# **Orange County Employees Retirement System**

Actuarial Valuation and Review as of December 31, 2009

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100 Montgomery Street, Suite 500 San Francisco, CA 94104 T 415.263.8200 F 415.263.8290 www.segalco.com

July 8, 2010

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, 2009. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2011-2012 and analyzes the preceding year's experience.

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

This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices, including Actuarial Standards of Practice (ASOPs) Nos. 4, 27, 35, 44 and all other relevant ASOPs. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the recommended assumptions are reasonably related to the experience of and the expectations for the Plan. The undersigned are members of the American Academy of Actuaries and meet the qualification requirements to render the actuarial opinion contained herein.

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

Sincerely

THE SEGAL COMPANY

Bv:

Paul Angelo, FSA, EA, MAAA Senior Vice President and Actuary Andy Yeung, ASA, EA, MAAA

Vice President and Associate Actuary

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## **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, 2009. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- > The benefit provisions of the Retirement 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, 2009, provided by the Retirement System;
- > The assets of the Plan as of December 31, 2009, 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 from the December 31, 2004 valuation over a declining period, currently 25 years. The UAAL established as a result of including additional premium pay items as pensionable salary is amortized over a 25-year period, beginning December 31, 2009. 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, 2011 through June 30, 2012.

#### **Significant Issues in Valuation Year**

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

- Ref: Pgs. 45 and 84 Ref: Pg. 40
- Ref: Pg. 20
- Ref: Pg. 21
- Ref: Pgs. 20 and 21

- > The ratio of the valuation value of assets to actuarial accrued liabilities has decreased from 71.34% to 68.77%. For informational purposes only, we have also prepared in Appendix C the funded ratio for each rate group. The System's unfunded actuarial accrued liability has increased from \$3,112 million as of December 31, 2008 to \$3,704 million as of December 31, 2009. The increase in unfunded actuarial accrued liability is mainly due to lower than expected investment return, the inclusion of additional premium pay items as pensionable salary and other experience losses. A reconciliation of the System's unfunded actuarial accrued liability is provided in Section 3, Exhibit H.
- > The aggregate employer rate calculated in this valuation has increased from 27.53% of payroll to 30.13% of payroll. The reasons for the changes are: (i) unfavorable investment return, (ii) inclusion of additional premium pay items as pensionable salary, (iii) lower than expected individual salary increases, and (iv) other experience losses. A reconciliation of the System's aggregate employer rate is provided in Section 2, Subsection D (see Chart 15).
- > The aggregate member rate calculated in this valuation has decreased from 10.85% of payroll to 10.84% of payroll. The change in member rate is due to the changes in membership demographics. A reconciliation of the System's aggregate member rate is provided in Section 2, Subsection D (see Chart 16).
- > The results of this valuation were prepared using the same actuarial assumptions and methods as in our December 31, 2008 actuarial valuation report dated June 12, 2009. The impact of actuarial experience during the 2009 calendar year is provided in Section 2, Subsection D (see Charts 15 and 16).
- > Effective May 7, 2010, the County and the Court have implemented new General Plan O/P (1.62% @ 65 under Section 31676.01). All new General employees eligible for Plan I/J (2.7% @ 55 under Section 31676.19) and hired on or after May 7, 2010, are required to elect their retirement benefit formula within 45 days of their hire date and may elect either Plan O/P or Plan I/J. The costs associated with the new plan have not been used in the determination of the aggregate rate of 30.13% for the employer and 10.84% for the member determined in this valuation. This is because as of December 31, 2009, there are no members covered under the new plan.

The normal costs for this new plan provided in this report are the same as those calculated in our 1.62% @ 65 Cost Study report dated December 1, 2009. It should be pointed out that in that report, we had assumed that all future members would enter Plan P (with final three-year average salary) and no members would enter Plan O (with final one-year average salary).

> Effective April 8, 2010, the County has implemented new Plan Q/R (3.00% @ 55 under Section 31664.2). All new employees hired on or after April 8, 2010 are members of Plan Q/R. Again, the costs associated with the new plan have not been used in the determination of the aggregate rate of 30.13% for the employer and 10.84% for the member determined in this valuation. This is because as of December 31, 2009, there are no members covered under the new plan.

The normal costs for this new plan provided in this report are the same as those calculated in our 3% @ 55 Cost Study report dated January 15, 2010. It should be pointed out that in that report, we had assumed that all future members would enter Plan R (with final three-year average salary) and no members would enter Plan Q (with final one-year average salary).

As indicated in Section 2, Subsection B (see Chart 7) of this report, the total unrecognized investment loss as of December 31, 2009 is \$690,893,000 (as compared to \$1,502,193,000 as of December 31, 2008). This investment loss will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, and will serve to offset any investment gains that may occur after December 31, 2009. This implies that if the System earns the assumed rate of investment return of 7.75% per year (net of expenses) on a market value basis, this will result in investment losses on the actuarial value of assets for the next few years.

The deferred losses of \$691 million represent about 9% of the market value of assets. Unless offset by future investment gains or other favorable experience, the recognition of the \$691 million market losses is expected to have a significant impact on the System's future funded percentage and contribution rate requirements. This potential impact may be illustrated as follows:

- If the deferred losses were recognized immediately in the valuation value of assets, the funded percentage would decrease from 68.8% to 62.9%.
- If the deferred losses were recognized immediately in the valuation value of assets, the aggregate employer rate would increase from 30.1% to about 34.5% of payroll.

A more detailed analysis of the employer contribution rates under different future market return scenarios can be found in our report letter dated July 8, 2010.

> The actuarial valuation report as of December 31, 2009 is based on financial information as of that date. Changes in the value of assets subsequent to that date, to the extent that they exist, are not reflected. Declines in asset values will increase the actuarial cost of the plan, while increases will decrease the actuarial cost of the plan.

Ref: Pg. 5

# 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

	<b>December 31, 2009</b>		Decen	nber 31, 2008
Employer Contribution Rates:		Estimated		Estimated
<u>General</u>	Total Rate	Annual Amount <sup>(1)</sup>	Total Rate	Annual Amount <sup>(1)</sup>
Rate Group #1 – Plans A and B (non-OCTA)	19.12%	\$10,833	16.05%	\$9,094
Rate Group #2 – Plans I and J (2.7% @ 55 – non-OCFA)	27.11	269,764	24.79	246,679
Rate Group #3 – Plans G and H (2.5% @ 55)	25.68	15,776	24.20	14,866
Rate Group #5 – Plans A and B (OCTA)	20.39	23,084	17.26	19,540
Rate Group #9 – Plans M and N (2.0% @ 55 – TCA)	19.64	1,628	18.74	1,553
Rate Group #10 – Plans I and J (OCFA)	26.53	6,050	24.62	5,614
Rate Group #11 – Plans M and N, future service (2.0% @ 55 – Cemetery)	18.16	199	17.90	195
Safety				
Rate Group #6 – Plans E and F (Probation)	34.07%	\$23,604	32.18%	\$22,296
Rate Group #7 – Plans E and F (Law Enforcement)	46.39	92,196	43.34	86,135
Rate Group #8 – Plans E and F (Fire Authority)	48.53	44,602	43.10	39,612
All Groups Combined	30.13%	\$487,736	27.53%	\$445,584
Average Member Contribution Rates:		Estimated		Estimated
General	Total Rate	Annual Amount <sup>(1)</sup>	Total Rate <sup>(2)</sup>	Annual Amount <sup>(1)</sup>
Rate Group #1 – Plans A and B (non-OCTA)	7.37%	\$4,176	7.39%	\$4,187
Rate Group #2 – Plans I and J (2.7% @ 55 – non-OCFA)	10.73	106,771	10.75	106,970
Rate Group #3 – Plans G and H (2.5% @ 55)	10.85	6,665	10.87	6,678
Rate Group #5 – Plans A and B (OCTA)	8.34	9,442	8.37	9,476
Rate Group #9 – Plans M and N (2.0% @ 55 – TCA)	9.26	768	9.29	770
Rate Group #10 – Plans I and J (OCFA)	10.87	2,479	10.87	2,479
Rate Group #11 – Plans M and N, future service (2.0% @ 55 – Cemetery)	7.63	83	7.60	83
Safety				
Rate Group #6 – Plans E and F (Probation)	12.50%	\$8,660	12.49%	\$8,653
Rate Group #7 – Plans E and F (Law Enforcement)	12.92	25,678	12.92	25,678
Rate Group #8 – Plans E and F (Fire Authority)	11.65	10,707	11.65	10,707
All Groups Combined	10.84%	\$175,429	10.85%	\$175,681
Funded Status:				
Actuarial accrued liability	\$11,858,578		\$10,860,715	
Valuation value of assets	\$8,154,687		\$7,748,380	
Funded percentage	68.77%		71.34%	
Unfunded Actuarial Accrued Liability	\$3,703,891		\$3,112,335	
Key Assumptions:			, ,	
Interest rate	7.75%		7.75%	
Inflation rate	3.50%		3.50%	
Across-the-board real salary increase	0.00%		0.00%	

Based on December 31, 2009 projected annual compensation.
Rates have been recalculated by applying the individual entry age based member rates determined in the December 31, 2008 valuation to the System membership as of December 31, 2009.

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

	December 31, 2009	December 31, 2008	Percentage Change
Active Members:			
Number of members	22,633	23,720	-4.6%
Average age	44.6	43.8	N/A
Average service	11.9	11.0	N/A
Projected total compensation	\$1,618,492,858	\$1,569,764,568	3.1%
Average projected compensation	\$71,510	\$66,179	8.1%
Retired Member and Beneficiaries:			
Number of members:			
Service retired	9,322	8,925	4.4%
Disability retired	1,274	1,266	0.6%
Beneficiaries	<u>1,647</u>	<u>1,587</u>	3.8%
Total	12,243	11,778	3.9%
Average age	68.7	68.4	N/A
Average monthly benefit (1)	\$2,854	\$2,785	2.5%
Vested Terminated Members:			
Number of vested terminated members (2)	4,094	3,881	5.5%
Average age	42.9	42.6	N/A
Summary of Financial Data (dollar amounts in thousands):			
Market value of assets (3)	\$7,464,761	\$6,248,558	19.5%
Return on market value of assets	17.32%	-20.76%	N/A
Actuarial value of assets	\$8,155,654	\$7,750,751	5.2%
Return on actuarial value of assets	3.60%	4.23%	N/A
Valuation value of assets	\$8,154,687	\$7,748,380	5.2%
Return on valuation value of assets	3.62%	4.25%	N/A

<sup>(1)</sup> Excludes monthly benefits payable from the RMBR and STAR COLA.

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

The December 31, 2009 market value excludes \$108,324,000 in the County Investment Account and \$20,027,000 in the prepaid employer contributions account. The December 31, 2008 market value excludes \$126,683,000 in the County Investment Account and \$24,345,000 in the prepaid employer contributions account.

#### A. MEMBER DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, vested terminated members, retired members and beneficiaries. This section presents a summary of significant statistical data on these member groups.

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

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

CHART 1 Member Population: 2002 – 2009

Year Ended December 31	Active Members	Vested Terminated Members*	Retired Members and Beneficiaries	Ratio of Non-Actives to Actives
2002	22,723	2,177	8,688	0.48
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

<sup>\*</sup>Includes terminated members due a refund of member contributions.

#### **Active Members**

Plan costs are affected by the age, years of service and compensation of active members. In this year's valuation, there were 22,633 active members with an average age of 44.6, average years of service of 11.9 years, and average compensation of \$71,510. The 23,720 active members in the prior valuation had an average age of 43.8, average service of 11.0 years, and average compensation of \$66,179.

#### **Inactive Members**

In this year's valuation, there were 4,094 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their member contributions versus 3,881 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, 2009

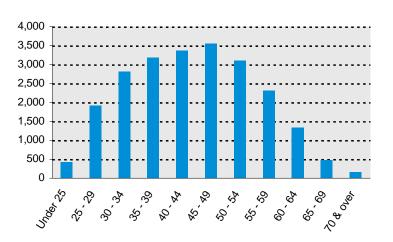
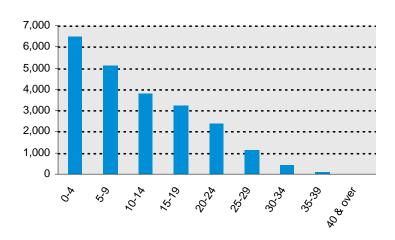


CHART 3
Distribution of Active Members by Years of Service as of December 31, 2009

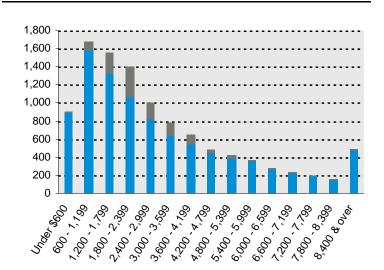


#### **Retired Members and Beneficiaries**

As of December 31, 2009, 10,596 retired members and 1,647 beneficiaries were receiving total monthly benefits of \$34,937,753. For comparison, in the previous valuation, there were 10,191 retired members and 1,587 beneficiaries receiving total monthly benefits of \$32,804,000. 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).

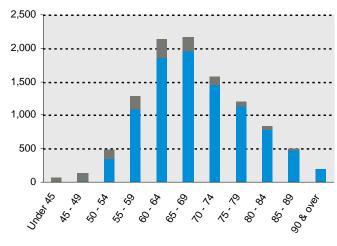
These graphs show a distribution of the current retired members based on their monthly amount and age, by type of pension.

CHART 4
Distribution of Retired Members (Excl. Beneficiaries) by Type and by Monthly Amount as of December 31, 2009



# CHART 5

Distribution of Retired Members (Excl. Beneficiaries) by Type and by Age as of December 31, 2009



■ Disability■ Regular



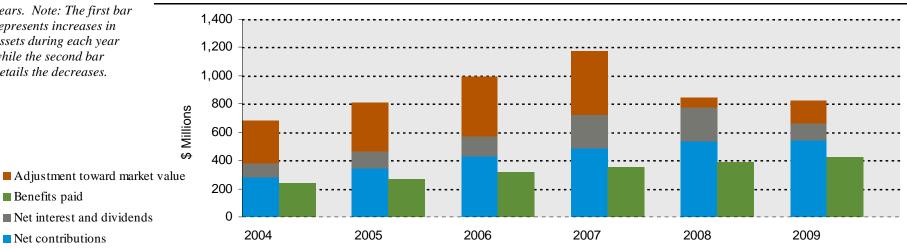
#### **B. FINANCIAL INFORMATION**

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 last six years. Note: The first bar represents increases in assets during each year while the second bar details the decreases.

**CHART 6** Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended December 31, 2004 - 2009



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, 2009

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

\*SEGAL

]	Plan Year Ending	Total Actual Market Return (net)	Expected Market Return (net)	Investment Gain / (Loss)	Deferred Factor	Deferred Return
	2005	\$441,178,000	\$421,743,000	\$19,435,000	0.0	\$0
	2006	787,330,000	463,198,000	324,132,000	0.2	64,826,000
	2007	769,613,000	533,502,000	236,111,000	0.4	94,444,000
	2008	(1,617,791,000)	603,959,000	(2,221,750,000)	0.6	(1,333,050,000)
	2009	1,092,660,000	489,051,000	603,609,000	0.8	482,887,000
1.	Total Def	erred Return				\$(690,893,000)
2.		et Value of Assets (Excludes \$ 27,000 in Prepaid Employer C	•	vestment Account		\$7,464,761,000
3.	Actuarial	Value of Assets $(2) - (1)$				\$8,155,654,000
4.	Ratio of A	Actuarial Value to Market Valu	ue (3) / (2)			109%
5.	(a) I (b) I (c) I	ation Reserves Unclaimed member deposit Medicare medical insurance re Retired member benefit reserve Subtotal				\$849,000 100,000 <u>18,000</u> \$967,000
6. 7.	Deferred (a) 4 (b) 4 (c) 4 (d) 4	Value of Assets (3) – (5)(d) Return Recognized in Each of Amount recognized on 12/31/2 Amount recognized on 12/31/2 Amount recognized on 12/31/2	2010 2011 2012 2013			\$8,154,687,000 \$(211,580,167) (276,406,167) (323,628,666) 120,722,000
	(e) S	Subtotal (may not total exactly	aue to rounding)			\$(690,893,000)

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.

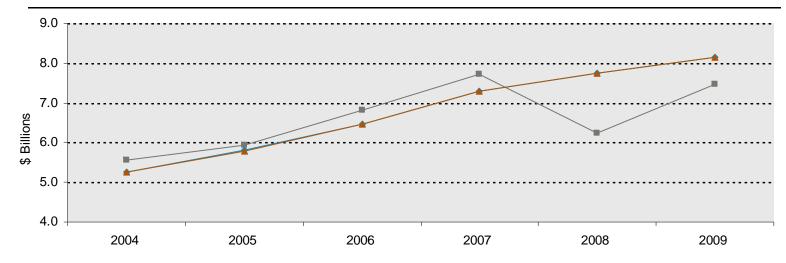
This chart shows the change in market value, actuarial value and valuation value over the past six years.

Notes: Market Value of Assets excludes the County Investment Account and Prepaid Employer Contributions.

—— Market Value

CHART 8

Market Value, Actuarial Value and Valuation Value of Assets as of December 31, 2004 – 2009



#### 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 \$259.6 million, a loss of \$322.5 million from investments and a gain of \$62.9 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, 2009 (Dollar Amounts in Thousands)

1.	Net loss from investments <sup>(1)</sup>	\$(322,523)
2.	Net gain from other experience <sup>(2)</sup>	<u>62,927</u>
3.	Net experience gain/(loss): $(1) + (2)$	\$(259,596)

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

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

#### **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%. The actual rate of return on a valuation basis for the 2009 plan year was 3.62%.

Since the actual return for the year was less than the assumed return, OCERS experienced an actuarial loss during the year ended December 31, 2009 with regard to its investments.

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

# CHART 10 Investment Experience for Year Ended December 31, 2009 – Valuation Value and Actuarial Value of Assets

	Valuation Value	<b>Actuarial Value</b>
1. Actual return	\$282,764,000	\$281,360,000
2. Average value of assets	\$7,810,152,000	\$7,812,523,000
3. Actual rate of return: $(1) \div (2)$	3.62%	3.60%
4. Assumed rate of return	7.75%	7.75%
5. Expected return: (2) x (4)	\$605,287,000	\$605,470,000
6. Actuarial gain/(loss): (1) – (5)	<u>\$(322,523,000)</u>	<u>\$(324,110,000)</u>

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 six years. Based upon this experience, future expectations, and direction from the Board, we maintain the assumed rate of return of 7.75%.

CHART 11
Investment Return – Actuarial Value, Valuation Value and Market Value: (Dollar Amounts in Thousands)

	Valuatio Investmer		Actuarial Value Investment Return		Market \ Investment	
Year Ended December 31	Amount	Percent	Amount	Percent	Amount	Percent
2004	\$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%
-Year Average Return		7.48%		7.48%		5.86%

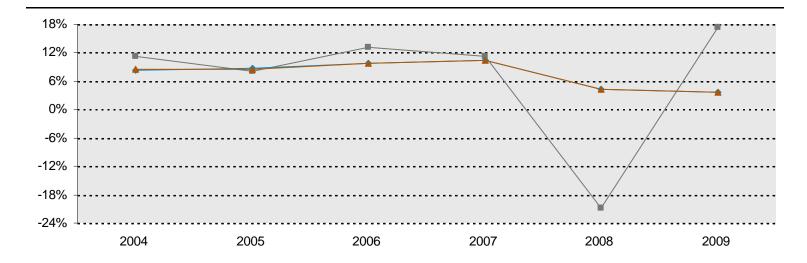
Note: The return on market value is net of the return on the County Investment Account and prepaid employer contributions account.

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 – 2009.

CHART 12

Market, Actuarial, and Valuation Value Rates of Return for Years Ended December 31, 2004 – 2009



Market ValueActuarial ValueValuation Value

#### **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, 2009 amounted to \$62.9 million which is 0.53% of the actuarial accrued liability. See Exhibit H in Section 3 for a detailed development of the Unfunded Actuarial Accrued Liability.

#### D. EMPLOYER AND MEMBER CONTRIBUTIONS

Employer contributions consist of two components:

Normal Cost

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

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 inflation rate of 3.50%. The outstanding balance of the December 31, 2004 UAAL is being amortized over a declining 25-year period. The UAAL established as a result of including additional premium pay items as pensionable salary is amortized over a 25-year period, beginning December 31, 2009. 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.

#### Member Contributions

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

- > 1/200 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, and J;
- > 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, and P, 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.

Member contribution rates are provided in Appendix A.

CHART 13
Recommended Employer Contribution Rates as of December 31, 2009 (Dollar Amounts in Thousands)

General Employers	December 31, 2009 Valuation		December 31, 2008 Valuation	
	Rate	Estimated Annual Amount (1)	Rate	Estimated Annual Amount (1)
Rate Group #1 - Plans A and B (non-OCTA)				
Normal Cost	8.69%	\$4,924	8.99%	\$5,094
$UAAL^{(2)}$	10.43%	5,909	7.06%	<u>4,000</u>
Total Contribution	19.12%	\$10,833	16.05%	\$9,094
Rate Group #2 - Plans I and J (2.7% @ 55 – non-OCFA) (3)				
Normal Cost	11.61%	\$115,528	11.79%	\$117,319
$UAAL^{(2)}$	15.50%	<u>154,236</u>	13.00%	129,360
Total Contribution	27.11%	\$269,764	24.79%	\$246,679
Rate Group #2 – Plans O and P (1.62% @ 65) (4)				
Normal Cost <sup>(5)</sup>	3.69%	N/A	3.69%	N/A
$UAAL^{(2)}$	15.50%	<u>N/A</u>	13.00%	<u>N/A</u>
Total Contribution	19.19%	N/A	16.69%	N/A
Rate Group #3 - Plans G and H (2.5% @ 55) (3)				
Normal Cost	10.93%	\$6,715	11.19%	\$6,874
$UAAL^{(2)}$	14.75%	9,061	13.01%	7,992
Total Contribution	25.68%	\$15,776	24.20%	\$14,866

<sup>(1)</sup> See page 15 for projected annual compensation.

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

<sup>(3)</sup> For employers with future service only benefit improvements, refer to the employer rate adjustment on page 17.

<sup>&</sup>lt;sup>(4)</sup> Effective for members hired on or after May 7, 2010.

<sup>(5)</sup> The normal cost rate has not been recalculated from our study dated December 1, 2009.

**CHART 13 (Continued)** 

Recommended Employer Contribution Rates as of December 31, 2009 (Dollar Amounts in Thousands)

<b>General Employers</b>			Docombor	31, 2009 Valuation	Docombor	31, 2008 Valuation
			December .	51, 2009 Valuation	December	31, 2006 Valuation
Data Carra 45 Diagram A and D	D (OCTA)		ъ.	Estimated	D -4-	Estimated
Rate Group #5 – Plans A and I	B (OCTA)		<u>Rate</u>	Annual <u>Amount<sup>(1)</sup></u>	<u>Rate</u>	Annual <u>Amount<sup>(1)</sup></u>
Normal Cost			11.11%	\$12,578	11.32%	\$12,815
UAAL <sup>(2)</sup>			9.28%	<u>10,506</u>	5.94%	<u>6,725</u>
Total Contribution			20.39%	\$23,084	17.26%	\$19,540
Rate Group #9 – Plans M and	N (2.0% @ 55 - TCA)					
Normal Cost			12.59%	\$1,044	13.02%	\$1,079
UAAL <sup>(2)</sup>			7.05%	<u>584</u>	5.72%	<u>474</u>
Total Contribution			19.64%	\$1,628	18.74%	\$1,553
Rate Group #10 – Plans I and	J (2.7% @ 55 - OCFA)					
Normal Cost			11.98%	\$2,732	12.03%	\$2,743
UAAL <sup>(2)</sup>			14.55%	3,318	12.59%	<u>2,871</u>
Total Contribution			26.53%	\$6,050	24.62%	\$5,614
Rate Group #11 – Plans M and	l N, future service (2.0% @	9 <b>55 - Cemetery</b> )				
Normal Cost			11.24%	\$123	10.85%	\$118
$UAAL^{(2)}$			6.92%	<u>76</u>	7.05%	<u>77</u>
Total Contribution			18.16%	\$199	17.90%	\$195
(1) Based on December 31, 2009 p	projected annual compensation	on (also in thousand	ds):			
Rate Group #1	\$56,658					
Rate Group #2	995,074					
Rate Group #3	61,433					
Rate Group #5	113,209					
Rate Group #9	8,289					
Rate Group #10	22,803					
Rate Group #11	1,092					
Total – General Members	\$1,258,558					

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

**CHART 13 (Continued)** 

# Recommended Employer Contribution Rates as of December 31, 2009 (Dollar Amounts in Thousands)

Safety Employers				
	December 3	31, 2009 Valuation	December 3	1, 2008 Valuation
		Estimated Annual		Estimated Annual
Rate Group #6 – Plans E and F (Probation)	<u>Rate</u>	Amount <sup>(1)</sup>	<u>Rate</u>	Amount <sup>(1)</sup>
Normal Cost	20.17%	\$13,974	20.15%	\$13,961
UAAL <sup>(2)</sup>	<u>13.90%</u>	9,630	<u>12.03%</u>	8,335
Total Contribution	34.07%	\$23,604	32.18%	\$22,296
Rate Group #7 – Plans E and F (3% @ 50 - Law Enforcement	nt)			
Normal Cost	21.13%	\$41,994	21.39%	\$42,511
UAAL <sup>(2)</sup>	<u>25.26%</u>	<u>50,202</u>	<u>21.95%</u>	43,624
Total Contribution	46.39%	\$92,196	43.34%	\$86,135
Rate Group #7 - Plans Q and R (3% @ 55 - Law Enforceme	ent) (3)			
Normal Cost <sup>(4)</sup>	20.38%	N/A	20.38%	N/A
UAAL <sup>(2)</sup>	<u>25.26%</u>	<u>N/A</u>	21.95%	<u>N/A</u>
Total Contribution	45.64%	N/A	42.33%	N/A
Rate Group #8 – Plans E and F (Fire Authority)				
Normal Cost	21.31%	\$19,585	21.16%	\$19,448
UAAL <sup>(2)</sup>	<u>27.22%</u>	<u>25,017</u>	21.94%	20,164
Total Contribution	48.53%	\$44,602	43.10%	\$39,612
General and Safety Employers Combined				
Rate Groups #1 – #11				
Total Contributions	30.13%	\$487,736	27.53%	\$445,584
(1) Based on December 31, 2009 projected annual compensation	(also in thousands):			
Rate Group #6 \$69,283				
Rate Group #7 198,743				
Rate Group #8 91,907	• •			
Total – Safety Members \$359,933				

<sup>&</sup>lt;sup>(2)</sup> UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.



<sup>(3)</sup> Effective for members hired on or after April 8, 2010.

<sup>&</sup>lt;sup>(4)</sup> The normal cost rate has not been recalculated from our study dated January 15, 2010.

#### **CHART 13 (Continued)**

Recommended Employer Contribution Rates as of December 31, 2009 (Dollar Amounts in Thousands)

# December 31, 2009 Rate Adjustment for General Employers with 2.7% @ 55 – Rate Group #2 Future Service Only Benefit Improvement (Plans I and J)

Reduction to Total Contribution

Estimated Annual Amount Amount

Amount

-1.84%

Estimated Annual Amount

-1.84%

-\$74

Retirement System\$1,987Local Agency Formation Commission468Children & Family Commission1,588Total\$4,043

# December 31, 2009 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, 2009 ValuationEstimated Annual Amount  $^{(2)}$ Reduction to Total Contribution-4.04%-\$50

<sup>(1)</sup> Based on December 31, 2009 projected annual compensation (also in thousands):

<sup>(2)</sup> Based on December 31, 2009 projected annual compensation (also in thousands): Law Library \$1,245

#### **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, 20 Pick-Up Pe		December 31, 20 Pick-Up Per	
General Members				
Rate Group #1 (non-OCTA)	Plan A: 100.00%	Plan B: 97.03%	Plan A: 100.00%	Plan B: 96.62%
Rate Group #2 (2.7% @ 55 – non-OCFA)	Plan I: 99.70%	Plan J: 97.32%	Plan I: 99.63%	Plan J: 96.98%
Rate Group #2 (1.62% @ 65)	Plan O: Not calculated	Plan P: 94.18%	Plan O: Not calculated	Plan P: 94.18%
Rate Group #3 (2.5% @ 55)	Plan G: 99.58%	Plan H: 98.01%	Plan G: 99.45%	Plan H: 97.79%
Rate Group #5 (OCTA)	Plan A: 99.73%	Plan B: 97.57%	Plan A: 99.71%	Plan B: 97.14%
Rate Group #9 (2.0% @ 55 – TCA)	Plan M: 97.57%	Plan N: 97.57%	Plan M: 97.32%	Plan N: 97.32%
Rate Group #10 (2.7% @ 55 – OCFA)	Plan I: 100.00%	Plan J: 97.56%	Plan I: 100.00%	Plan J: 97.42%
Rate Group #11 (2.0% @ 55 – Cemetery)	Plan M: 97.60%	Plan N: 97.60%	Plan M: 96.84%	Plan N: 96.84%
Safety Members				
Rate Group #6 (Probation)	Plan E: 100.00%	Plan F: 96.57%	Plan E: 100.00%	Plan F: 95.94%
Rate Group #7 (3% @ 50 - Law Enforcement)	Plan E: 100.00%	Plan F: 99.72%	Plan E: 100.00%	Plan F: 99.68%
Rate Group #7 (3% @ 55 – Law Enforcement)	Plan Q: Not calculated	Plan R: 99.32%	Plan Q: Not calculated	Plan R: 99.32%
Rate Group #8 (Fire Authority)	Plan E: 100.00%	Plan F: 99.71%	Plan E: 100.00%	Plan F: 99.69%

# **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>	Average Entry Age
General		
Orange County	101	33
Cemetery District	102	32
Law Library	103	43
Retirement System	105	35
Fire Authority	106	33
Department of Education	108	28
Transportation Corridor Agency	109	40
City of San Juan Capistrano	110	34
Sanitation District	111	34
OCTA	112	37
U.C.I. (Bi-weekly)	113	22
U.C.I. (Monthly)	114	19
Children & Families Commission	118	31
Local Agency Formation Commission	119	31
Superior Court	121	33
IHSS Public Authority	122	44
Safety		
Probation	101	28
Law Enforcement	101	27
Fire Authority	106	27

The contribution rates as of December 31, 2009 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.

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, 2008 to December 31, 2009 (Dollar Amounts in Thousands)

	Contribution	Estimated
	Rate	Amount (1)
Aggregate Recommended Contribution Rate as of December 31, 2008	27.53%	\$445,584
Effect of inclusion of additional premium pay items as pensionable salary (determined using 25-year amortization with 2009 remeasurement and 18-month delay of premium pay item		
impact)	0.56%	\$9,064
Effect of investment loss	1.81%	29,228
Effect of difference in actual versus expected salary increases and growth in total payroll	-0.01%	-101
Effect of other experience (gain)/loss <sup>(2)</sup>	0.24%	<u>3,961</u>
Subtotal	2.60%	\$42,152
Aggregate Recommended Contribution Rate as of December 31, 2009	30.13%	\$487,736

 $<sup>^{(1)} \</sup>textit{Based on December 31, 2009 projected compensation of \$1,618,491,000}.$ 

<sup>(2)</sup> Includes adjustment to reflect 18-month delay between date of valuation and date of rate implementation.

The member contribution rates as of December 31, 2009 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, 2008 to December 31, 2009 (Dollar Amounts in Thousands)

	Contribution Rate	Estimated Amount <sup>(1)</sup>
Average Recommended Contribution Rate as of December 31, 2008 (2)	10.85%	\$175,681
Effect of change in demographics	-0.01%	-252
Average Recommended Contribution Rate as of December 31, 2009	10.84%	\$175,429

<sup>(1)</sup> Based on December 31, 2009 projected annual compensation of \$1,618,491,000.

<sup>&</sup>lt;sup>(2)</sup> Rates have been recalculated by applying the individual entry age based member rates determined in the December 31, 2008 valuation to the System membership as of December 31, 2009.

#### 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.

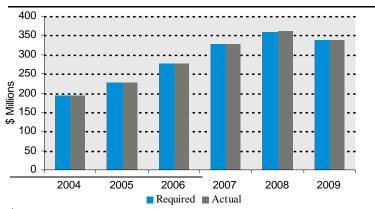
Critical information to the GASB is the historical comparison of the GASB required contributions to the actual contributions. This comparison demonstrates whether a plan is being funded on an actuarially sound basis and in accordance with GASB funding requirements. Chart 17 below presents a graphical 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 2009 funded ratio is 68.77%, compared to 71.34% in 2008.

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

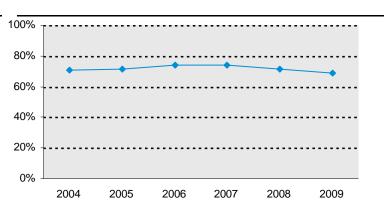
These graphs show key GASB information.

CHART 17
Required Versus Actual Contributions



<sup>\*</sup> Actual contributions excludes transfers from County Investment Account. See page 44.

CHART 18 Funded Ratio



**EXHIBIT A Table of Plan Coverage** 

# i. General (other than OCTA)

	Year Ended		
Category	2009	2008	Change From Prior Year
Active members in valuation			
Number	17,037	17,773	-4.1%
Average age	44.9	44.2	N/A
Average service	11.5	10.7	N/A
Projected total compensation	\$1,145,350,024	\$1,132,152,974	1.2%
Projected average compensation	\$67,227	\$63,701	5.5%
Account balances	\$1,137,721,536	\$1,009,872,345	12.7%
Total active vested members	12,040	12,050	-0.1%
Vested terminated members	·	,	
Number	3,249	3,138	3.5%
Average age	43.0	42.6	N/A
Retired members			
Number in pay status	7,621	7,309	4.3%
Average age	70.1	69.9	N/A
Average monthly benefit <sup>(1)</sup>	\$2,792	\$2,714(2)	2.9%
Disabled members			
Number in pay status	628	637	-1.4%
Average age	63.9	63.6	N/A
Average monthly benefit <sup>(1)</sup>	\$2,049	\$2,015 <sup>(2)</sup>	1.7%
Beneficiaries	. ,	. ,	
Number in pay status	1,362	1,332	2.3%
Average age	73.1	72.4	N/A
Average monthly benefit <sup>(1)</sup>	\$1,399	\$1,367 <sup>(2)</sup>	2.3%

<sup>(1)</sup> Excludes monthly benefits payable from the RMBR and STAR COLA.
(2) For purposes of this display, includes adjustment to reflect COLA that is paid for a partial year starting with the April 1 following the valuation date.

**EXHIBIT A Table of Plan Coverage** 

# ii. General OCTA

	Year Ended	Year Ended December 31		
Category	2009	2008	Change From Prior Year	
Active members in valuation				
Number	1,836	2,022	-9.2%	
Average age	48.1	47.0	N/A	
Average service	11.2	9.9	N/A	
Projected total compensation	\$113,209,332	\$105,925,203	6.9%	
Projected average compensation	\$61,661	\$52,386	17.7%	
Account balances	\$97,269,303	\$90,212,591	7.8%	
Total active vested members	1,391	1,353	2.8%	
Vested terminated members	,	,		
Number	458	421	8.8%	
Average age	47.2	46.4	N/A	
Retired members				
Number in pay status	517	491	5.3%	
Average age	67.5	67.1	N/A	
Average monthly benefit <sup>(1)</sup>	\$1,989	\$1,944 <sup>(2)</sup>	2.3%	
Disabled members		·		
Number in pay status	223	219	1.8%	
Average age	61.1	60.5	N/A	
Average monthly benefit <sup>(1)</sup>	\$2,008	\$2,011 <sup>(2)</sup>	-0.1%	
Beneficiaries	·			
Number in pay status	116	106	9.4%	
Average age	68.0	67.8	N/A	
Average monthly benefit <sup>(1)</sup>	\$1,109	\$1,055 <sup>(2)</sup>	5.1%	

<sup>(1)</sup> Excludes monthly benefits payable from the RMBR and STAR COLA.
(2) For purposes of this display, includes adjustment to reflect COLA that is paid for a partial year starting with the April 1 following the valuation date.

**EXHIBIT A Table of Plan Coverage** 

iii. Safety Law Enforcement

	Year Ended	Year Ended December 31		
Category	2009	2008	Change From Prior Year	
Active members in valuation				
Number	1,955	1,984	-1.5%	
Average age	41.5	41.1	N/A	
Average service	14.7	14.2	N/A	
Projected total compensation	\$198,743,123	\$183,564,617 <sup>(2)</sup>	8.3%	
Projected average compensation	\$101,659	\$92,522	9.9%	
Account balances	\$158,923,533	\$146,792,972	8.3%	
Total active vested members	1,603	1,614	-0.7%	
Vested terminated members				
Number	149	154	-3.2%	
Average age	40.7	40.2	N/A	
Retired members				
Number in pay status	799	762	4.9%	
Average age	63.7	63.6	N/A	
Average monthly benefit <sup>(1)</sup>	\$5,820	\$5,806 <sup>(3)</sup>	0.2%	
Disabled members				
Number in pay status	313	313	0.0%	
Average age	58.7	58.0	N/A	
Average monthly benefit <sup>(1)</sup>	\$3,718	\$3,692 <sup>(3)</sup>	0.7%	
Beneficiaries				
Number in pay status	142	125	13.6%	
Average age	68.9	69.9	N/A	
Average monthly benefit <sup>(1)</sup>	\$2,370	\$2,320 <sup>(3)</sup>	2.2%	

<sup>(1)</sup> Excludes monthly benefits payable from the RMBR and STAR COLA.
(2) Includes a 2% adjustment to the pay for 2008.
(3) For purposes of this display, includes adjustment to reflect COLA that is paid for a partial year starting with the April 1 following the valuation date.

EXHIBIT A

Table of Plan Coverage

iv. Safety Probation Officers

**Year Ended December 31 Change From** 2009 2008 **Prior Year** Category Active members in valuation Number 972 1,106 -12.1% Average age 39.3 37.5 N/A Average service 9.5 N/A 11.3 Projected total compensation \$72,494,625(2) \$69,283,653 -4.4% Projected average compensation \$71,279 \$65,547 8.7% Account balances \$69,801,177 \$61,279,746 13.9% Total active vested members 754 756 -0.3% Vested terminated members Number 220 43.8% 153 Average age 35.7 34.6 N/A **Retired members** Number in pay status 160 148 8.1% Average age 62.3 N/A 61.6 Average monthly benefit<sup>(1)</sup> \$4,923(3) \$4,869 -1.1% Disabled members Number in pay status 12 12 0.0% Average age 48.7 47.7 N/A Average monthly benefit<sup>(1)</sup> \$2,473<sup>(3)</sup> \$2,491 0.7% **Beneficiaries** Number in pay status 8 7 14.3% Average age 54.3 52.6 N/A Average monthly benefit (1) \$1.447<sup>(3)</sup> \$1.786 23.4%

<sup>(1)</sup> Excludes monthly benefits payable from the RMBR and STAR COLA.

<sup>(2)</sup> Includes a 1% adjustment to the pay for 2008.

<sup>(3)</sup> For purposes of this display, includes adjustment to reflect COLA that is paid for a partial year starting with the April 1 following the valuation date.

**EXHIBIT A Table of Plan Coverage** 

# v. Safety Fire Authority

	Year Ended	Year Ended December 31		
Category	2009	2008	Change From Prior Year	
Active members in valuation				
Number	833	835	-0.2%	
Average age	43.1	42.9	N/A	
Average service	16.4	16.2	N/A	
Projected total compensation	\$91,906,727	\$75,627,150 <sup>(2)</sup>	21.5%	
Projected average compensation	\$110,332	\$90,571	21.8%	
Account balances	\$73,133,893	\$68,355,918	7.0%	
Total active vested members	682	672	1.5%	
Vested terminated members				
Number	18	15	20.0%	
Average age	40.8	40.6	N/A	
Retired members				
Number in pay status	225	215	4.7%	
Average age	61.3	60.3	N/A	
Average monthly benefit <sup>(1)</sup>	\$5,975	\$5,808 <sup>(3)</sup>	2.9%	
Disabled members				
Number in pay status	98	85	15.3%	
Average age	60.3	59.8	N/A	
Average monthly benefit <sup>(1)</sup>	\$4,977	\$4,841 <sup>(3)</sup>	2.8%	
Beneficiaries	,			
Number in pay status	19	17	11.8%	
Average age	56.1	54.4	N/A	
Average monthly benefit <sup>(1)</sup>	\$3,143	\$3,390 <sup>(3)</sup>	-7.3%	

<sup>(1)</sup> Excludes monthly benefits payable from the RMBR and STAR COLA.
(2) Includes a 3% adjustment to the pay for 2008.
(3) For purposes of this display, includes adjustment to reflect COLA that is paid for a partial year starting with the April 1 following the valuation date.

**EXHIBIT A Table of Plan Coverage** 

VI.	Total

	Year Ended	_ Change From		
Category	2009	2008	Prior Year	
Active members in valuation				
Number	22,633	23,720	-4.6%	
Average age	44.6	43.8	N/A	
Average service	11.9	11.0	N/A	
Projected total compensation	\$1,618,492,858	\$1,569,764,568	3.1%	
Projected average compensation	\$71,510	\$66,179	8.1%	
Account balances	\$1,536,849,441	\$1,376,513,571	11.6%	
Total active vested members	16,470	16,445	0.2%	
Vested terminated members				
Number	4,094	3,881	5.5%	
Average age	42.9	42.6	N/A	
Retired members				
Number in pay status	9,322	8,925	4.4%	
Average age	69.0	68.8	N/A	
Average monthly benefit <sup>(1)</sup>	\$3,119	\$3,047 <sup>(2)</sup>	2.4%	
Disabled members				
Number in pay status	1,274	1,266	0.6%	
Average age	61.7	61.3	N/A	
Average monthly benefit <sup>(1)</sup>	\$2,681	\$2,623 <sup>(2)</sup>	2.2%	
Beneficiaries				
Number in pay status	1,647	1,587	3.8%	
Average age	72.1	71.6	N/A	
Average monthly benefit <sup>(1)</sup>	\$1,484	\$1,443 <sup>(2)</sup>	2.8%	

<sup>(1)</sup> Excludes monthly benefits payable from the RMBR and STAR COLA.
(2) For purposes of this display, includes adjustment to reflect COLA that is paid for a partial year starting with the April 1 following the valuation date.

EXHIBIT B
Members in Active Service and Projected Average Compensation as of December 31, 2009
By Age and Years of Service

## i. General (other than OCTA)

					Years o	of Service				
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	331	324	7							
	\$42,101	\$41,938	\$49,628							
25-29	1,475	1,227	241	7						
	52,299	52,226	52,735	\$50,228						
30-34	2,033	1,073	716	241	3					
	58,624	57,842	59,808	58,611	\$56,875					
35-39	2,342	772	774	574	213	9				
	65,742	61,718	67,705	68,623	64,821	\$80,042				
40-44	2,414	531	568	557	574	183	1			
	69,562	62,845	70,104	73,001	71,606	70,453	\$77,564			
45-49	2,558	485	443	469	532	457	160	12		
	72,343	68,171	68,989	72,660	72,952	79,177	71,244	\$79,820		
50-54	2,342	355	372	369	427	425	279	109	6	
	73,851	64,940	67,259	72,072	72,667	80,872	84,603	80,815	\$79,769	
55-59	1,851	214	328	325	324	328	185	115	32	
	74,470	65,900	68,892	72,904	74,205	79,532	82,563	85,674	68,610	
60-64	1,111	133	211	214	238	169	84	32	26	4
	71,640	66,897	67,645	70,986	72,499	74,069	74,891	92,048	77,564	\$51,356
65-69	422	45	83	81	98	76	27	8	2	2
	66,604	75,224	73,765	66,140	56,798	65,241	67,385	71,631	57,994	104,443
70 & over	158	15	19	21	43	35	13	10	2	
	61,030	50,380	51,330	64,363	65,425	67,833	52,617	61,219	38,280	
Total	17,037	5,174	3,762	2,858	2,452	1,682	749	286	68	6
	\$67,227	\$58,757	\$65,830	\$70,257	\$71,205	\$77,351	\$78,971	\$83,042	\$71,814	\$69,052

EXHIBIT B
Members in Active Service and Projected Average Compensation as of December 31, 2009
By Age and Years of Service

## ii. General OCTA

					Years o	f Service				
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	12	12								
	\$43,758	\$43,758								
25-29	81	64	17							
	50,524	48,610	\$57,732							
30-34	152	67	75	10						
	56,459	53,526	59,000	\$57,060						
35-39	170	63	71	28	8					
	56,212	52,735	57,110	60,684	\$59,984					
40-44	251	74	108	41	19	9				
	61,670	58,802	59,671	64,845	74,565	\$67,544				
45-49	323	65	132	47	39	34	6			
	64,441	63,342	59,795	62,392	77,525	70,923	\$72,817			
50-54	330	56	99	47	46	38	34	10		
	65,427	65,194	58,312	67,028	71,729	73,354	66,613	\$66,498		
55-59	294	37	80	35	36	37	31	34	4	
	61,714	55,567	59,799	57,000	62,016	70,797	61,118	64,380	\$93,340	
60-64	161	16	45	26	25	18	11	18	2	
	66,738	77,117	72,560	55,346	65,565	69,593	58,138	60,947	89,203	
65-69	53	4	17	14	7	4	3	3	1	
	60,323	44,782	56,397	58,028	58,249	71,406	89,430	65,633	88,293	
70 & over	9	1	3	1	2		2			
	53,718	43,342	52,893	49,254	54,504		61,591			
Total	1,836	459	647	249	182	140	87	65	7	
	\$61,661	\$57,029	\$59,874	\$61,473	\$69,275	\$71,175	\$64,683	\$63,813	\$91,437	

EXHIBIT B

Members in Active Service and Projected Average Compensation as of December 31, 2009

By Age and Years of Service

iii. Safety Law Enforcement

					Years of	Service				
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	49	48	1							
	\$72,680	\$72,526	\$80,047							
25-29	169	142	26	1						
	80,319	78,137	91,581	\$97,289						
30-34	251	103	88	60						
	89,608	81,249	93,936	97,610						
35-39	352	42	79	169	62					
	98,109	88,472	94,337	100,499	\$102,928					
40-44	413	26	44	105	168	69	1			
	104,389	96,599	103,332	99,911	105,035	\$113,292	\$100,767			
45-49	421	14	29	29	72	215	62			
	112,985	102,790	106,232	109,394	107,027	115,444	118,520			
50-54	191	16	6	16	28	57	57	11		
	112,062	123,448	116,075	105,671	107,240	105,901	117,164	\$120,362		
55-59	68	5	6	2	8	24	15	8		
	112,792	119,567	112,113	114,725	103,546	110,554	113,090	123,986		
60-64	40	3	8	2	7	11	5	4		
	117,613	178,747	110,513	106,062	124,178	117,266	109,689	91,110		
65-69	1					1				
	124,455					124,455				
70 & over										
Total	1,955	399	287	384	345	377	140	23		
	\$101,659	\$84,514	\$97,773	\$100,869	\$105,605	\$113,373	\$116,944	\$116,535		

EXHIBIT B
Members in Active Service and Projected Average Compensation as of December 31, 2009
By Age and Years of Service

## iv. Safety Probation Officers

					Years o	of Service				
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	11	10	1							
	\$50,714	\$50,387	\$53,991							
25-29	117	107	10							
	58,060	57,270	66,523							
30-34	242	65	142	34	1					
	67,645	58,242	69,885	\$75,866	\$81,339					
35-39	214	22	65	110	16	1				
	73,111	56,850	68,944	78,024	79,287	\$62,462				
40-44	164	11	34	54	54	11				
	73,066	59,087	66,339	72,541	78,294	84,752				
45-49	81	3	6	18	27	24	3			
	80,511	74,261	65,201	73,551	78,913	92,283	\$79,338			
50-54	80	4	6	11	16	20	17	6		
	79,394	60,004	56,230	67,183	79,594	83,959	88,818	\$95,415		
55-59	38	1	6	7	6	9	5	3	1	
	81,404	67,376	62,447	65,474	84,296	83,139	81,116	138,606	\$117,543	
60-64	24		2	1	2	8	6	3	2	
	78,668		62,020	65,583	88,248	75,006	85,046	78,883	87,472	
65-69	1					1				
	79,771					79,771				
70 & over										
Total	972	223	272	235	122	74	31	12	3	
	\$71,279	\$57,616	\$68,408	\$75,175	\$79,215	\$85,362	\$85,928	\$102,080	\$97,496	

EXHIBIT B
Members in Active Service and Projected Average Compensation as of December 31, 2009
By Age and Years of Service

## v. Safety Fire Authority

				Y	ears of Sei	rvice				
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	13	13								
	\$74,337	\$74,337								
25-29	69	64	5							
	86,411	85,310	\$100,503							
30-34	125	76	40	9						
	99,063	95,113	106,033	\$101,439						
35-39	112	42	33	24	12	1				
	104,257	95,868	105,498	110,809	\$114,878	\$131,008				
40-44	125	11	34	16	47	17				
	111,854	98,665	111,022	111,605	115,218	112,987				
45-49	160	3	17	24	38	58	20			
	116,430	102,794	108,101	113,641	111,398	120,963	\$125,318			
50-54	151	1	6	12	34	25	63	10		
	125,497	233,141	107,342	113,157	119,231	117,562	133,861	\$128,879		
55-59	63		2	5	9	4	39	3	1	
	118,602		117,829	109,468	114,818	122,469	121,749	105,227	\$101,798	
60-64	14			2	1		9	2		
	127,047			118,304	137,516		125,549	137,294		
65-69	1			1						
	107,121			107,121						
70 & over										
Total	833	210	137	93	141	105	131	15	1	
	\$110,332	\$91,943	\$107,427	\$111,122	\$115,260	\$119,015	\$128,380	\$125,271	\$101,798	

EXHIBIT B

Members in Active Service and Projected Average Compensation as of December 31, 2009

By Age and Years of Service

vi. Total

				Y	ears of Sei	rvice				
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	416	407	9							
	\$46,986	\$46,842	\$53,492							
25-29	1,911	1,604	299	8						
	56,286	56,032	57,657	\$56,111						
30-34	2,803	1,384	1,061	354	4					
	63,864	61,440	65,673	67,923	\$62,991					
35-39	3,190	941	1,022	905	311	11				
	70,652	63,721	70,327	76,591	74,969	\$83,077				
40-44	3,367	653	788	773	862	289	2			
	74,987	64,271	72,133	76,991	80,983	83,636	\$89,166			
45-49	3,543	570	627	587	708	788	251	12		
	78,630	68,685	69,800	75,356	78,960	92,191	87,365	\$79,820		
50-54	3,094	432	489	455	551	565	450	146	6	
	77,975	67,484	66,403	73,698	77,420	84,624	94,424	86,706	\$79,769	
55-59	2,314	257	422	374	383	402	275	163	38	
	75,291	65,462	67,923	71,989	74,785	81,088	87,342	84,447	73,374	
60-64	1,350	152	266	245	273	206	115	59	30	4
	73,117	70,181	69,723	69,977	73,542	76,021	79,296	83,360	79,001	\$51,356
65-69	478	49	100	96	105	82	30	11	3	2
	66,141	72,739	70,813	65,384	56,895	66,441	69,589	69,995	68,093	104,443
70 & over	167	16	22	22	45	35	15	10	2	
	60,636	49,940	51,543	63,676	64,939	67,833	53,814	61,219	38,280	
Total	22,633	6,465	5,105	3,819	3,242	2,378	1,138	401	79	6
	\$71,510	\$61,262	\$68,124	\$74,060	\$76,975	\$84,787	\$88,427	\$83,995	\$74,907	\$69,052

**EXHIBIT C** Reconciliation of Member Data – December 31, 2008 to December 31, 2009

	Active Members	Vested Former Members	Pensioners	Disableds	Beneficiaries	Total
Number as of December 31, 2008	23,720	3,881	8,925	1,266	1,587	39,379
New members	226	49	0	0	116	391
Terminations – with vested rights	-448 <sup>(1)</sup>	448	0	0	0	0
Contributions refunds	-334 <sup>(2)</sup>	-165	0	0	0	-499
Retirements	-500	-105	605	0	0	0
New disabilities	-21	-2	-16	39	0	0
Return to work	20	-13	-7	0	0	0
Deaths	-27	-2	-185	-30	-56	-300
Data adjustments	-3	3	0	-1	0	-1
Number as of December 31, 2009	22,633	4,094	9,322	1,274	1,647	38,970

<sup>(1)</sup> Includes 51 terminated before January 1, 2009. (2) Includes 19 terminated before January 1, 2009.

EXHIBIT D
Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended Dece	mber 31, 2009	Year Ended Dece	mber 31, 2008
Contribution income:				
Employer contributions <sup>(1)</sup>	\$341,714,000		\$372,924,000	
Employee contributions	171,928,000		172,291,000	
Prepaid unearned contributions	-3,327,000		-12,559,000	
Transfer from County Investment Account	34,900,000		0	
Net contribution income		\$545,215,000		\$532,656,000
Investment income:				
Interest, dividends and other income	\$157,464,000		\$273,419,000	
Recognition of capital appreciation	170,444,000		81,240,000	
Less investment and administrative fees	<u>-46,548,000</u>		<u>-42,772,000</u>	
Net investment income		\$281,360,000		\$311,887,000
Total income available for benefits		\$826,575,000		\$844,543,000
Less benefit payments		-\$421,672,000		-\$385,997,000
Change in reserve for future benefits		\$404,903,000		\$458,546,000

<sup>(1)</sup> Excludes \$20,027,000 and \$24,345,000 in prepaid employer contributions as of December 31, 2009 and December 31, 2008, respectively.

**EXHIBIT E Summary Statement of Assets** 

	Year Ended Dec	ember 31, 2009	Year Ended Dec	ember 31, 2008
Cash equivalents		\$449,678,000		\$371,646,000
Accounts receivable:				
Contributions	\$19,346,000		\$33,471,000	
Investment income	21,615,000		25,908,000	
Securities settlements	277,227,000		597,702,000	
Other	468,730,000		<u>1,845,000</u>	
Total accounts receivable		\$786,918,000		\$658,926,000
Investments:				
Fixed income investments	\$2,281,508,000		\$2,990,894,000	
Equities	3,658,781,000		2,350,103,000	
Real estate	603,552,000		630,025,000	
Venture capital and limited partnership interests	596,088,000		498,188,000	
Security lending collateral	1,148,890,000		295,811,000	
Fixed assets net of accumulated depreciation	1,761,000		2,335,000	
Total investments at market value		\$8,290,580,000		\$6,767,357,000
Total assets		\$9,527,176,000		\$7,797,929,000
Less accounts payable:				
Securities settlements	-\$733,925,000		-\$1,065,024,000	
Security lending liability	-1,148,890,000		-295,811,000	
All other	<u>-51,249,000</u>		<u>-37,508,000</u>	
Total accounts payable		-\$1,934,064,000		-\$1,398,343,000
Net assets at market value		<u>\$7,464,761,000</u> <sup>(1)</sup>		\$6,248,558,000 <sup>(2)</sup>
Net assets at actuarial value		<u>\$8,155,654,000</u>		<u>\$7,750,751,000</u>
Net assets at valuation value		\$8,154,687,000		\$7,748,380,000

The December 31, 2009 market value excludes \$108,324,000 in the County Investment Account and \$20,027,000 in the prepaid employer contributions account.

The December 31, 2008 market value excludes \$126,683,000 in the County Investment Account and \$24,345,000 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**

7. Total actuarial liabilities

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.

6. Present value of retirement allowances to be granted to present non-retired members

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

	<del></del>	
1.	Total valuation value of assets	\$8,154,687,000
2.	Present value of future contributions by members	1,478,645,000
3.	Present value of future employer contributions for:	
	a. entry age normal cost	1,678,790,000
	b. unfunded actuarial accrued liability	3,703,891,000
4.	Total current and future assets	\$15,016,013,000
Lia	<u>abilities</u>	
5.	Present value of retirement allowance payable to present retired members	\$5,430,252,000

9,585,761,000

\$15,016,013,000

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

## **EXHIBIT G**

## Summary of Reported Asset Information as of December 31, 2009

#### Reserves

#### **Included in Valuation Value of Assets**

Active Members Reserve (Book Value)	\$1,647,498,000
Retired Members Reserve (Book Value)	5,008,582,000
Employer Advanced Reserve (Book Value)	1,352,673,000
ERI Contribution Reserve	2,905,000
STAR COLA Contribution Reserve	0
Unrealized Appreciation Included in Valuation Value of Assets	<u>143,029,000</u>
Subtotal: Valuation Value of Assets	\$8,154,687,000

## **Not Included in Valuation Value of Assets**

Total: Gross Market Value of Assets

RMBR	\$18,000	
Unclaimed Member Deposit	849,000	
Medicare Medical Insurance Reserve	<u>100,000</u>	
Total	\$967,000	
Subtotal: Actuarial Value of Assets		\$8,155,654,000
Unrecognized Investment Income (Loss)		<u>-690,893,000</u>
Subtotal: Market Value of Assets (Net of County Investment Account and Prepaid Employer Contributions)		\$7,464,761,000
County Investment Account		108,324,000
Prepaid Employer Contributions		20,027,000



\$7,593,112,000

EXHIBIT H

Development of Unfunded/(Overfunded) Actuarial Accrued Liability for Year Ended December 31, 2009

1.	Unfunded actuarial accrued liability at beginning of year		\$3,112,335,000
2.	Actuarial accrued liability due to the inclusion of additional premium pay items as pensionable salary (measured as of December 31, 2008)		228,051,000
3.	Adjusted unfunded actuarial accrued liability at beginning of year		3,340,386,000
4.	Total normal cost at middle of year		396,025,000
5.	Actual employer and member contributions		-545,215,000
6.	Interest		253,099,000
7.	Expected unfunded actuarial accrued liability		\$3,444,295,000
8.	Actuarial (gain)/loss and other changes:		
	(a) Loss on investment return	\$322,523,000	
	(b) Gain on lower than expected salary increase	-77,858,000	
	(c) Other experience (gain) / loss	14,931,000	
	(d) Total changes		\$259,596,000
9.	Unfunded actuarial accrued liability at end of year		<u>\$3,703,891,000</u>

Note: 8(b) plus 8(c) is equal to the "other experience" gain of \$62,927,000 provided on page 7.

#### **EXHIBIT I**

#### **Section 415 Limitations**

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

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

In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar indexed for inflation. That limit is \$195,000 for 2009 and 2010. 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 in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m).

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

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

### SECTION 3: Supplemental Information for the 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) <u>Investment return</u> the rate of investment yield that the Plan will earn over the long-term future;
- (b) <u>Mortality rates</u> the death rates of employees and pensioners; life expectancy is based on these rates;
- (c) <u>Retirement rates</u> the rate or probability of retirement at a given age; and
- (d) <u>Turnover rates</u> the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

#### **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.

EXHIBIT I
Supplementary Information Required by GASB – Schedule of Employer Contributions

Plan Year Ended December 31	Annual Required Contributions	Actual Contributions <sup>(1)</sup>	Percentage Contributed
2004	\$194,430,000	\$194,430,000	100.0%
2005	227,892,000	227,892,000	100.0%
2006	277,368,000	277,368,000	100.0%
2007	326,736,000	326,736,000	100.0%
2008	359,673,000	360,365,000 <sup>(2)</sup>	100.2%
2009	337,496,000	338,387,000 <sup>(3)</sup>	100.3%

<sup>(1)</sup> Excludes transfers from County Investment Account. See below.

Plan Year Ended December 31	Transfers from County Investment Account
2004	3,579,000
2005	9,675,000
2006	11,000,000
2007	0
2008	0
2009	34,900,000

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

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

EXHIBIT II

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)
2004	\$5,245,821,000	\$7,403,972,000	\$2,158,151,000	70.85%	\$1,257,085,000	171.68%
2005	5,786,617,000	8,089,627,000	2,303,010,000	71.53%	1,276,764,000	180.38%
2006	6,466,085,000	8,765,045,000	2,298,960,000	73.77%	1,322,952,000	173.78%
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%

## **EXHIBIT III**

## **Supplementary Information Required by GASB**

Valuation date	December 31, 2009
Actuarial cost method	Entry Age Normal Actuarial Cost Method
Amortization method	Level percent of payroll for total unfunded liability (3.50% payroll growth assumed)
Remaining amortization period	25 years closed (declining) amortization of outstanding balance of December 31, 2004 UAAL. The UAAL established as a result of including additional premium pay items as pensionable salary is amortized over a 25-year period, beginning December 31, 2009. 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	7.75%
Inflation rate	3.50%
Real across-the-board salary increase	0.00%
Projected salary increases *	4.50% to $11.50%$ for General members; $4.50%$ to $13.50%$ for Safety members based on service.
Cost of living adjustments	3.00%
Plan membership:	
Retired members and beneficiaries receiving benefits	12,243
Terminated members entitled to, but not yet receiving benefits	4,094
Active members	<u>22,633</u>
Total	38,970

<sup>\*</sup> See Exhibit IV for these increases, including inflation rate.

#### **EXHIBIT IV**

## **Actuarial Assumptions and Actuarial Cost Method**

### **Post – Retirement Mortality Rates:**

Healthy: For General Members and all Beneficiaries: RP-2000 Combined Healthy

Mortality Table set back one year.

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

years.

Disabled: For General Members: RP-2000 Combined Healthy Mortality Table set forward

three years.

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

two years.

Employee Contribution Rates: For General Members: RP-2000 Combined Healthy Mortality Table set back one

year, 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.

## **Termination Rates Before Retirement:**

Rate (%)
Mortality

	General		Safet	:y
Age	Male	Female	Male	Female
25	0.04	0.02	0.04	0.02
30	0.04	0.02	0.04	0.02
35	0.07	0.04	0.06	0.04
40	0.10	0.06	0.10	0.06
45	0.14	0.10	0.13	0.09
50	0.20	0.16	0.19	0.14
55	0.32	0.24	0.29	0.22
60	0.59	0.44	0.53	0.39
65	1.13	0.86	1.00	0.76

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

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

Rate (%)
Disability

Age	General All Other <sup>(1)</sup>	General OCTA <sup>(2)</sup>	Safety - Law & Fire <sup>(3)</sup>	Safety - Probation <sup>(3)</sup>
20	0.00	0.00	0.03	0.00
25	0.00	0.00	0.08	0.06
30	0.03	0.03	0.16	0.16
35	0.08	0.08	0.32	0.20
40	0.13	0.28	0.52	0.20
45	0.17	0.49	0.72	0.20
50	0.19	0.64	0.98	0.20
55	0.23	0.88	2.24	0.20
60	0.34	1.30	3.60	0.08

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

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

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

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

Rate (%)
Termination (< 5 Years of Service)

Years of Service	General All Other <sup>(1)</sup>	General OCTA <sup>(1)</sup>	Safety – Law & Fire <sup>(1)</sup>	Safety - Probation <sup>(1)</sup>
0	13.0	17.0	4.0	17.0
1	9.0	9.0	3.0	10.0
2	8.0	8.0	2.0	8.0
3	7.0	7.0	2.0	6.0
4	5.0	6.0	1.0	5.0

,			
General All Other <sup>(2)</sup>	General OCTA <sup>(2)</sup>	Safety – Law & Fire <sup>(3)</sup>	Safety – Probation <sup>(2)</sup>
5.0	4.0	1.0	5.0
5.0	4.0	1.0	5.0
5.0	4.0	1.0	4.6
4.4	4.0	0.9	3.8
3.7	4.0	0.6	3.1
2.9	3.4	0.5	2.5
2.2	2.7	0.2	2.0
1.4	1.9	0.0	1.3
0.4	0.6	0.0	0.4
	5.0 5.0 5.0 5.0 4.4 3.7 2.9 2.2 1.4	General All Other <sup>(2)</sup> General OCTA <sup>(2)</sup> 5.0         4.0           5.0         4.0           5.0         4.0           4.4         4.0           3.7         4.0           2.9         3.4           2.2         2.7           1.4         1.9	General All Other <sup>(2)</sup> General OCTA <sup>(2)</sup> Safety – Law & Fire <sup>(3)</sup> 5.0         4.0         1.0           5.0         4.0         1.0           5.0         4.0         1.0           4.4         4.0         0.9           3.7         4.0         0.6           2.9         3.4         0.5           2.2         2.7         0.2           1.4         1.9         0.0

<sup>(1) 75%</sup> of all terminated members will choose a refund of contributions and 25% will choose a deferred vested benefit.

<sup>&</sup>lt;sup>(2)</sup> 20% of all terminated members will choose a refund of contributions and 80% will choose a deferred vested benefit.

<sup>(3) 10%</sup> of terminated members will choose a refund of contributions and 90% will choose a deferred vested benefit.

## **Retirement Rates:**

	Rate (%)				
Age	General - Enhanced	General - Non-Enhanced	Safety - Law <sup>(1)</sup>	Safety - Fire <sup>(1)</sup>	Safety - Probation <sup>(1)</sup>
50	2.5	3.0	15.0	10.0	4.0
51	2.5	3.0	15.0	12.0	4.0
52	2.5	3.0	15.0	14.0	4.0
53	2.5	3.0	20.0	15.0	7.0
54	5.0	3.0	20.0	17.0	10.0
55	15.0	4.0	20.0	25.0	20.0
56	8.0	5.0	20.0	25.0	20.0
57	8.0	6.0	20.0	30.0	20.0
58	10.0	7.0	25.0	30.0	25.0
59	10.0	9.0	30.0	40.0	30.0
60	13.0	11.0	100.0	100.0	35.0
61	13.0	13.0	100.0	100.0	45.0
62	15.0	15.0	100.0	100.0	60.0
63	15.0	17.0	100.0	100.0	100.0
64	20.0	19.0	100.0	100.0	100.0
65	20.0	25.0	100.0	100.0	100.0
66	24.0	20.0	100.0	100.0	100.0
67	24.0	20.0	100.0	100.0	100.0
68	24.0	20.0	100.0	100.0	100.0
69	24.0	20.0	100.0	100.0	100.0
70	100.0	100.0	100.0	100.0	100.0

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

Retirement Age and Benefit for Deferred Vested Members:

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

General Age: 57

Safety Age: 52

We assume that 30% of future General and Safety deferred vested members are reciprocal. For reciprocals, we assume 4.50% 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 and/or 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) four years younger (or older) than spouse.

**Net Investment Return:** 7.75%; net of investment and administrative expenses.

**Employee Contribution** 

**Crediting Rate:** 5.00%, compounded semi-annually.

**Consumer Price Index:** Increase of 3.50% per year, retiree COLA increases due to CPI subject to a 3.0%

maximum change per year.

# **Salary Increases:**

# **Annual Rate of Compensation Increase (%)**

Inflation: 3.50% per year, plus the following merit and promotion increases:

Years of Service	General	Safety
Less than 1	8.00%	10.00%
1	7.00	8.00
2	6.00	7.00
3	5.00	6.00
4	4.00	4.00
5	3.00	3.00
6	2.00	2.00
7	1.75	1.75
8	1.50	1.50
9	1.25	1.25
10	1.25	1.00
11	1.25	1.00
12	1.25	1.00
13	1.25	1.00
14	1.25	1.00
15	1.25	1.00
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

**Annual Payoffs Assumptions:** 

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

	Final One <u>Year Salary</u>	Final Three Year Salary
General Members	4.50%	2.60%
Safety - Probation	4.80%	2.70%
Safety - Law	8.20%	5.60%
Safety - Fire	4.00%	3.60%

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

**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.

#### **Actuarial Cost Method:**

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 25-year period. The additional UAAL established as a result of including additional premium pay items as pensionable pay is amortized over a 25-year period, beginning December 31, 2009. 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.

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.

# Changes in Actuarial Assumptions and Methods:

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

#### **EXHIBIT V**

### **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.

### **General Plans**

2.5% @ 55 Plans (Orange County Sanitation District and Law Library<sup>(1)</sup>)

Plan G
General members hired before September 21, 1979.

Plan H
General members hired on or after September 21, 1979

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<sup>(1)</sup>, Orange County Employees Retirement System<sup>(2)</sup>, Children and Family Commission<sup>(3)</sup> 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.

2.0% @ 55 Plans (Transportation Corridor Agency, Cemetery District – future service effective December 7, 2007)

Plan M General members hired before September 21, 1979.

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

<sup>(1)</sup> Improvement is prospective only for service after June 23, 2005.

<sup>(2)</sup> Improvement for management employees is prospective only for service after June 30, 2005.

<sup>(3)</sup> Improvement is prospective only for service after December 22, 2005.

1.62% @ 65 Plans (Orange County Employees and Orange County Superior Court)

Plan O General members hired on or after May 7, 2010 previously in Plan I and not

electing to rejoin Plan I.

Plan P General members hired on or after May 7, 2010 and not electing Plan J.

All Other General Employers

Plan A General members hired before September 21, 1979.

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

**Safety Plans** 

3% @ 50 Plans (Law Enforcement, Fire Protection 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 8, 2010

(for Law Enforcement only).

3% @ 55 Plans (Law Enforcement)

Plan Q Safety members rehired on or after April 8, 2010 and previously in Plan E.

Plan R Safety members hired on or after April 8, 2010.

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 and R Highest consecutive thirty-six months of compensation earnable. (§31462)

(FAS3)

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

**Service Retirement Eligibility:** 

General Age 50 with 10 years of service, or age 70 regardless of service, or after 30 years,

regardless of age. (§31672)

Safety and Probation 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.

# **Benefit Formula:**

# **General Plans**

0 01101 01 1 100110		
2.5% @ 55	Retirement Age	Benefit Formula
Plan G (§31676.18)	50	(2.00% x FAS1 x Yrs)
	55	(2.50% x FAS1 x Yrs)
	60	(2.50% x FAS1 x Yrs)
	62	(2.62% x FAS1 x Yrs)*
	65	(2.62% x FAS1 x Yrs)*
Plan H (§31676.18)	50	(2.00% x FAS3 x Yrs)
	55	(2.50% x FAS3 x Yrs)
	60	(2.50% x FAS3 x Yrs)
	62	(2.50% x FAS3 x Yrs)
	65	(2.50% x FAS3 x Yrs)

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

2.7% @ 55	Retirement Age	<b>Benefit Formula</b>
Plan I (§31676.19)	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	(2.70% x FAS1 x Yrs)

# **Benefit Formula (continued):**

	Retirement Age	Retirement Age
Plan J (§31676.19)	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	(2.70% x FAS3 x Yrs)
2.0% @ 55	Retirement Age	Benefit Formula
Plan M (§31676.16)	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	(2.62% x FAS1 x Yrs)**
Plan N (§31676.16)	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	(2.43% x FAS3 x Yrs)***

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

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

# **Benefit Formula (continued):**

1.62% @ 65	Retirement Age	Benefit Formula
Plan O (§31676.01)	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	(1.62% x FAS1 x Yrs)
Plan P (§31676.01)	50	(0.79% x FAS3 x Yrs)
(6	55	(0.99% x FAS3 x Yrs)
	60	(1.28% x FAS3 x Yrs)
	62	(1.39% x FAS3 x Yrs)
	65	(1.62% x FAS3 x Yrs)
All Other General Members	Retirement Age	Benefit Formula
Plan A (§31676.12)	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	(2.62% x FAS1 x Yrs)

# **Benefit Formula (continued):**

	Retirement Age	Benefit Formula
Plan B (§31676.1)	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	(2.43% x FAS3 x Yrs)
Safety Plans		
<i>3%</i> @ <i>50</i>	Retirement Age	Benefit Formula
Plan E (§31664.1)	50	(3.00% x FAS1 x Yrs)
	55	(3.00% x FAS1 x Yrs)
	60	(3.00% x FAS1 x Yrs)
Plan F (§31664.1)	50	(3.00% x FAS3 x Yrs)
	55	(3.00% x FAS3 x Yrs)
	60	(3.00% x FAS3 x Yrs)
<i>3%</i> @ <i>55</i>	Retirement Age	Benefit Formula
Plan Q (§31664.2)	50	(2.29% x FAS1 x Yrs)
	55	(3.00% x FAS1 x Yrs)
	60	(3.00% x FAS1 x Yrs)

## **Benefit Formula (continued):**

	Retirement Age	Benefit Formula
Plan R (§31664.2)	50	(2.29% x FAS3 x Yrs)
	55	(3.00% x FAS3 x Yrs)
	60	(3.00% x FAS3 x Yrs)

**Maximum Benefit:** 100% of Highest Average Compensation.

(§31676.01, §31676.1, §31676.12, §31676.16, §31676.18, §31676.19, §31664.1,

§31664.2)

# Ordinary Disability:

#### **General Plans**

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

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 and P:

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 and R

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.

**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

<b>Death After Retirement:</b>	
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 A for the specific rates.

**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 and O

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

(§31621)

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

 $Plan\ N\ and\ P$ 

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.

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

### **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.

**Other Information:** 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, 2009

	Date			Years	Remaining	Amortization
Rate Groups	Established	Source	Initial Base	Remaining	Base	Amount
General Members						
Rate Group #1 – Non-OCTA						
	12/31/2004	Restart amortization	\$44,613,000	25	\$47,949,000	\$3,104,000
	12/31/2005	Actuarial (gain) or loss	(3,774,000)	11	(3,418,000)	(392,000)
	12/31/2006	Actuarial (gain) or loss	2,619,000	12	2,454,000	263,000
	12/31/2007	Actuarial (gain) or loss	(4,903,000)	13	(4,721,000)	(476,000)
	12/31/2007	Assumption change	8,305,000	28	8,578,000	521,000
	12/31/2008	Actuarial (gain) or loss	10,802,000	14	10,626,000	1,013,000
	12/31/2009	Inclusion of Premium Pay	4,691,000	25	4,691,000	304,000
	12/31/2009	Actuarial (gain) or loss	14,681,000	15	14,681,000	1,330,000
Subtotal					\$80,840,000	\$5,667,000
Rate Group #2 – 2.7% @ 55						
	12/31/2004	Restart amortization	\$1,303,159,000	25	\$1,400,595,000	\$90,676,000
	12/31/2005	Actuarial (gain) or loss	85,000,000	11	76,984,000	8,839,000
	12/31/2006	Actuarial (gain) or loss	(18,810,000)	12	(17,626,000)	(1,890,000)
	12/31/2007	Actuarial (gain) or loss	9,539,000	13	9,185,000	926,000
	12/31/2007	Assumption change	68,025,000	28	70,265,000	4,269,000
	12/31/2008	Actuarial (gain) or loss	215,870,000	14	212,355,000	20,247,000
	12/31/2008	Assumption change	106,699,000	29	108,499,000	6,470,000
	12/31/2009	Inclusion of Premium Pay	53,005,000	25	53,005,000	3,432,000
	12/31/2009	Actuarial (gain) or loss	193,173,000	15	193,173,000	17,506,000
Subtotal					\$2,106,435,000	\$150,475,000

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% @ 55						
	12/31/2004	Restart amortization	\$67,595,000	25	\$72,649,000	\$4,703,000
	12/31/2005	Actuarial (gain) or loss	9,864,000	11	8,934,000	1,026,000
	12/31/2006	Actuarial (gain) or loss	2,158,000	12	2,022,000	217,000
	12/31/2007	Actuarial (gain) or loss	(615,000)	13	(592,000)	(60,000)
	12/31/2007	Assumption change	7,781,000	28	8,037,000	488,000
	12/31/2008	Actuarial (gain) or loss	8,401,000	14	8,264,000	788,000
	12/31/2008	Assumption change	6,562,000	29	6,673,000	398,000
	12/31/2009	Inclusion of Premium Pay	8,458,000	25	8,458,000	548,000
	12/31/2009	Actuarial (gain) or loss	8,728,000	15	8,728,000	791,000
Subtotal					\$123,173,000	\$8,899,000
Rate Group #5 – OCTA						
	12/31/2004	Restart amortization	\$70,302,000	25	\$75,558,000	\$4,892,000
	12/31/2005	Actuarial (gain) or loss	1,340,000	11	1,214,000	139,000
	12/31/2006	Actuarial (gain) or loss	(5,778,000)	12	(5,414,000)	(581,000)
	12/31/2007	Actuarial (gain) or loss	(12,467,000)	13	(12,004,000)	(1,210,000)
	12/31/2007	Assumption change	11,504,000	28	11,883,000	722,000
	12/31/2008	Actuarial (gain) or loss	24,594,000	14	24,194,000	2,307,000
	12/31/2009	Inclusion of Premium Pay	26,400,000	25	26,400,000	1,709,000
	12/31/2009	Actuarial (gain) or loss	22,306,000	15	22,306,000	2,021,000
Subtotal					\$144,137,000	\$9,999,000

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						
	12/31/2004	Restart amortization	\$6,061,000	25	\$6,514,000	\$422,000
	12/31/2005	Actuarial (gain) or loss	(250,000)	11	(226,000)	(26,000)
	12/31/2006	Actuarial (gain) or loss	(319,000)	12	(299,000)	(32,000)
	12/31/2007	Actuarial (gain) or loss	(149,000)	13	(143,000)	(14,000)
	12/31/2007	Assumption change	312,000	28	322,000	20,000
	12/31/2008	Actuarial (gain) or loss	578,000	14	569,000	54,000
	12/31/2008	Assumption change	172,000	29	175,000	10,000
	12/31/2009	Inclusion of Premium Pay	697,000	25	697,000	45,000
	12/31/2009	Actuarial (gain) or loss	1,071,000	15	<u>1,071,000</u>	<u>97,000</u>
Subtotal					\$8,680,000	\$576,000
Rate Group #10 – OCFA						
	12/31/2004	Restart amortization	\$28,348,000	25	\$30,468,000	\$1,973,000
	12/31/2005	Actuarial (gain) or loss	1,849,000	11	1,675,000	192,000
	12/31/2006	Actuarial (gain) or loss	4,362,000	12	4,087,000	438,000
	12/31/2007	Actuarial (gain) or loss	(3,010,000)	13	(2,898,000)	(292,000)
	12/31/2007	Assumption change	2,975,000	28	3,073,000	187,000
	12/31/2008	Actuarial (gain) or loss	1,347,000	14	1,325,000	126,000
	12/31/2008	Assumption change	2,318,000	29	2,357,000	141,000
	12/31/2009	Inclusion of Premium Pay	2,955,000	25	2,955,000	191,000
	12/31/2009	Actuarial (gain) or loss	3,276,000	15	3,276,000	<u>297,000</u>
Subtotal	12,01,200	(Buill) 01 1000	2,270,000		\$46,318,000	\$3,253,000
Subtotal					φ+0,510,000	φυ,2υυ,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						
	12/31/2004	Restart amortization	\$679,000	25	\$730,000	\$47,000
	12/31/2005	Actuarial (gain) or loss	(62,000)	11	(56,000)	(6,000)
	12/31/2006	Actuarial (gain) or loss	43,000	12	40,000	4,000
	12/31/2007	Actuarial (gain) or loss	83,000	13	80,000	8,000
	12/31/2007	Assumption change	25,000	28	26,000	2,000
	12/31/2008	Actuarial (gain) or loss	212,000	14	209,000	20,000
	12/31/2008	Assumption change	13,000	29	13,000	1,000
	12/31/2009	Inclusion of Premium Pay	9,000	25	9,000	1,000
	12/31/2009	Actuarial (gain) or loss	(37,000)	15	(37,000)	(3,000)
Subtotal					\$1,014,000	\$74,000
Safety Members						
Rate Group #6 – Probation						
	12/31/2004	Restart amortization	\$82,839,000	25	\$89,033,000	\$5,764,000
	12/31/2005	Actuarial (gain) or loss	10,520,000	11	9,528,000	1,094,000
	12/31/2006	Actuarial (gain) or loss	2,531,000	12	2,372,000	254,000
	12/31/2007	Actuarial (gain) or loss	(1,866,000)	13	(1,797,000)	(181,000)
	12/31/2007	Assumption change	12,945,000	28	13,371,000	812,000
	12/31/2008	Actuarial (gain) or loss	13,162,000	14	12,948,000	1,235,000
	12/31/2009	Inclusion of Premium Pay	1,793,000	25	1,793,000	116,000
	12/31/2009	Actuarial (gain) or loss	4,017,000	15	4,017,000	364,000
Subtotal			, , , , , , , , , , , , , , , , , , , ,		\$131,265,000	\$9,458,000

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						
	12/31/2004	Restart amortization	\$409,515,000	25	\$440,134,000	\$28,495,000
	12/31/2005	Actuarial (gain) or loss	1,092,000	11	989,000	114,000
	12/31/2006	Actuarial (gain) or loss	(18,681,000)	12	(17,505,000)	(1,877,000)
	12/31/2007	Actuarial (gain) or loss	(5,815,000)	13	(5,599,000)	(564,000)
	12/31/2007	Assumption change	88,601,000	28	91,518,000	5,560,000
	12/31/2008	Actuarial (gain) or loss	94,542,000	14	93,003,000	8,867,000
	12/31/2009	Inclusion of Premium Pay	67,939,000	25	67,939,000	4,398,000
	12/31/2009	Actuarial (gain) or loss	46,476,000	15	46,476,000	4,212,000
Subtotal					\$716,955,000	\$49,205,000
Rate Group #8 – Fire Authority						
	12/31/2004	Restart amortization	\$144,849,000	25	\$155,679,000	\$10,079,000
	12/31/2005	Actuarial (gain) or loss	2,796,000	11	2,532,000	291,000
	12/31/2006	Actuarial (gain) or loss	(4,791,000)	12	(4,489,000)	(481,000)
	12/31/2007	Actuarial (gain) or loss	2,047,000	13	1,971,000	199,000
	12/31/2007	Assumption change	36,674,000	28	37,882,000	2,302,000
	12/31/2008	Actuarial (gain) or loss	44,714,000	14	43,986,000	4,194,000
	12/31/2009	Inclusion of Premium Pay	79,778,000	25	79,778,000	5,165,000
	12/31/2009	Actuarial (gain) or loss	27,735,000	15	27,735,000	2,513,000
Subtotal					\$345,074,000	\$24,262,000
Grand Total					\$3,703,891,000	\$261,859,000

Appendix B

Member Contribution Rates

General Tier 1 Members' Contribution Rates from the December 31, 2009 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

Calculated Under Recommended Assumptions

	Plan I (2.7% @	55 non-OCFA)	Plan G (2.5	<b>1%</b> @ 55)	Plan M (2.0	)% @ 55)*	Plan A	(OCTA)
Entry Age	<b>Normal</b>	<b>Total</b>	<b>Normal</b>	<b>Total</b>	<b>Normal</b>	<b>Total</b>	<b>Normal</b>	<u>Total</u>
15	5.98%	8.06%	5.98%	7.97%	4.23%	5.98%	2.54%	4.20%
16	5.98%	8.06%	5.98%	7.97%	4.23%	5.98%	2.54%	4.20%
17	6.09%	8.22%	6.09%	8.13%	4.31%	6.09%	2.59%	4.28%
18	6.21%	8.37%	6.21%	8.28%	4.40%	6.21%	2.64%	4.36%
19	6.32%	8.53%	6.32%	8.44%	4.48%	6.33%	2.69%	4.44%
20	6.44%	8.69%	6.44%	8.60%	4.57%	6.45%	2.74%	4.53%
21	6.57%	8.86%	6.57%	8.76%	4.65%	6.57%	2.79%	4.62%
22	6.69%	9.02%	6.69%	8.92%	4.74%	6.70%	2.85%	4.70%
23	6.82%	9.19%	6.82%	9.09%	4.83%	6.82%	2.90%	4.79%
24	6.94%	9.37%	6.94%	9.26%	4.92%	6.95%	2.95%	4.88%
25	7.07%	9.54%	7.07%	9.44%	5.02%	7.08%	3.01%	4.98%
26	7.21%	9.72%	7.21%	9.62%	5.11%	7.22%	3.07%	5.07%
27	7.34%	9.90%	7.34%	9.80%	5.21%	7.35%	3.13%	5.17%
28	7.48%	10.09%	7.48%	9.98%	5.31%	7.49%	3.18%	5.26%
29	7.62%	10.28%	7.62%	10.17%	5.41%	7.63%	3.24%	5.36%
30	7.77%	10.47%	7.77%	10.36%	5.51%	7.78%	3.31%	5.46%
31	7.91%	10.67%	7.91%	10.56%	5.61%	7.92%	3.37%	5.57%
32	8.06%	10.88%	8.06%	10.76%	5.72%	8.07%	3.43%	5.67%
33	8.22%	11.08%	8.22%	10.96%	5.83%	8.22%	3.50%	5.78%
34	8.38%	11.30%	8.38%	11.17%	5.94%	8.38%	3.56%	5.89%
35	8.54%	11.51%	8.54%	11.39%	6.05%	8.54%	3.63%	6.00%
36	8.70%	11.74%	8.70%	11.61%	6.16%	8.70%	3.70%	6.119
37	8.88%	11.97%	8.88%	11.84%	6.28%	8.86%	3.77%	6.23%
38	9.05%	12.21%	9.05%	12.08%	6.40%	9.03%	3.84%	6.35%
39	9.22%	12.43%	9.22%	12.30%	6.52%	9.21%	3.91%	6.47%

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

General Tier 1 Members' Contribution Rates from the December 31, 2009 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

Calculated Under Recommended Assumptions

	Plan I (2.7% @	55 non-OCFA)	<b>Plan G (2.5</b>	5% @ 55)	Plan M (2.0	)% @ 55)*	Plan A (OCTA)		
Entry Age	<b>Normal</b>	<b>Total</b>	<b>Normal</b>	<b>Total</b>	<u>Normal</u>	<b>Total</b>	<b>Normal</b>	<b>Total</b>	
40	9.39%	12.66%	9.39%	12.52%	6.65%	9.38%	3.99%	6.59%	
41	9.56%	12.89%	9.56%	12.75%	6.78%	9.57%	4.07%	6.72%	
42	9.74%	13.14%	9.74%	13.00%	6.91%	9.76%	4.15%	6.85%	
43	9.94%	13.40%	9.94%	13.25%	7.05%	9.95%	4.23%	6.99%	
44	10.14%	13.67%	10.14%	13.53%	7.18%	10.13%	4.31%	7.12%	
45	10.36%	13.97%	10.36%	13.82%	7.31%	10.32%	4.38%	7.25%	
46	10.57%	14.26%	10.57%	14.11%	7.44%	10.51%	4.47%	7.38%	
47	10.79%	14.55%	10.79%	14.39%	7.59%	10.71%	4.55%	7.52%	
48	11.00%	14.84%	11.00%	14.68%	7.74%	10.92%	4.64%	7.67%	
49	11.15%	15.04%	11.15%	14.88%	7.89%	11.15%	4.74%	7.83%	
50	11.23%	15.15%	11.23%	14.99%	8.07%	11.39%	4.84%	8.00%	
51	11.25%	15.17%	11.25%	15.00%	8.23%	11.62%	4.94%	8.16%	
52	11.19%	15.09%	11.19%	14.93%	8.40%	11.86%	5.04%	8.33%	
53	11.07%	14.93%	11.07%	14.77%	8.57%	12.09%	5.14%	8.50%	
54	10.88%	14.68%	10.88%	14.52%	8.68%	12.26%	5.21%	8.61%	
55	10.88%	14.68%	10.88%	14.52%	8.75%	12.35%	5.25%	8.67%	
56	10.88%	14.68%	10.88%	14.52%	8.76%	12.36%	5.25%	8.68%	
57	10.88%	14.68%	10.88%	14.52%	8.71%	12.30%	5.23%	8.64%	
58	10.88%	14.68%	10.88%	14.52%	8.62%	12.17%	5.17%	8.55%	
59	10.88%	14.68%	10.88%	14.52%	8.47%	11.96%	5.08%	8.40%	
60	10.88%	14.68%	10.88%	14.52%	8.47%	11.96%	5.08%	8.40%	
OLA Loading:		34.87%		33.41%		41.17%		65.28%	

<sup>\*</sup> 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, 2009 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

Calculated Under Recommended Assumptions

	Plan A (No	on-OCTA)	Plan I (2.7% (	@ 55 OCFA)
<b>Entry Age</b>	<b>Normal</b>	<b>Total</b>	<b>Normal</b>	<b>Total</b>
15	2.54%	3.98%	5.98%	8.11%
16	2.54%	3.98%	5.98%	8.11%
17	2.59%	4.06%	6.09%	8.26%
18	2.64%	4.14%	6.21%	8.42%
19	2.69%	4.21%	6.32%	8.58%
20	2.74%	4.29%	6.44%	8.74%
21	2.79%	4.38%	6.57%	8.91%
22	2.85%	4.46%	6.69%	9.07%
23	2.90%	4.54%	6.82%	9.25%
24	2.95%	4.63%	6.94%	9.42%
25	3.01%	4.72%	7.07%	9.60%
26	3.07%	4.81%	7.21%	9.78%
27	3.13%	4.90%	7.34%	9.96%
28	3.18%	4.99%	7.48%	10.15%
29	3.24%	5.08%	7.62%	10.34%
30	3.31%	5.18%	7.77%	10.53%
31	3.37%	5.28%	7.91%	10.73%
32	3.43%	5.38%	8.06%	10.94%
33	3.50%	5.48%	8.22%	11.15%
34	3.56%	5.58%	8.38%	11.36%
35	3.63%	5.69%	8.54%	11.58%
36	3.70%	5.79%	8.70%	11.81%
37	3.77%	5.90%	8.88%	12.04%
38	3.84%	6.02%	9.05%	12.28%
39	3.91%	6.13%	9.22%	12.50%
40	3.99%	6.25%	9.39%	12.73%
41	4.07%	6.37%	9.56%	12.97%
42	4.15%	6.50%	9.74%	13.22%

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

General Tier 1 Members' Contribution Rates from the December 31, 2009 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

Calculated Under Recommended Assumptions

	Plan A (No	on-OCTA)	Plan I (2.7% (	@ 55 OCFA)
Entry Age	<b>Normal</b>	<b>Total</b>	<b>Normal</b>	<b>Total</b>
43	4.23%	6.63%	9.94%	13.48%
44	4.31%	6.75%	10.14%	13.75%
45	4.38%	6.87%	10.36%	14.05%
46	4.47%	7.00%	10.57%	14.34%
47	4.55%	7.13%	10.79%	14.63%
48	4.64%	7.27%	11.00%	14.92%
49	4.74%	7.42%	11.15%	15.13%
50	4.84%	7.58%	11.23%	15.24%
51	4.94%	7.74%	11.25%	15.26%
52	5.04%	7.90%	11.19%	15.18%
53	5.14%	8.06%	11.07%	15.02%
54	5.21%	8.17%	10.88%	14.76%
55	5.25%	8.22%	10.88%	14.76%
56	5.25%	8.23%	10.88%	14.76%
57	5.23%	8.19%	10.88%	14.76%
58	5.17%	8.10%	10.88%	14.76%
59	5.08%	7.97%	10.88%	14.76%
60	5.08%	7.97%	10.88%	14.76%
COLA Loading:		56.72%		35.65%

General Tier 2 Members' Contribution Rates from the December 31, 2009 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

Calculated Under Recommended Assumptions

	Plan J (2.7% @ 55 non-OCFA)		Plan H (2.	5% @ 55)	Plan N (2.0	)% @ 55)*	Plan B (	OCTA)
Entry Age	<b>Normal</b>	<b>Total</b>	<b>Normal</b>	<u>Total</u>	<b>Normal</b>	<b>Total</b>	<b>Normal</b>	<b>Total</b>
15	5.72%	7.72%	5.72%	7.64%	4.05%	5.72%	4.05%	5.64%
16	5.72%	7.72%	5.72%	7.64%	4.05%	5.72%	4.05%	5.64%
17	5.83%	7.87%	5.83%	7.78%	4.13%	5.83%	4.13%	5.75%
18	5.94%	8.02%	5.94%	7.93%	4.21%	5.94%	4.21%	5.86%
19	6.06%	8.17%	6.06%	8.08%	4.29%	6.06%	4.29%	5.97%
20	6.17%	8.32%	6.17%	8.23%	4.37%	6.17%	4.37%	6.09%
21	6.29%	8.48%	6.29%	8.39%	4.46%	6.29%	4.46%	6.20%
22	6.41%	8.64%	6.41%	8.55%	4.54%	6.41%	4.54%	6.32%
23	6.53%	8.80%	6.53%	8.71%	4.63%	6.53%	4.63%	6.44%
24	6.65%	8.97%	6.65%	8.87%	4.72%	6.66%	4.72%	6.56%
25	6.77%	9.14%	6.77%	9.04%	4.80%	6.78%	4.80%	6.69%
26	6.90%	9.31%	6.90%	9.21%	4.90%	6.91%	4.90%	6.81%
27	7.03%	9.48%	7.03%	9.38%	4.99%	7.04%	4.99%	6.94%
28	7.16%	9.66%	7.16%	9.56%	5.08%	7.17%	5.08%	7.07%
29	7.30%	9.84%	7.30%	9.74%	5.18%	7.31%	5.18%	7.21%
30	7.44%	10.03%	7.44%	9.92%	5.27%	7.45%	5.27%	7.34%
31	7.58%	10.22%	7.58%	10.11%	5.37%	7.59%	5.37%	7.48%
32	7.72%	10.41%	7.72%	10.30%	5.47%	7.73%	5.47%	7.62%
33	7.87%	10.61%	7.87%	10.50%	5.58%	7.87%	5.58%	7.76%
34	8.02%	10.82%	8.02%	10.70%	5.68%	8.02%	5.68%	7.91%
35	8.18%	11.03%	8.18%	10.91%	5.79%	8.17%	5.79%	8.06%
36	8.34%	11.24%	8.34%	11.12%	5.90%	8.33%	5.90%	8.21%
37	8.49%	11.46%	8.49%	11.33%	6.01%	8.49%	6.01%	8.37%
38	8.65%	11.67%	8.65%	11.54%	6.13%	8.65%	6.13%	8.53%
39	8.81%	11.88%	8.81%	11.75%	6.24%	8.82%	6.24%	8.69%
40	8.97%	12.09%	8.97%	11.96%	6.37%	8.99%	6.37%	8.86%
41	9.13%	12.32%	9.13%	12.18%	6.49%	9.16%	6.49%	9.03%
71								

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

General Tier 2 Members' Contribution Rates from the December 31, 2009 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

Calculated Under Recommended Assumptions

	Plan J (2.7% @	55 non-OCFA)	Plan H (2.	.5% @ 55)	Plan N (2.0	0% @ 55)*	Plan B (	B (OCTA)		
Entry Age	Normal	<b>Total</b>	<b>Normal</b>	<b>Total</b>	Normal	<b>Total</b>	<b>Normal</b>	<b>Total</b>		
43	9.49%	12.80%	9.49%	12.66%	6.74%	9.51%	6.74%	9.37%		
44	9.68%	13.05%	9.68%	12.91%	6.86%	9.68%	6.86%	9.54%		
45	9.87%	13.31%	9.87%	13.16%	6.98%	9.86%	6.98%	9.72%		
46	10.05%	13.55%	10.05%	13.40%	7.11%	10.04%	7.11%	9.90%		
47	10.20%	13.76%	10.20%	13.61%	7.25%	10.23%	7.25%	10.09%		
48	10.31%	13.91%	10.31%	13.76%	7.39%	10.43%	7.39%	10.29%		
49	10.36%	13.98%	10.36%	13.82%	7.54%	10.64%	7.54%	10.49%		
50	10.35%	13.96%	10.35%	13.80%	7.68%	10.84%	7.68%	10.69%		
51	10.27%	13.85%	10.27%	13.70%	7.82%	11.04%	7.82%	10.89%		
52	10.13%	13.67%	10.13%	13.52%	7.94%	11.22%	7.94%	11.06%		
53	10.50%	14.16%	10.50%	14.01%	8.03%	11.34%	8.03%	11.18%		
54	10.88%	14.68%	10.88%	14.52%	8.07%	11.39%	8.07%	11.23%		
55	10.88%	14.68%	10.88%	14.52%	8.06%	11.37%	8.06%	11.21%		
56	10.88%	14.68%	10.88%	14.52%	8.00%	11.29%	8.00%	11.13%		
57	10.88%	14.68%	10.88%	14.52%	7.89%	11.14%	7.89%	10.98%		
58	10.88%	14.68%	10.88%	14.52%	8.17%	11.54%	8.17%	11.38%		
59	10.88%	14.68%	10.88%	14.52%	8.47%	11.96%	8.47%	11.79%		
60	10.88%	14.68%	10.88%	14.52%	8.47%	11.96%	8.47%	11.79%		
COLA Loading:		34.87%		33.41%		41.17%		39.17%		

<sup>\*</sup> 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, 2009 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

Calculated Under Recommended Assumptions

The state of the s								
	Plan B (N	on-OCTA)	Plan J (2.7%	@ 55 OCFA)	<b>Plan P</b> (1.6	62% @ 65)		
Entry Age	Normal	<b>Total</b>	<b>Normal</b>	<b>Total</b>	Normal	<b>Total</b>		
15	4.05%	5.43%	5.72%	7.76%	4.05%	5.04%		
16	4.05%	5.43%	5.72%	7.76%	4.05%	5.04%		
17	4.13%	5.54%	5.83%	7.91%	4.13%	5.14%		
18	4.21%	5.64%	5.94%	8.06%	4.21%	5.24%		
19	4.29%	5.75%	6.06%	8.22%	4.29%	5.34%		
20	4.37%	5.86%	6.17%	8.37%	4.37%	5.44%		
21	4.46%	5.97%	6.29%	8.53%	4.46%	5.55%		
22	4.54%	6.09%	6.41%	8.69%	4.54%	5.65%		
23	4.63%	6.20%	6.53%	8.85%	4.63%	5.76%		
24	4.72%	6.32%	6.65%	9.02%	4.72%	5.87%		
25	4.80%	6.44%	6.77%	9.19%	4.80%	5.98%		
26	4.90%	6.56%	6.90%	9.36%	4.90%	6.09%		
27	4.99%	6.69%	7.03%	9.54%	4.99%	6.21%		
28	5.08%	6.81%	7.16%	9.72%	5.08%	6.32%		
29	5.18%	6.94%	7.30%	9.90%	5.18%	6.44%		
30	5.27%	7.07%	7.44%	10.09%	5.27%	6.56%		
31	5.37%	7.20%	7.58%	10.28%	5.37%	6.69%		
32	5.47%	7.34%	7.72%	10.47%	5.47%	6.81%		
33	5.58%	7.48%	7.87%	10.67%	5.58%	6.94%		
34	5.68%	7.62%	8.02%	10.88%	5.68%	7.07%		
35	5.79%	7.76%	8.18%	11.09%	5.79%	7.20%		
36	5.90%	7.91%	8.34%	11.31%	5.90%	7.34%		
37	6.01%	8.06%	8.49%	11.52%	6.01%	7.48%		
38	6.13%	8.21%	8.65%	11.73%	6.13%	7.62%		
39	6.24%	8.37%	8.81%	11.94%	6.24%	7.77%		
40	6.37%	8.53%	8.97%	12.16%	6.37%	7.92%		
41	6.49%	8.70%	9.13%	12.39%	6.49%	8.08%		
42	6.61%	8.86%	9.31%	12.63%	6.61%	8.23%		

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

General Tier 2 Members' Contribution Rates from the December 31, 2009 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

Calculated Under Recommended Assumptions

	Plan B (No	on-OCTA)	Plan J (2.7%	@ 55 OCFA)	<b>Plan P (1.0</b>	62% @ 65)
<b>Entry Age</b>	<b>Normal</b>	<b>Total</b>	<b>Normal</b>	<b>Normal</b>	<b>Normal</b>	<b>Total</b>
43	6.74%	9.03%	9.49%	12.87%	6.74%	8.38%
44	6.86%	9.19%	9.68%	13.13%	6.86%	8.53%
45	6.98%	9.36%	9.87%	13.38%	6.98%	8.69%
46	7.11%	9.53%	10.05%	13.63%	7.11%	8.85%
47	7.25%	9.71%	10.20%	13.84%	7.25%	9.02%
48	7.39%	9.91%	10.31%	13.99%	7.39%	9.20%
49	7.54%	10.10%	10.36%	14.06%	7.54%	9.38%
50	7.68%	10.30%	10.35%	14.04%	7.68%	9.56%
51	7.82%	10.49%	10.27%	13.93%	7.82%	9.73%
52	7.94%	10.65%	10.13%	13.75%	7.94%	9.89%
53	8.03%	10.76%	10.50%	14.24%	8.03%	9.99%
54	8.07%	10.81%	10.88%	14.76%	8.07%	10.04%
55	8.06%	10.80%	10.88%	14.76%	8.06%	10.02%
56	8.00%	10.72%	10.88%	14.76%	8.00%	9.95%
57	7.89%	10.58%	10.88%	14.76%	7.89%	9.82%
58	8.17%	10.96%	10.88%	14.76%	8.17%	10.17%
59	8.47%	11.36%	10.88%	14.76%	8.47%	10.54%
60	8.47%	11.36%	10.88%	14.76%	8.47%	10.54%
COLA Loading:		34.03%		35.65%		24.42%

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

Safety Tier 1 Members' Contribution Rates from the December 31, 2009 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

Calculated Under Recommended Assumptions

	Plan E (Fire	e Authority)	Plan E (Law I	Enforcement)	Plan E (P	robation)
Entry Age	<u>Normal</u>	<b>Total</b>	<u>Normal</u>	<b>Total</b>	<u>Normal</u>	<u>Total</u>
15	3.44%	7.82%	3.44%	7.83%	3.44%	7.31%
16	3.44%	7.82%	3.44%	7.83%	3.44%	7.31%
17	3.50%	7.97%	3.50%	7.98%	3.50%	7.44%
18	3.57%	8.12%	3.57%	8.13%	3.57%	7.58%
19	3.63%	8.27%	3.63%	8.28%	3.63%	7.73%
20	3.70%	8.43%	3.70%	8.44%	3.70%	7.87%
21	3.77%	8.58%	3.77%	8.60%	3.77%	8.02%
22	3.84%	8.75%	3.84%	8.76%	3.84%	8.17%
23	3.91%	8.91%	3.91%	8.92%	3.91%	8.32%
24	3.99%	9.08%	3.99%	9.09%	3.99%	8.48%
25	4.06%	9.25%	4.06%	9.26%	4.06%	8.64%
26	4.14%	9.42%	4.14%	9.43%	4.14%	8.80%
27	4.21%	9.60%	4.21%	9.61%	4.21%	8.96%
28	4.29%	9.78%	4.29%	9.79%	4.29%	9.13%
29	4.38%	9.97%	4.38%	9.98%	4.38%	9.31%
30	4.46%	10.16%	4.46%	10.17%	4.46%	9.49%
31	4.55%	10.35%	4.55%	10.37%	4.55%	9.67%
32	4.64%	10.56%	4.64%	10.57%	4.64%	9.86%
33	4.73%	10.76%	4.73%	10.78%	4.73%	10.05%
34	4.82%	10.98%	4.82%	11.00%	4.82%	10.26%
35	4.92%	11.21%	4.92%	11.22%	4.92%	10.47%
36	5.02%	11.44%	5.02%	11.46%	5.02%	10.69%
37	5.13%	11.69%	5.13%	11.70%	5.13%	10.92%
38	5.25%	11.95%	5.25%	11.97%	5.25%	11.16%
39	5.37%	12.23%	5.37%	12.25%	5.37%	11.42%
40	5.49%	12.51%	5.49%	12.52%	5.49%	11.68%
41	5.61%	12.78%	5.61%	12.80%	5.61%	11.93%
42	5.73%	13.05%	5.73%	13.07%	5.73%	12.19%

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

Safety Tier 1 Members' Contribution Rates from the December 31, 2009 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

Calculated Under Recommended Assumptions

	Plan E (Fire	e Authority)	Plan E (Law l	Enforcement)	Plan E (I	Probation)
Entry Age	<b>Normal</b>	<u>Total</u>	<u>Normal</u>	<b>Total</b>	<b>Normal</b>	<b>Total</b>
43	5.86%	13.34%	5.86%	13.35%	5.86%	12.46%
44	5.95%	13.55%	5.95%	13.57%	5.95%	12.66%
45	6.01%	13.69%	6.01%	13.71%	6.01%	12.79%
46	6.00%	13.65%	6.00%	13.67%	6.00%	12.75%
47	5.94%	13.54%	5.94%	13.55%	5.94%	12.64%
48	5.86%	13.35%	5.86%	13.37%	5.86%	12.47%
49	5.71%	13.01%	5.71%	13.03%	5.71%	12.15%
50	5.71%	13.01%	5.71%	13.03%	5.71%	12.15%
51	5.71%	13.01%	5.71%	13.03%	5.71%	12.15%
52	5.71%	13.01%	5.71%	13.03%	5.71%	12.15%
53	5.71%	13.01%	5.71%	13.03%	5.71%	12.15%
54	5.71%	13.01%	5.71%	13.03%	5.71%	12.15%
55	5.71%	13.01%	5.71%	13.03%	5.71%	12.15%
56	5.71%	13.01%	5.71%	13.03%	5.71%	12.15%
57	5.71%	13.01%	5.71%	13.03%	5.71%	12.15%
58	5.71%	13.01%	5.71%	13.03%	5.71%	12.15%
59	5.71%	13.01%	5.71%	13.03%	5.71%	12.15%
60	5.71%	13.01%	5.71%	13.03%	5.71%	12.15%
COLA Loading:		127.74%		128.03%		112.70%

Safety Tier 2 Members' Contribution Rates from the December 31, 2009 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

Calculated Under Recommended Assumptions

						<u> </u>			
	Plan F (Fire Authority)		Plan F (Law Enforcement)		Plan F (P	Plan F (Probation)		Plan R (Law Enforcement)	
Entry Age	<u>Normal</u>	<b>Total</b>	<u>Normal</u>	<u>Total</u>	<u>Normal</u>	<b>Total</b>	<u>Normal</u>	<u>Total</u>	
15	6.58%	10.78%	6.58%	10.79%	6.58%	10.29%	6.58%	10.27%	
16	6.58%	10.78%	6.58%	10.79%	6.58%	10.29%	6.58%	10.27%	
17	6.70%	10.98%	6.70%	10.99%	6.70%	10.48%	6.70%	10.46%	
18	6.83%	11.19%	6.83%	11.20%	6.83%	10.68%	6.83%	10.65%	
19	6.96%	11.40%	6.96%	11.41%	6.96%	10.88%	6.96%	10.85%	
20	7.09%	11.61%	7.09%	11.62%	7.09%	11.08%	7.09%	11.06%	
21	7.22%	11.83%	7.22%	11.84%	7.22%	11.29%	7.22%	11.26%	
22	7.35%	12.05%	7.35%	12.06%	7.35%	11.50%	7.35%	11.48%	
23	7.49%	12.28%	7.49%	12.29%	7.49%	11.71%	7.49%	11.69%	
24	7.63%	12.51%	7.63%	12.52%	7.63%	11.93%	7.63%	11.91%	
25	7.78%	12.74%	7.78%	12.75%	7.78%	12.16%	7.78%	12.13%	
26	7.92%	12.98%	7.92%	12.99%	7.92%	12.39%	7.92%	12.36%	
27	8.07%	13.23%	8.07%	13.24%	8.07%	12.62%	8.07%	12.59%	
28	8.22%	13.48%	8.22%	13.49%	8.22%	12.86%	8.22%	12.83%	
29	8.38%	13.73%	8.38%	13.75%	8.38%	13.10%	8.38%	13.08%	
30	8.54%	14.00%	8.54%	14.01%	8.54%	13.36%	8.54%	13.33%	
31	8.71%	14.27%	8.71%	14.28%	8.71%	13.61%	8.71%	13.59%	
32	8.88%	14.55%	8.88%	14.56%	8.88%	13.88%	8.88%	13.85%	
33	9.05%	14.83%	9.05%	14.85%	9.05%	14.15%	9.05%	14.13%	
34	9.23%	15.13%	9.23%	15.15%	9.23%	14.44%	9.23%	14.41%	
35	9.42%	15.44%	9.42%	15.46%	9.42%	14.73%	9.42%	14.70%	
36	9.62%	15.77%	9.62%	15.78%	9.62%	15.04%	9.62%	15.01%	
37	9.83%	16.11%	9.83%	16.12%	9.83%	15.37%	9.83%	15.34%	
38	10.04%	16.46%	10.04%	16.47%	10.04%	15.70%	10.04%	15.67%	
39	10.25%	16.80%	10.25%	16.82%	10.25%	16.03%	10.25%	16.00%	
40	10.46%	17.14%	10.46%	17.16%	10.46%	16.36%	10.46%	16.32%	
41	10.66%	17.47%	10.66%	17.49%	10.66%	16.67%	10.66%	16.64%	
42	10.84%	17.77%	10.84%	17.78%	10.84%	16.95%	10.84%	16.92%	
43	10.98%	17.99%	10.98%	18.01%	10.98%	17.17%	10.98%	17.13%	
44	11.03%	18.07%	11.03%	18.08%	11.03%	17.24%	11.03%	17.20%	

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

Safety Tier 2 Members' Contribution Rates from the December 31, 2009 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

Calculated Under Recommended Assumptions

	Plan F (Fire	e Authority)	Plan F (Law I	Enforcement)	Plan F (P	robation)	Plan R (Law	<b>Enforcement</b> )
Entry Age	<b>Normal</b>	<b>Total</b>	<u>Normal</u>	<b>Total</b>	<b>Normal</b>	<b>Total</b>	<b>Normal</b>	<u>Total</u>
45	10.98%	18.00%	10.98%	18.01%	10.98%	17.17%	10.98%	17.14%
46	10.86%	17.79%	10.86%	17.81%	10.86%	16.98%	10.86%	16.94%
47	10.65%	17.45%	10.65%	17.46%	10.65%	16.65%	10.65%	16.62%
48	11.03%	18.07%	11.03%	18.09%	11.03%	17.24%	11.03%	17.21%
49	11.43%	18.73%	11.43%	18.74%	11.43%	17.87%	11.43%	17.83%
50	11.43%	18.73%	11.43%	18.74%	11.43%	17.87%	11.43%	17.83%
51	11.43%	18.73%	11.43%	18.74%	11.43%	17.87%	11.43%	17.83%
52	11.43%	18.73%	11.43%	18.74%	11.43%	17.87%	11.43%	17.83%
53	11.43%	18.73%	11.43%	18.74%	11.43%	17.87%	11.43%	17.83%
54	11.43%	18.73%	11.43%	18.74%	11.43%	17.87%	11.43%	17.83%
55	11.43%	18.73%	11.43%	18.74%	11.43%	17.87%	11.43%	17.83%
56	11.43%	18.73%	11.43%	18.74%	11.43%	17.87%	11.43%	17.83%
57	11.43%	18.73%	11.43%	18.74%	11.43%	17.87%	11.43%	17.83%
58	11.43%	18.73%	11.43%	18.74%	11.43%	17.87%	11.43%	17.83%
59	11.43%	18.73%	11.43%	18.74%	11.43%	17.87%	11.43%	17.83%
60	11.43%	18.73%	11.43%	18.74%	11.43%	17.87%	11.43%	17.83%
COLA Loading:		63.87%		64.01%		56.35%		56.04%

## Appendix C

## **Funded Percentages**

The funded percentages by rate group provided for informational purposes only are as follows:

	December 31, 2009 Valuation Funded Percentage	December 31, 2008 Valuation Funded Percentage
General Members		
Rate Group #1 (non-OCTA)	78.00%	82.30%
Rate Group #2 (2.7% @ 55 – non-OCFA)	69.06%	70.80%
Rate Group #3 (2.5% @ 55)	66.65%	68.57%
Rate Group #5 (OCTA)	75.12%	81.47%
Rate Group #9 (2.0% @ 55 – TCA)	63.91%	66.45%
Rate Group #10 (2.7% @ 55 – OCFA)	61.91%	63.14%
Rate Group #11 (2.0% @ 55 – Cemetery)	80.36%	79.36%
Safety Members		
Rate Group #6 (Probation)	66.46%	64.91%
Rate Group #7 (Law Enforcement)	68.28%	71.15%
Rate Group #8 (Fire Authority)	62.97%	70.15%

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