

# **Ventura County Employees' Retirement Association**

**Actuarial Valuation and Review  
as of June 30, 2016**



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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*December 20, 2016*

*Board of Retirement  
Ventura County Employees' Retirement Association  
1190 S. Victoria Avenue, Suite 200  
Ventura, CA 93003-6572*

*Dear Board Members:*

*We are pleased to submit this Actuarial Valuation and Review as of June 30, 2016. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2017-2018 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 provided by the Retirement Association. That assistance is gratefully acknowledged.*

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

*The actuarial calculations were completed under the supervision of John Monroe, ASA, EA, MAAA. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Plan.*

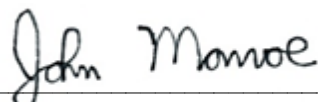
*We look forward to reviewing this report at your next meeting and to answering any questions.*

*Sincerely,*

*Segal Consulting, a Member of The Segal Group, Inc.*

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

*AW/jl*

  
\_\_\_\_\_  
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Vice President and Actuary*

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

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### Purpose and Scope

This report has been prepared by Segal Consulting to present a valuation of the Ventura County Employees' Retirement Association (VCERA) as of June 30, 2016. 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 VCERA;
- The characteristics of covered active members, terminated vested members, and retired members and beneficiaries as of June 30, 2016, provided by VCERA;
- The assets of the Plan as of June 30, 2016, provided by VCERA;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

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

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

*Ref: Pg. 59*

The contribution requirements are determined as a percentage of payroll. The Association's employer rates provide for both normal cost and a contribution to amortize any unfunded or overfunded actuarial accrued liabilities. In 2004, the Board elected to amortize the Association's Unfunded Actuarial Accrued Liability (UAAL) as of June 30, 2004 over a declining 15-year period. Any change in the UAAL after June 30, 2004 is amortized over separate 15-year declining amortization periods.

*Ref: Pgs. 42-45*

Effective with the June 30, 2012 valuation, any change in the UAAL that arises due to assumption changes is amortized over separate 20-year declining amortization periods. Also, any change in the UAAL that arises due to retirement incentives is annualized over separate declining amortization period of up to 5 years. A schedule of current amortization amounts may be found in Section 3, Exhibit I.

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

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The rates calculated in this report may be adopted by the Board for the fiscal year that extends from July 1, 2017 through June 30, 2018.

The Actuarial Standards Board has adopted a revised Actuarial Standard of Practice (ASOP) No. 4 that provides guidelines for actuaries to follow when measuring pension obligations. For a plan such as that offered by the Retirement Association that may use undesignated excess earnings to provide supplemental benefits, the valuation report must indicate that the impact of any such future use of undesignated excess earnings on the future financial condition of the plan has not been explicitly measured or otherwise reflected in the valuation. However, it should be noted that under the Board's Interest Crediting Policy, the balance of \$1.02 billion (negative) in the Contra Account has to be fully restored out of future excess earnings before any subsequent earnings can be used to provide for any supplemental benefits.

### Significant Issues in this Valuation

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

*Ref: Pgs. 16, 68*

- In this report, the employer and member contribution rates shown in Chart 14 and Appendix A are calculated based on a 50/50 sharing of Normal Cost for both PEPRA and non-PEPRA Tiers. For purposes of these calculations, we have been previously directed by VCERA to assume that the cessation of member contributions after 30 years of service for non-PEPRA members continues per the County Employees Retirement Law (CERL) and that the cost associated with this provision is to be paid for by employers.

*Ref: Pgs. 70-76*

The employer and member contribution rates calculated under the prior method (i.e., no 50/50 sharing of Normal Cost for non-PEPRA tiers) are shown in Appendix C and Appendix D, respectively.

*Ref: Pg. 10*

- The market value of assets earned a return of 0.5% for the July 1, 2015 to June 30, 2016 plan year. The valuation value of assets earned a return of 6.5% for the same period due to the deferral of most of the current year investment loss and the recognition of prior investment gains and losses. This resulted in an actuarial loss when measured against the assumed rate of return of 7.50% for the 2015/2016 year. This actuarial investment loss increased the average employer contribution rate by 0.53% of payroll.

*Ref: Pg. 23*

- The ratio of the valuation value of assets to actuarial accrued liabilities increased from 83.1% to 84.9%. The Association's UAAL decreased from \$876 million as of June 30, 2015 to \$813 million as of June 30, 2016. This decrease is primarily due to contributions paying down a portion of the UAAL, lower than expected individual salary increase for actives and lower than expected benefit increases for retirees and beneficiaries. The decrease is offset to some extent by the investment loss (on the valuation value of assets). A complete reconciliation of the Association's UAAL is provided in Section 3, Exhibit H.

*Ref: Pg. 41*

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

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*Ref: Pg. 20*

- The average employer rate decreased from 27.77% of payroll to 27.52% of payroll. This decrease is primarily due to lower than expected individual salary increases for actives and lower than expected benefit increases for retirees and beneficiaries offset to some extent by the investment loss (on the valuation value of assets). A complete reconciliation of the Association's employer rate is provided in Section 2, Subsection D, Chart 15.

As previously adopted by the Board, we have continued to calculate the Basic and COLA UAAL rates on a combined basis for all General Tiers. This results in more stable UAAL rates for General Tier 1.

*Ref: Pg. 21*

- The average member rate decreased from 10.24% of payroll in the June 30, 2015 valuation to 10.10% of payroll in the June 30, 2016 valuation. This decrease was mainly the result of a change in the membership demographics. A complete reconciliation of the member rate is provided in Section 2, Subsection D, Chart 16.

*Ref: Pg. 5*

- As indicated in Section 2, Subsection B, Chart 7 of this report, the net unrecognized investment loss as of June 30, 2016 is \$206 million as compared to an unrecognized gain of \$54 million in the June 30, 2015 valuation. This investment loss will be recognized in the determination of the valuation value of assets for funding purposes over the next few years. This means that even if the plan earns the current assumed rate of investment return of 7.50% per year (net of expenses) on a **market value** basis then the deferred losses will be recognized over the next few years as shown in the footnote to Chart 7.
- The June 30, 2016 unrecognized investment losses of \$206 million represents about 4.7% of the market value of assets. Unless offset by future investment gains or other favorable experience, the recognition of the \$206 million market losses is expected to have an impact on the Association's future funded ratio and average employer contribution rate. This potential impact may be illustrated as follows:
  - If the net deferred losses were recognized immediately in the valuation value of assets, the funded ratio would decrease from 84.9% to 81.1%.

For comparison purposes, if all the deferred gains in the June 30, 2015 valuation had been recognized immediately in the June 30, 2015 valuation, the funded ratio would have increased from 83.1% to 84.1%.
  - If the net deferred losses were recognized immediately in the valuation value of assets, the average employer rate would increase from 27.52% to about 30.12% of payroll.

For comparison purposes, if all the deferred gains in the June 30, 2015 valuation had been recognized immediately in the June 30, 2015 valuation, the average employer rate would have decreased from 27.77% to about 27.06% of payroll.
- The actuarial valuation report as of June 30, 2016 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.

## **SECTION 1: Valuation Summary for the Ventura 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:

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

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

**Summary of Key Valuation Results (all dollar amounts in thousands)**

	June 30, 2016		June 30, 2015	
<b>Employer Contribution Rates: <sup>(1)</sup></b>				
	Total Rate	Estimated Annual Amount <sup>(2)</sup>	Total Rate	Estimated Annual Amount <sup>(2)</sup>
General Tier 1	24.40%	\$1,910	23.85%	\$2,060
General Tier 2	16.54%	35,503	16.80%	35,864
General PEPRA Tier 2	16.39%	5,776	16.67%	3,666
General Tier 2C <sup>(3)</sup>	20.72%	44,794	20.52%	45,829
General PEPRA Tier 2C <sup>(3)</sup>	20.50%	13,149	20.33%	8,361
General Combined	18.79%	101,132	18.84%	95,780
Safety	55.66%	86,496	54.56%	88,725
Safety PEPRA	53.49%	6,663	52.77%	4,001
Safety Combined	55.50%	93,159	54.48%	92,726
All Categories combined	27.52%	\$194,291	27.77%	\$188,506
<b>Average Member Contribution Rates: <sup>(1)(4)</sup></b>				
	Total Rate	Estimated Annual Amount <sup>(2)</sup>	Total Rate	Estimated Annual Amount <sup>(2)</sup>
General Tier 1	10.60%	\$830	10.09%	\$872
General Tier 2	7.11%	15,265	7.16%	15,283
General PEPRA Tier 2	6.96%	2,453	7.03%	1,546
General Tier 2C <sup>(3)</sup>	9.74%	21,061	9.79%	21,861
General PEPRA Tier 2C <sup>(3)</sup>	9.59%	6,152	9.66%	3,972
Safety	15.27%	23,730	15.27%	24,832
Safety PEPRA	14.42%	1,796	14.68%	1,113
All Categories combined	10.10%	\$71,287	10.24%	\$69,479

<sup>(1)</sup> Before reflection of any member rate that may be "picked-up" by the employer. Contributions are assumed to be paid throughout the year.

<sup>(2)</sup> Based on projected compensation for each year shown.

<sup>(3)</sup> Throughout this report, this category represents those Tier 2 members who contribute a negotiated 2.63% of compensation for a fixed 2% COLA pursuant to Government Code 31627 that applies to service after March 2003.

<sup>(4)</sup> The non-refundability factors as of June 30, 2016 are 0.99 for General Tier 1 and Tier 2 (non-PEPRA) and 0.99 for Safety (non-PEPRA) compared to 0.98 for General Tier 1 and Tier 2 (non-PEPRA) and 0.99 for Safety (non-PEPRA) from June 30, 2015.



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

**Summary of Key Valuation Results (continued) (all dollar amounts in thousands)**

	June 30, 2016	June 30, 2015
<b>Funded Status:</b>		
Actuarial accrued liability(AAL) <sup>(1)</sup>	\$5,398,756	\$5,178,157
Valuation value of assets (VVA) <sup>(1)</sup>	4,585,713	4,302,330
Market value of assets (MVA)	4,386,837	4,364,795
Funded percentage on VVA basis (VVA/AAL)	84.94%	83.09%
Funded percentage on MVA basis (MVA/AAL)	81.26%	84.29%
Unfunded actuarial accrued liability (UAAL) on VVA basis	\$813,043	\$875,827
Unfunded actuarial accrued liability (UAAL) on MVA basis	1,011,919	813,362
<b>Key Assumptions:</b>		
Interest rate	7.50%	7.50%
Inflation rate	3.00%	3.00%
Across the board salary increase	0.50%	0.50%

<sup>(1)</sup> Excludes liabilities and assets held for supplemental medical benefit reserve and statutory contingency reserve.

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

### Summary of Key Valuation Demographic and Financial Data

	June 30, 2016	June 30, 2015	Percentage Change
<b>Active Members:</b>			
Number of members	8,509	8,299	2.5%
Average age	45.0	45.2	N/A
Average service	11.2	11.2	N/A
Projected total compensation	\$705,999,680	\$678,705,846	4.0%
Average projected compensation	\$82,971	\$81,782	1.5%
<b>Retired Member and Beneficiaries:</b>			
Number of members:			
Service retired	4,779	4,657	2.6%
Disability retired	826	834	-1.0%
Beneficiaries	934	847	10.3%
Total	6,539	6,338	3.2%
Average age	69.8	69.6	N/A
Average monthly benefit <sup>(1)</sup>	\$3,024	\$2,936	3.0%
<b>Vested Terminated Members:</b>			
Number of terminated vested members <sup>(2)</sup>	2,639	2,441	8.1%
Average age	46.0	46.2	N/A
<b>Total Members:</b>	<b>17,687</b>	<b>17,078</b>	<b>3.6%</b>
<b>Summary of Financial Data (dollar amounts in thousands):</b>			
Market value of assets	\$4,386,837	\$4,364,795	0.5%
Return on market value of assets	0.49%	1.98%	N/A
Actuarial value of assets	\$4,592,439	\$4,311,131	6.5%
Return on actuarial value of assets	6.51%	8.60%	N/A
Valuation value of assets	\$4,585,713	\$4,302,330	6.6%
Return on valuation value of assets	6.52%	9.82%	N/A

<sup>(1)</sup> Excludes monthly benefits for vested fixed supplemental and supplemental medical benefit amounts.

<sup>(2)</sup> Includes terminated members with member contributions on deposit.

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

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### Important Information about Actuarial Valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – the actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

In order to prepare an actuarial valuation, Segal Consulting (“Segal”) relies on a number of input items. These include:

- **Plan of benefits** Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan description in this report to confirm that Segal has correctly interpreted the plan of benefits.
- **Participant data** An actuarial valuation for a plan is based on data provided to the actuary by VCERA. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
- **Assets** This valuation is based on the market value of assets as of the valuation date, as provided by VCERA.
- **Actuarial assumptions** In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan’s assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.

The user of Segal’s actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The valuation is prepared at the request of the VCERA. Segal is not responsible for the use or misuse of its report, particularly by any other party.

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

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- An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.
- If the Association is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Board should look to their other advisors for expertise in these areas.

As Segal Consulting has no discretionary authority with respect to the management or assets of VCERA, it is not a fiduciary in its capacity as actuaries and consultants with respect to VCERA.

**SECTION 2: Valuation Results for the Ventura 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 ten valuations can be seen in this chart.*

**CHART 1**  
**Member Population: 2007 – 2016**

<b>Year Ended June 30</b>	<b>Active Members</b>	<b>Vested Terminated Members<sup>(1)</sup></b>	<b>Retired Members and Beneficiaries</b>	<b>Total Non-Actives</b>	<b>Ratio of Non-Actives to Actives</b>
2007	7,653	1,864	4,770	6,634	0.87
2008	7,928	2,007	4,914	6,921	0.87
2009	8,045	2,055	5,041	7,096	0.88
2010	8,003	2,040	5,267	7,307	0.91
2011	8,040	2,097	5,481	7,578	0.94
2012	8,019	2,161	5,658	7,819	0.98
2013	8,068	2,249	5,888	8,137	1.01
2014	8,210	2,339	6,121	8,460	1.03
2015	8,299	2,441	6,338	8,779	1.06
2016	8,509	2,639	6,539	9,178	1.08

<sup>(1)</sup> Includes terminated members with member contributions on deposit.

**SECTION 2: Valuation Results for the Ventura 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 8,509 active members with an average age of 45.0, average service of 11.2 years and average compensation of \$82,971. The 8,299 active members in the prior valuation had an average age of 45.2, average service of 11.2 years and average compensation of \$81,782.

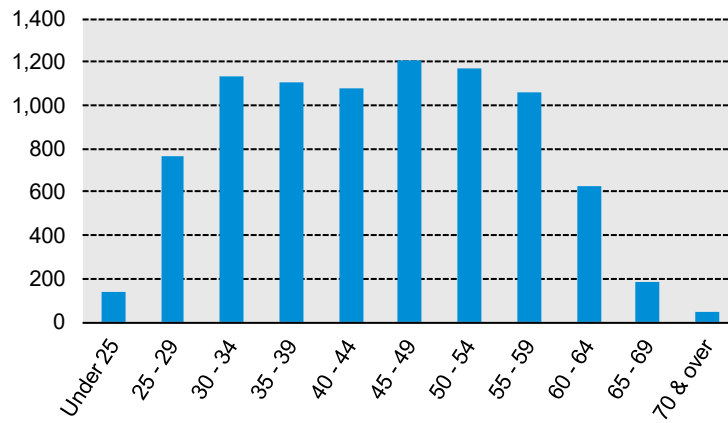
Among the active members, there were none with unknown age.

**Inactive Members**

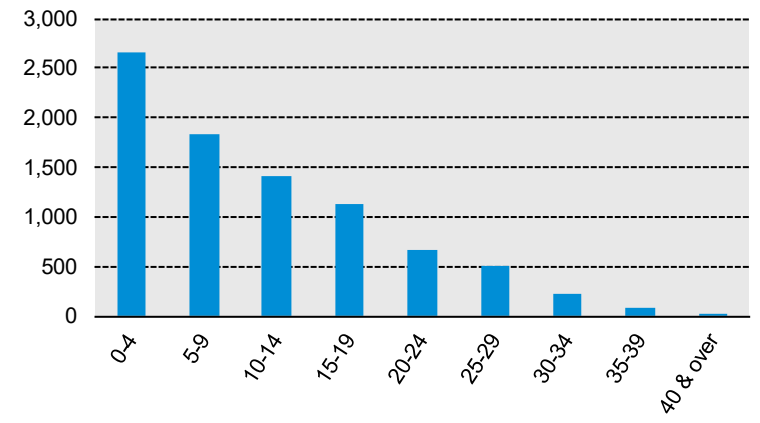
In this year's valuation, there were 2,639 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their member contributions versus 2,441 in the prior valuation.

*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 June 30, 2016**



**CHART 3**  
**Distribution of Active Members by Years of Service as of June 30, 2016**



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

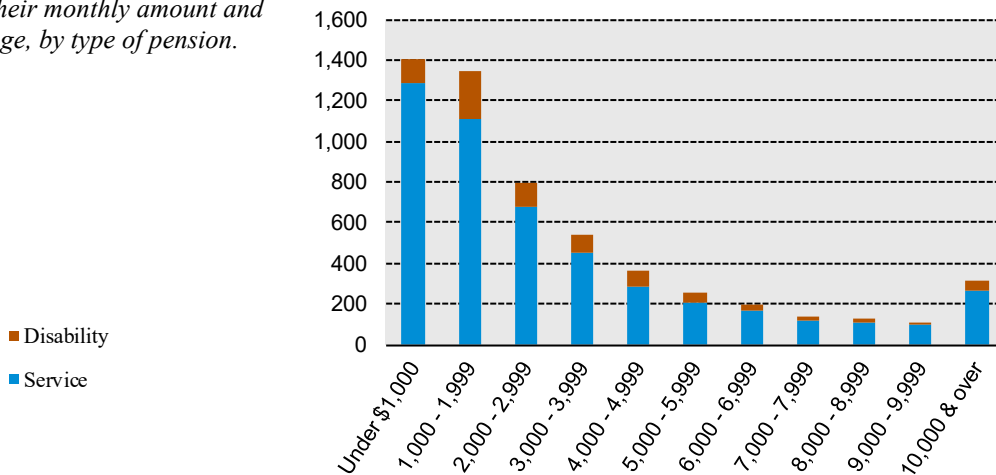
**Retired Members and Beneficiaries**

As of June 30, 2016, 5,605 retired members and 934 beneficiaries were receiving total monthly benefits of \$19,776,496. For comparison, in the previous valuation, there were 5,491 retired members and 847 beneficiaries receiving monthly benefits of \$18,609,671. These monthly benefits exclude benefits for vested fixed supplemental and supplemental medical benefit amounts.

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

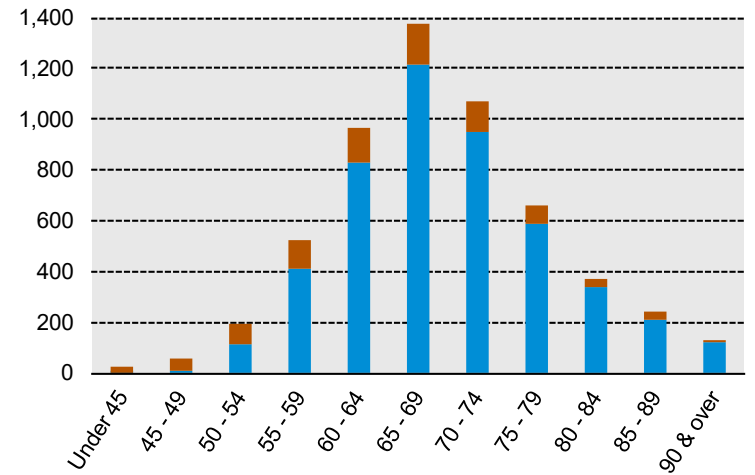
**CHART 4**

**Distribution of Retired Members by Type and by Monthly Amount as of June 30, 2016**



**CHART 5**

**Distribution of Retired Members by Type and by Age as of June 30, 2016**



**SECTION 2: Valuation Results for the Ventura 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.

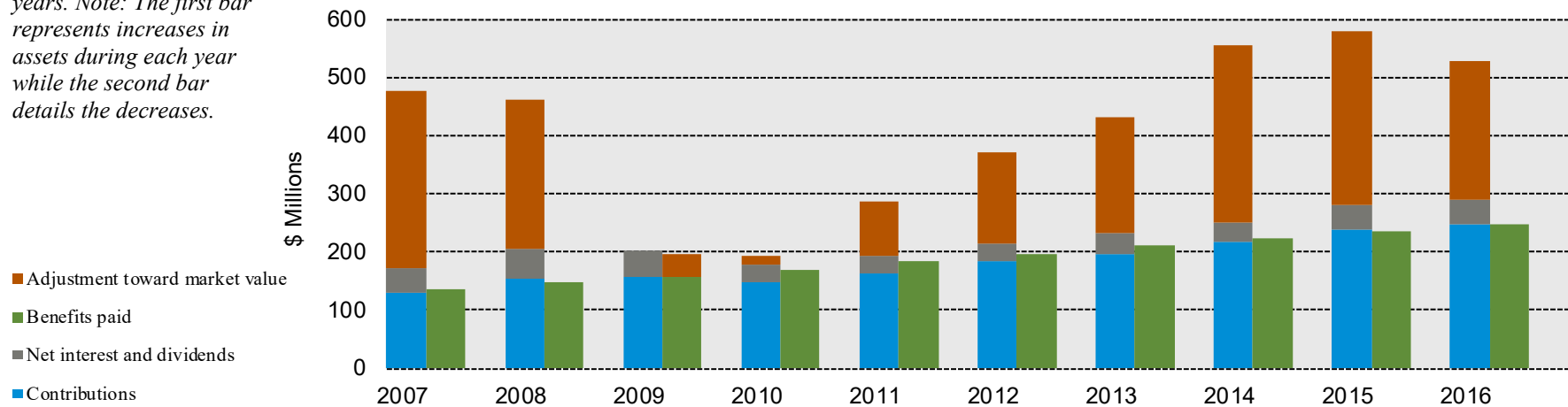
Retirement plan assets change as a result of the net impact of these income and expense components. The adjustment toward market value shown in the chart is the “non-cash” earnings on investments implicitly included in the actuarial value of assets. Additional financial information, including a summary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

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

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

*The chart depicts the components of changes in the actuarial value of assets over the last ten 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 June 30, 2007 – 2016**





## SECTION 2: Valuation Results for the Ventura 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 June 30, 2016

Six Month Period		Total Actual Market Return (net)	Expected Market Return (net)	Investment Gain (Loss)	Deferred Factor	Deferred Return <sup>(1)</sup>
From	To					
6/2011	Combined net deferred loss <sup>(2)</sup>			\$(63,892,227)	0.0	\$0
7/2011	12/2011	\$(156,476,001)	\$127,074,122	(283,550,123)	0.0	0
1/2012	6/2012	203,623,364	120,287,707	83,335,657	0.1	8,333,566
7/2012	12/2012	230,080,850	128,592,180	101,488,670	0.2	20,297,734
1/2013	6/2013	203,932,155	137,287,941	66,644,214	0.3	19,993,264
7/2013	12/2013	405,462,695	140,757,243	264,705,452	0.4	105,882,181
1/2014	6/2014	249,072,466	155,947,487	93,124,979	0.5	46,562,489
7/2014	12/2014	1,675,147	165,579,616	(163,904,469)	0.6	(98,342,681)
1/2015	6/2015	83,151,071	165,743,013	(82,591,942)	0.7	(57,814,359)
7/2015	12/2015	(131,432,997)	169,038,879	(300,471,876)	0.8	(240,377,501)
1/2016	6/2016	152,698,097	163,960,894	(11,262,797)	0.9	<u>(10,136,517)</u>
1.	Total Deferred Return					\$(205,601,824)
2.	Net Market Value of Assets					4,386,836,709
3.	a. Actuarial Value of Assets (Item 2 – Item 1)					4,592,438,533
	b. Ratio of Actuarial Value of Assets to Net Market Value of Assets (Item 3a / Item 2)					104.7%
4.	Non-valuation reserves					
	a. Supplemental Medical Benefit					\$6,725,575
	b. Statutory Contingency					<u>0</u>
	c. Subtotal					\$6,725,575
5.	Valuation Value of Assets (Item 3a – Item 4c)					\$4,585,712,958
6.	Amount of Deferred Returns to be recognized in the following valuations:					
	a. June 30, 2017					\$1,880,013
	b. June 30, 2018					(33,415,709)
	c. June 30, 2019					(102,333,719)
	d. June 30, 2020					(70,606,129)
	e. June 30, 2021					<u>(1,126,280)</u>
	f. Subtotal					\$(205,601,824)

<sup>(1)</sup> Recognition at 10% per six month period over 5 years.

<sup>(2)</sup> Net deferred loss as of June 30, 2011 was combined and will be recognized over 4.5 years in level semi-annual amounts.

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

**CHART 8**

**Allocation of Valuation Value of Assets as of June 30, 2016**

The calculation of the valuation value of assets from June 30, 2015 to June 30, 2016 by category is provided below:

	Allocated Assets for Funding			
	General			Total
	Tier I	Tier II	Safety	
1. Allocated Assets as of Beginning of Plan Year	\$556,650,633	\$1,834,188,078	\$1,911,491,713	\$4,302,330,424
2. Member Contributions	750,689	41,713,366	24,442,381	66,906,436
3. Member Buybacks	260,048	952,143	432,558	1,644,749
4. Employer Pick-up Contributions Credited to Member Account	42,801	962,455	(86,670)	918,586
5. Employer Contributions	1,991,857	89,697,071	86,020,760	177,709,688
6. Refunds of Member Contributions and Death Benefits Paid	293,746	3,866,002	824,131	4,983,879
7. Retiree Benefit Payments Excluding Supplemental Medical Payments	74,748,721	68,665,293	95,930,211	239,344,225
8. Subtotal (Items 1 + 2 + 3 + 4 + 5 – 6 – 7)	\$484,653,561	\$1,894,981,818	\$1,925,546,400	\$4,305,181,779
9. Weighted Average Fund Balance: Item 1 + ½ of (Items 2, 3, 4, 5) – ½ of (Items 6, 7)	520,652,097	1,864,584,948	1,918,519,057	4,303,756,102
10. Earnings Allocated in Proportion to Item 9	33,937,599	121,539,000	125,054,580	280,531,179
11. Valuation Value of Assets (Items 8 + 10)	\$518,591,160	\$2,016,520,818	\$2,050,600,980	\$4,585,712,958

*Note: Results may not add due to rounding.*

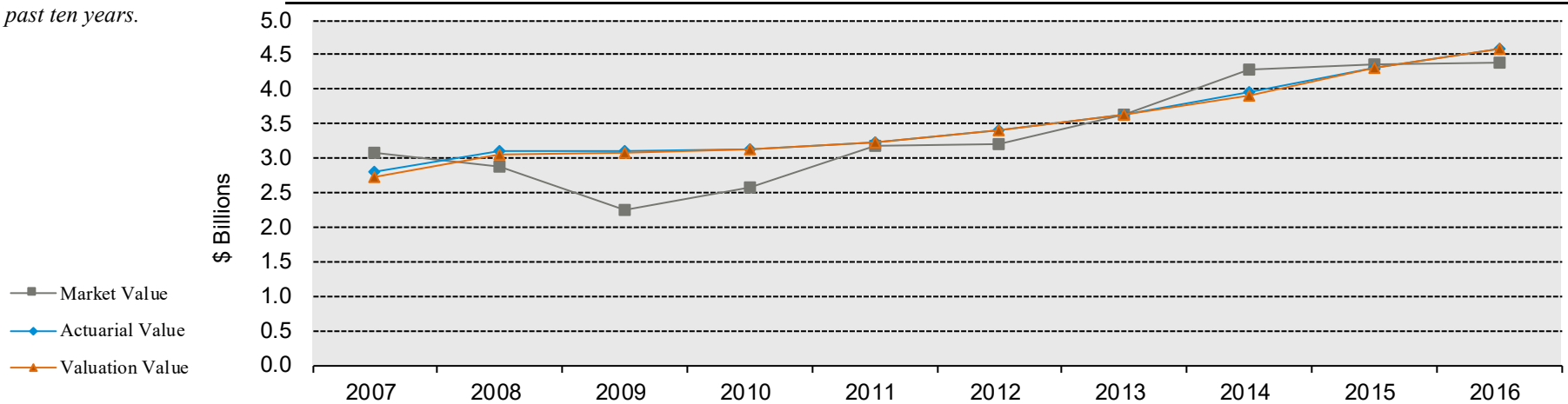
## SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

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

**CHART 9**

**Market Value, Actuarial Value and Valuation Value of Assets as of June 30, 2007 – 2016**



**SECTION 2: Valuation Results for the Ventura 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 gain was \$0.5 million, including a \$42.3 million loss from investments and a \$42.7 million gain from all other sources. The net experience variation from individual sources other than investments experience was 0.8% 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 10**  
**Actuarial Experience for Year Ended June 30, 2016**

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1. Net loss from investments <sup>(1)</sup>	\$(42,251,000)
2. Net gain from other experience <sup>(2)</sup>	<u>42,704,000</u>
3. Net experience gain: (1) + (2)	<u>\$453,000</u>

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<sup>(1)</sup> Details in Chart 11.

<sup>(2)</sup> See Section 3, Exhibit H. Does not include the effect of plan or assumption changes, if any.

**SECTION 2: Valuation Results for the Ventura 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 VCERA's investment policy. For valuation purposes, the assumed rate of return on the valuation value of assets is 7.50%. The actual rate of return on the valuation value of assets for the 2015/2016 plan year was 6.52%.

Since the actual return for the year was less than the assumed return, the VCERA experienced an actuarial loss during the year ended June 30, 2016 with regard to its investments.

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

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**CHART 11**

**Investment Experience for Year Ended June 30, 2016 – Market Value, Actuarial Value and Valuation Value of Assets**

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	<b>Market Value</b>	<b>Actuarial Value</b>	<b>Valuation Value</b>
1. Actual return	\$21,265,100	\$280,531,179	\$280,531,179
2. Average value of assets	4,365,183,399	4,311,519,144	4,303,756,102
3. Actual rate of return: (1) ÷ (2)	0.49%	6.51%	6.52%
4. Assumed rate of return	7.50%	7.50%	7.50%
5. Expected return: (2) x (4)	327,388,755	323,363,936	322,781,708
6. Actuarial gain/(loss): (1) – (5)	<u>\$(306,123,655)</u>	<u>\$(42,832,757)</u>	<u>\$(42,250,529)</u>

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## SECTION 2: Valuation Results for the Ventura 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 ten years.

### CHART 12

#### Investment Return – Market Value, Actuarial Value and Valuation Value: 2007 – 2016

Year Ended June 30	Market Value Investment Return		Actuarial Value Investment Return		Valuation Value Investment Return	
	Amount	Percent	Amount	Percent	Amount	Percent
2007	\$458,962,761	17.48%	\$344,644,568	14.06%	\$308,000,514	12.68%
2008	(211,806,573)	(6.86)	307,776,354	11.01	310,176,628	11.32
2009	(628,718,568)	(21.86)	5,186,654	0.17	31,242,785	1.02
2010	343,005,717	15.33	43,756,165	1.41	43,756,185	1.42
2011	622,940,028	24.34	121,406,541	3.89	121,406,541	3.91
2012	47,147,363	1.49	184,787,098	5.72	184,909,716	5.75
2013	432,694,392	13.51	237,282,497	6.97	237,282,497	7.00
2014	654,535,161	18.06	338,343,729	9.32	294,307,214	8.13
2015	84,826,216	1.98	341,233,326	8.60	384,442,119	9.82
2016	21,265,100	0.49	280,531,179	6.51	280,531,179	6.52
Five-Year Average Return		6.66%		7.45%		7.49%
Ten-Year Average Return		5.70%		6.67%		6.68%

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

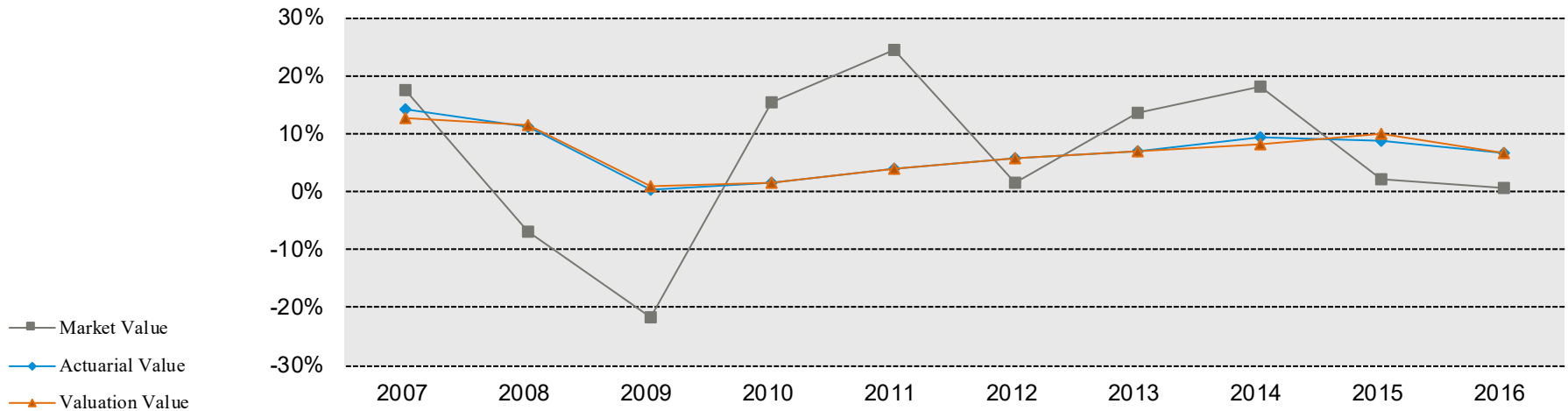
## SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

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 years 2007 - 2016.*

**CHART 13**

**Market, Actuarial and Valuation Rates of Return for Years Ended June 30, 2007 - 2016**



## SECTION 2: Valuation Results for the Ventura 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 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,
- salary increases different than assumed, and
- COLA increases for retirees different than assumed.

The net gain from this other experience for the year ended June 30, 2016 amounted to \$42.7 million which is 0.8% of the actuarial accrued liability. This gain was mainly due to lower than expected individual salary increase for actives and lower than expected COLA increases for retirees and beneficiaries. See Exhibit H for a detailed development of the Unfunded Actuarial Accrued Liability.



## SECTION 2: Valuation Results for the Ventura 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 combined annual inflation and "across the board" increases rate of 3.50%. The June 30, 2004 UAAL is being amortized over a 15-year declining period effective June 30, 2004. The change in UAAL that arises due to actuarial gains or losses or due to plan amendments (with the exception of retirement incentives) at each valuation is amortized over its own declining 15-year period. Effective with the June 30, 2012 valuation, any change in UAAL that arises due to changes in actuarial assumptions or methods is amortized over its own declining 20-year period and any change in UAAL due to retirement incentives is amortized over its own declining period of up to 5 years.

VCERA's UAAL is determined separately for each tier depending on the assets and liabilities for that tier. Note that Non-PEPRA tiers are combined with PEPRA tiers for UAAL purposes.

Effective with the June 30, 2012 valuation, the Basic UAAL rate has been calculated on a combined basis for all General Tiers. Effective with the June 30, 2014 valuation, the COLA UAAL rate has been calculated on a combined basis for General Tiers that

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

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have a COLA. The recommended employer contribution rates determined under this combined methodology are provided on Chart 14. For reference purposes only, Appendix E shows the employer contribution rates under the previous non-combined methodology.

The employer contribution rates shown in Chart 14 are calculated based on a 50/50 sharing of Normal Cost for non-PEPRA Tiers. For purposes of these calculations, we have been previously directed by VCERA to assume that the cessation of member contributions after 30 years of service for non-PEPRA members continues per the County Employees Retirement Law (CERL) and that the cost associated with this provision is to be paid for by employers.

Appendix C shows employer contribution rates based on the prior methodology without a 50/50 sharing of Normal Cost for non-PEPRA Tiers.

### Member Contributions *Non-PEPRA Members*

The non-PEPRA member contribution rates are provided in Appendix A. Please note that the member rates provided in the report are the full rate before reflecting any employer pickup. General Tier 2 members eligible for the fixed 2% cost-of-living benefit contribute a negotiated 2.63% of compensation per year towards the cost of that benefit that is reflected in this report.

Appendix D shows member contribution rates based on the prior methodology as defined in Articles 6 and 6.8 of the 1937 CERL for General members and Safety members. The basic member 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 1/120 of Final Average Compensation for General members and 1/100 of Final Average Compensation for Safety members. That age is 55 for General Tier 1 members, 60 for General Tier 2 members and 50 for Safety members. It is assumed that contributions are made annually at the same rate, starting at entry age. In addition to their basic contributions, General Tier 1 and Safety members pay one-half of the total normal cost necessary to fund their cost-of-living benefits. Member contributions accumulate with interest at the lesser of the assumed investment earning rate or the rate on ten year U.S. Treasury notes. Any difference between the assumed investment earning rate and the actual

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

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interest crediting rate will be credited to the County Advance reserve. Please note that in calculating the basic member rate, we follow the Board's past practice and have not included any in-service pay redemptions that may potentially increase a member's final average compensation and hence retirement benefit.

### *PEPRA Members*

Pursuant to Section 7522.30(a) of the Government Code, members under PEPRA tiers are required to contribute at least 50% of the Normal Cost. In addition, there are certain additional requirements that would have to be met such as 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 the requirements of Section 7522.30(e). The only exception to this is that we have also shown the PEPRA Tier 2 with COLA contribution rates including the member COLA contribution rate of 2.63% of compensation based on current bargaining agreements.

Also of note is that based on our discussions with VCERA, we have used the discretion made available by Section 31620.5(a) to no longer round the PEPRA member's contribution rates to the nearest one quarter of one percent as was previously required by PEPRA. This is consistent with established practice for the Non-PEPRA plans and should allow for exactly one-half of the normal cost for the PEPRA plans to be paid by the employees and one-half by the employers. In addition, Section 31620.5(b) also provides that the "one percent rule" under Section 7522.30(d) does not apply. This section formerly limited the circumstances under which the PEPRA member rate would change.

The PEPRA member contribution rates are provided in Appendix B.

### *Tier 2 COLA Procedures*

This benefit has been valued consistent with the methodologies described in our October 9, 2006 report entitled "Funding Policies and Procedures for General Tier II COLA Benefit".

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

**CHART 14a**

**Recommended Employer Contribution Rates (Dollar Amounts in Thousands) Based on 50/50 Sharing of Normal Cost for All Tiers (PEPRA and Non-PEPRA) – Current Valuation with Combined General UAAL Rates**

	June 30, 2016 Actuarial Valuation					
	BASIC		COLA		TOTAL	
	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>
<b>General Tier 1 Members</b>						
Normal Cost <sup>(2)</sup>	8.13%	\$637	2.74%	\$214	10.87%	\$851
UAAL <sup>(3)</sup>	<u>9.43%</u>	<u>738</u>	<u>4.10%</u>	<u>321</u>	<u>13.53%</u>	<u>1,059</u>
Total Contribution	17.56%	\$1,375	6.84%	\$535	24.40%	\$1,910
<b>General Tier 2 Members w/o COLA</b>						
Normal Cost	7.11%	\$15,265	0.00%	\$0	7.11%	\$15,265
UAAL <sup>(3)</sup>	<u>9.43%</u>	<u>20,238</u>	<u>0.00%</u>	<u>0</u>	<u>9.43%</u>	<u>20,238</u>
Total Contribution	16.54%	\$35,503	0.00%	\$0	16.54%	\$35,503
<b>General PEPRA Tier 2 Members w/o COLA</b>						
Normal Cost	6.96%	\$2,453	0.00%	\$0	6.96%	\$2,453
UAAL <sup>(3)</sup>	<u>9.43%</u>	<u>3,323</u>	<u>0.00%</u>	<u>0</u>	<u>9.43%</u>	<u>3,323</u>
Total Contribution	16.39%	\$5,776	0.00%	\$0	16.39%	\$5,776
<b>General Tier 2 Members w/COLA</b>						
Normal Cost <sup>(4)</sup>	7.11%	\$15,374	0.08%	\$173	7.19%	\$15,547
UAAL <sup>(3)(5)</sup>	<u>9.43%</u>	<u>20,382</u>	<u>4.10%</u>	<u>8,865</u>	<u>13.53%</u>	<u>29,247</u>
Total Contribution	16.54%	\$35,756	4.18%	\$9,038	20.72%	\$44,794
<b>General PEPRA Tier 2 Members w/COLA</b>						
Normal Cost <sup>(4)</sup>	6.96%	\$4,465	0.01%	\$6	6.97%	\$4,471
UAAL <sup>(3)(5)</sup>	<u>9.43%</u>	<u>6,049</u>	<u>4.10%</u>	<u>2,629</u>	<u>13.53%</u>	<u>8,678</u>
Total Contribution	16.39%	\$10,514	4.11%	\$2,635	20.50%	\$13,149
<b>All General Members<sup>(6)</sup></b>						
Normal Cost	7.10%	\$38,194	0.07%	\$393	7.17%	\$38,587
UAAL	<u>9.43%</u>	<u>50,730</u>	<u>2.19%</u>	<u>11,815</u>	<u>11.62%</u>	<u>62,545</u>
Total Contribution	16.53%	\$88,924	2.26%	\$12,208	18.79%	\$101,132

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

### CHART 14a (continued)

#### Recommended Employer Contribution Rates (Dollar Amounts in Thousands) Based on 50/50 Sharing of Normal Cost for All Tiers (PEPRA and Non-PEPRA) – Current Valuation with Combined General UAAL Rates

	June 30, 2016 Actuarial Valuation					
	BASIC		COLA		TOTAL	
	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>
<b>Safety Members</b>						
Normal Cost <sup>(7)</sup>	11.71%	\$18,197	4.88%	\$7,584	16.59%	\$25,781
UAAL	<u>51.58%</u>	<u>80,156</u>	<u>-12.51%</u>	<u>-19,441</u>	<u>39.07%</u>	<u>60,715</u>
Total Contribution	63.29%	\$98,353	-7.63%	-\$11,857	55.66%	\$86,496
<b>Safety PEPRA Members</b>						
Normal Cost	10.21%	\$1,272	4.21%	\$524	14.42%	\$1,796
UAAL	<u>51.58%</u>	<u>6,425</u>	<u>-12.51%</u>	<u>-1,558</u>	<u>39.07%</u>	<u>4,867</u>
Total Contribution	61.79%	\$7,697	-8.30%	-\$1,034	53.49%	\$6,663
<b>All Safety Members<sup>(6)</sup></b>						
Normal Cost	11.60%	\$19,469	4.83%	\$8,108	16.43%	\$27,577
UAAL	<u>51.58%</u>	<u>86,581</u>	<u>-12.51%</u>	<u>-20,999</u>	<u>39.07%</u>	<u>65,582</u>
Total Contribution	63.18%	\$106,050	-7.68%	-\$12,891	55.50%	\$93,159
<b>All Categories Combined<sup>(6)</sup></b>						
Normal Cost	8.17%	\$57,663	1.20%	\$8,501	9.37%	\$66,164
UAAL	<u>19.45%</u>	<u>137,311</u>	<u>-1.30%</u>	<u>-9,184</u>	<u>18.15%</u>	<u>128,127</u>
Total Contribution	27.62%	\$194,974	-0.10%	-\$683	27.52%	\$194,291

<sup>(1)</sup> Amounts are in thousands, assumed to be paid throughout the year, and are based on June 30, 2016 annual payroll (also in thousands) shown below:

General Tier 1	\$7,830
General Tier 2	214,696
General PEPRA Tier 2	35,238
General Tier 2C	216,231
General PEPRA Tier 2C	64,147
Safety	155,401
Safety PEPRA	<u>12,457</u>
Total	\$706,000

<sup>(2)</sup> The total employer rate has been adjusted by 0.27% to account for the cost associated with the cessation of member contributions after 30 years of service.

<sup>(3)</sup> Basic UAAL rates have been calculated on a combined basis for all General Tiers. COLA UAAL rates have been calculated on a combined basis for all General Tiers that have a COLA (excludes General Tier 2 without COLA and General PEPRA Tier 2 without COLA).

<sup>(4)</sup> Reflects General Tier 2 member COLA contribution rate of 2.63% based on current bargaining agreements.

<sup>(5)</sup> Includes 0.47% in COLA UAAL costs attributed to the first two years of service accrued for the fixed 2% COLA pursuant to Government Code 31627.

<sup>(6)</sup> These aggregated rates are provided for informational purposes only as we understand that the tier specific rates will be implemented.

<sup>(7)</sup> The total employer rate has been adjusted by 1.32% to account for the cost associated with the cessation of member contributions after 30 years of service.

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

**CHART 14b**

**Recommended Employer Contribution Rates (Dollar Amounts in Thousands) Based on 50/50 Sharing of Normal Cost for All Tiers (PEPRA and Non-PEPRA) – Prior Valuation with Combined General UAAL Rates**

	June 30, 2015 Actuarial Valuation					
	BASIC		COLA		TOTAL	
	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>
<b>General Tier 1 Members</b>						
Normal Cost <sup>(2)</sup>	7.90%	\$683	2.67%	\$230	10.57%	\$913
UAAL <sup>(3)</sup>	<u>9.64%</u>	<u>833</u>	<u>3.64%</u>	<u>314</u>	<u>13.28%</u>	<u>1,147</u>
Total Contribution	17.54%	\$1,516	6.31%	\$544	23.85%	\$2,060
<b>General Tier 2 Members w/o COLA</b>						
Normal Cost	7.16%	\$15,283	0.00%	\$0	7.16%	\$15,283
UAAL <sup>(3)</sup>	<u>9.64%</u>	<u>20,581</u>	<u>0.00%</u>	<u>0</u>	<u>9.64%</u>	<u>20,581</u>
Total Contribution	16.80%	\$35,864	0.00%	\$0	16.80%	\$35,864
<b>General PEPRA Tier 2 Members w/o COLA</b>						
Normal Cost	7.03%	\$1,546	0.00%	\$0	7.03%	\$1,546
UAAL <sup>(3)</sup>	<u>9.64%</u>	<u>2,120</u>	<u>0.00%</u>	<u>0</u>	<u>9.64%</u>	<u>2,120</u>
Total Contribution	16.67%	\$3,666	0.00%	\$0	16.67%	\$3,666
<b>General Tier 2 Members w/COLA</b>						
Normal Cost <sup>(4)</sup>	7.16%	\$15,988	0.08%	\$179	7.24%	\$16,167
UAAL <sup>(3)(5)</sup>	<u>9.64%</u>	<u>21,531</u>	<u>3.64%</u>	<u>8,131</u>	<u>13.28%</u>	<u>29,662</u>
Total Contribution	16.80%	\$37,519	3.72%	\$8,310	20.52%	\$45,829
<b>General PEPRA Tier 2 Members w/COLA</b>						
Normal Cost <sup>(4)</sup>	7.03%	\$2,890	0.02%	\$9	7.05%	\$2,899
UAAL <sup>(3)(5)</sup>	<u>9.64%</u>	<u>3,964</u>	<u>3.64%</u>	<u>1,498</u>	<u>13.28%</u>	<u>5,462</u>
Total Contribution	16.67%	\$6,854	3.66%	\$1,507	20.33%	\$8,361
<b>All General Members<sup>(6)</sup></b>						
Normal Cost	7.16%	\$36,390	0.08%	\$418	7.24%	\$36,808
UAAL	<u>9.64%</u>	<u>49,029</u>	<u>1.96%</u>	<u>9,943</u>	<u>11.60%</u>	<u>58,972</u>
Total Contribution	16.80%	\$85,419	2.04%	\$10,361	18.84%	\$95,780

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

### CHART 14b (continued)

#### Recommended Employer Contribution Rates (Dollar Amounts in Thousands) Based on 50/50 Sharing of Normal Cost for All Tiers (PEPRA and Non-PEPRA) – Prior Valuation with Combined General UAAL Rates

	June 30, 2015 Actuarial Valuation					
	BASIC		COLA		TOTAL	
	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>
<b>Safety Members</b>						
Normal Cost <sup>(7)</sup>	11.63%	\$18,913	4.84%	\$7,870	16.47%	\$26,783
UAAL	<u>47.33%</u>	<u>76,968</u>	<u>-9.24%</u>	<u>-15,026</u>	<u>38.09%</u>	<u>61,942</u>
Total Contribution	58.96%	\$95,881	-4.40%	-\$7,156	54.56%	\$88,725
<b>Safety PEPRA Members</b>						
Normal Cost	10.40%	\$789	4.28%	\$324	14.68%	\$1,113
UAAL	<u>47.33%</u>	<u>3,589</u>	<u>-9.24%</u>	<u>-701</u>	<u>38.09%</u>	<u>2,888</u>
Total Contribution	57.73%	\$4,378	-4.96%	-\$377	52.77%	\$4,001
<b>All Safety Members<sup>(6)</sup></b>						
Normal Cost	11.58%	\$19,702	4.81%	\$8,194	16.39%	\$27,896
UAAL	<u>47.33%</u>	<u>80,557</u>	<u>-9.24%</u>	<u>-15,727</u>	<u>38.09%</u>	<u>64,830</u>
Total Contribution	58.91%	\$100,259	-4.43%	-\$7,533	54.48%	\$92,726
<b>All Categories Combined<sup>(6)</sup></b>						
Normal Cost	8.26%	\$56,092	1.27%	\$8,612	9.53%	\$64,704
UAAL	<u>19.09%</u>	<u>129,586</u>	<u>-0.85%</u>	<u>-5,784</u>	<u>18.24%</u>	<u>123,802</u>
Total Contribution	27.35%	\$185,678	0.42%	\$2,828	27.77%	\$188,506

<sup>(1)</sup> Amounts are in thousands, assumed to be paid throughout the year, and are based on June 30, 2015 annual payroll (also in thousands) shown below:

General Tier 1	\$8,640
General Tier 2	213,455
General PEPRA Tier 2	21,992
General Tier 2C	223,301
General PEPRA Tier 2C	41,116
Safety	162,619
Safety PEPRA	<u>7,582</u>
Total	\$678,705

<sup>(2)</sup> The total employer rate has been adjusted by 0.48% to account for the cost associated with the cessation of member contributions after 30 years of service.

<sup>(3)</sup> Basic UAAL rates have been calculated on a combined basis for all General Tiers. COLA UAAL rates have been calculated on a combined basis for all General Tiers that have a COLA (excludes General Tier 2 without COLA and General PEPRA Tier 2 without COLA).

<sup>(4)</sup> Reflects General Tier 2 member COLA contribution rate of 2.63% based on current bargaining agreements.

<sup>(5)</sup> Includes 0.54% in COLA UAAL costs attributed to the first two years of service accrued for the fixed 2% COLA pursuant to Government Code 31627.

<sup>(6)</sup> These aggregated rates are provided for informational purposes only as we understand that the tier specific rates will be implemented.

<sup>(7)</sup> The total employer rate has been adjusted by 1.20% to account for the cost associated with the cessation of member contributions after 30 years of service.

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

The employer contribution rates as of June 30, 2016 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

### Reconciliation of Recommended Employer Contribution Rate

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

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

#### CHART 15

#### Reconciliation of Recommended Average Employer Contribution Rate from June 30, 2015 to June 30, 2016 (Dollar Amounts in Thousands)

	Contribution Rate	Estimated Annual Dollar Cost <sup>(1)</sup>
<b>Recommended Average Employer Contribution Rate as of June 30, 2015</b>	27.77%	\$188,506
Effect of investment loss <sup>(2)</sup>	0.53%	\$3,742
Effect of difference between actual and expected contributions <sup>(3)</sup>	0.14%	988
Effect of difference in actual versus expected individual salary increases	-0.25%	-1,765
Effect of difference in actual versus expected total payroll growth	-0.09%	-635
Effect of lower than expected COLA benefit increase for retirees and beneficiaries	-0.26%	-1,836
Effect of changes in member demographics on Normal Cost	-0.16%	-1,130
Effect of higher than expected mortality for retirees and beneficiaries	-0.11%	-777
Effect of net other changes <sup>(4)</sup>	<u>-0.05%</u>	<u>7,198</u>
<b>Total change</b>	<u>-0.25%</u>	<u>\$5,785</u>
<b>Recommended Average Employer Contribution Rate as of June 30, 2016</b>	27.52%	\$194,291

<sup>(1)</sup> Based on projected payroll for each year.

<sup>(2)</sup> The Association's valuation value of assets earned 6.52% which was lower than the 7.50% assumed rate of return for 2015/2016.

<sup>(3)</sup> Contribution loss mainly from one-year delay in implementing higher contribution rates for Safety tiers from the June 30, 2015 valuation.

<sup>(4)</sup> Other differences in actual versus expected experience including mortality, disability, withdrawal, retirement and in-service redemption experience. Estimated annual dollar cost also reflects change in payroll from prior valuation.



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

The member contribution rates as of June 30, 2016 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.

**Reconciliation of Recommended Member Contribution Rate**

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

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

**CHART 16**  
**Reconciliation of Recommended Average Member Contribution Rate from June 30, 2015 to June 30, 2016**  
**(Dollar Amounts in Thousands)**

	Contribution Rate	Estimated Annual Dollar Cost <sup>(1)</sup>
<b>Recommended Average Member Contribution Rate in June 30, 2015 Valuation</b>	10.24%	\$69,479
Effect of changes in member demographics <sup>(2)</sup>	<u>-0.14%</u>	<u>\$1,808</u>
<b>Total change</b>	<u>-0.14%</u>	<u>\$1,808</u>
<b>Recommended Average Member Contribution Rate in June 30, 2016 Valuation</b>	10.10%	\$71,287

<sup>(1)</sup> Based on projected payroll for each year.

<sup>(2)</sup> Estimated annual dollar cost also reflects change in payroll from prior valuation.

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

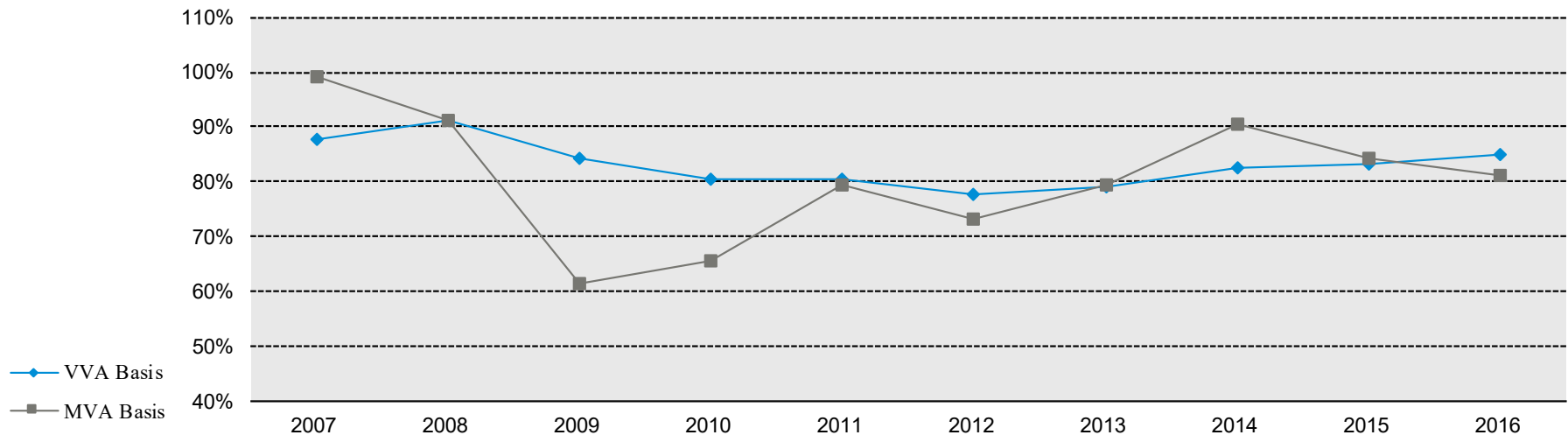
### E. FUNDED RATIO

A commonly reported piece of information regarding the Plan's financial status is the funded ratio. These ratios compare the valuation value of assets and market value of assets to the actuarial accrued liabilities of the Plan as calculated. High ratios indicate a well-funded plan with assets sufficient to cover the plan's actuarial accrued liabilities. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other factors. The chart below depicts a history of the funded

ratio for this plan. Chart 18 on the next page shows the Plan's schedule of funding progress for the last ten years.

The funded status measures shown in this valuation are appropriate for assessing the need for or amount of future contributions. However, they are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligations. As the chart below shows, the measures are different depending on whether the valuation or market value of assets is used.

**CHART 17**  
**Funded Ratio for Plan Years Ending June 30, 2007 - 2016**



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

**CHART 18**

**Schedule of Funding Progress**

<b>Actuarial Valuation Date</b>	<b>Valuation Value of Assets<sup>(1)</sup> (a)</b>	<b>Actuarial Accrued Liability (AAL)<sup>(2)</sup> (b)</b>	<b>Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)</b>	<b>Funded Ratio (a) / (b)</b>	<b>Projected Covered Payroll (c)</b>	<b>UAAL as a Percentage of Projected Covered Payroll [(b) - (a) / (c)]</b>
06/30/2007	\$2,736,558,000	\$3,112,583,000	\$376,025,000	87.92%	\$551,968,000	68.12%
06/30/2008	3,055,756,000	3,345,804,000	290,048,000	91.33%	599,173,000	48.41%
06/30/2009	3,090,148,000	3,663,701,000	573,553,000	84.34%	634,777,000	90.36%
06/30/2010	3,115,984,000	3,877,443,000	761,459,000	80.36%	654,829,000	116.28%
06/30/2011	3,220,388,000	3,995,352,000	774,964,000	80.60%	637,037,000	121.65%
06/30/2012	3,397,360,000	4,373,227,000	975,867,000	77.69%	633,848,000	153.96%
06/30/2013	3,621,709,000	4,575,063,000	953,354,000	79.16%	638,764,000	149.25%
06/30/2014	3,910,801,000	4,731,016,000	820,215,000	82.66%	648,257,000	126.53%
06/30/2015	4,302,330,000	5,178,157,000	875,827,000	83.09%	678,705,000	129.04%
06/30/2016	4,585,713,000	5,398,756,000	813,043,000	84.94%	706,000,000	115.16%

<sup>(1)</sup> Excludes assets for supplemental medical benefit reserve and statutory contingency reserve.

<sup>(2)</sup> Excludes liabilities held for supplemental medical benefit reserve and statutory contingency reserve.

**SECTION 2: Valuation Results for the Ventura 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 VCERA, the current AVR is about 6.2. This means that a 1% asset gain/(loss) (relative to the assumed investment return) translates to about 6.2% of one-year's payroll. Since VCERA amortizes actuarial gains and losses over a period of 15 years, there would be a 0.6% 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 VCERA, the current LVR is about 7.6. This is about 23% higher than the AVR. Therefore, we would expect that contribution volatility will increase over the long term.

**CHART 19**  
**Volatility Ratios for Years Ended June 30, 2009 – 2016**

Year Ended June 30	Asset Volatility Ratios			Liability Volatility Ratios		
	General	Safety	Total	General	Safety	Total
2009	2.8	5.7	3.5	4.4	9.8	5.8
2010	3.1	6.3	3.9	4.4	10.1	5.9
2011	3.9	8.2	5.0	4.7	10.8	6.3
2012	3.8	8.7	5.1	5.1	12.3	6.9
2013	4.3	9.7	5.7	5.3	12.7	7.2
2014	4.9	11.5	6.6	5.4	12.9	7.3
2015	4.8	11.4	6.4	5.6	13.8	7.6
2016	4.5	11.7	6.2	5.5	14.5	7.6

*This chart shows how the asset and liability volatility ratios have varied over time, both for the plan in total and separately for General and Safety.*

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

**EXHIBIT A**

**Table of Plan Coverage**

**i. General Tier 1**

<b>Category</b>	<b>Year Ended June 30</b>		<b>Change From Prior Year</b>
	<b>2016</b>	<b>2015</b>	
<b>Active members in valuation:</b>			
Number	60	75	-20.0%
Average age	61.7	61.1	N/A
Average service	32.7	32.6	N/A
Projected total compensation <sup>(1)</sup>	\$7,830,126	\$8,640,084	-9.4%
Projected average compensation	\$130,502	\$115,201	13.3%
Account balances	\$13,119,074	\$15,052,653	-12.8%
Total active vested members	60	75	-20.0%
<b>Vested terminated members<sup>(2)</sup></b>			
	49	55	-10.9%
<b>Retired members:</b>			
Number in pay status	1,417	1,474	-3.9%
Average age	75.7	75.3	N/A
Average monthly benefit <sup>(3)</sup>	\$3,721	\$3,565	4.4%
<b>Disabled members:</b>			
Number in pay status	104	110	-5.5%
Average age	73.6	73.5	N/A
Average monthly benefit <sup>(3)</sup>	\$2,363	\$2,318	1.9%
<b>Beneficiaries:</b>			
Number in pay status	352	346	1.7%
Average age	79.7	79.7	N/A
Average monthly benefit <sup>(3)</sup>	\$1,695	\$1,602	5.8%

<sup>(1)</sup> Calculated by increasing annualized bi-weekly compensations as of valuation date by one-half year of inflation and "across the board" salary increases.

<sup>(2)</sup> Includes terminated members with member contributions on deposit.

<sup>(3)</sup> Excludes vested fixed supplemental and supplemental medical benefit amounts.

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

**EXHIBIT A (continued)**

**Table of Plan Coverage**

**ii. General Tier 2**

<b>Category</b>	<b>Year Ended June 30</b>		<b>Change From Prior Year</b>
	<b>2016</b>	<b>2015</b>	
<b>Active members in valuation:</b>			
Number	5,155	5,494	-6.2%
Average age	48.6	47.9	N/A
Average service	13.3	12.3	N/A
Projected total compensation <sup>(1)</sup>	\$430,926,973	\$436,756,384	-1.3%
Projected average compensation	\$83,594	\$79,497	5.2%
Account balances	\$387,531,527	\$375,523,585	3.2%
Total active vested members	4,547	4,556	-0.2%
<b>Vested terminated members<sup>(2)</sup></b>			
	1,971	1,933	2.0%
<b>Retired members:</b>			
Number in pay status	2,641	2,481	6.4%
Average age	68.2	67.8	N/A
Average monthly benefit <sup>(3)</sup>	\$1,746	\$1,669	4.6%
<b>Disabled members:</b>			
Number in pay status	331	336	-1.5%
Average age	64.2	63.6	N/A
Average monthly benefit <sup>(3)</sup>	\$1,479	\$1,463	1.1%
<b>Beneficiaries:</b>			
Number in pay status	319	274	16.4%
Average age	68.2	67.9	N/A
Average monthly benefit <sup>(3)</sup>	\$840	\$806	4.2%

<sup>(1)</sup> Calculated by increasing annualized bi-weekly compensations as of valuation date by one-half year of inflation and "across the board" salary increases.

<sup>(2)</sup> Includes terminated members with member contributions on deposit.

<sup>(3)</sup> Excludes vested fixed supplemental and supplemental medical benefit amounts.

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

**EXHIBIT A (continued)**

**Table of Plan Coverage**

**iii. PEPR General Tier 1**

<b>Category</b>	<b>Year Ended June 30</b>		<b>Change From Prior Year</b>
	<b>2016</b>	<b>2015</b>	
<b>Active members in valuation:</b>			
Number	0	0	N/A
Average age	N/A	N/A	N/A
Average service	N/A	N/A	N/A
Projected total compensation <sup>(1)</sup>	N/A	N/A	N/A
Projected average compensation	N/A	N/A	N/A
Account balances	N/A	N/A	N/A
Total active vested members	0	0	N/A
<b>Vested terminated members<sup>(2)</sup></b>	<b>3</b>	<b>3</b>	<b>0.0%</b>
<b>Retired members:</b>			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit <sup>(3)</sup>	N/A	N/A	N/A
<b>Disabled members:</b>			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit <sup>(3)</sup>	N/A	N/A	N/A
<b>Beneficiaries:</b>			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit <sup>(3)</sup>	N/A	N/A	N/A

<sup>(1)</sup> Calculated by increasing annualized bi-weekly compensations as of valuation date by one-half year of inflation and "across the board" salary increases.

<sup>(2)</sup> Includes terminated members with member contributions on deposit.

<sup>(3)</sup> Excludes vested fixed supplemental and supplemental medical benefit amounts.

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

**EXHIBIT A (continued)**

**Table of Plan Coverage**

**iv. PEPR General Tier 2**

<b>Category</b>	<b>Year Ended June 30</b>		<b>Change From Prior Year</b>
	<b>2016</b>	<b>2015</b>	
<b>Active members in valuation:</b>			
Number	1,800	1,209	48.9%
Average age	37.0	36.8	N/A
Average service	1.5	1.1	N/A
Projected total compensation <sup>(1)</sup>	\$99,384,839	\$63,108,479	57.5%
Projected average compensation	\$55,214	\$52,199	5.8%
Account balances	\$11,743,432	\$5,968,682	96.8%
Total active vested members	12	1	1100.0%
<b>Vested terminated members<sup>(2)</sup></b>	<b>309</b>	<b>149</b>	<b>107.4%</b>
<b>Retired members:</b>			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit <sup>(3)</sup>	N/A	N/A	N/A
<b>Disabled members:</b>			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit <sup>(3)</sup>	N/A	N/A	N/A
<b>Beneficiaries:</b>			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit <sup>(3)</sup>	N/A	N/A	N/A

<sup>(1)</sup> Calculated by increasing annualized bi-weekly compensations as of valuation date by one-half year of inflation and "across the board" salary increases.

<sup>(2)</sup> Includes terminated members with member contributions on deposit.

<sup>(3)</sup> Excludes vested fixed supplemental and supplemental medical benefit amounts.



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

**EXHIBIT A (continued)**

**Table of Plan Coverage**

**v. Safety**

<b>Category</b>	<b>Year Ended June 30</b>		<b>Change From Prior Year</b>
	<b>2016</b>	<b>2015</b>	
<b>Active members in valuation:</b>			
Number	1,321	1,405	-6.0%
Average age	43.1	42.5	N/A
Average service	16.5	15.4	N/A
Projected total compensation <sup>(1)</sup>	\$155,400,453	\$162,618,523	-4.4%
Projected average compensation	\$117,638	\$115,743	1.6%
Account balances	\$186,394,260	\$175,551,244	6.2%
Total active vested members	1,231	1,245	-1.1%
<b>Vested terminated members<sup>(2)</sup></b>			
	287	297	-3.4%
<b>Retired members:</b>			
Number in pay status	721	702	2.7%
Average age	66.4	66.0	N/A
Average monthly benefit <sup>(3)</sup>	\$7,514	\$7,153	5.0%
<b>Disabled members:</b>			
Number in pay status	391	388	0.8%
Average age	63.9	63.7	N/A
Average monthly benefit <sup>(3)</sup>	\$5,378	\$5,192	3.6%
<b>Beneficiaries:</b>			
Number in pay status	263	227	15.9%
Average age	66.8	67.7	N/A
Average monthly benefit <sup>(3)</sup>	\$2,940	\$2,896	1.5%

<sup>(1)</sup> Calculated by increasing annualized bi-weekly compensations as of valuation date by one-half year of inflation and "across the board" salary increases.

<sup>(2)</sup> Includes terminated members with member contributions on deposit.

<sup>(3)</sup> Excludes vested fixed supplemental and supplemental medical benefit amounts.

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

**EXHIBIT A (continued)**

**Table of Plan Coverage**

**vi. PEPR Safety**

<b>Category</b>	<b>Year Ended June 30</b>		<b>Change From Prior Year</b>
	<b>2016</b>	<b>2015</b>	
<b>Active members in valuation:</b>			
Number	173	116	49.1%
Average age	29.6	29.3	N/A
Average service	1.7	1.2	N/A
Projected total compensation <sup>(1)</sup>	\$12,457,289	\$7,582,376	64.3%
Projected average compensation	\$72,007	\$65,365	10.2%
Account balances	\$2,654,345	\$1,259,585	110.7%
Total active vested members	0	0	N/A
<b>Vested terminated members<sup>(2)</sup></b>	20	4	400.0%
<b>Retired members:</b>			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit <sup>(3)</sup>	N/A	N/A	N/A
<b>Disabled members:</b>			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit <sup>(3)</sup>	N/A	N/A	N/A
<b>Beneficiaries:</b>			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit <sup>(3)</sup>	N/A	N/A	N/A

<sup>(1)</sup> Calculated by increasing annualized bi-weekly compensations as of valuation date by one-half year of inflation and "across the board" salary increases.

<sup>(2)</sup> Includes terminated members with member contributions on deposit.

<sup>(3)</sup> Excludes vested fixed supplemental and supplemental medical benefit amounts.

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

**EXHIBIT B**

**Members in Active Service and Projected Average Compensation as of June 30, 2016  
By Age and Years of Service**

**i. General Tier 1**

Age	Total	Years of Service								
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	--	--	--	--	--	--	--	--	--	--
25 - 29	--	--	--	--	--	--	--	--	--	--
30 - 34	--	--	--	--	--	--	--	--	--	--
35 - 39	--	--	--	--	--	--	--	--	--	--
40 - 44	--	--	--	--	--	--	--	--	--	--
45 - 49	1	--	--	--	1	--	--	--	--	--
	\$193,449	--	--	--	\$193,449	--	--	--	--	--
50 - 54	2	--	--	--	--	2	--	--	--	--
	268,572	--	--	--	--	\$268,572	--	--	--	--
55 - 59	18	--	--	--	3	--	3	1	11	--
	145,566	--	--	--	183,416	--	\$226,245	\$213,177	\$107,094	--
60 - 64	28	--	--	--	1	1	3	2	15	6
	113,366	--	--	--	217,496	70,755	226,859	169,756	84,672	\$99,304
65 - 69	6	--	--	1	2	2	1	--	--	--
	140,226	--	--	\$187,288	179,798	121,350	51,774	--	--	--
70 & over	5	--	--	--	--	1	--	--	--	4
	92,747	--	--	--	--	132,354	--	--	--	82,846
Total	60	--	--	1	7	6	7	3	26	10
	\$130,502	--	--	\$187,288	\$188,684	\$163,825	\$201,584	\$184,230	\$94,158	\$92,721

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

**EXHIBIT B (continued)**

**Members in Active Service and Projected Average Compensation as of June 30, 2016**

**By Age and Years of Service**

**ii. General Tier 2**

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	3	3	--	--	--	--	--	--	--	--
	\$50,988	\$50,988	--	--	--	--	--	--	--	--
25 - 29	131	70	61	--	--	--	--	--	--	--
	63,129	63,170	\$63,082	--	--	--	--	--	--	--
30 - 34	491	125	296	70	--	--	--	--	--	--
	75,371	77,414	76,113	\$68,586	--	--	--	--	--	--
35 - 39	621	98	280	185	58	--	--	--	--	--
	80,551	78,824	81,223	82,406	\$74,312	--	--	--	--	--
40 - 44	658	77	202	204	144	28	3	--	--	--
	82,401	79,893	80,916	84,336	83,489	\$80,670	\$79,105	--	--	--
45 - 49	801	69	203	191	182	112	44	--	--	--
	85,928	74,566	81,281	85,318	91,833	92,917	85,614	--	--	--
50 - 54	870	64	195	196	162	125	96	29	3	--
	86,040	80,922	81,034	86,634	87,829	93,506	87,250	\$81,274	\$81,470	--
55 - 59	850	53	158	181	137	115	111	77	18	--
	87,290	83,113	79,312	84,506	86,939	89,506	97,345	96,144	86,247	--
60 - 64	529	36	105	100	103	74	62	38	11	--
	87,761	86,200	86,245	78,082	87,606	89,022	94,070	99,302	112,899	--
65 - 69	162	13	44	38	26	19	10	9	3	--
	85,722	72,374	79,682	88,128	88,238	91,915	89,848	95,897	96,385	--
70 & over	39	2	11	12	5	3	3	3	--	--
	78,518	56,752	74,812	75,215	79,209	129,580	83,020	63,119	--	--
Total	5,155	610	1,555	1,177	817	476	329	156	35	--
	\$83,594	\$77,073	\$79,539	\$83,162	\$86,779	\$91,113	\$91,689	\$93,500	\$95,083	--

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

**EXHIBIT B**

**Members in Active Service and Projected Average Compensation as of June 30, 2016**

**By Age and Years of Service**

**iii. PEPR General Tier 2**

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	113	113	--	--	--	--	--	--	--	--
	\$42,375	\$42,375	--	--	--	--	--	--	--	--
25 - 29	452	452	--	--	--	--	--	--	--	--
	48,123	48,123	--	--	--	--	--	--	--	--
30 - 34	417	417	--	--	--	--	--	--	--	--
	55,795	55,795	--	--	--	--	--	--	--	--
35 - 39	251	251	--	--	--	--	--	--	--	--
	57,640	57,640	--	--	--	--	--	--	--	--
40 - 44	166	166	--	--	--	--	--	--	--	--
	59,884	59,884	--	--	--	--	--	--	--	--
45 - 49	139	139	--	--	--	--	--	--	--	--
	62,349	62,349	--	--	--	--	--	--	--	--
50 - 54	97	97	--	--	--	--	--	--	--	--
	59,467	59,467	--	--	--	--	--	--	--	--
55 - 59	100	100	--	--	--	--	--	--	--	--
	64,203	64,203	--	--	--	--	--	--	--	--
60 - 64	48	48	--	--	--	--	--	--	--	--
	67,270	67,270	--	--	--	--	--	--	--	--
65 - 69	15	15	--	--	--	--	--	--	--	--
	66,513	66,513	--	--	--	--	--	--	--	--
70 & over	2	2	--	--	--	--	--	--	--	--
	44,019	44,019	--	--	--	--	--	--	--	--
Total	1,800	1,800	--	--	--	--	--	--	--	--
	\$55,214	\$55,214	--	--	--	--	--	--	--	--

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

**EXHIBIT B (continued)**

**Members in Active Service and Projected Average Compensation as of June 30, 2016**

**By Age and Years of Service**

**iv. Safety**

Age	Total	Years of Service									
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
Under 25	2	2	--	--	--	--	--	--	--	--	--
	\$90,423	\$90,423	--	--	--	--	--	--	--	--	--
25 - 29	88	38	49	1	--	--	--	--	--	--	--
	96,731	92,428	\$100,569	\$72,142	--	--	--	--	--	--	--
30 - 34	188	28	123	36	1	--	--	--	--	--	--
	103,634	93,739	106,037	103,653	\$84,459	--	--	--	--	--	--
35 - 39	220	14	56	102	47	1	--	--	--	--	--
	109,154	97,297	110,769	105,857	117,339	\$136,213	--	--	--	--	--
40 - 44	247	4	24	53	122	41	3	--	--	--	--
	118,397	106,691	106,920	104,544	121,547	134,000	\$129,235	--	--	--	--
45 - 49	268	1	8	25	85	97	51	1	--	--	--
	123,077	111,672	108,896	101,582	115,071	127,759	139,878	\$154,768	--	--	--
50 - 54	194	2	3	12	24	35	89	27	2	--	--
	130,016	146,511	108,117	98,192	114,429	118,359	137,020	151,777	\$122,910	--	--
55 - 59	90	1	5	1	10	5	28	26	14	--	--
	137,952	143,221	140,619	66,199	104,308	124,910	134,486	147,540	159,561	--	--
60 - 64	22	--	4	1	3	1	6	3	3	1	1
	138,734	--	152,836	82,759	113,258	118,048	129,758	126,402	208,966	\$115,578	--
65 - 69	2	--	1	--	--	--	--	--	--	--	1
	145,342	--	138,705	--	--	--	--	--	--	--	151,979
70 & over	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--
Total	1,321	90	273	231	292	180	177	57	19	2	
	\$117,638	\$96,163	\$107,649	\$103,934	\$117,597	\$127,266	\$137,064	\$148,561	\$163,504	\$133,779	

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

**EXHIBIT B**

**Members in Active Service and Projected Average Compensation as of June 30, 2016**

**By Age and Years of Service**

**v. PEPRA Safety**

Age	Total	Years of Service								
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	24	24	--	--	--	--	--	--	--	--
	\$68,509	\$68,509	--	--	--	--	--	--	--	--
25 - 29	92	92	--	--	--	--	--	--	--	--
	66,686	66,686	--	--	--	--	--	--	--	--
30 - 34	38	38	--	--	--	--	--	--	--	--
	75,820	75,820	--	--	--	--	--	--	--	--
35 - 39	9	9	--	--	--	--	--	--	--	--
	81,629	81,630	--	--	--	--	--	--	--	--
40 - 44	3	3	--	--	--	--	--	--	--	--
	77,688	77,688	--	--	--	--	--	--	--	--
45 - 49	2	2	--	--	--	--	--	--	--	--
	91,599	91,599	--	--	--	--	--	--	--	--
50 - 54	3	3	--	--	--	--	--	--	--	--
	124,670	124,670	--	--	--	--	--	--	--	--
55 - 59	2	2	--	--	--	--	--	--	--	--
	135,954	135,954	--	--	--	--	--	--	--	--
60 - 64	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
65 - 69	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
70 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Total	173	173	--	--	--	--	--	--	--	--
	\$72,007	\$72,007	--	--	--	--	--	--	--	--

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

**EXHIBIT C**

**Reconciliation of Member Data – June 30, 2015 to June 30, 2016**

	<b>Active Members</b>	<b>Vested Terminated Members<sup>(1)</sup></b>	<b>Pensioners</b>	<b>Disableds</b>	<b>Beneficiaries</b>	<b>Total</b>
Number as of June 30, 2015	8,299	2,441	4,657	834	847	17,078
Data clean up:						
(a) Combined account <sup>(2)</sup>	N/A	-25	N/A	N/A	N/A	-25
(b) Status reclassification <sup>(3)</sup>	N/A	N/A	-35	N/A	35	0
New members	853	107	0	0	87	1,047
Terminations – with vested rights	-302	302	0	0	0	0
Contributions refunds	-131	-67	0	0	0	-198
Retirements	-223	-69	292	0	0	0
New disabilities	-15	-2	-7	24	0	0
Return to work	44	-44	0	0	0	0
Died with or without beneficiary	-15	-1	-128	-32	-35	-211
Data adjustments	-1	-3	0	0	0	-4
Number as of June 30, 2016	8,509	2,639	4,779	826	934	17,687

<sup>(1)</sup> Includes terminated members with member contributions on deposit.

<sup>(2)</sup> Combined 25 ex-spouse/alternate records with the associated active member account before receiving benefit distributions.

<sup>(3)</sup> 35 ex-spouse/alternate payees previously reported as retirees are now reclassified as beneficiaries.



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

**EXHIBIT D**

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

	Year Ended June 30, 2016	Year Ended June 30, 2015
<b>Contribution income:</b>		
Employer contributions	\$177,709,688	\$175,099,550
Member contributions	<u>69,469,771</u>	<u>63,678,770</u>
Contribution income	\$247,179,459	\$238,778,320
<b>Investment income:</b>		
Interest, dividends and other income	\$62,654,675	\$60,743,969
Adjustment toward market value <sup>(1)</sup>	236,773,776	298,995,273
Less investment and administrative fees	<u>(18,897,272)</u>	<u>(18,505,915)</u>
Net investment income	<u>\$280,531,179</u>	<u>\$341,233,327</u>
<b>Total income available for benefits</b>	<b>\$527,710,638</b>	<b>\$580,011,647</b>
<b>Less benefit payments</b>	<b>\$(246,403,038)</b>	<b>\$(233,695,213)</b>
<b>Change in reserve for future benefits</b>	<b>\$281,307,600</b>	<b>\$346,316,434</b>

<sup>(1)</sup> Equals the "non-cash" earnings on investments included in the Actuarial Value of Assets.

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

**EXHIBIT E**

**Summary Statement of Net Assets**

	<b>Year Ended June 30, 2016</b>	<b>Year Ended June 30, 2015</b>
<b>Cash equivalents</b>	\$287,041,397	\$59,061,354
<b>Pension software development cost</b>	12,961,635	9,426,005
<b>Accounts receivable:</b>		
Member and employer contributions	\$8,300,490	\$6,872,228
Accrued interest and dividends	2,487,536	3,213,855
Securities sold	5,571,076	38,357,646
Other	<u>43,714</u>	<u>32,056</u>
Total accounts receivable	\$16,402,816	\$48,475,785
<b>Investments:</b>		
Equities	\$2,491,464,213	\$2,526,596,112
Fixed income	834,771,950	1,013,748,941
Real estate	371,598,471	340,986,568
Investments received on securities lending	48,243,231	63,260,292
Others	<u>380,549,757</u>	<u>415,341,030</u>
Total investments at market value	4,126,627,622	\$4,359,932,943
<b>Total assets</b>	\$4,443,033,470	\$4,476,896,087
<b>Liabilities:</b>		
Securities lending	\$(48,243,230)	\$(63,260,292)
Security purchases	(2,936,604)	(46,451,889)
Accounts payable	(4,990,540)	(2,361,658)
Prepaid contributions	<u>(26,387)</u>	<u>(27,060)</u>
Total liabilities	\$(56,196,761)	\$(112,100,899)
<b>Net assets at market value</b>	<u>\$4,386,836,709</u>	<u>\$4,364,795,188</u>
<b>Net assets at actuarial value</b>	<u>\$4,592,438,533</u>	<u>\$4,311,130,933</u>
<b>Net assets at valuation value</b>	<u>\$4,585,712,958</u>	<u>\$4,302,330,424</u>

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

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#### EXHIBIT F

#### Actuarial Balance Sheet

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

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

#### Actuarial Balance Sheet (\$ in 000s)

<u>Assets</u>	<u>June 30, 2016</u>	<u>June 30, 2015</u>
1. Total valuation value of assets	\$4,585,713	\$4,302,330
2. Present value of future contributions by members	513,034	495,597
3. Present value of future employer contributions for:		
a. Entry age normal cost	556,204	554,183
b. Unfunded actuarial accrued liability	<u>813,043</u>	<u>875,827</u>
4. Total current and future assets	\$6,467,994	\$6,227,937
 <u>Liabilities</u>		
5. Present value of benefits for retirees and beneficiaries	\$3,065,942	\$2,901,805
6. Present value of benefits for vested terminated members	145,994	134,344
7. Present value of benefits for active members	<u>3,256,058</u>	<u>3,191,788</u>
8. Total liabilities	\$6,467,994	\$6,227,937

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

**EXHIBIT G**

**Summary of Allocated Reserves**

<b>Reserves</b>		
	<b><u>June 30, 2016</u></b>	<b><u>June 30, 2015</u></b>
Member contributions reserve <sup>(1)</sup>	\$683,571,172	\$647,597,355
Employer advance reserve <sup>(1)</sup>	2,350,035,512	2,119,359,715
Offset: Interest crediting shortfall tracking account <sup>(1)</sup>	(1,019,896,714)	(885,633,697)
Retiree reserve <sup>(1)</sup>	2,417,425,764	2,269,554,677
Supplemental death benefit reserve <sup>(1)</sup>	14,773,547	14,301,038
Vested fixed supplemental (\$108.44) reserve <sup>(1)</sup>	139,803,677	137,151,336
Undistributed earnings <sup>(1)</sup>	0	0
Valuation reserves	<u>\$4,585,712,958</u>	<u>\$4,302,330,424</u>
Supplemental medical (\$27.50) reserve <sup>(2)</sup>	6,725,575	8,800,509
Contingency reserve <sup>(2)</sup>	0	0
Total reserves (actuarial value)	<u>\$4,592,438,533</u>	<u>\$4,311,130,933</u>
Market stabilization reserve <sup>(2)</sup>	<u>(205,601,824)</u>	<u>53,664,255</u>
Net market value	\$4,386,836,709	\$4,364,795,188

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

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

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

**EXHIBIT H**

**Development of Unfunded/(Overfunded) Actuarial Accrued Liability for Year Ended June 30, 2016**

1. Unfunded actuarial accrued liability at beginning of year		\$875,827,000
2. Total Normal Cost payable at middle of year		134,183,000
3. Expected employer and member contributions		(257,985,000)
4. Interest (whole year on (1) plus half year on (2) + (3))		<u>61,471,000</u>
5. Expected unfunded actuarial accrued liability at end of year		<u>\$813,496,000</u>
6. Actuarial (gain)/loss due to all changes:		
(a) Loss from investment return on valuation value of assets (6.52%)	\$42,251,000	
(b) Actual contributions less than expected <sup>(1)</sup>	11,204,000	
(c) Lower than expected individual salary increases	(19,801,000)	
(d) Lower than expected COLA benefit increase for retirees and beneficiaries	(20,350,000)	
(e) Higher than expected mortality for retirees and beneficiaries	(8,940,000)	
(f) Other experience	<u>(4,817,000)</u>	
Total changes		<u>\$(453,000)</u>
7. Unfunded actuarial accrued liability at end of year		<u>\$813,043,000</u>

*Note: Net gain from other experience of \$42,704,000 (as shown on page 8) is equal to the sum of items: 6(b) through 6(f).*

<sup>(1)</sup> *Contribution loss mainly from one-year delay in implementing higher contribution rates for Safety tiers from the June 30, 2015 valuation.*

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

**EXHIBIT I**

**Table of Amortization Bases**

	<b>Date Established</b>	<b>Source</b>	<b>Initial Amount</b>	<b>Outstanding Balance</b>	<b>Years Remaining</b>	<b>Payment<sup>(1)</sup></b>
<b>General Tier 1</b>	June 30, 2004	Restart of Amortization	\$63,394,000	\$25,207,000	3	\$9,071,000
	June 30, 2005	Actuarial (Gain)/Loss	22,085,000	11,045,000	4	3,037,000
	June 30, 2006	Actuarial (Gain)/Loss	7,048,000	4,158,000	5	932,000
	June 30, 2006	Assumption Change	41,538,000	24,466,000	5	5,481,000
	June 30, 2007	Actuarial (Gain)/Loss	(19,901,000)	(13,265,000)	6	(2,522,000)
	June 30, 2008	Actuarial (Gain)/Loss	(18,128,000)	(13,295,000)	7	(2,207,000)
	June 30, 2009	Actuarial (Gain)/Loss	55,190,000	43,632,000	8	6,452,000
	June 30, 2009	Assumption Change	18,574,000	14,677,000	8	2,170,000
	June 30, 2010	Actuarial (Gain)/Loss	50,018,000	41,949,000	9	5,614,000
	June 30, 2011	Actuarial (Gain)/Loss	36,225,000	31,850,000	10	3,905,000
	June 30, 2012	Actuarial (Gain)/Loss	29,865,000	27,249,000	11	3,091,000
	June 30, 2012	Demographic Assumption Change	38,104,000	37,851,000	16	3,220,000
	June 30, 2012	Economic Assumption Change	19,517,000	19,382,000	16	1,649,000
	June 30, 2013	Actuarial (Gain)/Loss	31,670,000	29,805,000	12	3,155,000
	June 30, 2014	Actuarial (Gain)/Loss	16,119,000	15,553,000	13	1,546,000
	June 30, 2015	Actuarial (Gain)/Loss	8,457,000	8,308,000	14	780,000
	June 30, 2015	Assumption Change	47,959,000	47,948,000	19	3,613,000
	June 30, 2016	Actuarial (Gain)/Loss	45,451,000	<u>45,451,000</u>	15	<u>4,054,000</u>
				\$401,971,000		\$53,041,000

<sup>(1)</sup> *As of middle of year.*

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

**EXHIBIT I (continued)**

**Table of Amortization Bases**

	<b>Date Established</b>	<b>Source</b>	<b>Initial Amount</b>	<b>Outstanding Balance</b>	<b>Years Remaining</b>	<b>Payment<sup>(1)</sup></b>
<b>General Tier 2</b>	June 30, 2004	Restart of Amortization	\$49,731,000	\$19,779,000	3	\$7,118,000
	June 30, 2005	Actuarial (Gain)/Loss	7,622,000	3,813,000	4	1,048,000
	June 30, 2006	Actuarial (Gain)/Loss	(9,108,000)	(5,368,000)	5	(1,203,000)
	June 30, 2006	Assumption Change	19,085,000	11,244,000	5	2,519,000
	June 30, 2006	Plan Provision Change	14,731,000	8,671,000	5	1,943,000
	June 30, 2007	Actuarial (Gain)/Loss	(39,508,000)	(26,339,000)	6	(5,008,000)
	June 30, 2008	Actuarial (Gain)/Loss	(34,794,000)	(25,517,000)	7	(4,235,000)
	June 30, 2009	Actuarial (Gain)/Loss	71,253,000	56,322,000	8	8,329,000
	June 30, 2009	Assumption Change	22,696,000	17,932,000	8	2,652,000
	June 30, 2010	Actuarial (Gain)/Loss	47,615,000	39,938,000	9	5,345,000
	June 30, 2011	Actuarial (Gain)/Loss	(6,949,000)	(6,129,000)	10	(751,000)
	June 30, 2012	Actuarial (Gain)/Loss	(18,106,000)	(16,521,000)	11	(1,874,000)
	June 30, 2012	Demographic Assumption Change	29,420,000	29,213,000	16	2,485,000
	June 30, 2012	Economic Assumption Change	32,874,000	32,668,000	16	2,779,000
	June 30, 2013	Actuarial (Gain)/Loss	(23,823,000)	(22,442,000)	12	(2,375,000)
	June 30, 2014	Actuarial (Gain)/Loss	(49,125,000)	(47,397,000)	13	(4,712,000)
	June 30, 2015	Actuarial (Gain)/Loss	(62,406,000)	(61,337,000)	14	(5,762,000)
	June 30, 2015	Assumption Change	50,090,000	50,077,000	19	3,774,000
	June 30, 2016	Actuarial (Gain)/Loss	(28,842,000)	<u>(28,842,000)</u>	15	<u>(2,573,000)</u>
				\$29,765,000		\$9,499,000

<sup>(1)</sup> *As of middle of year.*

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

**EXHIBIT I (continued)**

**Table of Amortization Bases**

	<b>Date Established</b>	<b>Source</b>	<b>Initial Amount</b>	<b>Outstanding Balance</b>	<b>Years Remaining</b>	<b>Payment<sup>(1)</sup></b>
<b>Safety</b>	June 30, 2004	Restart of Amortization	\$210,319,000	\$83,628,000	3	\$30,094,000
	June 30, 2005	Actuarial (Gain)/Loss	19,142,000	9,577,000	4	2,633,000
	June 30, 2006	Actuarial (Gain)/Loss	3,418,000	2,010,000	5	450,000
	June 30, 2006	Assumption Change	42,167,000	24,835,000	5	5,564,000
	June 30, 2007	Actuarial (Gain)/Loss	(37,489,000)	(24,984,000)	6	(4,751,000)
	June 30, 2008	Actuarial (Gain)/Loss	(22,443,000)	(16,450,000)	7	(2,730,000)
	June 30, 2009	Actuarial (Gain)/Loss	78,157,000	61,781,000	8	9,136,000
	June 30, 2009	Assumption Change	49,982,000	39,510,000	8	5,843,000
	June 30, 2010	Actuarial (Gain)/Loss	108,448,000	90,975,000	9	12,175,000
	June 30, 2011	Actuarial (Gain)/Loss	8,879,000	7,817,000	10	958,000
	June 30, 2012	Actuarial (Gain)/Loss	(7,501,000)	(6,833,000)	11	(775,000)
	June 30, 2012	Demographic Assumption Change	55,513,000	55,152,000	16	4,692,000
	June 30, 2012	Economic Assumption Change	51,887,000	51,539,000	16	4,384,000
	June 30, 2013	Actuarial (Gain)/Loss	7,588,000	7,148,000	12	757,000
	June 30, 2014	Actuarial (Gain)/Loss	(54,478,000)	(52,550,000)	13	(5,225,000)
	June 30, 2015	Actuarial (Gain)/Loss	(55,657,000)	(54,704,000)	14	(5,139,000)
	June 30, 2015	Assumption Change	119,953,000	119,918,000	19	9,037,000
	June 30, 2016	Actuarial (Gain)/Loss	(17,062,000)	<u>(17,062,000)</u>	15	<u>(1,522,000)</u>
				\$381,307,000		\$65,581,000

<sup>(1)</sup> *As of middle of year.*



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

**EXHIBIT I (continued)**

**Table of Amortization Bases**

	<b>Date Established</b>	<b>Source</b>	<b>Initial Amount</b>	<b>Outstanding Balance</b>	<b>Years Remaining</b>	<b>Payment<sup>(1)</sup></b>
<b>Total VCERA</b>	June 30, 2004	Restart of Amortization	\$323,444,000	\$128,614,000	3	\$46,283,000
	June 30, 2005	Actuarial (Gain)/Loss	48,849,000	24,435,000	4	6,718,000
	June 30, 2006	Actuarial (Gain)/Loss	1,358,000	800,000	5	179,000
	June 30, 2006	Assumption Change	102,790,000	60,545,000	5	13,564,000
	June 30, 2006	Plan Provision Change	14,731,000	8,671,000	5	1,943,000
	June 30, 2007	Actuarial (Gain)/Loss	(96,898,000)	(64,588,000)	6	(12,281,000)
	June 30, 2008	Actuarial (Gain)/Loss	(75,365,000)	(55,262,000)	7	(9,172,000)
	June 30, 2009	Actuarial (Gain)/Loss	204,600,000	161,735,000	8	23,917,000
	June 30, 2009	Assumption Change	91,252,000	72,119,000	8	10,665,000
	June 30, 2010	Actuarial (Gain)/Loss	206,081,000	172,862,000	9	23,134,000
	June 30, 2011	Actuarial (Gain)/Loss	38,155,000	33,538,000	10	4,112,000
	June 30, 2012	Actuarial (Gain)/Loss	4,258,000	3,895,000	11	442,000
	June 30, 2012	Demographic Assumption Change	123,037,000	122,216,000	16	10,397,000
	June 30, 2012	Economic Assumption Change	104,278,000	103,589,000	16	8,812,000
	June 30, 2013	Actuarial (Gain)/Loss	15,435,000	14,511,000	12	1,537,000
	June 30, 2014	Actuarial (Gain)/Loss	(87,484,000)	(84,394,000)	13	(8,391,000)
	June 30, 2015	Actuarial (Gain)/Loss	(109,606,000)	(107,733,000)	14	(10,121,000)
	June 30, 2015	Assumption Change	218,002,000	217,943,000	19	16,424,000
	June 30, 2016	Actuarial (Gain)/Loss	(453,000)	<u>(453,000)</u>	15	<u>(41,000)</u>
				\$813,043,000		\$128,121,000

<sup>(1)</sup> *As of middle of year.*

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

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#### EXHIBIT J

#### 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 limit of \$160,000 indexed for inflation. That limit is \$210,000 for 2016 and \$215,000 for 2017. 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. Limits are also affected by the "grandfather" election under Section 415(b)(10).

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

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

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

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

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**EXHIBIT K**

**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 is anticipated to earn over the long-term future;
- (b) Mortality rates — the death rates of employees and pensioners at each age;
- (c) Retirement rates — the rate or probability of retirement at a given age;
- (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 determined cost allocated to the current year of service, as a level % of payroll over the members' career.

**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 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.

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

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**Unfunded/(Overfunded) Actuarial  
Accrued Liability:**

The extent to which the actuarial accrued liability of the Plan exceeds (or is exceeded by) the assets of the Plan.

**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.

**Rate of Investment Return:**

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

**Payroll or Compensation:**

Compensation Earnable and Pensionable Compensation expected to be paid to active members during the twelve months following the valuation date. Only Compensation Earnable and Pensionable Compensation that would possibly go into the determination of retirement benefits are included.

## SECTION 4: Reporting Information for the Ventura 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 934 beneficiaries in pay status)	6,539
2. Members inactive during year ended June 30, 2016 with vested rights <sup>(1)</sup>	2,639
3. Members active during the year ended June 30, 2016	8,509

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

1. Normal cost	\$137,451
2. Present value of future benefits	6,467,994
3. Present value of future normal costs (employer and member)	1,069,238
4. Actuarial accrued liability <sup>(2)</sup>	5,398,756
Retired members and beneficiaries	\$3,065,942
Inactive members with vested rights <sup>(1)</sup>	145,994
Active members	2,186,820
5. Valuation value of assets <sup>(2)</sup> (\$4,386,837 at market value as reported by Retirement Association)	4,585,713
6. Unfunded actuarial accrued liability	\$813,043

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<sup>(1)</sup> Includes terminated members with member contributions on deposit.

<sup>(2)</sup> Excludes liabilities and assets held for supplemental medical benefit reserve and statutory contingency reserve.

**SECTION 4: Reporting Information for the Ventura 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	Dollar Amount (in 000s)	% of Payroll
1. Total normal cost	\$137,451	19.47%
2. Expected employee contributions	<u>-71,287</u>	<u>-10.10%</u>
3. Employer normal cost: (1) + (2)	\$66,164	9.37%
4. Amortization of unfunded actuarial accrued liability	<u>128,127</u>	<u>18.15%</u>
5. Total recommended average employer contribution: (3) + (4)	\$194,291	27.52%
6. Projected compensation	\$706,000	

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

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**EXHIBIT II**

**Actuarial Assumptions and Methods**

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**Rationale for Assumptions:** The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the July 1, 2011 through June 30, 2014 Actuarial Experience Study and June 30, 2015 Economic Actuarial Assumptions Report both dated April 14, 2015. Unless otherwise noted, all actuarial assumptions and methods shown below apply to both PEPRA and Non-PEPRA members.

**Economic Assumptions**

**Net Investment Return:** 7.50%, net of investment and administration expenses.

**Member Contribution Crediting Rate:** 3.00% (actual increase is based on projected long term ten-year Treasury rate).

**Consumer Price Index:** Increase of 3.00% per year; retiree COLA increases due to CPI are subject to a 3.0% maximum change per year for General Tier 1 and Safety. For General Tier 2, SEIU members receive a fixed 2% cost-of-living adjustment, not subject to changes in the CPI, that applies to future service after March 2003.

**Payroll Growth:** Inflation of 3.00% per year plus “across the board” real salary increases of 0.50% per year.

**Increase in the Internal Revenue Code Section 401(a)(17) Compensation Limit:** Increase of 3.00% per year from the valuation date.

**Increase in Section 7522.10 Compensation Limit:** Increase of 3.00% per year from the valuation date.

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

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**Demographic Assumptions**

**Mortality Rates:**

- Healthy:* For General Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2035 set back one year for males and set forward one year for females.  
For Safety Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2035 set back three years.
- Disabled:* For General Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2035 set forward six years for males and eight years for females.  
For Safety Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2035 set forward two years.
- Beneficiaries:* Beneficiaries are assumed to have the same mortality as a General Member of the opposite sex who has taken a service (non-disability) retirement.

The above mortality tables contain about a 10% margin, based on actual to expected deaths, as a provision appropriate to reasonably anticipate future mortality improvement, based on a review of mortality experience as of the measurement date.

- Member Contribution Rates:* For General Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2035 set back one year for males and set forward one year for females weighted one-third male and two-thirds female.  
For Safety Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2035 set back three years weighted 80% male and 20% female.



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

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**Termination Rates Before Retirement:**

Age	Rate (%) Mortality			
	General		Safety	
	Male	Female	Male	Female
25	0.03	0.02	0.03	0.02
30	0.04	0.03	0.03	0.02
35	0.06	0.05	0.05	0.03
40	0.09	0.07	0.08	0.05
45	0.13	0.11	0.11	0.08
50	0.18	0.17	0.16	0.12
55	0.29	0.25	0.24	0.18
60	0.48	0.39	0.41	0.27
65	0.77	0.72	0.64	0.44

All pre-retirement deaths are assumed to be non-duty related.

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

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

<u>Age</u>	<u>Rate (%)</u>	
	<u>General<sup>(1)</sup></u>	<u>Safety<sup>(2)</sup></u>
25	0.02	0.11
30	0.04	0.24
35	0.08	0.36
40	0.13	0.58
45	0.21	0.88
50	0.31	1.48
55	0.41	2.88
60	0.54	5.04
65	0.69	0.00
70	0.90	0.00

- (1) 35% of General disabilities are assumed to be duty disabilities and the other 65% are assumed to be ordinary disabilities.
- (2) 90% of Safety disabilities are assumed to be duty disabilities and the other 10% are assumed to be ordinary disabilities.

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

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

Years of Service	Rate (%)	
	Withdrawal <sup>(1)</sup>	
	General	Safety
Less than 1	14.00	10.00
1	10.00	6.00
2	8.00	5.50
3	7.00	5.00
4	6.00	4.00
5	4.00	2.75
6	3.75	2.50
7	3.50	2.00
8	3.50	1.80
9	3.25	1.60
10	3.25	1.40
11	3.00	1.20
12	3.00	1.00
13	2.75	0.95
14	2.75	0.90
15	2.50	0.85
16	2.50	0.80
17	2.25	0.75
18	2.00	0.70
19	2.00	0.65
20 or more	2.00	0.60

<sup>(1)</sup> The greater of a refund of member contributions and a deferred annuity is valued when a member withdraws.

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

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

**Retirement Rates (%):**

Age	PEPRA			
	General Tier 1 and 2	General Tier 1 and 2	Safety	PEPRA Safety
40	0.00	0.00	1.00	0.00
41	0.00	0.00	1.00	0.00
42	0.00	0.00	1.00	0.00
43	0.00	0.00	1.00	0.00
44	0.00	0.00	1.00	0.00
45	0.00	0.00	1.00	0.00
46	0.00	0.00	1.00	0.00
47	0.00	0.00	1.00	0.00
48	0.00	0.00	1.00	0.00
49	0.00	0.00	1.50	0.00
50	2.50	0.00	2.50	5.00
51	2.50	0.00	2.00	2.00
52	3.00	2.00	3.00	4.00
53	3.50	2.00	4.00	6.00
54	4.00	2.50	17.00	16.00
55	4.50	4.00	22.00	20.00
56	5.00	4.50	22.00	20.00
57	6.00	5.00	20.00	18.00
58	8.00	6.00	19.00	18.00
59	8.00	7.00	22.00	25.00
60	12.00	9.00	22.00	25.00
61	15.00	11.00	25.00	25.00
62	22.00	20.00	35.00	40.00
63	20.00	20.00	40.00	40.00
64	22.00	18.00	40.00	40.00
65	30.00	20.00	100.00	100.00
66	35.00	30.00	100.00	100.00
67	35.00	30.00	100.00	100.00
68	35.00	30.00	100.00	100.00
69	20.00	30.00	100.00	100.00
70	20.00	50.00	100.00	100.00
71	20.00	50.00	100.00	100.00
72	20.00	50.00	100.00	100.00
73	20.00	50.00	100.00	100.00
74	30.00	50.00	100.00	100.00
75	100.00	100.00	100.00	100.00

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

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

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

General Age: 59  
Safety Age: 54

We assume that 50% and 60% of future General and Safety deferred vested members, respectively, will continue to work for a reciprocal employer. For reciprocals, we assume 4.00% compensation increases per annum.

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**Future Benefit Accruals:**

1.0 year of service per year.

**Unknown Data for Members:**

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

**Definition of Active Members:**

All active members of VCERA as of the valuation date.

**Percent Married:**

70% of male members and 55% of female members are assumed to be married at pre-retirement death or retirement. There is no explicit assumption for children's benefits.

**Age of Spouse:**

Female (or male) spouses are 3 years younger (or older) than their spouses.

**In-Service Redemptions:**

*Non-PEPRA Formulas*

The following assumptions for in-service redemptions pay as a percentage of final average compensation are used:

General Tier 1                    7.50%  
General Tier 2                    3.50%  
Safety                                7.25%

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

*PEPRA Formulas*

None

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

**Individual Salary Increases:**

<b>Annual Rate of Compensation Increase</b>		
Inflation: 3.00% per year; plus “across the board” real salary increases of 0.50% per year; plus the following promotional and merit increases:		
<b>Years of Service</b>	<b>General</b>	<b>Safety</b>
Less than 1	6.00%	8.00%
1	4.25	6.25
2	3.25	4.75
3	2.75	4.00
4	2.25	3.25
5	1.75	3.00
6	1.25	2.25
7	1.00	1.50
8	0.75	1.25
9	0.50	1.00
10	0.50	0.75
11	0.50	0.75
12	0.50	0.75
13	0.50	0.75
14	0.50	0.75
15	0.50	0.75
16	0.50	0.50
17	0.50	0.50
18	0.50	0.50
19	0.50	0.50
20 and Over	0.50	0.50

**Average Entry Age for  
Member Contribution Rates:**

For non-PEPRA members hired after November 1974, they will pay a contribution corresponding to a General and Safety member hired at entry age 35 and 27, respectively.

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

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### Actuarial Methods

- Actuarial Cost Method:** Entry Age Actuarial Cost Method. Entry Age is the age at the member's hire date. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are based on costs allocated as a level percentage of compensation, as if the current benefit formulas for each individual have always been in effect (i.e., "replacement life").
- Actuarial Value of Assets:** Market value of assets less unrecognized returns in each of the last ten semi-annual accounting periods. Unrecognized returns are equal to the difference between the actual market return and the expected return on market value and are recognized over a five-year period. Deferred gains and losses as of June 30, 2011 have been combined and will be recognized in equal amounts over a period of four and a half years from that date.
- Valuation Value of Assets:** Actuarial Value of Assets, reduced by the value of the supplemental medical benefit reserve and statutory contingency reserve.
- Amortization Policy:** The UAAL, (i.e., the difference between the Actuarial Accrued Liability and the Valuation Value of Assets), as of June 30, 2011 shall continue to be amortized over separate 15-year period amortization layers based on the valuations during which each separate layer was previously established.
- Any new UAAL as a result of actuarial gains or losses identified in the annual valuation as of June 30 will be amortized over a period of 15 years.
- Any new UAAL as a result of change in actuarial assumptions or methods will be amortized over a period of 20 years.
- Unless an alternative amortization period is recommended by the Actuary and accepted by the Board based on the results of an actuarial analysis:
- i) with the exception noted in ii., below, the increase in UAAL as a result of any plan amendments will be amortized over a period of 15 years;
  - ii) the increase in UAAL resulting from a temporary retirement incentive, including the impact of benefits resulting from additional service permitted in Section 31641.04 of the 1937 CERL (Golden Handshake), will be funded over a period of up to 5 years.

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

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

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

If an overfunding exists (i.e., the total of all UAAL becomes negative so that there is a surplus), such surplus and any subsequent surpluses will be amortized over an “open” amortization period of 30 years. Any prior UAAL amortization layers will be considered fully amortized, and any subsequent UAAL, will be amortized over 15 years as the first of a new series of amortization layers.

These amortization policy components will apply separately to each of VCERA’s UAAL cost groups.

Basic UAAL contribution rates have been calculated on a combined basis for all General Tiers. COLA UAAL contribution rates have been calculated on a combined basis for all General Tiers that have a COLA.

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#### **Changes in Actuarial Assumptions and Methods:**

There have been no changes in actuarial assumptions or methods since the previous actuarial valuation.



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

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**EXHIBIT III**

**Summary of Plan Provisions**

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This exhibit summarizes the major provisions of the VCERA 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 regular employees of the County of Ventura or contracting district, scheduled to work 64 or more hours biweekly, are eligible to become a member of the Retirement Association subject to classification below:
<i>General Tier 1</i>	All General members with membership dates before June 30, 1979, plus Deputy Sheriff trainees and certain executive management with membership dates before January 1, 2013.
<i>General Tier 2</i>	All General members with membership dates on or after June 30, 1979 and before January 1, 2013, except as noted above for General Tier 1.
<i>Safety</i>	All Safety members with membership dates before January 1, 2013.
<i>PEPRA General Tier 1</i>	Deputy Sheriff trainees with membership dates on or after January 1, 2013 and before April 17, 2014.
<i>PEPRA General Tier 2</i>	All General members with membership dates on or after January 1, 2013, except as noted above for PEPRA General Tier 1.
<i>PEPRA Safety</i>	All Safety members with membership dates on or after January 1, 2013.

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**Final Compensation for  
Benefit Determination:**

<i>General Tier 1 and Safety</i>	Highest consecutive twelve months of compensation earnable (§31462.1)(FAC1).
<i>General Tier 2</i>	Highest consecutive thirty-six months of compensation earnable (§31462)(FAC3).
<i>PEPRA General Tier 1, PEPRA General Tier 2 and PEPRA Safety</i>	Highest consecutive thirty-six months of pensionable compensation (§7522.32) (FAS3).

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

**Compensation Limit:**

*General Tier 1, General Tier 2 and Safety*

For members with membership dates on or after July 1, 1996, Compensation Earnable is limited to Internal Revenue Code Section 401(a)(17). The limit as of July 1, 2016 is \$265,000. The limit is indexed for inflation on an annual basis.

*PEPRA General Tier 1, PEPRA General Tier 2 and PEPRA Safety*

Pensionable Compensation is limited to \$117,020 for 2016 (\$140,424, if not enrolled in Social Security). The limit is indexed for inflation on an annual basis.

**Service:**

Years of service. (Yrs)

**Service Retirement Eligibility:**

*General*

Age 50 with 10 years of service, or age 70 regardless of service, or after 30 years, regardless of age (§31672).

*Safety*

Age 50 with 10 years of service, or age 70 regardless of service, or after 20 years, regardless of age (§31663.25).

*PEPRA General*

Age 52 with 5 years of service (§7522.20(a)) or age 70 regardless of service (§31672.3).

*PEPRA Safety*

Age 50 with 5 years of service (§7522.25(d)) or age 70 regardless of service (§31672.3).

**Benefit Formula:**

	<b>Retirement Age</b>	<b>Benefit Formula</b>
<i>General Tier 1</i> (§31676.11)	50	$(1.24\% \times \text{FAC1} - 1/3 \times 1.24\% \times \$350 \times 12) \times \text{Yrs}$
	55	$(1.67\% \times \text{FAC1} - 1/3 \times 1.67\% \times \$350 \times 12) \times \text{Yrs}$
	60	$(2.18\% \times \text{FAC1} - 1/3 \times 2.18\% \times \$350 \times 12) \times \text{Yrs}$
	62	$(2.35\% \times \text{FAC1} - 1/3 \times 2.35\% \times \$350 \times 12) \times \text{Yrs}$
	65 or later	$(2.61\% \times \text{FAC1} - 1/3 \times 2.61\% \times \$350 \times 12) \times \text{Yrs}$

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	<b>Retirement Age</b>	<b>Benefit Formula</b>
<i>General Tier 2 (§31676.1)</i>	50	$(1.18\% \times \text{FAC3} - 1/3 \times 1.18\% \times \$350 \times 12) \times \text{Yrs}$
	55	$(1.49\% \times \text{FAC3} - 1/3 \times 1.49\% \times \$350 \times 12) \times \text{Yrs}$
	60	$(1.92\% \times \text{FAC3} - 1/3 \times 1.92\% \times \$350 \times 12) \times \text{Yrs}$
	62	$(2.09\% \times \text{FAC3} - 1/3 \times 2.09\% \times \$350 \times 12) \times \text{Yrs}$
	65 or later	$(2.43\% \times \text{FAC3} - 1/3 \times 2.43\% \times \$350 \times 12) \times \text{Yrs}$
<i>PEPRA General Tier 1 and PEPRA General Tier 2 (§7522.20(a))</i>	<b>Retirement Age</b>	<b>Benefit Formula</b>
	52	$(1.00\% \times \text{FAS3} \times \text{Yrs})$
	55	$(1.30\% \times \text{FAS3} \times \text{Yrs})$
	60	$(1.80\% \times \text{FAS3} \times \text{Yrs})$
	62	$(2.00\% \times \text{FAS3} \times \text{Yrs})$
	65	$(2.30\% \times \text{FAS3} \times \text{Yrs})$
67 or later	$(2.50\% \times \text{FAS3} \times \text{Yrs})$	
<i>Safety (Non-Integrated) (§31664)</i>	<b>Retirement Age</b>	<b>Benefit Formula</b>
	50	$(2.00\% \times \text{FAC1} \times \text{Yrs})$
	55	$(2.62\% \times \text{FAC1} \times \text{Yrs})$
	60 or later	$(2.62\% \times \text{FAC1} \times \text{Yrs})$
<i>PEPRA Safety (§7522.25(d))</i>	<b>Retirement Age</b>	<b>Benefit Formula</b>
	50	$(2.00\% \times \text{FAS3} \times \text{Yrs})$
	55	$(2.50\% \times \text{FAS3} \times \text{Yrs})$
	57 or later	$(2.70\% \times \text{FAS3} \times \text{Yrs})$

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**Maximum Benefit:**

<i>General Tier 1, General Tier 2 and Safety</i>	100% of Highest Average Compensation (§31676.1, §31676.11, §31664)
<i>PEPRA General Tier 1, PEPRA General Tier 2 and PEPRA Safety</i>	None

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**Ordinary Disability:**

<i>General Tier 1, General Tier 2, PEPRA General Tier 1 and PEPRA General Tier 2</i>	
<i>Eligibility</i>	Five years of service (§31720).
<i>Benefit Formula</i>	1.5% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 65, but total benefit cannot be more than one-third of Final Compensation (§31727).
<i>Safety and PEPRA Safety</i>	
<i>Eligibility</i>	Five years of service (§31720).
<i>Benefit Formula</i>	1.8% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 55, but total benefit cannot be more than one-third of Final Compensation (§31727.2).

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**Line-of-Duty Disability:**

<i>All Members</i>	
<i>Eligibility</i>	No age or service requirements (§31720).
<i>Benefit Formula</i>	50% of the Final Compensation or 100% of Service Retirement benefit, if larger (§31727.4).

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**Pre-Retirement Death:**

<i>All Members</i>	
<i>Less than Five Years of Service</i>	Refund of employee contributions with interest, plus one month's compensation for each year of service to a maximum of six month's compensation (§31781). 50% of Final Compensation or 100% of Service Retirement benefit, if larger, payable to spouse if Line-of-Duty death (§31787).

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*Five or More Years of Service* An additional lump sum benefit of one-year of compensation is paid if Line-of-Duty death for Safety member (§31787.6).  
OR  
60% of the greater of Service Retirement or Ordinary Disability Retirement benefit payable to surviving eligible spouse (§31765.1, §31781.1), in lieu of above.  
An additional lump sum benefit of one-year of compensation is paid if Line-of-Duty death for Safety member (§31787.6).

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**Death After Retirement:**

*All Members*  
*Service Retirement or*  
*Ordinary Disability Retirement* 60% of member's unmodified allowance continued to eligible spouse (§31760.1). In addition, there is a \$5,000 lump sum benefit payable to member's beneficiary (§31789.3). An eligible spouse is a surviving spouse who was married to the member at least two years prior to the date of death and has attained age 55 on or prior to the date of death (§31760.2, §31785.1).  
*Line-of-Duty Disability* 100% of member's allowance continued to eligible spouse (§31786). In addition, there is a \$5,000 lump sum benefit payable to member's beneficiary (§31789.3). An eligible spouse is a surviving spouse who was married to the member at least two years prior to the date of death and has attained age 55 on or prior to the date of death (§31786.1).

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**Withdrawal Benefits:**

*Less than Five Years of Service* Refund of accumulated employee contributions with interest (§31628) or entitled to earned benefits commencing at anytime after eligible to retire (§31629.5).  
*Five or More Years of Service* If contributions left on deposit, entitled to earned benefits commencing at any time after eligible to retire (§31700).

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**Post-retirement**

**Cost-of-Living Benefits:**

*General Tier 1, Safety,*  
*PEPRA General Tier 1*  
*and PEPRA Safety* Future changes based on Consumer Price Index to a maximum of 3% per year, excess "banked" (§31870.1).

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

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<i>General Tier 2 and PEPRA General Tier 2</i>	SEIU members receive a fixed 2% cost-of-living adjustment, not subject to changes in the CPI, that applies to future service after March, 2003. This benefit has been valued consistent with the methodologies described in our October 9, 2006 report entitled "Funding Policies and Procedures for General Tier II COLA Benefit".
<b>Supplemental Benefit:</b>	A supplemental benefit in the amount of \$108.44 per month is paid to retirees and their survivors.
<b>Member Contributions:</b>	Please refer to Appendix A for the specific rates.
<i>General Tier 1 and Safety</i>	Provide for 50% of total Normal Cost.
<i>General Tier 2</i>	Provide for 50% of total basic Normal Cost. In addition, for General Tier 2 with COLA members, the current member COLA contribution rate of 2.63% of compensation has been reflected.
<i>PEPRA General Tier 2</i>	Provide for 50% of total basic Normal Cost. In addition, for General Tier 2 with COLA members, the current member COLA contribution rate of 2.63% of compensation has been reflected.
<i>PEPRA Safety</i>	Provide for 50% of total Normal Cost.
<b>Other Information:</b>	For Non-PEPRA members hired after November 1974, they will pay a contribution corresponding to a General and Safety member hired at entry age 35 and 27, respectively. Non-PEPRA Safety members with 30 or more years of service are exempt from paying member contributions. The same applies for Non-PEPRA General members hired on or before March 7, 1973.
<b>Plan Provisions Not Valued:</b>	<p>The Board of Retirement has approved a Supplemental Medical Benefit. This benefit is funded from Undistributed Excess Earnings, paid from a reserve that is not included in the Valuation Value of Assets and is subject at all times to the availability of funds.</p> <p>The Supplemental Medical Benefit is \$27.50 per month and is payable to virtually all retirees and beneficiaries.</p>

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**Plan Changes:** There have been no changes in plan provisions since the previous actuarial valuation.

**NOTE:** *The summary of major plan provisions is designed to outline 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 Segal, to ensure the proper provisions are valued.*

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

**Appendix A**

**Member Contribution Rates Based on 50/50 Sharing of Normal Cost for Non-PEPRA Tiers**

	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
General Tier 1	5.35%	8.03%	1.79%	2.68%	7.14%	10.71%
General Tier 2 without COLA	4.82%	7.23%	0.00%	0.00%	4.82%	7.23%
General Tier 2 COLA	4.82%	7.23%	2.63% <sup>(1)</sup>	2.63% <sup>(1)</sup>	7.45%	9.86%
Safety	10.78%	10.78%	4.49%	4.49%	15.27%	15.27%

<sup>(1)</sup> General Tier 2 members with COLA are required to pay COLA contributions of 2.63% of compensation based on current bargaining agreements.



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

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### Appendix B

#### Member Contribution Rates for PEPRA Members

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	<u>Basic</u>	<u>COLA</u>	<u>Total</u>
General Tier 2 without COLA	6.96%	0.00%	6.96%
General Tier 2 with COLA	6.96%	2.63% <sup>(1)</sup>	9.59%
Safety	10.21%	4.21%	14.42%

The PEPRA member contribution rate is 50% of the Normal Cost.

<sup>(1)</sup> General Tier 2 members with COLA are required to pay COLA contributions of 2.63% of compensation based on current bargaining agreements.

Note: It is our understanding that in the determination of pension benefits under the PEPRA tier formulas, the compensation that can be taken into account for 2016 is \$117,020. (For an employer that is not enrolled in Social Security, the maximum amount is \$140,424) (reference Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2016 (reference Section 7522.10(d)).

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

**Appendix C**

**Employer Contribution Rates (Dollar Amounts in Thousands) Without 50/50 Sharing of Normal Cost for Non-PEPRA Tiers – Current Valuation with Combined General UAAL Rates**

	<b>June 30, 2016 Actuarial Valuation</b>					
	BASIC		COLA		TOTAL	
	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>
<b>General Tier 1 Members</b>						
Normal Cost	9.04%	\$708	2.77%	\$217	11.81%	\$925
UAAL <sup>(2)</sup>	<u>9.43%</u>	<u>738</u>	<u>4.10%</u>	<u>321</u>	<u>13.53%</u>	<u>1,059</u>
Total Contribution	18.47%	\$1,446	6.87%	\$538	25.34%	\$1,984
<b>General Tier 2 Members w/o COLA</b>						
Normal Cost	8.45%	\$18,142	0.00%	\$0	8.45%	\$18,142
UAAL <sup>(2)</sup>	<u>9.43%</u>	<u>20,238</u>	<u>0.00%</u>	<u>0</u>	<u>9.43%</u>	<u>20,238</u>
Total Contribution	17.88%	\$38,380	0.00%	\$0	17.88%	\$38,380
<b>General PEPRA Tier 2 Members w/o COLA</b>						
Normal Cost	6.96%	\$2,453	0.00%	\$0	6.96%	\$2,453
UAAL <sup>(2)</sup>	<u>9.43%</u>	<u>3,323</u>	<u>0.00%</u>	<u>0</u>	<u>9.43%</u>	<u>3,323</u>
Total Contribution	16.39%	\$5,776	0.00%	\$0	16.39%	\$5,776
<b>General Tier 2 Members w/COLA</b>						
Normal Cost <sup>(3)</sup>	8.45%	\$18,272	0.08%	\$173	8.53%	\$18,445
UAAL <sup>(2)(4)</sup>	<u>9.43%</u>	<u>20,382</u>	<u>4.10%</u>	<u>8,865</u>	<u>13.53%</u>	<u>29,247</u>
Total Contribution	17.88%	\$38,654	4.18%	\$9,038	22.06%	\$47,692
<b>General PEPRA Tier 2 Members w/COLA</b>						
Normal Cost <sup>(3)</sup>	6.96%	\$4,465	0.01%	\$6	6.97%	\$4,471
UAAL <sup>(2)(4)</sup>	<u>9.43%</u>	<u>6,049</u>	<u>4.10%</u>	<u>2,629</u>	<u>13.53%</u>	<u>8,678</u>
Total Contribution	16.39%	\$10,514	4.11%	\$2,635	20.50%	\$13,149
<b>All General Members<sup>(5)</sup></b>						
Normal Cost	8.18%	\$44,040	0.08%	\$396	8.26%	\$44,436
UAAL	<u>9.43%</u>	<u>50,730</u>	<u>2.19%</u>	<u>11,815</u>	<u>11.62%</u>	<u>62,545</u>
Total Contribution	17.61%	\$94,770	2.27%	\$12,211	19.88%	\$106,981

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

**Appendix C (continued)**

**Employer Contribution Rates (Dollar Amounts in Thousands) Without 50/50 Sharing of Normal Cost for Non-PEPRA Tiers – Current Valuation with Combined General UAAL Rates**

	June 30, 2016 Actuarial Valuation					
	BASIC		COLA		TOTAL	
	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>
<b>Safety Members</b>						
Normal Cost	13.55%	\$21,057	4.40%	\$6,837	17.95%	\$27,894
UAAL	<u>51.58%</u>	<u>80,156</u>	<u>-12.51%</u>	<u>-19,441</u>	<u>39.07%</u>	<u>60,715</u>
Total Contribution	65.13%	\$101,213	-8.11%	-\$12,604	57.02%	\$88,609
<b>Safety PEPRA Members</b>						
Normal Cost	10.21%	\$1,272	4.21%	\$524	14.42%	\$1,796
UAAL	<u>51.58%</u>	<u>6,425</u>	<u>-12.51%</u>	<u>-1,558</u>	<u>39.07%</u>	<u>4,867</u>
Total Contribution	61.79%	\$7,697	-8.30%	-\$1,034	53.49%	\$6,663
<b>All Safety Members<sup>(5)</sup></b>						
Normal Cost	13.30%	\$22,329	4.39%	\$7,361	17.69%	\$29,690
UAAL	<u>51.58%</u>	<u>86,581</u>	<u>-12.51%</u>	<u>-20,999</u>	<u>39.07%</u>	<u>65,582</u>
Total Contribution	64.88%	\$108,910	-8.12%	-\$13,638	56.76%	\$95,272
<b>All Categories Combined<sup>(5)</sup></b>						
Normal Cost	9.40%	\$66,369	1.10%	\$7,757	10.50%	\$74,126
UAAL	<u>19.45%</u>	<u>137,311</u>	<u>-1.30%</u>	<u>-9,184</u>	<u>18.15%</u>	<u>128,127</u>
Total Contribution	28.85%	\$203,680	-0.20%	-\$1,427	28.65%	\$202,253

<sup>(1)</sup> Amounts are in thousands, assumed to be paid throughout the year, and are based on June 30, 2016 annual payroll (also in thousands) shown below:

General Tier 1	\$7,830
General Tier 2	214,696
General PEPRA Tier 2	35,238
General Tier 2C	216,231
General PEPRA Tier 2C	64,147
Safety	155,401
Safety PEPRA	<u>12,457</u>
Total	\$706,000

<sup>(2)</sup> Basic UAAL rates have been calculated on a combined basis for all General Tiers. COLA UAAL rates have been calculated on a combined basis for all General Tiers that have a COLA (excludes General Tier 2 without COLA and General PEPRA Tier 2 without COLA).

<sup>(3)</sup> Reflects General Tier 2 member COLA contribution rate of 2.63% based on current bargaining agreements.

<sup>(4)</sup> Includes 0.47% in COLA UAAL costs attributed to the first two years of service accrued for the fixed 2% COLA pursuant to Government Code 31627.

<sup>(5)</sup> These aggregated rates are provided for informational purposes only as we understand that the tier specific rates will be implemented.

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

**Appendix D**

**Member Contribution Rates Without 50/50 Sharing of Normal Cost for Non-PEPRA Tiers**

**General Tier 1 Members' Contribution Rates from the June 30, 2016 Actuarial Valuation  
(Expressed as a Percentage of Monthly Payroll)**

**Calculated Under Recommended Assumptions**

Entry Age	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
15	3.24%	4.86%	1.21%	1.82%	4.45%	6.68%
16	3.24%	4.86%	1.21%	1.82%	4.45%	6.68%
17	3.31%	4.96%	1.23%	1.85%	4.54%	6.81%
18	3.38%	5.06%	1.25%	1.89%	4.63%	6.95%
19	3.44%	5.17%	1.29%	1.92%	4.73%	7.09%
20	3.51%	5.27%	1.32%	1.97%	4.83%	7.24%
21	3.59%	5.38%	1.33%	2.00%	4.92%	7.38%
22	3.66%	5.49%	1.36%	2.04%	5.02%	7.53%
23	3.73%	5.60%	1.39%	2.08%	5.12%	7.68%
24	3.81%	5.71%	1.42%	2.13%	5.23%	7.84%
25	3.88%	5.82%	1.45%	2.17%	5.33%	7.99%
26	3.96%	5.94%	1.47%	2.21%	5.43%	8.15%
27	4.04%	6.06%	1.51%	2.26%	5.55%	8.32%
28	4.12%	6.18%	1.53%	2.30%	5.65%	8.48%
29	4.20%	6.30%	1.57%	2.35%	5.77%	8.65%
30	4.28%	6.42%	1.60%	2.40%	5.88%	8.82%
31	4.37%	6.55%	1.62%	2.44%	5.99%	8.99%
32	4.45%	6.68%	1.66%	2.49%	6.11%	9.17%
33	4.54%	6.81%	1.69%	2.54%	6.23%	9.35%
34	4.63%	6.95%	1.73%	2.59%	6.36%	9.54%
35	4.72%	7.08%	1.77%	2.65%	6.49%	9.73%
36	4.82%	7.22%	1.79%	2.70%	6.61%	9.92%
37	4.91%	7.37%	1.83%	2.74%	6.74%	10.11%
38	5.01%	7.51%	1.87%	2.81%	6.88%	10.32%

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

**General Tier 1 Members' Contribution Rates from the June 30, 2016 Actuarial Valuation  
(Expressed as a Percentage of Monthly Payroll)**

**Calculated Under Recommended Assumptions**

<b>Entry Age</b>	<b>Basic</b>		<b>COLA</b>		<b>Total</b>	
	<b>First \$350</b>	<b>Over \$350</b>	<b>First \$350</b>	<b>Over \$350</b>	<b>First \$350</b>	<b>Over \$350</b>
39	5.11%	7.66%	1.90%	2.86%	7.01%	10.52%
40	5.21%	7.82%	1.95%	2.92%	7.16%	10.74%
41	5.32%	7.98%	1.99%	2.98%	7.31%	10.96%
42	5.43%	8.14%	2.02%	3.04%	7.45%	11.18%
43	5.54%	8.32%	2.07%	3.10%	7.61%	11.42%
44	5.66%	8.50%	2.12%	3.17%	7.78%	11.67%
45	5.79%	8.69%	2.16%	3.24%	7.95%	11.93%
46	5.91%	8.87%	2.21%	3.31%	8.12%	12.18%
47	6.03%	9.04%	2.24%	3.37%	8.27%	12.41%
48	6.14%	9.21%	2.29%	3.43%	8.43%	12.64%
49	6.23%	9.35%	2.33%	3.49%	8.56%	12.84%
50	6.31%	9.47%	2.36%	3.53%	8.67%	13.00%
51	6.37%	9.56%	2.38%	3.56%	8.75%	13.12%
52	6.42%	9.62%	2.39%	3.59%	8.81%	13.21%
53	6.43%	9.64%	2.39%	3.59%	8.82%	13.23%
54 & Over	6.37%	9.55%	2.37%	3.56%	8.74%	13.11%
Interest:	7.50%					
COLA:	3.00%					
COLA Loading:	37.30%					
Mortality:	RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2035 set back one year for males and set forward one year for females weighted one-third male and two-thirds female.					
Salary Increase:	See Exhibit II.					

Note: All members hired after November 1974, will pay a contribution corresponding to entry age 35. These rates are determined before any pickups by the employer.

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

**General Tier 2 Members' Contribution Rates from the June 30, 2016 Actuarial Valuation  
(Expressed as a Percentage of Monthly Payroll)**

**Calculated Under Recommended Assumptions**

Entry Age	Basic Only		Entry Age	Basic Only	
	First \$350	Over \$350		First \$350	Over \$350
16	2.66%	3.99%	38	4.13%	6.20%
17	2.72%	4.08%	39	4.21%	6.32%
18	2.77%	4.16%	40	4.29%	6.44%
19	2.83%	4.25%	41	4.38%	6.57%
20	2.89%	4.33%	42	4.47%	6.70%
21	2.95%	4.42%	43	4.55%	6.83%
22	3.01%	4.51%	44	4.65%	6.97%
23	3.07%	4.61%	45	4.74%	7.11%
24	3.13%	4.70%	46	4.84%	7.26%
25	3.20%	4.80%	47	4.94%	7.41%
26	3.26%	4.89%	48	5.05%	7.57%
27	3.33%	4.99%	49	5.15%	7.72%
28	3.39%	5.09%	50	5.25%	7.88%
29	3.46%	5.19%	51	5.35%	8.02%
30	3.53%	5.30%	52	5.44%	8.16%
31	3.60%	5.40%	53	5.51%	8.27%
32	3.67%	5.51%	54	5.57%	8.36%
33	3.75%	5.62%	55	5.61%	8.42%
34	3.82%	5.73%	56	5.63%	8.45%
35	3.89%	5.84%	57	5.61%	8.42%
36	3.97%	5.96%	58	5.81%	8.72%
37	4.05%	6.08%	59 & over	6.02%	9.03%

Interest: 7.50%  
 COLA: SEIU members contribute a negotiated 2.63% for a fixed 2% COLA pursuant to Government Code 31627.  
 Mortality: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2035 set back one year for males and set forward one year for females weighted one-third male and two-thirds female.  
 Salary Increase: See Exhibit II.

Note: All members hired after November 1974, will pay a contribution corresponding to entry age 35. These rates are determined before any pickups by the employer.

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

**Safety Members' Contribution Rates from the June 30, 2016 Actuarial Valuation  
(Expressed as a Percentage of Monthly Payroll)**

**Calculated Under Recommended Assumptions**

<b>Entry Age</b>	<b>Basic</b>	<b>COLA</b>	<b>Total</b>
15	7.74%	4.43%	12.17%
16	7.74%	4.43%	12.17%
17	7.74%	4.43%	12.17%
18	7.74%	4.43%	12.17%
19	7.74%	4.43%	12.17%
20	7.74%	4.43%	12.17%
21	7.74%	4.43%	12.17%
22	7.90%	4.52%	12.42%
23	8.07%	4.61%	12.68%
24	8.23%	4.71%	12.94%
25	8.40%	4.81%	13.21%
26	8.57%	4.91%	13.48%
27	8.75%	5.01%	13.76%
28	8.93%	5.11%	14.04%
29	9.12%	5.22%	14.34%
30	9.31%	5.33%	14.64%
31	9.51%	5.44%	14.95%
32	9.71%	5.56%	15.27%
33	9.93%	5.67%	15.60%
34	10.12%	5.79%	15.91%
35	10.32%	5.91%	16.23%
36	10.54%	6.02%	16.56%
37	10.76%	6.15%	16.91%
38	10.99%	6.29%	17.28%
39	11.24%	6.43%	17.67%
40	11.48%	6.56%	18.04%
41	11.71%	6.70%	18.41%
42	11.94%	6.83%	18.77%
43	12.12%	6.93%	19.05%
44	12.23%	7.00%	19.23%

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

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**Safety Members' Contribution Rates from the June 30, 2016 Actuarial Valuation  
(Expressed as a Percentage of Monthly Payroll)**

**Calculated Under Recommended Assumptions**

<b>Entry Age</b>	<b>Basic</b>	<b>COLA</b>	<b>Total</b>
45	12.34%	7.06%	19.40%
46	12.40%	7.10%	19.50%
47	12.42%	7.11%	19.53%
48	12.33%	7.05%	19.38%
49 & Over	12.11%	6.92%	19.03%

Interest: 7.50%  
 COLA: 3.00%  
 COLA Loading: 57.20%  
 Mortality: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2035 set back three years weighted 80% male and 20% female.  
 Salary Increase: See Exhibit II.

Note: All members hired after November 1974, will pay a contribution corresponding to entry age 27. These rates are determined before any pickups by the employers.



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

**Appendix E**

**Employer Contribution Rates (Dollar Amounts in Thousands) For Reference Purposes Only – Current Valuation Based on 50/50 Sharing of Normal Cost for All Tiers (PEPRA and Non-PEPRA) with Non-Combined General UAAL Rates**

	June 30, 2016 Actuarial Valuation					
	BASIC		COLA		TOTAL	
	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>
<b>General Tier 1 Members</b>						
Normal Cost <sup>(2)</sup>	8.13%	\$637	2.74%	\$214	10.87%	\$851
UAAL <sup>(3)</sup>	<u>572.72%</u>	<u>44,844</u>	<u>104.69%</u>	<u>8,197</u>	<u>677.41%</u>	<u>53,041</u>
Total Contribution	580.85%	\$45,481	107.43%	\$8,411	688.28%	\$53,892
<b>General Tier 2 Members w/o COLA</b>						
Normal Cost	7.11%	\$15,265	0.00%	\$0	7.11%	\$15,265
UAAL <sup>(3)</sup>	<u>1.11%</u>	<u>2,383</u>	<u>0.00%</u>	<u>0</u>	<u>1.11%</u>	<u>2,383</u>
Total Contribution	8.22%	\$17,648	0.00%	\$0	8.22%	\$17,648
<b>General PEPRA Tier 2 Members w/o COLA</b>						
Normal Cost	6.96%	\$2,453	0.00%	\$0	6.96%	\$2,453
UAAL <sup>(3)</sup>	<u>1.11%</u>	<u>391</u>	<u>0.00%</u>	<u>0</u>	<u>1.11%</u>	<u>391</u>
Total Contribution	8.07%	\$2,844	0.00%	\$0	8.07%	\$2,844
<b>General Tier 2 Members w/COLA</b>						
Normal Cost <sup>(4)</sup>	7.11%	\$15,374	0.08%	\$173	7.19%	\$15,547
UAAL <sup>(3)(5)</sup>	<u>1.11%</u>	<u>2,400</u>	<u>1.29%</u>	<u>2,790</u>	<u>2.40%</u>	<u>5,190</u>
Total Contribution	8.22%	\$17,774	1.37%	\$2,963	9.59%	\$20,737
<b>General PEPRA Tier 2 Members w/COLA</b>						
Normal Cost <sup>(4)</sup>	6.96%	\$4,465	0.01%	\$6	6.97%	\$4,471
UAAL <sup>(3)(5)</sup>	<u>1.11%</u>	<u>712</u>	<u>1.29%</u>	<u>828</u>	<u>2.40%</u>	<u>1,540</u>
Total Contribution	8.07%	\$5,177	1.30%	\$834	9.37%	\$6,011
<b>All General Members<sup>(6)</sup></b>						
Normal Cost	7.10%	\$38,194	0.07%	\$393	7.17%	\$38,587
UAAL	<u>9.43%</u>	<u>50,730</u>	<u>2.19%</u>	<u>11,815</u>	<u>11.62%</u>	<u>62,545</u>
Total Contribution	16.53%	\$88,924	2.26%	\$12,208	18.79%	\$101,132

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

**Appendix E (continued)**

**Employer Contribution Rates (Dollar Amounts in Thousands) For Reference Purposes Only – Current Valuation Based on 50/50 Sharing of Normal Cost for All Tiers (PEPRA and Non-PEPRA) with Non-Combined General UAAL Rates**

	June 30, 2016 Actuarial Valuation					
	BASIC		COLA		TOTAL	
	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>
<b>Safety Members</b>						
Normal Cost <sup>(7)</sup>	11.71%	\$18,197	4.88%	\$7,584	16.59%	\$25,781
UAAL	<u>51.58%</u>	<u>80,156</u>	<u>-12.51%</u>	<u>-19,441</u>	<u>39.07%</u>	<u>60,715</u>
Total Contribution	63.29%	\$98,353	-7.63%	-\$11,857	55.66%	\$86,496
<b>Safety PEPRA Members</b>						
Normal Cost	10.21%	\$1,272	4.21%	\$524	14.42%	\$1,796
UAAL	<u>51.58%</u>	<u>6,425</u>	<u>-12.51%</u>	<u>-1,558</u>	<u>39.07%</u>	<u>4,867</u>
Total Contribution	61.79%	\$7,697	-8.30%	-\$1,034	53.49%	\$6,663
<b>All Safety Members<sup>(6)</sup></b>						
Normal Cost	11.60%	\$19,469	4.83%	\$8,108	16.43%	\$27,577
UAAL	<u>51.58%</u>	<u>86,581</u>	<u>-12.51%</u>	<u>-20,999</u>	<u>39.07%</u>	<u>65,582</u>
Total Contribution	63.18%	\$106,050	-7.68%	-\$12,891	55.50%	\$93,159
<b>All Categories Combined<sup>(6)</sup></b>						
Normal Cost	8.17%	\$57,663	1.20%	\$8,501	9.37%	\$66,164
UAAL	<u>19.45%</u>	<u>137,311</u>	<u>-1.30%</u>	<u>-9,184</u>	<u>18.15%</u>	<u>128,127</u>
Total Contribution	27.62%	\$194,974	-0.10%	-\$683	27.52%	\$194,291

<sup>(1)</sup> Amounts are in thousands, assumed to be paid throughout the year, and are based on June 30, 2016 annual payroll (also in thousands) shown below:

General Tier 1	\$7,830
General Tier 2	214,696
General PEPRA Tier 2	35,238
General Tier 2C	216,231
General PEPRA Tier 2C	64,147
Safety	155,401
Safety PEPRA	<u>12,457</u>
Total	\$706,000

<sup>(2)</sup> The total employer rate has been adjusted by 0.27% to account for the cost associated with the cessation of member contributions after 30 years of service.

<sup>(3)</sup> Basic UAAL rates have not been calculated on a combined basis for all General Tiers.

<sup>(4)</sup> Reflects General Tier 2 member COLA contribution rate of 2.63% based on current bargaining agreements.

<sup>(5)</sup> Includes 0.47% in COLA UAAL costs attributed to the first two years of service accrued for the fixed 2% COLA pursuant to Government Code 31627.

<sup>(6)</sup> These aggregated rates are provided for informational purposes only as we understand that the tier specific rates will be implemented.

<sup>(7)</sup> The total employer rate has been adjusted by 1.32% to account for the cost associated with the cessation of member contributions after 30 years of service.

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

**Appendix E (continued)**

**Employer Contribution Rates (Dollar Amounts in Thousands) For Reference Purposes Only – Prior Valuation Based on 50/50 Sharing of Normal Cost for All Tiers (PEPRA and Non-PEPRA) with Non-Combined General UAAL Rates**

	June 30, 2015 Actuarial Valuation					
	BASIC		COLA		TOTAL	
	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>
<b>General Tier 1 Members</b>						
Normal Cost <sup>(2)</sup>	7.90%	\$683	2.67%	\$230	10.57%	\$913
UAAL <sup>(3)</sup>	<u>473.75%</u>	<u>40,932</u>	<u>74.06%</u>	<u>6,399</u>	<u>547.81%</u>	<u>47,331</u>
Total Contribution	481.65%	\$41,615	76.73%	\$6,629	558.38%	\$48,244
<b>General Tier 2 Members w/o COLA</b>						
Normal Cost	7.16%	\$15,283	0.00%	\$0	7.16%	\$15,283
UAAL <sup>(3)</sup>	<u>1.62%</u>	<u>3,458</u>	<u>0.00%</u>	<u>0</u>	<u>1.62%</u>	<u>3,458</u>
Total Contribution	8.78%	\$18,741	0.00%	\$0	8.78%	\$18,741
<b>General PEPRA Tier 2 Members w/o COLA</b>						
Normal Cost	7.03%	\$1,546	0.00%	\$0	7.03%	\$1,546
UAAL <sup>(3)</sup>	<u>1.62%</u>	<u>356</u>	<u>0.00%</u>	<u>0</u>	<u>1.62%</u>	<u>356</u>
Total Contribution	8.65%	\$1,902	0.00%	\$0	8.65%	\$1,902
<b>General Tier 2 Members w/COLA</b>						
Normal Cost <sup>(4)</sup>	7.16%	\$15,988	0.08%	\$179	7.24%	\$16,167
UAAL <sup>(3)(5)</sup>	<u>1.62%</u>	<u>3,617</u>	<u>1.34%</u>	<u>2,993</u>	<u>2.96%</u>	<u>6,610</u>
Total Contribution	8.78%	\$19,605	1.42%	\$3,172	10.20%	\$22,777
<b>General PEPRA Tier 2 Members w/COLA</b>						
Normal Cost <sup>(4)</sup>	7.03%	\$2,890	0.02%	\$9	7.05%	\$2,899
UAAL <sup>(3)(5)</sup>	<u>1.62%</u>	<u>666</u>	<u>1.34%</u>	<u>551</u>	<u>2.96%</u>	<u>1,217</u>
Total Contribution	8.65%	\$3,556	1.36%	\$560	10.01%	\$4,116
<b>All General Members<sup>(6)</sup></b>						
Normal Cost	7.16%	\$36,390	0.08%	\$418	7.24%	\$36,808
UAAL	<u>9.64%</u>	<u>49,029</u>	<u>1.96%</u>	<u>9,943</u>	<u>11.60%</u>	<u>58,972</u>
Total Contribution	16.80%	\$85,419	2.04%	\$10,361	18.84%	\$95,780

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

**Appendix E (continued)**

**Employer Contribution Rates (Dollar Amounts in Thousands) For Reference Purposes Only – Prior Valuation Based on 50/50 Sharing of Normal Cost for All Tiers (PEPRA and Non-PEPRA) with Non-Combined General UAAL Rates**

	June 30, 2015 Actuarial Valuation					
	BASIC		COLA		TOTAL	
	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>	Rate	Estimated Annual Amount <sup>(1)</sup>
<b>Safety Members</b>						
Normal Cost <sup>(7)</sup>	11.63%	\$18,913	4.84%	\$7,870	16.47%	\$26,783
UAAL	<u>47.33%</u>	<u>76,968</u>	<u>-9.24%</u>	<u>-15,026</u>	<u>38.09%</u>	<u>61,942</u>
Total Contribution	58.96%	\$95,881	-4.40%	-\$7,156	54.56%	\$88,725
<b>Safety PEPRA Members</b>						
Normal Cost	10.40%	\$789	4.28%	\$324	14.68%	\$1,113
UAAL	<u>47.33%</u>	<u>3,589</u>	<u>-9.24%</u>	<u>-701</u>	<u>38.09%</u>	<u>2,888</u>
Total Contribution	57.73%	\$4,378	-4.96%	-\$377	52.77%	\$4,001
<b>All Safety Members<sup>(6)</sup></b>						
Normal Cost	11.58%	\$19,702	4.81%	\$8,194	16.39%	\$27,896
UAAL	<u>47.33%</u>	<u>80,557</u>	<u>-9.24%</u>	<u>-15,727</u>	<u>38.09%</u>	<u>64,830</u>
Total Contribution	58.91%	\$100,259	-4.43%	-\$7,533	54.48%	\$92,726
<b>All Categories Combined<sup>(6)</sup></b>						
Normal Cost	8.26%	\$56,092	1.27%	\$8,612	9.53%	\$64,704
UAAL	<u>19.09%</u>	<u>129,586</u>	<u>-0.85%</u>	<u>-5,784</u>	<u>18.24%</u>	<u>123,802</u>
Total Contribution	27.35%	\$185,678	0.42%	\$2,828	27.77%	\$188,506

<sup>(1)</sup> Amounts are in thousands, assumed to be paid throughout the year, and are based on June 30, 2015 annual payroll (also in thousands) shown below:

General Tier 1	\$8,640
General Tier 2	213,455
General PEPRA Tier 2	21,992
General Tier 2C	223,301
General PEPRA Tier 2C	41,116
Safety	162,619
Safety PEPRA	<u>7,582</u>
Total	\$678,705

<sup>(2)</sup> The total employer rate has been adjusted by 0.48% to account for the cost associated with the cessation of member contributions after 30 years of service.

<sup>(3)</sup> Basic UAAL rates have not been calculated on a combined basis for all General Tiers.

<sup>(4)</sup> Reflects General Tier 2 member COLA contribution rate of 2.63% based on current bargaining agreements.

<sup>(5)</sup> Includes 0.54% in COLA UAAL costs attributed to the first two years of service accrued for the fixed 2% COLA pursuant to Government Code 31627.

<sup>(6)</sup> These aggregated rates are provided for informational purposes only as we understand that the tier specific rates will be implemented.

<sup>(7)</sup> The total employer rate has been adjusted by 1.20% to account for the cost associated with the cessation of member contributions after 30 years of service.

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