CITY OF PACIFIC GROVE

300 Forest Avenue, Pacific Grove, California 93950

AGENDA REPORT

TO:	Honorable Mayor and Members of City Council
FROM:	Patty Maitland, Finance Director
MEETING DATE:	September 21, 2016
SUBJECT:	CalPERS Valuation Reports as of June 30, 2015
CEQA:	Does not Constitute a "Project" per California Environmental Quality Act (CEQA) Guidelines

RECOMMENDATION
Receive the report.

DISCUSSION
At the February 17, 2016 Council Meeting, Council received a comprehensive document regarding the City's pension finances from an Ad hoc Committee comprised of Mayor Kampe, and Councilmembers Fischer and Peake. With the receipt of the City's most recent pension valuation reports, Mayor Kampe requested the reports be submitted to the Council.

BACKGROUND
The City makes annual contributions to CalPERS for its active employees as well as to reduce the amount of unfunded liability. Unfunded liability is the deficit between what the City has paid into CalPERS and the amount of funds needed for the City to meet its obligations to pay pensions in the future. CalPERS annually prepares an actuarial study for each member's pension plan/pension pool (the City is a member of four pension plans) that addresses the City's current and future pension obligations.

The annual CalPERS valuation reports included with this agenda report were received in August 2016 and reflect the status of the City's pension plans as of June 30, 2015. The following tables provide the highlights of these reports.

Pension Formulas

Plan	Formula	Notes
Miscellaneous	2% @ 55	In general, the CalPERS calculation for pension benefits is the percentage, multiplied by the number of service years, multiplied by the highest annual salary amount
Safety	3% @ 50	
PEPRA Miscellaneous	2% @ 62	
PEPRA Safety	2.7% at 57	

Participants by Plan

Participants	Active	Retired	Separated	Transferred
Miscellaneous	42	132	45	23
Safety	12	111	8	32
PEPRA Miscellaneous	13	0	2	2
PEPRA Safety	7	0	0	0
Total	74	243	55	57

Active = Current Employees
Transferred = Former Employees working for other CalPERS members
Separated = Former Employees working for non-CalPERS employers or not eligible to retire
Retired = Former Employees receiving a pension benefit

City Contribution Rates: The percentages are, in general, a percent of salaries and depending upon the terms of labor agreements, may include other pays as well. Additionally, the City may negotiate that labor union employees pay a portion of the employer percentage.

Employer Percentage Contributions	FY 2016-17	FY 2017-18 (Projected)	FY 2018-19 (Projected)
Miscellaneous	8.88%	8.92%	8.90%
Safety	19.54%	19.72%	19.70%
PEPRA Miscellaneous	6.56%	6.53%	6.50%
PEPRA Safety	12.08%	11.99%	12.00%

Unfunded Pension Liability

Unfunded Liability	FY 2016-17	FY 2017-18 (Projected)	FY 2018-19 (Projected)
Miscellaneous	$ 498,741	$ 641,228	$ 825,602
Safety	$ 880,155	$ 1,073,121	$ 1,341,921
PEPRA Miscellaneous	$ 60	$ 249	$ 636
PEPRA Safety	$ 68	$ 229	$ 521

FISCAL IMPACT
There is no fiscal impact associated with Council's receipt of this report.

ATTACHMENTS

1. Miscellaneous Plan of the City of Pacific Grove, Annual Valuation Report as of June 30, 2015
2. Safety Plan of the City of Pacific Grove, Annual Valuation Report as of June 30, 2015
3. PEPRA Miscellaneous Plan of the City of Pacific Grove, Annual Valuation Report as of June 30, 2015
4. PEPRA Safety Plan of the City of Pacific Grove, Annual Valuation Report as of June 30, 2015

RESPECTFULLY SUBMITTED:

P.A. Maitland

Patty Maitland
Finance Director

REVIEWED BY:

Ben Harvey

Ben Harvey
City Manager

California Public Employees' Retirement System
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August 2016

MISCELLANEOUS PLAN OF THE CITY OF PACIFIC GROVE
(CalPERS ID: 5070575563)
Annual Valuation Report as of June 30, 2015

Dear Employer,

As an attachment to this letter, you will find a copy of the June 30, 2015 actuarial valuation report of the pension plan.

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

- Section 1 contains specific information for the plan including the development of the current and projected employer contributions, and
- Section 2 contains the Risk Pool Actuarial Valuation appropriate to the plan as of June 30, 2015.

Section 2 can be found on the CalPERS website at (www.calpers.ca.gov). From the home page, go to "*Forms & Publications*" and select "*View All*". In the search box, enter "*Risk Pool Report*" and from the results list download the Miscellaneous or Safety Risk Pool Actuarial Valuation Report as appropriate.

Your June 30, 2015 actuarial valuation report contains important actuarial information about your pension plan at CalPERS. Your assigned CalPERS staff actuary, whose signature appears in the Actuarial Certification section on page 1, is available to discuss the report with you after August 31, 2016.

Future Employer Contribution

Fiscal Year	Employer Normal Cost Rate	+	Employer Payment of Unfunded Liability
2017-18	8.921%		$641,228
2018-19 (projected)	8.9%		$825,602

The exhibit above displays the minimum employer contributions, before any cost sharing, for Fiscal Year 2017-18 along with estimates of the contributions for Fiscal Year 2018-19. The total employer contribution is the sum of a Normal Cost Rate applied to reported payroll plus an Unfunded Liability dollar payment. The estimated contributions for Fiscal Year 2018-19 are based on a projection of the most recent information we have available, including an estimated 0.0 percent investment return for Fiscal Year 2015-16 (based on the year to date return through April 30, 2016).

For a projection of employer contributions beyond Fiscal Year 2018-19, please refer to the "Projected Employer Contributions" in the "Highlights and Executive Summary" section. This 5-year projection of future employer contributions supersedes any previous projections we have provided. The "Risk Analysis" section of the valuation report also contains estimated employer contributions in future years under a variety of investment return scenarios. Member contributions, other than cost sharing, 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 estimates for Fiscal Year 2018-19 also assume 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 an important assumption because these gains and losses do occur and can have a significant effect on required contributions. Even for the largest plans or pools, such gains and losses can impact the employer's contributions. These gains and losses cannot be predicted in advance so the projected employer contributions are estimates. The actual required employer contribution for Fiscal Year 2018-19 will be provided in next year's valuation report.

Changes since the Prior Year's Valuation

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. The policy has no impact on the current year valuation results but is expected to have an impact in future years. More details on the Risk Mitigation Policy can be found on our website.

Besides the above noted changes, there may also be changes specific to the 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 the 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 results, we ask that you wait until after August 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

ACTUARIAL VALUATION

as of June 30, 2015

for the MISCELLANEOUS PLAN of the CITY OF PACIFIC GROVE

(CalPERS ID: 5070575563)

REQUIRED CONTRIBUTIONS FOR FISCAL YEAR July 1, 2017 - June 30, 2018

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Section 1

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(CalPERS ID: 5070575563)
(Rate Plan: 347)

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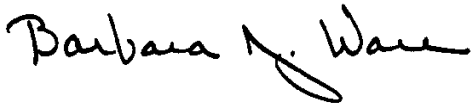
ACTUARIAL CERTIFICATION

Section 1 of this report is based on the member and financial data contained in our records as of June 30, 2015 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, 2015 provided by employers participating in the Miscellaneous Risk Pool to which the 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 MISCELLANEOUS 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 the plan, it is my opinion as the plan actuary that the side fund and other Unfunded Accrued Liability bases as of June 30, 2015 and employer contribution as of July 1, 2017, 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.



BARBARA J. WARE, FSA, MAAA
Enrolled Actuary
Senior Pension Actuary, CalPERS
Plan Actuary

HIGHLIGHTS AND EXECUTIVE SUMMARY

- **INTRODUCTION**
- **PURPOSE OF SECTION 1**
- **REQUIRED EMPLOYER CONTRIBUTION**
- **PLAN'S FUNDED STATUS**
- **PROJECTED EMPLOYER CONTRIBUTIONS**
- **CHANGES SINCE THE PRIOR YEAR VALUATION**
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Introduction

This report presents the results of the June 30, 2015 actuarial valuation of the MISCELLANEOUS PLAN of the CITY OF PACIFIC GROVE of the California Public Employees' Retirement System (CalPERS). This actuarial valuation sets the required employer contributions for Fiscal Year 2017-18.

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. The Risk Mitigation Policy does not have an impact on the current year actuarial valuation. More details on the Risk Mitigation Policy can be found on our website.

Purpose of Section 1

This Section 1 report for the MISCELLANEOUS PLAN of the CITY OF PACIFIC GROVE 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, 2015;
- Determine the required employer contribution for this plan for the fiscal year July 1, 2017 through June 30, 2018; and
- Provide actuarial information as of June 30, 2015 to the CalPERS Board of Administration and other interested parties.

The pension funding information presented in this report should not be used in financial reports subject to GASB Statement No. 68 for a Cost Sharing Employer Defined Benefit Pension Plan. A separate accounting valuation report for such purposes is available from CalPERS and details for ordering are available on our website.

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 8.

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

Required Employer Contribution		Fiscal Year 2016-17 [1]		Fiscal Year 2017-18
Employer Normal Cost Rate		**8.880%**		**8.921%**
Plus Either				
1) Monthly Employer Dollar UAL Payment	**$**	**41,561.77**	**$**	**53,435.63**
Or				
2) Annual Lump Sum Prepayment Option	**$**	**481,029**	**$**	**618,455**

*The total minimum required employer contribution is the **sum** of the Plan's Employer Normal Cost Rate (expressed as a percentage of payroll) **plus** the Employer Unfunded Accrued Liability (UAL) Contribution Amount (billed monthly in dollars). Only the UAL portion of the employer contribution can be prepaid (which must be received in full no later than July 31). Plan Normal Cost contributions will be made as part of the payroll reporting process. If there is contractual cost sharing or other change, this amount will change. § 20572 of the Public Employees' Retirement Law assesses interest at an annual rate of 10 percent if a contracting agency fails to remit the required contributions when due.*

		Fiscal Year 2016-17 [1]		Fiscal Year 2017-18
Development of Normal Cost as a Percentage of Payroll				
Base Total Normal Cost for Formula		15.263%		15.314%
Surcharge for Class 1 Benefits[3]				
a) FAC 1		0.503%		0.503%
Phase out of Normal Cost Difference[4]		0.000%		0.000%
Plan's Total Normal Cost		15.766%		15.817%
Formula's Expected Employee Contribution Rate		6.886%		6.896%
Employer Normal Cost Rate		8.880%		8.921%
Projected Payroll for the Contribution Fiscal Year	$	2,881,462	$	3,088,558
Estimated Employer Contributions Based on Projected Payroll				
Plan's Estimated Employer Normal Cost	$	255,880	$	275,530
Plan's Payment on Amortization Bases[2]		498,741		641,228
Total Employer Contribution[5]	$	754,621	$	916,758

[1] The results shown for Fiscal Year 2016-17 reflect the prior year valuation and do not take into account any lump sum payment, side fund payoff, or rate adjustment made after June 30, 2015.

[2] See page 8 for a breakdown of the Amortization Bases.

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

[4] The normal cost difference is 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. This is non-zero only for plans that joined a pool within the past 5 years. Most plans joined a pool June 30, 2003, when risk pooling was implemented.

[5] As a percentage of projected payroll the UAL contribution is 20.761 percent for an estimated total employer contribution rate of 29.682 percent.

Plan's Funded Status

	June 30, 2014	June 30, 2015
1. Present Value of Projected Benefits (PVB)	$ 54,892,658	$ 56,430,954
2. Entry Age Normal Accrued Liability (AL)	52,140,954	53,372,426
3. Plan's Market Value of Assets (MVA)	43,701,346	42,270,791
4. Unfunded Accrued Liability (UAL) [(2) - (3)]	8,439,608	11,101,635
5. Funded Ratio [(3) / (2)]	83.8%	79.2%

Projected Employer Contributions

The estimate for Fiscal Year 2018-19 is based on a projection of the most recent information we have available, including an estimated 0.0 percent investment return for Fiscal Year 2015-16 (based on year to date return through April 30, 2016).

The table below shows projected employer contributions (before cost sharing) for the next five fiscal years, ***assuming CalPERS earns 0.0 percent for Fiscal Year 2015-16 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 projection period.

	Required Contribution	Projected Future Employer Contributions				
Fiscal Year	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**
Normal Cost %	8.921%	8.9%	8.9%	8.9%	8.9%	8.9%
UAL $	$641,228	$825,602	$1,020,461	$1,132,214	$1,261,049	$1,336,909

Changes since the Prior Year's Valuation

Benefits

None. This valuation generally reflects plan changes by amendments effective before the date of the report. Please refer to the "Plan's Major Benefit Options" and Appendix B of Section 2 for a summary of the plan provisions used in this valuation.

Actuarial Methods and Assumptions

None.

Subsequent Events

Risk Mitigation

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. More details on the Risk Mitigation Policy can be found on our website.

ASSETS AND LIABILITIES

- **ALLOCATION OF PLAN'S SHARE OF POOL'S EXPERIENCE/ASSUMPTION CHANGE**
- **DEVELOPMENT OF PLAN'S SHARE OF POOL'S MVA**
- **SCHEDULE OF PLAN'S SIDE FUND & OTHER AMORTIZATION BASES**
- **30-YEAR AMORTIZATION SCHEDULE AND ALTERNATIVES**
- **EMPLOYER CONTRIBUTION HISTORY**
- **FUNDING HISTORY**

Allocation of Plan's Share of Pool's Experience/Assumption Change

It is the policy of CalPERS to ensure equity within the risk pools by allocating the pool's experience gains/losses and assumption changes in a manner that treats each employer equitably and maintains benefit security for the members of the System while minimizing substantial variations in employer contributions. The Pool's experience gains/losses and impact of assumption/method changes is allocated to the plan as follows:

1.	Plan's Accrued Liability	$	53,372,426
2.	Projected UAL balance at 6/30/15		8,981,273
3.	Pool's Accrued Liability	$	13,889,938,645
4.	Sum of Pool's Individual Plan UAL Balances at 6/30/15		2,423,468,906
5.	Pool's 2014/15 Investment & Asset (Gain)/Loss		596,365,421
6.	Pool's 2014/15 Other (Gain)/Loss		(49,030,273)
7.	Plan's Share of Pool's Asset (Gain)/Loss [(1)-(2)]/[(3)-(4)] * (5)		2,308,762
8.	Plan's Share of Pool's Other (Gain)/Loss [(1)]/[(3)] * (6)		(188,400)
9.	Plan's New (Gain)/Loss as of 6/30/2015 [(7)+(8)]	$	2,120,362
10.	Increase in Pool's Accrued Liability due to Change in Assumptions		0
11.	Plan's Share of Pool's Change in Assumptions [(1)]/[(3)] * (10)	$	0

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

1.	Plan's Accrued Liability	$	53,372,426
2.	Plan's UAL	$	11,101,635
3.	Plan's Share of Pool's MVA [(1)-(2)]	$	**42,270,791**

Schedule of Plan's Side Fund and Other Amortization Bases

There is a two-year lag between the valuation date and the start of the contribution fiscal year.

- The assets, liabilities, and funded status of the plan are measured as of the valuation date: June 30, 2015.
- The employer contribution determined by the valuation is for the fiscal year beginning two years after the valuation date: Fiscal Year 2017-18.

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

The Unfunded Accrued Liability (UAL) 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 UAL is rolled forward each year by subtracting the payment on the UAL for the fiscal year and adjusting for interest.

							Amounts for Fiscal 2017-18	
Reason for Base	**Date Established**	**Amortization Period**	**Balance 6/30/15**	**Payment 2015-16**	**Balance 6/30/16**	**Payment 2016-17**	**Balance 6/30/17**	**Scheduled Payment for 2017-18**
SIDE FUND	2013 or Prior	0	$31,442	$32,600	$0	$0	$0	$0
SHARE OF PRE-2013 POOL UAL	06/30/13	20	$4,655,344	$331,410	$4,660,882	$341,352	$4,656,527	$351,593
ASSET (GAIN)/LOSS	06/30/13	28	$5,824,430	$81,921	$6,176,325	$168,757	$6,464,578	$260,729
NON-ASSET (GAIN)/LOSS	06/30/13	28	$(56,087)	$(789)	$(59,475)	$(1,625)	$(62,251)	$(2,511)
ASSET (GAIN)/LOSS	06/30/14	29	$(4,020,162)	$0	$(4,321,674)	$(60,784)	$(4,582,777)	$(125,216)
ASSUMPTION CHANGE	06/30/14	19	$2,476,602	$(13,357)	$2,676,196	$50,975	$2,824,059	$105,009
NON-ASSET (GAIN)/LOSS	06/30/14	29	$4,373	$0	$4,701	$66	$4,985	$136
ASSET (GAIN)/LOSS	06/30/15	30	$2,308,762	$0	$2,481,919	$0	$2,668,063	$37,526
GOLDEN HANDSHAKE	06/30/15	5	$65,331	$0	$70,231	$0	$75,498	$17,022
NON-ASSET (GAIN)/LOSS	06/30/15	30	$(188,400)	$0	$(202,530)	$0	$(217,720)	$(3,062)
TOTAL			**$11,101,635**	**$431,785**	**$11,486,575**	**$498,741**	**$11,830,962**	**$641,226**

The (gain)/loss bases are the plan's allocated share of the risk pool's (gain)/loss for the fiscal year as disclosed on the previous page. These (gain)/loss bases will be amortized according to Board policy over 30 years with a 5-year ramp-up.

If the total Unfunded Liability is negative (i.e., plan has a surplus), the scheduled payment is $0, because the minimum required contribution under PEPRA must be at least equal to the normal cost.

30-Year Amortization Schedule and Alternatives

The amortization schedule 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 the current amortization schedule and illustrate the advantages of accelerating unfunded liability payments.

Shown on the following page are future year amortization payments based on 1) the current amortization schedule reflecting the individual bases and remaining periods shown on the previous page, and 2) alternate "fresh start" amortization schedules using two sample periods that would both result in interest savings relative to the current amortization schedule. Note that the payments under each alternate scenario increase by 3 percent for each year into the future. The schedules do not attempt to reflect any experience after June 30, 2015 that may deviate from the actuarial assumptions. Therefore, future amortization payments displayed in the Current Amortization Schedule may not match projected amortization payments shown in connection with Projected Employer Contributions provided elsewhere in this report.

The Current Amortization Schedule typically contains individual bases that are both positive and negative. Positive bases result from plan changes, assumption changes or plan experience that result in increases to unfunded liability. Negative bases result from plan changes, assumption changes or plan experience that result in decreases to unfunded liability. The combination of positive and negative bases within an amortization schedule can result in unusual or problematic circumstances in future years such as:

- A positive total unfunded liability with a negative total payment,
- A negative total unfunded liability with a positive total payment, or
- Total payments that completely amortize the unfunded liability over a very short period of time

In any year where one of the above scenarios occurs, the actuary will consider corrective action such as replacing the existing unfunded liability bases with a single "fresh start" base and amortizing it over a reasonable period.

The Current Amortization Schedule on the following page may appear to show that, based on the current amortization bases, one of the above scenarios will occur at some point in the future. It is impossible to know today whether such a scenario will in fact arise since there will be additional bases added to the amortization schedule in each future year. Should such a scenario arise in any future year, the actuary will take appropriate action based on guidelines in the CalPERS amortization policy. For purposes of this display, total payments include any negative payments. Therefore, the amount of estimated savings may be understated to the extent that negative payments appear in the current schedule.

30-Year Amortization Schedule and Alternatives

	Current Amortization Schedule		Alternate Schedules			
			20 Year Amortization		15 Year Amortization	
Date	**Balance**	**Payment**	**Balance**	**Payment**	**Balance**	**Payment**
6/30/2017	11,830,962	641,228	11,830,962	893,302	11,830,962	1,084,539
6/30/2018	12,053,446	774,281	11,792,090	920,101	11,593,811	1,117,075
6/30/2019	12,154,662	914,741	11,722,515	947,704	11,305,139	1,150,587
6/30/2020	12,117,838	968,877	11,619,104	976,135	10,960,070	1,185,105
6/30/2021	12,022,123	1,036,733	11,478,458	1,005,419	10,553,332	1,220,658
6/30/2022	11,848,874	1,048,102	11,296,902	1,035,582	10,079,227	1,257,278
6/30/2023	11,650,845	1,079,545	11,070,455	1,066,649	9,531,596	1,294,996
6/30/2024	11,405,362	1,111,931	10,794,814	1,098,649	8,903,785	1,333,846
6/30/2025	11,107,890	1,145,289	10,465,322	1,131,608	8,188,608	1,373,861
6/30/2026	10,753,521	1,179,648	10,076,945	1,165,556	7,378,304	1,415,077
6/30/2027	10,336,950	1,215,037	9,624,241	1,200,523	6,464,493	1,457,530
6/30/2028	9,852,444	1,251,488	9,101,330	1,236,539	5,438,131	1,501,255
6/30/2029	9,293,807	1,289,033	8,501,859	1,273,635	4,289,456	1,546,293
6/30/2030	8,654,345	1,327,704	7,818,966	1,311,844	3,007,935	1,592,682
6/30/2031	7,926,828	1,367,535	7,045,240	1,351,199	1,582,202	1,640,462
6/30/2032	7,103,450	1,326,761	6,172,680	1,391,735		
6/30/2033	6,260,594	1,282,309	5,192,649	1,433,487		
6/30/2034	5,400,612	1,233,996	4,095,826	1,476,492		
6/30/2035	4,526,224	1,181,630	2,872,154	1,520,787		
6/30/2036	3,640,550	1,125,012	1,510,780	1,566,410		
6/30/2037	2,747,154	523,746				
6/30/2038	2,410,159	539,459				
6/30/2039	2,031,599	555,642				
6/30/2040	1,607,866	572,312				
6/30/2041	1,135,071	414,513				
6/30/2042	790,425	377,675				
6/30/2043	458,125	263,929				
6/30/2044	218,837	143,019				
6/30/2045	86,965	14,616				
6/30/2046	78,333	81,217				
Totals		**25,987,007**		**24,003,356**		**20,171,244**
Estimated Savings				**1,983,651**		**5,815,763**

Current CalPERS Board policy prioritizes the order for which lump sum contributions in excess of the required employer contribution shall be applied. Excess contributions shall first be applied toward payment on the plan's side fund, and any remainder shall then be applied toward the plan's share of the pool's unfunded accrued liability.

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

Employer Contribution History

The table below provides a recent history of the required employer contributions for the plan, as determined by the annual actuarial valuation. It does not account for prepayments or benefit changes made during a fiscal year.

Fiscal Year	Employer Normal Cost	Unfunded Liability Payment ($)
2016 - 17	8.880%	498,741
2017 - 18	8.921%	641,228

Funding History

The funding history below shows the plan's actuarial accrued liability, share of the pool's market value of assets, share of the pool's unfunded liability, funded ratio, and 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	$ 46,618,357	$ 38,015,831	$ 8,602,526	81.6%	$ 4,278,107
06/30/2012	47,793,097	36,801,790	10,991,307	77.0%	4,181,915
06/30/2013	49,320,877	40,013,687	9,307,190	81.1%	3,716,361
06/30/2014	52,140,954	43,701,346	8,439,608	83.8%	2,636,946
06/30/2015	53,372,426	42,270,791	11,101,635	79.2%	2,826,468

RISK ANALYSIS

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

Analysis of Future Investment Return Scenarios

The investment return for Fiscal Year 2015-16 was not known at the time this report was produced. The investment return in Fiscal Year 2015-16 as of April 30, 2016 is 0.0 percent before administrative expenses. For purposes of projecting future employer contributions, we are assuming a 0.0 percent investment return for Fiscal Year 2015-16.

The investment return realized during a fiscal year first affects the contribution for the fiscal year two years later. For example, the investment return for Fiscal Year 2015-16 will first be reflected in the June 30, 2016 actuarial valuation that will be used to set the Fiscal Year 2018-19 employer contributions, the Fiscal Year 2016-17 investment return will first be reflected in the June 30, 2017 actuarial valuation that will be used to set the Fiscal Year 2019-20 employer contributions, and so forth.

A sensitivity analysis was performed to determine the effects of various investment returns during fiscal years 2016-17, 2017-18, and 2018-19 on the employer contributions for fiscal years 2019-20, 2020-21, and 2021-22. The projected contributions 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 a -3.8 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 5th percentile return from July 1, 2016 through June 30, 2019.
- The second scenario is a 2.8 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 25th percentile return from July 1, 2016 through June 30, 2019.
- The third scenario is a 7.5 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 49th percentile return from July 1, 2016 through June 30, 2019.
- The fourth scenario is a 12.0 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 75th percentile return from July 1, 2016 through June 30, 2019.
- Finally, the last scenario is an 18.9 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 95th percentile return from July 1, 2016 through June 30, 2019.

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

2016-19 Investment Return Scenario	Fiscal Year			Estimated Change Between 2018-19 and 2021-22
	2019-20	2020-21	2021-22	
(3.8%)				
Normal Cost	8.9%	8.9%	8.9%	0.0%
UAL Contribution	$1,097,454	$1,364,505	$1,728,570	$902,968
2.8%				
Normal Cost	8.9%	8.9%	8.9%	0.0%
UAL Contribution	$1,052,486	$1,230,948	$1,464,061	$638,459
7.5%				
Normal Cost	8.9%	8.9%	8.9%	0.0%
UAL Contribution	$1,020,461	$1,132,214	$1,261,049	$435,447
12.0%				
Normal Cost	9.1%	9.3%	9.5%	0.6%
UAL Contribution	$991,298	$1,044,220	$1,078,648	$253,046
18.9%				
Normal Cost	9.5%	10.1%	10.6%	1.7%
UAL Contribution	$948,017	$913,002	$0	$(825,602)

For the last two scenarios in the table above the results incorporate the impact of CalPERS Risk Mitigation Policy. A 12.0% return would result in a reduction of the discount rate by 0.05% and a return of 18.9% would reduce the discount rate by 0.15%. Reducing the discount rate increases both the plan's accrued liability and normal cost. More details about Risk Mitigation policy can be found on our website.

Analysis of Discount Rate Sensitivity

The following analysis looks at the Fiscal Year 2017-18 total normal cost rates and liabilities under two different discount rate scenarios. Shown below are the total normal cost rates assuming discount rates that are 1 percent lower and 1 percent higher than the current valuation discount rate. This analysis shows the potential plan impacts if the Public Employees' Retirement Fund (PERF) were to realize investment returns of 6.50 percent or 8.50 percent over the long-term.

This analysis is intended to illustrate the long-term risk to the contribution rates.

Sensitivity Analysis			
As of June 30, 2015	**6.50% Discount Rate (-1%)**	**7.50% Discount Rate (assumed rate)**	**8.50% Discount Rate (+1%)**
Plan's Total Normal Cost	19.6%	15.8%	12.9%
Accrued Liability	$59,241,550	$53,372,426	$48,417,059
Unfunded Accrued Liability	$16,970,759	$11,101,635	$6,146,268

Volatility Ratios

Actuarial calculations are based on a number of assumptions about 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 required employer contributions from one year to the next. Therefore, employer contributions 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 experience more volatile employer contributions (as a percentage of payroll) 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. Shown below is the asset volatility ratio, a measure of the plan's current contribution 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 experience more volatile employer contributions (as a percentage of payroll) 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 shown in the table below. It should be noted that this ratio indicates a longer-term potential for contribution volatility. The asset volatility ratio, described above, will tend to move closer to the liability volatility ratio as the plan matures.

Rate Volatility		As of June 30, 2015
1. Market Value of Assets	$	42,270,791
2. Payroll		2,826,468
3. Asset Volatility Ratio (AVR) [(1) / (2)]		15.0
4. Accrued Liability	$	53,372,426
5. Liability Volatility Ratio (LVR) [(4) / (2)]		18.9

Hypothetical Termination Liability

The hypothetical termination liability is an estimate of the financial position of the plan had the contract with CalPERS been terminated as of June 30, 2015. The plan liability on a termination basis is calculated differently compared to the plan's ongoing funding liability. For the hypothetical termination liability calculation, both compensation and service are frozen as of the valuation date and no future pay increases or service accruals are assumed.

A more conservative investment policy and asset allocation strategy was adopted by the CalPERS Board for the Terminated Agency Pool. The Terminated Agency Pool has limited funding sources since no future employer contributions will be made. Therefore, expected benefit payments are secured by risk-free assets and benefit security for members is increased while funding risk is limited. However, this asset allocation has a lower expected rate of return than the PERF and consequently, a lower discount rate is assumed. The lower discount rate for the Terminated Agency Pool results in higher liabilities for terminated plans.

The effective termination discount rate will depend on actual market rates of return for risk-free securities on the date of termination. As market discount rates are variable, the table below shows a range for the hypothetical termination liability based on the lowest and highest interest rates observed during an approximate 2-year period centered around the valuation date.

Market Value of Assets (MVA)	Hypothetical Termination Liability[1,2] @ 2.00%	Funded Status	Unfunded Termination Liability @ 2.00%	Hypothetical Termination Liability[1,2] @ 3.25%	Funded Status	Unfunded Termination Liability @ 3.25%
$42,270,791	$102,405,549	41.3%	$60,134,758	$88,390,867	47.8%	$46,120,076

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

[2] The current discount rate assumption used for termination valuations is a weighted average of the 10-year and 30-year U.S. Treasury yields where the weights are based on matching asset and liability durations as of the termination date. The discount rates used in the table are based on 20-year Treasury bonds, rounded to the nearest quarter percentage point, which is a good proxy for most plans. The 20-year Treasury yield was 2.75 percent on June 30, 2015.

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

Participant Data

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

	June 30, 2014	June 30, 2015
Reported Payroll	$ 2,636,946	$ 2,826,468
Projected Payroll for Contribution Purposes	$ 2,881,462	$ 3,088,558
Number of Members		
Active	42	42
Transferred	27	23
Separated	45	45
Retired	125	132

List of Class 1 Benefit Provisions

This plan has the additional Class 1 Benefit Provisions:

- One Year Final Compensation (FAC 1)

PLAN'S MAJOR BENEFIT OPTIONS

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.

	Contract package		
Benefit Provision	Active Misc	Receiving Misc	
Benefit Formula	2.0% @ 55		
Social Security Coverage	No		
Full/Modified	Full		
Employee Contribution Rate	7.00%		
Final Average Compensation Period	One Year		
Sick Leave Credit	Yes		
Non-Industrial Disability	Standard		
Industrial Disability	No		
Pre-Retirement Death Benefits			
Optional Settlement 2W	Yes		
1959 Survivor Benefit Level	level 4		
Special	No		
Alternate (firefighters)	No	No	
Post-Retirement Death Benefits			
Lump Sum	$500	$500	
Survivor Allowance (PRSA)	No	No	
COLA	2%	2%	

Section 2

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Section 2 may be found on the CalPERS website (www.calpers.ca.gov) in the Forms and Publications section

California Public Employees' Retirement System
Actuarial Office
P.O. Box 942709
Sacramento, CA 94229-2709
TTY: (916) 795-3240
(888) 225-7377 phone – (916) 795-2744 fax
www.calpers.ca.gov

August 2016

SAFETY PLAN OF THE CITY OF PACIFIC GROVE
(CalPERS ID: 5070575563)
Annual Valuation Report as of June 30, 2015

Dear Employer,

As an attachment to this letter, you will find a copy of the June 30, 2015 actuarial valuation report of the pension plan.

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

- Section 1 contains specific information for the plan including the development of the current and projected employer contributions, and
- Section 2 contains the Risk Pool Actuarial Valuation appropriate to the plan as of June 30, 2015.

Section 2 can be found on the CalPERS website at (www.calpers.ca.gov). From the home page, go to "*Forms & Publications*" and select "*View All*". In the search box, enter "*Risk Pool Report*" and from the results list download the Miscellaneous or Safety Risk Pool Actuarial Valuation Report as appropriate.

Your June 30, 2015 actuarial valuation report contains important actuarial information about your pension plan at CalPERS. Your assigned CalPERS staff actuary, whose signature appears in the Actuarial Certification section on page 1, is available to discuss the report with you after August 31, 2016.

Future Employer Contribution

Fiscal Year	Employer Normal Cost Rate	+	Employer Payment of Unfunded Liability
2017-18	19.723%		$1,073,121
2018-19 (projected)	19.7%		$1,341,921

The exhibit above displays the minimum employer contributions, before any cost sharing, for Fiscal Year 2017-18 along with estimates of the contributions for Fiscal Year 2018-19. The total employer contribution is the sum of a Normal Cost Rate applied to reported payroll plus an Unfunded Liability dollar payment. The estimated contributions for Fiscal Year 2018-19 are based on a projection of the most recent information we have available, including an estimated 0.0 percent investment return for Fiscal Year 2015-16 (based on the year to date return through April 30, 2016).

For a projection of employer contributions beyond Fiscal Year 2018-19, please refer to the "Projected Employer Contributions" in the "Highlights and Executive Summary" section. This 5-year projection of future employer contributions supersedes any previous projections we have provided. The "Risk Analysis" section of the valuation report also contains estimated employer contributions in future years under a variety of investment return scenarios. Member contributions, other than cost sharing, 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 estimates for Fiscal Year 2018-19 also assume 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 an important assumption because these gains and losses do occur and can have a significant effect on required contributions. Even for the largest plans or pools, such gains and losses can impact the employer's contributions. These gains and losses cannot be predicted in advance so the projected employer contributions are estimates. The actual required employer contribution for Fiscal Year 2018-19 will be provided in next year's valuation report.

Changes since the Prior Year's Valuation

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. The policy has no impact on the current year valuation results but is expected to have an impact in future years. More details on the Risk Mitigation Policy can be found on our website.

Besides the above noted changes, there may also be changes specific to the 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 the 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 results, we ask that you wait until after August 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

ACTUARIAL VALUATION

as of June 30, 2015

for the
SAFETY PLAN
of the
CITY OF PACIFIC GROVE

(CalPERS ID: 5070575563)

REQUIRED CONTRIBUTIONS
FOR FISCAL YEAR
July 1, 2017 - June 30, 2018

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(CalPERS ID: 5070575563)
(Rate Plan: 348)

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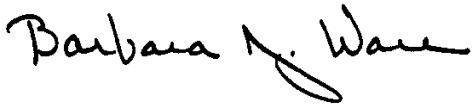
ACTUARIAL CERTIFICATION

Section 1 of this report is based on the member and financial data contained in our records as of June 30, 2015 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, 2015 provided by employers participating in the Safety Risk Pool to which the 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 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 the plan, it is my opinion as the plan actuary that the side fund and other Unfunded Accrued Liability bases as of June 30, 2015 and employer contribution as of July 1, 2017, 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.



BARBARA J. WARE, FSA, MAAA
Enrolled Actuary
Senior Pension Actuary, CalPERS
Plan Actuary

HIGHLIGHTS AND EXECUTIVE SUMMARY

- **INTRODUCTION**
- **PURPOSE OF SECTION 1**
- **REQUIRED EMPLOYER CONTRIBUTION**
- **PLAN'S FUNDED STATUS**
- **PROJECTED EMPLOYER CONTRIBUTIONS**
- **CHANGES SINCE THE PRIOR YEAR VALUATION**
- **SUBSEQUENT EVENTS**

Introduction

This report presents the results of the June 30, 2015 actuarial valuation of the SAFETY PLAN of the CITY OF PACIFIC GROVE of the California Public Employees' Retirement System (CalPERS). This actuarial valuation sets the required employer contributions for Fiscal Year 2017-18.

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. The Risk Mitigation Policy does not have an impact on the current year actuarial valuation. More details on the Risk Mitigation Policy can be found on our website.

Purpose of Section 1

This Section 1 report for the SAFETY PLAN of the CITY OF PACIFIC GROVE 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, 2015;
- Determine the required employer contribution for this plan for the fiscal year July 1, 2017 through June 30, 2018; and
- Provide actuarial information as of June 30, 2015 to the CalPERS Board of Administration and other interested parties.

The pension funding information presented in this report should not be used in financial reports subject to GASB Statement No. 68 for a Cost Sharing Employer Defined Benefit Pension Plan. A separate accounting valuation report for such purposes is available from CalPERS and details for ordering are available on our website.

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 8.

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

Required Employer Contribution		Fiscal Year 2016-17 [1]		Fiscal Year 2017-18
Employer Normal Cost Rate		**19.536%**		**19.723%**
Plus Either				
1) Monthly Employer Dollar UAL Payment	**$**	**73,346.24**	**$**	**89,426.71**
Or				
2) Annual Lump Sum Prepayment Option	**$**	**848,897**	**$**	**1,035,009**

*The total minimum required employer contribution is the **sum** of the Plan's Employer Normal Cost Rate (expressed as a percentage of payroll) **plus** the Employer Unfunded Accrued Liability (UAL) Contribution Amount (billed monthly in dollars). Only the UAL portion of the employer contribution can be prepaid (which must be received in full no later than July 31). Plan Normal Cost contributions will be made as part of the payroll reporting process. If there is contractual cost sharing or other change, this amount will change. § 20572 of the Public Employees' Retirement Law assesses interest at an annual rate of 10 percent if a contracting agency fails to remit the required contributions when due.*

		Fiscal Year 2016-17 [1]		Fiscal Year 2017-18
Development of Normal Cost as a Percentage of Payroll				
Base Total Normal Cost for Formula		27.415%		27.603%
Surcharge for Class 1 Benefits[3]				
a) FAC 1		1.108%		1.108%
Phase out of Normal Cost Difference[4]		0.000%		0.000%
Plan's Total Normal Cost		28.523%		28.711%
Formula's Expected Employee Contribution Rate		8.987%		8.988%
Employer Normal Cost Rate		19.536%		19.723%
Projected Payroll for the Contribution Fiscal Year	$	1,544,423	$	1,403,747
Estimated Employer Contributions Based on Projected Payroll				
Plan's Estimated Employer Normal Cost	$	301,712	$	276,861
Plan's Payment on Amortization Bases[2]		880,155		1,073,121
Total Employer Contribution[5]	$	1,181,867	$	1,349,982

[1] The results shown for Fiscal Year 2016-17 reflect the prior year valuation and do not take into account any lump sum payment, side fund payoff, or rate adjustment made after June 30, 2015.

[2] See page 8 for a breakdown of the Amortization Bases.

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

[4] The normal cost difference is 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. This is non-zero only for plans that joined a pool within the past 5 years. Most plans joined a pool June 30, 2003, when risk pooling was implemented.

[5] As a percentage of projected payroll the UAL contribution is 76.447 percent for an estimated total employer contribution rate of 96.170 percent.

Plan's Funded Status

	June 30, 2014	June 30, 2015
1. Present Value of Projected Benefits (PVB)	$ 76,219,536	$ 76,177,439
2. Entry Age Normal Accrued Liability (AL)	71,813,026	72,406,827
3. Plan's Market Value of Assets (MVA)	57,225,820	53,994,946
4. Unfunded Accrued Liability (UAL) [(2) - (3)]	14,587,206	18,411,881
5. Funded Ratio [(3) / (2)]	79.7%	74.6%

Projected Employer Contributions

The estimate for Fiscal Year 2018-19 is based on a projection of the most recent information we have available, including an estimated 0.0 percent investment return for Fiscal Year 2015-16 (based on year to date return through April 30, 2016).

The table below shows projected employer contributions (before cost sharing) for the next five fiscal years, ***assuming CalPERS earns 0.0 percent for Fiscal Year 2015-16 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 projection period.

	Required Contribution	**Projected Future Employer Contributions**				
Fiscal Year	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**
Normal Cost %	19.723%	19.7%	19.7%	19.7%	19.7%	19.7%
UAL $	$1,073,121	$1,341,921	$1,625,883	$1,789,721	$1,968,343	$2,100,606

Changes since the Prior Year's Valuation

Benefits

None. This valuation generally reflects plan changes by amendments effective before the date of the report. Please refer to the "Plan's Major Benefit Options" and Appendix B of Section 2 for a summary of the plan provisions used in this valuation.

Actuarial Methods and Assumptions

None.

Subsequent Events

Risk Mitigation

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. More details on the Risk Mitigation Policy can be found on our website.

ASSETS AND LIABILITIES

- **ALLOCATION OF PLAN'S SHARE OF POOL'S EXPERIENCE/ASSUMPTION CHANGE**
- **DEVELOPMENT OF PLAN'S SHARE OF POOL'S MVA**
- **SCHEDULE OF PLAN'S SIDE FUND & OTHER AMORTIZATION BASES**
- **30-YEAR AMORTIZATION SCHEDULE AND ALTERNATIVES**
- **EMPLOYER CONTRIBUTION HISTORY**
- **FUNDING HISTORY**

Allocation of Plan's Share of Pool's Experience/Assumption Change

It is the policy of CalPERS to ensure equity within the risk pools by allocating the pool's experience gains/losses and assumption changes in a manner that treats each employer equitably and maintains benefit security for the members of the System while minimizing substantial variations in employer contributions. The Pool's experience gains/losses and impact of assumption/method changes is allocated to the plan as follows:

1.	Plan's Accrued Liability	$	72,406,827
2.	Projected UAL balance at 6/30/15		15,468,232
3.	Pool's Accrued Liability	$	18,467,886,519
4.	Sum of Pool's Individual Plan UAL Balances at 6/30/15		3,713,009,355
5.	Pool's 2014/15 Investment & Asset (Gain)/Loss		765,720,345
6.	Pool's 2014/15 Other (Gain)/Loss		(2,867,161)
7.	Plan's Share of Pool's Asset (Gain)/Loss [(1)-(2)]/[(3)-(4)] * (5)		2,954,890
8.	Plan's Share of Pool's Other (Gain)/Loss [(1)]/[(3)] * (6)		(11,241)
9.	Plan's New (Gain)/Loss as of 6/30/2015 [(7)+(8)]	$	2,943,649
10.	Increase in Pool's Accrued Liability due to Change in Assumptions		0
11.	Plan's Share of Pool's Change in Assumptions [(1)]/[(3)] * (10)	$	0

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

1.	Plan's Accrued Liability	$	72,406,827
2.	Plan's UAL	$	18,411,881
3.	Plan's Share of Pool's MVA [(1)-(2)]	$	**53,994,946**

Schedule of Plan's Side Fund and Other Amortization Bases

There is a two-year lag between the valuation date and the start of the contribution fiscal year.

- The assets, liabilities, and funded status of the plan are measured as of the valuation date: June 30, 2015.
- The employer contribution determined by the valuation is for the fiscal year beginning two years after the valuation date: Fiscal Year 2017-18.

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

The Unfunded Accrued Liability (UAL) 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 UAL is rolled forward each year by subtracting the payment on the UAL for the fiscal year and adjusting for interest.

							Amounts for Fiscal 2017-18	
Reason for Base	**Date Established**	**Amortization Period**	**Balance 6/30/15**	**Payment 2015-16**	**Balance 6/30/16**	**Payment 2016-17**	**Balance 6/30/17**	**Scheduled Payment for 2017-18**
SIDE FUND	2013 or Prior	0	$31,589	$32,752	$0	$0	$0	$0
SHARE OF PRE-2013 POOL UAL	06/30/13	20	$8,784,249	$625,343	$8,794,698	$644,104	$8,786,479	$663,427
ASSET (GAIN)/LOSS	06/30/13	28	$8,433,948	$118,624	$8,943,502	$244,365	$9,360,902	$377,544
NON-ASSET (GAIN)/LOSS	06/30/13	28	$(95,867)	$(1,348)	$(101,659)	$(2,778)	$(106,403)	$(4,291)
ASSET (GAIN)/LOSS	06/30/14	29	$(5,424,697)	$0	$(5,831,549)	$(82,021)	$(6,183,874)	$(168,963)
ASSUMPTION CHANGE	06/30/14	19	$3,670,445	$(14,739)	$3,961,010	$75,448	$4,179,860	$155,423
NON-ASSET (GAIN)/LOSS	06/30/14	29	$68,565	$0	$73,707	$1,037	$78,160	$2,136
ASSET (GAIN)/LOSS	06/30/15	30	$2,954,890	$0	$3,176,507	$0	$3,414,745	$48,029
NON-ASSET (GAIN)/LOSS	06/30/15	30	$(11,241)	$0	$(12,084)	$0	$(12,991)	$(183)
TOTAL			**$18,411,881**	**$760,632**	**$19,004,132**	**$880,155**	**$19,516,878**	**$1,073,122**

The (gain)/loss bases are the plan's allocated share of the risk pool's (gain)/loss for the fiscal year as disclosed on the previous page. These (gain)/loss bases will be amortized according to Board policy over 30 years with a 5-year ramp-up.

If the total Unfunded Liability is negative (i.e., plan has a surplus), the scheduled payment is $0, because the minimum required contribution under PEPRA must be at least equal to the normal cost.

30-Year Amortization Schedule and Alternatives

The amortization schedule 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 the current amortization schedule and illustrate the advantages of accelerating unfunded liability payments.

Shown on the following page are future year amortization payments based on 1) the current amortization schedule reflecting the individual bases and remaining periods shown on the previous page, and 2) alternate "fresh start" amortization schedules using two sample periods that would both result in interest savings relative to the current amortization schedule. Note that the payments under each alternate scenario increase by 3 percent for each year into the future. The schedules do not attempt to reflect any experience after June 30, 2015 that may deviate from the actuarial assumptions. Therefore, future amortization payments displayed in the Current Amortization Schedule may not match projected amortization payments shown in connection with Projected Employer Contributions provided elsewhere in this report.

The Current Amortization Schedule typically contains individual bases that are both positive and negative. Positive bases result from plan changes, assumption changes or plan experience that result in increases to unfunded liability. Negative bases result from plan changes, assumption changes or plan experience that result in decreases to unfunded liability. The combination of positive and negative bases within an amortization schedule can result in unusual or problematic circumstances in future years such as:

- A positive total unfunded liability with a negative total payment,
- A negative total unfunded liability with a positive total payment, or
- Total payments that completely amortize the unfunded liability over a very short period of time

In any year where one of the above scenarios occurs, the actuary will consider corrective action such as replacing the existing unfunded liability bases with a single "fresh start" base and amortizing it over a reasonable period.

The Current Amortization Schedule on the following page may appear to show that, based on the current amortization bases, one of the above scenarios will occur at some point in the future. It is impossible to know today whether such a scenario will in fact arise since there will be additional bases added to the amortization schedule in each future year. Should such a scenario arise in any future year, the actuary will take appropriate action based on guidelines in the CalPERS amortization policy. For purposes of this display, total payments include any negative payments. Therefore, the amount of estimated savings may be understated to the extent that negative payments appear in the current schedule.

30-Year Amortization Schedule and Alternatives

	Current Amortization Schedule		Alternate Schedules			
			20 Year Amortization		15 Year Amortization	
Date	**Balance**	**Payment**	**Balance**	**Payment**	**Balance**	**Payment**
6/30/2017	19,516,878	1,073,121	19,516,878	1,473,630	19,516,878	1,789,103
6/30/2018	19,868,009	1,276,872	19,452,751	1,517,839	19,125,662	1,842,776
6/30/2019	20,034,220	1,491,883	19,337,979	1,563,374	18,649,456	1,898,060
6/30/2020	19,989,970	1,582,691	19,167,386	1,610,276	18,080,215	1,955,001
6/30/2021	19,848,249	1,684,022	18,935,371	1,658,584	17,409,242	2,013,651
6/30/2022	19,590,836	1,734,543	18,635,867	1,708,341	16,627,138	2,074,061
6/30/2023	19,261,736	1,786,579	18,262,311	1,759,592	15,723,741	2,136,283
6/30/2024	18,854,002	1,840,177	17,807,601	1,812,379	14,688,076	2,200,371
6/30/2025	18,360,116	1,895,382	17,264,057	1,866,751	13,508,289	2,266,382
6/30/2026	17,771,951	1,952,243	16,623,373	1,922,753	12,171,575	2,334,374
6/30/2027	17,080,719	2,010,811	15,876,573	1,980,436	10,664,113	2,404,405
6/30/2028	16,276,920	2,071,135	15,013,956	2,039,849	8,970,981	2,476,537
6/30/2029	15,350,290	2,133,269	14,025,043	2,101,044	7,076,077	2,550,833
6/30/2030	14,289,742	2,197,267	12,898,512	2,164,076	4,962,022	2,627,358
6/30/2031	13,083,298	2,263,185	11,622,139	2,228,998	2,610,071	2,706,179
6/30/2032	11,718,025	2,210,009	10,182,725	2,295,868		
6/30/2033	10,305,491	2,151,605	8,566,023	2,364,744		
6/30/2034	8,847,571	2,087,707	6,756,656	2,435,686		
6/30/2035	7,346,558	2,018,040	4,738,032	2,508,757		
6/30/2036	5,805,201	1,942,314	2,492,250	2,584,019		
6/30/2037	4,226,758	802,360				
6/30/2038	3,711,860	826,431				
6/30/2039	3,133,387	851,224				
6/30/2040	2,485,824	876,761				
6/30/2041	1,763,215	650,149				
6/30/2042	1,221,368	583,800				
6/30/2043	707,674	409,702				
6/30/2044	335,961	224,633				
6/30/2045	128,254	28,091				
6/30/2046	108,747	112,752				
Totals		**42,768,756**		**39,596,996**		**33,275,375**
Estimated Savings				**3,171,760**		**9,493,381**

Current CalPERS Board policy prioritizes the order for which lump sum contributions in excess of the required employer contribution shall be applied. Excess contributions shall first be applied toward payment on the plan's side fund, and any remainder shall then be applied toward the plan's share of the pool's unfunded accrued liability.

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

Employer Contribution History

The table below provides a recent history of the required employer contributions for the plan, as determined by the annual actuarial valuation. It does not account for prepayments or benefit changes made during a fiscal year.

Fiscal Year	Employer Normal Cost	Unfunded Liability Payment ($)
2016 - 17	19.536%	880,155
2017 - 18	19.723%	1,073,121

Funding History

The funding history below shows the plan's actuarial accrued liability, share of the pool's market value of assets, share of the pool's unfunded liability, funded ratio, and 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	$ 62,199,112	$ 48,955,216	$ 13,243,896	78.7%	$ 2,348,818
06/30/2012	64,389,977	47,401,126	16,988,851	73.6%	2,105,104
06/30/2013	67,347,865	52,144,284	15,203,581	77.4%	1,761,000
06/30/2014	71,813,026	57,225,820	14,587,206	79.7%	1,413,366
06/30/2015	72,406,827	53,994,946	18,411,881	74.6%	1,284,628

RISK ANALYSIS

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

Analysis of Future Investment Return Scenarios

The investment return for Fiscal Year 2015-16 was not known at the time this report was produced. The investment return in Fiscal Year 2015-16 as of April 30, 2016 is 0.0 percent before administrative expenses. For purposes of projecting future employer contributions, we are assuming a 0.0 percent investment return for Fiscal Year 2015-16.

The investment return realized during a fiscal year first affects the contribution for the fiscal year two years later. For example, the investment return for Fiscal Year 2015-16 will first be reflected in the June 30, 2016 actuarial valuation that will be used to set the Fiscal Year 2018-19 employer contributions, the Fiscal Year 2016-17 investment return will first be reflected in the June 30, 2017 actuarial valuation that will be used to set the Fiscal Year 2019-20 employer contributions, and so forth.

A sensitivity analysis was performed to determine the effects of various investment returns during fiscal years 2016-17, 2017-18, and 2018-19 on the employer contributions for fiscal years 2019-20, 2020-21, and 2021-22. The projected contributions 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 a -3.8 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 5th percentile return from July 1, 2016 through June 30, 2019.
- The second scenario is a 2.8 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 25th percentile return from July 1, 2016 through June 30, 2019.
- The third scenario is a 7.5 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 49th percentile return from July 1, 2016 through June 30, 2019.
- The fourth scenario is a 12.0 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 75th percentile return from July 1, 2016 through June 30, 2019.
- Finally, the last scenario is an 18.9 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 95th percentile return from July 1, 2016 through June 30, 2019.

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

2016-19 Investment Return Scenario	Fiscal Year			Estimated Change Between 2018-19 and 2021-22
	2019-20	2020-21	2021-22	
(3.8%)				
Normal Cost	19.7%	19.7%	19.7%	0.0%
UAL Contribution	$1,721,977	$2,078,378	$2,546,789	$1,204,868
2.8%				
Normal Cost	19.7%	19.7%	19.7%	0.0%
UAL Contribution	$1,665,857	$1,912,437	$2,219,606	$877,685
7.5%				
Normal Cost	19.7%	19.7%	19.7%	0.0%
UAL Contribution	$1,625,883	$1,789,721	$1,968,343	$626,422
12.0%				
Normal Cost	20.1%	20.5%	20.8%	1.1%
UAL Contribution	$1,588,204	$1,678,161	$1,739,984	$398,063
18.9%				
Normal Cost	20.8%	21.9%	23.1%	3.4%
UAL Contribution	$1,531,614	$1,510,595	$1,391,945	$50,024

For the last two scenarios in the table above the results incorporate the impact of CalPERS Risk Mitigation Policy. A 12.0% return would result in a reduction of the discount rate by 0.05% and a return of 18.9% would reduce the discount rate by 0.15%. Reducing the discount rate increases both the plan's accrued liability and normal cost. More details about Risk Mitigation policy can be found on our website.

Analysis of Discount Rate Sensitivity

The following analysis looks at the Fiscal Year 2017-18 total normal cost rates and liabilities under two different discount rate scenarios. Shown below are the total normal cost rates assuming discount rates that are 1 percent lower and 1 percent higher than the current valuation discount rate. This analysis shows the potential plan impacts if the Public Employees' Retirement Fund (PERF) were to realize investment returns of 6.50 percent or 8.50 percent over the long-term.

This analysis is intended to illustrate the long-term risk to the contribution rates.

Sensitivity Analysis			
As of June 30, 2015	**6.50% Discount Rate (-1%)**	**7.50% Discount Rate (assumed rate)**	**8.50% Discount Rate (+1%)**
Plan's Total Normal Cost	36.1%	28.7%	23.1%
Accrued Liability	$81,464,662	$72,406,827	$64,941,358
Unfunded Accrued Liability	$27,469,716	$18,411,881	$10,946,412

Volatility Ratios

Actuarial calculations are based on a number of assumptions about 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 required employer contributions from one year to the next. Therefore, employer contributions 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 experience more volatile employer contributions (as a percentage of payroll) 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. Shown below is the asset volatility ratio, a measure of the plan's current contribution 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 experience more volatile employer contributions (as a percentage of payroll) 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 shown in the table below. It should be noted that this ratio indicates a longer-term potential for contribution volatility. The asset volatility ratio, described above, will tend to move closer to the liability volatility ratio as the plan matures.

Rate Volatility		As of June 30, 2015
1. Market Value of Assets	$	53,994,946
2. Payroll		1,284,628
3. Asset Volatility Ratio (AVR) [(1) / (2)]		42.0
4. Accrued Liability	$	72,406,827
5. Liability Volatility Ratio (LVR) [(4) / (2)]		56.4

Hypothetical Termination Liability

The hypothetical termination liability is an estimate of the financial position of the plan had the contract with CalPERS been terminated as of June 30, 2015. The plan liability on a termination basis is calculated differently compared to the plan's ongoing funding liability. For the hypothetical termination liability calculation, both compensation and service are frozen as of the valuation date and no future pay increases or service accruals are assumed.

A more conservative investment policy and asset allocation strategy was adopted by the CalPERS Board for the Terminated Agency Pool. The Terminated Agency Pool has limited funding sources since no future employer contributions will be made. Therefore, expected benefit payments are secured by risk-free assets and benefit security for members is increased while funding risk is limited. However, this asset allocation has a lower expected rate of return than the PERF and consequently, a lower discount rate is assumed. The lower discount rate for the Terminated Agency Pool results in higher liabilities for terminated plans.

The effective termination discount rate will depend on actual market rates of return for risk-free securities on the date of termination. As market discount rates are variable, the table below shows a range for the hypothetical termination liability based on the lowest and highest interest rates observed during an approximate 2-year period centered around the valuation date.

Market Value of Assets (MVA)	Hypothetical Termination Liability[1,2] @ 2.00%	Funded Status	Unfunded Termination Liability @ 2.00%	Hypothetical Termination Liability[1,2] @ 3.25%	Funded Status	Unfunded Termination Liability @ 3.25%
$53,994,946	$152,438,005	35.4%	$98,443,059	$128,793,918	41.9%	$74,798,972

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

[2] The current discount rate assumption used for termination valuations is a weighted average of the 10-year and 30-year U.S. Treasury yields where the weights are based on matching asset and liability durations as of the termination date. The discount rates used in the table are based on 20-year Treasury bonds, rounded to the nearest quarter percentage point, which is a good proxy for most plans. The 20-year Treasury yield was 2.75 percent on June 30, 2015.

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

Participant Data

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

	June 30, 2014	June 30, 2015
Reported Payroll	$ 1,413,366	$ 1,284,628
Projected Payroll for Contribution Purposes	$ 1,544,423	$ 1,403,747
Number of Members		
Active	14	12
Transferred	32	32
Separated	10	8
Retired	111	111

List of Class 1 Benefit Provisions

This plan has the additional Class 1 Benefit Provisions:

- One Year Final Compensation (FAC 1)

PLAN'S MAJOR BENEFIT OPTIONS

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.

	Contract package				
Benefit Provision	Active Police	Inactive Fire	Receiving Fire	Receiving Police	
Benefit Formula	3.0% @ 50	3.0% @ 50			
Social Security Coverage	No	No			
Full/Modified	Full	Full			
Employee Contribution Rate	9.00%				
Final Average Compensation Period	One Year	One Year			
Sick Leave Credit	Yes	Yes			
Non-Industrial Disability	Standard	Standard			
Industrial Disability	Yes	Yes			
Pre-Retirement Death Benefits					
Optional Settlement 2W	Yes	Yes			
1959 Survivor Benefit Level	level 4	level 4			
Special	Yes	Yes			
Alternate (firefighters)	No	No	No	No	
Post-Retirement Death Benefits					
Lump Sum	$500	$500	$500	$500	
Survivor Allowance (PRSA)	No	No	No	No	
COLA	2%	2%	2%	2%	

Section 2

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Section 2 may be found on the CalPERS website (www.calpers.ca.gov) in the Forms and Publications section

California Public Employees' Retirement System
Actuarial Office
P.O. Box 942709
Sacramento, CA 94229-2709
TTY: (916) 795-3240
(888) 225-7377 phone – (916) 795-2744 fax
www.calpers.ca.gov

August 2016

PEPRA MISCELLANEOUS PLAN OF THE CITY OF PACIFIC GROVE
(CalPERS ID: 5070575563)
Annual Valuation Report as of June 30, 2015

Dear Employer,

As an attachment to this letter, you will find a copy of the June 30, 2015 actuarial valuation report of the pension plan.

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

- Section 1 contains specific information for the plan including the development of the current and projected employer contributions, and
- Section 2 contains the Risk Pool Actuarial Valuation appropriate to the plan as of June 30, 2015.

Section 2 can be found on the CalPERS website at (www.calpers.ca.gov). From the home page, go to "*Forms & Publications*" and select "*View All*". In the search box, enter "*Risk Pool Report*" and from the results list download the Miscellaneous or Safety Risk Pool Actuarial Valuation Report as appropriate.

Your June 30, 2015 actuarial valuation report contains important actuarial information about your pension plan at CalPERS. Your assigned CalPERS staff actuary, whose signature appears in the Actuarial Certification section on page 1, is available to discuss the report with you after August 31, 2016.

Future Employer Contribution

Fiscal Year	Employer Normal Cost Rate	+	Employer Payment of Unfunded Liability
2017-18	6.533%		$249
2018-19 (projected)	6.5%		$636

The exhibit above displays the minimum employer contributions, before any cost sharing, for Fiscal Year 2017-18 along with estimates of the contributions for Fiscal Year 2018-19. The total employer contribution is the sum of a Normal Cost Rate applied to reported payroll plus an Unfunded Liability dollar payment. The estimated contributions for Fiscal Year 2018-19 are based on a projection of the most recent information we have available, including an estimated 0.0 percent investment return for Fiscal Year 2015-16 (based on the year to date return through April 30, 2016).

For a projection of employer contributions beyond Fiscal Year 2018-19, please refer to the "Projected Employer Contributions" in the "Highlights and Executive Summary" section. This 5-year projection of future employer contributions supersedes any previous projections we have provided. The "Risk Analysis" section of the valuation report also contains estimated employer contributions in future years under a variety of investment return scenarios. Member contributions, other than cost sharing, 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 estimates for Fiscal Year 2018-19 also assume 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 an important assumption because these gains and losses do occur and can have a significant effect on required contributions. Even for the largest plans or pools, such gains and losses can impact the employer's contributions. These gains and losses cannot be predicted in advance so the projected employer contributions are estimates. The actual required employer contribution for Fiscal Year 2018-19 will be provided in next year's valuation report.

Changes since the Prior Year's Valuation

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. The policy has no impact on the current year valuation results but is expected to have an impact in future years. More details on the Risk Mitigation Policy can be found on our website.

Besides the above noted changes, there may also be changes specific to the 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 the 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 results, we ask that you wait until after August 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

ACTUARIAL VALUATION

as of June 30, 2015

for the
PEPRA MISCELLANEOUS PLAN
of the
CITY OF PACIFIC GROVE

(CalPERS ID: 5070575563)

REQUIRED CONTRIBUTIONS
FOR FISCAL YEAR
July 1, 2017 - June 30, 2018

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SECTION 2 – RISK POOL ACTUARIAL VALUATION INFORMATION

Section 1

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Plan Specific Information for the PEPRA MISCELLANEOUS PLAN of the CITY OF PACIFIC GROVE

(CalPERS ID: 5070575563)
(Rate Plan: 26278)

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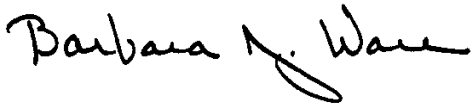
ACTUARIAL CERTIFICATION

Section 1 of this report is based on the member and financial data contained in our records as of June 30, 2015 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, 2015 provided by employers participating in the Miscellaneous Risk Pool to which the 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 PEPRA MISCELLANEOUS 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 the plan, it is my opinion as the plan actuary that the side fund and other Unfunded Accrued Liability bases as of June 30, 2015 and employer contribution as of July 1, 2017, 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.



BARBARA J. WARE, FSA, MAAA
Enrolled Actuary
Senior Pension Actuary, CalPERS
Plan Actuary

HIGHLIGHTS AND EXECUTIVE SUMMARY

- **INTRODUCTION**
- **PURPOSE OF SECTION 1**
- **REQUIRED EMPLOYER CONTRIBUTION**
- **PLAN'S FUNDED STATUS**
- **PROJECTED EMPLOYER CONTRIBUTIONS**
- **CHANGES SINCE THE PRIOR YEAR VALUATION**
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Introduction

This report presents the results of the June 30, 2015 actuarial valuation of the PEPRA MISCELLANEOUS PLAN of the CITY OF PACIFIC GROVE of the California Public Employees' Retirement System (CalPERS). This actuarial valuation sets the required employer contributions for Fiscal Year 2017-18.

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. The Risk Mitigation Policy does not have an impact on the current year actuarial valuation. More details on the Risk Mitigation Policy can be found on our website.

Purpose of Section 1

This Section 1 report for the PEPRA MISCELLANEOUS PLAN of the CITY OF PACIFIC GROVE 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, 2015;
- Determine the required employer contribution for this plan for the fiscal year July 1, 2017 through June 30, 2018; and
- Provide actuarial information as of June 30, 2015 to the CalPERS Board of Administration and other interested parties.

The pension funding information presented in this report should not be used in financial reports subject to GASB Statement No. 68 for a Cost Sharing Employer Defined Benefit Pension Plan. A separate accounting valuation report for such purposes is available from CalPERS and details for ordering are available on our website.

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 8.

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

Required Employer Contribution		Fiscal Year 2016-17 [1]		Fiscal Year 2017-18
Employer Normal Cost Rate		**6.555%**		**6.533%**
Plus Either				
1) Monthly Employer Dollar UAL Payment	**$**	**4.98**	**$**	**20.78**
Or				
2) Annual Lump Sum Prepayment Option	**$**	**58**	**$**	**241**

*The total minimum required employer contribution is the **sum** of the Plan's Employer Normal Cost Rate (expressed as a percentage of payroll) **plus** the Employer Unfunded Accrued Liability (UAL) Contribution Amount (billed monthly in dollars). Only the UAL portion of the employer contribution can be prepaid (which must be received in full no later than July 31). Plan Normal Cost contributions will be made as part of the payroll reporting process. If there is contractual cost sharing or other change, this amount will change. § 20572 of the Public Employees' Retirement Law assesses interest at an annual rate of 10 percent if a contracting agency fails to remit the required contributions when due.*

		Fiscal Year 2016-17 [1]		Fiscal Year 2017-18
Development of Normal Cost as a Percentage of Payroll				
Base Total Normal Cost for Formula		12.805%		12.783%
Surcharge for Class 1 Benefits[3]				
None		0.000%		0.000%
Phase out of Normal Cost Difference[4]		0.000%		0.000%
Plan's Total Normal Cost		12.805%		12.783%
Plan's Employee Contribution Rate		6.250%		6.250%
Employer Normal Cost Rate		6.555%		6.533%
Projected Payroll for the Contribution Fiscal Year	$	402,198	$	927,370
Estimated Employer Contributions Based on Projected Payroll				
Plan's Estimated Employer Normal Cost	$	26,363	$	60,585
Plan's Payment on Amortization Bases[2]		60		249
Total Employer Contribution[5]	$	26,423	$	60,834

[1] The results shown for Fiscal Year 2016-17 reflect the prior year valuation and do not take into account any lump sum payment, side fund payoff, or rate adjustment made after June 30, 2015.

[2] See page 8 for a breakdown of the Amortization Bases.

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

[4] The normal cost difference is 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. This is non-zero only for plans that joined a pool within the past 5 years. Most plans joined a pool June 30, 2003, when risk pooling was implemented.

[5] As a percentage of projected payroll the UAL contribution is 0.027 percent for an estimated total employer contribution rate of 6.560 percent.

Plan's Funded Status

	June 30, 2014	June 30, 2015
1. Present Value of Projected Benefits (PVB)	$ 474,486	$ 1,205,544
2. Entry Age Normal Accrued Liability (AL)	32,939	160,583
3. Plan's Market Value of Assets (MVA)	34,404	152,512
4. Unfunded Accrued Liability (UAL) [(2) - (3)]	(1,465)	8,071
5. Funded Ratio [(3) / (2)]	104.5%	95.0%

Projected Employer Contributions

The estimate for Fiscal Year 2018-19 is based on a projection of the most recent information we have available, including an estimated 0.0 percent investment return for Fiscal Year 2015-16 (based on year to date return through April 30, 2016).

The table below shows projected employer contributions (before cost sharing) for the next five fiscal years, ***assuming CalPERS earns 0.0 percent for Fiscal Year 2015-16 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 projection period.

	Required Contribution	**Projected Future Employer Contributions**				
Fiscal Year	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**
Normal Cost %	6.533%	6.5%	6.5%	6.5%	6.5%	6.5%
UAL $	$249	$636	$1,045	$1,478	$1,867	$2,132

Changes since the Prior Year's Valuation

Benefits

None. This valuation generally reflects plan changes by amendments effective before the date of the report. Please refer to the "Plan's Major Benefit Options" and Appendix B of Section 2 for a summary of the plan provisions used in this valuation.

Actuarial Methods and Assumptions

None.

Subsequent Events

Risk Mitigation

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. More details on the Risk Mitigation Policy can be found on our website.

ASSETS AND LIABILITIES

- **ALLOCATION OF PLAN'S SHARE OF POOL'S EXPERIENCE/ASSUMPTION CHANGE**
- **DEVELOPMENT OF PLAN'S SHARE OF POOL'S MVA**
- **SCHEDULE OF PLAN'S SIDE FUND & OTHER AMORTIZATION BASES**
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- **EMPLOYER CONTRIBUTION HISTORY**
- **FUNDING HISTORY**

Allocation of Plan's Share of Pool's Experience/Assumption Change

It is the policy of CalPERS to ensure equity within the risk pools by allocating the pool's experience gains/losses and assumption changes in a manner that treats each employer equitably and maintains benefit security for the members of the System while minimizing substantial variations in employer contributions. The Pool's experience gains/losses and impact of assumption/method changes is allocated to the plan as follows:

1.	Plan's Accrued Liability	$	160,583
2.	Projected UAL balance at 6/30/15		302
3.	Pool's Accrued Liability	$	13,889,938,645
4.	Sum of Pool's Individual Plan UAL Balances at 6/30/15		2,423,468,906
5.	Pool's 2014/15 Investment & Asset (Gain)/Loss		596,365,421
6.	Pool's 2014/15 Other (Gain)/Loss		(49,030,273)
7.	Plan's Share of Pool's Asset (Gain)/Loss [(1)-(2)]/[(3)-(4)] * (5)		8,336
8.	Plan's Share of Pool's Other (Gain)/Loss [(1)]/[(3)] * (6)		(567)
9.	Plan's New (Gain)/Loss as of 6/30/2015 [(7)+(8)]	$	7,769
10.	Increase in Pool's Accrued Liability due to Change in Assumptions		0
11.	Plan's Share of Pool's Change in Assumptions [(1)]/[(3)] * (10)	$	0

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

1.	Plan's Accrued Liability	$	160,583
2.	Plan's UAL	$	8,071
3.	Plan's Share of Pool's MVA [(1)-(2)]	$	**152,512**

Schedule of Plan's Side Fund and Other Amortization Bases

There is a two-year lag between the valuation date and the start of the contribution fiscal year.

- The assets, liabilities, and funded status of the plan are measured as of the valuation date: June 30, 2015.
- The employer contribution determined by the valuation is for the fiscal year beginning two years after the valuation date: Fiscal Year 2017-18.

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

The Unfunded Accrued Liability (UAL) 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 UAL is rolled forward each year by subtracting the payment on the UAL for the fiscal year and adjusting for interest.

							Amounts for Fiscal 2017-18	
Reason for Base	**Date Established**	**Amortization Period**	**Balance 6/30/15**	**Payment 2015-16**	**Balance 6/30/16**	**Payment 2016-17**	**Balance 6/30/17**	**Scheduled Payment for 2017-18**
ASSET (GAIN)/LOSS	06/30/14	29	$(3,134)	$0	$(3,369)	$(47)	$(3,573)	$(98)
NON-ASSET (GAIN)/LOSS	06/30/14	29	$3	$0	$3	$0	$3	$0
ASSUMPTION CHANGE	06/30/14	19	$3,433	$(1,864)	$5,623	$107	$5,934	$221
ASSET (GAIN)/LOSS	06/30/15	30	$8,336	$0	$8,961	$0	$9,633	$135
NON-ASSET (GAIN)/LOSS	06/30/15	30	$(567)	$0	$(609)	$0	$(655)	$(9)
TOTAL			**$8,071**	**$(1,864)**	**$10,609**	**$60**	**$11,342**	**$249**

The (gain)/loss bases are the plan's allocated share of the risk pool's (gain)/loss for the fiscal year as disclosed on the previous page. These (gain)/loss bases will be amortized according to Board policy over 30 years with a 5-year ramp-up.

If the total Unfunded Liability is negative (i.e., plan has a surplus), the scheduled payment is $0, because the minimum required contribution under PEPRA must be at least equal to the normal cost.

30-Year Amortization Schedule and Alternatives

The amortization schedule 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 the current amortization schedule and illustrate the advantages of accelerating unfunded liability payments.

Shown on the following page are future year amortization payments based on 1) the current amortization schedule reflecting the individual bases and remaining periods shown on the previous page, and 2) alternate "fresh start" amortization schedules using two sample periods that would both result in interest savings relative to the current amortization schedule. Note that the payments under each alternate scenario increase by 3 percent for each year into the future. The schedules do not attempt to reflect any experience after June 30, 2015 that may deviate from the actuarial assumptions. Therefore, future amortization payments displayed in the Current Amortization Schedule may not match projected amortization payments shown in connection with Projected Employer Contributions provided elsewhere in this report.

The Current Amortization Schedule typically contains individual bases that are both positive and negative. Positive bases result from plan changes, assumption changes or plan experience that result in increases to unfunded liability. Negative bases result from plan changes, assumption changes or plan experience that result in decreases to unfunded liability. The combination of positive and negative bases within an amortization schedule can result in unusual or problematic circumstances in future years such as:

- A positive total unfunded liability with a negative total payment,
- A negative total unfunded liability with a positive total payment, or
- Total payments that completely amortize the unfunded liability over a very short period of time

In any year where one of the above scenarios occurs, the actuary will consider corrective action such as replacing the existing unfunded liability bases with a single "fresh start" base and amortizing it over a reasonable period.

The Current Amortization Schedule on the following page may appear to show that, based on the current amortization bases, one of the above scenarios will occur at some point in the future. It is impossible to know today whether such a scenario will in fact arise since there will be additional bases added to the amortization schedule in each future year. Should such a scenario arise in any future year, the actuary will take appropriate action based on guidelines in the CalPERS amortization policy. For purposes of this display, total payments include any negative payments. Therefore, the amount of estimated savings may be understated to the extent that negative payments appear in the current schedule.

30-Year Amortization Schedule and Alternatives

	Current Amortization Schedule		Alternate Schedules			
			25 Year Amortization		20 Year Amortization	
Date	**Balance**	**Payment**	**Balance**	**Payment**	**Balance**	**Payment**
6/30/2017	11,342	249	11,342	750	11,342	856
6/30/2018	11,935	450	11,416	772	11,305	882
6/30/2019	12,363	663	11,471	795	11,239	909
6/30/2020	12,602	888	11,507	819	11,139	936
6/30/2021	12,627	1,057	11,521	844	11,005	964
6/30/2022	12,478	1,089	11,510	869	10,830	993
6/30/2023	12,285	1,121	11,472	895	10,613	1,023
6/30/2024	12,043	1,155	11,405	922	10,349	1,053
6/30/2025	11,749	1,190	11,304	950	10,033	1,085
6/30/2026	11,397	1,225	11,167	978	9,661	1,117
6/30/2027	10,981	1,262	10,991	1,008	9,227	1,151
6/30/2028	10,496	1,300	10,770	1,038	8,726	1,185
6/30/2029	9,935	1,339	10,502	1,069	8,151	1,221
6/30/2030	9,292	1,379	10,182	1,101	7,496	1,258
6/30/2031	8,559	1,421	9,804	1,134	6,754	1,295
6/30/2032	7,728	1,291	9,363	1,168	5,918	1,334
6/30/2033	6,968	1,153	8,855	1,203	4,978	1,374
6/30/2034	6,296	1,005	8,271	1,239	3,927	1,416
6/30/2035	5,725	848	7,607	1,276	2,754	1,458
6/30/2036	5,276	680	6,854	1,315	1,448	1,502
6/30/2037	4,967	700	6,005	1,354		
6/30/2038	4,614	721	5,052	1,395		
6/30/2039	4,212	743	3,985	1,436		
6/30/2040	3,758	765	2,794	1,480		
6/30/2041	3,247	788	1,470	1,524		
6/30/2042	2,674	914				
6/30/2043	1,927	774				
6/30/2044	1,269	625				
6/30/2045	717	466				
6/30/2046	287	298				
Totals		**27,559**		**27,333**		**23,012**
Estimated Savings				**226**		**4,547**

Current CalPERS Board policy prioritizes the order for which lump sum contributions in excess of the required employer contribution shall be applied. Excess contributions shall first be applied toward payment on the plan's side fund, and any remainder shall then be applied toward the plan's share of the pool's unfunded accrued liability.

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

Employer Contribution History

The table below provides a recent history of the required employer contributions for the plan, as determined by the annual actuarial valuation. It does not account for prepayments or benefit changes made during a fiscal year.

Fiscal Year	Employer Normal Cost	Unfunded Liability Payment ($)
2016 - 17	6.555%	60
2017 - 18	6.533%	249

Funding History

The funding history below shows the plan's actuarial accrued liability, share of the pool's market value of assets, share of the pool's unfunded liability, funded ratio, and 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
06/30/2013	$ 1	$ 1	$ 0	100.0%	$ 71,136
06/30/2014	32,939	34,404	(1,465)	104.5%	368,068
06/30/2015	160,583	152,512	8,071	95.0%	848,675

RISK ANALYSIS

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

Analysis of Future Investment Return Scenarios

The investment return for Fiscal Year 2015-16 was not known at the time this report was produced. The investment return in Fiscal Year 2015-16 as of April 30, 2016 is 0.0 percent before administrative expenses. For purposes of projecting future employer contributions, we are assuming a 0.0 percent investment return for Fiscal Year 2015-16.

The investment return realized during a fiscal year first affects the contribution for the fiscal year two years later. For example, the investment return for Fiscal Year 2015-16 will first be reflected in the June 30, 2016 actuarial valuation that will be used to set the Fiscal Year 2018-19 employer contributions, the Fiscal Year 2016-17 investment return will first be reflected in the June 30, 2017 actuarial valuation that will be used to set the Fiscal Year 2019-20 employer contributions, and so forth.

A sensitivity analysis was performed to determine the effects of various investment returns during fiscal years 2016-17, 2017-18, and 2018-19 on the employer contributions for fiscal years 2019-20, 2020-21, and 2021-22. The projected contributions 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 a -3.8 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 5th percentile return from July 1, 2016 through June 30, 2019.
- The second scenario is a 2.8 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 25th percentile return from July 1, 2016 through June 30, 2019.
- The third scenario is a 7.5 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 49th percentile return from July 1, 2016 through June 30, 2019.
- The fourth scenario is a 12.0 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 75th percentile return from July 1, 2016 through June 30, 2019.
- Finally, the last scenario is an 18.9 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 95th percentile return from July 1, 2016 through June 30, 2019.

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

2016-19 Investment Return Scenario	Fiscal Year			Estimated Change Between 2018-19 and 2021-22
	2019-20	2020-21	2021-22	
(3.8%)				
Normal Cost	6.5%	6.5%	6.5%	0.0%
UAL Contribution	$1,323	$2,317	$3,555	$2,919
2.8%				
Normal Cost	6.5%	6.5%	6.5%	0.0%
UAL Contribution	$1,160	$1,835	$2,600	$1,964
7.5%				
Normal Cost	6.5%	6.5%	6.5%	0.0%
UAL Contribution	$1,045	$1,478	$1,867	$1,231
12.0%				
Normal Cost	6.5%	6.5%	6.6%	0.1%
UAL Contribution	$952	$1,184	$1,245	$609
18.9%				
Normal Cost	6.6%	6.8%	7.1%	0.6%
UAL Contribution	$821	$0	$0	$(636)

For the last two scenarios in the table above the results incorporate the impact of CalPERS Risk Mitigation Policy. A 12.0% return would result in a reduction of the discount rate by 0.05% and a return of 18.9% would reduce the discount rate by 0.15%. Reducing the discount rate increases both the plan's accrued liability and normal cost. More details about Risk Mitigation policy can be found on our website.

Analysis of Discount Rate Sensitivity

The following analysis looks at the Fiscal Year 2017-18 total normal cost rates and liabilities under two different discount rate scenarios. Shown below are the total normal cost rates assuming discount rates that are 1 percent lower and 1 percent higher than the current valuation discount rate. This analysis shows the potential plan impacts if the Public Employees' Retirement Fund (PERF) were to realize investment returns of 6.50 percent or 8.50 percent over the long-term.

This analysis is intended to illustrate the long-term risk to the contribution rates.

Sensitivity Analysis			
As of June 30, 2015	**6.50% Discount Rate (-1%)**	**7.50% Discount Rate (assumed rate)**	**8.50% Discount Rate (+1%)**
Plan's Total Normal Cost	15.7%	12.8%	10.5%
Accrued Liability	$190,917	$160,583	$136,344
Unfunded Accrued Liability	$38,405	$8,071	$(16,168)

Volatility Ratios

Actuarial calculations are based on a number of assumptions about 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 required employer contributions from one year to the next. Therefore, employer contributions 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 experience more volatile employer contributions (as a percentage of payroll) 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. Shown below is the asset volatility ratio, a measure of the plan's current contribution 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 experience more volatile employer contributions (as a percentage of payroll) 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 shown in the table below. It should be noted that this ratio indicates a longer-term potential for contribution volatility. The asset volatility ratio, described above, will tend to move closer to the liability volatility ratio as the plan matures.

Rate Volatility		As of June 30, 2015
1. Market Value of Assets	$	152,512
2. Payroll		848,675
3. Asset Volatility Ratio (AVR) [(1) / (2)]		0.2
4. Accrued Liability	$	160,583
5. Liability Volatility Ratio (LVR) [(4) / (2)]		0.2

Hypothetical Termination Liability

The hypothetical termination liability is an estimate of the financial position of the plan had the contract with CalPERS been terminated as of June 30, 2015. The plan liability on a termination basis is calculated differently compared to the plan's ongoing funding liability. For the hypothetical termination liability calculation, both compensation and service are frozen as of the valuation date and no future pay increases or service accruals are assumed.

A more conservative investment policy and asset allocation strategy was adopted by the CalPERS Board for the Terminated Agency Pool. The Terminated Agency Pool has limited funding sources since no future employer contributions will be made. Therefore, expected benefit payments are secured by risk-free assets and benefit security for members is increased while funding risk is limited. However, this asset allocation has a lower expected rate of return than the PERF and consequently, a lower discount rate is assumed. The lower discount rate for the Terminated Agency Pool results in higher liabilities for terminated plans.

The effective termination discount rate will depend on actual market rates of return for risk-free securities on the date of termination. As market discount rates are variable, the table below shows a range for the hypothetical termination liability based on the lowest and highest interest rates observed during an approximate 2-year period centered around the valuation date.

Market Value of Assets (MVA)	Hypothetical Termination Liability[1,2] @ 2.00%	Funded Status	Unfunded Termination Liability @ 2.00%	Hypothetical Termination Liability[1,2] @ 3.25%	Funded Status	Unfunded Termination Liability @ 3.25%
$152,512	$172,604	88.4%	$20,092	$148,341	102.8%	$(4,171)

For plans where active members have little service the hypothetical termination liability methodology used does not fully vest active members upon termination. In these cases the hypothetical termination liability is understated.

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

[2] The current discount rate assumption used for termination valuations is a weighted average of the 10-year and 30-year U.S. Treasury yields where the weights are based on matching asset and liability durations as of the termination date. The discount rates used in the table are based on 20-year Treasury bonds, rounded to the nearest quarter percentage point, which is a good proxy for most plans. The 20-year Treasury yield was 2.75 percent on June 30, 2015.

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

Participant Data

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

	June 30, 2014	June 30, 2015
Reported Payroll	$ 368,068	$ 848,675
Projected Payroll for Contribution Purposes	$ 402,198	$ 927,370
Number of Members		
Active	6	13
Transferred	1	2
Separated	1	2
Retired	0	0

List of Class 1 Benefit Provisions

This plan has the additional Class 1 Benefit Provisions:

- None

PLAN'S MAJOR BENEFIT OPTIONS

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.

	Contract package	
Benefit Provision	Active Misc	
Benefit Formula	2.0% @ 62	
Social Security Coverage	No	
Full/Modified	Full	
Employee Contribution Rate	6.25%	
Final Average Compensation Period	Three Year	
Sick Leave Credit	Yes	
Non-Industrial Disability	Standard	
Industrial Disability	No	
Pre-Retirement Death Benefits		
Optional Settlement 2W	Yes	
1959 Survivor Benefit Level	level 4	
Special	No	
Alternate (firefighters)	No	
Post-Retirement Death Benefits		
Lump Sum	$500	
Survivor Allowance (PRSA)	No	
COLA	2%	

Section 2

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Section 2 may be found on the CalPERS website (www.calpers.ca.gov) in the Forms and Publications section

California Public Employees' Retirement System
Actuarial Office
P.O. Box 942709
Sacramento, CA 94229-2709
TTY: (916) 795-3240
(888) 225-7377 phone – (916) 795-2744 fax
www.calpers.ca.gov

August 2016

PEPRA SAFETY POLICE PLAN OF THE CITY OF PACIFIC GROVE
(CalPERS ID: 5070575563)
Annual Valuation Report as of June 30, 2015

Dear Employer,

As an attachment to this letter, you will find a copy of the June 30, 2015 actuarial valuation report of the pension plan.

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

- Section 1 contains specific information for the plan including the development of the current and projected employer contributions, and
- Section 2 contains the Risk Pool Actuarial Valuation appropriate to the plan as of June 30, 2015.

Section 2 can be found on the CalPERS website at (www.calpers.ca.gov). From the home page, go to "*Forms & Publications*" and select "*View All*". In the search box, enter "*Risk Pool Report*" and from the results list download the Miscellaneous or Safety Risk Pool Actuarial Valuation Report as appropriate.

Your June 30, 2015 actuarial valuation report contains important actuarial information about your pension plan at CalPERS. Your assigned CalPERS staff actuary, whose signature appears in the Actuarial Certification section on page 1, is available to discuss the report with you after August 31, 2016.

Future Employer Contribution

Fiscal Year	Employer Normal Cost Rate	+	Employer Payment of Unfunded Liability
2017-18	11.990%		$229
2018-19 (projected)	12.0%		$521

The exhibit above displays the minimum employer contributions, before any cost sharing, for Fiscal Year 2017-18 along with estimates of the contributions for Fiscal Year 2018-19. The total employer contribution is the sum of a Normal Cost Rate applied to reported payroll plus an Unfunded Liability dollar payment. The estimated contributions for Fiscal Year 2018-19 are based on a projection of the most recent information we have available, including an estimated 0.0 percent investment return for Fiscal Year 2015-16 (based on the year to date return through April 30, 2016).

For a projection of employer contributions beyond Fiscal Year 2018-19, please refer to the "Projected Employer Contributions" in the "Highlights and Executive Summary" section. This 5-year projection of future employer contributions supersedes any previous projections we have provided. The "Risk Analysis" section of the valuation report also contains estimated employer contributions in future years under a variety of investment return scenarios. Member contributions, other than cost sharing, 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 estimates for Fiscal Year 2018-19 also assume 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 an important assumption because these gains and losses do occur and can have a significant effect on required contributions. Even for the largest plans or pools, such gains and losses can impact the employer's contributions. These gains and losses cannot be predicted in advance so the projected employer contributions are estimates. The actual required employer contribution for Fiscal Year 2018-19 will be provided in next year's valuation report.

Changes since the Prior Year's Valuation

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. The policy has no impact on the current year valuation results but is expected to have an impact in future years. More details on the Risk Mitigation Policy can be found on our website.

Besides the above noted changes, there may also be changes specific to the 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 the 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 results, we ask that you wait until after August 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

ACTUARIAL VALUATION

as of June 30, 2015

for the
PEPRA SAFETY POLICE PLAN
of the
CITY OF PACIFIC GROVE

(CalPERS ID: 5070575563)

REQUIRED CONTRIBUTIONS
FOR FISCAL YEAR
July 1, 2017 - June 30, 2018

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(CalPERS ID: 5070575563)
(Rate Plan: 25299)

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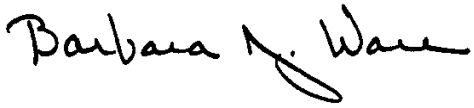
ACTUARIAL CERTIFICATION

Section 1 of this report is based on the member and financial data contained in our records as of June 30, 2015 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, 2015 provided by employers participating in the Safety Risk Pool to which the 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 PEPRA SAFETY POLICE 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 the plan, it is my opinion as the plan actuary that the side fund and other Unfunded Accrued Liability bases as of June 30, 2015 and employer contribution as of July 1, 2017, 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.



BARBARA J. WARE, FSA, MAAA
Enrolled Actuary
Senior Pension Actuary, CalPERS
Plan Actuary

HIGHLIGHTS AND EXECUTIVE SUMMARY

- **INTRODUCTION**
- **PURPOSE OF SECTION 1**
- **REQUIRED EMPLOYER CONTRIBUTION**
- **PLAN'S FUNDED STATUS**
- **PROJECTED EMPLOYER CONTRIBUTIONS**
- **CHANGES SINCE THE PRIOR YEAR VALUATION**
- **SUBSEQUENT EVENTS**

Introduction

This report presents the results of the June 30, 2015 actuarial valuation of the PEPRA SAFETY POLICE PLAN of the CITY OF PACIFIC GROVE of the California Public Employees' Retirement System (CalPERS). This actuarial valuation sets the required employer contributions for Fiscal Year 2017-18.

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. The Risk Mitigation Policy does not have an impact on the current year actuarial valuation. More details on the Risk Mitigation Policy can be found on our website.

Purpose of Section 1

This Section 1 report for the PEPRA SAFETY POLICE PLAN of the CITY OF PACIFIC GROVE 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, 2015;
- Determine the required employer contribution for this plan for the fiscal year July 1, 2017 through June 30, 2018; and
- Provide actuarial information as of June 30, 2015 to the CalPERS Board of Administration and other interested parties.

The pension funding information presented in this report should not be used in financial reports subject to GASB Statement No. 68 for a Cost Sharing Employer Defined Benefit Pension Plan. A separate accounting valuation report for such purposes is available from CalPERS and details for ordering are available on our website.

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 8.

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

Required Employer Contribution		Fiscal Year 2016-17 [1]		Fiscal Year 2017-18
Employer Normal Cost Rate		**12.082%**		**11.990%**
Plus Either				
1) Monthly Employer Dollar UAL Payment	**$**	**5.65**	**$**	**19.08**
Or				
2) Annual Lump Sum Prepayment Option	**$**	**65**	**$**	**221**

*The total minimum required employer contribution is the **sum** of the Plan's Employer Normal Cost Rate (expressed as a percentage of payroll) **plus** the Employer Unfunded Accrued Liability (UAL) Contribution Amount (billed monthly in dollars). Only the UAL portion of the employer contribution can be prepaid (which must be received in full no later than July 31). Plan Normal Cost contributions will be made as part of the payroll reporting process. If there is contractual cost sharing or other change, this amount will change. § 20572 of the Public Employees' Retirement Law assesses interest at an annual rate of 10 percent if a contracting agency fails to remit the required contributions when due.*

		Fiscal Year 2016-17 [1]		Fiscal Year 2017-18
Development of Normal Cost as a Percentage of Payroll				
Base Total Normal Cost for Formula		23.582%		23.490%
Surcharge for Class 1 Benefits[3]				
None		0.000%		0.000%
Phase out of Normal Cost Difference[4]		0.000%		0.000%
Plan's Total Normal Cost		23.582%		23.490%
Plan's Employee Contribution Rate		11.500%		11.500%
Employer Normal Cost Rate		12.082%		11.990%
Projected Payroll for the Contribution Fiscal Year	$	222,813	$	656,652
Estimated Employer Contributions Based on Projected Payroll				
Plan's Estimated Employer Normal Cost	$	26,921	$	78,733
Plan's Payment on Amortization Bases[2]		68		229
Total Employer Contribution[5]	$	26,989	$	78,962

[1] The results shown for Fiscal Year 2016-17 reflect the prior year valuation and do not take into account any lump sum payment, side fund payoff, or rate adjustment made after June 30, 2015.

[2] See page 8 for a breakdown of the Amortization Bases.

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

[4] The normal cost difference is 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. This is non-zero only for plans that joined a pool within the past 5 years. Most plans joined a pool June 30, 2003, when risk pooling was implemented.

[5] As a percentage of projected payroll the UAL contribution is 0.035 percent for an estimated total employer contribution rate of 12.025 percent.

Plan's Funded Status

	June 30, 2014	June 30, 2015
1. Present Value of Projected Benefits (PVB)	$ 717,511	$ 2,045,016
2. Entry Age Normal Accrued Liability (AL)	43,278	106,464
3. Plan's Market Value of Assets (MVA)	45,115	100,798
4. Unfunded Accrued Liability (UAL) [(2) - (3)]	(1,837)	5,666
5. Funded Ratio [(3) / (2)]	104.2%	94.7%

Projected Employer Contributions

The estimate for Fiscal Year 2018-19 is based on a projection of the most recent information we have available, including an estimated 0.0 percent investment return for Fiscal Year 2015-16 (based on year to date return through April 30, 2016).

The table below shows projected employer contributions (before cost sharing) for the next five fiscal years, ***assuming CalPERS earns 0.0 percent for Fiscal Year 2015-16 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 projection period.

	Required Contribution	**Projected Future Employer Contributions**				
Fiscal Year	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**
Normal Cost %	11.990%	12.0%	12.0%	12.0%	12.0%	12.0%
UAL $	$229	$521	$831	$1,159	$1,427	$1,606

Changes since the Prior Year's Valuation

Benefits

None. This valuation generally reflects plan changes by amendments effective before the date of the report. Please refer to the "Plan's Major Benefit Options" and Appendix B of Section 2 for a summary of the plan provisions used in this valuation.

Actuarial Methods and Assumptions

None.

Subsequent Events

Risk Mitigation

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. More details on the Risk Mitigation Policy can be found on our website.

ASSETS AND LIABILITIES

- **ALLOCATION OF PLAN'S SHARE OF POOL'S EXPERIENCE/ASSUMPTION CHANGE**
- **DEVELOPMENT OF PLAN'S SHARE OF POOL'S MVA**
- **SCHEDULE OF PLAN'S SIDE FUND & OTHER AMORTIZATION BASES**
- **30-YEAR AMORTIZATION SCHEDULE AND ALTERNATIVES**
- **EMPLOYER CONTRIBUTION HISTORY**
- **FUNDING HISTORY**

Allocation of Plan's Share of Pool's Experience/Assumption Change

It is the policy of CalPERS to ensure equity within the risk pools by allocating the pool's experience gains/losses and assumption changes in a manner that treats each employer equitably and maintains benefit security for the members of the System while minimizing substantial variations in employer contributions. The Pool's experience gains/losses and impact of assumption/method changes is allocated to the plan as follows:

1.	Plan's Accrued Liability	$	106,464
2.	Projected UAL balance at 6/30/15		166
3.	Pool's Accrued Liability	$	18,467,886,519
4.	Sum of Pool's Individual Plan UAL Balances at 6/30/15		3,713,009,355
5.	Pool's 2014/15 Investment & Asset (Gain)/Loss		765,720,345
6.	Pool's 2014/15 Other (Gain)/Loss		(2,867,161)
7.	Plan's Share of Pool's Asset (Gain)/Loss [(1)-(2)]/[(3)-(4)] * (5)		5,516
8.	Plan's Share of Pool's Other (Gain)/Loss [(1)]/[(3)] * (6)		(17)
9.	Plan's New (Gain)/Loss as of 6/30/2015 [(7)+(8)]	$	5,500
10.	Increase in Pool's Accrued Liability due to Change in Assumptions		0
11.	Plan's Share of Pool's Change in Assumptions [(1)]/[(3)] * (10)	$	0

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

1.	Plan's Accrued Liability	$	106,464
2.	Plan's UAL	$	5,666
3.	Plan's Share of Pool's MVA [(1)-(2)]	$	**100,798**

Schedule of Plan's Side Fund and Other Amortization Bases

There is a two-year lag between the valuation date and the start of the contribution fiscal year.

- The assets, liabilities, and funded status of the plan are measured as of the valuation date: June 30, 2015.
- The employer contribution determined by the valuation is for the fiscal year beginning two years after the valuation date: Fiscal Year 2017-18.

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

The Unfunded Accrued Liability (UAL) 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 UAL is rolled forward each year by subtracting the payment on the UAL for the fiscal year and adjusting for interest.

							Amounts for Fiscal 2017-18	
Reason for Base	**Date Established**	**Amortization Period**	**Balance 6/30/15**	**Payment 2015-16**	**Balance 6/30/16**	**Payment 2016-17**	**Balance 6/30/17**	**Scheduled Payment for 2017-18**
ASSET (GAIN)/LOSS	06/30/14	29	$(4,219)	$0	$(4,535)	$(64)	$(4,809)	$(131)
NON-ASSET (GAIN)/LOSS	06/30/14	29	$41	$0	$44	$1	$46	$1
ASSUMPTION CHANGE	06/30/14	19	$4,344	$(2,126)	$6,874	$131	$7,254	$270
ASSET (GAIN)/LOSS	06/30/15	30	$5,516	$0	$5,930	$0	$6,375	$90
NON-ASSET (GAIN)/LOSS	06/30/15	30	$(17)	$0	$(18)	$0	$(19)	$0
TOTAL			**$5,665**	**$(2,126)**	**$8,295**	**$68**	**$8,847**	**$230**

The (gain)/loss bases are the plan's allocated share of the risk pool's (gain)/loss for the fiscal year as disclosed on the previous page. These (gain)/loss bases will be amortized according to Board policy over 30 years with a 5-year ramp-up.

If the total Unfunded Liability is negative (i.e., plan has a surplus), the scheduled payment is $0, because the minimum required contribution under PEPRA must be at least equal to the normal cost.

30-Year Amortization Schedule and Alternatives

The amortization schedule 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 the current amortization schedule and illustrate the advantages of accelerating unfunded liability payments.

Shown on the following page are future year amortization payments based on 1) the current amortization schedule reflecting the individual bases and remaining periods shown on the previous page, and 2) alternate "fresh start" amortization schedules using two sample periods that would both result in interest savings relative to the current amortization schedule. Note that the payments under each alternate scenario increase by 3 percent for each year into the future. The schedules do not attempt to reflect any experience after June 30, 2015 that may deviate from the actuarial assumptions. Therefore, future amortization payments displayed in the Current Amortization Schedule may not match projected amortization payments shown in connection with Projected Employer Contributions provided elsewhere in this report.

The Current Amortization Schedule typically contains individual bases that are both positive and negative. Positive bases result from plan changes, assumption changes or plan experience that result in increases to unfunded liability. Negative bases result from plan changes, assumption changes or plan experience that result in decreases to unfunded liability. The combination of positive and negative bases within an amortization schedule can result in unusual or problematic circumstances in future years such as:

- A positive total unfunded liability with a negative total payment,
- A negative total unfunded liability with a positive total payment, or
- Total payments that completely amortize the unfunded liability over a very short period of time

In any year where one of the above scenarios occurs, the actuary will consider corrective action such as replacing the existing unfunded liability bases with a single "fresh start" base and amortizing it over a reasonable period.

The Current Amortization Schedule on the following page may appear to show that, based on the current amortization bases, one of the above scenarios will occur at some point in the future. It is impossible to know today whether such a scenario will in fact arise since there will be additional bases added to the amortization schedule in each future year. Should such a scenario arise in any future year, the actuary will take appropriate action based on guidelines in the CalPERS amortization policy. For purposes of this display, total payments include any negative payments. Therefore, the amount of estimated savings may be understated to the extent that negative payments appear in the current schedule.

30-Year Amortization Schedule and Alternatives

	Current Amortization Schedule		Alternate Schedules			
			20 Year Amortization		15 Year Amortization	
Date	**Balance**	**Payment**	**Balance**	**Payment**	**Balance**	**Payment**
6/30/2017	8,847	229	8,847	668	8,847	811
6/30/2018	9,273	400	8,818	688	8,669	835
6/30/2019	9,554	581	8,766	709	8,453	860
6/30/2020	9,668	772	8,688	730	8,195	886
6/30/2021	9,593	896	8,583	752	7,891	913
6/30/2022	9,383	923	8,447	774	7,537	940
6/30/2023	9,130	950	8,278	798	7,127	968
6/30/2024	8,830	979	8,072	822	6,658	997
6/30/2025	8,477	1,008	7,825	846	6,123	1,027
6/30/2026	8,067	1,039	7,535	872	5,517	1,058
6/30/2027	7,596	1,070	7,197	898	4,834	1,090
6/30/2028	7,056	1,102	6,806	925	4,066	1,123
6/30/2029	6,443	1,135	6,357	952	3,207	1,156
6/30/2030	5,750	1,169	5,847	981	2,249	1,191
6/30/2031	4,969	1,204	5,268	1,010	1,183	1,227
6/30/2032	4,094	1,030	4,616	1,041		
6/30/2033	3,333	844	3,883	1,072		
6/30/2034	2,707	647	3,063	1,104		
6/30/2035	2,240	437	2,148	1,137		
6/30/2036	1,955	213	1,130	1,171		
6/30/2037	1,881	220				
6/30/2038	1,794	226				
6/30/2039	1,694	233				
6/30/2040	1,579	240				
6/30/2041	1,449	247				
6/30/2042	1,301	391				
6/30/2043	994	350				
6/30/2044	705	307				
6/30/2045	440	260				
6/30/2046	203	211				
Totals		**19,311**		**17,949**		**15,083**
Estimated Savings				**1,363**		**4,228**

Current CalPERS Board policy prioritizes the order for which lump sum contributions in excess of the required employer contribution shall be applied. Excess contributions shall first be applied toward payment on the plan's side fund, and any remainder shall then be applied toward the plan's share of the pool's unfunded accrued liability.

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

Employer Contribution History

The table below provides a recent history of the required employer contributions for the plan, as determined by the annual actuarial valuation. It does not account for prepayments or benefit changes made during a fiscal year.

Fiscal Year	Employer Normal Cost	Unfunded Liability Payment ($)
2016 - 17	12.082%	68
2017 - 18	11.990%	229

Funding History

The funding history below shows the plan's actuarial accrued liability, share of the pool's market value of assets, share of the pool's unfunded liability, funded ratio, and 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
06/30/2014	$ 43,278	$ 45,115	$ (1,837)	104.2%	$ 203,906
06/30/2015	106,464	100,798	5,666	94.7%	600,930

RISK ANALYSIS

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

Analysis of Future Investment Return Scenarios

The investment return for Fiscal Year 2015-16 was not known at the time this report was produced. The investment return in Fiscal Year 2015-16 as of April 30, 2016 is 0.0 percent before administrative expenses. For purposes of projecting future employer contributions, we are assuming a 0.0 percent investment return for Fiscal Year 2015-16.

The investment return realized during a fiscal year first affects the contribution for the fiscal year two years later. For example, the investment return for Fiscal Year 2015-16 will first be reflected in the June 30, 2016 actuarial valuation that will be used to set the Fiscal Year 2018-19 employer contributions, the Fiscal Year 2016-17 investment return will first be reflected in the June 30, 2017 actuarial valuation that will be used to set the Fiscal Year 2019-20 employer contributions, and so forth.

A sensitivity analysis was performed to determine the effects of various investment returns during fiscal years 2016-17, 2017-18, and 2018-19 on the employer contributions for fiscal years 2019-20, 2020-21, and 2021-22. The projected contributions 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 a -3.8 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 5th percentile return from July 1, 2016 through June 30, 2019.
- The second scenario is a 2.8 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 25th percentile return from July 1, 2016 through June 30, 2019.
- The third scenario is a 7.5 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 49th percentile return from July 1, 2016 through June 30, 2019.
- The fourth scenario is a 12.0 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 75th percentile return from July 1, 2016 through June 30, 2019.
- Finally, the last scenario is an 18.9 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 95th percentile return from July 1, 2016 through June 30, 2019.

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

2016-19 Investment Return Scenario	Fiscal Year			Estimated Change Between 2018-19 and 2021-22
	2019-20	2020-21	2021-22	
(3.8%)				
Normal Cost	12.0%	12.0%	12.0%	0.0%
UAL Contribution	$1,010	$1,697	$2,506	$1,985
2.8%				
Normal Cost	12.0%	12.0%	12.0%	0.0%
UAL Contribution	$905	$1,388	$1,896	$1,375
7.5%				
Normal Cost	12.0%	12.0%	12.0%	0.0%
UAL Contribution	$831	$1,159	$1,427	$906
12.0%				
Normal Cost	11.9%	12.0%	12.2%	0.2%
UAL Contribution	$771	$971	$1,032	$511
18.9%				
Normal Cost	12.2%	12.6%	13.0%	1.0%
UAL Contribution	$688	$0	$0	$(521)

For the last two scenarios in the table above the results incorporate the impact of CalPERS Risk Mitigation Policy. A 12.0% return would result in a reduction of the discount rate by 0.05% and a return of 18.9% would reduce the discount rate by 0.15%. Reducing the discount rate increases both the plan's accrued liability and normal cost. More details about Risk Mitigation policy can be found on our website.

Analysis of Discount Rate Sensitivity

The following analysis looks at the Fiscal Year 2017-18 total normal cost rates and liabilities under two different discount rate scenarios. Shown below are the total normal cost rates assuming discount rates that are 1 percent lower and 1 percent higher than the current valuation discount rate. This analysis shows the potential plan impacts if the Public Employees' Retirement Fund (PERF) were to realize investment returns of 6.50 percent or 8.50 percent over the long-term.

This analysis is intended to illustrate the long-term risk to the contribution rates.

Sensitivity Analysis			
As of June 30, 2015	**6.50% Discount Rate (-1%)**	**7.50% Discount Rate (assumed rate)**	**8.50% Discount Rate (+1%)**
Plan's Total Normal Cost	29.1%	23.5%	19.2%
Accrued Liability	$128,725	$106,464	$88,660
Unfunded Accrued Liability	$27,927	$5,666	$(12,138)

Volatility Ratios

Actuarial calculations are based on a number of assumptions about 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 required employer contributions from one year to the next. Therefore, employer contributions 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 experience more volatile employer contributions (as a percentage of payroll) 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. Shown below is the asset volatility ratio, a measure of the plan's current contribution 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 experience more volatile employer contributions (as a percentage of payroll) 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 shown in the table below. It should be noted that this ratio indicates a longer-term potential for contribution volatility. The asset volatility ratio, described above, will tend to move closer to the liability volatility ratio as the plan matures.

Rate Volatility		As of June 30, 2015
1. Market Value of Assets	$	100,798
2. Payroll		600,930
3. Asset Volatility Ratio (AVR) [(1) / (2)]		0.2
4. Accrued Liability	$	106,464
5. Liability Volatility Ratio (LVR) [(4) / (2)]		0.2

Hypothetical Termination Liability

The hypothetical termination liability is an estimate of the financial position of the plan had the contract with CalPERS been terminated as of June 30, 2015. The plan liability on a termination basis is calculated differently compared to the plan's ongoing funding liability. For the hypothetical termination liability calculation, both compensation and service are frozen as of the valuation date and no future pay increases or service accruals are assumed.

A more conservative investment policy and asset allocation strategy was adopted by the CalPERS Board for the Terminated Agency Pool. The Terminated Agency Pool has limited funding sources since no future employer contributions will be made. Therefore, expected benefit payments are secured by risk-free assets and benefit security for members is increased while funding risk is limited. However, this asset allocation has a lower expected rate of return than the PERF and consequently, a lower discount rate is assumed. The lower discount rate for the Terminated Agency Pool results in higher liabilities for terminated plans.

The effective termination discount rate will depend on actual market rates of return for risk-free securities on the date of termination. As market discount rates are variable, the table below shows a range for the hypothetical termination liability based on the lowest and highest interest rates observed during an approximate 2-year period centered around the valuation date.

Market Value of Assets (MVA)	Hypothetical Termination Liability[1,2] @ 2.00%	Funded Status	Unfunded Termination Liability @ 2.00%	Hypothetical Termination Liability[1,2] @ 3.25%	Funded Status	Unfunded Termination Liability @ 3.25%
$100,798	$67,957	148.3%	$(32,841)	$67,957	148.3%	$(32,841)

For plans where active members have little service the hypothetical termination liability methodology used does not fully vest active members upon termination. In these cases the hypothetical termination liability is understated.

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

[2] The current discount rate assumption used for termination valuations is a weighted average of the 10-year and 30-year U.S. Treasury yields where the weights are based on matching asset and liability durations as of the termination date. The discount rates used in the table are based on 20-year Treasury bonds, rounded to the nearest quarter percentage point, which is a good proxy for most plans. The 20-year Treasury yield was 2.75 percent on June 30, 2015.

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

Participant Data

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

	June 30, 2014	June 30, 2015
Reported Payroll	$ 203,906	$ 600,930
Projected Payroll for Contribution Purposes	$ 222,813	$ 656,652
Number of Members		
Active	2	7
Transferred	0	0
Separated	0	0
Retired	0	0

List of Class 1 Benefit Provisions

This plan has the additional Class 1 Benefit Provisions:

- None

PLAN'S MAJOR BENEFIT OPTIONS

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.

	Contract package	
	Active Police	
Benefit Provision		
Benefit Formula	2.7% @ 57	
Social Security Coverage	No	
Full/Modified	Full	
Employee Contribution Rate	11.50%	
Final Average Compensation Period	Three Year	
Sick Leave Credit	Yes	
Non-Industrial Disability	Standard	
Industrial Disability	Yes	
Pre-Retirement Death Benefits		
Optional Settlement 2W	Yes	
1959 Survivor Benefit Level	level 4	
Special	Yes	
Alternate (firefighters)	No	
Post-Retirement Death Benefits		
Lump Sum	$500	
Survivor Allowance (PRSA)	No	
COLA	2%	

Section 2

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Section 2 may be found on the CalPERS website (www.calpers.ca.gov) in the Forms and Publications section