

Orange County Employees Retirement System

Actuarial Valuation and Review
as of December 31, 2012

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

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May 31, 2013

*Board of Retirement
Orange County Employees Retirement System
2223 Wellington Avenue
Santa Ana, CA 92701*

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of December 31, 2012. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2014-2015 and analyzes the preceding year's experience.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Plan. The census and the unaudited financial information on which our calculations were based were provided by the Retirement System. That assistance is gratefully acknowledged. The actuarial calculations were completed under the supervision of Andy Yeung, ASA, MAAA, FCA, Enrolled Actuary.

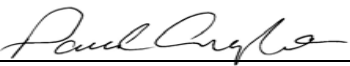
The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic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

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

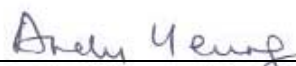
We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely

THE SEGAL COMPANY

By: 

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



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Vice President and Associate Actuary*

AW/bqb

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SECTION 1: Valuation Summary for the Orange County Employees Retirement System

Purpose

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

- The benefit provisions of the Retirement System, as administered by the Board of Retirement;
- The characteristics of covered active members, inactive vested members, retired members, and beneficiaries as of December 31, 2012, provided by the Retirement System;
- The assets of the Plan as of December 31, 2012, provided by the Retirement System;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

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

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

The contribution requirements are determined as a percentage of payroll. The System's employer rates provide for both normal cost and a contribution to amortize any unfunded or overfunded actuarial accrued liabilities. In this valuation, we have continued with the Board's funding policy to amortize the outstanding balance of the unfunded actuarial accrued liability (UAAL) from the December 31, 2004 valuation over a declining period, currently 22 years¹. Any increases or decreases in unfunded actuarial accrued liabilities that arise in future years due to actuarial gains or losses will be amortized over separate 15-year periods. Any increases or decreases in UAAL due to changes in actuarial assumptions are amortized over separate 30-year periods. The rates calculated in this report may be adopted by the Board for the fiscal year that extends from July 1, 2014 through June 30, 2015.

¹ We have also used 22 years to amortize the outstanding balance of the UAAL established in the December 31, 2009 valuation as a result of including additional premium pay items as pensionable salary and the new UAAL established in the December 31, 2010 valuation as a result of reallocating contributions and benefit payments among Rate Groups.

SECTION 1: Valuation Summary for the Orange County Employees Retirement System

Significant Issues in Valuation Year

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

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

In this report, the CalPEPRA plan contribution rates have been developed based on the same methods used to estimate the costs in our new tier reports dated January 8, 2013 and January 25, 2013 for the 2012/2013 and 2013/2014 fiscal years, respectively. In particular, as the new plan formulas are only offered to new employees, and since data for such employees is not yet available, we have continued to assume in this valuation that the demographic profiles (e.g., entry age, composition of male versus female, etc.) of the new employees in each Rate Group can be approximated by the data profiles of current active members hired after January 1, 2011 as reported in the December 31, 2011 valuation, with the exception of Rate Groups 6, 7, 9, 10 and 11 for which we used data for current active members hired in the last several years prior to the December 31, 2011 valuation in order to have a larger population¹. With the exception of the service retirement assumptions and the elimination of the annual payoffs assumptions, the contribution rates for the CalPEPRA plans in this report are based on the actuarial assumptions and methodologies adopted by the OCERS Board of Retirement for use in the December 31, 2012 valuation.

- For current members covered under the non-CalPEPRA plans, it is our understanding that the implementation of the compensation earnable provisions found in AB 197 (that became effective on January 1, 2013) should not have a material impact on their compensation amounts. For that reason, we have not made any adjustments in this valuation for those members.

¹ We have modified the demographic profiles for use in determining the contribution rates for the two CalPEPRA plans in Rate Group 2 based on the data provided after we published our new tier reports. Contribution rates were estimated in the original CalPEPRA studies on both benefit plans assuming alternatively that 391 employees in Rate Group 2 hired within one year of December 31, 2011 would enroll under either the 1.62% at 65 or the 2.5% at 67 formula. Since the original CalPEPRA studies were completed, data was provided by OCERS to isolate County attorneys who can only enroll under the 2.5% at 67 formula. Out of the 391 new employees, a total of 27 were County attorneys, San Juan Capistrano employees or OCERS management employees who would be enrolled under the 2.5% at 65 formula. Contribution rates under the 2.5% at 67 formula were recalculated in the December 31, 2012 valuation using these 27 employees. Contribution rates under the 1.62% at 65 formula were recalculated in this December 31, 2012 valuation using the remaining 364 employees.

SECTION 1: Valuation Summary for the Orange County Employees Retirement System

- Ref: Pg. 70*
- The results of this valuation reflect changes in economic actuarial assumptions adopted by the Board for the December 31, 2012 valuation. All of the assumptions recommended by Segal in our Review of Economic Assumptions report dated October 5, 2012 were adopted and have been applied in this valuation, including the alternative recommendation of an assumed investment earnings rate of 7.25%. The adopted changes were documented in that report and are also outlined in Section 4, Exhibit IV of this report.
- Ref: Pg. 69 and 126*
- The ratio of the valuation value of assets to the actuarial accrued liabilities has decreased from 67.03% to 62.52%. For informational purposes only, we have also prepared in Appendix C the funded ratio for each Rate Group. The System's funded ratio measured on a market value basis increased from 62.60% to 63.17%. The System's unfunded actuarial accrued liability has increased from \$4,458.6 million as of December 31, 2011 to \$5,675.7 million as of December 31, 2012. The increase in unfunded actuarial accrued liability is mainly due to lower than expected investment return (after smoothing) and changes in economic assumptions offset somewhat by lower than expected salary increases. A reconciliation of the System's unfunded actuarial accrued liability is provided in Section 3, Exhibit H.
- Ref: Pg. 62*
- Ref: Pg. 31*
- The aggregate employer rate calculated in this valuation has increased from 34.71% of payroll to 41.64% of payroll. The reasons for the changes are: (i) unfavorable investment return (after smoothing), (ii) growth in total payroll less than expected, (iii) changes in economic assumptions, and (iv) other experience losses, offset somewhat by (v) lower than expected individual salary increases. A reconciliation of the System's aggregate employer rate is provided in Section 2, Subsection D (see Chart 15). A reconciliation of the employer contribution rate by Rate Group is provided in Appendix D.
- Ref: Pg. 127*
- Note that the Board adopted a two-year phase-in of the impact of the change in economic assumptions on the employer contribution rates. After reflecting the two-year phase-in, the aggregate employer rate calculated in this valuation is 39.32% of payroll.
- Ref: Pg. 32*
- The aggregate member rate calculated in this valuation has increased from 11.47% of payroll to 12.87% of payroll. The change in the aggregate member rate is due to the changes in economic assumptions and changes in membership demographics. A reconciliation of the System's aggregate member rate is provided in Section 2, Subsection D (see Chart 16).
- Ref: Pgs. 15 – 26*
- This report contains contribution rates for some new benefit formulas within some Rate Groups for which there were no active employees (and no reported compensation) as of December 31, 2012. The normal cost rates for those benefit formulas have been updated in this report based on prior cost studies prepared using hypothetical membership profiles in conjunction with the adoption of those benefit formulas, updated to reflect the new economic assumptions adopted by the Board for the December 31, 2012 valuation.
- Ref: Pg. 5*
- As indicated in Section 2, Subsection B (see Chart 7) of this report, the total net unrecognized investment gain as of December 31, 2012 is \$97,451,000 (as compared to a net unrecognized loss of \$598,987,000 as of

SECTION 1: Valuation Summary for the Orange County Employees Retirement System

December 31, 2011). This deferred investment gain will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years and will help offset any investment losses that may occur after December 31, 2012. The deferred gains will be recognized over the next four years as shown on Line 7 of Chart 7, along with any futures gains or losses that will occur if the System does not earn the assumed rate of investment return of 7.25% per year (net of expenses) on a market value basis.

The deferred gains of \$97 million represent about 1% of the market value of assets. The potential impact associated with the deferred investment gains may be illustrated as follows:

- If the deferred gains were recognized immediately in the valuation value of assets, the funded ratio would increase from 62.5% to 63.2%.
- If the deferred gains were recognized immediately in the valuation value of assets, the aggregate employer rate would decrease from 41.64% to about 41.1% of payroll (before the two-year phase-in).

Ref: Pg. 34

- In 2013, the California Actuarial Advisory Panel (CAAP) adopted a set of model disclosure elements recommended for actuarial valuation reports for public retirement systems in California. Information has been added to this valuation report consistent with the recommendations regarding basic disclosure elements. In particular, we are now including new information regarding measures of plan volatility.
- The Governmental Accounting Standards Board (GASB) recently approved two new Statements affecting the reporting of pension liabilities for accounting purposes. Statement 67 replaces Statement 25 and is for plan reporting. Statement 68 replaces Statement 27 and is for employer reporting. It is important to note that the new GASB rules only redefine pension expense for financial reporting purposes, and do not apply to contribution amounts for actual pension funding purposes. Employers and plans can still develop and adopt funding policies under current practices. While the new Statements are applicable for preparing the 2014 calendar year financial statement for the Plan's reporting and for the 2014/2015 fiscal year financial statements for the employer's reporting, the actual preparation of schedules in compliance with those Statements will depend upon GASB's issuance of detailed implementation guides for the Plan and the employer, anticipated around June 2013 and January 2014, respectively. As a result, we have continued to use Statements 25 and 27 in preparing the financial reporting information in this report.

SECTION 1: Valuation Summary for the Orange County Employees Retirement System

Impact of Future Experience on Contribution Rates

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

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

SECTION 1: Valuation Summary for the Orange County Employees Retirement System

Summary of Key Valuation Results (Dollar amounts in thousands)

	December 31, 2012 (Before Phase-in)		December 31, 2011	
Aggregate Employer Contribution Rates⁽¹⁾:				
<u>General</u>				
	<u>Total Rate</u>	Estimated <u>Annual Amount⁽²⁾</u>	<u>Total Rate⁽³⁾</u>	Estimated <u>Annual Amount⁽²⁾</u>
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD)	22.59%	\$14,317	18.94%	\$12,004
Rate Group #2 – Plans I, J, O, P, S, T and U	39.42	386,680	32.91	322,771
Rate Group #3 – Plans B, G, H and U (Law Library, OCSD)	38.34	24,814	31.86	20,622
Rate Group #5 – Plans A, B and U (OCTA)	28.31	28,503	23.65	23,811
Rate Group #9 – Plans M, N and U (TCA)	27.17	1,647	22.22	1,347
Rate Group #10 – Plans I, J, M, N and U (OCFA)	38.69	8,447	32.76	7,152
Rate Group #11 – Plans M and N, future service, and U (Cemetery)	24.62	303	19.03	234
<u>Safety</u>				
Rate Group #6 – Plans E, F and V (Probation)	43.17%	\$28,141	36.57%	\$23,838
Rate Group #7 – Plans E, F, Q, R and V (Law Enforcement)	60.95	118,011	50.86	98,478
Rate Group #8 – Plans E, F, Q, R and V (Fire Authority)	53.00	59,268	43.15	48,253
<u>All Groups Combined</u>	41.64%	\$670,131	34.71%	\$558,510
Average Member Contribution Rates:				
<u>General</u>				
	<u>Total Rate</u>	Estimated <u>Annual Amount⁽²⁾</u>	<u>Total Rate⁽⁴⁾</u>	Estimated <u>Annual Amount⁽²⁾</u>
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD)	8.93%	\$5,660	7.91%	\$5,013
Rate Group #2 – Plans I, J, O, P, S, T and U	12.64	124,004	11.28	110,662
Rate Group #3 – Plans B, G, H and U (Law Library, OCSD)	12.65	8,188	11.35	7,346
Rate Group #5 – Plans A, B and U (OCTA)	9.72	9,786	8.71	8,769
Rate Group #9 – Plans M, N and U (TCA)	10.83	657	9.83	596
Rate Group #10 – Plans I, J, M, N and U (OCFA)	12.66	2,764	11.33	2,474
Rate Group #11 – Plans M and N, future service, and U (Cemetery)	9.41	116	8.28	102
<u>Safety</u>				
Rate Group #6 – Plans E, F and V (Probation)	14.77%	\$9,628	13.11%	\$8,546
Rate Group #7 – Plans E, F, Q, R and V (Law Enforcement)	15.63	30,264	13.77	26,663
Rate Group #8 – Plans E, F, Q, R and V (Fire Authority)	14.44	16,148	12.99	14,526
<u>All Groups Combined</u>	12.87%	\$207,215	11.47%	\$184,697

Note: The above average rates are calculated without the CalPEPRA plans as there are no members enrolled in those plans as of December 31, 2012.

⁽¹⁾ Before reflecting 2-year phase-in of the contribution rate impact from the change in economic assumptions in the December 31, 2012 valuation.

⁽²⁾ Based on December 31, 2012 projected annual compensation.

⁽³⁾ For those Rate Groups with tier specific contribution rates, the total rates shown above have been recalculated by applying the tier specific contribution rates determined in the December 31, 2011 valuation to the corresponding projected payrolls reported as of December 31, 2012.

⁽⁴⁾ Average rates have been recalculated by applying the individual entry age based rates determined in the December 31, 2011 valuation to the System membership as of December 31, 2012.

SECTION 1: Valuation Summary for the Orange County Employees Retirement System

Summary of Key Valuation Results (Dollar amounts in thousands)

	December 31, 2012 (After Phase-in)		December 31, 2011	
Aggregate Employer Contribution Rates⁽¹⁾:				
<u>General</u>				
	<u>Total Rate</u>	Estimated <u>Annual Amount⁽²⁾</u>	<u>Total Rate⁽³⁾</u>	Estimated <u>Annual Amount⁽²⁾</u>
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD)	21.04%	\$13,335	18.94%	\$12,004
Rate Group #2 – Plans I, J, O, P, S, T and U	37.34	366,253	32.91	322,771
Rate Group #3 – Plans B, G, H and U (Law Library, OCSD)	36.44	23,586	31.86	20,622
Rate Group #5 – Plans A, B and U (OCTA)	26.62	26,802	23.65	23,811
Rate Group #9 – Plans M, N and U (TCA)	25.71	1,559	22.22	1,347
Rate Group #10 – Plans I, J, M, N and U (OCFA)	36.72	8,017	32.76	7,152
Rate Group #11 – Plans M and N, future service, and U (Cemetery)	22.99	283	19.03	234
<u>Safety</u>				
Rate Group #6 – Plans E, F and V (Probation)	40.52%	\$26,414	36.57%	\$23,838
Rate Group #7 – Plans E, F, Q, R and V (Law Enforcement)	57.28	110,908	50.86	98,478
Rate Group #8 – Plans E, F, Q, R and V (Fire Authority)	49.83	55,723	43.15	48,253
<u>All Groups Combined</u>	39.32%	\$632,880	34.71%	\$558,510
Average Member Contribution Rates:				
<u>General</u>				
	<u>Total Rate</u>	Estimated <u>Annual Amount⁽²⁾</u>	<u>Total Rate⁽⁴⁾</u>	Estimated <u>Annual Amount⁽²⁾</u>
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD)	8.93%	\$5,660	7.91%	\$5,013
Rate Group #2 – Plans I, J, O, P, S, T and U	12.64	124,004	11.28	110,662
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Rate Group #9 – Plans M, N and U (TCA)	10.83	657	9.83	596
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Rate Group #7 – Plans E, F, Q, R and V (Law Enforcement)	15.63	30,264	13.77	26,663
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<u>All Groups Combined</u>	12.87%	\$207,215	11.47%	\$184,697

Note: The above average rates are calculated without the CalPEPRA plans as there are no members enrolled in those plans as of December 31, 2012.

⁽¹⁾ Before reflecting 2-year phase-in of the contribution rate impact from the change in economic assumptions in the December 31, 2012 valuation.

⁽²⁾ Based on December 31, 2012 projected annual compensation.

⁽³⁾ For those Rate Groups with tier specific contribution rates, the total rates shown above have been recalculated by applying the tier specific contribution rates determined in the December 31, 2011 valuation to the corresponding projected payrolls reported as of December 31, 2012.

⁽⁴⁾ Average rates have been recalculated by applying the individual entry age based rates determined in the December 31, 2011 valuation to the System membership as of December 31, 2012.

SECTION 1: Valuation Summary for the Orange County Employees Retirement System

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

	December 31, 2012	December 31, 2011
Funded Status:		
Actuarial accrued liability (AAL)	\$15,144,888	\$13,522,978
Valuation value of assets (VVA) ⁽¹⁾	9,469,208	9,064,355
Market value of assets (MVA) ⁽¹⁾	9,566,659	8,465,368
Funded percentage on a VVA basis	62.52%	67.03%
Funded percentage on a MVA basis	63.17%	62.60%
Unfunded Actuarial Accrued Liability on a VVA basis	\$5,675,680	\$4,458,623
Unfunded Actuarial Accrued Liability on a MVA basis	5,578,229	5,057,610
Key Assumptions:		
Interest rate	7.25%	7.75%
Inflation rate	3.25%	3.50%
Across-the-board real salary increase	0.50%	0.25%

⁽¹⁾ Excludes County Investment Account (funded by pension obligation bond proceeds held by OCERS), prepaid employer contributions account and non-valuation reserves.

SECTION 1: Valuation Summary for the Orange County Employees Retirement System

Summary of Key Valuation Demographic and Financial Data

	December 31, 2012	December 31, 2011	Percentage Change
Active Members:			
Number of members	21,256	21,421	-0.8%
Average age	45.5	45.4	N/A
Average service	13.1	13.0	N/A
Projected total compensation	\$1,609,600,860	\$1,619,474,479	-0.6%
Average projected compensation	\$75,725	\$75,602	0.2%
Retired Member and Beneficiaries:			
Number of members:			
Service retired	10,739	10,189	5.4%
Disability retired	1,319	1,291	2.2%
Beneficiaries	<u>1,889</u>	<u>1,809</u>	4.4%
Total	13,947	13,289	5.0%
Average age	69.0	69.0	N/A
Average monthly benefit ⁽¹⁾	\$3,247	\$3,099	4.8%
Vested Terminated Members:			
Number of vested terminated members ⁽²⁾	4,415	4,406	0.2%
Average age	44.2	43.9	N/A
Summary of Financial Data (dollar amounts in thousands):			
Market value of assets ⁽³⁾	\$9,566,874	\$8,465,593	13.0%
Return on market value of assets	11.92%	0.04%	N/A
Actuarial value of assets ⁽³⁾	\$9,469,423	\$9,064,580	4.5%
Return on actuarial value of assets	3.49%	3.28%	N/A
Valuation value of assets ⁽³⁾	\$9,469,208	\$9,064,355	4.5%
Return on valuation value of assets	3.49%	3.29%	N/A

⁽¹⁾ Excludes monthly benefits payable from the RMBR and STAR COLA.

⁽²⁾ This includes members who chose to leave their contributions on deposit even though they have less than five years of service.

⁽³⁾ The market value excludes \$103,261,000 and \$97,767,000 as of December 31, 2012 and December 31, 2011, respectively, in the County Investment Account (funded by pension obligation bond proceeds held by OCERS) and \$177,632,000 and \$162,873,000 as of December 31, 2012 and December 31, 2011, respectively, in the prepaid employer contributions account.

Note that the above market values and actuarial values include the non-valuation reserves, which are excluded from the valuation values.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

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: 2003 – 2012

Year Ended December 31	Active Members	Vested Terminated Members*	Retired Members and Beneficiaries	Ratio of Non-Actives to Actives
2003	22,672	2,278	9,079	0.50
2004	22,502	1,910	9,433	0.50
2005	22,467	2,466	10,218	0.56
2006	22,791	3,195	10,915	0.62
2007	23,618	3,646	11,421	0.64
2008	23,720	3,881	11,778	0.66
2009	22,633	4,094	12,243	0.72
2010	21,742	4,308	12,762	0.79
2011	21,421	4,406	13,289	0.83
2012	21,256	4,415	13,947	0.86

**Includes terminated members due a refund of member contributions.*

SECTION 2: Valuation Results for the Orange County Employees Retirement System

Active Members

Plan costs are affected by the age, years of service and compensation of active members. In this year's valuation, there were 21,256 active members with an average age of 45.5, average years of service of 13.1 years, and average compensation of \$75,725. The 21,421 active members in the prior valuation had an average age of 45.4, average service of 13.0 years, and average compensation of \$75,602.

Inactive Members

In this year's valuation, there were 4,415 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their member contributions versus 4,406 in the prior valuation.

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

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

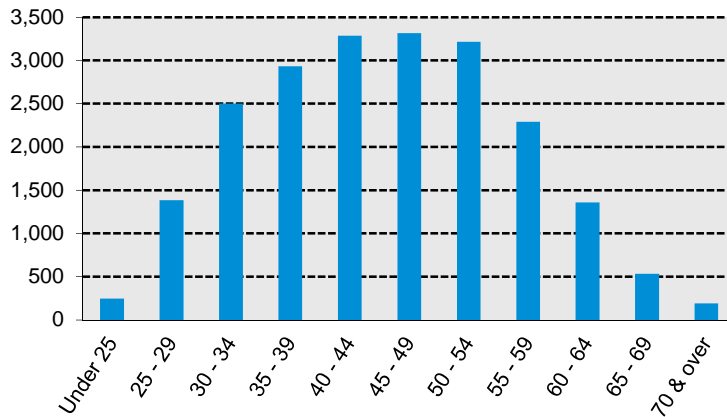
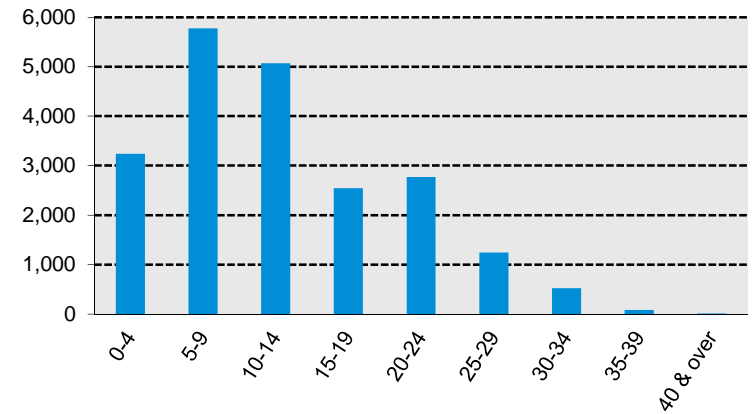


CHART 3
Distribution of Active Members by Years of Service as of December 31, 2012



SECTION 2: Valuation Results for the Orange County Employees Retirement System

Retired Members and Beneficiaries

As of December 31, 2012, 12,058 retired members and 1,889 beneficiaries were receiving total monthly benefits of \$45,292,112. For comparison, in the previous valuation, there were 11,480 retired members and 1,809 beneficiaries receiving total monthly benefits of \$41,183,112. These monthly benefits exclude benefits payable from the Retired Member Benefit Reserve (RMBR) and Supplemental Targeted Adjustment for Retirees Cost of Living Adjustment (STAR COLA).

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 (Excl. Beneficiaries) by Type and by Monthly Amount as of December 31, 2012

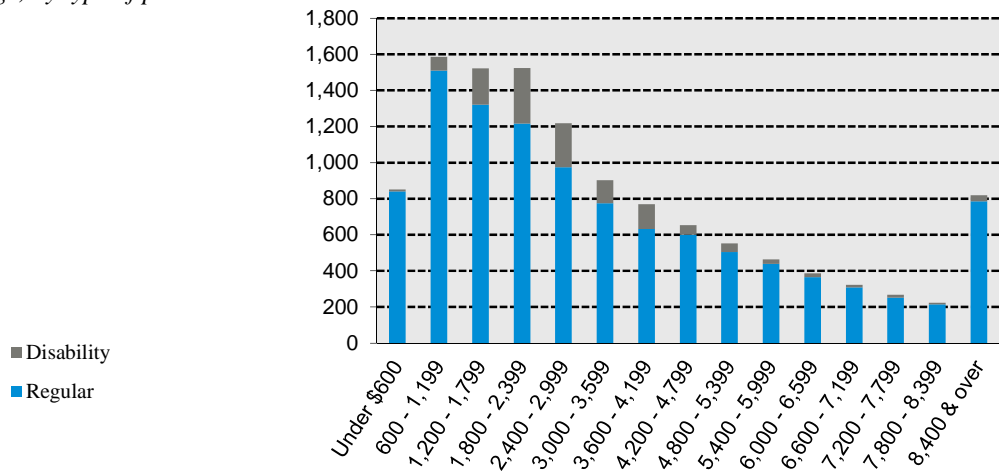
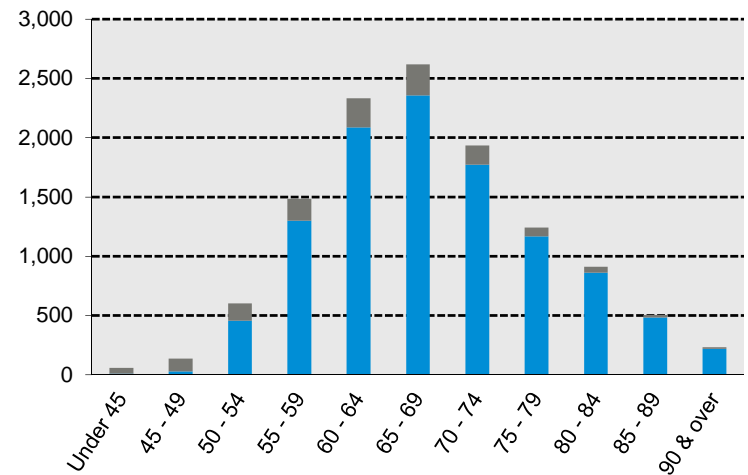


CHART 5
Distribution of Retired Members (Excl. Beneficiaries) by Type and by Age as of December 31, 2012



SECTION 2: Valuation Results for the Orange County Employees Retirement System

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.

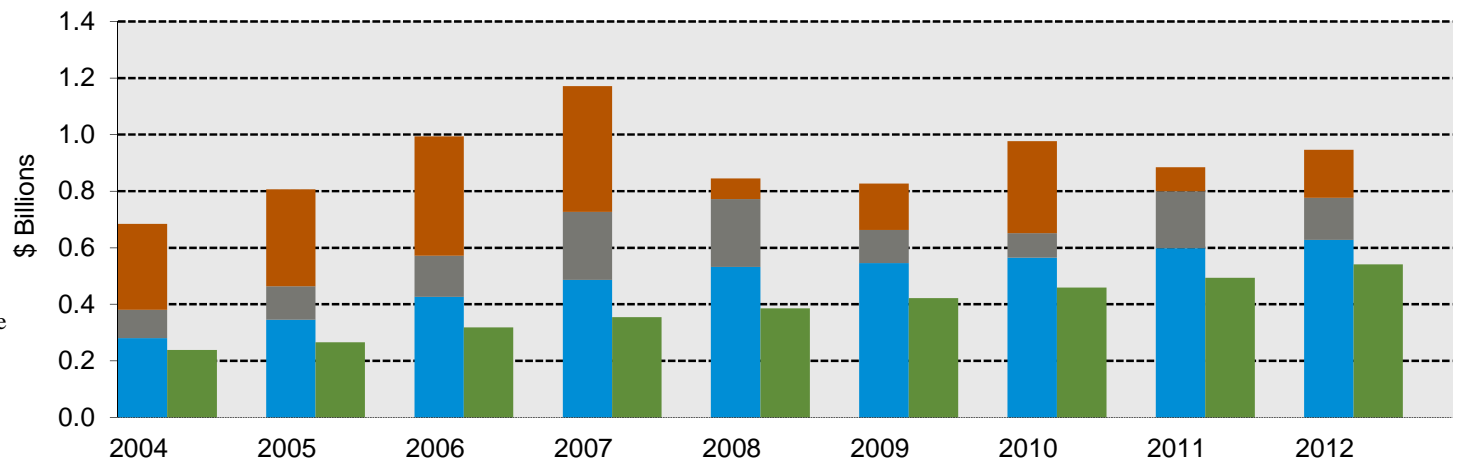
Retirement plan assets change as a result of the net impact of these income and expense components. The adjustment toward market value shown in the chart is the “non-cash” earnings on investments implicitly included in the actuarial value of assets. Additional financial information, including a summary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

The chart depicts the components of changes in the actuarial value of assets over the years 2004 – 2012. Note: The first bar represents increases in assets during each year while the second bar details the decreases.*

** 2004 was the year of the first valuation performed by Segal.*

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

CHART 6
Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended December 31, 2004 – 2012



SECTION 2: Valuation Results for the Orange County Employees Retirement System

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 does not have an immediate effect on the actuarial value of assets. The determination of the Actuarial Value of Assets and Valuation Value of Assets is provided below.

CHART 7

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

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

Plan Year Ending	Total Actual Market Return (net)	Expected Market Return (net)	Investment Gain / (Loss)	Deferred Factor	Deferred Return
2008	\$(1,617,791,000)	\$603,959,000	\$(2,221,750,000)	0.0	\$0
2009	1,092,660,000	489,051,000	603,609,000	0.2	120,722,000
2010	787,215,000	582,621,000	204,594,000	0.4	81,838,000
2011	3,236,000	651,782,000	(648,546,000)	0.6	(389,128,000)
2012	1,014,471,000	659,447,000	355,024,000	0.8	<u>284,019,000</u>
1. Total Deferred Return					\$97,451,000
2. Net Market Value Of Assets (Excludes \$103,261,000 in County Investment Account (funded by pension obligation bond proceeds held by OCERS) and \$177,632,000 in Prepaid Employer Contributions)					\$9,566,874,000 ⁽¹⁾
3. Actuarial Value of Assets (2) – (1)					\$9,469,423,000
4. Ratio of Actuarial Value To Market Value (3) / (2)					99%
5. Non-valuation Reserves					
(a) Unclaimed member deposit					\$123,000
(b) Medicare medical insurance reserve					92,000
(c) Retired member benefit reserve (RMBR)					<u>0</u>
(d) Subtotal					\$215,000
6. Valuation value of assets (3) – (5)(d)					\$9,469,208,000
7. Deferred Return Recognized in Each of the Next 4 years					
(a) Amount recognized on 12/31/2013					\$102,936,417
(b) Amount recognized on 12/31/2014					(17,785,583)
(c) Amount recognized on 12/31/2015					(58,704,583)
(d) Amount recognized on 12/31/2016					<u>71,004,750</u>
(e) Subtotal (may not total exactly due to rounding)					\$97,451,000

⁽¹⁾ Based on the preliminary unaudited financial statement provided by OCERS for this valuation.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

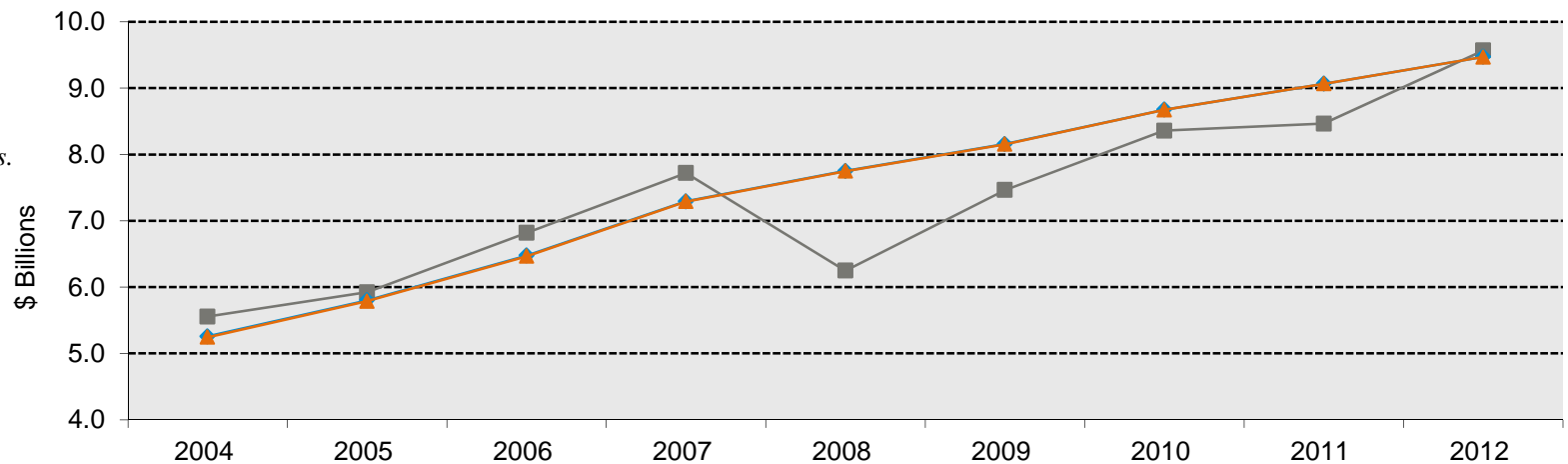
The market value, actuarial value, and valuation value of assets are representations of OCERS' financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets, but with less volatility. The valuation value of assets is the actuarial value, excluding any non-valuation reserves. The valuation value of assets is significant because OCERS' 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 years 2004 – 2012. Note: Market Value of Assets excludes the County Investment Account and Prepaid Employer Contributions.*

** 2004 was the year of the first valuation performed by Segal.*

- Market Value
- ◆ Actuarial Value
- ▲ Valuation Value

CHART 8
Market Value, Actuarial Value and Valuation Value of Assets as of December 31, 2004 – 2012



SECTION 2: Valuation Results for the Orange County Employees Retirement System

C. ACTUARIAL EXPERIENCE

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

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

return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

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

The total experience loss was \$163.0 million, a loss of \$387.8 million from investments and a gain of \$224.8 million from all other sources. A discussion of the major components of the actuarial experience is on the following pages.

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

CHART 9

Actuarial Experience for Year Ended December 31, 2012 (Dollar Amounts in Thousands)

1. Net loss from investments ⁽¹⁾	\$(387,808)
2. Net gain from other experience ⁽²⁾	<u>224,771</u>
3. Net experience gain/(loss): (1) + (2)	<hr/> \$(163,037)

⁽¹⁾ Details in Chart 10.

⁽²⁾ See Section 3, Exhibit H.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

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 OCERS’ investment policy. For valuation purposes, the assumed rate of return on the valuation value of assets was 7.75% (based on the December 31, 2011 valuation). The actual rate of return on a valuation basis for the 2012 plan year was 3.49%.

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

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

CHART 10
Investment Experience for Year Ended December 31, 2012 – Valuation Value and Actuarial Value of Assets

	Valuation Value	Actuarial Value
1. Actual return	\$318,043,000	\$318,033,000
2. Average value of assets	\$9,107,760,000	\$9,107,985,000
3. Actual rate of return: (1) ÷ (2)	3.49%	3.49%
4. Assumed rate of return	7.75%	7.75%
5. Expected return: (2) x (4)	\$705,851,000	\$705,869,000
6. Actuarial gain/(loss): (1) – (5)	<u>\$(387,808,000)</u>	<u>\$(387,836,000)</u>

SECTION 2: Valuation Results for the Orange County Employees Retirement System

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 nine years.

CHART 11

Investment Return – Actuarial Value, Valuation Value and Market Value: (Dollar Amounts in Thousands)

Year Ended December 31	Valuation Value Investment Return		Actuarial Value Investment Return		Market Value Investment Return	
	Amount	Percent	Amount	Percent	Amount	Percent
2004 ⁽¹⁾	\$411,453	8.55%	\$403,652	8.35%	\$544,457	11.26%
2005	449,620	8.50%	461,972	8.72%	441,178	8.11%
2006	565,491	9.68%	568,254	9.71%	787,330	13.17%
2007	683,212	10.45%	685,780	10.49%	769,613	11.18%
2008	312,821	4.25%	311,887	4.23%	(1,617,791)	-20.76%
2009	282,764	3.62%	281,360	3.60%	1,092,660	17.32%
2010	412,046	5.02%	411,960	5.02%	787,215	10.47%
2011	287,241	3.29%	286,585	3.28%	3,236	0.04%
2012	318,043	3.49%	318,033	3.49%	1,014,471	11.92%
9-Year Average Return		6.28%		6.28%		6.35%

⁽¹⁾ 2004 was the year of the first valuation performed by Segal.

Note: The dollar amount of return on market value is net of the return on the County Investment Account (funded by pension obligation bond proceeds held by OCERS) and prepaid employer contributions account. Furthermore, due to differences in how returns are calculated, these market value rates of return will generally differ somewhat from the return reported by OCERS and its investment consultant. For example, the return for 2012 reported by OCERS is 12.2%.

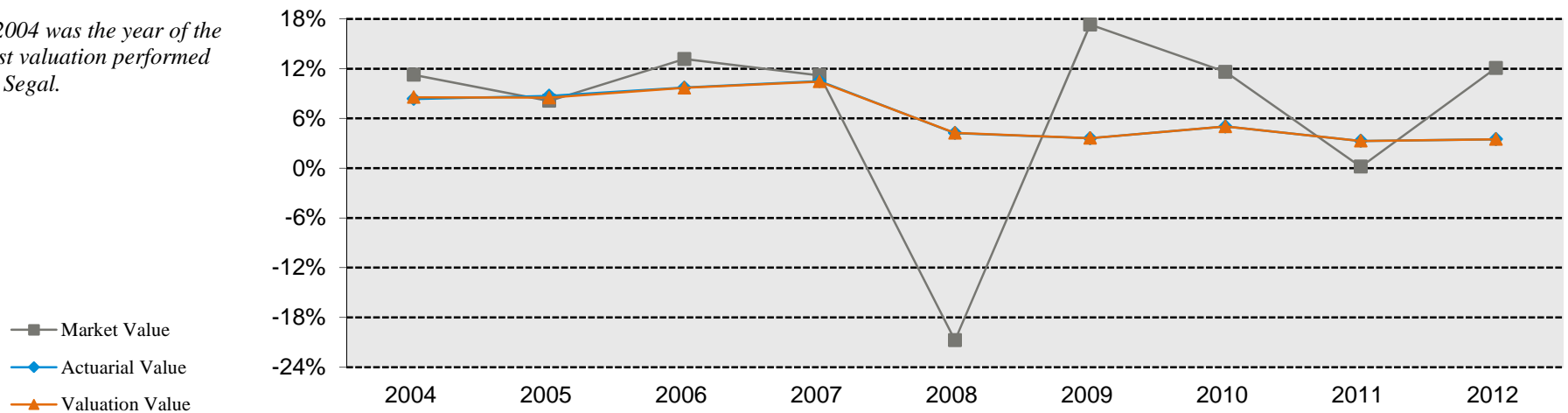
SECTION 2: Valuation Results for the Orange County Employees Retirement System

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 2004 – 2012.*

** 2004 was the year of the first valuation performed by Segal.*

CHART 12
Market, Actuarial, and Valuation Value Rates of Return for Years Ended December 31, 2004 – 2012



SECTION 2: Valuation Results for the Orange County Employees Retirement System

Other Experience

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

- actual turnover among the participants,
- retirement experience (earlier or later than expected),
- mortality (more or fewer deaths than expected),

- the number of disability retirements, and
- salary increases different than assumed.

The net gain from this other experience for the year ended December 31, 2012 amounted to \$224.8 million which is 1.48% of the actuarial accrued liability. See Exhibit H in Section 3 for a detailed development of the Unfunded Actuarial Accrued Liability.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

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.

For Probation Safety members who have prior benefit service in the General OCERS plan, the normal cost rate for their current plan is calculated based on the entry date for their current plan.

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 System) assuming a constant number of active members. In order to remain as a level percentage of payroll, amortization payments (credits) are scheduled to increase at the annual rate of 3.75% (i.e., 3.25% inflation plus 0.50% across-the-board salary increase). The outstanding balance of the December 31, 2004 UAAL is being amortized over a declining 22-year period¹. Any new UAAL that arises in future years due to actuarial gains or losses will be amortized over separate 15-year periods. Any new UAAL resulting from changes in actuarial assumptions is amortized over separate 30-year periods.

The recommended employer contributions are provided in Chart 13.

¹ We have also used 22 years to amortize the outstanding balance of the UAAL established in the December 31, 2009 valuation as a result of including additional premium pay items as pensionable salary and the new UAAL established in the December 31, 2010 valuation as a result of reallocating contributions and benefit payments among Rate Groups.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

Member Contributions

Non-CalPEPRA Members

Articles 6 and 6.8 of the 1937 Act define the methodology to be used in the calculation of member basic contribution rates for General members and Safety members, respectively. The basic contribution rate is determined so that the accumulation of a member's basic contributions made in a given year until a certain age will be sufficient to fund an annuity at that age that is equal to:

- 1/200 of Final Average Salary for General Plan A;
- 1/120 of Final Average Salary for General Plan B;
- 1/100 of Final Average Salary for General Plans G, H, I, J, and S;
- 1/120 of Final Average Salary for General Plans M, N, O, and P;
- 1/200 of Final Average Salary for Safety Plan E and Q, and;
- 1/100 of Final Average Salary for Safety Plan F and R.

The annuity age is 60 for General Plans A, B, M, N, O, P and S, 55 for Plans G, H, I, and J, and 50 for Safety Plans E, F, Q, and R. It is assumed that contributions are made annually at the same rate, starting at entry age. In addition to the basic contributions, members pay one-half of the total normal cost necessary to fund cost-of-living benefits. Accumulation includes crediting of interest at the assumed investment earnings rate.

Consistent with the practice since the Ventura Settlement, for determining the cost of basic benefit (i.e., non-COLA component), the effect of the assumed annual payoffs are currently recognized in the valuation only as an employer cost and do not affect member contribution rates. The assumed annual payoffs are only used in establishing cost-of-living member contributions.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

CalPEPRA Members

Pursuant to Section 7522.30(a) of the Government Code, CalPEPRA members in Plans T, U and V are required to contribute at least 50% of the Normal Cost rate. In addition, there are certain additional requirements that would have to be met such as requiring the employee rates be rounded to the nearest one quarter of one percent and requiring the new employees to pay the contribution rate of “similarly situated employees”, if it is greater. (reference: Section 7522.30(c)). We further understand that different rules may have to be applied for collectively bargained employees, non-represented, managerial or other supervisory employees. (reference: section 7522.30(e)). In preparing the Normal Cost rates in this report, we have assumed that exactly 50% of the Normal Cost would be paid by the new members and we have taken into account in this valuation only the requirements of Section 7522.30(c), but not requirements of Section 7522.30(e). We have also compared the total Normal Cost rates between the current and the prior valuations so that a rate increase of less than 1% of payroll would result in no change to the member’s rate (reference: Section 7522.30(d)).

Note that for members in Plan T, their basic rates have been calculated using a methodology similar to that used for Plan P. For members in Plan U or Plan V, their basic rates have been calculated using a methodology outlined in our letter dated December 4, 2012 that was previously approved by the Board.

Member contribution rates are provided in Appendix B.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

CHART 13

Recommended Employer Contribution Rates as of December 31, 2012 (Dollar Amounts in Thousands)

General Employers	December 31, 2012 Valuation		December 31, 2011 Valuation	
	Rate	Estimated Annual Amount ⁽¹⁾	Rate	Estimated Annual Amount ⁽¹⁾
Rate Group #1 – Plans A and B (2.0% @ 57 and 1.6667% @ 57.5 – non-OCTA, non-OCSD)				
Normal Cost	9.68%	\$6,135	8.55%	\$5,419
UAAL ⁽²⁾	<u>12.91%</u>	<u>8,182</u>	<u>10.39%</u>	<u>6,585</u>
Total Contribution	22.59%	\$14,317	18.94%	\$12,004
Total Contribution After 2-Year Phase-In	21.04%	\$13,335	N/A	N/A
Rate Group #1 – Plan U (2.5% @ 67 PEPR) ⁽³⁾				
Normal Cost	8.68%	N/A	8.06%	N/A
UAAL ⁽²⁾	<u>12.91%</u>	<u>N/A</u>	<u>10.39%</u>	<u>N/A</u>
Total Contribution	21.59%	N/A	18.45%	N/A
Total Contribution After 2-Year Phase-In	20.33%	N/A	N/A	N/A
Rate Group #1 – Plans A, B and U Combined				
Normal Cost	9.68%	\$6,135	8.55%	\$5,419
UAAL ⁽²⁾	<u>12.91%</u>	<u>8,182</u>	<u>10.39%</u>	<u>6,585</u>
Total Contribution	22.59%	\$14,317	18.94%	\$12,004
Total Contribution After 2-Year Phase-In	21.04%	\$13,335	N/A	N/A

⁽¹⁾ See page 26 for projected annual compensation.

⁽²⁾ UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

⁽³⁾ Applicable for members hired on or after January 1, 2013.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

CHART 13 (Continued)

Recommended Employer Contribution Rates as of December 31, 2012 (Dollar Amounts in Thousands)

General Employers	December 31, 2012 Valuation		December 31, 2011 Valuation	
	Rate	Estimated Annual Amount ⁽¹⁾	Rate	Estimated Annual Amount ⁽¹⁾
Rate Group #2 – Plans I and J (2.7% @ 55 – non-OCFA)				
Normal Cost	13.69%	\$132,200	12.03%	\$116,170
UAAL ⁽²⁾	<u>25.85%</u>	<u>249,625</u>	<u>20.98%</u>	<u>202,597</u>
Total Contribution	39.54%	\$381,825	33.01%	\$318,767
Total Contribution After 2-Year Phase-In	37.45%	\$361,642	N/A	N/A
Rate Group #2 – Plans O and P (1.62% @ 65)				
Normal Cost	5.56%	\$835	4.91%	\$737
UAAL ⁽²⁾	<u>25.85%</u>	<u>3,881</u>	<u>20.98%</u>	<u>3,150</u>
Total Contribution	31.41%	\$4,716	25.89%	\$3,887
Total Contribution After 2-Year Phase-In	29.84%	\$4,480	N/A	N/A
Rate Group #2 – Plan S (2.0% @ 57)				
Normal Cost	12.10%	\$44	10.99%	\$40
UAAL ⁽²⁾	<u>25.85%</u>	<u>\$95</u>	<u>20.98%</u>	<u>\$77</u>
Total Contribution	37.95%	\$139	31.97%	\$117
Total Contribution After 2-Year Phase-In	35.96%	\$131	N/A	N/A

⁽¹⁾ See page 26 for projected annual compensation.

⁽²⁾ UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

Note: For employers with future service only benefit improvements under 2.7% @ 55, refer to the employer rate adjustment on page 27.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

CHART 13 (Continued)

Recommended Employer Contribution Rates as of December 31, 2012 (Dollar Amounts in Thousands)

General Employers	December 31, 2012 Valuation		December 31, 2011 Valuation	
	Rate	Estimated Annual Amount ⁽¹⁾	Rate	Estimated Annual Amount ⁽¹⁾
Rate Group #2 – Plan T (1.62% @ 65 PEPR) ⁽³⁾				
Normal Cost	6.78%	N/A	6.20%	N/A
UAAL ⁽²⁾	<u>25.85%</u>	<u>N/A</u>	<u>20.98%</u>	<u>N/A</u>
Total Contribution	32.63%	N/A	27.18%	N/A
Total Contribution After 2-Year Phase-In	31.10%	N/A	N/A	N/A
Rate Group #2 – Plan U (2.5% @ 67 PEPR) ⁽⁴⁾				
Normal Cost	7.44%	N/A	8.26%	N/A
UAAL ⁽²⁾	<u>25.85%</u>	<u>N/A</u>	<u>20.98%</u>	<u>N/A</u>
Total Contribution	33.29%	N/A	29.24%	N/A
Total Contribution After 2-Year Phase-In	32.05%	N/A	N/A	N/A
Rate Group #2 – Plans I, J, O, P, S, T and U Combined				
Normal Cost	13.57%	\$133,079	11.93%	\$116,947
UAAL ⁽²⁾	<u>25.85%</u>	<u>253,601</u>	<u>20.98%</u>	<u>205,824</u>
Total Contribution	39.42%	\$386,680	32.91%	\$322,771
Total Contribution After 2-Year Phase-In	37.34%	\$366,253	N/A	N/A

⁽¹⁾ See page 26 for projected annual compensation.

⁽²⁾ UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

⁽³⁾ Applicable for members hired on or after January 1, 2013 except for County Attorneys, San Juan Capistrano employees and OCERS management employees.

⁽⁴⁾ Applicable for County Attorneys, San Juan Capistrano employees and OCERS management employees hired on or after January 1, 2013.

Note: For employers with future service only benefit improvements under 2.7% @ 55, refer to the employer rate adjustment on page 27.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

CHART 13 (Continued)

Recommended Employer Contribution Rates as of December 31, 2012 (Dollar Amounts in Thousands)

General Employers	December 31, 2012 Valuation		December 31, 2011 Valuation	
	Rate	Estimated Annual Amount ⁽¹⁾	Rate	Estimated Annual Amount ⁽¹⁾
Rate Group #3 – Plans G and H (2.5% @ 55)				
Normal Cost	12.88%	\$7,703	11.29%	\$6,752
UAAL ⁽²⁾	<u>25.60%</u>	<u>15,311</u>	<u>20.66%</u>	<u>12,357</u>
Total Contribution	38.48%	\$23,014	31.95%	\$19,109
Total Contribution After 2-Year Phase-In	36.57%	\$21,872	N/A	N/A
Rate Group #3 – Plan B (1.64% @ 57 – OCSD)				
Normal Cost	11.02%	\$542	10.11%	\$497
UAAL ⁽²⁾	<u>25.60%</u>	<u>1,258</u>	<u>20.66%</u>	<u>1,016</u>
Total Contribution	36.62%	\$1,800	30.77%	\$1,513
Total Contribution After 2-Year Phase-In	34.87%	\$1,714	N/A	N/A
Rate Group #3 – Plan U (2.5% @ 67 PEPRA) ⁽³⁾				
Normal Cost	9.38%	N/A	8.70%	N/A
UAAL ⁽²⁾	<u>25.60%</u>	<u>N/A</u>	<u>20.66%</u>	<u>N/A</u>
Total Contribution	34.98%	N/A	29.36%	N/A
Total Contribution After 2-Year Phase-In	33.52%	N/A	N/A	N/A
Rate Group #3 – Plans B, G, H and U Combined				
Normal Cost	12.74%	\$8,245	11.20%	\$7,249
UAAL ⁽²⁾	<u>25.60%</u>	<u>16,569</u>	<u>20.66%</u>	<u>13,373</u>
Total Contribution	38.34%	\$24,814	31.86%	\$20,622
Total Contribution After 2-Year Phase-In	36.44%	\$23,586	N/A	N/A

⁽¹⁾ See page 26 for projected annual compensation.

⁽²⁾ UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

⁽³⁾ Applicable for members hired on or after January 1, 2013.

Note: For employers with future service only benefit improvements under 2.5% @ 55, refer to the employer rate adjustment on page 27.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

CHART 13 (Continued)

Recommended Employer Contribution Rates as of December 31, 2012 (Dollar Amounts in Thousands)

General Employers	December 31, 2012 Valuation		December 31, 2011 Valuation	
	Rate	Estimated Annual Amount ⁽¹⁾	Rate	Estimated Annual Amount ⁽¹⁾
Rate Group #5 – Plans A and B (2.0% @ 57 and 1.6667% @ 57.5 – OCTA)				
Normal Cost	11.83%	\$11,911	10.57%	\$10,642
UAAL ⁽²⁾	<u>16.48%</u>	<u>16,592</u>	<u>13.08%</u>	<u>13,169</u>
Total Contribution	28.31%	\$28,503	23.65%	\$23,811
Total Contribution After 2-Year Phase-In	26.62%	\$26,802	N/A	N/A
Rate Group #5 – Plan U (2.5% @ 67 PEPR) ⁽³⁾				
Normal Cost	10.69%	N/A	9.89%	N/A
UAAL ⁽²⁾	<u>16.48%</u>	<u>N/A</u>	<u>13.08%</u>	<u>N/A</u>
Total Contribution	27.17%	N/A	22.97%	N/A
Total Contribution After 2-Year Phase-In	25.72%	N/A	N/A	N/A
Rate Group #5 – Plans A, B and U Combined				
Normal Cost	11.83%	\$11,911	10.57%	\$10,642
UAAL ⁽²⁾	<u>16.48%</u>	<u>16,592</u>	<u>13.08%</u>	<u>13,169</u>
Total Contribution	28.31%	\$28,503	23.65%	\$23,811
Total Contribution After 2-Year Phase-In	26.62%	\$26,802	N/A	N/A

⁽¹⁾ See page 26 for projected annual compensation.

⁽²⁾ UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

⁽³⁾ Applicable for members hired on or after January 1, 2013.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

CHART 13 (Continued)

Recommended Employer Contribution Rates as of December 31, 2012 (Dollar Amounts in Thousands)

General Employers	December 31, 2012 Valuation		December 31, 2011 Valuation	
	Rate	Estimated Annual Amount ⁽¹⁾	Rate	Estimated Annual Amount ⁽¹⁾
Rate Group #9 – Plans M and N (2.0% @ 55 – TCA)				
Normal Cost	14.20%	\$861	13.11%	\$795
UAAL ⁽²⁾	<u>12.97%</u>	<u>786</u>	<u>9.11%</u>	<u>552</u>
Total Contribution	27.17%	\$1,647	22.22%	\$1,347
Total Contribution After 2-Year Phase-In	25.71%	\$1,559	N/A	N/A
Rate Group #9 – Plan U (2.5% @ 67 PEPR) ⁽³⁾				
Normal Cost	10.97%	N/A	10.36%	N/A
UAAL ⁽²⁾	<u>12.97%</u>	<u>N/A</u>	<u>9.11%</u>	<u>N/A</u>
Total Contribution	23.94%	N/A	19.47%	N/A
Total Contribution After 2-Year Phase-In	22.87%	N/A	N/A	N/A
Rate Group #9 – Plans M, N and U Combined				
Normal Cost	14.20%	\$861	13.11%	\$795
UAAL ⁽²⁾	<u>12.97%</u>	<u>786</u>	<u>9.11%</u>	<u>552</u>
Total Contribution	27.17%	\$1,647	22.22%	\$1,347
Total Contribution After 2-Year Phase-In	25.71%	\$1,559	N/A	N/A

⁽¹⁾ See page 26 for projected annual compensation.

⁽²⁾ UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

⁽³⁾ Applicable for members hired on or after January 1, 2013.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

CHART 13 (Continued)

Recommended Employer Contribution Rates as of December 31, 2012 (Dollar Amounts in Thousands)

General Employers	December 31, 2012 Valuation		December 31, 2011 Valuation	
	Rate	Estimated Annual Amount ⁽¹⁾	Rate	Estimated Annual Amount ⁽¹⁾
Rate Group #10 – Plans I and J (2.7% @ 55 – OCFA)				
Normal Cost	13.92%	\$2,832	12.18%	\$2,478
UAAL ⁽²⁾	<u>24.76%</u>	<u>5,037</u>	<u>20.43%</u>	<u>4,156</u>
Total Contribution	38.68%	\$7,869	32.61%	\$6,634
Total Contribution After 2-Year Phase-In	36.70%	\$7,466	N/A	N/A
Rate Group #10 – Plans M and N (2.0% @ 55 – OCFA)				
Normal Cost	14.01%	\$209	14.35%	\$214
UAAL ⁽²⁾	<u>24.76%</u>	<u>369</u>	<u>20.43%</u>	<u>304</u>
Total Contribution	38.77%	\$578	34.78%	\$518
Total Contribution After 2-Year Phase-In	36.99%	\$551	N/A	N/A
Rate Group #10 – Plan U (2.5% @ 67 PEPR) ⁽³⁾				
Normal Cost	8.50%	N/A	7.84%	N/A
UAAL ⁽²⁾	<u>24.76%</u>	<u>N/A</u>	<u>20.43%</u>	<u>N/A</u>
Total Contribution	33.26%	N/A	28.27%	N/A
Total Contribution After 2-Year Phase-In	31.81%	N/A	N/A	N/A
Rate Group #10 – Plans I, J, M, N and U Combined				
Normal Cost	13.93%	\$3,041	12.33%	\$2,692
UAAL ⁽²⁾	<u>24.76%</u>	<u>5,406</u>	<u>20.43%</u>	<u>4,460</u>
Total Contribution	38.69%	\$8,447	32.76%	\$7,152
Total Contribution After 2-Year Phase-In	36.72%	\$8,017	N/A	N/A

⁽¹⁾ See page 26 for projected annual compensation.

⁽²⁾ UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

⁽³⁾ Applicable for members hired on or after January 1, 2013.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

CHART 13 (Continued)

Recommended Employer Contribution Rates as of December 31, 2012 (Dollar Amounts in Thousands)

General Employers	December 31, 2012 Valuation		December 31, 2011 Valuation	
	Rate	Estimated Annual Amount ⁽¹⁾	Rate	Estimated Annual Amount ⁽¹⁾
Rate Group #11 – Plans M and N, future service (2.0% @ 55 – Cemetery)				
Normal Cost	12.34%	\$152	10.80%	\$133
UAAL ⁽²⁾	<u>12.28%</u>	<u>151</u>	<u>8.23%</u>	<u>101</u>
Total Contribution	24.62%	\$303	19.03%	\$234
Total Contribution After 2-Year Phase-In	22.99%	\$283	N/A	N/A
Rate Group #11 – Plan U (2.5% @ 67 PEPR) ⁽³⁾				
Normal Cost	8.66%	N/A	7.95%	N/A
UAAL ⁽²⁾	<u>12.28%</u>	<u>N/A</u>	<u>8.23%</u>	<u>N/A</u>
Total Contribution	20.94%	N/A	16.18%	N/A
Total Contribution After 2-Year Phase-In	19.63%	N/A	N/A	N/A
Rate Group #11 – Plans M, N and U Combined				
Normal Cost	12.34%	\$152	10.80%	\$133
UAAL ⁽²⁾	<u>12.28%</u>	<u>151</u>	<u>8.23%</u>	<u>101</u>
Total Contribution	24.62%	\$303	19.03%	\$234
Total Contribution After 2-Year Phase-In	22.99%	\$283	N/A	N/A

⁽¹⁾ See page 26 for projected annual compensation.

⁽²⁾ UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

⁽³⁾ Applicable for members hired on or after January 1, 2013.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

CHART 13 (Continued)

Recommended Employer Contribution Rates as of December 31, 2012 (Dollar Amounts in Thousands)

Safety Employers	December 31, 2012 Valuation		December 31, 2011 Valuation	
	Rate	Estimated Annual Amount ⁽¹⁾	Rate	Estimated Annual Amount ⁽¹⁾
Rate Group #6 – Plans E and F (3% @ 50 – Probation)				
Normal Cost	21.26%	\$13,859	19.31%	\$12,587
UAAL ⁽²⁾	<u>21.91%</u>	<u>14,282</u>	<u>17.26%</u>	<u>11,251</u>
Total Contribution	43.17%	\$28,141	36.57%	\$23,838
Total Contribution After 2-Year Phase-In	40.52%	\$26,414	N/A	N/A
Rate Group #6 – Plan V (2.7% @ 57 PEPR) ⁽³⁾				
Normal Cost	13.91%	N/A	12.23%	N/A
UAAL ⁽²⁾	<u>21.91%</u>	<u>N/A</u>	<u>17.26%</u>	<u>N/A</u>
Total Contribution	35.82%	N/A	29.49%	N/A
Total Contribution After 2-Year Phase-In	33.40%	N/A	N/A	N/A
Rate Group #6 – Plans E, F and V Combined				
Normal Cost	21.26%	\$13,859	19.31%	\$12,587
UAAL ⁽²⁾	<u>21.91%</u>	<u>14,282</u>	<u>17.26%</u>	<u>11,251</u>
Total Contribution	43.17%	\$28,141	36.57%	\$23,838
Total Contribution After 2-Year Phase-In	40.52%	\$26,414	N/A	N/A

⁽¹⁾ See page 26 for projected annual compensation.

⁽²⁾ UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

⁽³⁾ Applicable for members hired on or after January 1, 2013.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

CHART 13 (Continued)

Recommended Employer Contribution Rates as of December 31, 2012 (Dollar Amounts in Thousands)

Safety Employers	December 31, 2012 Valuation		December 31, 2011 Valuation	
	Rate	Estimated Annual Amount ⁽¹⁾	Rate	Estimated Annual Amount ⁽¹⁾
Rate Group #7 – Plans E and F (3% @ 50 – Law Enforcement)				
Normal Cost	24.24%	\$43,000	21.48%	\$38,104
UAAL ⁽²⁾	<u>36.71%</u>	<u>65,121</u>	<u>29.38%</u>	<u>52,118</u>
Total Contribution	60.95%	\$108,121	50.86%	\$90,222
Total Contribution After 2-Year Phase-In	57.27%	\$101,593	N/A	N/A
Rate Group #7 – Plans Q and R (3% @ 55 – Law Enforcement)				
Normal Cost	24.20%	\$3,929	21.47%	\$3,486
UAAL ⁽²⁾	<u>36.71%</u>	<u>5,961</u>	<u>29.38%</u>	<u>4,770</u>
Total Contribution	60.91%	\$9,890	50.85%	\$8,256
Total Contribution After 2-Year Phase-In	57.37%	\$9,315	N/A	N/A
Rate Group #7 – Plan V (2.7% @ 57 PEPR) ⁽³⁾				
Normal Cost	17.05%	N/A	15.55%	N/A
UAAL ⁽²⁾	<u>36.71%</u>	<u>N/A</u>	<u>29.38%</u>	<u>N/A</u>
Total Contribution	53.76%	N/A	44.93%	N/A
Total Contribution After 2-Year Phase-In	50.61%	N/A	N/A	N/A
Rate Group #7 – Plans E, F, Q, R and V Combined				
Normal Cost	24.24%	\$46,929	21.48%	\$41,590
UAAL ⁽²⁾	<u>36.71%</u>	<u>71,082</u>	<u>29.38%</u>	<u>56,888</u>
Total Contribution	60.95%	\$118,011	50.86%	\$98,478
Total Contribution After 2-Year Phase-In	57.28%	\$110,908	N/A	N/A

⁽¹⁾ See page 26 for projected annual compensation.

⁽²⁾ UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

⁽³⁾ Applicable for members hired on or after January 1, 2013.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

CHART 13 (Continued)

Recommended Employer Contribution Rates as of December 31, 2012 (Dollar Amounts in Thousands)

Safety Employers	December 31, 2012 Valuation		December 31, 2011 Valuation	
	Rate	Estimated Annual Amount ⁽¹⁾	Rate	Estimated Annual Amount ⁽¹⁾
Rate Group #8 – Plans E and F (3% @ 50 – Fire Authority)				
Normal Cost	26.16%	\$29,254	23.49%	\$26,268
UAAL ⁽²⁾	<u>26.84%</u>	<u>30,014</u>	<u>19.66%</u>	<u>21,985</u>
Total Contribution	53.00%	\$59,268	43.15%	\$48,253
Total Contribution After 2-Year Phase-In	49.83%	\$55,723	N/A	N/A
Rate Group #8 – Plans Q and R (3% @ 55 – Fire Authority)				
Normal Cost	21.12%	N/A	18.58%	N/A
UAAL ⁽²⁾	<u>26.84%</u>	<u>N/A</u>	<u>19.66%</u>	<u>N/A</u>
Total Contribution	47.96%	N/A	38.24%	N/A
Total Contribution After 2-Year Phase-In	44.85%	N/A	N/A	N/A
Rate Group #8 – Plan V (2.7% @ 57 PEPR) ⁽³⁾				
Normal Cost	16.41%	N/A	15.23%	N/A
UAAL ⁽²⁾	<u>26.84%</u>	<u>N/A</u>	<u>19.66%</u>	<u>N/A</u>
Total Contribution	43.25%	N/A	34.89%	N/A
Total Contribution After 2-Year Phase-In	40.96%	N/A	N/A	N/A
Rate Group #8 – Plans E, F, Q, R and V Combined				
Normal Cost	26.16%	\$29,254	23.49%	\$26,268
UAAL ⁽²⁾	<u>26.84%</u>	<u>30,014</u>	<u>19.66%</u>	<u>21,985</u>
Total Contribution	53.00%	\$59,268	43.15%	\$48,253
Total Contribution After 2-Year Phase-In	49.83%	\$55,723	N/A	N/A

⁽¹⁾ See page 26 for projected annual compensation.

⁽²⁾ UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

⁽³⁾ Applicable for members hired on or after January 1, 2013.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

CHART 13 (Continued)

Recommended Employer Contribution Rates as of December 31, 2012 (Dollar Amounts in Thousands)

General and Safety Combined	December 31, 2012 Valuation		December 31, 2011 Valuation	
	Rate	Estimated Annual Amount ⁽¹⁾	Rate	Estimated Annual Amount ⁽¹⁾
Rate Groups #1 – #11				
Total Contribution	41.64%	\$670,131	34.71%	\$558,510
Total Contribution After 2-Year Phase-In	39.32%	\$632,880	N/A	N/A

⁽¹⁾ Based on December 31, 2012 projected annual compensation (also in thousands):

Rate Group #1 – Plans A and B	\$63,379
Rate Group #1 – Plan U	0
Rate Group #2 – Plans I and J	965,666
Rate Group #2 – Plans O and P	15,014
Rate Group #2 – Plan S	366
Rate Group #2 – Plan T	0
Rate Group #2 – Plan U	0
Rate Group #3 – Plans G and H	59,809
Rate Group #3 – Plan B	4,916
Rate Group #3 – Plan U	0
Rate Group #5 – Plans A and B	100,681
Rate Group #5 – Plan U	0
Rate Group #9 – Plans M and N	6,063
Rate Group #9 – Plan U	0
Rate Group #10 – Plans I and J	20,342
Rate Group #10 – Plans M and N	1,490
Rate Group #10 – Plan U	0
Rate Group #11 – Plans M and N	1,232
Rate Group #11 – Plan U	0
Rate Group #6 – Plans E and F	65,186
Rate Group #6 – Plan V	0
Rate Group #7 – Plans E and F	177,393
Rate Group #7 – Plans Q and R	16,237
Rate Group #7 – Plan V	0
Rate Group #8 – Plans E and F	111,826
Rate Group #8 – Plans Q and R	0
Rate Group #8 – Plan V	0
Total	\$1,609,600

SECTION 2: Valuation Results for the Orange County Employees Retirement System

CHART 13 (Continued)

Recommended Employer Contribution Rates as of December 31, 2012 (Dollar Amounts in Thousands)

**December 31, 2012 Rate Adjustment for General Employers with 2.7% @ 55 – Rate Group #2
Future Service Only Benefit Improvement (Plans I and J)**

Reduction to UAAL Rate Calculated in December 31, 2012 Valuation	<u>Rate</u>	Estimated Annual <u>Amount⁽¹⁾</u>
Reduction to Total Contribution	-2.04%	-\$103

⁽¹⁾ Based on December 31, 2012 projected annual compensation (also in thousands):

Retirement System	\$3,322
Local Agency Formation Commission	269
Children & Family Commission	<u>1,461</u>
Total	\$5,052

**December 31, 2012 Rate Adjustment for General Employers with 2.5% @ 55 – Rate Group #3
Future Service Only Benefit Improvement (Plans G and H)**

Reduction to UAAL Rate Calculated in December 31, 2012 Valuation	<u>Rate</u>	Estimated Annual <u>Amount⁽²⁾</u>
Reduction to Total Contribution	-3.69%	-\$45

⁽²⁾ Based on December 31, 2012 projected annual compensation (also in thousands):

Law Library	\$1,226
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SECTION 2: Valuation Results for the Orange County Employees Retirement System

CHART 14

“Pick – Up” - Discount Percentages

For every dollar of member contribution “picked up” by the employer and not deposited in the member’s contribution account, the employer can contribute less than a dollar. This is because the “pick-up” amount is not deposited in the member’s contribution account and so is not payable to a member who withdraws his or her contributions following termination of employment, and is not payable as an additional death benefit. The contribution discount percentages are as follows:

	December 31, 2012 Valuation Pick-Up Percentage		December 31, 2011 Valuation Pick-Up Percentage	
<i>General Members</i>				
Rate Group #1 Plan A/B (non-OCTA, non-OCSD)	Plan A: 97.85%	Plan B: 93.15%	Plan A: 97.87%	Plan B: 93.53%
Rate Group #1 Plan U (non-OCTA, non-OCSD)		Plan U: 90.72%		Plan U: 91.01%
Rate Group #2 (2.7% @ 55 – non-OCFA)	Plan I: 97.36%	Plan J: 94.29%	Plan I: 97.29%	Plan J: 94.44%
Rate Group #2 (1.62% @ 65)	Plan O: Not calculated	Plan P: 92.25%	Plan O: Not calculated	Plan P: 92.26%
Rate Group #2 (2.0% @ 57)		Plan S: 92.05%		Plan S: 91.25%
Rate Group #2 (1.62% @ 65 PEPRA)		Plan T: 91.68%		Plan T: 91.92%
Rate Group #2 (2.5% @ 67 PEPRA)		Plan U: 91.01%		Plan U: 91.66%
Rate Group #3 (2.5% @ 55)	Plan G: 96.74%	Plan H: 95.02%	Plan G: 96.89%	Plan H: 95.06%
Rate Group #3 (1.64% @ 57)		Plan B: 92.55%		Plan B: 92.60%
Rate Group #3 (2.5% @ 67 PEPRA)		Plan U: 92.03%		Plan U: 92.28%
Rate Group #5 Plan A/B (OCTA)	Plan A: 98.53%	Plan B: 94.59%	Plan A: 98.21%	Plan B: 94.75%
Rate Group #5 Plan U (OCTA)		Plan U: 91.11%		Plan U: 91.37%
Rate Group #9 (2.0% @ 55 – TCA)	Plan M: 95.00%	Plan N: 95.00%	Plan M: 95.32%	Plan N: 95.32%
Rate Group #9 (2.5% @ 67 PEPRA)		Plan U: 93.93%		Plan U: 94.15%
Rate Group #10 (2.7% @ 55 – OCFA)	Plan I: Not calculated*	Plan J: 94.79%	Plan I: 96.15%	Plan J: 94.79%
Rate Group #10 (2.0% @ 55 – OCFA)	Plan M: Not calculated	Plan N: 92.89%	Plan M: Not calculated	Plan N: 93.61%
Rate Group #10 (2.5% @ 67 PEPRA – OCFA)		Plan U: 92.93%		Plan U: 93.13%
Rate Group #11 (2.0% @ 55 – Cemetery)	Plan M: 94.43%	Plan N: 94.43%	Plan M: 94.29%	Plan N: 94.29%
Rate Group #11 (2.5% @ 67 PEPRA – Cemetery)		Plan U: 93.64%		Plan U: 93.85%

* There are no active members reported for this Tier in the December 31, 2012 valuation.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

CHART 14 (Continued)

“Pick – Up” - Discount Percentages

	December 31, 2012 Valuation Pick-Up Percentage		December 31, 2011 Valuation Pick-Up Percentage	
<i>Safety Members</i>				
Rate Group #6 (3% @ 50 – Probation)	Plan E: 100.00%	Plan F: 95.70%	Plan E: 100.00%	Plan F: 95.75%
Rate Group #6 (2.7% @ 57 PEPRA – Probation)		Plan V: 94.26%		Plan V: 94.38%
Rate Group #7 (3% @ 50 – Law Enforcement)	Plan E: 100.00%	Plan F: 99.35%	Plan E: 100.00%	Plan F: 99.32%
Rate Group #7 (3% @ 55 – Law Enforcement)	Plan Q: Not calculated	Plan R: 98.60%	Plan Q: Not calculated	Plan R: 98.52%
Rate Group #7 (2.7% @ 57 PEPRA – Law Enforcement)		Plan V: 98.48%		Plan V: 98.50%
Rate Group #8 (3% @ 50 – Fire Authority)	Plan E: 100.00%	Plan F: 99.35%	Plan E: 100.00%	Plan F: 99.29%
Rate Group #8 (3% @ 55 – Fire Authority)	Plan Q: Not calculated	Plan R: 98.71%	Plan Q: Not calculated	Plan R: 98.72%
Rate Group #8 (2.7% @ 57 PEPRA – Fire Authority)		Plan V: 98.83%		Plan V: 98.84%

SECTION 2: Valuation Results for the Orange County Employees Retirement System

CHART 14 (Continued)

“Pick – Up” - Average Entry Age

The following table provides the average entry age by employer used in determining the “pick-up” contributions under Section 31581.1.

<u>Employer</u>	<u>Code</u>	<u>Average Entry Age</u>
<i>General</i>		
Orange County	101	33
Cemetery District	102	31
Law Library	103	42
Retirement System	105	35
Fire Authority	106	33
Department of Education	108	31
Transportation Corridor Agency	109	40
City of San Juan Capistrano	110	35
Sanitation District	111	35
OCTA	112	36
U.C.I. (Bi-weekly)	113	20
Children & Families Commission	118	32
Local Agency Formation Commission	119	32
Superior Court	121	33
IHSS Public Authority	122	40
<i>Safety</i>		
Probation	101	28
Law Enforcement	101	27
Fire Authority	106	30

SECTION 2: Valuation Results for the Orange County Employees Retirement System

The contribution rates as of December 31, 2012 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions or methods.

Reconciliation of Recommended Contribution

The chart below details the changes in the recommended contribution from the prior valuation to the current year's valuation, for the entire Retirement System. A reconciliation of the recommended contribution from the prior valuation to the current year's valuation by Rate Group is provided in Appendix D.

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

CHART 15

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

	Contribution Rate	Estimated Amount ⁽¹⁾
Aggregate Recommended Contribution Rate as of December 31, 2011	34.71%	\$558,510
Effect of investment loss	2.15%	34,606
Effect of difference in actual versus expected salary increases	-1.36%	-21,891
Effect of growth in total payroll less than expected	0.86%	13,843
Effect of changes in economic assumptions	4.63%	74,502
Effect of other experience (gain)/loss ⁽²⁾	<u>0.65%</u>	<u>10,561</u>
Subtotal	6.93%	\$111,621
Aggregate Recommended Contribution Rate as of December 31, 2012 ⁽³⁾	41.64%	\$670,131
Aggregate Recommended Contribution Rate after 2-Year Phase-In	39.32%	\$632,880

⁽¹⁾ Based on December 31, 2012 projected compensation of \$1,609,600,000.

⁽²⁾ Includes adjustment of 0.40% to reflect 18-month delay between date of valuation and date of rate implementation for the rate impact of all actuarial experience (excluding the change in economic assumptions).

⁽³⁾ Before reflecting two-year phase-in of the effect of the changes in economic actuarial assumptions.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

The member contribution rates as of December 31, 2012 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, and changes in the actuarial assumptions or methods.

Reconciliation of Recommended Contribution Rate
 The chart below details the changes in the aggregate recommended member contribution rate from the prior valuation to the current year’s valuation.

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

CHART 16
Reconciliation of Average Recommended Member Contribution from December 31, 2011 to December 31, 2012 (Dollar Amounts in Thousands)

	Contribution Rate	Estimated Amount ⁽¹⁾
Average Recommended Contribution Rate as of December 31, 2011 ⁽²⁾	11.47%	\$184,697
Effect of changes in actuarial assumptions	1.42%	22,856
Effect of change in demographics	-0.02%	-338
Average Recommended Contribution Rate as of December 31, 2012	12.87%	\$207,215

⁽¹⁾ Based on December 31, 2012 projected annual compensation of \$1,609,600,000.

⁽²⁾ Rates have been recalculated by applying the individual entry age based rates determined in the December 31, 2011 valuation to the System membership as of December 31, 2012.

SECTION 2: Valuation Results for the Orange County Employees Retirement System

E. INFORMATION REQUIRED BY GASB

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

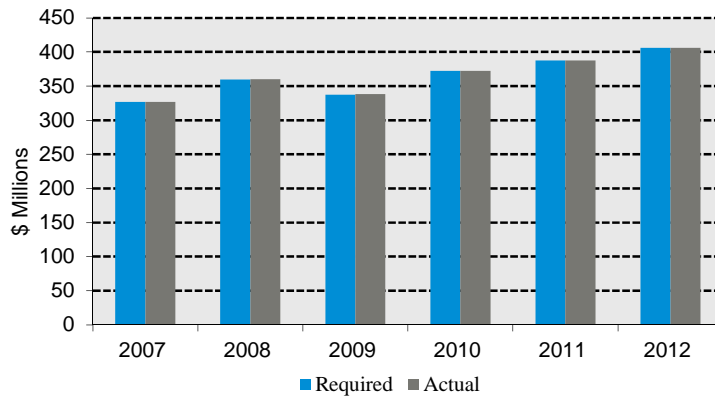
Critical information to the GASB is the historical comparison of the GASB required contributions to the actual contributions. This comparison demonstrates whether a plan is being funded on an actuarially sound basis and in accordance with GASB funding requirements. Chart 17 below presents a graphical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

The other critical piece of information regarding the Plan’s financial status is the funded ratio shown in Chart 18 below. This ratio compares the valuation value of assets to the actuarial accrued liabilities of the plan as calculated under the GASB. High ratios indicate a well-funded plan with assets sufficient to pay most benefits. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other changes. The 2012 funded ratio is 62.52%, compared to 67.03% in 2011.

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

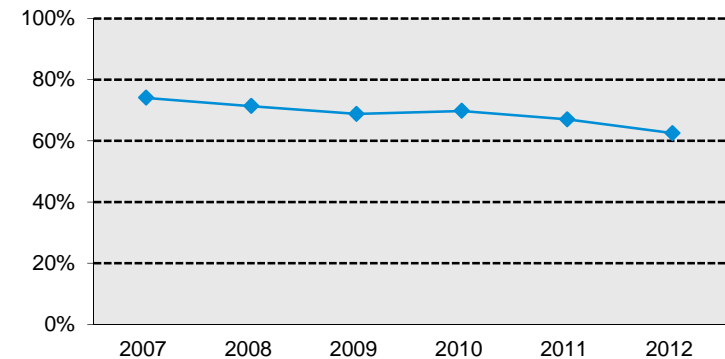
These graphs show key GASB information.

CHART 17
Required Versus Actual Contributions *



* Actual contributions excludes transfers from County Investment Account. See page 68.

CHART 18
Funded Ratio



SECTION 2: Valuation Results for the Orange County Employees Retirement System

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 OCERS, the current AVR is about 5.9. This means that a 1% asset gain/(loss) (relative to the assumed investment return) translates to about 5.9% of one-year’s payroll. Since OCERS amortizes actuarial gains and losses over a 15-year period, there would be a 0.5% 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 OCERS, the current LVR is about 9.4. This is about 59% higher than the AVR. Therefore, we would expect that contribution volatility will increase over the long-term.

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

CHART 19
Volatility Ratios for Years Ended December 31, 2008 – 2012

Year Ended December 31	Asset Volatility Ratio	Liability Volatility Ratio
2008	4.0	6.9
2009	4.6	7.3
2010	5.3	7.9
2011	5.2	8.4
2012	5.9	9.4

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT A

Table of Plan Coverage

i. Rate Group #1 – General – non-OCTA, non-OCSD – 2.0% at 57 and 1.6667% at 57.5

Category	Year Ended December 31		Change From Prior Year
	2012	2011	
Active members in valuation			
Number	1,265	1,232	2.7%
Average age	44.2	44.4	N/A
Average service	11.2	11.5	N/A
Projected total compensation	\$63,378,492	\$61,277,590	3.4%
Projected average compensation	\$50,102	\$49,738	0.7%
Account balances	\$36,064,708	\$34,789,697	3.7%
Total active vested members	981	957	2.5%
Vested terminated members			
Number	290	290	0.0%
Average age	42.4	44.6	N/A
Retired members			
Number in pay status	569	559	1.8%
Average age	73.3	73.0	N/A
Average monthly benefit ⁽¹⁾	\$2,444	\$2,379	2.7%
Disabled members			
Number in pay status	34	33	3.0%
Average age	67.6	66.8	N/A
Average monthly benefit ⁽¹⁾	\$2,247	\$2,152	4.4%
Beneficiaries			
Number in pay status	74	80	-7.5%
Average age	74.1	73.0	N/A
Average monthly benefit ⁽¹⁾	\$1,182	\$1,181	0.1%

⁽¹⁾ Excludes monthly benefits payable from the RMBR and STAR COLA.

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT A

Table of Plan Coverage

ii. Rate Group #2 – General – 2.7% at 55, 1.62% at 65 and 2.0% at 57

Category	Year Ended December 31		Change From Prior Year
	2012	2011	
Active members in valuation			
Number	13,802	13,971	-1.2%
Average age	45.9	45.7	N/A
Average service	12.9	12.6	N/A
Projected total compensation	\$981,046,774	\$988,851,937	-0.8%
Projected average compensation	\$71,080	\$70,779	0.4%
Account balances	\$1,345,480,313	\$1,240,681,149	8.4%
Total active vested members	11,898	11,393	4.4%
Vested terminated members			
Number	2,995	2,993	0.1%
Average age	44.3	43.7	N/A
Retired members			
Number in pay status	7,587	7,267	4.4%
Average age	70.2	70.2	N/A
Average monthly benefit ⁽¹⁾	\$3,165	\$3,026	4.6%
Disabled members			
Number in pay status	563	563	0.0%
Average age	65.3	64.7	N/A
Average monthly benefit ⁽¹⁾	\$2,268	\$2,194	3.4%
Beneficiaries			
Number in pay status	1,284	1,242	3.4%
Average age	74.8	74.5	N/A
Average monthly benefit ⁽¹⁾	\$1,530	\$1,486	3.0%

⁽¹⁾ Excludes monthly benefits payable from the RMBR and STAR COLA.

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT A

Table of Plan Coverage

iii. Rate Group #3 – General – 2.5% at 55 and 1.64% at 57

Category	Year Ended December 31		Change From Prior Year
	2012	2011	
Active members in valuation			
Number	612	616	-0.6%
Average age	48.2	48.4	N/A
Average service	13.2	13.4	N/A
Projected total compensation	\$64,724,834	\$65,188,958	-0.7%
Projected average compensation	\$105,760	\$105,826	-0.1%
Account balances	\$75,480,140	\$72,633,459	3.9%
Total active vested members	484	491	-1.4%
Vested terminated members			
Number	82	77	6.5%
Average age	46.7	46.2	N/A
Retired members			
Number in pay status	277	245	13.1%
Average age	66.8	66.8	N/A
Average monthly benefit ⁽¹⁾	\$4,501	\$4,266	5.5%
Disabled members			
Number in pay status	14	14	0.0%
Average age	65.3	66.3	N/A
Average monthly benefit ⁽¹⁾	\$2,857	\$2,540	12.5%
Beneficiaries			
Number in pay status	49	50	-2.0%
Average age	69.4	68.9	N/A
Average monthly benefit ⁽¹⁾	\$1,793	\$1,723	4.1%

⁽¹⁾ Excludes monthly benefits payable from the RMBR and STAR COLA.

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT A

Table of Plan Coverage

iv. Rate Group #5 – General OCTA – 2.0% at 57 and 1.6667% at 57.5

Category	Year Ended December 31		Change From Prior Year
	2012	2011	
Active members in valuation			
Number	1,509	1,549	-2.6%
Average age	49.9	49.5	N/A
Average service	13.4	13.1	N/A
Projected total compensation	\$100,681,092	\$103,674,469	-2.9%
Projected average compensation	\$66,720	\$66,930	-0.3%
Account balances	\$110,940,980	\$106,002,910	4.7%
Total active vested members	1,334	1,390	-4.0%
Vested terminated members			
Number	510	507	0.6%
Average age	48.6	48.4	N/A
Retired members			
Number in pay status	654	609	7.4%
Average age	68.5	68.2	N/A
Average monthly benefit ⁽¹⁾	\$2,180	\$2,136	2.1%
Disabled members			
Number in pay status	240	233	3.0%
Average age	62.9	62.4	N/A
Average monthly benefit ⁽¹⁾	\$2,126	\$2,080	2.2%
Beneficiaries			
Number in pay status	139	134	3.7%
Average age	68.3	68.0	N/A
Average monthly benefit ⁽¹⁾	\$1,216	\$1,163	4.6%

⁽¹⁾ Excludes monthly benefits payable from the RMBR and STAR COLA.

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT A

Table of Plan Coverage

v. Rate Group #9 – General – TCA – 2.0% at 55

Category	Year Ended December 31		Change From Prior Year
	2012	2011	
Active members in valuation			
Number	74	80	-7.5%
Average age	48.9	49.2	N/A
Average service	9.0	8.2	N/A
Projected total compensation	\$6,062,757	\$6,807,265	-10.9%
Projected average compensation	\$81,929	\$85,091	-3.7%
Account balances	\$4,656,238	\$4,720,543	-1.4%
Total active vested members	57	55	3.6%
Vested terminated members			
Number	40	40	0.0%
Average age	42.4	40.9	N/A
Retired members			
Number in pay status	27	21	28.6%
Average age	66.1	65.6	N/A
Average monthly benefit ⁽¹⁾	\$2,854	\$2,966	-3.8%
Disabled members			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit ⁽¹⁾	N/A	N/A	N/A
Beneficiaries			
Number in pay status	1	1	0.0%
Average age	72.7	71.7	N/A
Average monthly benefit ⁽¹⁾	\$94	\$91	3.3%

⁽¹⁾ Excludes monthly benefits payable from the RMBR and STAR COLA.

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT A

Table of Plan Coverage

vi. Rate Group #10 – General – OCFA – 2.7% at 55 and 2.0% at 55

Category	Year Ended December 31		Change From Prior Year
	2012	2011	
Active members in valuation			
Number	246	248	-0.8%
Average age	46.3	46.2	N/A
Average service ⁽¹⁾	12.8	12.9	N/A
Projected total compensation	\$21,831,986	\$22,016,705	-0.8%
Projected average compensation	\$88,748	\$88,777	0.0%
Account balances	\$22,951,038	\$21,254,872	8.0%
Total active vested members	208	207	0.5%
Vested terminated members			
Number	88	88	0.0%
Average age	42.0	41.5	N/A
Retired members			
Number in pay status	95	88	8.0%
Average age	64.8	64.2	N/A
Average monthly benefit ⁽²⁾	\$3,774	\$3,601	4.8%
Disabled members			
Number in pay status	9	10	-10.0%
Average age	59.6	59.7	N/A
Average monthly benefit ⁽²⁾	\$2,518	\$2,402	4.8%
Beneficiaries			
Number in pay status	7	4	75.0%
Average age	56.1	57.5	N/A
Average monthly benefit ⁽²⁾	\$1,319	\$1,624	-18.8%

⁽¹⁾ For some former Santa Ana employees, service used in calculating the average above is only used for vesting purposes. Benefit service starts to accrue only effective April 2012.

⁽²⁾ Excludes monthly benefits payable from the RMBR and STAR COLA.

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT A

Table of Plan Coverage

vii. Rate Group #11 – General – Cemetery District – 2.0% at 55 future service

Category	Year Ended December 31		Change From Prior Year
	2012	2011	
Active members in valuation			
Number	21	21	0.0%
Average age	46.2	45.2	N/A
Average service	14.3	13.3	N/A
Projected total compensation	\$1,232,371	\$1,247,172	-1.2%
Projected average compensation	\$58,684	\$59,389	-1.2%
Account balances	\$1,395,792	\$1,238,778	12.7%
Total active vested members	18	17	5.9%
Vested terminated members			
Number	2	2	0.0%
Average age	34.1	33.1	N/A
Retired members			
Number in pay status	5	5	0.0%
Average age	74.3	73.3	N/A
Average monthly benefit ⁽¹⁾	\$2,467	\$2,407	2.5%
Disabled members			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit ⁽¹⁾	N/A	N/A	N/A
Beneficiaries			
Number in pay status	3	3	0.0%
Average age	71.0	70.0	N/A
Average monthly benefit ⁽¹⁾	\$1,593	\$1,554	2.5%

⁽¹⁾ Excludes monthly benefits payable from the RMBR and STAR COLA.

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT A

Table of Plan Coverage

viii. Rate Group #6 – Safety – Probation Officers – 3.0% at 50

Category	Year Ended December 31		Change From Prior Year
	2012	2011	
Active members in valuation			
Number	892	885	0.8%
Average age	41.4	41.2	N/A
Average service	13.6	13.3	N/A
Projected total compensation	\$65,185,716	\$65,127,165	0.1%
Projected average compensation	\$73,078	\$73,590	-0.7%
Account balances	\$94,640,879	\$86,548,283	9.4%
Total active vested members	846	854	-0.9%
Vested terminated members			
Number	208	206	1.0%
Average age	37.3	36.9	N/A
Retired members			
Number in pay status	219	205	6.8%
Average age	64.6	64.3	N/A
Average monthly benefit ⁽¹⁾	\$5,411	\$5,318	1.7%
Disabled members			
Number in pay status	19	18	5.6%
Average age	53.3	52.5	N/A
Average monthly benefit ⁽¹⁾	\$2,592	\$2,528	2.5%
Beneficiaries			
Number in pay status	19	15	26.7%
Average age	58.5	59.6	N/A
Average monthly benefit ⁽¹⁾	\$2,497	\$2,384	4.7%

⁽¹⁾ Excludes monthly benefits payable from the RMBR and STAR COLA.

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT A

Table of Plan Coverage

ix. Rate Group #7 – Safety – Law Enforcement – 3.0% at 50 and 3.0% at 55

Category	Year Ended December 31		Change From Prior Year
	2012	2011	
Active members in valuation			
Number	1,888	1,823	3.6%
Average age	41.7	42.3	N/A
Average service	14.6	15.4	N/A
Projected total compensation	\$193,630,690	\$189,540,039	2.2%
Projected average compensation	\$102,559	\$103,971	-1.4%
Account balances	\$192,619,378	\$180,420,063	6.8%
Total active vested members	1,625	1,573	3.3%
Vested terminated members			
Number	164	172	-4.7%
Average age	43.2	42.5	N/A
Retired members			
Number in pay status	997	916	8.8%
Average age	63.3	63.5	N/A
Average monthly benefit ⁽¹⁾	\$6,317	\$6,140	2.9%
Disabled members			
Number in pay status	325	313	3.8%
Average age	60.6	59.9	N/A
Average monthly benefit ⁽¹⁾	\$4,292	\$4,070	5.5%
Beneficiaries			
Number in pay status	256	233	9.9%
Average age	65.9	66.6	N/A
Average monthly benefit ⁽¹⁾	\$2,564	\$2,565	0.0%

⁽¹⁾ Excludes monthly benefits payable from the RMBR and STAR COLA.

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT A

Table of Plan Coverage

x. Rate Group #8 – Safety – Fire Authority – 3.0% at 50 and 3.0% at 55

Category	Year Ended December 31		Change From Prior Year
	2012	2011	
Active members in valuation			
Number	947	996	-4.9%
Average age	44.2	43.7	N/A
Average service ⁽¹⁾	14.6	15.6	N/A
Projected total compensation	\$111,826,147	\$115,743,179	-3.4%
Projected average compensation	\$118,085	\$116,208	1.6%
Account balances	\$82,887,607	\$81,116,035	2.2%
Total active vested members	758	820	-7.6%
Vested terminated members			
Number	35	30	16.7%
Average age	39.6	38.1	N/A
Retired members			
Number in pay status	309	274	12.8%
Average age	62.1	62.0	N/A
Average monthly benefit ⁽²⁾	\$6,785	\$6,339	7.0%
Disabled members			
Number in pay status	115	107	7.5%
Average age	62.5	62.1	N/A
Average monthly benefit ⁽²⁾	\$5,520	\$5,248	5.2%
Beneficiaries			
Number in pay status	57	47	21.3%
Average age	59.0	59.8	N/A
Average monthly benefit ⁽²⁾	\$2,716	\$2,553	6.4%

⁽¹⁾ For some former Santa Ana employees, service used in calculating the average above is only used for vesting purposes. Benefit service starts to accrue only effective April 2012.

⁽²⁾ Excludes monthly benefits payable from the RMBR and STAR COLA.

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT A

Table of Plan Coverage

xi. Total

Category	Year Ended December 31		Change From Prior Year
	2012	2011	
Active members in valuation			
Number	21,256	21,421	-0.8%
Average age	45.5	45.4	N/A
Average service	13.1	13.0	N/A
Projected total compensation	\$1,609,600,860	\$1,619,474,479	-0.6%
Projected average compensation	\$75,725	\$75,602	0.2%
Account balances	\$1,967,117,073	\$1,829,405,790	7.5%
Total active vested members	18,209	17,757	2.5%
Vested terminated members			
Number	4,415	4,406	0.2%
Average age	44.2	43.9	N/A
Retired members			
Number in pay status	10,739	10,189	5.4%
Average age	69.1	69.2	N/A
Average monthly benefit ⁽¹⁾	\$3,548	\$3,387	4.8%
Disabled members			
Number in pay status	1,319	1,291	2.2%
Average age	63.3	62.8	N/A
Average monthly benefit ⁽¹⁾	\$3,037	\$2,890	5.1%
Beneficiaries			
Number in pay status	1,889	1,809	4.4%
Average age	72.2	72.2	N/A
Average monthly benefit ⁽¹⁾	\$1,685	\$1,629	3.4%

⁽¹⁾ Excludes monthly benefits payable from the RMBR and STAR COLA.

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT B

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

i. Rate Group #1 – General – non-OCTA, non-OCSD – 2.0% at 57 and 1.6667% at 57.5

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	30	30	--	--	--	--	--	--	--	--
	\$59,505	\$59,505	--	--	--	--	--	--	--	--
25-29	119	90	27	2	--	--	--	--	--	--
	50,714	51,248	\$49,004	\$49,773	--	--	--	--	--	--
30-34	195	69	89	37	--	--	--	--	--	--
	49,377	48,682	49,735	49,813	--	--	--	--	--	--
35-39	188	29	76	70	12	1	--	--	--	--
	48,841	44,845	49,650	49,494	\$49,506	\$49,645	--	--	--	--
40-44	197	18	72	57	26	24	--	--	--	--
	49,432	43,472	49,532	49,498	51,716	50,971	--	--	--	--
45-49	127	18	37	27	9	30	6	--	--	--
	49,008	42,727	48,912	49,948	50,069	51,572	\$49,792	--	--	--
50-54	118	17	22	25	11	36	4	3	--	--
	48,892	41,299	49,966	49,156	49,584	50,998	51,109	\$51,091	--	--
55-59	133	9	21	16	12	54	4	6	8	3
	51,174	42,720	48,885	49,080	50,036	50,866	51,482	49,622	\$77,883	\$45,290
60-64	93	3	14	21	9	36	4	4	2	--
	50,310	43,232	52,459	49,320	51,478	51,432	39,271	52,543	48,428	--
65-69	47	2	4	6	9	21	2	1	--	2
	55,630	41,864	50,930	48,541	49,230	50,763	54,119	55,371	--	181,593
70 & over	18	1	1	3	3	7	1	1	1	--
	50,925	40,040	49,942	48,960	49,925	48,611	52,858	49,698	87,184	--
Total	1,265	286	363	264	91	209	21	15	11	5
	\$50,102	\$48,771	\$49,622	\$49,490	\$50,454	\$51,008	\$48,919	\$51,083	\$73,373	\$99,811

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT B

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

ii. Rate Group #2 – General – 2.7% at 55, 1.62% at 65 and 2.0% at 57

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	140	132	8	--	--	--	--	--	--	--
	\$47,099	\$46,926	\$49,947	--	--	--	--	--	--	--
25-29	907	470	432	5	--	--	--	--	--	--
	52,707	54,054	51,214	\$55,134	--	--	--	--	--	--
30-34	1,600	442	893	261	4	--	--	--	--	--
	63,601	63,717	64,920	58,977	\$58,257	--	--	--	--	--
35-39	1,838	269	737	695	135	2	--	--	--	--
	68,482	65,738	69,259	68,889	67,899	\$49,008	--	--	--	--
40-44	2,071	214	560	702	366	226	3	--	--	--
	74,239	71,239	73,447	75,662	76,206	71,593	\$62,304	--	--	--
45-49	2,084	168	421	542	347	482	115	9	--	--
	75,232	74,908	71,209	73,872	81,339	76,341	71,980	\$98,031	--	--
50-54	2,140	133	354	424	299	490	284	151	5	--
	76,783	76,415	74,132	70,548	76,756	81,080	82,559	76,108	\$75,698	--
55-59	1,521	67	232	354	235	305	201	104	22	1
	75,610	76,296	65,469	71,470	75,288	77,510	88,136	81,758	80,775	\$72,598
60-64	969	58	165	271	139	183	100	40	12	1
	74,786	81,111	72,174	70,822	75,414	78,293	79,319	76,050	69,558	43,598
65-69	381	10	66	113	69	66	34	12	9	2
	71,693	69,264	75,366	69,177	74,030	67,963	75,131	61,891	92,041	56,017
70 & over	151	6	27	38	18	35	14	10	2	1
	62,143	55,537	74,000	58,809	72,949	56,989	60,203	47,755	56,660	76,201
Total	13,802	1,969	3,895	3,405	1,612	1,789	751	326	50	5
	\$71,080	\$64,135	\$67,513	\$70,824	\$76,341	\$76,720	\$81,166	\$77,116	\$78,639	\$60,886

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT B

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

iii. Rate Group #3 – General – 2.5% at 55 and 1.64% at 57

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	5	5	--	--	--	--	--	--	--	--
	\$64,004	\$64,004	--	--	--	--	--	--	--	--
25-29	23	19	4	--	--	--	--	--	--	--
	73,484	71,034	\$85,118	--	--	--	--	--	--	--
30-34	50	24	24	2	--	--	--	--	--	--
	86,663	81,227	91,378	\$95,320	--	--	--	--	--	--
35-39	54	22	27	5	--	--	--	--	--	--
	89,961	87,924	90,274	97,236	--	--	--	--	--	--
40-44	89	19	26	19	11	14	--	--	--	--
	106,343	99,290	104,402	108,088	\$122,056	\$104,802	--	--	--	--
45-49	114	17	25	10	22	33	7	--	--	--
	112,656	102,289	112,049	104,753	123,233	114,913	\$107,408	--	--	--
50-54	109	22	15	12	11	33	12	4	--	--
	111,343	88,412	104,280	115,835	131,639	117,274	112,096	\$143,485	--	--
55-59	97	9	15	14	18	24	10	7	--	--
	114,885	92,723	112,906	109,263	120,026	118,708	118,299	127,660	--	--
60-64	40	2	7	9	7	8	6	1	--	--
	113,375	87,511	114,398	119,141	99,165	110,274	134,405	104,149	--	--
65-69	23	1	5	5	4	5	2	1	--	--
	113,035	72,026	107,975	128,671	108,602	117,635	116,701	88,556	--	--
70 & over	8	--	1	--	2	3	2	--	--	--
	100,165	--	87,097	--	125,522	91,030	95,044	--	--	--
Total	612	140	149	76	75	120	39	13	--	--
	\$105,760	\$87,182	\$101,826	\$110,702	\$120,558	\$114,349	\$115,639	\$127,712	--	--

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT B

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

iv. Rate Group #5 – General OCTA – 2.0% at 57 and 1.6667% at 57.5

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	10	9	1	--	--	--	--	--	--	--
	\$46,748	\$45,783	\$55,439	--	--	--	--	--	--	--
25-29	36	26	10	--	--	--	--	--	--	--
	52,601	50,192	58,866	--	--	--	--	--	--	--
30-34	100	23	57	20	--	--	--	--	--	--
	63,013	63,514	62,657	\$63,452	--	--	--	--	--	--
35-39	132	22	56	50	4	--	--	--	--	--
	64,408	66,894	65,064	63,109	\$57,775	--	--	--	--	--
40-44	185	35	60	69	13	8	--	--	--	--
	65,502	70,862	68,107	60,662	64,160	\$66,450	--	--	--	--
45-49	229	16	80	78	22	26	6	1	--	--
	66,232	80,658	63,791	62,215	67,380	73,748	\$74,402	\$74,310	--	--
50-54	290	14	73	94	25	46	27	11	--	--
	69,207	91,774	68,253	63,700	80,605	70,920	67,336	65,414	--	--
55-59	283	24	49	64	27	42	31	38	8	--
	70,099	73,131	71,247	59,599	79,668	72,625	75,441	68,048	\$81,442	--
60-64	172	12	33	45	11	27	16	17	11	--
	65,715	80,044	61,170	61,461	66,233	60,271	75,212	67,712	77,066	--
65-69	62	3	16	14	11	12	3	2	1	--
	71,998	188,938	62,608	70,395	60,238	67,870	86,213	59,923	54,286	--
70 & over	10	--	5	2	1	1	--	1	--	--
	55,688	--	52,499	59,771	55,350	60,903	--	58,592	--	--
Total	1,509	184	440	436	114	162	83	70	20	--
	\$66,720	\$70,584	\$65,466	\$62,238	\$71,581	\$69,533	\$73,075	\$67,274	\$77,677	--

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT B

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

v. Rate Group #9 – General – TCA – 2.0% at 55

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
25-29	3	1	2	--	--	--	--	--	--	--
	\$44,609	\$58,013	\$37,908	--	--	--	--	--	--	--
30-34	9	6	2	1	--	--	--	--	--	--
	54,858	59,319	41,057	\$55,692	--	--	--	--	--	--
35-39	9	--	6	3	--	--	--	--	--	--
	60,377	--	66,989	47,152	--	--	--	--	--	--
40-44	5	1	3	--	1	--	--	--	--	--
	78,221	94,448	76,222	--	\$67,994	--	--	--	--	--
45-49	10	2	3	4	--	1	--	--	--	--
	96,534	95,162	73,759	91,954	--	\$185,921	--	--	--	--
50-54	12	3	3	4	2	--	--	--	--	--
	96,777	94,649	85,362	98,927	112,791	--	--	--	--	--
55-59	12	2	4	1	4	1	--	--	--	--
	105,605	144,398	95,666	75,020	111,782	73,648	--	--	--	--
60-64	9	1	5	3	--	--	--	--	--	--
	59,418	62,256	59,181	58,866	--	--	--	--	--	--
65-69	4	1	3	--	--	--	--	--	--	--
	92,815	206,784	54,825	--	--	--	--	--	--	--
70 & over	1	--	1	--	--	--	--	--	--	--
	200,771	--	200,771	--	--	--	--	--	--	--
Total	74	17	32	16	7	2	--	--	--	--
	\$81,929	\$90,617	\$72,178	\$75,768	\$105,815	\$129,785	--	--	--	--

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT B

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

vi. Rate Group #10 – General – OCFA – 2.7% at 55 and 2.0% at 55

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	1	--	1	--	--	--	--	--	--	--
	\$53,873	--	\$53,873	--	--	--	--	--	--	--
25-29	11	7	4	--	--	--	--	--	--	--
	60,850	\$53,636	73,475	--	--	--	--	--	--	--
30-34	27	13	11	3	--	--	--	--	--	--
	70,861	67,483	71,731	\$82,309	--	--	--	--	--	--
35-39	30	7	15	8	--	--	--	--	--	--
	77,352	53,095	85,443	83,406	--	--	--	--	--	--
40-44	24	5	5	10	4	--	--	--	--	--
	96,231	92,212	97,899	88,219	\$119,200	--	--	--	--	--
45-49	57	3	8	18	9	16	3	--	--	--
	87,745	88,824	95,639	79,804	94,367	\$87,364	\$95,434	--	--	--
50-54	48	5	6	14	9	4	8	2	--	--
	99,788	131,141	90,547	83,517	103,857	85,043	111,870	\$125,863	--	--
55-59	30	1	5	11	2	5	4	2	--	--
	100,976	96,964	106,970	97,666	125,879	82,327	112,131	105,615	--	--
60-64	15	1	4	5	3	1	1	--	--	--
	98,435	105,568	105,685	109,527	83,247	81,246	69,597	--	--	--
65-69	3	--	--	3	--	--	--	--	--	--
	89,437	--	--	89,437	--	--	--	--	--	--
70 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Total	246	42	59	72	27	26	16	4	--	--
	\$88,748	\$76,433	\$87,694	\$87,394	\$102,308	\$85,803	\$106,212	\$115,739	--	--

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT B

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

vii. Rate Group #11 – General – Cemetery District – 2.0% at 55 future service

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
25-29	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
30-34	5	3	1	1	--	--	--	--	--	--
	\$45,823	\$43,063	\$48,287	\$51,640	--	--	--	--	--	--
35-39	2	--	1	1	--	--	--	--	--	--
	60,632	--	44,251	77,013	--	--	--	--	--	--
40-44	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
45-49	7	--	2	1	2	2	--	--	--	--
	63,451	--	91,400	64,914	\$49,087	\$49,136	--	--	--	--
50-54	1	--	--	--	1	--	--	--	--	--
	77,284	--	--	--	77,284	--	--	--	--	--
55-59	5	--	--	--	2	2	1	--	--	--
	61,380	--	--	--	66,073	49,110	\$76,533	--	--	--
60-64	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
65-69	1	--	1	--	--	--	--	--	--	--
	53,649	--	53,649	--	--	--	--	--	--	--
70 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Total	21	3	5	3	5	4	1	--	--	--
	\$58,684	\$43,063	\$65,798	\$64,522	\$61,521	\$49,123	\$76,533	--	--	--

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT B

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

viii. Rate Group #6 – Safety – Probation Officers – 3.0% at 50

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	12	12	--	--	--	--	--	--	--	--
	\$48,951	\$48,951	--	--	--	--	--	--	--	--
25-29	42	13	29	--	--	--	--	--	--	--
	54,839	49,166	\$57,382	--	--	--	--	--	--	--
30-34	146	8	99	39	--	--	--	--	--	--
	64,509	48,388	63,081	\$71,442	--	--	--	--	--	--
35-39	236	12	56	150	18	--	--	--	--	--
	71,322	51,279	67,238	73,461	\$79,568	--	--	--	--	--
40-44	189	--	20	73	84	12	--	--	--	--
	76,319	--	64,092	72,385	81,504	\$84,338	--	--	--	--
45-49	119	--	6	30	35	39	9	--	--	--
	81,031	--	67,133	72,039	80,091	86,682	\$99,437	--	--	--
50-54	73	2	1	9	14	20	18	9	--	--
	83,795	49,078	64,789	73,556	76,186	82,127	97,309	\$92,373	--	--
55-59	49	--	3	11	7	10	13	5	--	--
	79,748	--	62,284	67,239	73,654	83,062	92,678	86,033	--	--
60-64	23	--	1	7	2	6	6	1	--	--
	72,542	--	65,321	62,113	69,495	83,888	74,346	79,962	--	--
65-69	3	--	--	--	--	--	1	1	1	--
	94,877	--	--	--	--	--	94,932	95,835	\$93,863	--
70 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Total	892	47	215	319	160	87	47	16	1	--
	\$73,078	\$49,515	\$63,609	\$72,373	\$80,018	\$84,703	\$93,454	\$89,832	\$93,863	--

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT B

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

ix. Rate Group #7 – Safety – Law Enforcement – 3.0% at 50 and 3.0% at 55

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	47	42	5	--	--	--	--	--	--	--
	\$70,579	\$68,881	\$84,847	--	--	--	--	--	--	--
25-29	189	109	80	--	--	--	--	--	--	--
	79,869	73,628	88,373	--	--	--	--	--	--	--
30-34	234	50	141	41	2	--	--	--	--	--
	91,032	75,896	93,703	\$99,969	\$97,915	--	--	--	--	--
35-39	290	25	80	137	48	--	--	--	--	--
	99,154	89,794	94,327	101,342	105,825	--	--	--	--	--
40-44	391	12	61	101	171	44	2	--	--	--
	105,238	97,789	104,454	102,007	107,418	\$106,308	\$127,075	--	--	--
45-49	406	3	29	56	79	160	78	1	--	--
	112,456	119,338	107,493	107,457	107,780	111,780	123,590	\$124,753	--	--
50-54	231	16	7	16	32	45	107	8	--	--
	116,739	112,873	115,268	111,268	115,607	108,754	121,281	125,400	--	--
55-59	74	10	13	1	6	15	25	4	--	--
	113,295	124,337	113,408	119,025	105,802	110,512	110,132	125,340	--	--
60-64	19	--	4	5	--	5	4	1	--	--
	108,454	--	113,891	108,341	--	109,080	104,087	101,617	--	--
65-69	7	2	--	2	1	--	1	1	--	--
	135,119	168,688	--	119,695	142,718	--	124,850	101,500	--	--
70 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Total	1,888	269	420	359	339	269	217	15	--	--
	\$102,559	\$81,324	\$96,377	\$103,018	\$108,069	\$110,258	\$120,579	\$122,162	--	--

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT B

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

x. Rate Group #8 – Safety – Fire Authority – 3.0% at 50 and 3.0% at 55

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	2	2	--	--	--	--	--	--	--	--
	\$40,506	\$40,506	--	--	--	--	--	--	--	--
25-29	56	39	17	--	--	--	--	--	--	--
	94,137	87,836	\$108,593	--	--	--	--	--	--	--
30-34	134	61	64	9	--	--	--	--	--	--
	107,563	101,251	113,090	\$111,037	--	--	--	--	--	--
35-39	151	52	59	35	5	--	--	--	--	--
	111,381	101,614	117,167	114,592	\$122,207	--	--	--	--	--
40-44	136	32	35	31	24	14	--	--	--	--
	118,482	109,379	115,866	118,858	125,241	\$133,408	--	--	--	--
45-49	162	29	11	29	33	42	18	--	--	--
	126,128	125,586	113,761	122,771	122,657	130,309	\$136,579	--	--	--
50-54	195	44	6	13	30	33	40	29	--	--
	125,454	118,023	118,353	116,849	125,627	126,923	124,362	\$141,711	--	--
55-59	87	19	--	3	19	9	8	29	--	--
	131,120	112,901	--	117,857	125,447	132,270	128,971	148,380	--	--
60-64	19	6	1	--	1	5	--	6	--	--
	118,797	108,106	124,649	--	100,115	119,990	--	130,631	--	--
65-69	4	--	--	2	--	--	--	2	--	--
	127,302	--	--	125,269	--	--	--	129,336	--	--
70 & over	1	--	--	1	--	--	--	--	--	--
	57,936	--	--	57,936	--	--	--	--	--	--
Total	947	284	193	123	112	103	66	66	--	--
	\$118,085	\$105,971	\$114,706	\$117,366	\$124,258	\$129,315	\$128,253	\$143,259	--	--

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT B

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

xi. Total

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	247	232	15	--	--	--	--	--	--	--
	\$53,466	\$52,901	\$62,208	--	--	--	--	--	--	--
25-29	1,386	774	605	7	--	--	--	--	--	--
	58,368	58,393	58,391	\$53,602	--	--	--	--	--	--
30-34	2,500	699	1,381	414	6	--	--	--	--	--
	67,918	66,742	69,354	65,059	\$71,476	--	--	--	--	--
35-39	2,930	438	1,113	1,154	222	3	--	--	--	--
	72,970	70,561	72,642	73,469	77,092	\$49,220	--	--	--	--
40-44	3,287	336	842	1,062	700	342	5	--	--	--
	78,934	76,260	75,920	77,523	85,969	78,829	\$88,212	--	--	--
45-49	3,315	256	622	795	558	831	242	11	--	--
	82,401	81,406	73,366	76,598	88,139	87,212	95,266	\$98,304	--	--
50-54	3,217	256	487	611	434	707	500	217	5	--
	82,644	86,453	74,476	72,087	84,634	84,530	94,825	88,180	\$75,698	--
55-59	2,291	141	342	475	332	467	297	195	38	4
	79,045	84,115	70,113	71,140	81,233	78,263	90,767	90,901	80,307	\$52,117
60-64	1,359	83	234	366	172	271	137	70	25	1
	74,306	81,760	71,909	70,402	74,752	75,345	80,517	78,183	71,171	43,598
65-69	535	19	95	145	94	104	43	20	11	4
	73,694	103,124	73,028	72,382	72,244	66,867	78,477	73,124	88,774	118,805
70 & over	189	7	35	44	24	46	17	12	3	1
	63,053	53,323	74,237	58,162	73,719	58,019	63,870	48,820	66,834	76,201
Total	21,256	3,241	5,771	5,073	2,542	2,771	1,241	525	82	10
	\$75,725	\$69,300	\$70,882	\$73,325	\$83,407	\$81,535	\$91,343	\$86,597	\$77,883	\$80,349

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT C

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

	Active Members	Vested Former Members	Pensioners	Disableds	Beneficiaries	Total
Number as of December 31, 2011	21,421	4,406	10,189	1,291	1,809	39,116
New members	916	69	0	0	157	1,142
Terminations – with vested rights	-266 ⁽¹⁾	266	0	0	0	0
Contributions refunds	-138 ⁽²⁾	-106	0	0	0	-244
Retirements	-712	-127	839	0	0	0
New disabilities	-23	-5	-21	49	0	0
Return to work	85	-84	-1	0	0	0
Deaths	-25	-5	-269	-21	-77	-397
Data adjustments	-2	1	2	0	0	1
Number as of December 31, 2012	21,256 ⁽³⁾	4,415 ⁽³⁾	10,739	1,319	1,889	39,618

⁽¹⁾ Includes 11 terminated before January 1, 2012.

⁽²⁾ Includes 5 terminated before January 1, 2012.

⁽³⁾ Note that 33 members that were originally reported by OCERS as active or active on leave of absence were reclassified by Segal as vested former members in the December 31, 2012 valuation.

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT D

Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended December 31, 2012	Year Ended December 31, 2011
Contribution income:		
Employer contributions	\$406,521,000	\$387,585,000
Employee contributions	191,069,000	183,820,000
Discount for prepaid contributions	24,874,000	15,866,000
Transfer from County Investment Account ⁽¹⁾	<u>5,500,000</u>	<u>11,000,000</u>
Net contribution income	\$627,964,000	\$598,271,000
Investment income:		
Interest, dividends and other income	\$200,599,000	\$252,702,000
Recognition of capital appreciation	172,821,000	88,385,000
Less investment and administrative fees	<u>-55,287,000</u>	<u>-54,502,000</u>
Net investment income	<u>\$318,033,000</u>	<u>\$286,585,000</u>
Total income available for benefits	\$945,997,000	\$884,856,000
Less benefit payments	-\$541,154,000	-\$493,749,000
Change in reserve for future benefits	\$404,843,000	\$391,107,000

⁽¹⁾ Funded by pension obligation bond proceeds held by OCERS.

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT E

Summary Statement of Assets

	Year Ended December 31, 2012	Year Ended December 31, 2011
Cash equivalents	\$412,948,000	\$444,193,000
Accounts receivable:		
Contributions	\$13,408,000	\$10,692,000
Investment income	21,705,000	23,755,000
Securities settlements	131,660,000	245,108,000
Other	<u>10,352,000</u>	<u>1,287,000</u>
Total accounts receivable	\$177,125,000	\$280,842,000
Investments:		
Fixed income investments	\$3,024,092,000	\$3,074,927,000
Equities	4,060,761,000	3,400,420,000
Real estate	999,490,000	803,545,000
Venture capital and limited partnership interests	1,524,642,000	1,209,504,000
Security lending collateral	301,332,000	420,716,000
Fixed assets net of accumulated depreciation	<u>10,459,000</u>	<u>4,209,000</u>
Total investments at market value	<u>\$9,920,776,000</u>	<u>\$8,913,319,000</u>
Total assets	<u>\$10,510,849,000</u>	<u>\$9,638,354,000</u>
Less accounts payable:		
Securities settlements	-\$305,881,000	-\$438,368,000
Security lending liability	-301,332,000	-420,716,000
All other	<u>-55,869,000</u>	<u>-53,038,000</u>
Total accounts payable	-\$663,082,000	-\$912,121,000
Net assets at market value⁽¹⁾	<u>\$9,566,874,000</u>	<u>\$8,465,593,000</u>
Net assets at actuarial value	<u>\$9,469,423,000</u>	<u>\$9,064,580,000</u>
Net assets at valuation value	<u>\$9,469,208,000</u>	<u>\$9,064,355,000</u>

⁽¹⁾ The market value excludes \$103,261,000 and \$97,767,000 as of December 31, 2012 and December 31, 2011, respectively, in the County Investment Account (funded by pension obligation bond proceeds held by OCERS) and \$177,632,000 and \$162,873,000 as of December 31, 2012 and December 31, 2011, respectively, in the prepaid employer contributions account.

Note: Results may not total exactly due to rounding.

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT F

Actuarial Balance Sheet

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

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

Assets

1. Total valuation value of assets	\$9,469,208,000
2. Present value of future contributions by members	1,818,546,000
3. Present value of future employer contributions for:	
a. entry age normal cost	2,073,601,000
b. unfunded actuarial accrued liability	<u>5,675,680,000</u>
4. Total current and future assets	\$19,037,035,000

Liabilities

5. Present value of retirement allowance payable to present retired members	\$7,567,000,000
6. Present value of retirement allowances to be granted to present non-retired members	<u>11,470,035,000</u>
7. Total actuarial liabilities	\$19,037,035,000

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT G

Summary of Reported Asset Information as of December 31, 2012

Reserves

Included in Valuation Value of Assets

Active Members Reserve (Book Value)	\$2,109,464,000
Retired Members Reserve (Book Value)	6,630,432,000
Employer Advanced Reserve (Book Value)	1,564,191,000
ERI Contribution Reserve	5,321,000
STAR COLA Contribution Reserve	0
Unrealized Appreciation Included in Valuation Value of Assets	<u>-840,200,000</u>
Subtotal: Valuation Value of Assets	\$9,469,208,000

Not Included in Valuation Value of Assets

RMBR	\$0
Unclaimed Member Deposit	123,000
Medicare Medical Insurance Reserve	<u>92,000</u>
Total	\$215,000
Subtotal: Actuarial Value of Assets	\$9,469,423,000
Unrecognized Investment Income (Loss)	<u>97,451,000</u>
Subtotal: Market Value of Assets (Net of County Investment Account ⁽¹⁾ and Prepaid Employer Contributions)	\$9,566,874,000
County Investment Account ⁽¹⁾	103,261,000
Prepaid Employer Contributions	<u>177,632,000</u>
Total: Gross Market Value of Assets	\$9,847,767,000

⁽¹⁾ Funded by pension obligation bond proceeds held by OCERS.

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT H

Development of Unfunded/(Overfunded) Actuarial Accrued Liability for Year Ended December 31, 2012

1.	Unfunded actuarial accrued liability at beginning of year		\$4,458,623,000
2.	Total normal cost at middle of year		410,258,000
3.	Actual employer and member contributions		-627,964,000
4.	Interest		<u>337,107,000</u>
5.	Expected unfunded actuarial accrued liability		\$4,578,024,000
6.	Actuarial (gain)/loss and other changes:		
	(a) Loss on investment return	\$387,808,000	
	(b) Gain on lower than expected salary increases	-244,750,000	
	(c) Other experience (gain)/loss	19,979,000	
	(d) Changes in economic assumptions	<u>934,619,000</u>	
	Total changes		<u>\$1,097,656,000</u>
7.	Unfunded actuarial accrued liability at end of year		<u>\$5,675,680,000</u>

Note: The sum of 6(b) through 6(c) is equal to the "other experience" gain of \$224,771,000 provided on page 7.

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

EXHIBIT I

Section 415 Limitations

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

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

In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar indexed for inflation. That limit is \$200,000 for 2012 and \$205,000 for 2013. Normal Retirement Age for these purposes is age 62. These are the limits in simplified terms. They must be adjusted based on each participant's circumstances, for such things as age at retirement, form of benefits chosen and after tax contributions.

Benefits for non-CalPEPRA plans that are in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m).

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

Contributions rates for non-CalPEPRA plans 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 Orange County Employees Retirement System

EXHIBIT J

Definitions of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Assumptions or Actuarial

Assumptions:

The estimates on which the cost of the Plan is calculated including:

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

Normal Cost:

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

Actuarial Accrued Liability

For Actives:

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

Actuarial Accrued Liability

For Pensioners:

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

SECTION 3: Supplemental Information for the Orange County Employees Retirement System

Unfunded Actuarial Accrued Liability:

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

Amortization of the Unfunded (Overfunded) Actuarial Accrued Liability:

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

Investment Return:

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

SECTION 4: Reporting Information for the Orange County Employees Retirement System

EXHIBIT I

Summary of Actuarial Valuation Results

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

1. Retired members as of the valuation date (including 1,889 beneficiaries in pay status)	13,947
2. Members inactive during year ended December 31, 2012 with vested rights*	4,415
3. Members active during the year ended December 31, 2012	21,256

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

1. Normal cost		\$460,681
2. Present value of future benefits		19,037,035
3. Present value of future normal costs		3,892,147
4. Actuarial accrued liability**		15,144,888
Retired members and beneficiaries	\$7,567,000	
Inactive members with vested rights*	352,478	
Active members	7,225,410	
5. Valuation value of assets*** (\$9,566,874 at market value as reported by Retirement System)		9,469,208
6. Unfunded actuarial accrued liability		\$5,675,680

* This includes members who chose to leave their contributions on deposit even though they have less than five years of service.

** Excludes liabilities held for RMBR and STAR COLA.

*** Excludes assets held for Unclaimed member deposit, Medicare medical insurance reserve and RMBR.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

EXHIBIT I (continued)

Summary of Actuarial Valuation Results

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

	Dollar Amount	% of Payroll
1. Total normal cost	\$460,681	28.62%
2. Expected employee contributions	<u>-207,215</u>	<u>-12.87%</u>
3. Employer normal cost: (1) + (2)	\$253,466	15.75%
4. Amortization of unfunded actuarial accrued liability	<u>416,665</u>	<u>25.89%</u>
5. Total recommended average employer contribution: (3) + (4)	\$670,131	41.64%
6. Projected compensation	\$1,609,600	

SECTION 4: Reporting Information for the Orange County Employees Retirement System

EXHIBIT II

Supplementary Information Required by GASB – Schedule of Employer Contributions

Plan Year Ended December 31	Annual Required Contributions	Actual Contributions⁽¹⁾	Percentage Contributed
2007	\$326,736,000	\$326,736,000	100.0%
2008	359,673,000	360,365,000 ⁽²⁾	100.2%
2009	337,496,000	338,387,000 ⁽³⁾	100.3%
2010	372,437,000	372,437,000	100.0%
2011	387,585,000	387,585,000	100.0%
2012	406,521,000	406,521,000	100.0%

⁽¹⁾ Excludes transfers from County Investment Account (funded by pension obligation bond proceeds held by OCERS). See below.

<i>Plan Year Ended December 31</i>	<i>Transfers from County Investment Account</i>
2007	\$0
2008	0
2009	34,900,000
2010	11,000,000
2011	11,000,000
2012	5,500,000

⁽²⁾ Includes \$692,000 in additional contributions made by OCFA towards the reduction of their UAAL.

⁽³⁾ Includes \$891,000 in additional contributions made by OCFA towards the reduction of their UAAL.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

EXHIBIT III

Supplementary Information Required by GASB – Schedule of Funding Progress

Actuarial Valuation Date December 31	Valuation Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b) - (a)] / (c)
2007	\$7,288,900,000	\$9,838,686,000	\$2,549,786,000	74.08%	\$1,457,159,000	174.98%
2008	7,748,380,000	10,860,715,000	3,112,335,000	71.34%	1,569,764,000	198.27%
2009	8,154,687,000	11,858,578,000	3,703,891,000	68.77%	1,618,491,000	228.85%
2010	8,672,592,000	12,425,873,000	3,753,281,000	69.79%	1,579,239,000	237.66%
2011	9,064,355,000	13,522,978,000	4,458,623,000	67.03%	1,619,474,000	275.31%
2012	9,469,208,000	15,144,888,000	5,675,680,000	62.52%	1,609,600,000	352.55%

For informational purposes only, we have also developed the funded ratio determined using the historical market value of assets after adjustment for amounts in the County Investment Account (funded by pension obligation bond proceeds held by OCERS), prepaid employer contributions, unclaimed member reserve, Medicare Medical Insurance Reserve and RMBR.

Actuarial Valuation Date December 31	Funded Ratio Based on Net Market Value of Assets
2007	78.43%
2008	57.51%
2009	62.94%
2010	67.25%
2011	62.60%
2012	63.17%

SECTION 4: Reporting Information for the Orange County Employees Retirement System

EXHIBIT IV

Supplementary Information Required by GASB

Valuation date	December 31, 2012
Actuarial cost method	Entry Age Normal Actuarial Cost Method
Amortization method	Level percent of payroll for total unfunded liability (3.75% payroll growth assumed)
Remaining amortization period	22 years closed (declining) amortization of outstanding balance of December 31, 2004 UAAL. The outstanding balance of the UAAL established in the December 31, 2009 valuation as a result of including additional premium pay items as pensionable salary and the new UAAL established in the December 31, 2010 valuation as a result of reallocating contributions and benefit payments among Rate Groups are also amortized over a 22-year period, in the December 31, 2012 valuation. Any increases or decreases in UAAL that arise in future years due to actuarial gains or losses will be amortized over separate 15-year periods. Any increases or decreases in UAAL due to changes in actuarial assumptions are amortized over separate 30-year periods.
Asset valuation method	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual and the expected return on a market value basis, and is recognized over a five-year period. The Valuation Value of Assets is the Actuarial Value of Assets reduced by the value of the non-valuation reserves.
Actuarial assumptions:	
Investment rate of return	7.25%
Inflation rate	3.25%
Real across-the-board salary increase	0.50%
Projected salary increases *	4.75% to 13.75% for General members; 4.75% to 17.75% for Safety members based on service.
Cost of living adjustments	3.00%
Plan membership:	
Retired members and beneficiaries receiving benefits	13,947
Terminated members entitled to, but not yet receiving benefits	4,415
Active members	<u>21,256</u>
Total	39,618

* See Exhibit V for these increases, including inflation rate.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

EXHIBIT V

Actuarial Assumptions and Actuarial Cost Method

Post – Retirement Mortality Rates:

Healthy:

For General Members and all Beneficiaries: RP-2000 Combined Healthy Mortality Table set back three years.

For Safety Members: RP-2000 Combined Healthy Mortality Table set back two years.

Disabled:

For General Members: RP-2000 Combined Healthy Mortality Table set forward three years.

For Safety Members: RP-2000 Combined Healthy Mortality Table set forward two years.

The mortality tables shown above were determined to contain sufficient provision appropriate to reasonably reflect future mortality improvement, based on a review of the mortality experience in the January 1, 2008 through December 31, 2010 Actuarial Experience Study.

Employee Contribution Rates:

For General Members: RP-2000 Combined Healthy Mortality Table set back three years, weighted 40% male and 60% female.

For Safety Members: RP-2000 Combined Healthy Mortality Table set back two years, weighted 80% male and 20% female.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Termination Rates Before Retirement:

Age	Rate (%)			
	Mortality			
	General		Safety	
	Male	Female	Male	Female
25	0.04	0.02	0.04	0.02
30	0.04	0.02	0.04	0.02
35	0.06	0.04	0.06	0.04
40	0.09	0.06	0.10	0.06
45	0.12	0.09	0.13	0.09
50	0.17	0.13	0.19	0.14
55	0.27	0.20	0.29	0.22
60	0.47	0.35	0.53	0.39
65	0.88	0.67	1.00	0.76

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

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Termination Rates Before Retirement (Continued):

Age	Rate (%)			
	Disability			
	General All Other ⁽¹⁾	General OCTA ⁽²⁾	Safety - Law & Fire ⁽³⁾	Safety - Probation ⁽³⁾
20	0.00	0.00	0.01	0.00
25	0.00	0.00	0.04	0.06
30	0.02	0.03	0.08	0.16
35	0.06	0.08	0.22	0.20
40	0.11	0.28	0.36	0.20
45	0.14	0.46	0.52	0.20
50	0.15	0.56	0.96	0.20
55	0.18	0.84	1.68	0.20
60	0.32	1.30	3.80	0.08

⁽¹⁾ 50% of General All Other disabilities are assumed to be service connected disabilities. The other 50% are assumed to be non-service connected.

⁽²⁾ 70% of General - OCTA disabilities are assumed to be service connected disabilities. The other 30% are assumed to be non-service connected.

⁽³⁾ 100% of Safety – Law Enforcement, Fire and Probation disabilities are assumed to be service connected disabilities.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Termination Rates Before Retirement (Continued):

Years of Service	Rate (%)			
	Termination (< 5 Years of Service)			
	General All Other ⁽¹⁾	General OCTA ⁽¹⁾	Safety – Law & Fire ⁽²⁾	Safety - Probation ⁽²⁾
0	13.0	20.0	4.0	20.0
1	8.0	16.0	3.0	15.0
2	7.0	12.0	2.0	10.0
3	6.0	9.0	2.0	5.0
4	5.0	7.0	1.0	4.0

Age	Termination (5+ Years of Service)			
	General All Other ⁽³⁾	General OCTA ⁽³⁾	Safety – Law & Fire ⁽³⁾	Safety – Probation ⁽³⁾
	20	5.0	4.0	1.0
25	4.4	4.0	1.0	4.0
30	4.0	4.0	1.0	3.4
35	3.4	4.0	0.9	3.0
40	3.0	3.4	0.6	2.4
45	2.4	3.0	0.5	2.0
50	2.3	3.0	0.2	2.0
55	2.5	3.0	0.0	1.4
60	2.5	3.0	0.0	0.4

⁽¹⁾ 50% of all terminated members will choose a refund of contributions and 50% will choose a deferred vested benefit.

⁽²⁾ 40% of all terminated members will choose a refund of contributions and 60% will choose a deferred vested benefit.

⁽³⁾ 30% of terminated members will choose a refund of contributions and 70% will choose a deferred vested benefit.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Retirement Rates:

Age	Rate (%)							
	General - Enhanced	General - Non-Enhanced ⁽¹⁾	General - SJC (31676.12)	Safety - Law (31664.1) ⁽²⁾	Safety - Law (31664.2) ⁽²⁾	Safety - Fire (31664.1) ⁽²⁾	Safety - Fire (31664.2) ⁽²⁾	Safety - Probation ⁽²⁾
49	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
50	3.0	2.0	3.0	14.0	11.5	7.0	8.0	4.0
51	2.0	2.0	3.0	14.0	12.0	9.0	10.0	4.0
52	2.0	2.0	3.0	14.0	12.7	11.0	11.0	4.0
53	2.0	2.0	3.0	14.0	17.9	12.0	12.0	4.0
54	5.0	2.0	3.0	20.0	18.8	16.0	14.0	8.0
55	15.0	3.0	4.0	20.0	30.7	20.0	24.0	12.0
56	9.0	4.0	5.0	20.0	20.0	20.0	23.0	12.0
57	9.0	6.0	6.0	20.0	20.0	25.0	27.0	16.0
58	9.0	8.0	7.0	20.0	25.0	25.0	27.0	25.0
59	9.0	8.0	9.0	25.0	30.0	30.0	36.0	25.0
60	12.0	8.0	11.0	60.0	100.0	60.0	100.0	25.0
61	12.0	8.0	13.0	60.0	100.0	60.0	100.0	25.0
62	17.0	16.0	15.0	60.0	100.0	60.0	100.0	25.0
63	15.0	16.0	15.0	60.0	100.0	60.0	100.0	50.0
64	18.0	16.0	20.0	60.0	100.0	60.0	100.0	100.0
65	20.0	20.0	20.0	100.0	100.0	100.0	100.0	100.0
66	25.0	25.0	24.0	100.0	100.0	100.0	100.0	100.0
67	21.0	21.0	24.0	100.0	100.0	100.0	100.0	100.0
68	21.0	21.0	24.0	100.0	100.0	100.0	100.0	100.0
69	21.0	21.0	24.0	100.0	100.0	100.0	100.0	100.0
70	60.0	40.0	100.0	100.0	100.0	100.0	100.0	100.0
71	60.0	40.0	100.0	100.0	100.0	100.0	100.0	100.0
72	60.0	40.0	100.0	100.0	100.0	100.0	100.0	100.0
73	60.0	40.0	100.0	100.0	100.0	100.0	100.0	100.0
74	60.0	40.0	100.0	100.0	100.0	100.0	100.0	100.0
75	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

⁽¹⁾ These assumptions are also used for the CalPEPRA 1.62% @ 65 formula (Plan T).

⁽²⁾ Retirement rate is 100% after a member accrues a benefit of 100% of final average earnings.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Retirement Rates (Continued):

Age	Rate (%)			
	CalPEPRA 2.5% @ 67 General Formula	CalPEPRA Safety - Probation Formula ⁽¹⁾	CalPEPRA Safety - Law Formula ⁽¹⁾	CalPEPRA Safety - Fire Formula ⁽¹⁾
50	0.0	3.0	10.0	7.0
51	0.0	3.0	10.5	8.5
52	4.0	3.0	11.0	9.5
53	1.5	3.0	15.5	10.5
54	1.5	7.0	16.5	12.0
55	2.5	10.5	27.0	21.0
56	3.5	10.5	17.5	20.0
57	5.5	14.0	18.0	23.5
58	7.5	22.0	22.0	23.5
59	7.5	22.0	26.0	31.5
60	7.5	100.0	100.0	100.0
61	7.5	100.0	100.0	100.0
62	15.0	100.0	100.0	100.0
63	15.0	100.0	100.0	100.0
64	15.0	100.0	100.0	100.0
65	19.0	100.0	100.0	100.0
66	25.0	100.0	100.0	100.0
67	21.0	100.0	100.0	100.0
68	21.0	100.0	100.0	100.0
69	21.0	100.0	100.0	100.0
70	40.0	100.0	100.0	100.0
71	40.0	100.0	100.0	100.0
72	40.0	100.0	100.0	100.0
73	40.0	100.0	100.0	100.0
74	40.0	100.0	100.0	100.0
75	100.0	100.0	100.0	100.0

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

SECTION 4: Reporting Information for the Orange County Employees Retirement System

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

For deferred vested members, we make the following retirement age assumptions:

General Age: 57

Safety Age: 53

We assume that 25% of future General and 30% of future Safety deferred vested members are reciprocal. For reciprocals, we assume 4.75% compensation increases per annum.

**Liability Calculation for Current
Deferred Vested Members:**

Liability for a current deferred vested member is calculated based on salary, service, and eligibility for reciprocal benefit as provided by the Retirement System. For those members without salary information that have 3 or more years of service, we used an average salary. For those members without salary information that have less than 3 years of service or for those members without service information, we assumed a refund of account balance.

Future Benefit Accruals:

1.0 year of service per year of employment. There is no assumption to anticipate conversion of unused sick leave at retirement.

Unknown Data for Members:

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

Percent Married:

80% of male members and 50% of female members are assumed to be married at retirement or time of pre-retirement death.

Age of Spouse:

Female (or male) three years younger (or older) than spouse.

Net Investment Return:

7.25%; net of investment and administrative expenses.

**Employee Contribution
Crediting Rate:**

5.00%, compounded semi-annually.

Consumer Price Index:

Increase of 3.25% per year, retiree COLA increases due to CPI subject to a 3.0% maximum change per year.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Salary Increases:

Annual Rate of Compensation Increase (%)

Inflation: 3.25% per year, plus “across the board” salary increases of 0.50% per year, plus the following merit and promotion increases:

Years of Service	General	Safety
Less than 1	10.00%	14.00%
1	7.00	9.00
2	6.00	8.00
3	5.00	7.00
4	4.00	5.00
5	3.00	4.00
6	2.00	3.00
7	1.75	3.00
8	1.50	2.00
9	1.25	2.00
10	1.25	1.50
11	1.25	1.50
12	1.25	1.50
13	1.25	1.50
14	1.25	1.50
15	1.25	1.50
16	1.00	1.00
17	1.00	1.00
18	1.00	1.00
19	1.00	1.00
20 & over	1.00	1.00

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Annual Payoffs Assumptions:

Non-CalPEPRA Formulas

Additional compensation amounts are expected to be received during a member's final average earnings period. The percentages used in this valuation are:

	<u>Final One Year Salary</u>	<u>Final Three Year Salary</u>
General Members	4.00%	2.70%
Safety - Probation	5.20%	2.70%
Safety - Law	6.60%	4.50%
Safety - Fire	4.00%	2.00%

The annual payoffs assumptions are the same for service and disability retirements.

CalPEPRA Formulas

None

Actuarial Value of Assets:

Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual and the expected return on a market value basis, and is recognized over a five-year period.

Valuation Value of Assets:

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

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Actuarial Cost Method:	<p>Entry Age Normal Actuarial Cost Method. Entry Age is the current age minus Vesting Credit. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by salaries, with Normal Cost determined as a level percentage of individual salary, as if the current benefit accrual rate had always been in effect. The outstanding balance of the December 31, 2004 Unfunded Actuarial Accrued Liability is amortized over a declining 22-year period. The outstanding balance of the UAAL established in the December 31, 2009 valuation as a result of including additional premium pay items as pensionable salary and the new UAAL established in the December 31, 2010 valuation as a result of reallocating contributions and benefit payments among Rate Groups are also amortized over a 22-year period, in the December 31, 2012 valuation. Any increases or decreases in Unfunded Actuarial Accrued Liability that arise in future years due to actuarial gains or losses will be amortized over separate 15-year periods. Any increases or decreases in UAAL due to changes in actuarial assumptions are amortized over separate 30-year periods.</p> <p>Please note that for Probation members who have prior benefit service in another General OCERS plan, the normal cost rate for the current plan is calculated assuming their Entry Age is the date they entered service with their current plan.</p>
Changes in Actuarial Assumptions:	<p>Based on the Actuarial Experience Study and Review of Economic Actuarial Assumptions, the following assumptions were changed. Previously, these assumptions were as follows:</p>
Net Investment Return:	<p>7.75% net of investment and administrative expenses.</p>
Consumer Price Index:	<p>Increase of 3.50% per year, retiree COLA increases due to CPI subject to a 3.0% maximum change per year.</p>

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Changes in Actuarial Assumptions (continued):

Salary Increases:

Annual Rate of Compensation Increase (%)

Inflation: 3.50% per year, plus “across the board” salary increases of 0.25% per year, plus the following merit and promotion increases:

Years of Service	General	Safety
Less than 1	10.00%	14.00%
1	7.00	9.00
2	6.00	8.00
3	5.00	7.00
4	4.00	5.00
5	3.00	4.00
6	2.00	3.00
7	1.75	3.00
8	1.50	2.00
9	1.25	2.00
10	1.25	1.50
11	1.25	1.50
12	1.25	1.50
13	1.25	1.50
14	1.25	1.50
15	1.25	1.50
16	1.00	1.00
17	1.00	1.00
18	1.00	1.00
19	1.00	1.00
20 & over	1.00	1.00

SECTION 4: Reporting Information for the Orange County Employees Retirement System

EXHIBIT VI

Summary of Plan Provisions

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

Membership Eligibility:

Membership with OCERS begins with the day of employment in an eligible position by the County or a participating employer.

Non-CalPEPRA General Plans

2.5% @ 55 Plans (Orange County Sanitation District and Law Library⁽¹⁾)

Plan G General members hired before September 21, 1979.

Plan H General members hired on or after September 21, 1979
(Sanitation District members within Supervisors and Professional unit hired on or after October 1, 2010 are in Plan B)

2.7% @ 55 Plans (City of San Juan Capistrano, Orange County Employees except bargaining unit AFSCME members, Orange County Superior Court, Orange County Local Agency Formation Commission⁽¹⁾, Orange County Employees Retirement System⁽²⁾, Children and Family Commission⁽³⁾ and Orange County Fire Authority)

Plan I General members hired before September 21, 1979.

Plan J General members hired on or after September 21, 1979.

⁽¹⁾ *Improvement is prospective only for service after June 23, 2005.*

⁽²⁾ *Improvement for management employees is prospective only for service after June 30, 2005.*

⁽³⁾ *Improvement is prospective only for service after December 22, 2005.*

2.0% @ 55 Plans (Transportation Corridor Agency, Cemetery District – future service effective December 7, 2007 and General OCFA employees effective July 1, 2011)

Plan M General members hired before September 21, 1979.

Plan N General members hired on or after September 21, 1979.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

1.62% @ 65 Plans (Orange County Employees, Orange County Superior Court, Local Agency Formation Commission and County Managers unit)

Plan O County OCEA members and Superior Court members rehired on or after May 7, 2010, LAFCO members rehired on or after July 1, 2010 and County Managers unit members rehired on or after August 17, 2010 and not electing to rejoin Plan I.

Plan P County OCEA members and Superior Court members hired on or after May 7, 2010, LAFCO members hired on or after July 1, 2010 and County Managers unit members hired on or after August 17, 2010 and not electing Plan J.

2.0% @ 57 Plan (City of San Juan Capistrano)

Plan S General members hired on or after July 1, 2012.

All Other General Employers

Plan A General members hired before September 21, 1979.

Plan B General members hired on or after September 21, 1979 and Sanitation District members within Supervisors and Professional unit hired on or after October 1, 2010

Non-CalPEPRA Safety Plans

3% @ 50 Plans (Law Enforcement, Fire Authority and Probation Members)

Plan E Safety members hired before September 21, 1979.

Plan F Safety members hired on or after September 21, 1979 and before April 9, 2010 for Law Enforcement, before July 1, 2011 for Safety employees of OCFA Executive Management, and before July 1, 2012 for other OCFA Safety employees.

3% @ 55 Plans (Law Enforcement, Fire Authority)

Plan Q Safety Law Enforcement members rehired on or after April 9, 2010, Safety employees of OCFA Executive Management rehired on or after July 1, 2011, and other OCFA Safety employees rehired on or after July 1, 2012 and previously in Plan E.

Plan R Safety Law Enforcement members hired on or after April 9, 2010, Safety employees of OCFA Executive Management hired on or after July 1, 2011, and other OCFA Safety employees hired on or after July 1, 2012.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

CalPEPRA General Plans

1.62% @ 65 Plan (Orange County Employees except County Attorneys, Orange County Employees Retirement System except Management Employees, Children and Family Commission, Local Agency Formation Commission, and Orange County Superior Court)

Plan T General members with membership dates on or after January 1, 2013.

2.5% @ 67 Plan (All Other General Employers, Orange County Attorneys, Orange County Employees Retirement System Management Employees)

Plan U General members with membership dates on or after January 1, 2013.

CalPEPRA Safety Plans

2.7% @ 57 Plan (Law Enforcement, Fire Authority and Probation Members)

Plan V Safety members with membership dates on or after January 1, 2013.

**Final Compensation for
Benefit Determination:**

Plans A, E, G, I, M, O and Q Highest consecutive twelve months of compensation earnable. (§31462.1) (FAS1)

Plans B, F, H, J, N, P, R and S Highest consecutive thirty-six months of compensation earnable. (§31462) (FAS3)

Plans T, U and V Highest consecutive thirty-six months of pensionable compensation. (§7522.10(c), §7522.32 and §7522.34) (FAS3)

Service: Years of service. (Yrs)

Service Retirement Eligibility:

Plans A, B, G, H, I, J, M, N, O, P, S and T Age 50 with 10 years of service, or age 70 regardless of service, or after 30 years, regardless of age. (§31672)

Plan U Age 52 with 5 years of service. (§7522.20(a))

Plans E, F, Q and R Age 50 with 10 years of service, or after 20 years, regardless of age. (§31663.25)
All part time employees over age 55 with 10 years of employment may retire with 5 years of service.

Plan V Age 50 with 5 years of service. (§7522.20(d))

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Benefit Formula:

General Plans

2.5% @ 55

Plan G (§31676.18)

Retirement Age

50

55

60

62

65 or later

Benefit Formula

(2.00% x FAS1 x Yrs)

(2.50% x FAS1 x Yrs)

(2.50% x FAS1 x Yrs)

(2.62% x FAS1 x Yrs)*

(2.62% x FAS1 x Yrs)*

Plan H (§31676.18)

50

55

60

62

65 or later

(2.00% x FAS3 x Yrs)

(2.50% x FAS3 x Yrs)

(2.50% x FAS3 x Yrs)

(2.50% x FAS3 x Yrs)

(2.50% x FAS3 x Yrs)

* Reflects benefit factors from Plan A as they provide a better benefit than those under 2.5% @ 55.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Benefit Formula (continued):

	Retirement Age	Benefit Formula
<i>2.7% @ 55</i>		
<i>Plan I (§31676.19)</i>	50	(2.00% x FAS1 x Yrs)
	55	(2.70% x FAS1 x Yrs)
	60	(2.70% x FAS1 x Yrs)
	62	(2.70% x FAS1 x Yrs)
	65 or later	(2.70% x FAS1 x Yrs)
 <i>Plan J (§31676.19)</i>	50	(2.00% x FAS3 x Yrs)
	55	(2.70% x FAS3 x Yrs)
	60	(2.70% x FAS3 x Yrs)
	62	(2.70% x FAS3 x Yrs)
	65 or later	(2.70% x FAS3 x Yrs)

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Benefit Formula (continued):

<i>2.0% @ 55</i>	Retirement Age	Benefit Formula
<i>Plan M (§31676.16)</i>	50	(1.43% x FAS1 x Yrs)
	55	(2.00% x FAS1 x Yrs)
	60	(2.34% x FAS1 x Yrs)**
	62	(2.62% x FAS1 x Yrs)**
	65 or later	(2.62% x FAS1 x Yrs)**
 <i>Plan N (§31676.16)</i>	 50	 (1.43% x FAS3 x Yrs)
	55	(2.00% x FAS3 x Yrs)
	60	(2.26% x FAS3 x Yrs)
	62	(2.37% x FAS3 x Yrs)
	65 or later	(2.43% x FAS3 x Yrs)***

** Reflects benefit factors from Plan A as they provide a better benefit than those under 2.0% @ 55.

*** Reflects benefit factors from Plan B as they provide a better benefit than those under 2.0% @ 55.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Benefit Formula (continued):

	Retirement Age	Benefit Formula
<i>1.62% @ 65</i> <i>Plan O (§31676.01)</i>	50	(0.79% x FAS1 x Yrs)
	55	(0.99% x FAS1 x Yrs)
	60	(1.28% x FAS1 x Yrs)
	62	(1.39% x FAS1 x Yrs)
	65 or later	(1.62% x FAS1 x Yrs)
<i>Plan P and Plan T (§31676.01)</i>	50	(0.79% x FAS3 x Yrs)
	55	(0.99% x FAS3 x Yrs)
	60	(1.28% x FAS3 x Yrs)
	62	(1.39% x FAS3 x Yrs)
	65 or later	(1.62% x FAS3 x Yrs)

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Benefit Formula (continued):

<i>2.0% @ 57 Plan S (§31676.12)</i>	Retirement Age	Benefit Formula
	50	(1.34% x FAS3 x Yrs)
	55	(1.77% x FAS3 x Yrs)
	60	(2.34% x FAS3 x Yrs)
	62	(2.62% x FAS3 x Yrs)
	65 or later	(2.62% x FAS3 x Yrs)

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Benefit Formula (continued):

	Retirement Age	Benefit Formula
<i>Plan A (§31676.12)</i>	50	(1.34% x FAS1 x Yrs)
	55	(1.77% x FAS1 x Yrs)
	60	(2.34% x FAS1 x Yrs)
	62	(2.62% x FAS1 x Yrs)
	65 or later	(2.62% x FAS1 x Yrs)
<i>Plan B (§31676.1)</i>	50	(1.18% x FAS3 x Yrs)
	55	(1.49% x FAS3 x Yrs)
	60	(1.92% x FAS3 x Yrs)
	62	(2.09% x FAS3 x Yrs)
	65 or later	(2.43% x FAS3 x Yrs)
<i>Plan U (§7522.20(a))</i>	52	(1.00% x FAS3 x Yrs)
	55	(1.30% x FAS3 x Yrs)
	60	(1.80% x FAS3 x Yrs)
	62	(2.00% x FAS3 x Yrs)
	65	(2.30% x FAS3 x Yrs)
	67 or later	(2.50% x FAS3 x Yrs)

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Benefit Formula (continued):

Safety Plans

3% @ 50

Plan E (§31664.1)

Retirement Age

50

55

60 or later

Benefit Formula

(3.00% x FAS1 x Yrs)

(3.00% x FAS1 x Yrs)

(3.00% x FAS1 x Yrs)

Plan F (§31664.1)

50

55

60 or later

(3.00% x FAS3 x Yrs)

(3.00% x FAS3 x Yrs)

(3.00% x FAS3 x Yrs)

3% @ 55

Plan Q (§31664.2)

50

55

60 or later

(2.29% x FAS1 x Yrs)

(3.00% x FAS1 x Yrs)

(3.00% x FAS1 x Yrs)

Plan R (§31664.2)

50

55

60 or later

(2.29% x FAS3 x Yrs)

(3.00% x FAS3 x Yrs)

(3.00% x FAS3 x Yrs)

Plan V

(§7522.25(d))

50

55

57 or later

(2.00% x FAS3 x Yrs)

(2.50% x FAS3 x Yrs)

(2.70% x FAS3 x Yrs)

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Maximum Benefit:

<i>Plans A, B, E, F, G, H, I, J, M, N, O, P, Q, R, S, and T</i>	100% of Highest Average Compensation. (§31676.01, §31676.1, §31676.12, §31676.16, §31676.18, §31676.19, §31664.1, §31664.2)
<i>Plans U and V</i>	None.

Ordinary Disability:

General Plans

Plans A, B, G, H, I, J, M, N, O, P, S, T and U

Eligibility Five years of service. (§31720)

Benefit Formula Plans A, G, I, M and O:
1.8% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 62, but the total benefit cannot be more than one-third of Final Compensation. (§31727.1)

Plans B, H, J, N, P, S, T and U:
1.5% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 65, but the total benefit cannot be more than one-third of Final Compensation. (§31727)

Safety Plans

Plans E, F, Q, R and V

Eligibility Five years of service. (§31720)

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

For all members, 100% of the Service Retirement benefit will be paid, if greater.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Line-of-Duty Disability:

All Members

Eligibility No age or service requirements. (§31720)

Benefit Formula 50% of the Final Compensation or 100% of Service Retirement benefit, if greater. (§31727.4)

Pre-Retirement Death:

All Members

Eligibility None.

Benefit Refund of employee contributions with interest plus one month's compensation for each year of service to a maximum of six month's compensation. (§31781) A lump sum benefit in the amount of \$1,000 is payable upon the death of a member (with 10 years of service) to his/her eligible beneficiary. (§31790)

Death in line of duty 50% of Final Compensation or 100% of Service Retirement benefit, if greater, payable to spouse or minor children. (§31787)

OR

Vested Members

Eligibility Five years of service.

Benefit 60% of the greater of Service or Ordinary Disability Retirement benefit payable to eligible surviving spouse (§31765.1, §31781.1), in lieu of §31781.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Death After Retirement:

All Members

Service or

Ordinary Disability Retirement

60% of member's unmodified allowance continued to eligible spouse. (§31760.1) A lump sum benefit in the amount of \$1,000 is payable upon the death of a member (with 10 years of service) to his/her eligible beneficiary. (§31790) An eligible spouse is a surviving spouse who was married to the member at least one year prior to the date of retirement. (§31760.1)

Line-of-Duty Disability

100% of member's allowance continued to eligible spouse. (§31786) A lump sum benefit in the amount of \$1,000 is payable upon the death of a member (with 10 years of service) to his/her eligible beneficiary. (§31790)

Withdrawal Benefits:

Less than Five Years of Service

Refund of accumulated employee contributions with interest or earned benefit at age 70. (§31628) Effective January 1, 2003, a member may also elect to leave contributions on deposit in the retirement fund. (§31629.5)

Five or More Years of Service

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

Post-retirement

Cost-of-Living Benefits:

Future changes based on Consumer Price Index to a maximum of 3% per year, excess "banked." (§31870.1)

Supplemental Benefit:

Non-vested supplemental COLA and medical benefits are also paid by the System to eligible retirees and survivors. These benefits have been excluded from this valuation.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Member Contributions:

Please refer to Appendix B for the specific rates.

Non-CalPEPRA General Plans

Plan A

Basic

Provide for an average annuity payable at age 60 equal to 1/200 of FAS1. (§31621.5)

Cost-of-Living

Provide for 50% of future Cost-of-Living costs.

Plan B

Basic

Provide for an average annuity payable at age 60 equal to 1/120 of FAS3. (§31621)

Cost-of-Living

Provide for 50% of future Cost-of-Living costs.

Plans G, H, I and J

Basic

Provide for an average annuity payable at age 55 equal to 1/100 of FAS3 (FAS1 for Plans G and I). (§31621.8)

Cost-of-Living

Provide for 50% of future Cost-of-Living costs.

Plan M, N, O and P

Basic

Provide for an average annuity payable at age 60 equal to 1/120 of FAS3 (FAS1 for Plans M and O). (§31621)

Cost-of-Living

Provide for 50% of future Cost-of-Living costs.

Plan S

Basic

Provide for an average annuity at age 60 equal to 1/100 of FAS3. (§31621.2)

Cost-of-Living

Provide for 50% of future Cost-of-Living costs.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Member Contributions (Continued):

Non-CalPEPRA Safety Plans

Plans E and Q

Basic

Provide for an average annuity payable at age 50 equal to 1/200 FAS1. (\$31639.5)

Cost-of-Living

Provide for 50% of future Cost-of-Living costs.

Plans F and R

Basic

Provide for an average annuity payable at age 50 equal to 1/100 of FAS3. (\$31639.25)

Cost-of-Living

Provide for 50% of future Cost-of-Living costs.

CalPEPRA Plans

Plans T, U and V

50% of total Normal Cost rate.

Other Information:

Non-CalPEPRA Safety members with 30 or more years of service are exempt from paying member contributions. This also applies for General members hired on or before March 7, 1973.

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

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Appendix A

UAAL Amortization Schedule as of December 31, 2012

Rate Groups	Date Established	Source	Initial Base	Years Remaining	Remaining Base	Amortization Amount
<i>General Members</i>						
Rate Group #1 – non-OCTA, non-OCSD – 2.0% at 57 and 1.6667% at 57.5						
	12/31/2004	Restart amortization	\$44,613,000	22	\$49,229,000	\$3,221,000
	12/31/2005	Actuarial (gain) or loss	(3,774,000)	8	(2,916,000)	(424,000)
	12/31/2006	Actuarial (gain) or loss	2,619,000	9	2,159,000	283,000
	12/31/2007	Actuarial (gain) or loss	(4,903,000)	10	(4,257,000)	(511,000)
	12/31/2007	Assumption change	8,305,000	25	8,926,000	537,000
	12/31/2008	Actuarial (gain) or loss	10,802,000	11	9,783,000	1,084,000
	12/31/2009	Inclusion of Premium Pay	4,691,000	22	4,816,000	315,000
	12/31/2009	Actuarial (gain) or loss	14,681,000	12	13,757,000	1,420,000
	12/31/2010	Reallocation of assets	(9,260,000)	22	(9,409,000)	(616,000)
	12/31/2010	Actuarial (gain) or loss	(5,915,000)	13	(5,696,000)	(551,000)
	12/31/2011	Actuarial (gain) or loss	6,993,000	14	6,879,000	628,000
	12/31/2011	Assumption change	15,224,000	29	15,481,000	849,000
	12/31/2012	Actuarial (gain) or loss	4,280,000	15	4,280,000	370,000
	12/31/2012	Assumption change	23,668,000	30	<u>23,668,000</u>	<u>1,272,000</u>
Subtotal					\$116,700,000	\$7,877,000

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Rate Groups	Date Established	Source	Initial Base	Years Remaining	Remaining Base	Amortization Amount
Rate Group #2 – 2.7% at 55, 1.62% at 65 and 2.0% at 57						
	12/31/2004	Restart amortization	\$1,303,159,000	22	\$1,438,005,000	\$94,081,000
	12/31/2005	Actuarial (gain) or loss	85,000,000	8	65,686,000	9,550,000
	12/31/2006	Actuarial (gain) or loss	(18,810,000)	9	(15,503,000)	(2,035,000)
	12/31/2007	Actuarial (gain) or loss	9,539,000	10	8,282,000	994,000
	12/31/2007	Assumption change	68,025,000	25	73,111,000	4,396,000
	12/31/2008	Actuarial (gain) or loss	215,870,000	11	195,513,000	21,671,000
	12/31/2008	Assumption change	106,699,000	26	113,318,000	6,645,000
	12/31/2009	Inclusion of Premium Pay	53,005,000	22	54,421,000	3,560,000
	12/31/2009	Actuarial (gain) or loss	193,173,000	12	181,013,000	18,680,000
	12/31/2010	Reallocation of assets	69,988,000	22	71,111,000	4,652,000
	12/31/2010	Actuarial (gain) or loss	25,794,000	13	24,837,000	2,403,000
	12/31/2011	Actuarial (gain) or loss	210,577,000	14	207,148,000	18,896,000
	12/31/2011	Assumption change	312,871,000	29	318,149,000	17,450,000
	12/31/2012	Actuarial (gain) or loss	176,465,000	15	176,465,000	15,255,000
	12/31/2012	Assumption change	531,427,000	30	<u>531,427,000</u>	<u>28,572,000</u>
Subtotal					\$3,442,983,000	\$244,770,000

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Rate Groups	Date Established	Source	Initial Base	Years Remaining	Remaining Base	Amortization Amount
Rate Group #3 – 2.5% at 55 and 1.64% at 57						
	12/31/2004	Restart amortization	\$67,595,000	22	\$74,589,000	\$4,880,000
	12/31/2005	Actuarial (gain) or loss	9,864,000	8	7,623,000	1,108,000
	12/31/2006	Actuarial (gain) or loss	2,158,000	9	1,779,000	234,000
	12/31/2007	Actuarial (gain) or loss	(615,000)	10	(534,000)	(64,000)
	12/31/2007	Assumption change	7,781,000	25	8,363,000	503,000
	12/31/2008	Actuarial (gain) or loss	8,401,000	11	7,609,000	843,000
	12/31/2008	Assumption change	6,562,000	26	6,969,000	409,000
	12/31/2009	Inclusion of Premium Pay	8,458,000	22	8,684,000	568,000
	12/31/2009	Actuarial (gain) or loss	8,728,000	12	8,179,000	844,000
	12/31/2010	Reallocation of assets	(4,134,000)	22	(4,200,000)	(275,000)
	12/31/2010	Actuarial (gain) or loss	15,234,000	13	14,669,000	1,419,000
	12/31/2011	Actuarial (gain) or loss	19,474,000	14	19,157,000	1,748,000
	12/31/2011	Assumption change	15,300,000	29	15,558,000	853,000
	12/31/2012	Actuarial (gain) or loss	13,879,000	15	13,879,000	1,200,000
	12/31/2012	Assumption change	32,179,000	30	<u>32,179,000</u>	<u>1,730,000</u>
Subtotal					\$214,503,000	\$16,000,000

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Rate Groups	Date Established	Source	Initial Base	Years Remaining	Remaining Base	Amortization Amount
Rate Group #5 – OCTA – 2.0% at 57 and 1.6667% at 57.5						
	12/31/2004	Restart amortization	\$70,302,000	22	\$77,577,000	\$5,075,000
	12/31/2005	Actuarial (gain) or loss	1,340,000	8	1,036,000	151,000
	12/31/2006	Actuarial (gain) or loss	(5,778,000)	9	(4,762,000)	(625,000)
	12/31/2007	Actuarial (gain) or loss	(12,467,000)	10	(10,825,000)	(1,299,000)
	12/31/2007	Assumption change	11,504,000	25	12,364,000	743,000
	12/31/2008	Actuarial (gain) or loss	24,594,000	11	22,275,000	2,469,000
	12/31/2009	Inclusion of Premium Pay	26,400,000	22	27,105,000	1,773,000
	12/31/2009	Actuarial (gain) or loss	22,306,000	12	20,902,000	2,157,000
	12/31/2010	Reallocation of assets	95,000	22	97,000	6,000
	12/31/2010	Actuarial (gain) or loss	(2,073,000)	13	(1,996,000)	(193,000)
	12/31/2011	Actuarial (gain) or loss	20,064,000	14	19,737,000	1,800,000
	12/31/2011	Assumption change	19,530,000	29	19,859,000	1,089,000
	12/31/2012	Actuarial (gain) or loss	5,904,000	15	5,904,000	510,000
	12/31/2012	Assumption change	42,963,000	30	<u>42,963,000</u>	<u>2,310,000</u>
Subtotal					\$232,236,000	\$15,966,000

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Rate Groups	Date Established	Source	Initial Base	Years Remaining	Remaining Base	Amortization Amount
Rate Group #9 – TCA – 2.0% at 55						
	12/31/2004	Restart amortization	\$6,061,000	22	\$6,688,000	\$438,000
	12/31/2005	Actuarial (gain) or loss	(250,000)	8	(193,000)	(28,000)
	12/31/2006	Actuarial (gain) or loss	(319,000)	9	(263,000)	(35,000)
	12/31/2007	Actuarial (gain) or loss	(149,000)	10	(129,000)	(15,000)
	12/31/2007	Assumption change	312,000	25	335,000	20,000
	12/31/2008	Actuarial (gain) or loss	578,000	11	523,000	58,000
	12/31/2008	Assumption change	172,000	26	183,000	11,000
	12/31/2009	Inclusion of Premium Pay	697,000	22	716,000	47,000
	12/31/2009	Actuarial (gain) or loss	1,071,000	12	1,004,000	104,000
	12/31/2010	Reallocation of assets	436,000	22	443,000	29,000
	12/31/2010	Actuarial (gain) or loss	(496,000)	13	(478,000)	(46,000)
	12/31/2011	Actuarial (gain) or loss	(350,000)	14	(344,000)	(31,000)
	12/31/2011	Assumption change	908,000	29	923,000	51,000
	12/31/2012	Actuarial (gain) or loss	535,000	15	535,000	46,000
	12/31/2012	Assumption change	1,879,000	30	<u>1,879,000</u>	<u>101,000</u>
Subtotal					\$11,822,000	\$750,000

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Rate Groups	Date Established	Source	Initial Base	Years Remaining	Remaining Base	Amortization Amount
Rate Group #10 – OCFA – 2.7% at 55 and 2.0% at 55						
	12/31/2004	Restart amortization	\$28,348,000	22	\$31,281,000	\$2,047,000
	12/31/2005	Actuarial (gain) or loss	1,849,000	8	1,429,000	208,000
	12/31/2006	Actuarial (gain) or loss	4,362,000	9	3,595,000	472,000
	12/31/2007	Actuarial (gain) or loss	(3,010,000)	10	(2,613,000)	(314,000)
	12/31/2007	Assumption change	2,975,000	25	3,197,000	192,000
	12/31/2008	Actuarial (gain) or loss	1,347,000	11	1,220,000	135,000
	12/31/2008	Assumption change	2,318,000	26	2,462,000	144,000
	12/31/2009	Inclusion of Premium Pay	2,955,000	22	3,034,000	198,000
	12/31/2009	Actuarial (gain) or loss	3,276,000	12	3,070,000	317,000
	12/31/2010	Reallocation of assets	(883,000)	22	(897,000)	(59,000)
	12/31/2010	Actuarial (gain) or loss	803,000	13	773,000	75,000
	12/31/2011	Actuarial (gain) or loss	7,465,000	14	7,343,000	670,000
	12/31/2011	Assumption change	4,710,000	29	4,789,000	263,000
	12/31/2012	Actuarial (gain) or loss	3,389,000	15	3,389,000	293,000
	12/31/2012	Assumption change	10,816,000	30	<u>10,816,000</u>	<u>582,000</u>
Subtotal					\$72,888,000	\$5,223,000

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Rate Groups	Date Established	Source	Initial Base	Years Remaining	Remaining Base	Amortization Amount
Rate Group #11 – Cemetery District – 2.0% at 55 future service						
	12/31/2004	Restart amortization	\$679,000	22	\$749,000	\$49,000
	12/31/2005	Actuarial (gain) or loss	(62,000)	8	(48,000)	(7,000)
	12/31/2006	Actuarial (gain) or loss	43,000	9	35,000	5,000
	12/31/2007	Actuarial (gain) or loss	83,000	10	72,000	9,000
	12/31/2007	Assumption change	25,000	25	27,000	2,000
	12/31/2008	Actuarial (gain) or loss	212,000	11	192,000	21,000
	12/31/2008	Assumption change	13,000	26	14,000	1,000
	12/31/2009	Inclusion of Premium Pay	9,000	22	9,000	1,000
	12/31/2009	Actuarial (gain) or loss	(37,000)	12	(35,000)	(4,000)
	12/31/2010	Reallocation of assets	(97,000)	22	(99,000)	(6,000)
	12/31/2010	Actuarial (gain) or loss	110,000	13	106,000	10,000
	12/31/2011	Actuarial (gain) or loss	104,000	14	102,000	9,000
	12/31/2011	Assumption change	217,000	29	221,000	12,000
	12/31/2012	Actuarial (gain) or loss	193,000	15	193,000	17,000
	12/31/2012	Assumption change	443,000	30	<u>443,000</u>	<u>24,000</u>
Subtotal					\$1,981,000	\$143,000

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Rate Groups	Date Established	Source	Initial Base	Years Remaining	Remaining Base	Amortization Amount
<i>Safety Members</i>						
Rate Group #6 – Probation Officers – 3.0% at 50						
	12/31/2004	Restart amortization	\$82,839,000	22	\$91,411,000	\$5,981,000
	12/31/2005	Actuarial (gain) or loss	10,520,000	8	8,130,000	1,182,000
	12/31/2006	Actuarial (gain) or loss	2,531,000	9	2,086,000	274,000
	12/31/2007	Actuarial (gain) or loss	(1,866,000)	10	(1,620,000)	(194,000)
	12/31/2007	Assumption change	12,945,000	25	13,913,000	837,000
	12/31/2008	Actuarial (gain) or loss	13,162,000	11	11,921,000	1,321,000
	12/31/2009	Inclusion of Premium Pay	1,793,000	22	1,841,000	120,000
	12/31/2009	Actuarial (gain) or loss	4,017,000	12	3,764,000	388,000
	12/31/2010	Reallocation of assets	8,698,000	22	8,838,000	578,000
	12/31/2010	Actuarial (gain) or loss	(404,000)	13	(389,000)	(38,000)
	12/31/2011	Actuarial (gain) or loss	7,523,000	14	7,401,000	675,000
	12/31/2011	Assumption change	75,000	29	76,000	4,000
	12/31/2012	Actuarial (gain) or loss	6,223,000	15	6,223,000	538,000
	12/31/2012	Assumption change	39,650,000	30	<u>39,650,000</u>	<u>2,132,000</u>
Subtotal					\$193,245,000	\$13,798,000

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Rate Groups	Date Established	Source	Initial Base	Years Remaining	Remaining Base	Amortization Amount
Rate Group #7 – Law Enforcement – 3.0% at 50 and 3.0% at 55						
	12/31/2004	Restart amortization	\$409,515,000	22	\$451,890,000	\$29,565,000
	12/31/2005	Actuarial (gain) or loss	1,092,000	8	844,000	123,000
	12/31/2006	Actuarial (gain) or loss	(18,681,000)	9	(15,396,000)	(2,021,000)
	12/31/2007	Actuarial (gain) or loss	(5,815,000)	10	(5,049,000)	(606,000)
	12/31/2007	Assumption change	88,601,000	25	95,226,000	5,725,000
	12/31/2008	Actuarial (gain) or loss	94,542,000	11	85,626,000	9,491,000
	12/31/2009	Inclusion of Premium Pay	67,939,000	22	69,754,000	4,564,000
	12/31/2009	Actuarial (gain) or loss	46,476,000	12	43,551,000	4,494,000
	12/31/2010	Reallocation of assets	(21,907,000)	22	(22,258,000)	(1,456,000)
	12/31/2010	Actuarial (gain) or loss	5,638,000	13	5,429,000	525,000
	12/31/2011	Actuarial (gain) or loss	42,226,000	14	41,538,000	3,789,000
	12/31/2011	Assumption change	7,424,000	29	7,549,000	414,000
	12/31/2012	Actuarial (gain) or loss	52,532,000	15	52,532,000	4,541,000
	12/31/2012	Assumption change	177,182,000	30	<u>177,182,000</u>	<u>9,526,000</u>
Subtotal					\$988,418,000	\$68,674,000

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Rate Groups	Date Established	Source	Initial Base	Years Remaining	Remaining Base	Amortization Amount
Rate Group #8 – Fire Authority – 3.0% at 50 and 3.0% at 55						
	12/31/2004	Restart amortization	\$144,849,000	22	\$159,837,000	\$10,457,000
	12/31/2005	Actuarial (gain) or loss	2,796,000	8	2,161,000	314,000
	12/31/2006	Actuarial (gain) or loss	(4,791,000)	9	(3,949,000)	(518,000)
	12/31/2007	Actuarial (gain) or loss	2,047,000	10	1,777,000	213,000
	12/31/2007	Assumption change	36,674,000	25	39,416,000	2,370,000
	12/31/2008	Actuarial (gain) or loss	44,714,000	11	40,497,000	4,489,000
	12/31/2009	Inclusion of Premium Pay	79,778,000	22	81,909,000	5,359,000
	12/31/2009	Actuarial (gain) or loss	27,735,000	12	25,989,000	2,682,000
	12/31/2010	Reallocation of assets	(42,936,000)	22	(43,625,000)	(2,854,000)
	12/31/2010	Actuarial (gain) or loss	(5,353,000)	13	(5,154,000)	(499,000)
	12/31/2011	Actuarial (gain) or loss	20,158,000	14	19,830,000	1,809,000
	12/31/2011	Assumption change	(12,419,000)	29	(12,629,000)	(693,000)
	12/31/2012	Actuarial (gain) or loss	20,435,000	15	20,435,000	1,767,000
	12/31/2012	Assumption change	74,410,000	30	<u>74,410,000</u>	<u>4,001,000</u>
Subtotal					\$400,904,000	\$28,897,000

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Rate Groups	Date Established	Source	Initial Base	Years Remaining	Remaining Base	Amortization Amount
All Rate Groups Combined						
	12/31/2004	Restart amortization	\$2,158,151,000	22	\$2,381,467,000	\$155,808,000
	12/31/2005	Actuarial (gain) or loss	108,449,000	8	83,809,000	12,185,000
	12/31/2006	Actuarial (gain) or loss	(36,936,000)	9	(30,442,000)	(3,995,000)
	12/31/2007	Actuarial (gain) or loss	(17,161,000)	10	(14,900,000)	(1,787,000)
	12/31/2007	Assumption change	237,147,000	25	254,878,000	15,325,000
	12/31/2008	Actuarial (gain) or loss	414,215,000	11	375,153,000	41,581,000
	12/31/2008	Assumption change	115,764,000	26	122,946,000	7,210,000
	12/31/2009	Inclusion of Premium Pay	245,725,000	22	252,289,000	16,505,000
	12/31/2009	Actuarial (gain) or loss	321,419,000	12	301,187,000	31,081,000
	12/31/2010	Reallocation of assets	0	22	1,000*	(1,000)*
	12/31/2010	Actuarial (gain) or loss	33,331,000	13	32,094,000	3,104,000
	12/31/2011	Actuarial (gain) or loss	334,222,000	14	328,779,000	29,992,000
	12/31/2011	Assumption change	363,842,000	29	369,978,000	20,292,000
	12/31/2012	Actuarial (gain) or loss	283,822,000	15	283,822,000	24,536,000
	12/31/2012	Assumption change	934,619,000	30	<u>934,619,000</u>	<u>50,250,000</u>
Grand Total					<u>\$5,675,680,000</u>	<u>\$402,086,000</u>

Note that the current equivalent single amortization period for the System's UAAL is between 19 and 20 years.

* These amounts are not \$0 due to rounding.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Appendix B

Member Contribution Rates

**General Tier 1 Members' Contribution Rates from the December 31, 2012 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)
Calculated Under Recommended Assumptions**

<u>Entry Age</u>	<u>Plan I (2.7% @ 55 Non-OCFA)</u>		<u>Plan G (2.5% @ 55)</u>		<u>Plan M (2.0% @ 55)*</u>		<u>Plan A (OCTA)</u>	
	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>
15	7.48%	10.42%	7.48%	10.27%	5.45%	7.90%	3.27%	5.44%
16	7.48%	10.42%	7.48%	10.27%	5.45%	7.90%	3.27%	5.44%
17	7.59%	10.57%	7.59%	10.42%	5.53%	8.01%	3.32%	5.52%
18	7.70%	10.72%	7.70%	10.57%	5.61%	8.12%	3.36%	5.60%
19	7.81%	10.88%	7.81%	10.72%	5.69%	8.24%	3.41%	5.68%
20	7.92%	11.03%	7.92%	10.87%	5.77%	8.36%	3.46%	5.76%
21	8.03%	11.19%	8.03%	11.03%	5.85%	8.48%	3.51%	5.84%
22	8.15%	11.35%	8.15%	11.19%	5.93%	8.60%	3.56%	5.93%
23	8.26%	11.51%	8.26%	11.35%	6.02%	8.72%	3.61%	6.01%
24	8.38%	11.68%	8.38%	11.51%	6.10%	8.85%	3.66%	6.10%
25	8.50%	11.84%	8.50%	11.67%	6.19%	8.97%	3.72%	6.18%
26	8.62%	12.01%	8.62%	11.84%	6.28%	9.10%	3.77%	6.27%
27	8.75%	12.19%	8.75%	12.01%	6.37%	9.23%	3.82%	6.36%
28	8.87%	12.36%	8.87%	12.18%	6.46%	9.36%	3.88%	6.45%
29	9.00%	12.54%	9.00%	12.36%	6.55%	9.49%	3.93%	6.55%
30	9.13%	12.72%	9.13%	12.54%	6.65%	9.63%	3.99%	6.64%
31	9.27%	12.91%	9.27%	12.72%	6.74%	9.77%	4.05%	6.73%
32	9.40%	13.10%	9.40%	12.91%	6.84%	9.91%	4.10%	6.83%
33	9.54%	13.30%	9.54%	13.10%	6.94%	10.05%	4.16%	6.93%
34	9.69%	13.50%	9.69%	13.30%	7.04%	10.20%	4.22%	7.03%
35	9.83%	13.70%	9.83%	13.50%	7.14%	10.35%	4.28%	7.13%
36	9.99%	13.91%	9.99%	13.71%	7.25%	10.50%	4.35%	7.24%
37	10.14%	14.13%	10.14%	13.93%	7.35%	10.65%	4.41%	7.34%
38	10.31%	14.36%	10.31%	14.15%	7.46%	10.81%	4.48%	7.45%
39	10.45%	14.56%	10.45%	14.35%	7.57%	10.98%	4.54%	7.57%

SECTION 4: Reporting Information for the Orange County Employees Retirement System

**General Tier 1 Members' Contribution Rates from the December 31, 2012 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)
Calculated Under Recommended Assumptions**

<u>Entry Age</u>	<u>Plan I (2.7% @ 55 Non-OCFA)</u>		<u>Plan G (2.5% @ 55)</u>		<u>Plan M (2.0% @ 55)*</u>		<u>Plan A (OCTA)</u>	
	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>
40	10.60%	14.77%	10.60%	14.56%	7.69%	11.14%	4.61%	7.68%
41	10.76%	14.99%	10.76%	14.77%	7.81%	11.31%	4.69%	7.80%
42	10.92%	15.22%	10.92%	15.00%	7.93%	11.49%	4.76%	7.92%
43	11.10%	15.46%	11.10%	15.24%	8.06%	11.68%	4.84%	8.05%
44	11.28%	15.72%	11.28%	15.49%	8.17%	11.84%	4.90%	8.16%
45	11.49%	16.00%	11.49%	15.77%	8.29%	12.01%	4.97%	8.28%
46	11.68%	16.28%	11.68%	16.04%	8.41%	12.19%	5.05%	8.40%
47	11.88%	16.55%	11.88%	16.31%	8.54%	12.37%	5.12%	8.53%
48	12.08%	16.82%	12.08%	16.58%	8.68%	12.57%	5.21%	8.67%
49	12.20%	17.00%	12.20%	16.75%	8.82%	12.78%	5.29%	8.81%
50	12.26%	17.07%	12.26%	16.83%	8.98%	13.01%	5.39%	8.97%
51	12.24%	17.05%	12.24%	16.80%	9.13%	13.24%	5.48%	9.12%
52	12.16%	16.93%	12.16%	16.69%	9.29%	13.46%	5.57%	9.28%
53	12.02%	16.74%	12.02%	16.50%	9.44%	13.68%	5.67%	9.43%
54	11.68%	16.27%	11.68%	16.03%	9.54%	13.82%	5.72%	9.53%
55	11.68%	16.27%	11.68%	16.03%	9.58%	13.88%	5.75%	9.57%
56	11.68%	16.27%	11.68%	16.03%	9.57%	13.87%	5.74%	9.56%
57	11.68%	16.27%	11.68%	16.03%	9.50%	13.77%	5.70%	9.49%
58	11.68%	16.27%	11.68%	16.03%	9.40%	13.62%	5.64%	9.39%
59	11.68%	16.27%	11.68%	16.03%	9.13%	13.23%	5.48%	9.12%
60	11.68%	16.27%	11.68%	16.03%	9.13%	13.23%	5.48%	9.12%
<i>COLA Loading:</i>		39.32%		37.31%		44.89%		66.48%
<i>Interest:</i>	7.25%							
<i>Salary Increases:</i>	See Exhibit V, page 78							
<i>Mortality:</i>	See Exhibit V, page 71							

* Payable by members in Rate Group #9 and Rate Group #11.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

**General Tier 1 Members' Contribution Rates from the December 31, 2012 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)
Calculated Under Recommended Assumptions**

<u>Entry Age</u>	<u>Plan A (Non-OCTA)</u>		<u>Plan I (2.7% @ 55 OCFA)</u>	
	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>
15	3.27%	5.26%	7.48%	10.45%
16	3.27%	5.26%	7.48%	10.45%
17	3.32%	5.34%	7.59%	10.60%
18	3.36%	5.42%	7.70%	10.75%
19	3.41%	5.49%	7.81%	10.91%
20	3.46%	5.57%	7.92%	11.06%
21	3.51%	5.65%	8.03%	11.22%
22	3.56%	5.73%	8.15%	11.38%
23	3.61%	5.81%	8.26%	11.54%
24	3.66%	5.90%	8.38%	11.71%
25	3.72%	5.98%	8.50%	11.88%
26	3.77%	6.07%	8.62%	12.05%
27	3.82%	6.15%	8.75%	12.22%
28	3.88%	6.24%	8.87%	12.40%
29	3.93%	6.33%	9.00%	12.58%
30	3.99%	6.42%	9.13%	12.76%
31	4.05%	6.51%	9.27%	12.95%
32	4.10%	6.61%	9.40%	13.14%
33	4.16%	6.70%	9.54%	13.33%
34	4.22%	6.80%	9.69%	13.53%
35	4.28%	6.90%	9.83%	13.74%
36	4.35%	7.00%	9.99%	13.95%
37	4.41%	7.10%	10.14%	14.17%
38	4.48%	7.21%	10.31%	14.40%
39	4.54%	7.32%	10.45%	14.60%
40	4.61%	7.43%	10.60%	14.81%
41	4.69%	7.54%	10.76%	15.03%
42	4.76%	7.66%	10.92%	15.26%

SECTION 4: Reporting Information for the Orange County Employees Retirement System

**General Tier 1 Members' Contribution Rates from the December 31, 2012 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)
Calculated Under Recommended Assumptions**

<u>Entry Age</u>	<u>Plan A (Non-OCTA)</u>		<u>Plan I (2.7% @ 55 OCFA)</u>	
	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>
43	4.84%	7.79%	11.10%	15.50%
44	4.90%	7.89%	11.28%	15.76%
45	4.97%	8.01%	11.49%	16.04%
46	5.05%	8.13%	11.68%	16.32%
47	5.12%	8.25%	11.88%	16.59%
48	5.21%	8.38%	12.08%	16.87%
49	5.29%	8.52%	12.20%	17.05%
50	5.39%	8.68%	12.26%	17.12%
51	5.48%	8.83%	12.24%	17.10%
52	5.57%	8.97%	12.16%	16.98%
53	5.67%	9.12%	12.02%	16.79%
54	5.72%	9.22%	11.68%	16.31%
55	5.75%	9.26%	11.68%	16.31%
56	5.74%	9.25%	11.68%	16.31%
57	5.70%	9.18%	11.68%	16.31%
58	5.64%	9.08%	11.68%	16.31%
59	5.48%	8.82%	11.68%	16.31%
60	5.48%	8.82%	11.68%	16.31%

COLA Loading: 61.02% 39.70%

Interest: 7.25%

Salary Increases: See Exhibit V, page 78

Mortality: See Exhibit V, page 71

SECTION 4: Reporting Information for the Orange County Employees Retirement System

**General Tier 2 Members' Contribution Rates from the December 31, 2012 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)
Calculated Under Recommended Assumptions**

<u>Entry Age</u>	<u>Plan J (2.7% @ 55 non-OCFA)</u>		<u>Plan H (2.5% @ 55)</u>		<u>Plan N (2.0% @ 55)*</u>		<u>Plan B (OCTA)</u>		<u>Plan B (non-OCTA, non-OCSD)</u>	
	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>
15	7.15%	9.96%	7.15%	9.81%	5.21%	7.54%	5.21%	7.28%	5.21%	7.11%
16	7.15%	9.96%	7.15%	9.81%	5.21%	7.54%	5.21%	7.28%	5.21%	7.11%
17	7.25%	10.10%	7.25%	9.96%	5.28%	7.65%	5.28%	7.39%	5.28%	7.21%
18	7.35%	10.24%	7.35%	10.10%	5.36%	7.76%	5.36%	7.49%	5.36%	7.32%
19	7.46%	10.39%	7.46%	10.24%	5.43%	7.87%	5.43%	7.60%	5.43%	7.42%
20	7.56%	10.54%	7.56%	10.39%	5.51%	7.98%	5.51%	7.71%	5.51%	7.53%
21	7.67%	10.69%	7.67%	10.54%	5.59%	8.10%	5.59%	7.82%	5.59%	7.64%
22	7.78%	10.84%	7.78%	10.69%	5.67%	8.21%	5.67%	7.93%	5.67%	7.74%
23	7.89%	11.00%	7.89%	10.84%	5.75%	8.33%	5.75%	8.04%	5.75%	7.86%
24	8.01%	11.15%	8.01%	10.99%	5.83%	8.45%	5.83%	8.16%	5.83%	7.97%
25	8.12%	11.31%	8.12%	11.15%	5.92%	8.57%	5.92%	8.27%	5.92%	8.08%
26	8.24%	11.48%	8.24%	11.31%	6.00%	8.69%	6.00%	8.39%	6.00%	8.20%
27	8.36%	11.64%	8.36%	11.47%	6.09%	8.82%	6.09%	8.51%	6.09%	8.31%
28	8.48%	11.81%	8.48%	11.64%	6.17%	8.94%	6.17%	8.63%	6.17%	8.43%
29	8.60%	11.98%	8.60%	11.81%	6.26%	9.07%	6.26%	8.76%	6.26%	8.55%
30	8.73%	12.16%	8.73%	11.98%	6.35%	9.20%	6.35%	8.88%	6.35%	8.67%
31	8.85%	12.33%	8.85%	12.16%	6.44%	9.33%	6.44%	9.01%	6.44%	8.80%
32	8.98%	12.52%	8.98%	12.34%	6.53%	9.47%	6.53%	9.14%	6.53%	8.93%
33	9.12%	12.70%	9.12%	12.52%	6.63%	9.60%	6.63%	9.27%	6.63%	9.06%
34	9.25%	12.89%	9.25%	12.71%	6.72%	9.74%	6.72%	9.41%	6.72%	9.19%
35	9.40%	13.09%	9.40%	12.90%	6.82%	9.89%	6.82%	9.54%	6.82%	9.32%
36	9.54%	13.29%	9.54%	13.10%	6.92%	10.03%	6.92%	9.68%	6.92%	9.46%
37	9.68%	13.49%	9.68%	13.30%	7.02%	10.18%	7.02%	9.83%	7.02%	9.60%
38	9.82%	13.69%	9.82%	13.49%	7.13%	10.33%	7.13%	9.97%	7.13%	9.74%
39	9.96%	13.88%	9.96%	13.68%	7.24%	10.49%	7.24%	10.12%	7.24%	9.89%
40	10.10%	14.08%	10.10%	13.87%	7.35%	10.64%	7.35%	10.28%	7.35%	10.04%
41	10.25%	14.28%	10.25%	14.08%	7.46%	10.81%	7.46%	10.44%	7.46%	10.19%
42	10.41%	14.50%	10.41%	14.29%	7.57%	10.97%	7.57%	10.59%	7.57%	10.34%

SECTION 4: Reporting Information for the Orange County Employees Retirement System

**General Tier 2 Members' Contribution Rates from the December 31, 2012 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)
Calculated Under Recommended Assumptions**

<u>Entry Age</u>	Plan J (2.7% @ 55 non-OCFA)		Plan H (2.5% @ 55)		Plan N (2.0% @ 55)*		Plan B (OCTA)		Plan B (non-OCTA, non-OCSD)	
	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Normal</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>
43	10.58%	14.73%	10.58%	14.52%	7.68%	11.13%	7.68%	10.75%	7.68%	10.49%
44	10.75%	14.97%	10.75%	14.75%	7.79%	11.28%	7.79%	10.90%	7.79%	10.64%
45	10.91%	15.20%	10.91%	14.99%	7.90%	11.45%	7.90%	11.05%	7.90%	10.79%
46	11.08%	15.43%	11.08%	15.21%	8.02%	11.62%	8.02%	11.21%	8.02%	10.95%
47	11.21%	15.62%	11.21%	15.39%	8.14%	11.79%	8.14%	11.39%	8.14%	11.12%
48	11.30%	15.74%	11.30%	15.51%	8.27%	11.98%	8.27%	11.57%	8.27%	11.30%
49	11.31%	15.76%	11.31%	15.53%	8.40%	12.17%	8.40%	11.75%	8.40%	11.48%
50	11.26%	15.69%	11.26%	15.47%	8.53%	12.36%	8.53%	11.94%	8.53%	11.66%
51	11.15%	15.54%	11.15%	15.31%	8.66%	12.55%	8.66%	12.12%	8.66%	11.83%
52	10.93%	15.22%	10.93%	15.00%	8.77%	12.70%	8.77%	12.26%	8.77%	11.97%
53	11.29%	15.73%	11.29%	15.51%	8.83%	12.80%	8.83%	12.36%	8.83%	12.07%
54	11.68%	16.27%	11.68%	16.03%	8.85%	12.82%	8.85%	12.37%	8.85%	12.08%
55	11.68%	16.27%	11.68%	16.03%	8.81%	12.76%	8.81%	12.32%	8.81%	12.03%
56	11.68%	16.27%	11.68%	16.03%	8.72%	12.64%	8.72%	12.20%	8.72%	11.91%
57	11.68%	16.27%	11.68%	16.03%	8.54%	12.38%	8.54%	11.95%	8.54%	11.67%
58	11.68%	16.27%	11.68%	16.03%	8.83%	12.79%	8.83%	12.35%	8.83%	12.06%
59	11.68%	16.27%	11.68%	16.03%	9.13%	13.23%	9.13%	12.77%	9.13%	12.47%
60	11.68%	16.27%	11.68%	16.03%	9.13%	13.23%	9.13%	12.77%	9.13%	12.47%
<i>COLA Loading:</i>		39.32%		37.31%		44.89%		39.89%		36.61%

Interest: 7.25%
Salary Increases: See Exhibit V, page 78
Mortality: See Exhibit V, page 71

* Payable by members in Rate Group #9 and Rate Group #11.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

**General Tier 2 Members' Contribution Rates from the December 31, 2012 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)
Calculated Under Recommended Assumptions**

<u>Entry Age</u>	<u>Plan J (2.7% @ 55 OCFA)</u>		<u>Plan P (1.62% @ 65)</u>		<u>Plan B (OCSD)</u>		<u>Plan N (OCFA)</u>		<u>Plan S (City of SJC)</u>	
	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>
15	7.15%	9.99%	5.21%	6.56%	5.21%	7.23%	5.21%	7.59%	6.25%	8.67%
16	7.15%	9.99%	5.21%	6.56%	5.21%	7.23%	5.21%	7.59%	6.25%	8.67%
17	7.25%	10.13%	5.28%	6.65%	5.28%	7.34%	5.28%	7.70%	6.34%	8.80%
18	7.35%	10.27%	5.36%	6.74%	5.36%	7.44%	5.36%	7.81%	6.43%	8.92%
19	7.46%	10.42%	5.43%	6.84%	5.43%	7.55%	5.43%	7.92%	6.52%	9.05%
20	7.56%	10.57%	5.51%	6.94%	5.51%	7.66%	5.51%	8.04%	6.61%	9.18%
21	7.67%	10.72%	5.59%	7.04%	5.59%	7.77%	5.59%	8.15%	6.71%	9.31%
22	7.78%	10.87%	5.67%	7.14%	5.67%	7.88%	5.67%	8.27%	6.80%	9.44%
23	7.89%	11.03%	5.75%	7.24%	5.75%	7.99%	5.75%	8.39%	6.90%	9.58%
24	8.01%	11.18%	5.83%	7.34%	5.83%	8.10%	5.83%	8.51%	7.00%	9.71%
25	8.12%	11.35%	5.92%	7.45%	5.92%	8.22%	5.92%	8.63%	7.10%	9.85%
26	8.24%	11.51%	6.00%	7.56%	6.00%	8.34%	6.00%	8.75%	7.20%	9.99%
27	8.36%	11.67%	6.09%	7.66%	6.09%	8.46%	6.09%	8.88%	7.30%	10.14%
28	8.48%	11.84%	6.17%	7.77%	6.17%	8.58%	6.17%	9.00%	7.41%	10.28%
29	8.60%	12.01%	6.26%	7.88%	6.26%	8.70%	6.26%	9.13%	7.51%	10.43%
30	8.73%	12.19%	6.35%	8.00%	6.35%	8.82%	6.35%	9.26%	7.62%	10.58%
31	8.85%	12.37%	6.44%	8.11%	6.44%	8.95%	6.44%	9.40%	7.73%	10.73%
32	8.98%	12.55%	6.53%	8.23%	6.53%	9.08%	6.53%	9.53%	7.84%	10.88%
33	9.12%	12.74%	6.63%	8.35%	6.63%	9.21%	6.63%	9.67%	7.95%	11.04%
34	9.25%	12.93%	6.72%	8.47%	6.72%	9.35%	6.72%	9.81%	8.07%	11.20%
35	9.40%	13.13%	6.82%	8.59%	6.82%	9.48%	6.82%	9.95%	8.19%	11.36%
36	9.54%	13.33%	6.92%	8.72%	6.92%	9.62%	6.92%	10.10%	8.31%	11.53%
37	9.68%	13.53%	7.02%	8.85%	7.02%	9.76%	7.02%	10.25%	8.43%	11.70%
38	9.82%	13.72%	7.13%	8.98%	7.13%	9.91%	7.13%	10.40%	8.56%	11.87%
39	9.96%	13.92%	7.24%	9.11%	7.24%	10.06%	7.24%	10.56%	8.68%	12.05%
40	10.10%	14.11%	7.35%	9.25%	7.35%	10.21%	7.35%	10.72%	8.82%	12.24%
41	10.25%	14.32%	7.46%	9.39%	7.46%	10.37%	7.46%	10.88%	8.95%	12.43%
42	10.41%	14.54%	7.57%	9.54%	7.57%	10.52%	7.57%	11.04%	9.09%	12.61%

SECTION 4: Reporting Information for the Orange County Employees Retirement System

**General Tier 2 Members' Contribution Rates from the December 31, 2012 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)
Calculated Under Recommended Assumptions**

<u>Entry Age</u>	<u>Plan J (2.7% @ 55 OCFA)</u>		<u>Plan P (1.62% @ 65)</u>		<u>Plan B (OCSD)</u>		<u>Plan N (OCFA)</u>		<u>Plan S (City of SJC)</u>	
	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Normal</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>
43	10.58%	14.77%	7.68%	9.67%	7.68%	10.67%	7.68%	11.20%	9.22%	12.79%
44	10.75%	15.01%	7.79%	9.81%	7.79%	10.82%	7.79%	11.36%	9.35%	12.97%
45	10.91%	15.25%	7.90%	9.95%	7.90%	10.98%	7.90%	11.52%	9.48%	13.16%
46	11.08%	15.47%	8.02%	10.10%	8.02%	11.14%	8.02%	11.69%	9.62%	13.35%
47	11.21%	15.66%	8.14%	10.25%	8.14%	11.31%	8.14%	11.87%	9.77%	13.56%
48	11.30%	15.78%	8.27%	10.41%	8.27%	11.49%	8.27%	12.06%	9.92%	13.77%
49	11.31%	15.80%	8.40%	10.58%	8.40%	11.68%	8.40%	12.26%	10.08%	13.99%
50	11.26%	15.74%	8.53%	10.75%	8.53%	11.86%	8.53%	12.45%	10.24%	14.21%
51	11.15%	15.58%	8.66%	10.91%	8.66%	12.04%	8.66%	12.63%	10.39%	14.42%
52	10.93%	15.26%	8.77%	11.04%	8.77%	12.18%	8.77%	12.79%	10.52%	14.60%
53	11.29%	15.78%	8.83%	11.12%	8.83%	12.27%	8.83%	12.88%	10.60%	14.71%
54	11.68%	16.31%	8.85%	11.14%	8.85%	12.29%	8.85%	12.90%	10.62%	14.73%
55	11.68%	16.31%	8.81%	11.09%	8.81%	12.24%	8.81%	12.85%	10.57%	14.67%
56	11.68%	16.31%	8.72%	10.98%	8.72%	12.12%	8.72%	12.72%	10.47%	14.53%
57	11.68%	16.31%	8.54%	10.76%	8.54%	11.87%	8.54%	12.46%	10.25%	14.23%
58	11.68%	16.31%	8.83%	11.12%	8.83%	12.27%	8.83%	12.88%	10.60%	14.71%
59	11.68%	16.31%	9.13%	11.50%	9.13%	12.69%	9.13%	13.32%	10.96%	15.21%
60	11.68%	16.31%	9.13%	11.50%	9.13%	12.69%	9.13%	13.32%	10.96%	15.21%
<i>COLA Loading:</i>		39.70%		25.93%		38.97%		45.87%		38.80%
<i>Interest:</i>	7.25%									
<i>Salary Increases:</i>	<i>See Exhibit V, page 78</i>									
<i>Mortality:</i>	<i>See Exhibit V, page 71</i>									

SECTION 4: Reporting Information for the Orange County Employees Retirement System

General CalPEPRA Tiers (Expressed as a Percentage of Monthly Payroll)

Calculated Under Recommended Assumptions

<u>Entry Age</u>	<u>Rate Group 1 – Plan U</u>		<u>Rate Group 2 – Plan T</u>		<u>Rate Group 2 – Plan U</u>		<u>Rate Group 3 – Plan U</u>	
	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>
15	5.66%	7.75%	3.70%	5.00%	4.49%	6.00%	5.65%	7.75%
16	5.66%	7.75%	3.70%	5.00%	4.49%	6.00%	5.65%	7.75%
17	5.48%	7.50%	3.89%	5.25%	4.30%	5.75%	5.29%	7.25%
18	5.11%	7.00%	3.89%	5.25%	4.12%	5.50%	5.11%	7.00%
19	5.11%	7.00%	3.89%	5.25%	4.12%	5.50%	5.11%	7.00%
20	5.29%	7.25%	4.08%	5.50%	4.30%	5.75%	5.29%	7.25%
21	5.29%	7.25%	4.08%	5.50%	4.30%	5.75%	5.29%	7.25%
22	5.48%	7.50%	4.08%	5.50%	4.30%	5.75%	5.29%	7.25%
23	5.48%	7.50%	4.08%	5.50%	4.49%	6.00%	5.47%	7.50%
24	5.48%	7.50%	4.26%	5.75%	4.49%	6.00%	5.47%	7.50%
25	5.66%	7.75%	4.26%	5.75%	4.68%	6.25%	5.65%	7.75%
26	5.66%	7.75%	4.26%	5.75%	4.68%	6.25%	5.65%	7.75%
27	5.84%	8.00%	4.44%	6.00%	4.86%	6.50%	5.84%	8.00%
28	5.84%	8.00%	4.44%	6.00%	4.86%	6.50%	5.84%	8.00%
29	6.03%	8.25%	4.44%	6.00%	5.05%	6.75%	6.01%	8.25%
30	6.03%	8.25%	4.63%	6.25%	5.05%	6.75%	6.01%	8.25%
31	6.21%	8.50%	4.63%	6.25%	5.24%	7.00%	6.01%	8.25%
32	6.21%	8.50%	4.82%	6.50%	5.24%	7.00%	6.20%	8.50%
33	6.39%	8.75%	4.82%	6.50%	5.43%	7.25%	6.20%	8.50%
34	6.39%	8.75%	4.82%	6.50%	5.43%	7.25%	6.38%	8.75%
35	6.57%	9.00%	5.00%	6.75%	5.61%	7.50%	6.38%	8.75%
36	6.57%	9.00%	5.00%	6.75%	5.80%	7.75%	6.56%	9.00%
37	6.75%	9.25%	5.00%	6.75%	5.80%	7.75%	6.56%	9.00%
38	6.75%	9.25%	5.18%	7.00%	5.98%	8.00%	6.75%	9.25%
39	6.94%	9.50%	5.18%	7.00%	5.98%	8.00%	6.93%	9.50%
40	6.94%	9.50%	5.36%	7.25%	6.17%	8.25%	6.93%	9.50%
41	7.12%	9.75%	5.36%	7.25%	6.17%	8.25%	7.11%	9.75%
42	7.12%	9.75%	5.55%	7.50%	6.36%	8.50%	7.11%	9.75%
43	7.30%	10.00%	5.55%	7.50%	6.54%	8.75%	7.29%	10.00%
44	7.49%	10.25%	5.55%	7.50%	6.54%	8.75%	7.29%	10.00%

SECTION 4: Reporting Information for the Orange County Employees Retirement System

General CalPEPRA Tiers (Expressed as a Percentage of Monthly Payroll)

Calculated Under Recommended Assumptions

<u>Entry Age</u>	<u>Rate Group 1 – Plan U</u>		<u>Rate Group 2 – Plan T</u>		<u>Rate Group 2 – Plan U</u>		<u>Rate Group 3 – Plan U</u>	
	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>
45	7.49%	10.25%	5.73%	7.75%	6.74%	9.00%	7.47%	10.25%
46	7.67%	10.50%	5.73%	7.75%	6.92%	9.25%	7.65%	10.50%
47	7.67%	10.50%	5.93%	8.00%	7.11%	9.50%	7.65%	10.50%
48	7.85%	10.75%	5.93%	8.00%	7.11%	9.50%	7.84%	10.75%
49	8.04%	11.00%	6.11%	8.25%	7.30%	9.75%	7.84%	10.75%
50	8.04%	11.00%	6.11%	8.25%	7.48%	10.00%	8.03%	11.00%
51	8.21%	11.25%	6.29%	8.50%	7.48%	10.00%	8.20%	11.25%
52	8.40%	11.50%	6.29%	8.50%	7.67%	10.25%	8.20%	11.25%
53	8.40%	11.50%	6.48%	8.75%	7.86%	10.50%	8.39%	11.50%
54	8.58%	11.75%	6.48%	8.75%	8.05%	10.75%	8.57%	11.75%
55	8.77%	12.00%	6.29%	8.50%	8.22%	11.00%	8.57%	11.75%
56	8.77%	12.00%	6.29%	8.50%	8.22%	11.00%	8.75%	12.00%
57	8.94%	12.25%	6.11%	8.25%	8.43%	11.25%	8.93%	12.25%
58	9.13%	12.50%	6.48%	8.75%	8.61%	11.50%	9.11%	12.50%
59	9.32%	12.75%	6.66%	9.00%	8.80%	11.75%	9.11%	12.50%
60	9.32%	12.75%	6.66%	9.00%	8.80%	11.75%	9.30%	12.75%
61	9.32%	12.75%	6.66%	9.00%	8.98%	12.00%	9.30%	12.75%
62	9.32%	12.75%	6.66%	9.00%	8.80%	11.75%	9.30%	12.75%
63	9.13%	12.50%	6.66%	9.00%	8.80%	11.75%	9.11%	12.50%
64	8.94%	12.25%	6.66%	9.00%	8.61%	11.50%	8.93%	12.25%
65	9.32%	12.75%	6.66%	9.00%	8.98%	12.00%	9.30%	12.75%
66 and thereafter	9.68%	13.25%	6.66%	9.00%	9.35%	12.50%	9.48%	13.00%
<i>COLA Loading:</i>		36.91%		35.06%		33.57%		37.13%

Interest: 7.25%

Salary Increases: See Exhibit V, page 78

Mortality: See Exhibit V, page 71

It is our understanding that in the determination of pension benefits under the CalPEPRA 2.5% at 67 formula, the compensation that can be taken into account for 2013 is equal to \$136,440 or 120% of the Social Security Taxable Wage Base (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2013 (reference: Section 7522.10(d)).

SECTION 4: Reporting Information for the Orange County Employees Retirement System

General CalPEPRA Tiers (Expressed as a Percentage of Monthly Payroll)

Calculated Under Recommended Assumptions

<u>Entry Age</u>	<u>Rate Group 5 – Plan U</u>		<u>Rate Group 9 – Plan U</u>		<u>Rate Group 10 – Plan U</u>		<u>Rate Group 11 – Plan U</u>	
	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>
15	6.21%	8.50%	6.09%	8.25%	5.29%	7.25%	5.83%	8.00%
16	6.21%	8.50%	6.09%	8.25%	5.29%	7.25%	5.83%	8.00%
17	5.85%	8.00%	5.72%	7.75%	5.11%	7.00%	5.46%	7.50%
18	5.67%	7.75%	5.35%	7.25%	4.74%	6.50%	5.28%	7.25%
19	5.67%	7.75%	5.53%	7.50%	4.92%	6.75%	5.28%	7.25%
20	5.85%	8.00%	5.53%	7.50%	4.92%	6.75%	5.28%	7.25%
21	5.85%	8.00%	5.72%	7.75%	5.11%	7.00%	5.46%	7.50%
22	5.85%	8.00%	5.72%	7.75%	5.11%	7.00%	5.46%	7.50%
23	6.04%	8.25%	5.90%	8.00%	5.11%	7.00%	5.64%	7.75%
24	6.04%	8.25%	5.90%	8.00%	5.29%	7.25%	5.64%	7.75%
25	6.21%	8.50%	6.09%	8.25%	5.29%	7.25%	5.83%	8.00%
26	6.21%	8.50%	6.09%	8.25%	5.48%	7.50%	5.83%	8.00%
27	6.40%	8.75%	6.28%	8.50%	5.48%	7.50%	6.01%	8.25%
28	6.40%	8.75%	6.28%	8.50%	5.65%	7.75%	6.01%	8.25%
29	6.58%	9.00%	6.28%	8.50%	5.65%	7.75%	6.01%	8.25%
30	6.58%	9.00%	6.46%	8.75%	5.65%	7.75%	6.20%	8.50%
31	6.76%	9.25%	6.46%	8.75%	5.83%	8.00%	6.20%	8.50%
32	6.76%	9.25%	6.65%	9.00%	5.83%	8.00%	6.38%	8.75%
33	6.94%	9.50%	6.65%	9.00%	6.02%	8.25%	6.38%	8.75%
34	7.13%	9.75%	6.83%	9.25%	6.02%	8.25%	6.56%	9.00%
35	7.13%	9.75%	7.01%	9.50%	6.20%	8.50%	6.56%	9.00%
36	7.32%	10.00%	7.01%	9.50%	6.20%	8.50%	6.74%	9.25%
37	7.32%	10.00%	7.20%	9.75%	6.38%	8.75%	6.92%	9.50%
38	7.50%	10.25%	7.20%	9.75%	6.38%	8.75%	6.92%	9.50%
39	7.50%	10.25%	7.37%	10.00%	6.56%	9.00%	7.10%	9.75%
40	7.68%	10.50%	7.37%	10.00%	6.56%	9.00%	7.10%	9.75%
41	7.85%	10.75%	7.56%	10.25%	6.74%	9.25%	7.29%	10.00%
42	7.85%	10.75%	7.56%	10.25%	6.74%	9.25%	7.29%	10.00%
43	8.04%	11.00%	7.75%	10.50%	6.93%	9.50%	7.47%	10.25%
44	8.04%	11.00%	7.93%	10.75%	6.93%	9.50%	7.47%	10.25%

SECTION 4: Reporting Information for the Orange County Employees Retirement System

General CalPEPRA Tiers (Expressed as a Percentage of Monthly Payroll)

Calculated Under Recommended Assumptions

<u>Entry Age</u>	<u>Rate Group 5 – Plan U</u>		<u>Rate Group 9 – Plan U</u>		<u>Rate Group 10 – Plan U</u>		<u>Rate Group 11 – Plan U</u>	
	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>
45	8.22%	11.25%	7.93%	10.75%	7.12%	9.75%	7.65%	10.50%
46	8.41%	11.50%	8.12%	11.00%	7.29%	10.00%	7.83%	10.75%
47	8.59%	11.75%	8.31%	11.25%	7.29%	10.00%	7.83%	10.75%
48	8.59%	11.75%	8.31%	11.25%	7.48%	10.25%	8.02%	11.00%
49	8.77%	12.00%	8.49%	11.50%	7.48%	10.25%	8.20%	11.25%
50	8.96%	12.25%	8.67%	11.75%	7.66%	10.50%	8.20%	11.25%
51	8.96%	12.25%	8.67%	11.75%	7.84%	10.75%	8.38%	11.50%
52	9.13%	12.50%	8.86%	12.00%	7.84%	10.75%	8.56%	11.75%
53	9.32%	12.75%	9.04%	12.25%	8.03%	11.00%	8.56%	11.75%
54	9.50%	13.00%	9.23%	12.50%	8.03%	11.00%	8.75%	12.00%
55	9.50%	13.00%	9.23%	12.50%	8.20%	11.25%	8.93%	12.25%
56	9.68%	13.25%	9.41%	12.75%	8.39%	11.50%	9.11%	12.50%
57	9.87%	13.50%	9.59%	13.00%	8.58%	11.75%	9.11%	12.50%
58	10.05%	13.75%	9.78%	13.25%	8.58%	11.75%	9.29%	12.75%
59	10.24%	14.00%	9.78%	13.25%	8.75%	12.00%	9.47%	13.00%
60	10.24%	14.00%	9.96%	13.50%	8.75%	12.00%	9.47%	13.00%
61	10.24%	14.00%	9.96%	13.50%	8.75%	12.00%	9.47%	13.00%
62	10.24%	14.00%	9.96%	13.50%	8.75%	12.00%	9.47%	13.00%
63	10.05%	13.75%	9.78%	13.25%	8.75%	12.00%	9.47%	13.00%
64	9.87%	13.50%	9.59%	13.00%	8.58%	11.75%	9.11%	12.50%
65	10.24%	14.00%	9.96%	13.50%	8.75%	12.00%	9.47%	13.00%
66 and thereafter	10.61%	14.50%	10.34%	14.00%	9.12%	12.50%	9.83%	13.50%
COLA Loading:		36.88%		35.43%		37.10%		37.24%

Interest: 7.25%
 Salary Increases: See Exhibit V, page 78
 Mortality: See Exhibit V, page 71

It is our understanding that in the determination of pension benefits under the 2.5% at 67 CalPEPRA formula, the compensation that can be taken into account for 2013 is equal to \$136,440 or 120% of the Social Security Taxable Wage Base (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2013 (reference: Section 7522.10(d)).

SECTION 4: Reporting Information for the Orange County Employees Retirement System

**Safety Tier 1 Members' Contribution Rates from the December 31, 2012 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)
Calculated Under Recommended Assumptions**

<u>Entry Age</u>	<u>Plan E (Fire Authority)</u>		<u>Plan E (Law Enforcement)</u>		<u>Plan E (Probation)</u>	
	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>
15	4.24%	9.75%	4.24%	9.91%	4.24%	9.10%
16	4.24%	9.75%	4.24%	9.91%	4.24%	9.10%
17	4.31%	9.90%	4.31%	10.06%	4.31%	9.24%
18	4.37%	10.04%	4.37%	10.21%	4.37%	9.37%
19	4.44%	10.19%	4.44%	10.36%	4.44%	9.51%
20	4.50%	10.35%	4.50%	10.51%	4.50%	9.66%
21	4.57%	10.50%	4.57%	10.67%	4.57%	9.80%
22	4.64%	10.66%	4.64%	10.83%	4.64%	9.95%
23	4.71%	10.82%	4.71%	11.00%	4.71%	10.10%
24	4.78%	10.99%	4.78%	11.17%	4.78%	10.26%
25	4.86%	11.16%	4.86%	11.34%	4.86%	10.42%
26	4.93%	11.34%	4.93%	11.52%	4.93%	10.58%
27	5.01%	11.52%	5.01%	11.71%	5.01%	10.75%
28	5.09%	11.71%	5.09%	11.90%	5.09%	10.93%
29	5.18%	11.90%	5.18%	12.09%	5.18%	11.11%
30	5.26%	12.10%	5.26%	12.30%	5.26%	11.29%
31	5.36%	12.31%	5.36%	12.51%	5.36%	11.49%
32	5.45%	12.53%	5.45%	12.73%	5.45%	11.69%
33	5.55%	12.76%	5.55%	12.96%	5.55%	11.91%
34	5.63%	12.94%	5.63%	13.14%	5.63%	12.07%
35	5.71%	13.13%	5.71%	13.34%	5.71%	12.25%
36	5.80%	13.33%	5.80%	13.54%	5.80%	12.44%
37	5.89%	13.54%	5.89%	13.76%	5.89%	12.64%
38	6.00%	13.78%	6.00%	14.00%	6.00%	12.86%
39	6.11%	14.04%	6.11%	14.27%	6.11%	13.10%
40	6.21%	14.26%	6.21%	14.49%	6.21%	13.31%
41	6.32%	14.52%	6.32%	14.75%	6.32%	13.55%
42	6.39%	14.68%	6.39%	14.91%	6.39%	13.70%

SECTION 4: Reporting Information for the Orange County Employees Retirement System

**Safety Tier 1 Members' Contribution Rates from the December 31, 2012 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)
Calculated Under Recommended Assumptions**

<u>Entry Age</u>	<u>Plan E (Fire Authority)</u>		<u>Plan E (Law Enforcement)</u>		<u>Plan E (Probation)</u>	
	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>
43	6.47%	14.88%	6.47%	15.12%	6.47%	13.89%
44	6.53%	15.00%	6.53%	15.25%	6.53%	14.00%
45	6.55%	15.06%	6.55%	15.30%	6.55%	14.05%
46	6.49%	14.92%	6.49%	15.16%	6.49%	13.92%
47	6.40%	14.71%	6.40%	14.94%	6.40%	13.73%
48	6.29%	14.46%	6.29%	14.69%	6.29%	13.49%
49	6.01%	13.81%	6.01%	14.04%	6.01%	12.89%
50	6.01%	13.81%	6.01%	14.04%	6.01%	12.89%
51	6.01%	13.81%	6.01%	14.04%	6.01%	12.89%
52	6.01%	13.81%	6.01%	14.04%	6.01%	12.89%
53	6.01%	13.81%	6.01%	14.04%	6.01%	12.89%
54	6.01%	13.81%	6.01%	14.04%	6.01%	12.89%
55	6.01%	13.81%	6.01%	14.04%	6.01%	12.89%
56	6.01%	13.81%	6.01%	14.04%	6.01%	12.89%
57	6.01%	13.81%	6.01%	14.04%	6.01%	12.89%
58	6.01%	13.81%	6.01%	14.04%	6.01%	12.89%
59	6.01%	13.81%	6.01%	14.04%	6.01%	12.89%
60	6.01%	13.81%	6.01%	14.04%	6.01%	12.89%
<i>COLA Loading:</i>		<i>129.82%</i>		<i>133.54%</i>		<i>114.52%</i>
<i>Interest:</i>	<i>7.25%</i>					
<i>Salary Increases:</i>	<i>See Exhibit V, page 78</i>					
<i>Mortality:</i>	<i>See Exhibit V, page 71</i>					

SECTION 4: Reporting Information for the Orange County Employees Retirement System

**Safety Tier 2 Members' Contribution Rates from the December 31, 2012 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)
Calculated Under Recommended Assumptions**

<u>Entry Age</u>	<u>Plan F (Fire Authority)</u>		<u>Plan F (Law Enforcement)</u>		<u>Plan F (Probation)</u>		<u>Plan R (Fire Authority)</u>		<u>Plan R (Law Enforcement)</u>	
	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>
15	8.11%	13.37%	8.11%	13.52%	8.11%	12.75%	8.11%	12.62%	8.11%	12.82%
16	8.11%	13.37%	8.11%	13.52%	8.11%	12.75%	8.11%	12.62%	8.11%	12.82%
17	8.23%	13.57%	8.23%	13.72%	8.23%	12.94%	8.23%	12.81%	8.23%	13.01%
18	8.35%	13.77%	8.35%	13.93%	8.35%	13.13%	8.35%	13.00%	8.35%	13.20%
19	8.47%	13.98%	8.47%	14.13%	8.47%	13.33%	8.47%	13.20%	8.47%	13.40%
20	8.60%	14.19%	8.60%	14.35%	8.60%	13.53%	8.60%	13.39%	8.60%	13.60%
21	8.73%	14.40%	8.73%	14.56%	8.73%	13.73%	8.73%	13.60%	8.73%	13.80%
22	8.86%	14.62%	8.86%	14.78%	8.86%	13.94%	8.86%	13.80%	8.86%	14.01%
23	9.00%	14.84%	9.00%	15.01%	9.00%	14.15%	9.00%	14.01%	9.00%	14.23%
24	9.14%	15.07%	9.14%	15.24%	9.14%	14.37%	9.14%	14.23%	9.14%	14.45%
25	9.28%	15.30%	9.28%	15.48%	9.28%	14.59%	9.28%	14.45%	9.28%	14.67%
26	9.43%	15.55%	9.43%	15.72%	9.43%	14.82%	9.43%	14.68%	9.43%	14.90%
27	9.58%	15.79%	9.58%	15.97%	9.58%	15.06%	9.58%	14.91%	9.58%	15.14%
28	9.73%	16.05%	9.73%	16.23%	9.73%	15.31%	9.73%	15.15%	9.73%	15.39%
29	9.89%	16.31%	9.89%	16.50%	9.89%	15.56%	9.89%	15.40%	9.89%	15.64%
30	10.06%	16.59%	10.06%	16.78%	10.06%	15.82%	10.06%	15.66%	10.06%	15.90%
31	10.23%	16.87%	10.23%	17.06%	10.23%	16.09%	10.23%	15.93%	10.23%	16.18%
32	10.40%	17.15%	10.40%	17.34%	10.40%	16.35%	10.40%	16.19%	10.40%	16.44%
33	10.56%	17.41%	10.56%	17.60%	10.56%	16.60%	10.56%	16.43%	10.56%	16.69%
34	10.70%	17.65%	10.70%	17.85%	10.70%	16.83%	10.70%	16.67%	10.70%	16.92%
35	10.86%	17.91%	10.86%	18.12%	10.86%	17.08%	10.86%	16.91%	10.86%	17.17%
36	11.03%	18.19%	11.03%	18.39%	11.03%	17.35%	11.03%	17.17%	11.03%	17.44%
37	11.21%	18.48%	11.21%	18.69%	11.21%	17.63%	11.21%	17.45%	11.21%	17.72%
38	11.39%	18.78%	11.39%	18.99%	11.39%	17.91%	11.39%	17.73%	11.39%	18.00%
39	11.56%	19.07%	11.56%	19.29%	11.56%	18.19%	11.56%	18.01%	11.56%	18.28%
40	11.71%	19.32%	11.71%	19.53%	11.71%	18.42%	11.71%	18.24%	11.71%	18.52%
41	11.85%	19.54%	11.85%	19.76%	11.85%	18.64%	11.85%	18.45%	11.85%	18.73%
42	11.95%	19.70%	11.95%	19.92%	11.95%	18.79%	11.95%	18.60%	11.95%	18.89%
43	12.01%	19.80%	12.01%	20.02%	12.01%	18.88%	12.01%	18.69%	12.01%	18.98%
44	11.97%	19.74%	11.97%	19.96%	11.97%	18.82%	11.97%	18.63%	11.97%	18.92%

SECTION 4: Reporting Information for the Orange County Employees Retirement System

**Safety Tier 2 Members' Contribution Rates from the December 31, 2012 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)
Calculated Under Recommended Assumptions**

<u>Entry Age</u>	<u>Plan F (Fire Authority)</u>		<u>Plan F (Law Enforcement)</u>		<u>Plan F (Probation)</u>		<u>Plan R (Fire Authority)</u>		<u>Plan R (Law Enforcement)</u>	
	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>
45	11.84%	19.52%	11.84%	19.74%	11.84%	18.62%	11.84%	18.43%	11.84%	18.72%
46	11.63%	19.18%	11.63%	19.40%	11.63%	18.29%	11.63%	18.11%	11.63%	18.39%
47	11.26%	18.57%	11.26%	18.78%	11.26%	17.71%	11.26%	17.54%	11.26%	17.80%
48	11.63%	19.18%	11.63%	19.40%	11.63%	18.29%	11.63%	18.11%	11.63%	18.39%
49	12.02%	19.82%	12.02%	20.05%	12.02%	18.90%	12.02%	18.72%	12.02%	19.00%
50	12.02%	19.82%	12.02%	20.05%	12.02%	18.90%	12.02%	18.72%	12.02%	19.00%
51	12.02%	19.82%	12.02%	20.05%	12.02%	18.90%	12.02%	18.72%	12.02%	19.00%
52	12.02%	19.82%	12.02%	20.05%	12.02%	18.90%	12.02%	18.72%	12.02%	19.00%
53	12.02%	19.82%	12.02%	20.05%	12.02%	18.90%	12.02%	18.72%	12.02%	19.00%
54	12.02%	19.82%	12.02%	20.05%	12.02%	18.90%	12.02%	18.72%	12.02%	19.00%
55	12.02%	19.82%	12.02%	20.05%	12.02%	18.90%	12.02%	18.72%	12.02%	19.00%
56	12.02%	19.82%	12.02%	20.05%	12.02%	18.90%	12.02%	18.72%	12.02%	19.00%
57	12.02%	19.82%	12.02%	20.05%	12.02%	18.90%	12.02%	18.72%	12.02%	19.00%
58	12.02%	19.82%	12.02%	20.05%	12.02%	18.90%	12.02%	18.72%	12.02%	19.00%
59	12.02%	19.82%	12.02%	20.05%	12.02%	18.90%	12.02%	18.72%	12.02%	19.00%
60	12.02%	19.82%	12.02%	20.05%	12.02%	18.90%	12.02%	18.72%	12.02%	19.00%
<i>COLA Loading:</i>		<i>64.91%</i>		<i>66.77%</i>		<i>57.26%</i>		<i>55.70%</i>		<i>58.08%</i>
<i>Interest:</i>	<i>7.25%</i>									
<i>Salary Increases:</i>	<i>See Exhibit V, page 78</i>									
<i>Mortality:</i>	<i>See Exhibit V, page 71</i>									

SECTION 4: Reporting Information for the Orange County Employees Retirement System



Safety CalPEPRA Tiers (Expressed as a Percentage of Monthly Payroll)

Calculated Under Recommended Assumptions

<u>Entry Age</u>	<u>Rate Group 6 – Plan V</u>		<u>Rate Group 7 – Plan V</u>		<u>Rate Group 8 – Plan V</u>	
	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>
15	8.12%	11.50%	9.63%	13.75%	9.05%	13.00%
16	8.12%	11.50%	9.63%	13.75%	9.05%	13.00%
17	8.30%	11.75%	9.81%	14.00%	9.22%	13.25%
18	8.48%	12.00%	9.99%	14.25%	9.41%	13.50%
19	8.48%	12.00%	10.16%	14.50%	9.41%	13.50%
20	8.65%	12.25%	10.33%	14.75%	9.57%	13.75%
21	8.83%	12.50%	10.33%	14.75%	9.75%	14.00%
22	8.83%	12.50%	10.52%	15.00%	9.92%	14.25%
23	9.01%	12.75%	10.69%	15.25%	10.09%	14.50%
24	9.19%	13.00%	10.86%	15.50%	10.09%	14.50%
25	9.36%	13.25%	11.04%	15.75%	10.27%	14.75%
26	9.54%	13.50%	11.21%	16.00%	10.45%	15.00%
27	9.54%	13.50%	11.39%	16.25%	10.62%	15.25%
28	9.71%	13.75%	11.57%	16.50%	10.80%	15.50%
29	9.89%	14.00%	11.74%	16.75%	10.97%	15.75%
30	10.07%	14.25%	11.91%	17.00%	11.14%	16.00%
31	10.25%	14.50%	12.09%	17.25%	11.32%	16.25%
32	10.42%	14.75%	12.26%	17.50%	11.50%	16.50%
33	10.60%	15.00%	12.45%	17.75%	11.67%	16.75%
34	10.78%	15.25%	12.62%	18.00%	11.84%	17.00%
35	10.95%	15.50%	12.79%	18.25%	12.02%	17.25%
36	11.13%	15.75%	13.14%	18.75%	12.18%	17.50%
37	11.30%	16.00%	13.32%	19.00%	12.53%	18.00%
38	11.49%	16.25%	13.49%	19.25%	12.70%	18.25%
39	11.66%	16.50%	13.67%	19.50%	12.88%	18.50%
40	11.84%	16.75%	14.02%	20.00%	13.05%	18.75%
41	12.01%	17.00%	14.20%	20.25%	13.23%	19.00%
42	12.19%	17.25%	14.36%	20.50%	13.40%	19.25%
43	12.37%	17.50%	14.54%	20.75%	13.58%	19.50%
44	12.55%	17.75%	14.89%	21.25%	13.93%	20.00%

SECTION 4: Reporting Information for the Orange County Employees Retirement System



**Safety CalPEPRA Tiers (Expressed as a Percentage of Monthly Payroll)
Calculated Under Recommended Assumptions**

<u>Entry Age</u>	<u>Rate Group 6</u>		<u>Rate Group 7</u>		<u>Rate Group 8</u>	
	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<u>Total</u>
45	12.73%	18.00%	15.08%	21.50%	14.10%	20.25%
46	12.90%	18.25%	15.24%	21.75%	14.28%	20.50%
47	13.07%	18.50%	15.42%	22.00%	14.45%	20.75%
48	13.24%	18.75%	15.60%	22.25%	14.63%	21.00%
49	13.42%	19.00%	15.78%	22.50%	14.80%	21.25%
50	13.42%	19.00%	15.94%	22.75%	14.80%	21.25%
51	13.42%	19.00%	15.78%	22.50%	14.80%	21.25%
52	13.24%	18.75%	15.60%	22.25%	14.63%	21.00%
53	13.07%	18.50%	15.42%	22.00%	14.45%	20.75%
54	12.55%	17.75%	14.89%	21.25%	13.93%	20.00%
55	13.07%	18.50%	15.42%	22.00%	14.45%	20.75%
56 and thereafter	13.42%	19.00%	15.94%	22.75%	14.80%	21.25%
<i>COLA Loading:</i>		<i>41.51%</i>		<i>42.56%</i>		<i>43.57%</i>
<i>Interest:</i>	<i>7.25%</i>					
<i>Salary Increases:</i>	<i>See Exhibit V, page 78</i>					
<i>Mortality:</i>	<i>See Exhibit V, page 71</i>					

It is our understanding that in the determination of pension benefits under the 2.7% at 57 CalPEPRA formula, the compensation that can be taken into account for 2013 is equal to \$136,440 or 120% of the Social Security Taxable Wage Base (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2013 (reference: Section 7522.10(d)).

SECTION 4: Reporting Information for the Orange County Employees Retirement System

**Appendix C
Funded Percentages**

The funded percentages on a valuation value of assets basis by rate group provided for informational purposes only are as follows:

	Funded Percentage	
	December 31, 2012 Valuation	December 31, 2011 Valuation
<i>General Members</i>		
Rate Group #1 – Plans A and B (non-OCTA, non-OCSD – 2.0% @ 57 and 1.6667% @ 57.5)	71.52%	76.89%
Rate Group #2 – Plans I, J, O, P and S (2.7% @ 55, 1.62% @ 65 and 2.0% @ 57 combined)	60.60%	65.02%
Rate Group #3 – Plans B, G and H (2.5% @ 55 and 1.64% @ 57 combined)	58.96%	63.22%
Rate Group #5 – Plans A and B (OCTA – 2.0% @ 57 and 1.6667% @ 57.5)	67.97%	72.20%
Rate Group #9 – Plans M and N (TCA – 2.0% @ 55)	61.90%	65.55%
Rate Group #10 – Plans I, J, M and N (OCFA – 2.7% @ 55 and 2.0% @ 55 combined)	56.00%	59.65%
Rate Group #11 – Plans M and N, future service (Cemetery – 2.0% @ 55)	71.78%	77.96%
<i>Safety Members</i>		
Rate Group #6 – Plans E and F (Probation – 3.0% @ 50)	64.99%	69.34%
Rate Group #7 – Plans E, F, Q and R (Law Enforcement – 3.0% @ 50 and 3.0% @ 55 combined)	64.77%	69.69%
Rate Group #8 – Plans E, F, Q and R (Fire Authority – 3.0% @ 50 and 3.0% @ 55 combined)	66.24%	70.46%

SECTION 4: Reporting Information for the Orange County Employees Retirement System

**Appendix D
Reconciliation of Employer Contribution Rates (by Rate Group)**

The reconciliation of the employer contribution rates for the General rate groups are as follows:

	Rate Group						
	#1	#2	#3	#5	#9	#10	#11
Recommended Contribution Rate as of December 31, 2011	18.94%	32.91%	31.86%	23.65%	22.22%	32.76%	19.03%
Effect of investment loss	1.69%	1.97%	1.74%	1.79%	1.16%	1.55%	1.49%
Effect of actual individual salary increases more/(less) than expected	-1.02%	-1.31%	-1.24%	-1.58%	-0.73%	-1.31%	-0.69%
Effect of growth in total payroll (more)/less than expected	0.03%	0.93%	0.90%	0.87%	1.47%	0.92%	0.41%
Effect of changes in economic assumptions	3.11%	4.17%	3.81%	3.38%	2.93%	3.94%	3.26%
Effect of other experience (gain)/loss ⁽¹⁾	<u>-0.16%</u>	<u>0.75%</u>	<u>1.27%</u> ⁽²⁾	<u>0.20%</u>	<u>0.12%</u>	<u>0.83%</u>	<u>1.12%</u> ⁽²⁾
Subtotal	3.65%	6.51%	6.48%	4.66%	4.95%	5.93%	5.59%
Recommended Contribution Rate as of December 31, 2012 ⁽³⁾	22.59%	39.42%	38.34%	28.31%	27.17%	38.69%	24.62%
Recommended Contribution Rate as of December 31, 2012 with 2-year Phase-in	21.04%	37.34%	36.44%	26.62%	25.71%	36.72%	22.99%

⁽¹⁾ Includes an adjustment to reflect 18-month delay between date of valuation and date of rate implementation for the rate impact of all actuarial experience (excluding the change in economic assumptions).

⁽²⁾ Effect of other experience (gain)/loss includes:

Rate Group #3	Retirement Loss	1.66%
	Turnover Gain	-0.61%
Rate Group #11	Mortality Loss	0.85%

⁽³⁾ Before reflecting two-year phase-in of the effect of the changes in economic actuarial assumptions.

SECTION 4: Reporting Information for the Orange County Employees Retirement System

Appendix D (Continued)

Reconciliation of Employer Contribution Rates (by Rate Group)

The reconciliation of the employer contribution rates for the Safety rate groups are as follows:

	Rate Group		
	#6	#7	#8
Recommended Contribution Rate as of December 31, 2011	36.57%	50.86%	43.15%
Effect of investment loss	2.01%	3.43%	2.57%
Effect of actual individual salary increases more/(less) than expected	-1.59%	-1.81%	-1.00%
Effect of growth in total payroll (more)/less than expected	0.63%	0.45%	1.48%
Effect of changes in economic assumptions	5.31%	7.36%	6.35%
Effect of other experience (gain)/loss ⁽¹⁾	<u>0.24%</u>	<u>0.66%</u>	<u>0.45%</u>
Subtotal	6.60%	10.09%	9.85%
Recommended Contribution Rate as of December 31, 2012 ⁽²⁾	43.17%	60.95%	53.00%
Recommended Contribution Rate as of December 31, 2012 with 2-year Phase-in	40.52%	57.28%	49.83%

⁽¹⁾ Includes an adjustment to reflect 18-month delay between date of valuation and date of rate implementation for the rate impact of all actuarial experience (excluding the change in economic assumptions).

⁽²⁾ Before reflecting two-year phase-in of the effect of the changes in economic actuarial assumptions.