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October 2014

**SAFETY FIRE PLAN OF THE CITY OF COSTA MESA
 (CalPERS ID: 5937664258)
 Annual Valuation Report as of June 30, 2013**

Dear Employer,

As an attachment to this letter, you will find a copy of the June 30, 2013 actuarial valuation report of your pension plan. Because this plan is in a risk pool and the CalPERS Board approved structural changes to risk pooling on May 21, 2014 you will notice some changes between your last actuarial report and this one. An overview of the changes to pooling is provided below and we urge you to carefully review the information provided in this report.

Because this plan is in a risk pool, the following valuation report has been separated into two Sections:

- Section 1 contains specific information for your plan, including the development of your pooled employer contributions and projected employer contributions, and
- Section 2 contains the Risk Pool Actuarial Valuation appropriate to your plan, as of June 30, 2013.

Section 2 can be found on the CalPERS website at (www.calpers.ca.gov) then select in order "Employers", "Actuarial, Risk Pooling & GASB 27 Information", "Risk Pooling", "Risk Pool Annual Valuation Reports", then select the appropriate pool report.

Your 2013 actuarial valuation report contains important actuarial information about your pension plan at CalPERS. Your CalPERS staff actuary, whose signature appears in the Actuarial Certification Section on page 1, is available to discuss your report with you after October 31, 2014.

Future Contribution Rates

Fiscal Year	Employer Normal Cost Rate	+	Employer Payment of Unfunded Liability
2015-16	20.230%		\$ 3,395,605
2016-17 (projected)	21.3%		\$ 3,769,534

The exhibit above displays the Minimum Employer Contributions, before any cost sharing, for 2015-16 along with estimates of the contributions for 2016-17. The estimated contributions for 2016-17 are based on a projection of the most recent information we have available, including an estimated 18.0 percent investment return for fiscal 2013-14, the impact of the new amortization methods adopted by the CalPERS Board in April 2013 that will impact employer rates for the first time in 2015-16 and new actuarial assumptions adopted by the CalPERS Board in February 2014 that will impact rates for the first time in 2016-17. These new demographic assumptions include a 20-year projected improvement in mortality.

A projection of employer contributions beyond 2016-17 can be found in the Risk Analysis Section of this report, "Analysis of Future Investment Return Scenarios", under a variety of investment return scenarios. Please disregard any projections provided to you in the past. Member contributions, other than cost sharing (whether paid by the employer or the employee), are in addition to the above amounts. The employer contributions in this report do not reflect any cost sharing arrangements you may have with your employees.

The estimate for 2016-17 also assumes that there are no future contract 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 effect on your contributions. Even for the largest plans or pools, such gains and losses can impact the employer's contribution rate by one or two percent of payroll or even more in some less common circumstances. These gains and losses cannot be predicted in advance so the projected employer contributions are estimates. Your actual employer contributions for 2016-17 will be provided in next year's valuation report.

Changes since the Prior Year's Valuation

On April 17, 2013, the CalPERS Board of Administration approved a recommendation to change the CalPERS amortization and rate smoothing policies. Beginning with the June 30, 2013 valuations that set the 2015-16 rates, CalPERS will employ an amortization and smoothing policy that will pay for all gains and losses over a fixed 30-year period with the increases or decreases in the rate spread directly over a 5-year period. The impact of this new actuarial methodology is reflected in the "*Analysis of Future Investment Return Scenarios*" subsection of the "*Risk Analysis*" section of your report.

On January 1, 2013, the Public Employees' Pension Reform Act of 2013 (PEPRA) took effect. In addition to creating new retirement formulas for newly hired members PEPRA also effectively closed all existing active risk pools to new employees. As such it is no longer appropriate to assume that the payroll of the risk pools for the classic formulas will continue to grow at 3 percent annually. Funding the promised pension benefits as a percentage of payroll would lead to the underfunding of the plans. In addition the current allocation of the existing unfunded liabilities based on payroll would create equity issues for employers within the risk pools. Furthermore the declining payroll of the classic formula risk pools will lead to unacceptable levels of employer rate volatility.

In order to address these issues the CalPERS Board of Administration approved at their May 21, 2014 meeting structural changes to the risk pools. All pooled plans will be combined into two active pools, one for all miscellaneous groups and one for all safety groups, effective with the 2013 valuations. By combining the pools this way the payroll of the risk pools and the employers within the pools can once again be expected to increase at the assumed 3 percent annual growth. However two important changes are being made which will affect employers.

1. Beginning with FY 2015-16 CalPERS will collect employer contributions toward your unfunded liability and side fund as dollar amounts instead of the prior method of a contribution rate. This change will address the funding issue that would still arise from the declining population of classic formula members. Although employers will be invoiced at the beginning of the fiscal year for their unfunded liability and side fund

payments the plan's normal cost contribution will continue to be collected as a percentage of payroll.

2. The pool's unfunded liability will be allocated to each individual plan based on the plan's total liability rather than by plan individual payroll. This will allow employers to track their own unfunded liability and pay it down faster if they choose. The change in the allocation of unfunded liabilities will result in some employers paying more towards their unfunded liability and some paying less.

On January 1, 2013, the Public Employees' Pension Reform Act of 2013 (PEPRA) took effect. The impact of the PEPRA changes are included in the rates and the benefit provision listings of the June 30, 2013 valuation for the 2015-16 rates. For more information on PEPRA, please refer to the CalPERS website.

In 2014 CalPERS completed a 2-year asset liability management study incorporating actuarial assumptions and strategic asset allocation. On February 19, 2014 the CalPERS Board of Administration adopted relatively modest changes to the current asset allocation that will reduce the expected volatility of returns. The adopted asset allocation is expected to have a long-term blended return that continues to support a discount rate assumption of 7.5 percent. The Board also approved several changes to the demographic assumptions that more closely align with actual experience. The most significant of these is mortality improvement to acknowledge the greater life expectancies we are seeing in our membership and expected continued improvements. The new actuarial assumptions will be used to set the FY 2016-17 contribution rates for public agency employers. The increase in liability due to new actuarial assumptions will be calculated in the 2014 actuarial valuation and will be amortized over a 20-year period with a 5-year ramp-up/ramp-down in accordance with Board policy.

Besides the above noted changes, 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*" of your section 2 report. 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, you wait until after October 31 to contact us with actuarial related questions.

If you have other questions, please call our customer contact center at (888) CalPERS or (888-**225-7377**).

Sincerely,

ALAN MILLIGAN
Chief Actuary

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ACTUARIAL VALUATION

as of June 30, 2013

**for the
SAFETY FIRE PLAN
of the
CITY OF COSTA MESA
(CalPERS ID: 5937664258)**

**REQUIRED CONTRIBUTIONS
FOR FISCAL YEAR
July 1, 2015 - June 30, 2016**

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SECTION 1 – PLAN SPECIFIC INFORMATION

SECTION 2 – RISK POOL ACTUARIAL VALUATION INFORMATION

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Section 1

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

**Plan Specific Information
for the
SAFETY FIRE PLAN
of the
CITY OF COSTA MESA**

**(CalPERS ID: 5937664258)
(Rate Plan: 3323)**

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ACTUARIAL CERTIFICATION

Section 1 of this report is based on the member and financial data contained in our records as of June 30, 2013 which was provided by your agency and the benefit provisions under your contract with CalPERS. Section 2 of this report is based on the member and financial data as of June 30, 2013 provided by employers participating in the SAFETY risk pool to which your plan belongs and benefit provisions under the CalPERS contracts for those agencies.

As set forth in Section 2 of this report, the Pool Actuary has certified that, in their opinion, the valuation of the Risk Pool containing your SAFETY FIRE PLAN has been performed in accordance with generally accepted actuarial principles consistent with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods are internally consistent and reasonable for the Risk Pool as of the date of this valuation and as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

Having relied upon the information set forth in Section 2 of this report and based on the census and benefit provision information for your plan, it is my opinion as your Plan Actuary that the Side Fund and other Unfunded Accrued Liability bases as of June 30, 2013 and employer contribution rate as of July 1, 2015, have been properly and accurately determined in accordance with the principles and standards stated above.

The undersigned is an actuary for CalPERS, who is a member of both the American Academy of Actuaries and Society of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

KERRY J. WORGAN, MAAA, FSA, FCIA
Senior Pension Actuary, CalPERS
Plan Actuary

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HIGHLIGHTS AND EXECUTIVE SUMMARY

- **INTRODUCTION**
- **PURPOSE OF SECTION 1**
- **REQUIRED EMPLOYER CONTRIBUTION**
- **PLAN'S FUNDED STATUS**
- **PROJECTED CONTRIBUTIONS**

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Introduction

This report presents the results of the June 30, 2013 actuarial valuation of the SAFETY FIRE PLAN of the CITY OF COSTA MESA of the California Public Employees' Retirement System (CalPERS). This actuarial valuation was used to set the 2015-16 required employer contribution rates.

On April 17, 2013, the CalPERS Board of Administration approved a recommendation to change the CalPERS amortization and rate smoothing policies. Beginning with the June 30, 2013 valuations that set the 2015-16 rates, CalPERS will employ an amortization and smoothing policy that will pay for all gains and losses over a fixed 30-year period with the increases or decreases in the rate spread directly over a 5-year period. The impact of this new actuarial methodology is reflected in the "*Analysis of Future Investment Return Scenarios*" subsection of the "*Risk Analysis*" section of your report.

On January 1, 2013, the Public Employees' Pension Reform Act of 2013 (PEPRA) took effect. In addition to creating new retirement formulas for newly hired members PEPRA also effectively closed all existing active risk pools to new employees. As such it is no longer appropriate to assume that the payroll of the risk pools for the classic formulas will continue to grow at 3 percent annually. Funding the promised pension benefits as a percentage of payroll would lead to the underfunding of the plans. In addition the current allocation of the existing unfunded liabilities based on payroll would create equity issues for employers within the risk pools. Furthermore the declining payroll of the classic formula risk pools will lead to unacceptable levels of employer rate volatility.

In order to address these issues the CalPERS Board of Administration approved at their May 21, 2014 meeting structural changes to the risk pools. All pooled plans will be combined into two active pools, one for all miscellaneous groups and one for all safety groups, effective with the 2013 valuations. By combining the pools this way the payroll of the risk pools and the employers within the pools can once again be expected to increase at the assumed 3 percent annual growth. However two important changes are being made which will affect employers.

1. Beginning with FY 2015-16 CalPERS will collect employer contributions toward your unfunded liability and side fund as dollar amounts instead of the prior method of a contribution rate. This change will address the funding issue that would still arise from the declining population of classic formula members. Although employers will be invoiced at the beginning of the fiscal year for their unfunded liability and side fund payments the plan's normal cost contribution will continue to be collected as a percentage of payroll.
2. The pool's unfunded liability will be allocated to each individual plan based on the plan's total liability rather than by the plan's individual payroll. This will allow employers to track their own unfunded liability and pay it down faster if they choose. The change in the allocation of unfunded liabilities will result in some employers paying more towards their unfunded liability and some paying less.

The impact of most of the PEPRA changes will first show up in the rates and the benefit provision listings of the June 30, 2013 valuation that sets the contribution rates for the 2015-16 fiscal year. For more detailed information on changes due to PEPRA, please refer to the CalPERS website.

In 2014 CalPERS completed a 2-year asset liability management study incorporating actuarial assumptions and strategic asset allocation. On February 19, 2014 the CalPERS Board of Administration adopted relatively modest changes to the current asset allocation that will reduce the expected volatility of returns (see Appendix). The adopted asset allocation is expected to have a long-term blended return that continues to support a discount rate assumption of 7.5 percent. The Board also approved several changes to the demographic assumptions that more closely align with actual experience. The most significant of these is mortality improvement to acknowledge the greater life expectancies we are seeing in our membership and expected continued improvements. The new actuarial assumptions will be used to set the FY 2016-17 contribution rates for public agency employers. The increase in liability due to new actuarial assumptions will be calculated in the 2014 actuarial valuation and will be amortized over a 20-year period with a 5-year ramp-up/ramp-down in accordance with Board policy.

Purpose of Section 1

This section 1 report for the SAFETY FIRE PLAN of the CITY OF COSTA MESA of the California Public Employees' Retirement System (CalPERS) was prepared by the Plan Actuary in order to:

- Set forth the assets and accrued liabilities of this plan as of June 30, 2013;
- Determine the required employer contribution for this plan for the fiscal year July 1, 2015 through June 30, 2016;
- Provide actuarial information as of June 30, 2013 to the CalPERS Board of Administration and other interested parties; and
- Provide pension information as of June 30, 2013 to be used in financial reports subject to Governmental Accounting Standards Board (GASB) Statement Number 27 for a Cost Sharing Multiple 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 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.

California Actuarial Advisory Panel Recommendations

This report includes all the basic disclosure elements as described in the *Model Disclosure Elements for Actuarial Valuation Reports* recommended in 2011 by the California Actuarial Advisory Panel (CAAP), with the exception of including the original base amounts of the various components of the unfunded liability in the Schedule of Amortization Bases shown on page 12.

Additionally, this report includes the following "Enhanced Risk Disclosures" also recommended by the CAAP in the Model Disclosure Elements document:

- A "Deterministic Stress Test," projecting future results under different investment income scenarios
- A "Sensitivity Analysis," showing the impact on current valuation results using a 1 percent plus or minus change in the discount rate.

Required Employer Contribution

Actuarially Determined Employer Contributions:	Fiscal Year	Fiscal Year
	2014-15 ¹	2015-16
Employer Contributions (in Projected Dollars)		
Plan's Employer Normal Cost	\$ 1,834,927	\$ 1,759,431
Plan's Payment on Amortization Bases	991,216	3,395,605 ²
Surcharge for Class 1 Benefits ³		
a) FAC 1	101,771	96,905
b) PRSA	179,466	170,962
Phase out of Normal Cost Difference ⁴	0	0
Amortization of Side Fund	1,881,462	0
Total Employer Contribution	\$ 4,988,842	\$ 5,422,903
Projected Payroll for the Contribution Fiscal Year	\$ 10,513,535	\$ 10,021,248
Required Employer Contributions (Percentage of Payroll)		
Plan's Net Employer Normal Cost	17.453%	17.557%
Plan's Payment on Amortization Bases	9.428%	33.884% ²
Surcharge for Class 1 Benefits ³		
a) FAC 1	0.968%	0.967%
b) PRSA	1.707%	1.706%
Phase out of Normal Cost Difference ⁴	0.000%	0.000%
Amortization of Side Fund	17.896%	0.000%
Total Employer Contribution Rate	47.452%	54.114%

Required Employer Contribution for FY 2015-16	
Employer Contribution Rate⁵	20.230%
Plus Monthly Employer Dollar UAL Payment⁶	\$ 282,967
Annual Lump Sum Prepayment Option	\$ 3,275,012
<p><i>For FY 2015-16 the total minimum required employer contribution is the sum of the Plan's Employer Contribution Rate (expressed as a percentage of payroll) plus the Employer Unfunded Accrued Liability (UAL) Contribution Amount (in dollars). Whereas in prior years it was possible to prepay total employer contributions for the fiscal year, beginning with FY 2015-16 and beyond, only the UAL portion of the employer contribution can be prepaid.</i></p>	

¹ The results shown for FY 2014-15 reflect the prior year valuation and do not reflect any lump sum payment, side fund payoff or rate adjustment made after annual valuation report is completed.

² For FY 2015-16 the Plan's Payment on Amortization Bases reflects the sum of all UAL amortization bases including the Plan's Side Fund (where applicable).

³ Section 2 of this report contains a list of Class 1 benefits and corresponding surcharges for each benefit.

⁴ Risk pooling was implemented for most plans as of June 30, 2003. The normal cost difference was scheduled to be phased out over a five year period. The phase out of normal cost difference is 100 percent for the first year of pooling, and is incrementally reduced by 20 percent of the original normal cost difference for each subsequent year.

⁵ The minimum employer contribution under PEPR is the greater of the required employer contribution or the total employer normal cost.

⁶ The Plan's Payment on Amortization Bases Contribution amount for FY 2015-16 will be billed as a level dollar amount monthly over the course of the year. Late payments will accrue interest at an annual rate of 7.5 percent. Lump sum payments may be made through my|CalPERS. Plan Normal Cost contributions will be made as part of the payroll reporting process. As a percentage of payroll your UAL contribution is 33.884 percent.

Plan's Funded Status

	June 30, 2012	June 30, 2013
1. Present Value of Projected Benefits (PVB)	\$ 186,015,053	\$ 188,676,280
2. Entry Age Normal Accrued Liability	161,328,098	165,583,936
3. Plan's Market Value of Assets (MVA)	100,677,450	109,061,941
4. Unfunded Liability [(2) - (3)]	60,650,648	56,521,995
5. Funded Ratio [(3) / (2)]	62.4%	65.9%

Projected Contributions

The contribution rate and amount shown below is an estimate for the employer contribution for fiscal year 2016-17. The estimated contribution is based on a projection of the most recent information we have available, including an estimate of the investment return for fiscal year 2013-14, namely 18.0 percent. It also reflects implementation of the direct rate smoothing method and the impact of new actuarial assumptions.

Projected Employer Contribution Rate:	21.3%
Projected Plan UAL Contribution	\$ 3,769,534

The estimate also assumes that there are no liability gains or losses among the plans in your risk pool, that your plan has no new amendments in the next year, and that your plan's and your risk pool's payrolls both increase exactly 3.0 percent in the 2013-14 fiscal year. Therefore, the projected employer contribution for 2016-17 is strictly an estimate. Your actual rate for 2016-17 will be provided in next year's valuation report. A more detailed analysis of your projected employer contributions over the next five years can be found in the "Risk Analysis" section of this report.

ASSETS AND LIABILITIES

- **DEVELOPMENT OF PLAN'S SHARE OF POOL'S UAL**
- **DEVELOPMENT OF PLAN'S SHARE OF POOL'S MVA**
- **SCHEDULE OF PLAN'S SIDE FUND & OTHER AMORTIZATION BASES**
- **ALTERNATIVE AMORTIZATION SCHEDULES**
- **FUNDING HISTORY**
- **PLAN'S TOTAL NORMAL COST RATE**

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Development of the Plan's Share of Pool's Unfunded Accrued Liability

It is the policy of the CalPERS to ensure equity within the risk pools by allocating the pool's unfunded accrued liability in a manner that treats each employer fairly and that maintains benefit security for the members of the System while minimizing substantial variations in employer contributions. Commencing with the June 30, 2013 actuarial valuations and for purposes of allocating the pool's unfunded accrued liability to all the individual plans within the pool, an individual plan's total unfunded accrued liability (Preliminary Plan UAL) on a specific valuation date will be set equal to the sum of the outstanding unamortized balances on the valuation date for the following:

a) Side Fund		
b) Plan's share of Pool UAL due to benefit changes (including golden handshakes) provided to the members of that plan		
c) Plan's share of the Pool UAL created before the valuation date for reasons other than benefit changes		
1. Plan's Accrued Liability	\$	165,583,936
2. Plan's Side Fund		24,941,538
3. Increase in Plan's AL for amendments in FY 2012-13		0
4. Pool's Accrued Liability	\$	12,307,135,447
5. Sum of Pool's Individual Plan Side Funds		461,094,417
6. Increase in Pool's AL for amendments in FY 2012-13		817,039
7. Pre-2013 Pool's UAL	\$	1,391,710,886
8. Plan's Share of Pre-2013 Pool's UAL $[(1)-(2)-(3)]/[(4)-(5)-(6)] * (7)$	\$	16,524,260
9. Pool's 2013 Investment & Asset (Gain)/Loss		1,285,245,280
10. Pool's 2013 Other (Gain)/Loss		(15,159,479)
11. Plan's Share of Pool's Asset (Gain)/Loss $[(1)-(2)-(3)]/[(4)-(5)-(6)] * (9)$		15,260,157
12. Plan's Share of Pool's Other (Gain)/Loss $[(1)]/[(4)] * (10)$		(203,960)
13. Plan's UAL as of 6/30/2013 $[(2)+(8)+(11)+(12)]$	\$	56,521,995

Development of the Plan's Share of Pool's Market Value of Assets

1. Plan's Accrued Liability	\$	165,583,936
2. Plan's UAL	\$	56,521,995
3. Plan's Share of Pool's MVA (1)-(2)	\$	109,061,941

Schedule of Plan's Side Fund and Other 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, 2013.
- The employer contribution determined by the valuation is for the fiscal year beginning two years after the valuation date; fiscal year 2015-16.

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 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, with the exception of the Side Fund base, 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 6/30/13	Expected Payment 2013-14	Balance 6/30/14	Expected Payment 2014-15	Amounts for Fiscal 2015-16		
							Balance 6/30/15	Scheduled Payment for 2015-16	Payment as Percentage of Payroll
SIDE FUND	06/30/13	18	\$24,941,538	\$2,810,917	\$23,897,733	\$1,864,668	\$23,756,734	\$1,920,608	19.165%
SHARE OF PRE-2013 POOL UAL	06/30/13	22	\$16,524,260	\$717,021	\$17,020,156	\$978,850	\$17,281,774	\$1,230,275	12.277%
ASSET (GAIN)/LOSS	06/30/13	30	\$15,260,157	\$0	\$16,404,669	\$0	\$17,635,019	\$248,037	2.475%
NON-ASSET (GAIN)/LOSS	06/30/13	30	\$(203,960)	\$0	\$(219,257)	\$0	\$(235,701)	\$(3,315)	(0.033%)
TOTAL			\$56,521,995	\$3,527,938	\$57,103,301	\$2,843,518	\$58,437,826	\$3,395,605	33.884%

Commencing with the June 30, 2013 actuarial valuations, the side fund will be treated as a liability as opposed to an asset. Prior to June 30, 2013, a positive side fund conveyed that a public agency had a surplus when risk pooling began June 30, 2003. Conversely, a negative side fund signified that a public agency had an unfunded liability that required elimination through an amortization payment schedule. After June 30, 2013 a positive side fund will signify that an agency has an unfunded liability while a negative side fund will indicate a surplus asset. The amortization schedule will remain unchanged, with the exception that a plan with a negative side fund may have its amortization period extended at the discretion of the plan actuary.

Your plan's allocated share of the risk's pool's unfunded accrued liability is based on your plan's accrued liability and is amortized over the average amortization period of the combined existing amortization bases prior to June 30, 2013. The payments on this base for Fiscal Year 2013-14 and 2014-15 are allocated by your plan's payroll.

The (gain)/loss base is your plan's allocated share of the risk pool's asset gain/loss for the Fiscal Year 2012-13, the change in unfunded accrued liability due to direct rate smoothing and your plan's allocated share of the risk pool's other liability gains and losses for fiscal year 2012-13. This base will be amortized according to Board policy over 30 years with a 5-year ramp-up.

Alternate Amortization Schedules

The amortization schedule shown on the previous page shows the minimum contributions required according to CalPERS amortization policy. There has been considerable interest from many agencies in paying off these unfunded accrued liabilities sooner and the possible savings in doing so. As a result, we have provided alternate amortization schedules to help analyze your current amortization schedule and illustrate the advantages of accelerating unfunded liability payments towards your plan's unfunded liability of \$58,437,826 as of June 30, 2015, which will require total payments of \$132,629,105.

Shown below are the level rate payments required to amortize your plan's unfunded liability assuming a fresh start over the various periods noted. Note that the payments under each scenario would increase by 3 percent for each year into the future.

Period	Level Rate			
	2015-16 Payment	Total Payments	Total Interest	Savings
20	\$ 4,412,373	\$ 118,562,115	\$ 60,124,289	\$ 14,066,990
15	\$ 5,356,968	\$ 99,633,787	\$ 41,195,961	\$ 32,995,318

Current CalPERS Board policy calls for lump sum contributions in excess of the required employer contribution shall first be used to eliminate the side fund, if applicable, and then the plan's share of the pool's unfunded accrued liability.

Please contact your plan actuary before making such a payment to ensure that the payment is applied correctly.

Funding History

The Funding History below shows the actuarial accrued liability, the plan's share of the pool's market value of assets, plan's share of the pool's unfunded liability, funded ratio and the annual covered payroll.

Valuation Date	Accrued Liability (AL)	Share of Pool's Market Value of Assets (MVA)	Plan's Share of Pool's Unfunded Liability	Funded Ratio	Annual Covered Payroll
06/30/2011	\$ 156,290,468	\$ 103,982,067	\$ 52,308,401	66.5%	\$ 9,422,324
06/30/2012	161,328,098	100,677,450	60,650,648	62.4%	9,621,374
06/30/2013	165,583,936	109,061,941	56,521,995	65.9%	9,170,862

Plan's Total Normal Cost Rate

The Public Employees' Pension Reform Act of 2013 requires that new employees pay at least 50 percent of the total annual normal cost and that current employees approach the same goal through collective bargaining. Please refer to the CalPERS website for more details.

Shown below are the total annual normal cost rates for your plan.

	Fiscal Year 2014-15	Fiscal Year 2015-16
Plan's Net Total Normal Cost Rate for 3% @ 50	26.438%	26.543%
Surcharge for Class 1 Benefits		
a) FAC 1	0.968%	0.967%
b) PRSA	<u>1.707%</u>	<u>1.706%</u>
Plan's Total Normal Cost Rate	29.113%	29.216%

RISK ANALYSIS

- **VOLATILITY RATIOS**
- **PROJECTED EMPLOYER CONTRIBUTIONS**
- **ANALYSIS OF FUTURE INVESTMENT RETURN SCENARIOS**
- **ANALYSIS OF DISCOUNT RATE SENSITIVITY**
- **HYPOTHETICAL TERMINATION LIABILITY**

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Volatility Ratios

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.

Asset Volatility Ratio (AVR)

Plans that have higher asset to payroll ratios produce more volatile employer rates due to investment return. For example, a plan with an asset to payroll ratio of 8 may experience twice the contribution volatility due to investment return volatility, than a plan with an asset to payroll ratio of 4. Below we have shown your asset volatility ratio, a measure of the plan's current rate volatility. It should be noted that this ratio is a measure of the current situation. It increases over time but generally tends to stabilize as the plan matures.

Liability Volatility Ratio (LVR)

Plans that have higher liability to payroll ratios produce more volatile employer rates due to investment return and changes in liability. For example, a plan with a liability to payroll ratio of 8 is expected to have twice the contribution volatility of a plan with a liability to payroll ratio of 4. The liability volatility ratio is also included in the table below. It should be noted that this ratio indicates a longer-term potential for contribution volatility and the asset volatility ratio, described above, will tend to move closer to this ratio as the plan matures.

Rate Volatility	As of June 30, 2013	
1. Market Value of Assets	\$	109,061,941
2. Payroll		9,170,862
3. Asset Volatility Ratio (AVR = 1. / 2.)		11.9
4. Accrued Liability	\$	165,583,936
5. Liability Volatility Ratio (LVR = 4. / 2.)		18.1

Projected Employer Contributions

The estimated rate for 2016-17 is based on a projection of the most recent information we have available, including an estimated 18.0 percent investment return for fiscal 2013-14, the impact of the new smoothing methods adopted by the CalPERS Board in April 2013 that will impact employer rates for the first time in 2015-16 and new actuarial assumptions adopted by the CalPERS Board in February 2014. These new demographic assumptions include a 20-year projected improvement in mortality. A complete listing of the new demographic assumptions to be implemented with the June 30, 2014 annual actuarial valuation and incorporated in the projected rates for FY 2016-17 and beyond can be found on the CalPERS website at: <http://www.calpers.ca.gov/eip-docs/about/pubs/employer/actuarial-assumptions.xls>

The table below shows projected employer contribution rates (before cost sharing) for the next five Fiscal Years, **assuming CalPERS earns 18.0% for fiscal year 2013-14 and 7.50 percent every fiscal year thereafter**, and assuming that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur between now and the beginning of the fiscal year 2016-17.

	New Rate	Projected Future Employer Contribution Rates				
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Normal Cost %:	20.230%	21.3%	21.3%	21.3%	21.3%	21.3%
UAL \$	\$ 3,395,605	\$ 3,769,534	\$ 4,162,840	\$ 4,576,354	\$ 5,010,932	\$ 5,183,764

Analysis of Future Investment Return Scenarios

In 2014 CalPERS completed a 2-year asset liability management study incorporating actuarial assumptions and strategic asset allocation. On February 19, 2014 the CalPERS Board of Administration adopted relatively modest changes to the current asset allocation that will reduce the expected volatility of returns. The adopted asset allocation is expected to have a long- term blended return that continues to support a discount rate assumption of 7.5 percent. The newly adopted asset allocation has a lower expected investment volatility that will result in better risk characteristics than an equivalent margin for adverse deviation. The current asset allocation has an expected standard deviation of 12.45 percent while the newly adopted asset allocation has a lower expected standard deviation of 11.76 percent.

The investment return for fiscal year 2013-14 was announced July 14, 2014. The investment return in fiscal year 2013-14 is 18.42 percent before administrative expenses. This year, there will be no adjustment for real estate and private equities. For purposes of projecting future employer rates, we are assuming a 18.0 percent investment return for fiscal year 2013-14.

The investment return realized during a fiscal year first affects the contribution rate for the fiscal year 2 years later. Specifically, the investment return for 2013-14 will first be reflected in the June 30, 2014 actuarial valuation that will be used to set the 2016-17 employer contribution rates, the 2014-15 investment return will first be reflected in the June 30, 2015 actuarial valuation that will be used to set the 2017-18 employer contribution rates and so forth.

Based on a 18.0 percent investment return for fiscal year 2013-14, the April 17, 2013 CalPERS Board-approved amortization and rate smoothing method change, the February 18, 2014 new demographic assumptions including 20-year mortality improvement using Scale BB and assuming that all other actuarial assumptions will be realized, and that no further changes to assumptions, contributions, benefits, or funding will occur between now and the beginning of the fiscal year 2016-17, the effect on the 2016-17 Employer Rate is as follows:

	Estimated 2016-17 Employer Contribution	Estimated Increase in Employer Contribution between 2015-16 and 2016-17
Normal Cost %:	21.3%	1.1%
UAL \$	\$ 3,769,534	\$ 373,929

As part of this report, a sensitivity analysis was performed to determine the effects of various investment returns during fiscal years 2014-15, 2015-16 and 2016-17 on the 2017-18, 2018-19 and 2019-20 employer rates. Once again, the projected rate increases assume that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur.

Five different investment return scenarios were selected.

- The first scenario is what one would expect if the markets were to give us a 5th percentile return from July 1, 2014 through June 30, 2017. The 5th percentile return corresponds to a -3.8 percent return for each of the 2014-15, 2015-16 and 2016-17 fiscal years.
- The second scenario is what one would expect if the markets were to give us a 25th percentile return from July 1, 2014 through June 30, 2017. The 25th percentile return corresponds to a 2.8 percent return for each of the 2014-15, 2015-16 and 2016-17 fiscal years.
- The third scenario assumed the return for 2014-15, 2015-16, 2016-17 would be our assumed 7.5 percent investment return which represents about a 49th percentile event.
- The fourth scenario is what one would expect if the markets were to give us a 75th percentile return from July 1, 2014 through June 30, 2017. The 75th percentile return corresponds to a 12.0 percent return for each of the 2014-15, 2015-16 and 2016-17 fiscal years.
- Finally, the last scenario is what one would expect if the markets were to give us a 95th percentile return from July 1, 2014 through June 30, 2017. The 95th percentile return corresponds to a 18.9 percent return for each of the 2014-15, 2015-16 and 2016-17 fiscal years.

The table below shows the estimated projected contribution rates and the estimated increases for your plan under the five different scenarios.

2014-17 Investment Return Scenario	Estimated Employer UAL Contribution			Estimated Total Change in Employer UAL Contribution between 2016-17 and 2019-20
	2017-18	2018-19	2019-20	
-3.8% (5th percentile)	\$ 4,389,882	\$ 5,257,383	\$ 6,373,607	\$ 2,604,073
2.8% (25th percentile)	\$ 4,257,291	\$ 4,865,899	\$ 5,602,912	\$ 1,833,378
7.5%	\$ 4,162,840	\$ 4,576,354	\$ 5,010,932	\$ 1,241,398
12.0%(75th percentile)	\$ 4,072,386	\$ 4,290,745	\$ 4,409,187	\$ 639,653
18.9%(95th percentile)	\$ 3,933,651	\$ 3,836,881	\$ 0	\$ (3,769,534)

In addition to the UAL Contribution amounts shown above the estimated employer normal cost of 21.3% of payroll will also be payable in each of the fiscal years shown above. The projected plan normal cost is expected to remain relatively stable over this time period.

Analysis of Discount Rate Sensitivity

The following analysis looks at the 2015-16 employer contributions under two different discount rate scenarios. Shown below are the employer contributions assuming discount rates that are 1 percent lower and 1 percent higher than the current valuation discount rate. This analysis gives an indication of the potential required employer contribution rates if the PERF were to realize investment returns of 6.50 percent or 8.50 percent over the long-term.

This type of analysis gives the reader a sense of the long-term risk to the employer contributions.

2015-16 Employer Contribution			
As of June 30, 2013	6.50% Discount Rate (-1%)	7.50% Discount Rate (assumed rate)	8.50% Discount Rate (+1%)
Plan's Employer Normal Cost	27.6%	20.2%	14.6%
Accrued Liability	\$ 186,338,304	\$ 165,583,936	\$ 148,365,174
Unfunded Accrued Liability	\$ 77,276,363	\$ 56,521,995	\$ 39,303,233

Hypothetical Termination Liability

Below is an estimate of the financial position of your plan if you had terminated your contract with CalPERS as of June 30, 2013 using the discount rates shown below. Your plan liability on a termination basis is calculated differently compared to the plan's ongoing funding liability. For this hypothetical termination liability both compensation and service is frozen as of the valuation date and no future pay increases or service accruals are included. In December 2012, the CalPERS Board adopted a more conservative investment policy and asset allocation strategy for the Terminated Agency Pool. Since the Terminated Agency Pool has limited funding sources, expected benefit payments are secured by risk-free assets. With this change, CalPERS increased benefit security for members while limiting its funding risk. This asset allocation has a lower expected rate of return than the PERF. Consequently, the lower discount rate for the Terminated Agency pool results in higher liabilities for terminated plans.

In order to terminate your plan, you must first contact our Retirement Services Contract Unit to initiate a Resolution of Intent to Terminate. The completed Resolution will allow your plan actuary to give you a preliminary termination valuation with a more up-to-date estimate of your plan liabilities. CalPERS advises you to consult with your plan actuary before beginning this process.

Valuation Date	Hypothetical Termination Liability¹	Market Value of Assets (MVA)	Unfunded Termination Liability	Termination Funded Ratio	Termination Liability Discount Rate²
06/30/2011	\$ 228,332,766	\$ 103,982,067	\$ 124,350,699	45.5%	\$ 4.82%
06/30/2012	302,104,554	100,677,450	201,427,104	33.3%	2.98%
06/30/2013	273,717,736	109,061,941	164,655,795	39.8%	3.72%

¹ The hypothetical liabilities calculated above include a 7 percent mortality load contingency in accordance with Board policy. Other actuarial assumptions, such as wage and inflation assumptions, can be found in appendix A.

² The discount rate assumption used for termination valuations is a weighted average of the 10 and 30-year US Treasury yields in effect on the valuation date that equal the duration of the pension liabilities. For purposes of this hypothetical termination liability estimate, the discount rate used, is the yield on the 30-year US Treasury Separate Trading of Registered Interest and Principal of Securities (STRIPS). Note that as of June 30, 2014 the 30-year STRIPS rate is 3.55 percent.

Participant Data

The table below shows a summary of your plan's member data upon which this valuation is based:

	June 30, 2012	June 30, 2013
Projected Payroll for Contribution Purposes	\$ 10,513,535	\$ 10,021,248
Number of Members		
Active	78	74
Transferred	10	11
Separated	5	4
Retired	114	120

List of Class 1 Benefit Provisions

- One Year Final Compensation
- Post-Retirement Survivor Allowance

Information for Compliance with GASB Statement No. 27 for Cost-Sharing Multiple-Employer Defined Benefit Plan

Disclosure under GASB 27 follows. However, note that effective for financial statements for fiscal years beginning after June 15, 2014, GASB 68 replaces GASB 27. Disclosure required under GASB 68 will require additional reporting. CalPERS is intending to provide GASB 68 disclosure information upon request for an additional fee. We urge you to start discussions with your auditors on how to implement GASB 68.

Your plan is part of the Safety Risk Pool, a cost-sharing multiple-employer defined benefit plan. Under GASB 27, an employer should recognize annual pension expenditures/expense equal to its contractually required contributions to the plan. Pension liabilities and assets result from the difference between contributions required and contributions made. The contractually required contribution for the period July 1, 2015 to June 30, 2016 has been determined by an actuarial valuation of the plan as of June 30, 2013. Your unadjusted contribution for the indicated period is a normal cost contribution of 20.230 percent of payroll and an unfunded accrued liability dollar amount of \$3,395,605. In order to calculate the dollar value of the contractually required contributions for inclusion in financial statements prepared as of June 30, 2016, this normal cost contribution rate, less any employee cost sharing, and as modified by any subsequent financing changes or contract amendments for the year, would be multiplied by the payroll of covered employees that was actually paid during the period July 1, 2015 to June 30, 2016 combined with the UAL amount of \$3,395,605. However, if this contribution is fully prepaid in a lump sum, then the dollar value of contractually required contributions is equal to the lump sum prepayment. The employer and the employer's auditor are responsible for determining the contractually required contributions. Further, the required contributions in dollars and the percentage of that amount contributed for the current year and each of the two preceding years is to be disclosed under GASB 27.

A summary of principal assumptions and methods used to determine the contractually required contributions is shown below for the cost-sharing multiple-employer defined benefit plan.

Valuation Date	June 30, 2013
Actuarial Cost Method	Entry Age Normal Cost Method
Amortization Method	Level Percent of Payroll
Asset Valuation Method	Market Value
Actuarial Assumptions	
Discount Rate	7.50% (net of administrative expenses)
Projected Salary Increases	3.30% to 14.20% depending on Age, Service, and type of employment
Inflation	2.75%
Payroll Growth	3.00%
Individual Salary Growth	A merit scale varying by duration of employment coupled with an assumed annual inflation growth of 2.75% and an annual production growth of 0.25%.

Complete information on assumptions and methods is provided in Appendix A of the Section 2 report. Appendix B of the Section 2 report contains a description of benefits included in the Risk Pool Actuarial Valuation.

A Schedule of Funding for the Risk Pool's actuarial value of assets, accrued liability, their relationship, and the relationship of the unfunded liability (UL) to payroll for the risk pool(s) to which your plan belongs can be found in Section 2 of the report.

PLAN'S MAJOR BENEFIT OPTIONS

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SECTION 1 – PLAN SPECIFIC INFORMATION FOR THE SAFETY FIRE PLAN OF THE CITY OF COSTA MESA

Plan’s Major Benefit Options

Shown below is a summary of the major optional benefits for which your agency has contracted. A description of principal standard and optional plan provisions is in Appendix B within Section 2 of this report.

Benefit Provision	Contract package	
	Receiving	Active Fire
Benefit Formula		3.0% @ 50
Social Security Coverage		no
Full/Modified		full
Final Average Compensation Period		12 mos.
Sick Leave Credit		yes
Non-Industrial Disability		improved
Industrial Disability		yes
Pre-Retirement Death Benefits		
Optional Settlement 2W		yes
1959 Survivor Benefit Level		level 3
Special		yes
Alternate (firefighters)		no
Post-Retirement Death Benefits		
Lump Sum	\$500	\$500
Survivor Allowance (PRSA)	yes	yes
COLA	2%	2%

Section 2

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

**Section 2 may be found on the CalPERS website
(www.calpers.ca.gov) then selecting:**

- **Employers**
- **Actuarial & GASB 27 Information**
- **Risk Pooling**
- **Risk Pool Annual Valuation Report**

