	2.50	2.00
25	2.50	2.00
30	2.20	1.58
35	1.28	0.88
40	0.68	0.42
45	0.48	0.18
50	0.34	0.00
55	0.24	0.00
60	0.14	0.00

*No withdrawal is assumed after a member is assumed to retire.*

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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**Vested Termination Rates:**

Rate (%)		
Years of Service	Vested Termination (<5 Years of Service)	
	General	Safety
0	6.0	4.0
1	5.0	4.0
2	4.0	4.0
3	3.0	4.0
4	3.0	4.0

Rate (%)		
Age	Vested Termination (5+ Years of Service)	
	General	Safety
20	3.00	2.00
25	3.00	2.00
30	3.00	2.00
35	3.00	1.40
40	2.40	0.94
45	1.85	0.84
50	1.60	0.00
55	1.05	0.00
60	0.75	0.00

*No vested termination is assumed after a member is assumed to retire.*



**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

**Retirement Rates:**

Age	Rate (%)					
	General			Safety		
	Before 30 Years	30 or More Years	CalPEPRA	Before 30 Years	30 or More Years	CalPEPRA
50	7.0	10.0	0.0	10.0	10.0	4.0
51	7.0	10.0	0.0	12.0	12.0	5.0
52	7.0	12.0	4.0	18.0	18.0	6.0
53	8.0	14.0	1.5	19.0	25.0	6.0
54	9.0	15.0	2.5	20.0	50.0	8.0
55	9.0	20.0	2.5	25.0	100.0	20.0
56	10.0	22.0	4.5	25.0	100.0	15.0
57	13.0	22.0	5.5	25.0	100.0	15.0
58	15.0	25.0	6.5	25.0	100.0	20.0
59	17.0	35.0	7.5	25.0	100.0	20.0
60	21.0	45.0	8.5	100.0	100.0	100.0
61	25.0	45.0	9.5	100.0	100.0	100.0
62	40.0	45.0	14.5	100.0	100.0	100.0
63	35.0	45.0	16.5	100.0	100.0	100.0
64	35.0	45.0	19.0	100.0	100.0	100.0
65	35.0	45.0	24.0	100.0	100.0	100.0
66	35.0	45.0	20.0	100.0	100.0	100.0
67	40.0	50.0	20.0	100.0	100.0	100.0
68	50.0	50.0	20.0	100.0	100.0	100.0
69	80.0	80.0	20.0	100.0	100.0	100.0
70	100.0	100.0	100.0	100.0	100.0	100.0

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

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<b>Retirement Age and Benefit for Deferred Vested Members:</b>	<p>For deferred vested members, we make the following retirement assumption:</p> <p>General: Age 58</p> <p>Safety: Age 53</p> <p>We assumed that 30% of General and 45% of Safety deferred vested members will continue to work for a reciprocal employer. For reciprocals, we assume 4.00% compensation increases per annum.</p>
<b>Future Benefit Accruals:</b>	1.0 year of service per year.
<b>Unknown Data for Members:</b>	Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.
<b>Definition of Active Members:</b>	First day of pay period following employment.
<b>Percent Married:</b>	75% of male members and 55% of female members are assumed to be married at retirement or pre-retirement death.
<b>Age of Spouse:</b>	Females (or male) spouses are 3 years younger (older) than their spouses.
<b>Net Investment Return:</b>	7.50%; net of administration and investment expenses.
<b>Employee Contribution Crediting Rate:</b>	½ of the net investment return credited semi-annually.

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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**Cost-of-Living Adjustment for Retirees:**

Not applicable.

**Salary Scale:**

Annual Rate of Compensation Increase

Inflation: 3.25% per year; plus "Across the Board" salary increases of 0.75% per year; plus Merit and Promotion increases as follows:

Years of Service	General	Safety
0	6.00%	8.50%
1	5.00	4.75
2	3.75	3.75
3	2.50	2.75
4	1.50	1.75
5+	0.50	0.50

**Cashouts for non-CalPEPRA members:**

The following assumptions for a one-time compensation increase at retirement from vacation, sick leave and holiday cashouts are used:

- General members: 4%
- Safety members: 6%

Note: For the purposes of calculating member contribution rates, these assumptions are adjusted by a factor of 91% since about 9% of the full costs included above have been determined by SCERA to be from the cashout of sick leave and should be excluded from the cashout cost paid by the active members.

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

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<b>Actuarial Value of Assets:</b>	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on valuation value and are recognized over a five-year period.
<b>Valuation Value of Assets:</b>	The Actuarial Value of Assets reduced by the value of the non-valuation reserves.
<b>Actuarial Cost Method:</b>	Entry Age Normal Actuarial Cost Method. Entry Age is the age at the member's hire date. Actuarial Accrued Liability is calculated on an individual basis and is based on costs allocated as a level percentage of compensation.

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### **Changes in Actuarial Assumptions**

**and Methods:** Based on the December 31, 2012 Experience Study and the December 31, 2012 Economic Assumptions Study, the following assumptions were changed. Previously, these assumptions were as follows:

#### **Mortality Rates:**

**Healthy Retirement:** For General Members – RP-2000 Combined Healthy Mortality Table set back two years.  
For Safety Members – RP-2000 Combined Healthy Mortality Table set back one year.

**Disabled Retirement:** For General Members – RP-2000 Disabled Retiree Mortality Table set back four years.  
For Safety Members – 1981 Safety Disability Mortality Table set back four years.

**Employee Contribution Rates:** For General Members – RP-2000 Combined Healthy Mortality Table set back two years weighted 25% male and 75% female.  
For Safety Members – RP-2000 Combined Healthy Mortality Table set back one year weighted 75% male and 25% female.

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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**Changes in Actuarial Assumptions and Methods (continued):**

**Termination Rates Before Retirement:**

**Mortality Rates:**

Age	Rate (%)			
	General		Safety	
	Male	Female	Male	Female
30	0.02	0.01	0.02	0.01
35	0.03	0.02	0.04	0.02
40	0.05	0.03	0.05	0.03
45	0.06	0.05	0.07	0.05
50	0.09	0.07	0.10	0.08
55	0.15	0.11	0.16	0.12
60	0.26	0.20	0.30	0.22

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

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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**Changes in Actuarial Assumptions and Methods (continued):**

**Disability Rates:**

Age	Rate (%)	
	General <sup>(1)</sup>	Safety <sup>(2)</sup>
20	0.05	0.06
25	0.05	0.16
30	0.06	0.39
35	0.12	0.82
40	0.21	1.66
45	0.31	2.38
50	0.45	2.87
55	0.59	3.58
60	0.73	0.00

<sup>(1)</sup> 60% of General disabilities are assumed to be service connected disabilities. The other 40% are assumed to be non-service connected disabilities.

<sup>(2)</sup> 90% of Safety disabilities are assumed to be service connected disabilities. The other 10% are assumed to be non-service connected disabilities.

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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**Changes in Actuarial Assumptions and Methods (continued):**

**Withdrawal Rates:**

Years of Service	Rate (%)	
	Withdrawal (< 5 Years of Service)	
	General	Safety
0	7.0	5.5
1	6.0	4.0
2	5.0	3.0
3	4.0	2.0
4	3.0	2.0

Age	Rate (%)	
	Withdrawal (5+ Years of Service)	
	General	Safety
20	3.00	2.00
25	3.00	2.00
30	2.70	1.58
35	1.60	0.88
40	0.85	0.42
45	0.66	0.18
50	0.48	0.00
55	0.28	0.00
60	0.14	0.00

*No withdrawal is assumed after a member is assumed to retire.*

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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**Changes in Actuarial Assumptions and Methods (continued):**

**Vested Termination Rates:**

Years of Service	Rate (%)	
	Vested Termination (<5 Years of Service)	
	General	Safety
0	4.0	3.0
1	3.0	3.0
2	2.0	3.0
3	2.0	3.0
4	2.0	3.0

Age	Rate (%)	
	Vested Termination (5+ Years of Service)	
	General	Safety
20	2.00	2.00
25	2.00	2.00
30	2.00	2.00
35	2.00	1.40
40	2.00	0.94
45	1.64	0.84
50	0.98	0.00
55	0.52	0.00
60	0.40	0.00

*No vested termination is assumed after a member is assumed to retire.*



**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

**Changes in Actuarial Assumptions and Methods (continued):**

**Retirement Rates:**

Age	Rate (%)					
	General			Safety		
	Before 30 Years	30 or More Years	CalPEPRA	Before 30 Years	30 or More Years	CalPEPRA
50	6.0	10.0	0.0	10.0	10.0	4.0
51	6.0	10.0	0.0	12.0	12.0	5.0
52	6.0	10.0	4.0	16.0	18.0	6.0
53	7.0	10.0	1.5	18.0	25.0	6.0
54	8.0	10.0	2.5	20.0	50.0	8.0
55	9.0	20.0	2.5	25.0	100.0	20.0
56	10.0	21.0	4.5	20.0	100.0	15.0
57	12.0	22.0	5.5	20.0	100.0	15.0
58	13.0	23.0	6.5	20.0	100.0	20.0
59	14.0	24.0	7.5	20.0	100.0	20.0
60	19.0	40.0	8.5	100.0	100.0	100.0
61	24.0	40.0	9.5	100.0	100.0	100.0
62	40.0	40.0	14.5	100.0	100.0	100.0
63	30.0	40.0	16.5	100.0	100.0	100.0
64	30.0	40.0	19.0	100.0	100.0	100.0
65	30.0	40.0	24.0	100.0	100.0	100.0
66	30.0	40.0	20.0	100.0	100.0	100.0
67	40.0	40.0	20.0	100.0	100.0	100.0
68	50.0	50.0	20.0	100.0	100.0	100.0
69	80.0	80.0	20.0	100.0	100.0	100.0
70	100.0	100.0	100.0	100.0	100.0	100.0

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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**Changes in Actuarial Assumptions and Methods (continued):**

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

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

General: Age 58

Safety: Age 53

We assumed that 50% of deferred vested members will continue to work for a reciprocal employer. For reciprocals, we assume 4.25% compensation increases per annum.

**Percent Married:**

80% of male members and 60% of female members are assumed to be married at retirement or pre-retirement death.

**Net Investment Return:**

7.75%; net of administration and investment expenses.

**Salary Scale:**

Annual Rate of Compensation Increase

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Inflation: 3.50% per year; plus "Across the Board" salary increases of 0.75% per year; plus Merit and Promotion increases as follows:

Years of Service	General	Safety
0	6.00%	8.00%
1	5.00	4.75
2	4.00	3.75
3	3.00	2.75
4	2.00	1.75
5+	0.50	0.75

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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**EXHIBIT VI**

**Summary of Plan Provisions**

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

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<b>Membership Eligibility:</b>	All permanent employees of the County of Sonoma or contracting district, scheduled to work at least 50% of a full-time position are eligible to become a member of the Retirement Association.
<i>Non-CalPEPRA</i>	All General and Safety members with membership dates before January 1, 2013.
<i>CalPEPRA</i>	All General and Safety members with membership dates on or after January 1, 2013.

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<b>Final Compensation for Benefit Determination:</b>	
<i>Non-CalPEPRA</i>	Highest consecutive one year of compensation earnable (§31462.1)(FAC1).
<i>CalPEPRA</i>	Highest consecutive three years of pensionable compensation (§7522.10(c), §7522.32 and §7522.34)(FAC3).

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**Service:** Years of service (Yrs).

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<b>Service Retirement Eligibility:</b>	
<i>General</i>	
<i>Non-CalPEPRA</i>	Age 50 with 10 years of service credit, or age 70 regardless of service credit, or after 30 years of service credit, regardless of age (§31672).
<i>CalPEPRA</i>	Age 52 with 5 years of service credit (§7522.20(a)).
<i>Safety</i>	
<i>Non-CalPEPRA</i>	Age 50 with 10 years of service credit, or age 70 regardless of service credit, or after 30 years of service credit, regardless of age (§31672).
<i>CalPEPRA</i>	Age 50 with 5 years of service credit (§7522.25(d)).

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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**Benefit Formula:**

	<b>Retirement Age</b>	<b>Benefit Formula</b>
<i>General – County (§31676.17)</i>	50	$(2.00\% \times \text{FAC1} - 1/3 \times 2.00\% \times \$350 \times 12) \times \text{Yrs}$
	55	$(2.50\% \times \text{FAC1} - 1/3 \times 2.50\% \times \$350 \times 12) \times \text{Yrs}$
	60 or later	$(3.00\% \times \text{FAC1} - 1/3 \times 3.00\% \times \$350 \times 12) \times \text{Yrs}$
<i>General – Court (§31676.17)</i>	50	$(2.00\% \times \text{FAC1} - 1/3 \times 2.00\% \times \$350 \times 12) \times \text{Yrs}$
	55	$(2.50\% \times \text{FAC1} - 1/3 \times 2.50\% \times \$350 \times 12) \times \text{Yrs}$
	60 or later	$(3.00\% \times \text{FAC1} - 1/3 \times 3.00\% \times \$350 \times 12) \times \text{Yrs}$
<i>General – Valley of the Moon (§31676.17)</i>	50	$2.00\% \times \text{FAC1} \times \text{Yrs}$
	55	$2.50\% \times \text{FAC1} \times \text{Yrs}$
	60 or later	$3.00\% \times \text{FAC1} \times \text{Yrs}$
<i>General – CalPEPRA (§7522.20(a))</i>	52	$1.00\% \times \text{FAC3} \times \text{Yrs}$
	55	$1.30\% \times \text{FAC3} \times \text{Yrs}$
	60	$1.80\% \times \text{FAC3} \times \text{Yrs}$
	62	$2.00\% \times \text{FAC3} \times \text{Yrs}$
	65	$2.30\% \times \text{FAC3} \times \text{Yrs}$
	67 or later	$2.50\% \times \text{FAC3} \times \text{Yrs}$

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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	<b>Retirement Age</b>	<b>Benefit Formula</b>
<i>Safety – County (§31664.1)</i>	50	$(3.00\% \times \text{FAC1} - 1/3 \times 3.00\% \times \$350 \times 12) \times \text{Yrs}$
	55	$(3.00\% \times \text{FAC1} - 1/3 \times 3.00\% \times \$350 \times 12) \times \text{Yrs}$
	60 or later	$(3.00\% \times \text{FAC1} - 1/3 \times 3.00\% \times \$350 \times 12) \times \text{Yrs}$
<i>Safety – Valley of the Moon (§31664.1)</i>	50	$3.00\% \times \text{FAC1} \times \text{Yrs}$
	55	$3.00\% \times \text{FAC1} \times \text{Yrs}$
	60 or later	$3.00\% \times \text{FAC1} \times \text{Yrs}$
<i>Safety – CalPEPRA (§7522.25(d))</i>	50	$2.00\% \times \text{FAC3} \times \text{Yrs}$
	55	$2.50\% \times \text{FAC3} \times \text{Yrs}$
	57 or later	$2.70\% \times \text{FAC3} \times \text{Yrs}$
<b>Maximum Benefit:</b>		
<i>Non-CalPEPRA</i>	100% of Final Average Compensation (§31676.17, §31664.1)	
<i>CalPEPRA</i>	None	

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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**Non Service Connected Disability:**

*General Members*

*Eligibility*

Five years of service (§31720).

*Benefit Formula*

1.8% of FAC per year of service. If the benefit does not exceed one-third of Final Average Compensation, the service is projected to 62, and the total benefit cannot be more than one-third of Final Average Compensation (§31727.1). The Service Retirement benefit is payable, if greater.

*Safety Members*

*Eligibility*

Five years of service (§31720).

*Benefit Formula*

1.8% of FAC per year of service. If the benefit does not exceed one-third of Final Average Compensation, the service is projected to 55, and the total benefit cannot be more than one-third of Final Average Compensation (§31727.2). The Service Retirement benefit is payable, if greater.

---

**Service Connected Disability:**

*All Members*

*Eligibility*

No age or service requirements (§31720).

*Benefit Formula*

50% of the Final Average Compensation or 100% of Service Retirement benefit, if larger (§31727.4).

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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**Pre-Retirement Death:**

All Members

<i>Eligibility</i>	None.
<i>Basic lump sum benefit</i>	Refund of employee contributions with interest, plus one month's compensation for each year of service, to a maximum of six months' compensation (§31781).
<i>Service Connected Death</i>	50% of Final Compensation or 100% of Service Retirement benefit, if greater, payable to spouse or registered domestic partner (§31787).

OR

Vested Members

<i>Eligibility</i>	Five years of service.
<i>Basic benefit</i>	60% of the greater of Service or Non Service Connected Disability Retirement benefit payable to surviving eligible spouse or registered domestic partner (§31765.1, §31781.1), in lieu of the basic lump sum benefit above.
<i>Service Connected Death</i>	50% of Final compensation or 100% of Service Retirement benefit, if greater, payable to spouse or registered domestic partner (§31787).

---

**Death After Retirement:**

All Members

<i>Service or Non Service Connected Disability Retirement</i>	60% of member's unmodified allowance continued to eligible spouse or registered domestic partner (§31760.1).
<i>Service Connected Disability Retirement</i>	100% of member's unmodified allowance continued to eligible spouse or registered domestic partner (§31786).

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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**Withdrawal Benefits:**

<i>Less than Five Years of Service</i>	Refund of accumulated employee contributions with interest, or earned benefit at age 70 (§31628). A member may also elect to leave contributions on deposit in the retirement fund (§31629.5).
<i>Five or More Years Service</i>	If contributions left on deposit, eligible for retirement benefits at any time after meeting eligibility criteria to retire (§31700).

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**County Contributions:**

The amortization period for the outstanding balance of the December 31, 2007 Unfunded Actuarial Accrued Liability as well as for UAAL established on each subsequent valuation as a result of actuarial gains or losses and changes in actuarial assumptions is amortized over a declining 20-year period. The amortization period for UAAL established as a result of including as pensionable salary a cash allowance is amortized over a declining 20-year period with 15 years remaining as of December 31, 2012.

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**Member Contributions:**

	Please refer to Appendix A for the specific rates.
<i>General – Non-CalPEPRA</i>	Provide for an average annuity at age 55 equal to 1/100 of FAC. (§31621.8)
<i>General – CalPEPRA</i>	50% of the total Normal Cost rate.
<i>Safety – Non-CalPEPRA</i>	Provide for an average annuity at age 50 equal to 1/100 of FAC. (§31639.25)
<i>Safety – CalPEPRA</i>	50% of the total Normal Cost rate.
<i>Additional Contributions</i>	
<i>    General – County and Courts</i>	An additional amount equal to 3.03% of payroll will be paid from July 1, 2004 to June 30, 2024.
<i>    Safety – County</i>	An additional amount equal to 3.00% of payroll will be paid effective February 1, 2005.



**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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**Other Information:** Non-CalPEPRA Safety members with 30 or more years of service are exempt from paying member contributions. The same applies for General members hired on or before March 7, 1973.

**Plan Amendment:** All members with membership dates on or after January 1, 2013 enter either General or Safety CalPEPRA Plan.

**NOTE:** *The summary of major plan provisions is designed to outline principle 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 they can both be sure the proper provisions are valued.*

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

**Appendix A**

**Member Contribution Rates**

Comparison of Total Member Rate<sup>(1)</sup> from December 31, 2012 (New) and December 31, 2011 (Current) Valuations

General Non-CalPEPRA<sup>(2)</sup>

Entry Age	Current	New	Change
25	7.51%	7.75%	<b>0.24%</b>
35	8.84%	9.12%	<b>0.28%</b>
45	10.46%	10.77%	<b>0.31%</b>

General CalPEPRA<sup>(2)</sup>

Entry Age	Current	New	Change
Any <sup>(3)</sup>	7.25%	7.25%	<b>0.00%</b>

Safety Non-CalPEPRA<sup>(4)</sup>

Entry Age	Current	New	Change
25	8.76%	8.76%	<b>0.00%</b>
35	10.15%	10.31%	<b>0.16%</b>
45	11.93%	12.31%	<b>0.38%</b>

Safety CalPEPRA<sup>(4)</sup>

Entry Age	Current	New	Change
Any <sup>(3)</sup>	11.75%	11.75%	<b>0.00%</b>

<sup>(1)</sup> Contributions for the first \$350 of monthly payroll are based on 2/3 of the above rates.

<sup>(2)</sup> Rates exclude an additional 3.03% of payroll payable from July 1, 2004 to June 30, 2024 for County and Court members only.

<sup>(3)</sup> CalPEPRA member rates are independent of entry age.

<sup>(4)</sup> Rates exclude an additional 3.00% of payroll payable effective February 1, 2005 for County members only.

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

**Appendix A**

**Member Contribution Rates (continued)**

**General Members' Contribution Rates from the December 31, 2012 Actuarial Valuation  
(As a Percentage of Monthly Payroll)**

<u>Entry Age</u>	<u>Non-CalPEPRA</u>		<u>CalPEPRA</u>	
	<u>First \$350*</u>	<u>Over \$350</u>	<u>All Members</u>	<u>All Eligible Pay**</u>
16	4.45%	6.67%	All Members	7.25%
17	4.53%	6.79%		
18	4.60%	6.90%		
19	4.68%	7.02%		
20	4.76%	7.14%		
21	4.84%	7.26%		
22	4.92%	7.38%		
23	5.00%	7.50%		
24	5.08%	7.63%		
25	5.17%	7.75%		
26	5.25%	7.88%		
27	5.34%	8.01%		
28	5.43%	8.14%		
29	5.52%	8.28%		
30	5.61%	8.41%		
31	5.70%	8.55%		
32	5.79%	8.69%		
33	5.89%	8.83%		
34	5.98%	8.98%		
35	6.08%	9.12%		
36	6.18%	9.27%		
37	6.28%	9.42%		
38	6.38%	9.58%		
39	6.49%	9.73%		
40	6.60%	9.90%		
41	6.71%	10.06%		

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

**Appendix A**

**Member Contribution Rates (continued)**

**General Members' Contribution Rates from the December 31, 2012 Actuarial Valuation  
(As a Percentage of Monthly Payroll)**

<b>Non-CalPEPRA</b>		
<b>Entry Age</b>	<b>First \$350*</b>	<b>Over \$350</b>
42	6.82%	10.23%
43	6.93%	10.40%
44	7.05%	10.58%
45	7.18%	10.77%
46	7.31%	10.96%
47	7.45%	11.17%
48	7.60%	11.40%
49	7.76%	11.64%
50	7.88%	11.82%
51	7.95%	11.92%
52	7.94%	11.91%
53	7.85%	11.78%
54 & Over	7.63%	11.44%

Interest: 7.50%

COLA: 0.00%

Mortality: RP-2000 Combined Healthy Mortality Table projected to 2015 with Scale AA setback two years weighted 30% male and 70% female

Salary Increase: Inflation (3.25%) + Across the board increase (0.75%) + Merit (see Exhibit V)

**Note: The above rates exclude an additional 3.03% of payroll payable from July 1, 2004 to June 30, 2024 for County and Court members only.**

\* For integrated members only.

\*\* It is our understanding that in the determination of pension benefits under the CalPEPRA formulas, the compensation that can be taken into account for 2013 is equal to the Social Security Taxable Wage Base or \$113,700. (For an employer that is not enrolled in Social Security, the maximum amount is \$136,440 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 2013. (reference: Section 7522.10(d)).

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

**Appendix A**

**Member Contribution Rates (continued)**

**Safety Members' Contribution Rates from the December 31, 2012 Actuarial Valuation  
(As a Percentage of Monthly Payroll)**

<u>Entry Age</u>	<u>Non-CalPEPRA</u>		<u>CalPEPRA</u>	
	<u>First \$350*</u>	<u>Over \$350</u>	<u>All Members</u>	<u>All Eligible Pay**</u>
16	5.04%	7.56%	All Members	11.75%
17	5.12%	7.68%		
18	5.21%	7.81%		
19	5.29%	7.94%		
20	5.38%	8.07%		
21	5.47%	8.21%		
22	5.56%	8.34%		
23	5.65%	8.48%		
24	5.75%	8.62%		
25	5.84%	8.76%		
26	5.94%	8.90%		
27	6.03%	9.05%		
28	6.13%	9.20%		
29	6.23%	9.35%		
30	6.33%	9.50%		
31	6.44%	9.66%		
32	6.54%	9.81%		
33	6.65%	9.98%		
34	6.76%	10.14%		
35	6.87%	10.31%		
36	6.99%	10.48%		
37	7.10%	10.66%		
38	7.23%	10.84%		
39	7.35%	11.03%		
40	7.48%	11.22%		
41	7.62%	11.43%		

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

**Appendix A**

**Member Contribution Rates (continued)**

**Safety Members' Contribution Rates from the December 31, 2012 Actuarial Valuation  
(As a Percentage of Monthly Payroll)**

<b>Entry Age</b>	<b>Non-CalPEPRA</b>	
	<b>First \$350*</b>	<b>Over \$350</b>
42	7.77%	11.65%
43	7.92%	11.89%
44	8.10%	12.15%
45	8.21%	12.31%
46	8.26%	12.39%
47	8.26%	12.38%
48	8.18%	12.27%
49 & Over	7.80%	11.70%

Interest: 7.50%

COLA: 0.00%

Mortality: RP-2000 Combined Healthy Mortality Table projected to 2015 with Scale AA weighted 75% male and 25% female

Salary Increase: Inflation (3.25%) + Across the board increase (0.75%) + Merit (see Exhibit V)

**Note: The above rates exclude an additional 3.00% of payroll payable effective February 1, 2005 for County members only.**

\* For integrated members only.

\*\* It is our understanding that in the determination of pension benefits under the CalPEPRA formulas, the compensation that can be taken into account for 2013 is equal to the Social Security Taxable Wage Base or \$113,700. (For an employer that is not enrolled in Social Security, the maximum amount is \$136,440 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 2013. (reference: Section 7522.10(d)).

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

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**Appendix B**

**Schedule of Additional (non-SCERA) Employer Contributions**

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As requested by SCERA, we have provided the following additional employer contributions made by the employer to other outside parties. These rates are provided by the employer and we have not audited them against any other sources.

The County's total contributions toward retirement benefits include the contributions shown in this report which are paid to SCERA, along with payments to holders of Pension Obligation Bonds issued by the County in 1993, 2003 and 2010. The 1993 Pension Obligation Bond will be paid-off in 2012/2013; therefore, the rates for 2013/2014 include only the payments for the 2003 and 2010 Pension Obligation Bonds. According to information supplied by the County, these contributions are projected to be made at the following percentage of covered payroll:

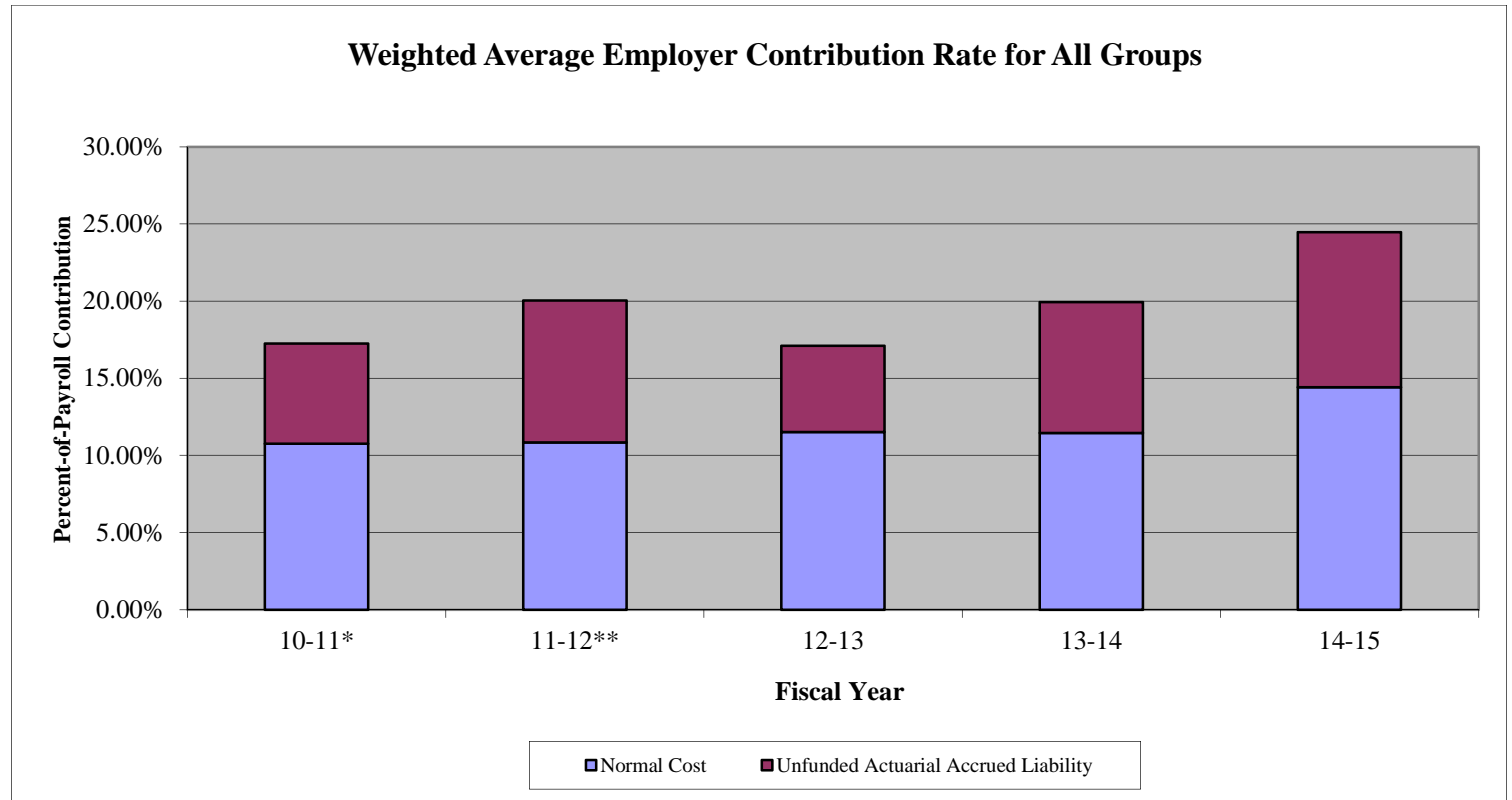
<b>Pension Obligation Bonds</b>	
<u>Fiscal Year</u>	<u>Rate as % of Payroll</u>
2007/2008	8.31%
2008/2009	8.11%
2009/2010	8.15%
2010/2011	15.55%
2011/2012	General – 15.43%, Safety – 16.83%
2012/2013	General – 15.95%, Safety – 17.80%
2013/2014	General – 13.69%, Safety – 13.88%
2014/2015	Not Yet Available

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

**Appendix C**

**Average Employer Contribution Rates**

The following chart displays the historical average employer contribution rates, broken down by normal cost and unfunded actuarial accrued liability. These rates have not been adjusted for any contribution rate phase-in (if applicable). The unfunded actuarial accrued liability rate for 2012-2013 reflects the Pension Obligation Bonds issued by the County around September 2010.



\* Before reflecting Pension Obligation Bonds issued in 2010. Employer contribution rate after reflecting Pension Obligation Bonds is 11.78%.

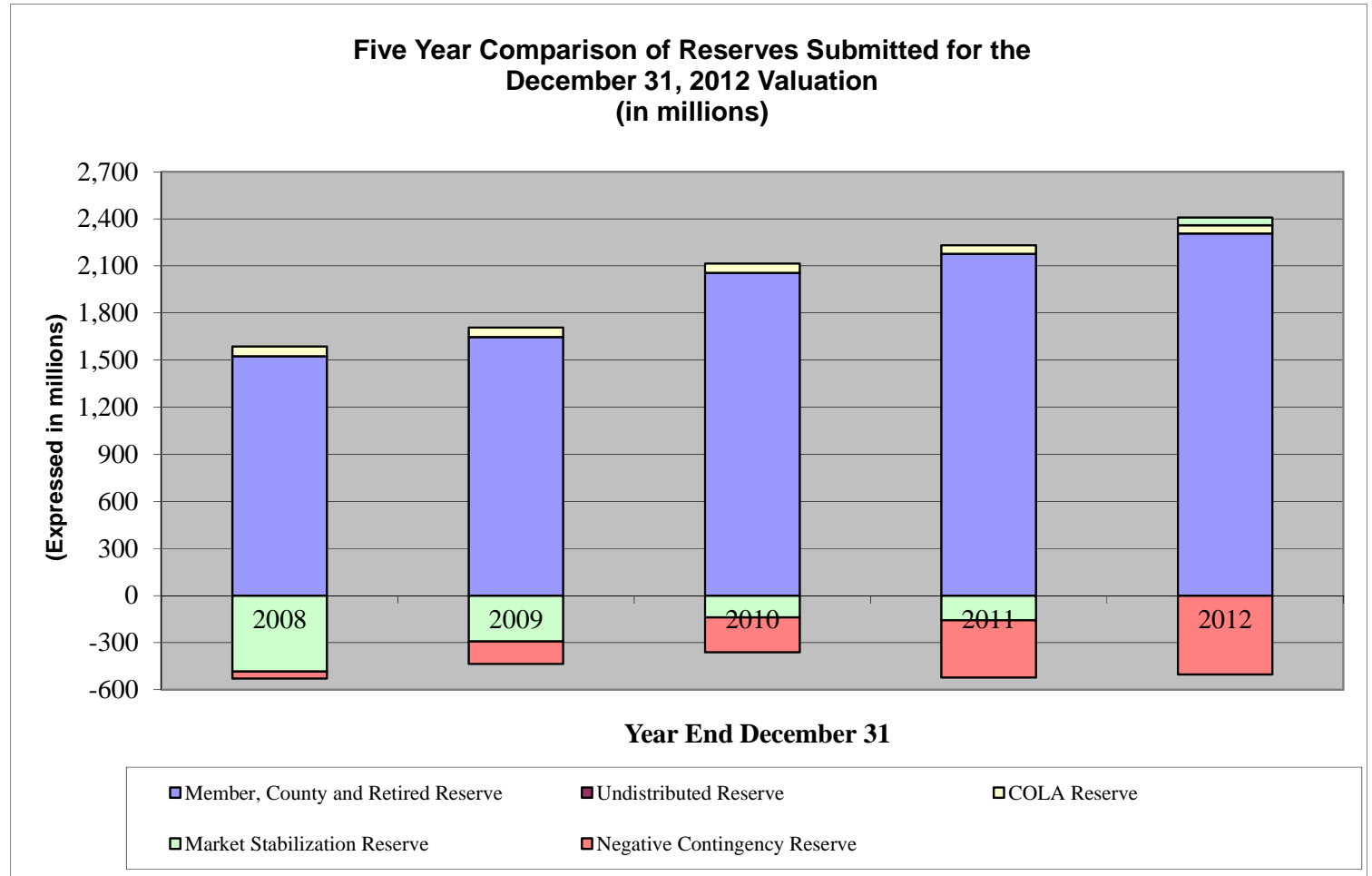
\*\* Before reflecting Pension Obligation Bonds issued in 2010. Employer contribution rate after reflecting Pension Obligation Bonds is 13.74%.



**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

**Appendix D  
Reserves**

The following chart displays the 5-year historical reserves balance after “true-up”.



**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

**Appendix E**

**Amortization Schedule for UAAL (Dollar Amounts in Thousands)**

	<b>Date Established</b>	<b>Source</b>	<b>Initial Amount</b>	<b>Outstanding Balance</b>	<b>Years Remaining</b>	<b>Annual Payment<sup>(3)</sup></b>
<b>General</b>	December 31, 2007	Restart amortization - County	\$123,396	\$34,852 <sup>(2)</sup>	16	\$2,870
	December 31, 2007	Restart amortization - Court	8,599	8,543	16	703
	December 31, 2007 <sup>(1)</sup>	Cash Allowance - County	55,982	15,880 <sup>(2)</sup>	15	1,374
	December 31, 2008	Actuarial loss - County	44,591	12,735 <sup>(2)</sup>	16	1,049
	December 31, 2008	Actuarial loss - Court	3,107	3,122	16	257
	December 31, 2009 <sup>(1)</sup>	Early Retirement Option - County	1,448	415 <sup>(2)</sup>	17	33
	December 31, 2009	Actuarial loss - County	45,691	13,090 <sup>(2)</sup>	17	1,030
	December 31, 2009	Actuarial loss - Court	2,859	2,881	17	227
	December 31, 2009	Actuarial loss - VOM	13	13	17	1
	December 31, 2009	Assumption changes - County	10,990	3,149 <sup>(2)</sup>	17	248
	December 31, 2009	Assumption changes - Court	688	693	17	55
	December 31, 2009	Assumption changes - VOM	3	3	17	0
	December 31, 2010	Actuarial loss - County	48,235	48,597	18	3,666
	December 31, 2010	Actuarial loss - Court	3,044	3,067	18	231
	December 31, 2010	Actuarial loss - VOM	14	14	18	1
	December 31, 2010	Assumption changes - County	37,393	37,674	18	2,842
	December 31, 2010	Assumption changes - Court	2,360	2,378	18	179
	December 31, 2010	Assumption changes - VOM	11	11	18	1
	December 31, 2011	Actuarial loss - County	74,087	74,464	19	5,401
	December 31, 2011	Actuarial loss - Court	4,760	4,784	19	347
	December 31, 2011	Actuarial loss - VOM	23	23	19	2
	December 31, 2012	Actuarial loss - County	71,616	71,616	20	5,008
	December 31, 2012	Actuarial loss - Court	4,188	4,188	20	293
	December 31, 2012	Actuarial loss - VOM	99	99	20	7
	December 31, 2012	Assumption changes - County	64,345	64,345	20	4,499
	December 31, 2012	Assumption changes - Court	3,763	3,763	20	263
	December 31, 2012	Assumption changes - VOM	89	89	20	6
	December 31, 2012	Compensation earnable change - County	(8,157)	(8,157)	20	(570)
	December 31, 2012	Compensation earnable change - Court	(477)	(477)	20	(33)
	December 31, 2012	Compensation earnable change - VOM	(11)	(11)	20	(1)
<b>Subtotal</b>				<u>\$401,845</u>		<u>\$29,989</u>

<sup>(1)</sup> Payment is only made by the County and not by the Court or Valley of the Moon because the programs were only available to County employees.

<sup>(2)</sup> Adjusted to reflect \$289.3 million in proceeds from issuance of Pension Obligation Bonds by the County.

<sup>(3)</sup> Before adjustments for supplemental contributions paid by certain employees to reduce the employer's UAAL.

**SECTION 4: Reporting Information for the Sonoma County Employees' Retirement Association**

**Appendix E (continued)**

**Amortization Schedule for UAAL (Dollar Amounts in Thousands)**

	<b>Date Established</b>	<b>Source</b>	<b>Initial Amount</b>	<b>Outstanding Balance</b>	<b>Years Remaining</b>	<b>Annual Payment<sup>(3)</sup></b>
<b>Safety – County</b>	December 31, 2007	Restart amortization	\$43,504	\$12,286 <sup>(2)</sup>	16	\$1,012
	December 31, 2008	Actuarial loss	7,603	2,171 <sup>(2)</sup>	16	179
	December 31, 2007 <sup>(1)</sup>	Cash Allowance	14,693	4,168 <sup>(2)</sup>	15	361
	December 31, 2009	Actuarial loss	28,643	8,206 <sup>(2)</sup>	17	646
	December 31, 2009	Assumption changes	7,337	2,103 <sup>(2)</sup>	17	165
	December 31, 2010	Actuarial loss	14,765	14,876	18	1,122
	December 31, 2010	Assumption changes	14,376	14,484	18	1,092
	December 31, 2011	Actuarial loss	24,746	24,872	19	1,804
	December 31, 2012	Actuarial loss	26,012	26,012	20	1,819
	December 31, 2012	Assumption changes	12,268	12,268	20	858
	December 31, 2012	Compensation earnable change	(2,613)	<u>(2,613)</u>	20	<u>(183)</u>
<b>Subtotal</b>				\$118,833		\$8,875
<b>Safety – Valley of the Moon</b>	December 31, 2007	Restart amortization	\$1,852	\$1,840	16	\$152
	December 31, 2008	Actuarial loss	169	170	16	14
	December 31, 2009	Actuarial loss	678	683	17	54
	December 31, 2009	Assumption changes	174	175	17	14
	December 31, 2010	Actuarial loss	344	347	18	26
	December 31, 2010	Assumption changes	335	338	18	25
	December 31, 2011	Actuarial loss	639	642	19	47
	December 31, 2012	Actuarial loss	1,444	1,444	20	101
	December 31, 2012	Assumption changes	681	681	20	48
	December 31, 2012	Compensation earnable change	(145)	<u>(145)</u>	20	<u>(10)</u>
<b>Subtotal</b>				\$6,175		\$471

<sup>(1)</sup> Payment is only made by the County and not by the Court or Valley of the Moon because the programs were only available to County employees.

<sup>(2)</sup> Adjusted to reflect \$289.3 million in proceeds from issuance of Pension Obligation Bonds by the County.

<sup>(3)</sup> Before adjustments for supplemental contributions paid by certain employees to reduce the employer's UAAL.

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