



California Public Employees' Retirement System  
 Actuarial Office  
 P.O. Box 942701  
 Sacramento, CA 94229-2701  
 TTY: (916) 795-3240  
 (888) 225-7377 phone • (916) 795-2744 fax  
 www.calpers.ca.gov

October 2011

**MISCELLANEOUS PLAN OF THE CITY OF SACRAMENTO (EMPLOYER # 1121)  
 Annual Valuation Report as of June 30, 2010**

Dear Employer,

As an attachment to this letter, you will find a copy of the June 30, 2010 actuarial valuation report of your pension plan. This report contains important actuarial information about your pension plan at CalPERS. Your CalPERS staff actuary is available to discuss the report with you.

**Changes Since the Prior Year's Valuation**

A temporary modification to our method of determining the actuarial value of assets and amortizing gains and losses was implemented for the valuations as of June 30, 2009 through June 30, 2011. The effect of those modifications continue in this valuation.

There may also be changes specific to your plan such as contract amendments and funding changes.

Further descriptions of general changes are included in the "Highlights and Executive Summary" section and in Appendix A, "Statement of Actuarial Data, Methods and Assumptions." The effect of the changes on your rate is included in the "Reconciliation of Required Employer Contributions."

**Future Contribution Rates**

The exhibit below displays the required employer contribution rate and Superfunded status for 2012/2013 along with estimates of the contribution rate for 2013/2014 and 2014/2015 and the probable Superfunded status for 2013/2014. The estimated rate for 2013/2014 is based solely on a projection of the investment return for fiscal 2010/2011, namely 20.0%. The estimated rate for 2014/2015 uses the valuation assumption of 7.75% as the investment return for fiscal 2011/2012. See Appendix D, "Investment Return Sensitivity Analysis", for rate projections under a variety of investment return scenarios. Please disregard any projections that we may have provided to you in the past.

| Fiscal Year | Employer Contribution Rate | Superfunded? |
|-------------|----------------------------|--------------|
| 2012/2013   | 12.844%                    | NO           |
| 2013/2014   | 13.0% (projected)          | NO           |
| 2014/2015   | 13.1% (projected)          | N/A          |

Member contributions (whether paid by the employer or the employee) are in addition to the above rates.

The estimates for 2013/2014 and 2014/2015 also assume that there are no future amendments and no liability gains or losses (such as larger than expected pay increases, more retirements than expected, etc.). **This is a very important assumption because these gains and losses do occur and can have a significant impact on your contribution rate.** Even for the largest plans, such gains and losses often cause a change in the employer's contribution rate of one or two percent and may be even larger in some less common instances. These gains and losses cannot be predicted in advance so the projected employer contribution rates are just estimates. Your actual rate for 2013/2014 will be provided in next year's report.

MISCELLANEOUS PLAN OF THE CITY OF SACRAMENTO (EMPLOYER # 1121)

October 2011

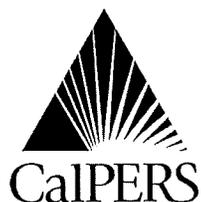
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We are very busy preparing actuarial valuations for other public agencies and expect to complete all such valuations by the end of October. We understand that you might have a number of questions about these results. While we are very interested in discussing these results with your agency, in the interest of allowing us to give every public agency their result, we ask that, if at all possible, you wait until after October 31 to contact us with questions. If you have questions, please call (888) CalPERS (225-7377).

Sincerely,

A handwritten signature in cursive script, appearing to read "Alan Milligan".

ALAN MILLIGAN, MAAA, FCA, FSA, FCIA  
Chief Actuary



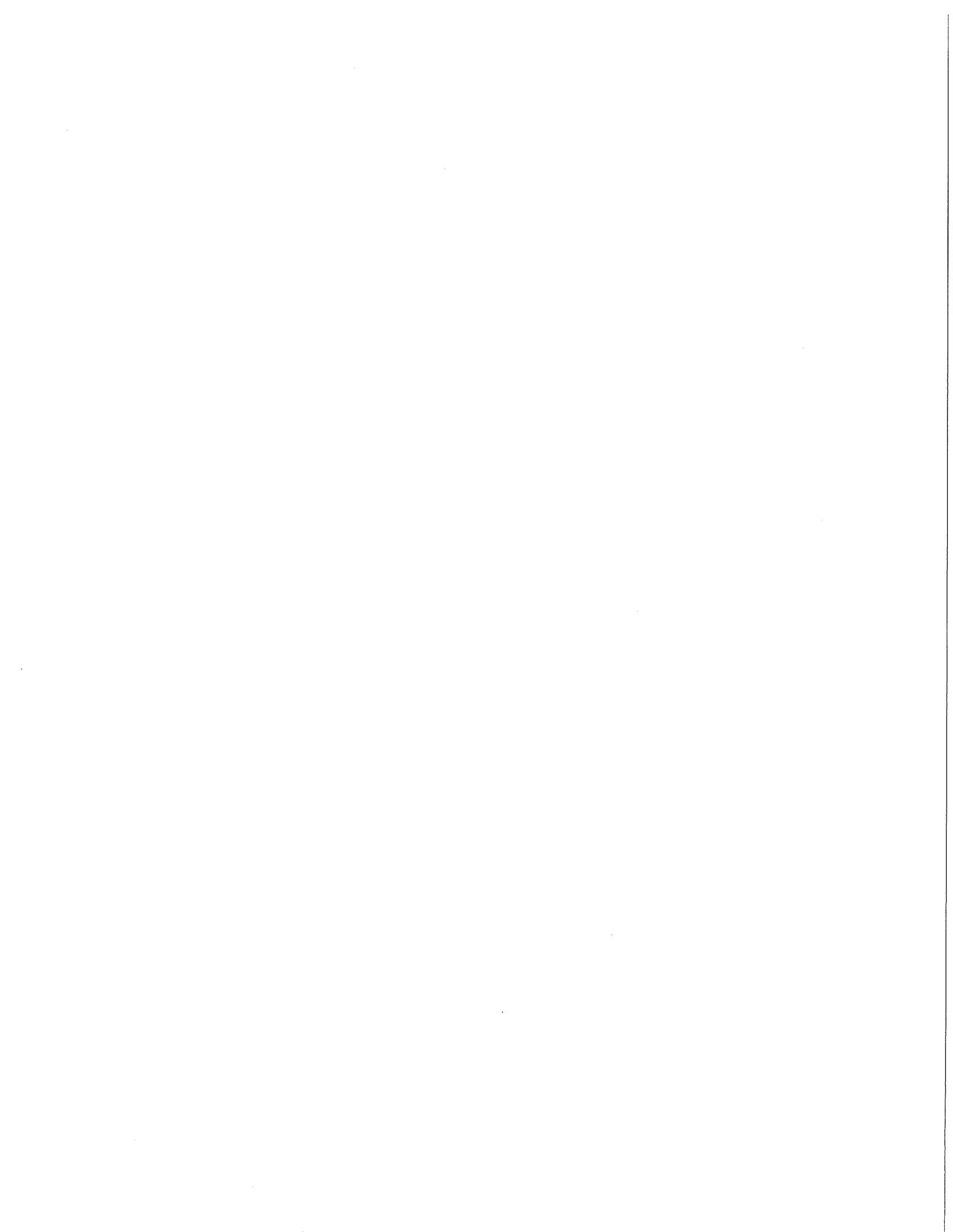
**ACTUARIAL VALUATION**

as of June 30, 2010

**for the  
MISCELLANEOUS PLAN  
of the  
CITY OF SACRAMENTO  
(EMPLOYER # 1121)**

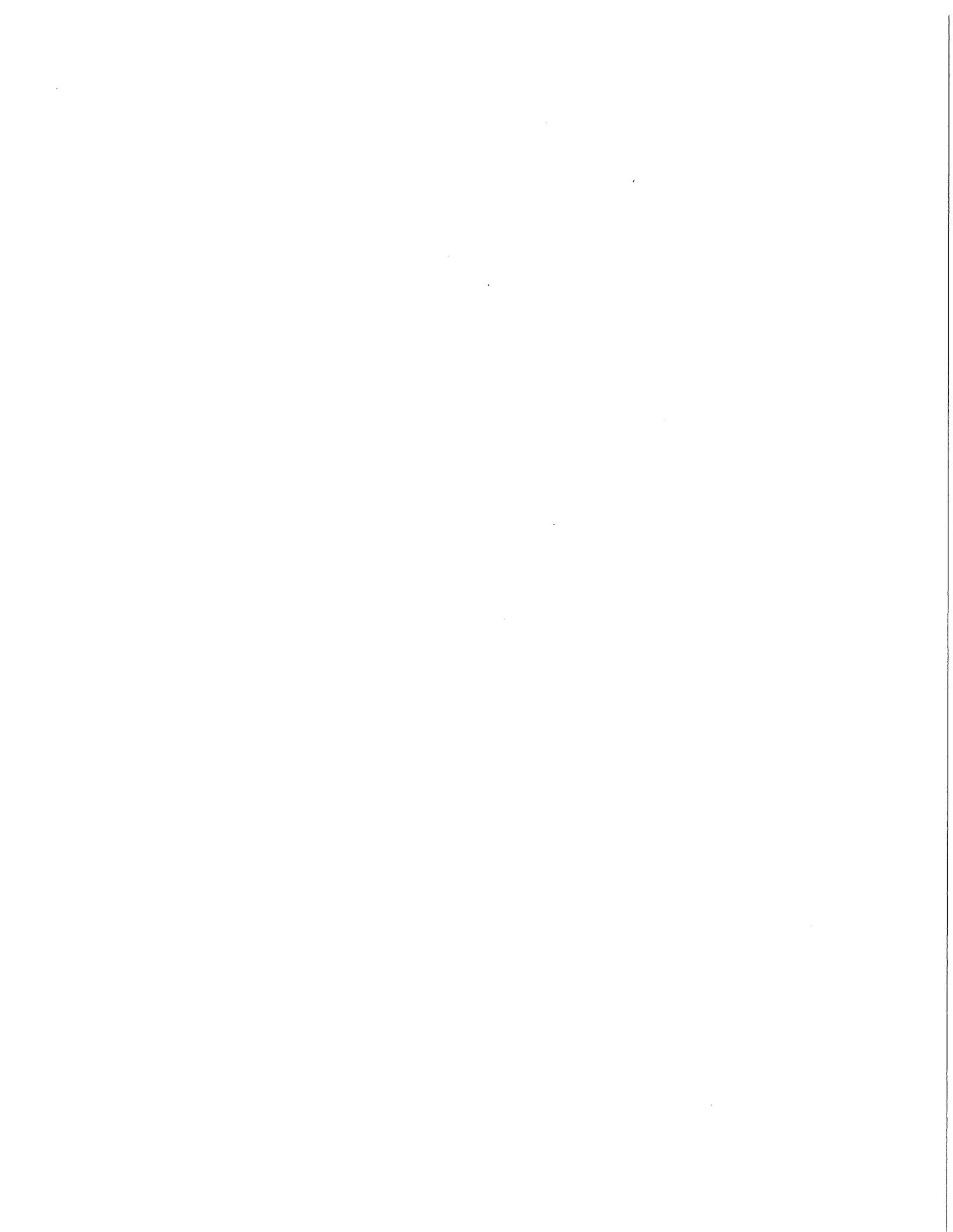
**REQUIRED CONTRIBUTIONS  
FOR FISCAL YEAR**

**July 1, 2012 – June 30, 2013**



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## ACTUARIAL CERTIFICATION

To the best of our knowledge, this report is complete and accurate and contains sufficient information to disclose, fully and fairly, the funded condition of the MISCELLANEOUS PLAN OF THE CITY OF SACRAMENTO. This valuation is based on the member and financial data as of June 30, 2010 provided by the various CalPERS databases and the benefits under this plan with CalPERS as of the date this report was produced. It is our opinion that the valuation has been performed in accordance with generally accepted actuarial principles, in accordance with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods are internally consistent and reasonable for this plan, as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

The undersigned listed are actuaries for CalPERS. Both are members of the American Academy of Actuaries and the Society of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.



FRITZIE ARCHULETA, ASA, MAAA  
Senior Pension Actuary, CalPERS  
Plan Actuary

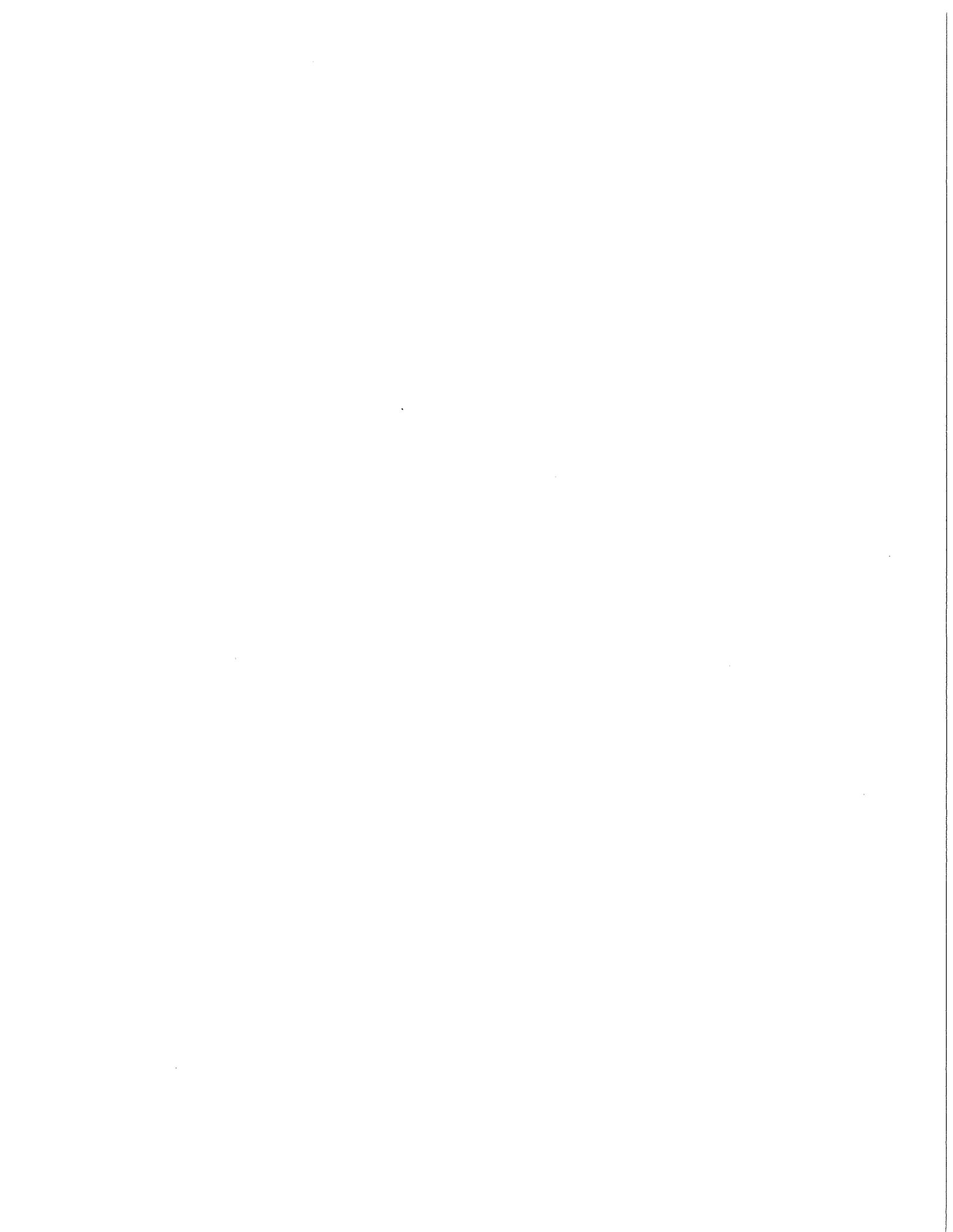


ALAN MILLIGAN, MAAA, FCA, FSA, FCIA  
Chief Actuary



# HIGHLIGHTS AND EXECUTIVE SUMMARY

- **PURPOSE OF THE REPORT**
- **REQUIRED CONTRIBUTIONS**
- **FUNDED STATUS**
- **COST AND VOLATILITY**
- **CHANGES SINCE THE PRIOR VALUATION**



## Purpose of the Report

This report presents the results of the June 30, 2010 actuarial valuation of the MISCELLANEOUS PLAN OF THE CITY OF SACRAMENTO of the California Public Employees' Retirement System (CalPERS). The valuation was prepared by the Plan Actuary in order to:

- set forth the actuarial assets and accrued liabilities of this plan as of June 30, 2010;
- certify that the actuarially required employer contribution rate of this plan for the fiscal year July 1, 2012 through June 30, 2013 is 12.844%;
- provide actuarial information as of June 30, 2010 to the CalPERS Board of Administration and other interested parties; and
- provide pension information as of June 30, 2010 to be used in financial reports subject to Governmental Accounting Standards Board (GASB) Statement Number 27 for a Single Employer Defined Benefit Pension Plan.

The use of this report for any other purposes may be inappropriate. In particular, this report does not contain information applicable to termination or alternative benefit costs. The employer should contact their actuary before disseminating any portion of this report for any reason that is not explicitly described above.

## Required Contributions

|  | <b>Fiscal Year<br/>2011/2012</b> | <b>Fiscal Year<br/>2012/2013</b> |
|--|----------------------------------|----------------------------------|
| <b>Required Employer Contributions</b>                 |                                  |                                  |
| Employer Contribution Required (in Projected Dollars)  |                                  |                                  |
| Payment for Normal Cost                                | \$ 14,509,418                    | \$ 14,017,289                    |
| Payment on the Amortization Bases                      | 9,925,118                        | 10,205,035                       |
| Total (not less than zero)                             | \$ 24,434,536                    | \$ 24,222,324                    |
| Annual Lump Sum Prepayment Option*                     | \$ 23,539,404                    | \$ 23,334,966                    |
| Employer Contribution Required (Percentage of Payroll) |                                  |                                  |
| Payment for Normal Cost                                | 7.517%                           | 7.433%                           |
| Payment on the Amortization Bases                      | 5.142%                           | 5.411%                           |
| Total (not less than zero)                             | 12.659%                          | 12.844%                          |

## Funded Status

|                                     | <b>June 30, 2009</b> | <b>June 30, 2010</b> |
|-------------------------------------|----------------------|----------------------|
| Present Value of Projected Benefits | \$ 903,783,216       | \$ 947,684,120       |
| Entry Age Normal Accrued Liability  | \$ 696,454,481       | \$ 750,920,883       |
| Actuarial Value of Assets (AVA)     | 556,378,430          | 606,857,292          |
| Unfunded Liability (AVA)            | \$ 140,076,051       | \$ 144,063,591       |
| Market Value of Assets (MVA)        | \$ 402,507,980       | \$ 477,184,231       |
| Unfunded Liability (MVA)            | 293,946,501          | 273,736,652          |
| Funded Status (MVA)                 | 57.8%                | 63.5%                |
| <b>Superfunded Status</b>           | No                   | No                   |

\* Payment **must be** received by CalPERS before the first payroll of the new fiscal year and after June 30.

## Cost and Volatility

### Actuarial Cost Estimates in General

What will this pension plan cost? Unfortunately, there is no simple answer. There are two major reasons for the complexity of the answer. First, all actuarial calculations, including the ones in this report, are based on a number of assumptions about the future. These assumptions can be divided into two categories.

- Demographic assumptions include the percentage of employees that will terminate, die, become disabled, and retire in each future year.
- Economic assumptions include future salary increases for each active employee, and the assumption with the greatest impact, future asset returns at CalPERS for each year into the future until the last dollar is paid to current members of your plan.

While CalPERS has set these assumptions to reflect our best estimate of the real future of your plan, it must be understood that these assumptions are very long term predictors and will surely not be realized in any one year. For example, while the asset earnings at CalPERS have averaged more than the assumed return of 7.75% for the past twenty year period ending June 30, 2011, returns for each fiscal year ranged from -24% to +20.7%

Second, the very nature of actuarial funding produces the answer to the question of plan cost as the sum of two separate pieces.

- The Normal Cost (i.e., the future annual premiums in the absence of surplus or unfunded liability) expressed as a percentage of total active payroll.
- The Past Service Cost or Accrued Liability (i.e., the current value of the benefit for all credited past service of current members) which is expressed as a lump sum dollar amount.

The cost is the sum of a percent of future pay and a lump sum dollar amount (the sum of an apple and an orange if you will). To communicate the total cost, either the Normal Cost (i.e., future percent of payroll) must be converted to a lump sum dollar amount (in which case the total cost is the present value of benefits), or the Past Service Cost (i.e., the lump sum) must be converted to a percent of payroll (in which case the total cost is expressed as the employer's rate, part of which is permanent and part temporary). Converting the Past Service Cost lump sum to a percent of payroll requires a specific amortization period, and the employer rate will vary depending on the amortization period chosen.

### Rate Volatility

As is stated above, the actuarial calculations supplied in this communication are based on a number of assumptions about very long term demographic and economic behavior. Unless these assumptions (terminations, deaths, disabilities, retirements, salary growth, and investment return) are exactly realized each year, there will be differences on a year to year basis. The year-to-year differences between actual experience and the assumptions are called actuarial gains and losses and serve to lower or raise the employer's rates from one year to the next. Therefore, the rates will inevitably fluctuate, especially due to the ups and downs of investment returns.

Plans that have higher asset to payroll ratios produce more volatile employer rates due to investment return. On the following page we have shown your volatility index, a measure of the plan's potential future rate volatility. It should be noted that this ratio increases over time but generally tends to stabilize as the plan matures.

| <b>Rate Volatility</b>                     | <b>As of June 30, 2010</b> |             |
|--|----------------------------|-------------|
| Market Value of Assets without Receivables | \$                         | 476,012,816 |
| Payroll                                    |                            | 171,328,547 |
| Volatility Index                           |                            | 2.8         |

## Changes since the Prior Valuation

### Actuarial Assumptions

There were no changes made to the actuarial assumptions since the prior year's actuarial valuation. The only exception would be changes necessary to reflect a benefit amendment.

### Actuarial Methods

A method change was adopted by the CalPERS Board in June 2009. We are in the second year of a 3-year temporary change to the asset smoothing method and the amortization of gains and losses in order to phase in the impact of the -24% investment loss experienced by CalPERS in fiscal year 2008-2009. The following changes were adopted:

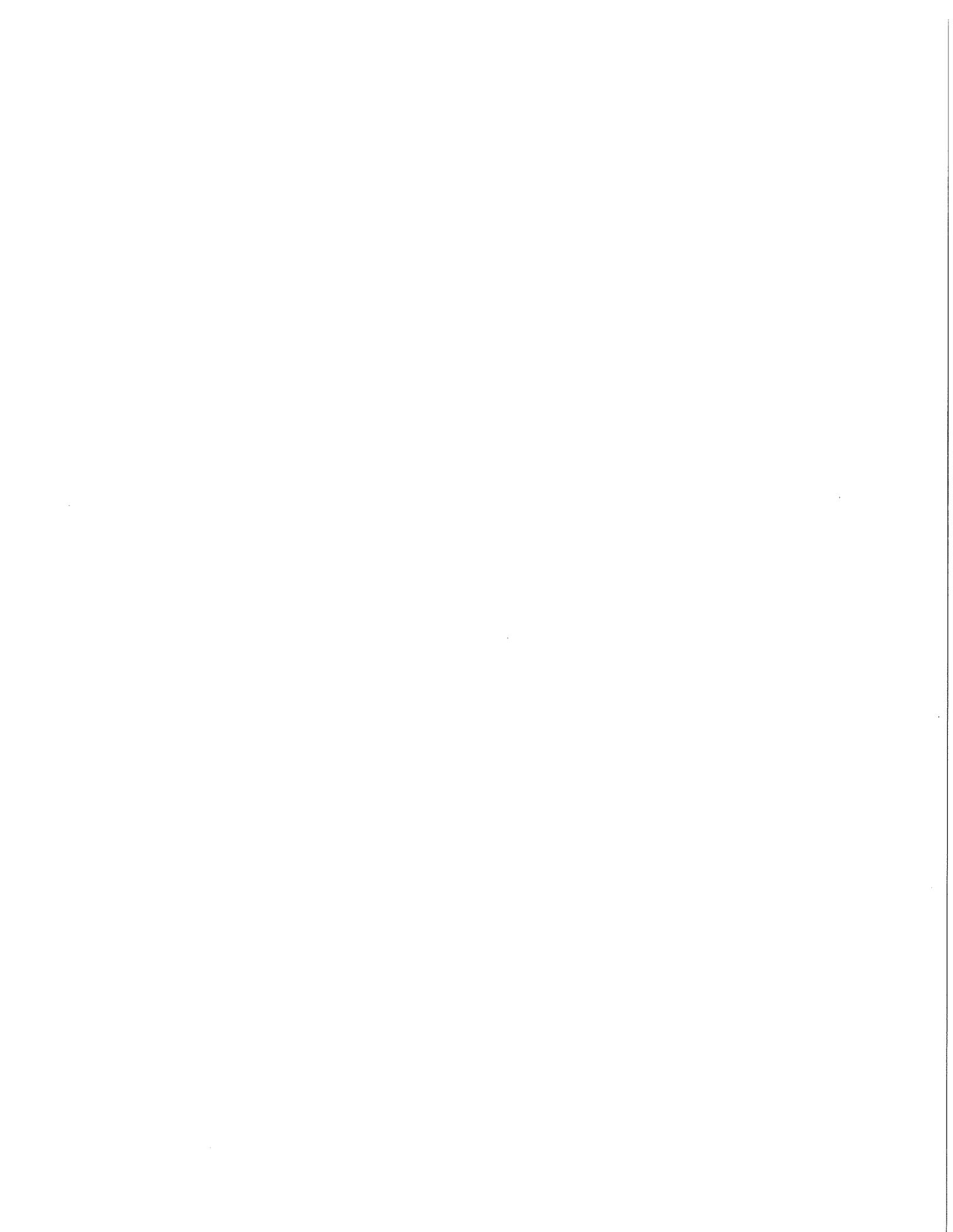
- Increase the corridor limits for the actuarial value of assets from 80%-120% of market value to 60%-140% of market value on June 30, 2009
- Reduce the corridor limits for the actuarial value of assets to 70%-130% of market value on June 30, 2010
- Return to the 80%-120% of market value corridor limits for the actuarial value of assets on June 30, 2011 and thereafter
- Isolate and amortize all gains and losses during fiscal year 2008-2009, 2009-2010 and 2010-2011 over fixed and declining 30 year periods (as opposed to the current rolling 30 year amortization)

A complete description of all methods is in Appendix A. The detailed calculation of the actuarial value of assets is shown in the "Development of the Actuarial Value of Assets."

### Benefits

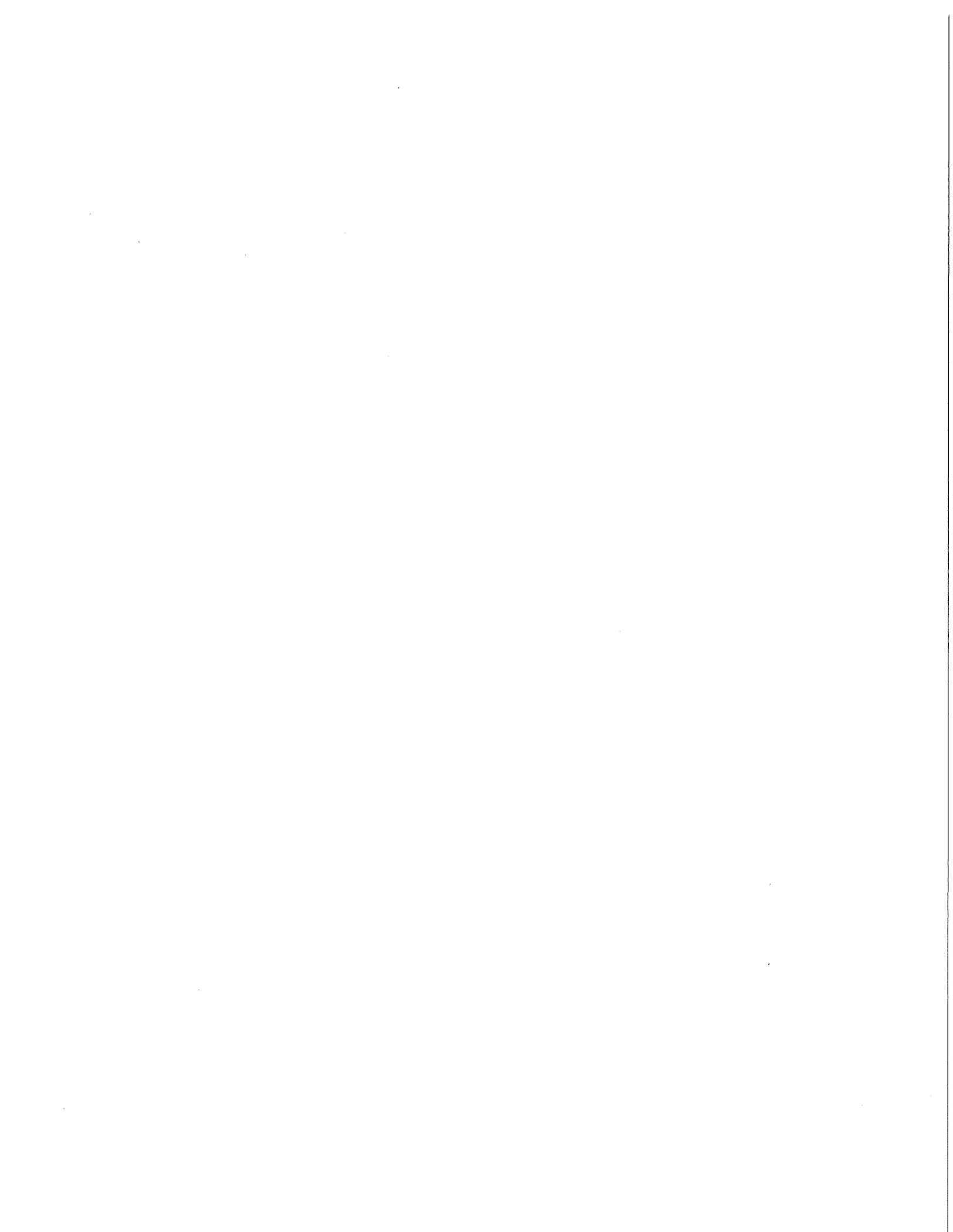
The standard actuarial practice at CalPERS is to recognize mandated legislative benefit changes in the first annual valuation whose valuation date follows the effective date of the legislation. Voluntary benefit changes by plan amendment are generally included in the first valuation that is prepared after the amendment becomes effective even if the valuation date is prior to the effective date of the amendment.

This valuation generally reflects plan changes by amendments effective before the date of the report. Please refer to Appendix B for a summary of the plan provisions used in the valuation. The effect of any mandated benefit changes or plan amendments on the unfunded liability is shown in the "(Gain)/Loss Analysis" and the effect on your employer contribution rate is shown in the "Reconciliation of Required Employer Contributions". It should be noted that no change in liability or rate is shown for any plan changes which were already included in the prior year's valuation.



## **SUMMARY OF LIABILITIES AND RATES**

- **DEVELOPMENT OF ACCRUED AND UNFUNDED LIABILITIES**
- **(GAIN) / LOSS ANALYSIS**
- **SCHEDULE OF AMORTIZATION BASES**
- **RECONCILIATION OF REQUIRED EMPLOYER CONTRIBUTIONS**
- **EMPLOYER CONTRIBUTION RATE HISTORY**
- **FUNDING HISTORY**



## Development of Accrued and Unfunded Liabilities

|  |    |                    |
|--|----|--------------------|
| 1. Present Value of Projected Benefits               |    |                    |
| a) Active Members                                    | \$ | 634,813,697        |
| b) Transferred Members                               |    | 63,551,923         |
| c) Terminated Members                                |    | 23,168,934         |
| d) Members and Beneficiaries Receiving Payments      |    | <u>226,149,566</u> |
| e) Total   | \$ | 947,684,120        |
| 2. Present Value of Future Employer Normal Costs     | \$ | 98,338,103         |
| 3. Present Value of Future Employee Contributions    | \$ | 98,425,134         |
| 4. Entry Age Normal Accrued Liability                |    |                    |
| a) Active Members [(1a) - (2) - (3)]                 | \$ | 438,050,460        |
| b) Transferred Members (1b)                          |    | 63,551,923         |
| c) Terminated Members (1c)                           |    | 23,168,934         |
| d) Members and Beneficiaries Receiving Payments (1d) |    | <u>226,149,566</u> |
| e) Total   | \$ | 750,920,883        |
| 5. Actuarial Value of Assets                         | \$ | 606,857,292        |
| 6. Unfunded Accrued Liability [(4e) - (5)]           | \$ | 144,063,591        |

## (Gain)/Loss Analysis 6/30/09 – 6/30/10

To calculate the cost requirements of the plan, 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 compared to the expected experience based on the actuarial assumptions. This results in actuarial gains or losses, as shown below.

### A Total (Gain)/Loss for the Year\*

|    |  |    |             |
|----|--|----|-------------|
| 1. | Unfunded Accrued Liability (UAL) as of 6/30/09                                     | \$ | 140,076,051 |
| 2. | Expected Payment on the UAL during 2009/2010                                       |    | 6,708,316   |
| 3. | Interest through 6/30/10 $[\.0775 \times (A1) - ((1.0775)^{1/2} - 1) \times (A2)]$ |    | 10,600,797  |
| 4. | Expected UAL before all other changes $[(A1) - (A2) + (A3)]$                       |    | 143,968,532 |
| 5. | Change due to plan changes   |    | 0           |
| 6. | Change due to assumption change  |    | 0           |
| 7. | Expected UAL after all other changes $[(A4) + (A5) + (A6)]$                        |    | 143,968,532 |
| 8. | Actual UAL as of 6/30/10   |    | 144,063,591 |
| 9. | Total (Gain)/Loss for 2009/2010 $[(A8) - (A7)]$                                    | \$ | 95,059      |

### B Contribution (Gain)/Loss for the Year

|    |  |    |             |
|----|--|----|-------------|
| 1. | Expected Contribution (Employer and Employee)        | \$ | 32,656,193  |
| 2. | Interest on Expected Contributions                   |    | 1,241,816   |
| 3. | Actual Contributions                                 |    | 34,279,603  |
| 4. | Interest on Actual Contributions                     |    | 1,303,550   |
| 5. | Expected Contributions with Interest $[(B1) + (B2)]$ |    | 33,898,009  |
| 6. | Actual Contributions with Interest $[(B3) + (B4)]$   |    | 35,583,153  |
| 7. | Contribution (Gain)/Loss $[(B5) - (B6)]$             | \$ | (1,685,144) |

### C Asset (Gain)/Loss for the Year

|     |   |    |              |
|-----|---|----|--------------|
| 1.  | Actuarial Value of Assets as of 6/30/09 Including Receivables                           | \$ | 556,378,430  |
| 2.  | Receivables as of 6/30/09   |    | 1,171,689    |
| 3.  | Actuarial Value of Assets as of 6/30/09   |    | 555,206,741  |
| 4.  | Contributions Received  |    | 34,279,603   |
| 5.  | Benefits and Refunds Paid   |    | (17,811,222) |
| 6.  | Transfers/Misc. Adjustments   |    | (367,668)    |
| 7.  | Expected Int. $[\.0775 \times (C3) + ((1.0775)^{1/2} - 1) \times ((C4) + (C5) + (C6))]$ |    | 43,640,784   |
| 8.  | Expected Assets as of 6/30/10 $[(C3) + (C4) + (C5) + (C6) + (C7)]$                      |    | 614,948,238  |
| 9.  | Receivables as of 6/30/10   |    | 1,171,415    |
| 10. | Expected Assets Including Receivables   |    | 616,119,653  |
| 11. | Actual Actuarial Value of Assets as of 6/30/10  |    | 606,857,292  |
| 12. | Asset (Gain)/Loss $[(C10) - (C11)]$   | \$ | 9,262,361    |

### D Liability (Gain)/Loss for the Year

|    |  |    |             |
|----|--|----|-------------|
| 1. | Total (Gain)/Loss (A9)                       | \$ | 95,059      |
| 2. | Contribution (Gain)/Loss (B7)                |    | (1,685,144) |
| 3. | Asset (Gain)/Loss (C12)                      |    | 9,262,361   |
| 4. | Liability (Gain)/Loss $[(D1) - (D2) - (D3)]$ | \$ | (7,482,158) |

### Development of the (Gain)/Loss Balance as of 6/30/10\*\*

|    |  |    |            |
|----|--|----|------------|
| 1. | (Gain)/Loss Balance as of 6/30/09  | \$ | 86,569,871 |
| 2. | Payment Made on the Balance during 2009/2010                                     |    | 4,291,394  |
| 3. | Interest through 6/30/10 $[\.0775 \times (1) - ((1.0775)^{1/2} - 1) \times (2)]$ |    | 6,545,976  |
| 4. | Scheduled (Gain)/Loss Balance as of 6/30/10 $[(1) - (2) + (3)]$                  | \$ | 88,824,453 |

\* The Total (Gain)/Loss for 2009/2010 is being amortized over a fixed and declining 30-year period and is shown as "Special (Gain)/Loss" in the "Schedule of Amortization Bases" on the following page.

\*\* This (Gain)/Loss represents the 6/30/10 balance of the accumulation of (gains)/losses through 6/30/08 and is amortized using a rolling 30-year period. Gains and losses incurred after 6/30/2011 will again accumulate to this base.

## Schedule of Amortization Bases

There is a two year lag between the Valuation Date and the Contribution Fiscal Year.

- The assets, liabilities and funded status of the plan are measured as of the valuation date (June 30, 2010).
- The employer contribution rate determined by the valuation is for the fiscal year beginning two years after the valuation date (fiscal year 2012/2013).

This two year lag is necessary due to the amount of time needed to extract and test the membership and financial data, and due to the need to provide public agencies with their employer contribution rates well in advance of the start of the fiscal year.

The Unfunded Liability is used to determine the employer contribution and therefore must be rolled forward two years from the valuation date to the first day of the fiscal year for which the contribution is being determined. The Unfunded Liability is rolled forward each year by subtracting the expected Payment on the Unfunded Liability for the fiscal year and adjusting for interest. The Expected Payment on the Unfunded Liability for a fiscal year is equal to the Expected Employer Contribution for the fiscal year minus the Expected Normal Cost for the year. The Employer Contribution Rate for the first fiscal year is determined by the actuarial valuation two years ago and the rate for the second year is from the actuarial valuation one year ago. The Normal Cost Rate for each of the two fiscal years is assumed to be the same as the rate determined by the current valuation. All expected dollar amounts are determined by multiplying the rate by the expected payroll for the applicable fiscal year, based on payroll as of the valuation date.

| Reason for Base     | Date Established | Amortization Period | Balance 6/30/10      | Expected Payment 2010/2011 | Balance 6/30/11      | Expected Payment 2011/2012 | Balance 6/30/12      | Amounts for Fiscal 2012/2013    |                              |
|---------------------|------------------|---------------------|----------------------|----------------------------|----------------------|----------------------------|----------------------|---------------------------------|------------------------------|
|                     |                  |                     |                      |                            |                      |                            |                      | Scheduled Payment for 2012-2013 | Payment as of age of Payroll |
| BENEFIT CHANGE      | 06/30/05         | 14                  | \$2,999,288          | \$262,843                  | \$2,958,895          | \$271,385                  | \$2,906,504          | \$280,205                       | 0.149%                       |
| ASSUMPTION CHANGE   | 06/30/07         | 13                  | \$23,329,477         | \$2,139,741                | \$22,916,403         | \$2,209,282                | \$22,399,130         | \$2,281,084                     | 1.210%                       |
| ARNETT CASE         | 06/30/07         | 13                  | \$186,370            | \$17,094                   | \$183,070            | \$17,649                   | \$178,938            | \$18,223                        | 0.010%                       |
| ASSETS CHANGE       | 06/30/07         | 13                  | \$(156,982)          | \$(14,398)                 | \$(154,203)          | \$(14,866)                 | \$(150,722)          | \$(15,349)                      | (0.008%)                     |
| METHOD CHANGE       | 06/30/07         | 14                  | \$(1,652,242)        | \$(144,794)                | \$(1,629,991)        | \$(149,500)                | \$(1,601,130)        | \$(154,359)                     | (0.082%)                     |
| BENEFIT CHANGE      | 06/30/08         | 17                  | \$(335,411)          | \$(26,181)                 | \$(334,229)          | \$(27,032)                 | \$(332,072)          | \$(27,910)                      | (0.015%)                     |
| (GAIN)/LOSS         | 06/30/08         | 30                  | \$88,824,454         | \$5,333,996                | \$90,171,517         | \$5,414,888                | \$91,539,010         | \$5,497,007                     | 2.915%                       |
| ASSUMPTION CHANGE   | 06/30/09         | 19                  | \$14,542,447         | \$723,480                  | \$14,918,495         | \$1,126,811                | \$14,905,018         | \$1,163,433                     | 0.617%                       |
| SPECIAL (GAIN)/LOSS | 06/30/09         | 29                  | \$18,832,133         | \$0                        | \$20,291,624         | \$1,218,532                | \$20,599,356         | \$1,258,134                     | 0.667%                       |
| SPECIAL (GAIN)/LOSS | 06/30/10         | 30                  | \$95,060             | \$0                        | \$102,427            | \$0                        | \$110,365            | \$6,628                         | 0.004%                       |
| PAYMENT (GAIN)/LOSS | 06/30/10         | 30                  | \$(2,601,003)        | \$(695,836)                | \$(2,080,284)        | \$(522,076)                | \$(1,699,577)        | \$(102,061)                     | (0.054%)                     |
| <b>TOTAL</b>        |                  |                     | <b>\$144,063,591</b> | <b>\$7,595,945</b>         | <b>\$147,343,724</b> | <b>\$9,545,073</b>         | <b>\$148,854,820</b> | <b>\$10,205,035</b>             | <b>5.411%</b>                |

The special (gain)/loss bases were established using the temporary modification recognized in the 2009, 2010 and 2011 annual valuations. Unlike the gain/loss occurring in previous and subsequent years, the gain/loss recognized in the 2009, 2010, and 2011 annual valuations will be amortized over fixed and declining 30 year periods so that these annual gain/losses will be fully paid off in 30 years.

## Reconciliation of Required Employer Contributions

|   | Percentage<br>of<br>Projected<br>Payroll | Estimated \$<br>Based on<br>Projected<br>Payroll |
|---|--|--|
| 1. Contribution for 7/1/11 – 6/30/12 (from prior year annual report)  | 12.659%                                  | \$ 24,434,536                                    |
| 2. Effect of changes since the prior year annual valuation            |  |  |
| a) Effect of unexpected changes in demographics and financial results | 0.185%                                   | 349,788  |
| b) Effect of plan changes   | 0.000%                                   | 0  |
| c) Effect of changes in Assumptions                                   | 0.000%                                   | 0  |
| d) Effect of change in payroll  | -  | (562,000)  |
| e) Effect of elimination of amortization base                         | 0.000%                                   | 0  |
| f) Effect of changes due to Fresh Start                               | 0.000%                                   | 0  |
| g) Net effect of the changes above [Sum of (a) through (f)]           | 0.185%                                   | (212,212)  |
| 3. Contribution for 7/1/12 – 6/30/13 [(1)+(2g)]                       | 12.844%                                  | 24,222,324                                       |

The contribution actually paid (item 1) may be different if a prepayment of unfunded actuarial liability is made or a plan change became effective after the prior year's actuarial valuation was performed.

## Employer Contribution Rate History

The table below provides a recent history of the employer contribution rates for your plan, as determined by the annual actuarial valuation. It does not account for prepayments or benefit changes made in the middle of the year.

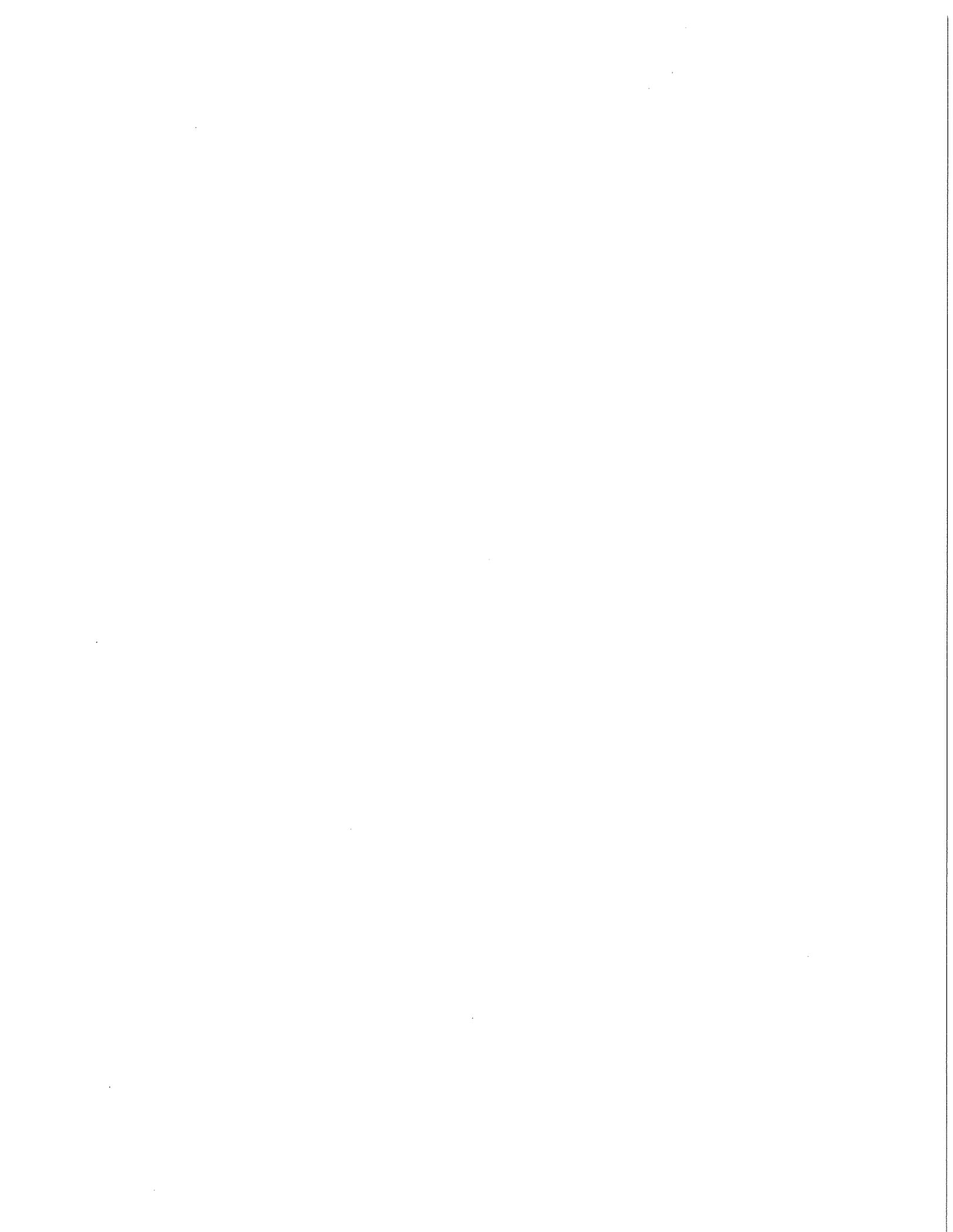
### Required By Valuation

| <b>Fiscal Year</b> | <b>Employer Normal Cost</b> | <b>Unfunded Rate</b> | <b>Total Employer Contribution Rate</b> |
|--------------------|-----------------------------|----------------------|---|
| 2008 - 2009        | 7.972%                      | 3.660%               | 11.632%                                 |
| 2009 - 2010        | 7.920%                      | 3.302%               | 11.222%                                 |
| 2010 - 2011        | 7.947%                      | 3.780%               | 11.727%                                 |
| 2011 - 2012        | 7.517%                      | 5.142%               | 12.659%                                 |
| 2012 - 2013        | 7.433%                      | 5.411%               | 12.844%                                 |

## Funding History

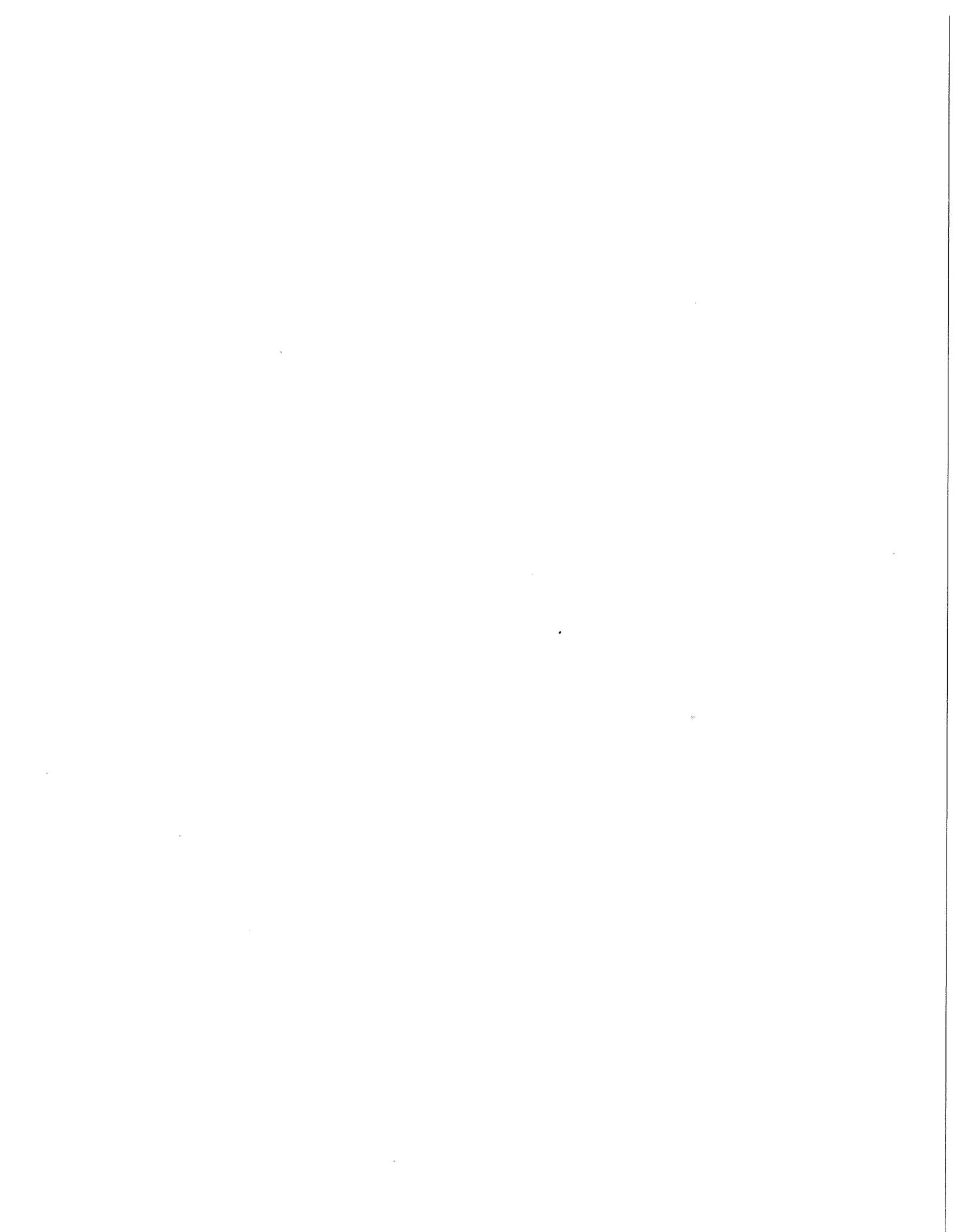
The Funding History below shows the recent history of the actuarial accrued liability, the market value of assets, the actuarial value of assets, funded ratios and the annual covered payroll. The Actuarial Value of Assets is used to establish funding requirements and the funded ratio on this basis represents the progress toward fully funding future benefits for current plan participants. The funded ratio based on the Market Value of Assets is an indicator of the short-term solvency of the plan.

| <b>Valuation Date</b> | <b>Accrued Liability</b> | <b>Actuarial Value of Assets (AVA)</b> | <b>Market Value of Assets (MVA)</b> | <b>Funded Ratio</b> |            | <b>Annual Covered Payroll</b> |
|-----------------------|--------------------------|--|-------------------------------------|---------------------|------------|-------------------------------|
|                       |                          |  |                                     | <b>AVA</b>          | <b>MVA</b> |                               |
| 06/30/06              | \$ 487,058,643           | \$ 397,787,693                         | \$ 418,041,897                      | 81.7%               | 85.8%      | \$ 152,611,274                |
| 06/30/07              | 549,512,696              | 457,174,700                            | 521,140,767                         | 83.2%               | 94.8%      | 173,347,822                   |
| 06/30/08              | 617,269,776              | 510,122,353                            | 510,251,869                         | 82.6%               | 82.7%      | 177,858,395                   |
| 06/30/09              | 696,454,481              | 556,378,430                            | 402,507,980                         | 79.9%               | 57.8%      | 175,361,908                   |
| 06/30/10              | 750,920,883              | 606,857,292                            | 477,184,231                         | 80.8%               | 63.5%      | 171,328,547                   |



## **SUMMARY OF ASSETS**

- **RECONCILIATION OF THE MARKET VALUE OF ASSETS**
- **DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS**
- **ASSET ALLOCATION**
- **CALPERS HISTORY OF INVESTMENT RETURNS**



## Reconciliation of the Market Value of Assets

|  |    |              |
|--|----|--------------|
| 1. Market Value of Assets as of 6/30/09 Including Receivables  | \$ | 402,507,980  |
| 2. Receivables for Service Buybacks as of 6/30/09              |    | 1,171,689    |
| 3. Market Value of Assets as of 6/30/09                        |    | 401,336,291  |
| 4. Employer Contributions                                      |    | 20,627,053   |
| 5. Employee Contributions                                      |    | 13,652,550   |
| 6. Benefit Payments to Retirees and Beneficiaries              |    | (16,897,844) |
| 7. Refunds   |    | (829,127)    |
| 8. Lump Sum Payments   |    | (84,251)     |
| 9. Transfers and Miscellaneous Adjustments                     |    | (367,668)    |
| 10. Investment Return  |    | 58,575,812   |
| 11. Market Value of Assets as of 6/30/10                       | \$ | 476,012,816  |
| 12. Receivables for Service Buybacks as of 6/30/10             |    | 1,171,415    |
| 13. Market Value of Assets as of 6/30/10 Including Receivables | \$ | 477,184,231  |

## Development of the Actuarial Value of Assets

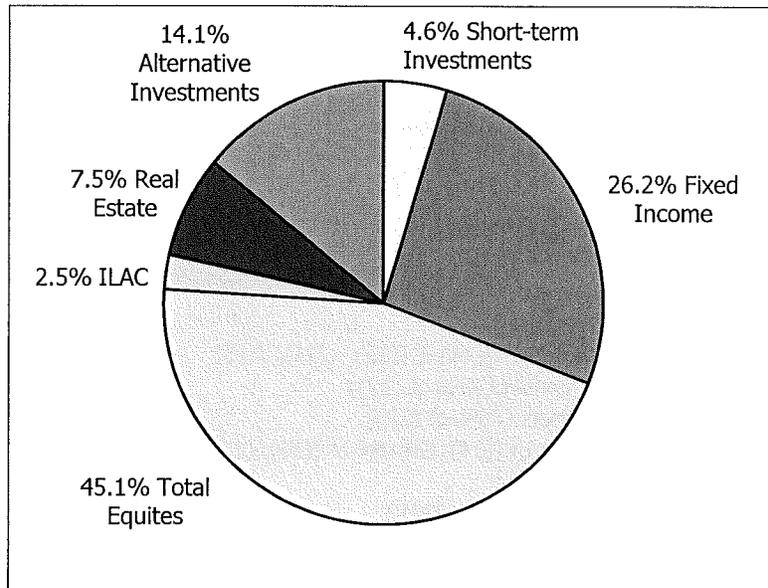
|  |    |              |
|--|----|--------------|
| 1. Actuarial Value of Assets as of 6/30/09 Used For Rate Setting Purposes  | \$ | 556,378,430  |
| 2. Receivables for Service Buybacks as of 6/30/09  |    | 1,171,689    |
| 3. Actuarial Value of Assets as of 6/30/09   |    | 555,206,741  |
| 4. Employer Contributions  |    | 20,627,053   |
| 5. Employee Contributions  |    | 13,652,550   |
| 6. Benefit Payments to Retirees and Beneficiaries  |    | (16,897,844) |
| 7. Refunds   |    | (829,127)    |
| 8. Lump Sum Payments   |    | (84,251)     |
| 9. Transfers and Miscellaneous Adjustments   |    | (367,668)    |
| 10. Expected Investment Income at 7.75%  |    | 43,640,784   |
| 11. Expected Actuarial Value of Assets   | \$ | 614,948,238  |
| 12. Market Value of Assets as of 6/30/10   | \$ | 476,012,816  |
| 13. Preliminary Actuarial Value of Assets $[(11) + ((12) - (11)) / 15]$  |    | 605,685,877  |
| 14. Maximum Actuarial Value of Assets (130% of (12))   |    | 618,816,661  |
| 15. Minimum Actuarial Value of Assets (70% of (12))  |    | 333,208,971  |
| 16. Actuarial Value of Assets {Lesser of [(14), Greater of ((13), (15))]}<br>$\{ \min(618,816,661, \max(605,685,877, 333,208,971)) \}$ |    | 605,685,877  |
| 17. Actuarial Value to Market Value Ratio  |    | 127.2%       |
| 18. Receivables for Service Buybacks as of 6/30/10   |    | 1,171,415    |
| 19. Actuarial Value of Assets as of 6/30/10 Used for Rate Setting Purposes   | \$ | 606,857,292  |

## Asset Allocation

CalPERS follows a strategic asset allocation policy that identifies the percentage of funds to be invested in each asset class. The current target allocation was adopted by the Board in December 2010

The asset allocation and market value of assets shown below reflect the values of the Public Employees Retirement Fund (PERF) in its entirety as of June 30, 2010. The assets for CITY OF SACRAMENTO MISCELLANEOUS PLAN are part of the Public Employees Retirement Fund (PERF) and are invested accordingly.

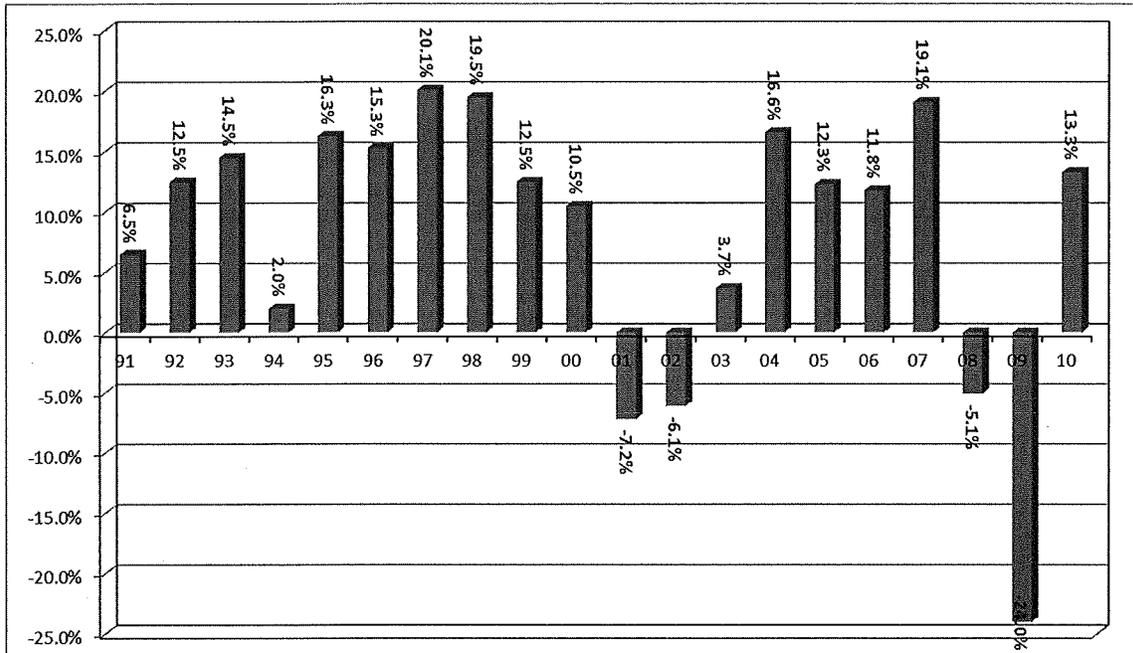
| (A)<br>Asset Class           | (B)<br>Market Value<br>(\$ Billion) | (C)<br>Current<br>Allocation | (D)<br>Current<br>Target |
|------------------------------|-------------------------------------|------------------------------|--------------------------|
| 1) Short-term Investments    | 9.3                                 | 4.6%                         | 4.0%                     |
| 2) Total Global Fixed Income | 53.4                                | 26.2%                        | 16.0%                    |
| 3) Total Equities            | 91.9                                | 45.1%                        | 49.0%                    |
| 4) Inflation Linked (ILAC)   | 5.0                                 | 2.5%                         | 4.0%                     |
| 5) Total Real Estate         | 15.2                                | 7.5%                         | 13.0%                    |
| 6) Alternative Investments   | <u>28.7</u>                         | 14.1%                        | 14.0%                    |
| Total Fund                   | 203.5 <sup>1</sup>                  | 100.0%                       | 100.0%                   |

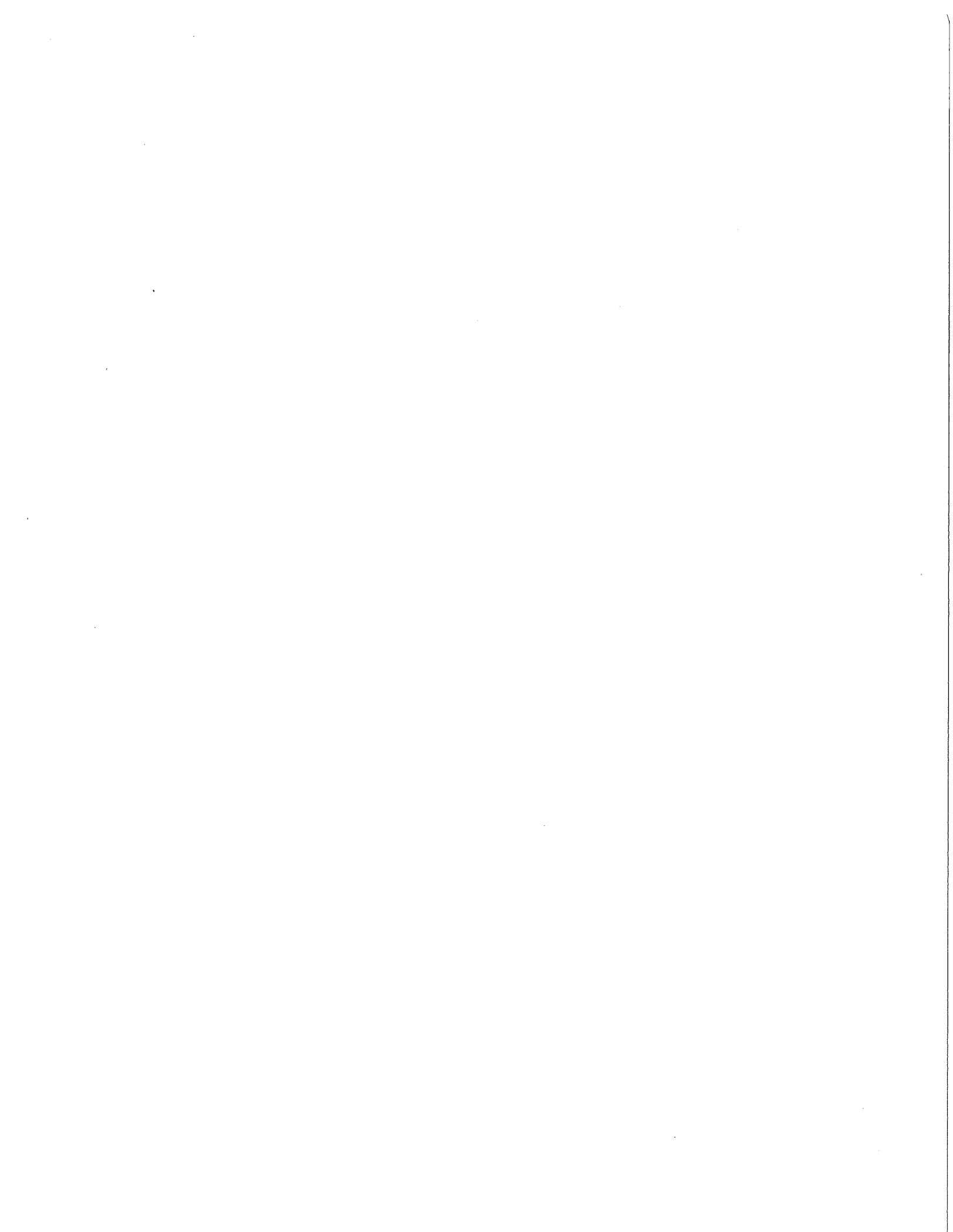


<sup>1</sup> Differences between investment values above and the values on the Summary of Investments on page 23 of the Comprehensive Annual Financial Report (Year Ended June 30, 2010) are due to differences in reporting methods. The Summary of Investments includes Net Investment Receivables/Payables.

## CalPERS 20-Year History of Investment Returns

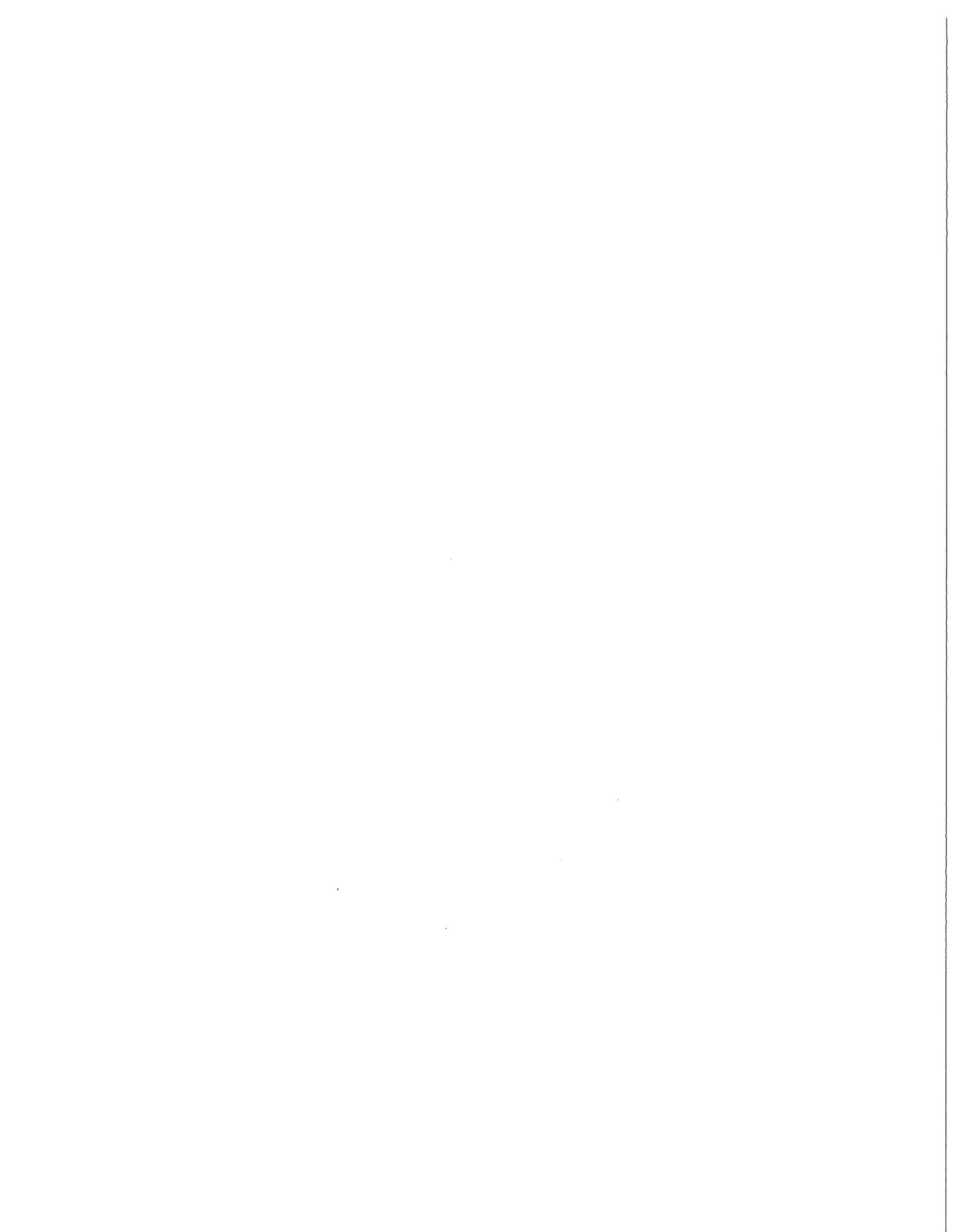
The following is a chart with historical annual returns of the Public Employees Retirement Fund for each fiscal year ending on June 30. Beginning with June 30, 2002 the figures are reported as gross of fees.





## **SUMMARY OF PARTICIPANT DATA**

- **SUMMARY OF VALUATION DATA**
- **ACTIVE MEMBERS**
- **TRANSFERRED AND TERMINATED MEMBERS**
- **RETIRED MEMBERS AND BENEFICIARIES**



## Summary of Valuation Data

|   | June 30, 2009 | June 30, 2010 |
|---|---------------|---------------|
| <b>1. Active Members</b>                          |               |               |
| a) Counts   | 2,949         | 2,758         |
| b) Average Attained Age                           | 43.83         | 44.58         |
| c) Average Entry Age to Rate Plan                 | 33.72         | 33.63         |
| d) Average Years of Service                       | 10.11         | 10.95         |
| e) Average Annual Covered Pay                     | \$ 59,465     | \$ 62,121     |
| f) Annual Covered Payroll                         | 175,361,908   | 171,328,547   |
| g) Projected Annual Payroll for Contribution Year | 193,021,392   | 188,581,859   |
| h) Present Value of Future Payroll                | 1,500,077,619 | 1,434,785,339 |
| <br><b>2. Transferred Members</b>                 |               |               |
| a) Counts   | 2,412         | 2,364         |
| b) Average Attained Age                           | 41.73         | 42.29         |
| c) Average Years of Service                       | 1.98          | 2.00          |
| d) Average Annual Covered Pay                     | \$ 75,355     | \$ 77,143     |
| <br><b>3. Terminated Members</b>                  |               |               |
| a) Counts   | 1,594         | 1,693         |
| b) Average Attained Age                           | 40.27         | 40.57         |
| c) Average Years of Service                       | 2.26          | 2.24          |
| d) Average Annual Covered Pay                     | \$ 36,123     | \$ 36,829     |
| <br><b>4. Retired Members and Beneficiaries</b>   |               |               |
| a) Counts   | 1,150         | 1,302         |
| b) Average Attained Age                           | 61.64         | 61.98         |
| c) Average Annual Benefits                        | \$ 13,093     | \$ 13,648     |
| <br><b>5. Active to Retired Ratio</b>             | <br>2.56      | <br>2.12      |

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

## Active Members

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities

### Distribution of Active Members by Age and Service

| Years of Service at Valuation Date |     |     |       |       |       |     |       |
|------------------------------------|-----|-----|-------|-------|-------|-----|-------|
| Attained<br>Age                    | 0-4 | 5-9 | 10-14 | 15-19 | 20-25 | 25+ | Total |
| 15-24                              | 123 | 2   | 0     | 0     | 0     | 0   | 125   |
| 25-29                              | 156 | 57  | 2     | 0     | 0     | 0   | 215   |
| 30-34                              | 123 | 123 | 27    | 1     | 0     | 0   | 274   |
| 35-39                              | 134 | 126 | 57    | 11    | 4     | 0   | 332   |
| 40-44                              | 93  | 136 | 81    | 48    | 21    | 3   | 382   |
| 45-49                              | 71  | 136 | 74    | 63    | 94    | 31  | 469   |
| 50-54                              | 74  | 94  | 69    | 51    | 92    | 71  | 451   |
| 55-59                              | 43  | 67  | 42    | 46    | 65    | 58  | 321   |
| 60-64                              | 20  | 31  | 31    | 17    | 21    | 24  | 144   |
| 65 and over                        | 14  | 13  | 7     | 4     | 5     | 2   | 45    |
| <b>All Ages</b>                    | 851 | 785 | 390   | 241   | 302   | 189 | 2,758 |

### Distribution of Average Annual Salaries by Age and Service

| Years of Service at Valuation Date |          |          |          |          |          |          |          |
|------------------------------------|----------|----------|----------|----------|----------|----------|----------|
| Attained<br>Age                    | 0-4      | 5-9      | 10-14    | 15-19    | 20-25    | 25+      | Average  |
| 15-24                              | \$25,790 | \$47,272 | \$0      | \$0      | \$0      | \$0      | \$26,133 |
| 25-29                              | 40,186   | 53,824   | 61,371   | 0        | 0        | 0        | 43,999   |
| 30-34                              | 52,000   | 62,734   | 64,873   | 74,482   | 0        | 0        | 58,169   |
| 35-39                              | 55,663   | 65,896   | 68,272   | 64,992   | 59,941   | 0        | 62,072   |
| 40-44                              | 52,028   | 65,747   | 73,760   | 69,536   | 62,435   | 77,997   | 64,496   |
| 45-49                              | 54,404   | 66,139   | 71,281   | 70,987   | 71,826   | 71,492   | 67,319   |
| 50-54                              | 64,942   | 64,246   | 70,473   | 70,245   | 72,609   | 72,204   | 68,950   |
| 55-59                              | 63,834   | 63,705   | 72,943   | 67,850   | 70,982   | 76,221   | 69,260   |
| 60-64                              | 64,433   | 65,075   | 63,914   | 77,417   | 84,339   | 71,316   | 70,042   |
| 65 and over                        | 34,734   | 65,630   | 56,858   | 59,941   | 64,494   | 65,470   | 54,014   |
| <b>All Ages</b>                    | \$48,558 | \$64,071 | \$70,053 | \$69,953 | \$71,821 | \$73,228 | \$62,121 |

## Transferred and Terminated Members

### Distribution of Transfers to Other CalPERS Plans by Age and Service

| Attained Age    | Years of Service at Valuation Date |     |       |       |       |     | Total | Average Salary |
|-----------------|------------------------------------|-----|-------|-------|-------|-----|-------|----------------|
|                 | 0-4                                | 5-9 | 10-14 | 15-19 | 20-25 | 25+ |       |                |
| 15-24           | 23                                 | 0   | 0     | 0     | 0     | 0   | 23    | \$55,330       |
| 25-29           | 214                                | 1   | 0     | 0     | 0     | 0   | 215   | 65,441         |
| 30-34           | 379                                | 12  | 0     | 0     | 0     | 0   | 391   | 76,850         |
| 35-39           | 386                                | 13  | 2     | 1     | 0     | 0   | 402   | 79,491         |
| 40-44           | 388                                | 20  | 13    | 5     | 1     | 0   | 427   | 83,124         |
| 45-49           | 317                                | 27  | 15    | 11    | 3     | 0   | 373   | 83,899         |
| 50-54           | 215                                | 25  | 16    | 5     | 5     | 0   | 266   | 75,750         |
| 55-59           | 127                                | 24  | 13    | 4     | 4     | 1   | 173   | 67,946         |
| 60-64           | 63                                 | 14  | 5     | 0     | 1     | 0   | 83    | 67,274         |
| 65 and over     | 7                                  | 2   | 1     | 1     | 0     | 0   | 11    | 67,491         |
| <b>All Ages</b> | 2119                               | 138 | 65    | 27    | 14    | 1   | 2,364 | 77,143         |

### Distribution of Terminated Participants with Funds on Deposit by Age and Service

| Attained Age    | Years of Service at Valuation Date |     |       |       |       |     | Total | Average Salary |
|-----------------|------------------------------------|-----|-------|-------|-------|-----|-------|----------------|
|                 | 0-4                                | 5-9 | 10-14 | 15-19 | 20-25 | 25+ |       |                |
| 15-24           | 72                                 | 0   | 0     | 0     | 0     | 0   | 72    | \$28,041       |
| 25-29           | 263                                | 4   | 0     | 0     | 0     | 0   | 267   | 30,994         |
| 30-34           | 271                                | 8   | 1     | 0     | 0     | 0   | 280   | 33,480         |
| 35-39           | 258                                | 18  | 1     | 1     | 0     | 0   | 278   | 36,779         |
| 40-44           | 178                                | 24  | 7     | 1     | 0     | 0   | 210   | 39,072         |
| 45-49           | 152                                | 35  | 14    | 11    | 3     | 3   | 218   | 40,966         |
| 50-54           | 130                                | 33  | 14    | 7     | 2     | 2   | 188   | 46,459         |
| 55-59           | 72                                 | 20  | 8     | 3     | 0     | 0   | 103   | 40,875         |
| 60-64           | 40                                 | 2   | 2     | 1     | 0     | 0   | 45    | 31,504         |
| 65 and over     | 30                                 | 2   | 0     | 0     | 0     | 0   | 32    | 29,989         |
| <b>All Ages</b> | 1466                               | 146 | 47    | 24    | 5     | 5   | 1,693 | 36,829         |

## Retired Members and Beneficiaries

### Distribution of Retirees and Beneficiaries by Age and Retirement Type\*

| Attained Age    | Service Retirement | Non-Industrial Disability | Industrial Disability | Non-Industrial Death | Industrial Death | Death After Retirement | Total        |
|-----------------|--------------------|---------------------------|-----------------------|----------------------|------------------|------------------------|--------------|
| Under 30        | 0                  | 0                         | 0                     | 0                    | 0                | 3                      | 3            |
| 30-34           | 0                  | 2                         | 0                     | 0                    | 0                | 1                      | 3            |
| 35-39           | 0                  | 2                         | 5                     | 0                    | 0                | 1                      | 8            |
| 40-44           | 0                  | 2                         | 16                    | 1                    | 1                | 2                      | 22           |
| 45-49           | 0                  | 8                         | 40                    | 1                    | 2                | 3                      | 54           |
| 50-54           | 95                 | 18                        | 46                    | 1                    | 1                | 5                      | 166          |
| 55-59           | 216                | 15                        | 35                    | 3                    | 0                | 9                      | 278          |
| 60-64           | 262                | 18                        | 34                    | 0                    | 0                | 13                     | 327          |
| 65-69           | 179                | 7                         | 14                    | 0                    | 0                | 7                      | 207          |
| 70-74           | 112                | 3                         | 6                     | 1                    | 0                | 11                     | 133          |
| 75-79           | 50                 | 3                         | 2                     | 0                    | 0                | 10                     | 65           |
| 80-84           | 21                 | 1                         | 2                     | 0                    | 0                | 4                      | 28           |
| 85 and Over     | 5                  | 0                         | 0                     | 0                    | 0                | 2                      | 7            |
| <b>All Ages</b> | <b>940</b>         | <b>79</b>                 | <b>200</b>            | <b>7</b>             | <b>4</b>         | <b>71</b>              | <b>1,301</b> |

### Distribution of Average Annual Amounts for Retirees and Beneficiaries by Age and Retirement Type\*

| Attained Age    | Service Retirement | Non-Industrial Disability | Industrial Disability | Non-Industrial Death | Industrial Death | Death After Retirement | Average         |
|-----------------|--------------------|---------------------------|-----------------------|----------------------|------------------|------------------------|-----------------|
| Under 30        | \$0                | \$0                       | \$0                   | \$0                  | \$0              | \$798                  | \$798           |
| 30-34           | 0                  | 7,615                     | 0                     | 0                    | 0                | 756                    | 5,329           |
| 35-39           | 0                  | 311                       | 3,439                 | 0                    | 0                | 756                    | 2,322           |
| 40-44           | 0                  | 15,888                    | 4,313                 | 61                   | 56               | 17,851                 | 6,209           |
| 45-49           | 0                  | 5,670                     | 5,358                 | 9,671                | 67               | 3,979                  | 5,211           |
| 50-54           | 9,401              | 5,906                     | 11,300                | 7,978                | 15               | 10,418                 | 9,514           |
| 55-59           | 13,735             | 9,416                     | 15,809                | 23,617               | 0                | 4,735                  | 13,578          |
| 60-64           | 18,948             | 8,769                     | 20,591                | 0                    | 0                | 11,093                 | 18,246          |
| 65-69           | 16,937             | 14,789                    | 21,672                | 0                    | 0                | 9,422                  | 16,930          |
| 70-74           | 12,115             | 9,568                     | 20,739                | 15,536               | 0                | 10,780                 | 12,362          |
| 75-79           | 9,249              | 16,395                    | 18,647                | 0                    | 0                | 6,709                  | 9,477           |
| 80-84           | 6,316              | 4,811                     | 15,516                | 0                    | 0                | 6,375                  | 6,928           |
| 85 and Over     | 3,421              | 0                         | 0                     | 0                    | 0                | 4,245                  | 3,656           |
| <b>All Ages</b> | <b>\$14,707</b>    | <b>\$8,666</b>            | <b>\$12,850</b>       | <b>\$14,871</b>      | <b>\$51</b>      | <b>\$8,114</b>         | <b>\$13,651</b> |

## Retired Members and Beneficiaries (continued)

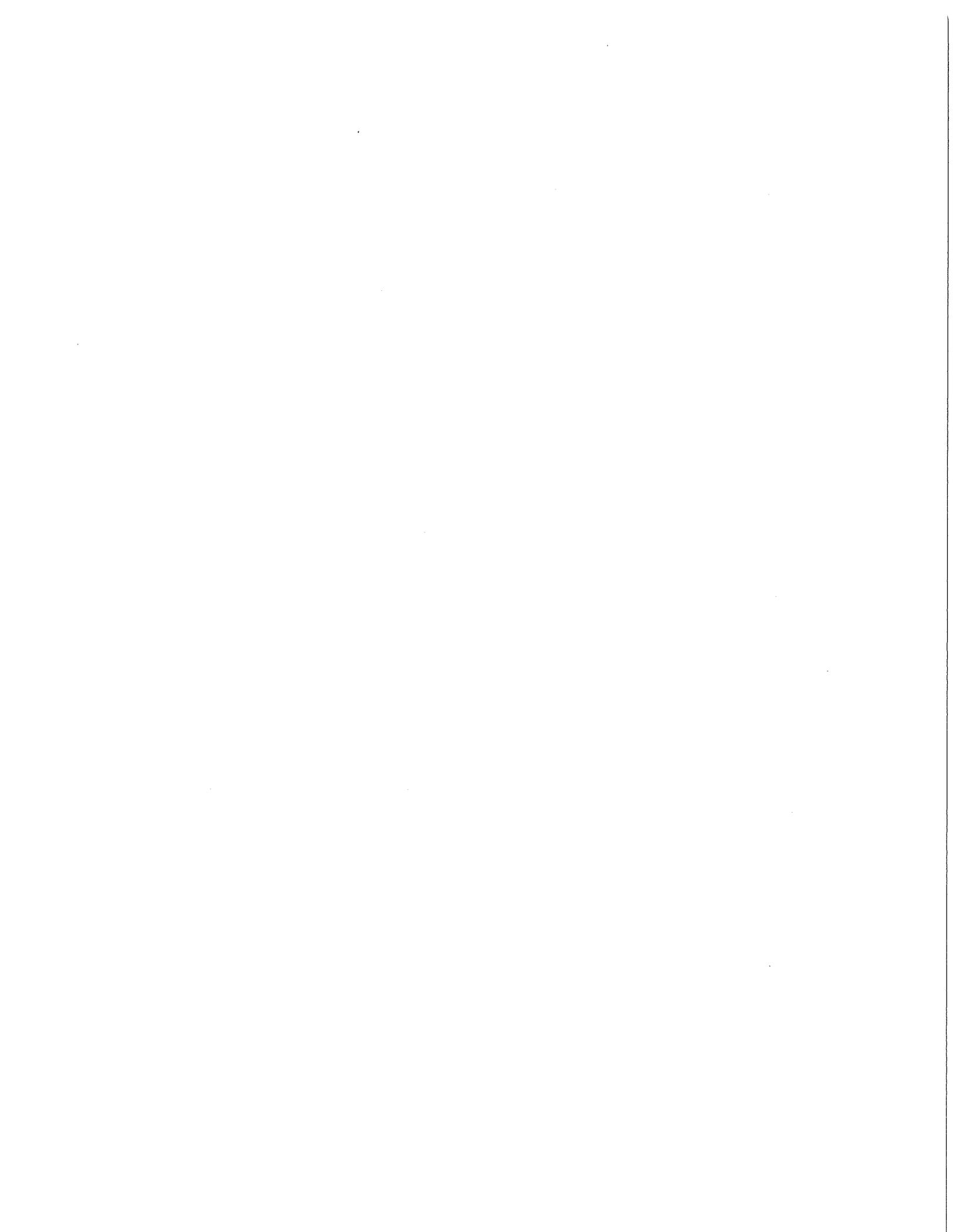
### Distribution of Retirees and Beneficiaries by Years Retired and Retirement Type\*

| Years Retired    | Service Retirement | Non-Industrial Disability | Industrial Disability | Non-Industrial Death | Industrial Death | Death After Retirement | Total |
|------------------|--------------------|---------------------------|-----------------------|----------------------|------------------|------------------------|-------|
| Under 5 Yrs      | 567                | 22                        | 50                    | 5                    | 1                | 39                     | 684   |
| 5-9              | 241                | 33                        | 52                    | 2                    | 1                | 17                     | 346   |
| 10-14            | 91                 | 17                        | 42                    | 0                    | 0                | 6                      | 156   |
| 15-19            | 35                 | 6                         | 39                    | 0                    | 1                | 7                      | 88    |
| 20-24            | 3                  | 1                         | 17                    | 0                    | 0                | 2                      | 23    |
| 25-29            | 3                  | 0                         | 0                     | 0                    | 1                | 0                      | 4     |
| 30 and Over      | 0                  | 0                         | 0                     | 0                    | 0                | 0                      | 0     |
| <b>All Years</b> | 940                | 79                        | 200                   | 7                    | 4                | 71                     | 1,301 |

### Distribution of Average Annual Amounts for Retirees and Beneficiaries by Years Retired and Retirement Type\*

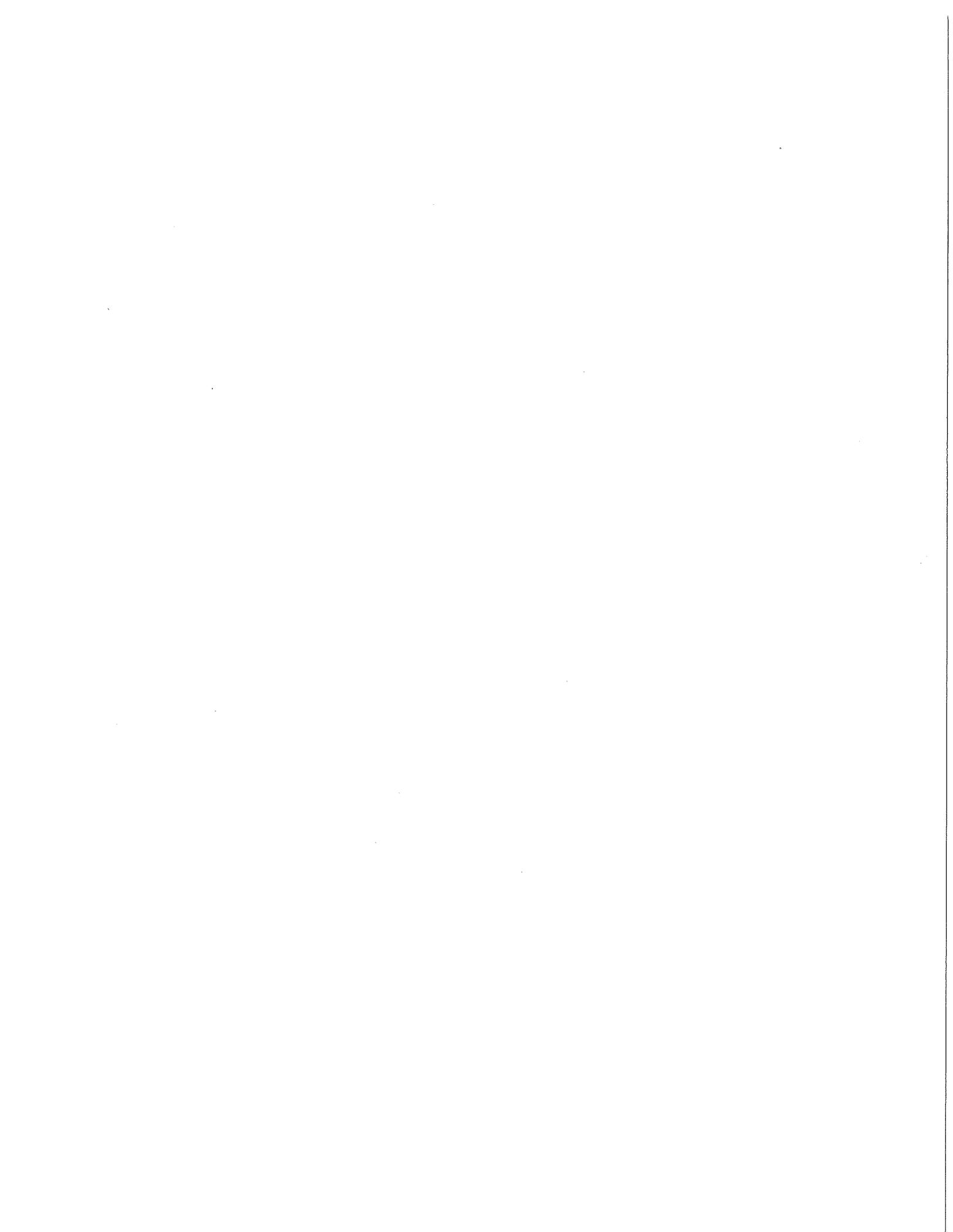
| Years Retired    | Service Retirement | Non-Industrial Disability | Industrial Disability | Non-Industrial Death | Industrial Death | Death After Retirement | Average  |
|------------------|--------------------|---------------------------|-----------------------|----------------------|------------------|------------------------|----------|
| Under 5 Yrs      | \$16,720           | \$7,360                   | \$12,215              | \$14,521             | \$56             | \$9,138                | \$15,617 |
| 5-9              | 13,256             | 9,461                     | 12,116                | 15,745               | 38               | 6,765                  | 12,380   |
| 10-14            | 10,313             | 8,572                     | 12,078                | 0                    | 0                | 6,695                  | 10,459   |
| 15-19            | 5,249              | 10,158                    | 14,011                | 0                    | 96               | 5,984                  | 9,466    |
| 20-24            | 4,930              | 3,795                     | 16,201                | 0                    | 0                | 11,312                 | 13,766   |
| 25-29            | 4,305              | 0                         | 0                     | 0                    | 15               | 0                      | 3,232    |
| 30 and Over      | 0                  | 0                         | 0                     | 0                    | 0                | 0                      | 0        |
| <b>All Years</b> | \$14,707           | \$8,666                   | \$12,850              | \$14,871             | \$51             | \$8,114                | \$13,651 |

\* Counts of members do not include alternate payees receiving benefits while the member is still working. Therefore, the total counts may not match information on page 25 of the report. Multiple records may exist for those who have service in more than one coverage group. This does not result in double counting of liabilities.



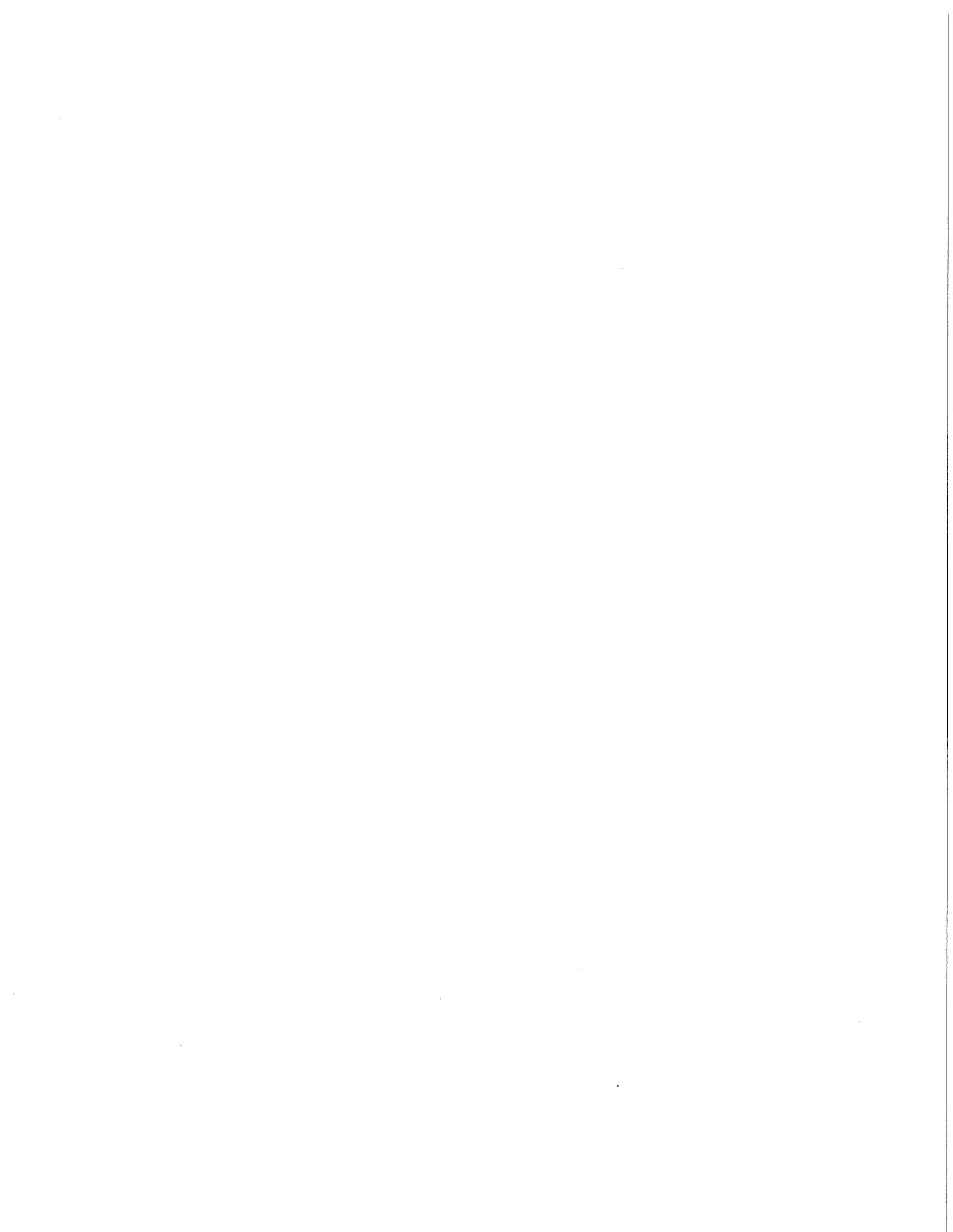
# **APPENDICES**

- **APPENDIX A - STATEMENT OF ACTUARIAL DATA, METHODS AND ASSUMPTIONS**
- **APPENDIX B - SUMMARY OF PRINCIPAL PLAN PROVISIONS**
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# **APPENDIX A**

- **STATEMENT OF ACTUARIAL DATA, METHODS AND ASSUMPTIONS**



## Actuarial Data

As stated in the Actuarial Certification, the data which serves as the basis of this valuation has been obtained from the various CalPERS databases. We have reviewed the valuation data and believe that it is reasonable and appropriate in aggregate. We are unaware of any potential data issues that would have a material effect on the results of this valuation, except that data does not always contain the latest salary information for former members now in reciprocal systems and does not recognize the potential for unusually large salary deviation in certain cases such as elected officials. Therefore, salary information in these cases may not be accurate. These situations are relatively infrequent, however, and when they do occur, they generally do not have a material impact on the employer contribution rates.

## Actuarial Methods

### Funding Method

The actuarial funding method used for the Retirement Program is the Entry Age Normal Cost Method. Under this method, projected benefits are determined for all members and the associated liabilities are spread in a manner that produces level annual cost as a percent of pay in each year from the age of hire (entry age) to the assumed retirement age. The cost allocated to the current fiscal year is called the normal cost.

The actuarial accrued liability for active members is then calculated as the portion of the total cost of the plan allocated to prior years. The actuarial accrued liability for members currently receiving benefits, for active members beyond the assumed retirement age, and for members entitled to deferred benefits, is equal to the present value of the benefits expected to be paid. No normal costs are applicable for these participants.

The excess of the total actuarial accrued liability over the actuarial value of plan assets is called the unfunded actuarial accrued liability. Funding requirements are determined by adding the normal cost and an amortization of the unfunded liability as a level percentage of assumed future payrolls. All changes in liability due to plan amendments, changes in actuarial assumptions, or changes in actuarial methodology are amortized separately over a 20-year period. All gains or losses are tracked and amortized over a rolling 30-year period with the exception of special gains and losses in fiscal years 2008-2009, 2009-2010 and 2010-2011. Each of these years' gains or losses will be isolated and amortized over fixed and declining 30 year periods (as opposed to the current rolling 30 year amortization). If a plan's accrued liability exceeds the actuarial value of assets, the annual contribution with respect to the total unfunded liability may not be less than the amount produced by a 30-year amortization of the unfunded liability.

Additional contributions will be required for any plan or pool if their cash flows hamper adequate funding progress by preventing the expected funded status on a market value of assets basis of the plan to either:

- Increase by at least 15% by June 30, 2043; or
- Reach a level of 75% funded by June 30, 2043

The necessary additional contribution will be obtained by changing the amortization period of the gains and losses prior to 2009 to a period which will result in the satisfaction of the above criteria. CalPERS actuaries will reassess the criteria above when performing each future valuation to determine whether or not additional contributions are necessary.

An exception to the funding rules above is used whenever the application of such rules results in inconsistencies. In these cases a "fresh start" approach is used. This simply means that the current unfunded actuarial liability is projected and amortized over a set number of years. As mentioned above, if the annual contribution on the total unfunded liability was less than the amount produced by a 30-year amortization of the unfunded liability, the plan actuary would implement a 30-year fresh start. However, in the case of a 30-year fresh start, just the unfunded liability not already in the (gain)/loss base (which already is amortized over 30 years) will go into the new fresh start base. In addition, a fresh start is needed in the following situations:

- 1) when a positive payment would be required on a negative unfunded actuarial liability (or conversely a negative payment on a positive unfunded actuarial liability); or
- 2) when there are excess assets, rather than an unfunded liability. In this situation a 30-year fresh start is used, unless a longer fresh start is needed to avoid a negative total rate.

It should be noted that the actuary may choose to use a fresh start under other circumstances. In all cases, the fresh start period is set by the actuary at what he deems appropriate, and will not be less than five years nor greater than 30 years.

### **Asset Valuation Method**

In order to dampen the effect of short term market value fluctuations on employer contribution rates, the following asset smoothing technique is used. First an Expected Value of Assets is computed by bringing forward the prior year's Actuarial Value of Assets and the contributions received and benefits paid during the year at the assumed actuarial rate of return. The Actuarial Value of Assets is then computed as the Expected Value of Assets plus one-fifteenth of the difference between the actual Market Value of Assets and the Expected Value of Assets as of the valuation date. However in no case will the Actuarial Value of Assets be less than 80% or greater than 120% of the actual Market Value of Assets.

In June 2009, the CalPERS Board adopted changes to the asset smoothing method in order to phase in over a three year period the impact of the -24% investment loss experienced by CalPERS in fiscal year 2008-2009. The following changes were adopted:

- Increase the corridor limits for the actuarial value of assets from 80%-120% of market value to 60%-140% of market value on June 30, 2009
- Reduce the corridor limits for the actuarial value of assets to 70%-130% of market value on June 30, 2010
- Return to the 80%-120% of market value corridor limits for the actuarial value of assets on June 30, 2011 and thereafter

## **Miscellaneous**

### **Superfunded Status**

If a rate plan is superfunded (actuarial value of assets exceeds the present value of benefits), as of the most recently completed annual valuation, the employer may cover their employees' member contributions (both taxed and tax-deferred) using their employer assets during the fiscal year for which this valuation applies. This would entail transferring assets within the Public Employees' Retirement Fund (PERF) from the employer account to the member accumulated contribution accounts. This change was implemented effective January 1, 1999 pursuant to Chapter 231 (Assembly Bill 2099) which added Government Code Section 20816.

Superfunded status applies only to individual plans, not risk pools. For rate plans within a risk pool, actuarial value of assets is the sum of the rate plan's side fund plus the rate plan's pro-rata share of non-side fund assets.

### **Internal Revenue Code Section 415**

The limitations on benefits imposed by Internal Revenue Code Section 415 were not taken into account in this valuation. The effect of these limitations has been deemed immaterial on the overall results.

### **Internal Revenue Code Section 401(a)(17)**

The limitations on compensation imposed by Internal Revenue Code Section 401(a)(17) were taken into account in this valuation. Each year the impact of any changes in this compensation limitation since the prior valuation is included and amortized as part of the actuarial gain or loss base.

## **Actuarial Assumptions**

### ***Economic Assumptions***

#### **Investment Return**

7.75% compounded annually (net of expenses). This assumption is used for all plans.

#### **Salary Growth**

Annual increases vary by category, entry age, and duration of service.

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