## Orange County Employees Retirement System

Actuarial Valuation and Review as of December 31, 2009

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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
$B y:$


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


Andy Yeung, ASA, EA, MAAA
Vice President and Associate Actuary

## MYM/hy

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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:
> 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).

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

> 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.

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

## Impact of Future Experience on Contribution Rates

Future contribution requirements may differ from those determined in the valuation because of:
> difference between actual experience and anticipated experience;
> changes in actuarial assumptions or methods;
> changes in statutory provisions; and
> difference between the contribution rates determined by the valuation and those adopted by the Board.

| Summary of Key Valuation Results (Dollar amounts in thousands) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | December 31, 2009 |  | December 31, 2008 |  |
| Employer Contribution Rates: |  | Estimated |  |  |
| General | Total Rate | Annual Amount ${ }^{(1)}$ | Total Rate | Annual Amount ${ }^{(1)}$ |
| 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 ${ }^{(1)}$ | Total Rate ${ }^{(2)}$ | Annual Amount ${ }^{(1)}$ |
| 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\% |  |

[^0] as of December 31, 2009.

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

| Summary of Key Valuation Demographic and Financial Data |  |  |  |
| :---: | :---: | :---: | :---: |
|  | 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 | 1,647 | 1,587 | 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 |

${ }^{(1)}$ Excludes monthly benefits payable from the RMBR and STAR COLA.
${ }^{(2)}$ This includes members who chose to leave their contributions on deposit even though they have less than five years of service.
${ }^{(3)}$ The 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.

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

## A. MEMBER DATA

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

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

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

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

## CHART 1

Member Population: 2002-2009

| Year Ended <br> December 31 | Active <br> Members | Vested Terminated <br> Members* | Retired Members <br> and Beneficiaries | Ratio of Non-Actives <br> 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 | 1,094 |  | 0.72 |

*Includes terminated members due a refund of member contributions.

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

## CHART 2 <br> Distribution of Active Members by Age as of December 31, 2009



## 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.

## 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.

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


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

## 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


## 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


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

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

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.


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

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
$\longrightarrow$ Actuarial Value
$\simeq$ Valuation Value

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.

## CHART 8

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


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

## C. ACTUARIAL EXPERIENCE

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

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

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

The total experience loss was $\$ 259.6$ 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 ${ }^{(1)}$ | $\$(322,523)$ |
| :--- | :--- | ---: |
| 2. | Net gain from other experience ${ }^{(2)}$ | $\underline{62,927}$ |
| 3. | Net experience gain/(loss): $(1)+(2)$ | $\$(259,596)$ |

(1) Details in Chart 10.
${ }^{(2)}$ See Section 3, Exhibit H.

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

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

## 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.

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

| 1. | Actual return | Valuation Value |
| :--- | :--- | ---: | Actuarial Value

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

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

|  | Valuation Value Investment Return |  | Actuarial Value Investment Return |  | Market Value Investment Return |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 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.

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

This chart illustrates how this leveling effect has actually worked over the years 2004-2009.

- Market Value
$\longrightarrow$ Actuarial Value
$\simeq$ Valuation Value

CHART 12
Market, Actuarial, and Valuation Value Rates of Return for Years Ended December 31, 2004-2009


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

## Other Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:
> actual turnover among the participants,
> retirement experience (earlier or later than expected),
> mortality (more or fewer deaths than expected),
> the number of disability retirements, and
> salary increases different than assumed.
The net gain from this other experience for the year ended December 31, 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:
$\left.\begin{array}{ll}\text { Normal Cost } & \begin{array}{l}\text { The annual contribution rate that, if paid annually from a member's first year of } \\ \text { membership through the year of retirement, would accumulate to the amount } \\ \text { necessary to fully fund the member's retirement-related benefits. Accumulation } \\ \text { includes annual crediting of interest at the assumed investment earning rate. The } \\ \text { contribution rate is expressed as a level percentage of the member's } \\ \text { compensation. }\end{array} \\ & \begin{array}{l}\text { For Probation Safety members who have prior benefit service in the General } \\ \text { OCERS plan, the normal cost rate for their current plan is calculated based on the } \\ \text { entry date for their current plan. }\end{array} \\ \text { Contribution to the Unfunded } & \\ \text { Actuarial Accrued Liability (UAAL) } & \begin{array}{l}\text { The annual contribution rate that, if paid annually over the UAAL amortization } \\ \text { period, would accumulate to the amount necessary to fully fund the UAAL. } \\ \text { Accumulation includes annual crediting of interest at the assumed investment } \\ \text { earning rate. The contribution (or rate credit in the case of a negative unfunded } \\ \text { actuarial accrued liability) is calculated to remain as a level percentage of future } \\ \text { active member payroll (including payroll for new members as they enter the }\end{array} \\ \text { System) assuming a constant number of active members. In order to remain as a } \\ \text { level percentage of payroll, amortization payments (credits) are scheduled to } \\ \text { increase at the annual inflation rate of 3.50\%. The outstanding balance of the }\end{array}\right\}$

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

## 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.

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

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


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



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

| CHART 13 (Continued) |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Recommended Employer Contribution Rates as of December 31, |  |  |  |  |
| Safety Employers |  |  |  |  |



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

## CHART 14 <br> "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, 2009 Valuation Pick-Up Percentage

December 31, 2008 Valuation Pick-Up Percentage

## General Members

Rate Group \#1 (non-OCTA)
Rate Group \#2 (2.7\% @ 55 - non-OCFA)

Rate Group \#2 (1.62\% @ 65)
Rate Group \#3 (2.5\% @ 55)
Rate Group \#5 (OCTA)
Rate Group \#9 (2.0\% @ 55 - TCA)
Rate Group \#10 (2.7\% @ 55 - OCFA)
Rate Group \#11 (2.0\% @ 55 - Cemetery)

## Safety Members

Rate Group \#6 (Probation)
Rate Group \#7 (3\% @ 50 - Law Enforcement)

Rate Group \#7 (3\% @ 55 - Law Enforcement)
Rate Group \#8 (Fire Authority)

| Plan A: 100.00\% | Plan B: 97.03\% |
| :--- | :--- |
| Plan I: 99.70\% | Plan J: 97.32\% |
| Plan O: Not <br> calculated | Plan P: 94.18\% |
| Plan G: 99.58\% | Plan H: $98.01 \%$ |
| Plan A: 99.73\% | Plan B: $97.57 \%$ |
| Plan M: $97.57 \%$ | Plan N: 97.57\% |
| Plan I: 100.00\% | Plan J: 97.56\% |
| Plan M: $97.60 \%$ | Plan N: $97.60 \%$ |


| Plan A: 100.00\% | Plan B: 96.62\% |
| :--- | :--- |
| Plan I: 99.63\% | Plan J: 96.98\% |
| Plan O: Not <br> calculated | Plan P: 94.18\% |
| Plan G: 99.45\% | Plan H: 97.79\% |
| Plan A: 99.71\% | Plan B: 97.14\% |
| Plan M: 97.32\% | Plan N: 97.32\% |
| Plan I: 100.00\% | Plan J: 97.42\% |
| Plan M: $96.84 \%$ | Plan N: 96.84\% |


| Plan E: $\mathbf{1 0 0 . 0 0 \%}$ | Plan F: 96.57\% | Plan E: $100.00 \%$ | Plan F: 95.94\% |
| :--- | :--- | :--- | :--- |
| Plan E: $\mathbf{1 0 0 . 0 0 \%}$ | Plan F: 99.72\% | Plan E: 100.00\% | Plan F: 99.68\% |
| Plan Q: Not <br> calculated | Plan R: 99.32\% | Plan Q: Not <br> calculated | Plan R: 99.32\% |
| Plan E: $\mathbf{1 0 0 . 0 0 \%}$ | Plan F: 99.71\% | Plan E: 100.00\% | Plan F: 99.69\% |

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

## CHART 14 (Continued) <br> "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.

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

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

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

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.

CHART 15
Reconciliation of Recommended Employer Contribution Rate from December 31, 2008 to December 31, 2009 (Dollar Amounts in Thousands)

|  | Contribution Rate | Estimated <br> 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 ${ }^{(2)}$ | 0.24\% | 3,961 |
| Subtotal | 2.60\% | \$42,152 |
| Aggregate Recommended Contribution Rate as of December 31, 2009 | 30.13\% | \$487,736 |
| ${ }^{(1)}$ Based on December 31, 2009 projected compensation of $\$ 1,618,491,000$. <br> ${ }^{(2)}$ Includes adjustment to reflect 18-month delay between date of valuation and date of rate implementation |  |  |

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

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

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.

## CHART 16 <br> Reconciliation of Average Recommended Member Contribution from December 31, 2008 to December 31, 2009 (Dollar Amounts in Thousands)

|  | Contribution <br> Rate | Estimated <br> Amount ${ }^{(1)}$ |
| :--- | :---: | ---: |
| 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 | $10.84 \%$ | $\$ 175,429$ |

${ }^{(1)}$ Based on December 31, 2009 projected annual compensation of \$1,618,491,000.
${ }^{(2)}$ 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 2: Valuation Results for the Orange County Employees Retirement System

## E. INFORMATION REQUIRED BY GASB

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

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

## CHART 17 <br> Required Versus Actual Contributions*



[^1]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 wellfunded 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.

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

| EXHIBIT A |  |  |
| :--- | ---: | :--- |
| Table of Plan Coverage |  |  |
| i. General (other than OCTA) |  |  |
|  |  |  |

[^2]
## SECTION 3: Supplemental Information for the Orange County Employees Retirement System

## EXHIBIT A

Table of Plan Coverage
ii. General OCTA

| Category | Year Ended December 31 |  | Change From Prior Year |
| :---: | :---: | :---: | :---: |
|  | 2009 | 2008 |  |
| 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 ${ }^{(1)}$ | \$1,989 | \$1,944 ${ }^{(2)}$ | 2.3\% |
| Disabled members |  |  |  |
| Number in pay status | 223 | 219 | 1.8\% |
| Average age | 61.1 | 60.5 | N/A |
| Average monthly benefit ${ }^{(1)}$ | \$2,008 | \$2,011 ${ }^{(2)}$ | -0.1\% |
| Beneficiaries |  |  |  |
| Number in pay status | 116 | 106 | 9.4\% |
| Average age | 68.0 | 67.8 | N/A |
| Average monthly benefit ${ }^{(1)}$ | \$1,109 | \$1,055 ${ }^{(2)}$ | 5.1\% |

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

## EXHIBIT A

Table of Plan Coverage
iii. Safety Law Enforcement

| Category | Year Ended December 31 |  | Change From Prior Year |
| :---: | :---: | :---: | :---: |
|  | 2009 | 2008 |  |
| 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 ${ }^{(2)}$ | 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 ${ }^{(1)}$ | \$5,820 | \$5,806 ${ }^{(3)}$ | 0.2\% |
| Disabled members |  |  |  |
| Number in pay status | 313 | 313 | 0.0\% |
| Average age | 58.7 | 58.0 | N/A |
| Average monthly benefit ${ }^{(1)}$ | \$3,718 | \$3,692 ${ }^{(3)}$ | 0.7\% |
| Beneficiaries |  |  |  |
| Number in pay status | 142 | 125 | 13.6\% |
| Average age | 68.9 | 69.9 | N/A |
| Average monthly benefit ${ }^{(1)}$ | \$2,370 | \$2,320 ${ }^{(3)}$ | 2.2\% |

[^4]
## SECTION 3: Supplemental Information for the Orange County Employees Retirement System

## EXHIBIT A

Table of Plan Coverage
iv. Safety Probation Officers

| Category | Year Ended December 31 |  | Change From Prior Year |
| :---: | :---: | :---: | :---: |
|  | 2009 | 2008 |  |
| Active members in valuation |  |  |  |
| Number | 972 | 1,106 | -12.1\% |
| Average age | 39.3 | 37.5 | N/A |
| Average service | 11.3 | 9.5 | N/A |
| Projected total compensation | \$69,283,653 | \$72,494,625 ${ }^{(2)}$ | -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 | 153 | 43.8\% |
| Average age | 34.6 | 35.7 | N/A |
| Retired members |  |  |  |
| Number in pay status | 160 | 148 | 8.1\% |
| Average age | 62.3 | 61.6 | N/A |
| Average monthly benefit ${ }^{(1)}$ | \$4,869 | \$4,923 ${ }^{(3)}$ | -1.1\% |
| Disabled members |  |  |  |
| Number in pay status | 12 | 12 | 0.0\% |
| Average age | 48.7 | 47.7 | N/A |
| Average monthly benefit ${ }^{(1)}$ | \$2,491 | \$2,473 ${ }^{(3)}$ | 0.7\% |
| Beneficiaries |  |  |  |
| Number in pay status | 8 | 7 | 14.3\% |
| Average age | 54.3 | 52.6 | N/A |
| Average monthly benefit ${ }^{(1)}$ | \$1,786 | \$1,447 ${ }^{(3)}$ | 23.4\% |

[^5]
## SECTION 3: Supplemental Information for the Orange County Employees Retirement System

## EXHIBIT A

Table of Plan Coverage
v. Safety Fire Authority

| Category | Year Ended December 31 |  | Change From Prior Year |
| :---: | :---: | :---: | :---: |
|  | 2009 | 2008 |  |
| 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 ${ }^{(2)}$ | 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 ${ }^{(1)}$ | \$5,975 | \$5,808 ${ }^{(3)}$ | 2.9\% |
| Disabled members |  |  |  |
| Number in pay status | 98 | 85 | 15.3\% |
| Average age | 60.3 | 59.8 | N/A |
| Average monthly benefit ${ }^{(1)}$ | \$4,977 | \$4,841 ${ }^{(3)}$ | 2.8\% |
| Beneficiaries |  |  |  |
| Number in pay status | 19 | 17 | 11.8\% |
| Average age | 56.1 | 54.4 | N/A |
| Average monthly benefit ${ }^{(1)}$ | \$3,143 | \$3,390 ${ }^{(3)}$ | -7.3\% |

[^6]
## SECTION 3: Supplemental Information for the Orange County Employees Retirement System

## EXHIBIT A <br> Table of Plan Coverage

vi. Total

| Category | Year Ended December 31 |  | Change From Prior Year |
| :---: | :---: | :---: | :---: |
|  | 2009 | 2008 |  |
| 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 ${ }^{(1)}$ | \$3,119 | \$3,047 ${ }^{(2)}$ | 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 ${ }^{(1)}$ | \$2,681 | \$2,623 ${ }^{(2)}$ | 2.2\% |
| Beneficiaries |  |  |  |
| Number in pay status | 1,647 | 1,587 | 3.8\% |
| Average age | 72.1 | 71.6 | N/A |
| Average monthly benefit ${ }^{(1)}$ | \$1,484 | \$1,443 ${ }^{(2)}$ | 2.8\% |

[^7]
## SECTION 3: Supplemental Information for the Orange County Employees Retirement System

## EXHIBIT B

Members in Active Service and Projected Average Compensation as of December 31, 2009
By Age and Years of Service
i. General (other than OCTA)

| Age | Years of Service |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40 \& over |
| Under 25 | 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 |

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

## EXHIBIT B

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

| Age | Years of Service |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40 \& over |
| Under 25 | 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 | -- |

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

## EXHIBIT B

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

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

## EXHIBIT B

Members in Active Service and Projected Average Compensation as of December 31, 2009
By Age and Years of Service
iv. Safety Probation Officers

| Age | Years of Service |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40 \& over |
| Under 25 | 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 | -- |

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

## EXHIBIT B

Members in Active Service and Projected Average Compensation as of December 31, 2009
By Age and Years of Service
v. Safety Fire Authority

| 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 | 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 | -- |

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

## EXHIBIT B

Members in Active Service and Projected Average Compensation as of December 31, 2009
By Age and Years of Service
vi. Total

| 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 | 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 |

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

## EXHIBIT C

Reconciliation of Member Data - December 31, 2008 to December 31, 2009

|  | Active <br> Members | Vested Former <br> 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 | $-448^{(1)}$ | 448 | 0 | 0 | 0 | 0 |
| Contributions refunds | $-334^{(2)}$ | -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 | -30 | -56 | 0 |
| Deaths | -27 | -2 | -185 | -1 | 0 | -300 |
| Data adjustments | -3 | 3 | 0 | 1,274 | 1,647 | -1 |
| Number as of December 31, 2009 | 22,633 | 4,094 | 9,322 | 38,970 |  |  |

${ }^{(1)}$ Includes 51 terminated before January 1, 2009
${ }^{(2)}$ Includes 19 terminated before January 1, 2009

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

## EXHIBIT D

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

|  | Year Ended December 31, 2009 | Year Ended December 31, 2008 |
| :---: | :---: | :---: |
| Contribution income: |  |  |
| Employer contributions ${ }^{(1)}$ | \$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 | -46,548,000 | -42,772,000 |
| 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 |

[^8]
## SECTION 3: Supplemental Information for the Orange County Employees Retirement System

## EXHIBIT E

Summary Statement of Assets

|  | Year Ended December 31, 2009 |  | Year Ended December 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 |  | 1,845,000 |  |
| 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 | $\underline{-51,249,000}$ |  | $\underline{-37,508,000}$ |  |
| Total accounts payable |  | -\$1,934,064,000 |  | -\$1,398,343,000 |
| Net assets at market value |  | \$7,464,761,000 ${ }^{(1)}$ |  | $\underline{\$ 6,248,558,000}{ }^{(2)}$ |
| Net assets at actuarial value |  | \$8,155,654,000 |  | \$7,750,751,000 |
| Net assets at valuation value |  | \$8,154,687,000 |  | \$7,748,380,000 |

[^9]
## SECTION 3: Supplemental Information for the Orange County Employees Retirement System

## EXHIBIT F <br> Actuarial Balance Sheet

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

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

Assets

| 1. Total valuation value of assets | \$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 |
| Liabilities |  |
| 5. Present value of retirement allowance payable to present retired members | \$5,430,252,000 |
| 6. Present value of retirement allowances to be granted to present non-retired members | 9,585,761,000 |
| 7. Total actuarial liabilities | \$15,016,013,000 |

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
3,703,891,000
4. Total current and future assets \$15,016,013,000
$\underline{\text { Liabilities }}$

## 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 |  | 143,029,000 |
| Subtotal: Valuation Value of Assets |  | \$8,154,687,000 |
| Not Included in Valuation Value of Assets |  |  |
| RMBR | \$18,000 |  |
| Unclaimed Member Deposit | 849,000 |  |
| Medicare Medical Insurance Reserve | 100,000 |  |
| Total | \$967,000 |  |
| Subtotal: Actuarial Value of Assets |  | \$8,155,654,000 |
| Unrecognized Investment Income (Loss) |  | -690,893,000 |
| 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 |
| Total: Gross Market Value of Assets |  | \$7,593,112,000 |

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

## EXHIBIT H

Development of Unfunded/(Overfunded) Actuarial Accrued Liability for Year Ended December 31, 2009
$\left.\begin{array}{llr}1 . & & \$ 3,112,335,000 \\ \text { 2. Unfunded actuarial accrued liability at beginning of year } & \\ \text { Actuarial accrued liability due to the inclusion of additional premium pay } \\ \text { items as pensionable salary (measured as of December 31, 2008) }\end{array}\right) \quad 228,051,000$

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

## EXHIBIT I <br> 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.

## EXHIBIT J <br> Definitions of Pension Terms

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

## Assumptions or Actuarial <br> Assumptions:

## Normal Cost:

## Actuarial Accrued Liability <br> For Actives:

## Actuarial Accrued Liability

For Pensioners:

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

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

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

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:

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

## Investment Return:

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.

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

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

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

## EXHIBIT I

Supplementary Information Required by GASB - Schedule of Employer Contributions

| Plan Year <br> Ended December 31 | Annual Required <br> Contributions | Actual <br> Contributions |  |
| :---: | :---: | :---: | :---: |
| 2004 | $\$ 194,430,000$ | $\$ 194,430,000$ | Percentage <br> Contributed |
| 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 | $359,673,000$ | $360,365,000^{(2)}$ | $100.0 \%$ |
| 2009 | $337,496,000$ | $338,387,000^{(3)}$ | $100.2 \%$ |

${ }^{(1)}$ Excludes transfers from County Investment Account. See below.
Plan Year Transfers from County
Ended December 31 Investment Account

| 2004 | $3,579,000$ |
| :--- | ---: |
| 2005 | $9,675,000$ |
| 2006 | $11,000,000$ |
| 2007 | 0 |
| 2008 | 0 |
| 2009 | $34,900,000$ |

${ }^{(2)}$ Includes $\$ 692,000$ in additional contributions made by OCFA towards the reduction of their UAAL.
${ }^{(3)}$ Includes $\$ 891,000$ in additional contributions made by OCFA towards the reduction of their UAAL.

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

EXHIBIT II
Supplementary Information Required by GASB - Schedule of Funding Progress

| Actuarial Valuation Date December 31 | Valuation Value of Assets (a) | Actuarial Accrued Liability (AAL) <br> (b) | Unfunded/ (Overfunded) AAL (UAAL) (b) - (a) | Funded Ratio <br> (a) I (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 | 22,633 |
| Total | 38,970 |

[^10]
## SECTION 4: Reporting Information for the Orange County Employees Retirement System

| EXHIBIT IV <br> Actuarial Assumptions and Act | 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. |

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

Termination Rates Before Retirement:

|  | Rate (\%) <br> Mortality |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Age | General |  |  | Safety |  |
| 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 |  |
|  |  |  |  | Male |  |
| All pre-remale |  |  |  |  |  |

Termination Rates Before Retirement (Continued):

| Age | Rate (\%) <br> Disability |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { General All } \\ & \text { Other }{ }^{(1)} \end{aligned}$ | $\begin{aligned} & \text { General } \\ & \text { OCTA }^{(2)} \end{aligned}$ | $\begin{gathered} \text { Safety - Law \& } \\ \text { Fire }^{(3)} \end{gathered}$ | Safety Probation ${ }^{(3)}$ |
| 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 |

${ }^{(1)} 50 \%$ of General All Other disabilities are assumed to be service connected disabilities. The other 50\% are assumed to be nonservice connected.
(2) $70 \%$ of General - OCTA disabilities are assumed to be service connected disabilities. The other 30\% are assumed to be nonservice connected.
${ }^{(3)} 100 \%$ 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 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { General All } \\ \text { Other } \end{gathered}$ | General $\text { OCTA }^{(1)}$ | $\begin{gathered} \text { Safety - Law \& } \\ \text { Fire }^{(1)} \end{gathered}$ | Safety Probation ${ }^{(1)}$ |
| 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 |
|  | Termination (5+ Years of Service) |  |  |  |
| Age | General All Other ${ }^{(2)}$ | General $\text { OCTA }^{(2)}$ | Safety - Law \& | Safety Probation ${ }^{(2)}$ |
| 20 | 5.0 | 4.0 | 1.0 | 5.0 |
| 25 | 5.0 | 4.0 | 1.0 | 5.0 |
| 30 | 5.0 | 4.0 | 1.0 | 4.6 |
| 35 | 4.4 | 4.0 | 0.9 | 3.8 |
| 40 | 3.7 | 4.0 | 0.6 | 3.1 |
| 45 | 2.9 | 3.4 | 0.5 | 2.5 |
| 50 | 2.2 | 2.7 | 0.2 | 2.0 |
| 55 | 1.4 | 1.9 | 0.0 | 1.3 |
| 60 | 0.4 | 0.6 | 0.0 | 0.4 |

${ }^{(1)} 75 \%$ of all terminated members will choose a refund of contributions and $25 \%$ will choose a deferred vested benefit.
${ }^{(2)} 20 \%$ of all terminated members will choose a refund of contributions and $80 \%$ will choose a deferred vested benefit.
${ }^{(3)} 10 \%$ of terminated members will choose a refund of contributions and $90 \%$ will choose a deferred vested benefit.

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

## Retirement Rates:

|  | Rate (\%) |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Age | General - <br> Enhanced | General - <br> Non-Enhanced | Safety <br> Law $\mathbf{w}^{(1)}$ | Safety <br> Fire $^{(1)}$ | Safety - <br> Probation |
| 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 |

(1) 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: <br> promotion increases: <br>  <br> 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:

## Actuarial Value of Assets:

Valuation Value of Assets:

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 <br> Year Salary | Final Three <br> 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.

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 Cost Method:

## Changes in Actuarial Assumptions and Methods:

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.

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

## EXHIBIT V <br> 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 ${ }^{(1)}$ ) |  |
| 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 ${ }^{(1)}$, Orange County Employees Retirement System ${ }^{(2)}$, Children and Family Commission ${ }^{(3)}$ and Orange County Fire Authority) |  |
| Plan I | General members hired before September 21, 1979. |
| Plan J | General members hired on or after September 21, 1979. |
| ${ }^{(1)}$ Improvement is prospective only for service after June 23, 2005. |  |
| ${ }^{(2)}$ Improvement for management employees is prospective only for service after June 30, 2005. |  |
| ${ }^{(3)}$ Improvement is prospective only for service after December 22, 2005. |  |
| 2.0\% @ 55 Plans (Transportation Corridor Agency, Cemetery District - future service effective December 7, 2007) |  |
| Plan M | General members hired before September 21, 1979. |
| Plan $N$ | General members hired on or after September 21, 1979. |

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

| 1.62\% @ 65 Plans (Orange County Employees 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. |

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

| Benefit Formula: |  |  |
| :---: | :---: | :---: |
| General Plans |  |  |
| 2.5\% @ 55 | Retirement Age | Benefit Formula |
| Plan G (§31676.18) | 50 | (2.00\% x FAS $1 \times$ 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 $\times$ 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) |

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

| $2.7 \%$ @ 55 | Retirement Age | Benefit Formula |
| :--- | :---: | :---: |
| Plan I (§31676.19) | 50 | $(2.00 \% \times$ FAS $1 \times$ Yrs $)$ |
|  | 55 | $(2.70 \% \times$ FAS $1 \times \mathrm{Yrs})$ |
|  | 60 | $(2.70 \% \times$ FAS $1 \times \mathrm{Yrs})$ |
|  | 62 | $(2.70 \% \times$ FAS $1 \times$ Yrs $)$ |
| $(2.70 \% \times$ 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 $\times$ 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)*** |
| ** Reflects benefit factors from Plan A as they provide a better benefit than those under 2.0\% @ 55. |  |  |
| *** Reflects benefit fac | $B$ as they provide a b | se 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) |
|  | 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):

| Plan B (§31676.1) | Retirement Age | Benefit Formula |
| :---: | :---: | :---: |
|  | 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 |  |  |
| 3\% @ 50 | 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) |
| 3\%@ 55 | 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 $R(\S 31664.2)$ | 50 | $(2.29 \% \times$ FAS3 x Yrs $)$ |
|  | 55 | $(3.00 \% \times$ FAS $3 \times$ Yrs $)$ |
| ximum Benefit: | 60 | $(3.00 \% \times$ FAS3 x Yrs $)$ |
|  |  |  |
|  | 100\% of Highest Average Compensation. |  |
| (§31676.01, §31676.1, §31676.12, §31676.16, §31676.18, §31676.19, §31664.1, |  |  |
|  | $\S 31664.2)$ |  |

## 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)

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

## Safety Plans

Plans E, F, Q and R
Eligibility

Benefit Formula
Five years of service. (§31720)
$1.8 \%$ 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: <br> All Members <br> Eligibility |  |
| :--- | :--- |
|  | No age or service requirements. ( $(31720)$ |
| Benefit Formula | $50 \%$ of the Final Compensation or $100 \%$ of Service Retirement benefit, if greater. <br> $(31727.4)$ |

Pre-Retirement Death:
All Members

Eligibility
Benefit

Death in line of duty

Vested Members
Eligibility
Benefit

None.
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)
$50 \%$ of Final Compensation or $100 \%$ of Service Retirement benefit, if greater, payable to spouse or minor children. (§31787)

OR

Five years of service.
$60 \%$ of the greater of Service or Ordinary Disability Retirement benefit payable to eligible surviving spouse ( $\S 31765.1$, §31781.1), in lieu of $\S 31781$.

| Death After Retirement: |  |
| :---: | :---: |
| All Members |  |
| Service or |  |
| Ordinary Disability Retirement | $60 \%$ of member's unmodified allowance continued to eligible spouse. (§31760.1) A lump sum benefit in the amount of $\$ 1,000$ is payable upon the death of a member (with 10 years of service) to his/her eligible beneficiary. (\$31790) An eligible spouse is a surviving spouse who was married to the member at least one year prior to the date of retirement. ( $\$ 31760.1$ ) |
| Line-of-Duty Disability | $100 \%$ of member’s allowance continued to eligible spouse. (§31786) A lump sum benefit in the amount of $\$ 1,000$ is payable upon the death of a member (with 10 years of service) to his/her eligible beneficiary. (\$31790) |
| Withdrawal Benefits: |  |
| Less than Five Years of Service | Refund of accumulated employee contributions with interest or earned benefit at age 70. (§31628) Effective January 1, 2003, a member may also elect to leave contributions on deposit in the retirement fund. (§31629.5) |
| Five or More Years of Service | If contributions left on deposit, entitled to earned benefits commencing at any time after eligible to retire. (\$31700) |
| Post-retirement Cost-of-Living Benefits: | Future changes based on Consumer Price Index to a maximum of 3\% per year, excess "banked." (\$31870.1) |
| Supplemental Benefit: | Non-vested supplemental COLA and medical benefits are also paid by the System to eligible retirees and survivors. These benefits have been excluded from this valuation. |

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

## Member Contributions:

## General Plans

Plan A
Basic

Cost-of-Living
Plan B
Basic

Cost-of-Living
Plans G, H, I and J
Basic

Cost-of-Living
Plan $M$ and $O$
Basic

Cost-of-Living
Plan N and P
Basic

Cost-of-Living
Please refer to Appendix A for the specific rates.

Provide for an average annuity payable at age 60 equal to $1 / 200$ of FAS1. (§31621.5)
Provide for $50 \%$ of future Cost-of-Living costs.

Provide for an average annuity payable at age 60 equal to $1 / 120$ of FAS3. (§31621)
Provide for $50 \%$ of future Cost-of-Living costs.

Provide for an average annuity payable at age 55 equal to $1 / 100$ of FAS3 (FAS1 for Plans G and I). (§31621.8)
Provide for $50 \%$ of future Cost-of-Living costs.

Provide for an average annuity payable at age 60 equal to $1 / 120$ of FAS1. (§31621)
Provide for $50 \%$ of future Cost-of-Living costs.

Provide for an average annuity payable at age 60 equal to $1 / 120$ of FAS3. (§31621)
Provide for $50 \%$ of future Cost-of-Living costs.

## Safety Plans:

| Plans E and Q <br> Basic <br> Cost-of-Living | Provide for an average annuity payable at age 50 equal to 1/200 FAS1. (§31639.5) <br> 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. <br> (§31639.25) <br> 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 <br> contributions. This also applies for General members hired on or before March 7, |
|  | 1973. |

NOTE: $\quad$ 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 <br> UAAL Amortization Schedule as of December 31, 2009

| Rate Groups | Date Established | Source | Initial Base | Years Remaining | Remaining Base | Amortization 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 | 1,071,000 | 97,000 |
| 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 | 297,000 |
| Subtotal |  |  |  |  | \$46,318,000 | \$3,253,000 |

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

| Rate Groups | Date <br> Established | Source | Rears | Remaining <br> Base | Amortization <br> Amount |
| :--- | :--- | :--- | :--- | :--- | ---: | ---: |
| Rate Group \#11 - Cemetery |  |  |  |  |  |
| Remaining |  |  |  |  |  |

## 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 |

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

## Appendix B <br> 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 | on-OCFA) | Plan G | 55) | Plan M | @ 55)* | Plan A | CTA) |
| Entry Age | Normal | Total | Normal | Total | Normal | Total | Normal | Total |
| 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\% | 6.11\% |
| 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\% |


| 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\% @ 55) |  | Plan M (2.0\% @ 55)* |  | Plan A (OCTA) |  |
| Entry Age | Normal | Total | Normal | Total | Normal | Total | Normal | Total |
| 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\% |
| COLA Loading: |  | 34.87\% |  | 33.41\% |  | 41.17\% |  | 65.28\% |
| Interest: | 7.75\% |  |  |  |  |  |  |  |
| Salary Increases: | See Exhib | 53 |  |  |  |  |  |  |
| Mortality: | See Exhib | 47 |  |  |  |  |  |  |

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 (Non-OCTA) |  | Plan I (2.7\% @ 55 OCFA) |  |
| Entry Age | Normal | Total | Normal | Total |
| 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\% |

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

| Entry Age | Plan A (Non-OCTA) |  |
| :---: | :---: | :---: |
|  | Normal | Total |
| 43 | 4.23\% | 6.63\% |
| 44 | 4.31\% | 6.75\% |
| 45 | 4.38\% | 6.87\% |
| 46 | 4.47\% | 7.00\% |
| 47 | 4.55\% | 7.13\% |
| 48 | 4.64\% | 7.27\% |
| 49 | 4.74\% | 7.42\% |
| 50 | 4.84\% | 7.58\% |
| 51 | 4.94\% | 7.74\% |
| 52 | 5.04\% | 7.90\% |
| 53 | 5.14\% | 8.06\% |
| 54 | 5.21\% | 8.17\% |
| 55 | 5.25\% | 8.22\% |
| 56 | 5.25\% | 8.23\% |
| 57 | 5.23\% | 8.19\% |
| 58 | 5.17\% | 8.10\% |
| 59 | 5.08\% | 7.97\% |
| 60 | 5.08\% | 7.97\% |
| COLA Loading: |  | 56.72\% |
| Interest: | 7.75\% |  |
| Salary Increases: | See Exhibit IV, page 53 |  |
| Mortality: | See Exh | page 47 |

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

|  | Plan J (2.7\% @ 55 non-OCFA) |  | Plan H (2.5\% @ 55) |  | Plan N (2.0\% @ 55)* |  | Plan B (OCTA) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Entry Age | Normal | Total | Normal | Total | Normal | Total | Normal | Total |
| 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\% |
| 42 | 9.31\% | 12.55\% | 9.31\% | 12.42\% | 6.61\% | 9.34\% | 6.61\% | 9.20\% |

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

|  | Plan J (2.7\% @ 55 non-OCFA) |  | Plan H (2.5\% @ 55) |  | Plan N (2.0\% @ 55)* |  | Plan B (OCTA) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Entry Age | Normal | Total | Normal | Total | Normal | Total | Normal | Total |
| 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\% |


| Interest: | $7.75 \%$ |
| :--- | :--- |
| Salary Increases: | See Exhibit IV, page 53 |
| Mortality: | See Exhibit IV, page 47 |

* 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)

|  | Plan B (Non-OCTA) |  | Plan J (2.7\% @ 55 OCFA) |  | Plan P (1.62\% @ 65) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Entry Age | Normal | Total | Normal | Total | Normal | Total |
| 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)

|  |  |  |
| :---: | :---: | ---: |
|  | Plan B (Non-OCTA) <br> Entry Age <br> Normal | $\underline{\text { Total }}$ |
| 43 | $6.74 \%$ | $9.03 \%$ |
| 44 | $6.86 \%$ | $9.19 \%$ |
| 45 | $6.98 \%$ | $9.36 \%$ |
| 46 | $7.11 \%$ | $9.53 \%$ |
| 47 | $7.25 \%$ | $9.71 \%$ |
| 48 | $7.39 \%$ | $9.91 \%$ |
| 49 | $7.54 \%$ | $10.10 \%$ |
| 50 | $7.68 \%$ | $10.30 \%$ |
| 51 | $7.82 \%$ | $10.49 \%$ |
| 52 | $7.94 \%$ | $10.65 \%$ |
| 53 | $8.03 \%$ | $10.76 \%$ |
| 54 | $8.07 \%$ | $10.81 \%$ |
| 55 | $8.06 \%$ | $10.80 \%$ |
| 56 | $8.00 \%$ | $10.72 \%$ |
| 57 | $7.89 \%$ | $10.58 \%$ |
| 58 | $8.17 \%$ | $10.96 \%$ |
| 59 | $8.47 \%$ | $11.36 \%$ |
| 60 | $8.47 \%$ | $11.36 \%$ |
|  |  |  |
| COLA Loading: |  | $34.03 \%$ |
|  |  |  |
| Interest: | $7.75 \%$ |  |
| Salary Increases: | See Exhibit IV, page 53 |  |
| Mortality: | See Exhibit IV, page 47 |  |

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)

| Entry Age | Calculated Under Recommended Assumptions |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Plan E (Fire Authority) |  | Plan E (Law Enforcement) |  | Plan E (Probation) |  |
|  | Normal | Total | Normal | Total | Normal | Total |
| 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)

|  | Plan E (Fire Authority) |  | Plan E (Law Enforcement) |  | Plan E (Probation) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Entry Age | Normal | Total | Normal |  | Normal | Total |
| 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\% |


| Interest: | $7.75 \%$ |
| :--- | :--- |
| Salary Increases: | See Exhibit IV, page 53 |
| Mortality: | See Exhibit IV, page 47 |

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

|  | Plan F (Fire Authority) |  | Plan F (Law Enforcement) |  | Plan F (Probation) |  | Plan R (Law Enforcement) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Entry Age | Normal | Total | Normal | Total | Normal | Total | Normal | Total |
| 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

## Appendix C <br> Funded Percentages

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

|  | December 31, 2009 Valuation <br> Funded Percentage | December 31, 2008 Valuation <br> 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 |  | $64.91 \%$ |
| Rate Group \#6 (Probation) | $66.46 \%$ | $71.15 \%$ |
| Rate Group \#7 (Law Enforcement) | $68.28 \%$ | $70.15 \%$ |
| Rate Group \#8 (Fire Authority) | $62.97 \%$ |  |

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[^0]:    ${ }^{(1)}$ Based on December 31, 2009 projected annual compensation.
    ${ }^{(2)}$ Rates have been recalculated by applying the individual entry age based member rates determined in the December 31, 2008 valuation to the System membership

[^1]:    * Actual contributions excludes transfers from County Investment Account. See page 44.

[^2]:    ${ }^{(1)}$ 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.

[^3]:    ${ }^{(1)}$ 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.

[^4]:    ${ }^{(1)}$ 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.

[^5]:    ${ }^{(1)}$ Excludes monthly benefits payable from the RMBR and STAR COLA.
    ${ }^{(2)}$ Includes a 1\% 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.

[^6]:    ${ }^{(1)}$ 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.

[^7]:    ${ }^{(1)}$ 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.

[^8]:    ${ }^{(1)}$ Excludes $\$ 20,027,000$ and $\$ 24,345,000$ in prepaid employer contributions as of December 31, 2009 and December 31, 2008, respectively.

[^9]:    1) 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
    ${ }^{(2)}$ 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.
[^10]:    * See Exhibit IV for these increases, including inflation rate.

