Bickmore

October 31, 2017

Mr. Geoffrey S. Kiehl
Director of Finance and Treasurer
City of Palm Springs
3200 E. Tahquitz Canyon Way
Palm Springs, CA 92263-2743

Re: June 30, 2017 Actuarial Report on GASB 45 Retiree Benefit Valuation

Dear Mr. Kiehl:

We are pleased to enclose our report providing the results of the June 30, 2017 actuarial valuation of other post-employment benefit (OPEB) liabilities for the City of Palm Springs (the City). The report's text describes our analysis and assumptions in detail.

The primary purposes of the report are to develop:

- The value of future OPEB expected to be provided by the City, and
- The current OPEB liability and the annual OPEB expense to be reported in the City's financial statements for the fiscal year ending June 30, 2017. Results for the fiscal year ending June 30, 2018, developed under GASB 75, will be provided under separate cover.

The majority of the exhibits included in this report reflect our understanding that the City intends to continue financing its OPEB liability on a pay-as-you-go basis. Other approaches are possible and these are discussed briefly in the report.

We have based our valuation on employee data and plan information provided by the City, including copies of current bargaining agreements and PEMHCA resolutions. We encourage you to review our summary of the benefits described in Table 3A to be comfortable that we have captured these provisions correctly.

We appreciate the opportunity to work on this analysis and acknowledge the efforts of City employees who provided valuable information and assistance to enable us to perform this valuation. Please let us know if we can be of further assistance.

Sincerely,

Catherine L. MacLeod

Catherine L. MacLeod, FSA, FCA, EA, MAAA
Director, Postemployment Benefit Actuarial Services

Enclosure

Bickmore

City of Palm Springs

Actuarial Valuation of the Other Post-Employment Benefit Programs As of June 30, 2017

Submitted October 2017

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A. Executive Summary

This report presents the results of the June 30, 2017 actuarial valuation of the City of Palm Springs (the City) other post-employment benefit (OPEB) programs. The purpose of this valuation is to assess the OPEB liabilities and provide disclosure information as required by Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). This report reflects the valuation of two distinct types of OPEB liability, described further in Section C.

- An "explicit subsidy" exists when the employer contributes directly toward retiree healthcare premiums. In this program, benefits may include a monthly subsidy toward medical premiums for eligible retirees. Future excise taxes expected to be paid for "high cost" coverage are also explicit costs and are included with explicit liabilities.
- An "implicit subsidy" exists when the premiums charged for retiree coverage are lower than the expected retiree claims for that coverage. Retirees able to continue medical coverage at the same premium rates as are charged for active employees creates an implicit benefit subsidy liability under GASB 45.

The rate used to discount each benefit payment from its future payment date back to the valuation date is to be based on the long term expected rate of return on the assets expected to be used to pay those benefits. Assets set aside in an irrevocable OPEB trust toward prefunding of the liability are generally expected to earn a higher rate of return, as compared to the City's internal rate of return. "Prefunding" is the term used to describe when an agency consistently contributes an amount at least equal to the annual required contribution (ARC) each year. Contributing only the current year's retiree payments is referred to as "pay-as-you-go" financing. There are other options relating to the funding policy, including shorter amortization periods and partial pre-funding. These other options would require additional calculations not provided in this report, though we would be happy to provide illustrations at the City's request.

The City confirmed it has not established an irrevocable OPEB trust and is unlikely to do so in the upcoming two years. With the City's approval, this valuation uses a discount rate of 3.13% for pay-as-you-go calculations[1]. Prefunding results are illustrated in Appendix 1 using a 6.5% discount rate. Please recognize that neither rate is a guarantee of future investment performance, but rather an assumption about the long term rate(s) of return.

The Unfunded Actuarial Accrued Liability (UAAL) as of June 30, 2017 was calculated to be:

Subsidy	Explicit	Implicit	Total
Discount Rate	3.13%	3.13%	3.13%
Actuarial Accrued Liability	$ 126,969,120	$ 14,673,038	$ 141,642,158
Actuarial Value of Assets	-	-	-
Unfunded Actuarial Accrued Liability	126,969,120	14,673,038	141,642,158
Funded Ratio	0.0%	0.0%	0.0%

The liabilities shown in the report reflect assumptions regarding continued future employment, rates of retirement and survival, and elections by future retirees to retain coverage for themselves and their dependents. We also note that this valuation has been prepared on a closed group basis; no

[1] Under GASB 75 the required discount rate for pay-as-you-go plans is linked to 20-year municipal bond yields. As of June 30, 2017 the S&P Municipal Bond 20-Year High Grade Index was approximately 3.13%.

Executive Summary
(Concluded)

provision is generally made for new employees until the valuation date following their employment.

The following summarizes results for the fiscal year ending June 30, 2017. Detailed results are shown in tables beginning on page 14 and additional information is provided in the Appendices.

Subsidy	Explicit	Implicit	Total
Annual Required Contribution (ARC) for FYE 2017	$ 8,737,336	$ 1,141,174	$ 9,878,510
Expected employer paid benefits for retirees	2,618,130	-	2,618,130
Current year's implicit subsidy credit	-	661,874	661,874
Expected contribution to OPEB trust	-	-	-
Expected net OPEB obligation at June 30, 2017	39,626,569	4,414,717	44,041,286

An exhibit comparing current valuation results to those from the prior valuation is provided on page 7, followed by a brief description of changes. An actuarial valuation is, by its nature, a projection and to the extent that actual experience is not what we assumed, future results will be different. Some possible sources of future differences may include:

- A significant change in the number of covered or eligible plan members;
- A significant increase or decrease in the future medical premium rates or in the subsidy provided by the City toward retiree medical premiums;
- Longer life expectancies of retirees;
- Significant changes in expected retiree healthcare claims by age, relative to healthcare claims for active employees and their dependents;
- Establishment of and recurring City contributions to an irrevocable OPEB trust;
- Implementation of GASB 75, the new OPEB accounting standard for the City's fiscal year ending June 30, 2018.

Details of our valuation process and the various disclosures required by GASB 45 are provided on the succeeding pages. The date of the next actuarial valuation should not be later than June 30, 2019. If there are any significant changes in the employee data, benefits provided or the funding policy, please contact us to discuss whether an earlier valuation is appropriate. The date of the next following actuarial valuation should be reviewed for suitability with GASB 75 requirements and the best timing to meet the City's needs. We would be happy to review this with the City on request.

Important Notices

This report is intended to be used only to present the actuarial information relating to other postemployment benefits for the City's financial statements and to provide the annual contribution information with respect to the City's current OPEB funding policy. The results of this report may not be appropriate for other purposes, where other assumptions, methodology and/or actuarial standards of practice may be required or more suitable. We note that various issues in this report may involve legal analysis of applicable law or regulations. The City should consult counsel on these matters; Bickmore does not practice law and does not intend anything in this report to constitute legal advice. In addition, we recommend the City consult with their internal accounting staff or external auditor or accounting firm about the accounting treatment of OPEB liabilities.

B. Requirements of GASB 45

The Governmental Accounting Standards Board (GASB) issued GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*. This Statement establishes standards for the measurement, recognition, and display of OPEB expense/expenditures and related liabilities (assets), note disclosures, and, if applicable, required supplementary information (RSI) in the financial reports of state and local governmental employers. We understand that the City implemented GASB 45 for the fiscal year ended June 30, 2009.

For agencies with 200 or more members covered by or eligible for plan benefits, GASB 45 requires that a valuation be prepared no less frequently than every two years. GASB 45 disclosures include the determination of an annual OPEB cost. For the first year, the annual OPEB cost is equal to the annual required contribution (ARC) as determined by the actuary.

- If the City's OPEB contributions had been equal to the ARC each year, the net OPEB obligation would equal $0.
- If the City's actual contribution is less than (greater than) the ARC, then a net OPEB obligation (asset) amount is established. In subsequent years, the annual OPEB expense will reflect adjustments made to the net OPEB obligation, in addition to the ARC (see Table 1B).

GASB 45 provides for recognition of payments as contributions if they are made (a) directly to retirees or beneficiaries, (b) to an insurer, e.g., for the payment of premiums, or (c) to an OPEB fund set aside toward the cost of future benefits. Funds set aside for future benefits should be considered contributions to an OPEB plan only if the vehicle established is one that is capable of building assets that are separate from and independent of the control of the employer and legally protected from its creditors. Furthermore, the sole purpose of the assets should be to provide benefits under the plan. These conditions generally require the establishment of a legal trust. Earmarked assets or reserves may be an important step in financing future benefits, but they may not be recognized as an asset for purposes of reporting under GASB 45.

We reiterate that GASB 45 applies only to the expense to be charged to an agency's income statements and to providing other related liability disclosures. While the Annual Required Contribution typically comprises the majority of the annual OPEB expense, it is a theoretical, not a required contribution amount. The decision whether or not to prefund, and at what level, is at the discretion of the City, as are the manner and term for paying down the unfunded actuarial accrued liability. Once a funding policy has been established, however, the City's auditor may have an opinion as to the timing and manner of any change to such policy in future years. The level of prefunding also affects the selection of the discount rate used for valuing the liabilities.

New GASB Statement 75, issued in June 2015, will impact the liabilities and/or expenses developed in future valuations and require changes beginning with the City's fiscal year end 2018 reporting. Those calculations are outside the scope of this report.

C. Sources of OPEB Liabilities

General Types of OPEB

Post-employment benefits other than pensions (OPEB) comprise a part of compensation that employers offer for services received. The most common OPEB are medical, prescription drug, dental, vision, and/or life insurance coverage. Other OPEB may include outside group legal, long-term care, or disability benefits outside of a pension plan. OPEB does not generally include COBRA, vacation, sick leave[2] or other direct retiree payments.

A direct employer payment toward the cost of OPEB benefits is referred to as an "explicit subsidy". Upcoming excise tax exposure under the Affordable Care Act for retirees covered by high cost plans is another potential source of explicit subsidy liability for the City.

In addition, if claims experience of employees and retirees are pooled when determining premiums, the retirees pay a premium based on a pool of members that, on average, are younger and healthier. For certain types of coverage, such as medical insurance, this results in an "implicit subsidy" of retiree premiums by active employee premiums since the retiree premiums are lower than they would have been if retirees were insured separately. Actuarial Standards of Practice generally require an implicit subsidy of retiree premium rates be valued as an OPEB liability.

This chart shows the sources of funds needed to cover expected claims for pre-Medicare retirees

<table>
<tr><td colspan="3">Expected retiree claims</td></tr>
<tr><td colspan="2">Premium charged for retiree coverage</td><td>Covered by higher active premiums</td></tr>
<tr><td>Retiree portion of premium</td><td>Agency portion of premium
Explicit subsidy</td><td>Implicit subsidy</td></tr>
</table>

From this illustration, we can see that regardless of how much or little of the premium is paid by the Agency, this does not impact the amount of the implicit subsidy.

OPEB Obligations of the City

The City provides continuation of medical coverage to its retiring employees, which may create one or both of the following types OPEB liabilities:

- **Explicit subsidy liabilities**: The City contributes directly to the cost of retiree medical coverage, as described in Table 3A. Liabilities relating to these benefits are included in this valuation.
- **Implicit subsidy liabilities**: Where applicable, as described below, we determine the difference between projected retiree claim costs by age and premiums expected to be charged for retirees (see Addendum 1: Bickmore Age Rating Methodology). We determine the implicit rate subsidy for pre-Medicare retirees as the projected difference between (a) retiree medical claim costs by age (see sample claim costs in Table 4) and (b) premiums charged for retiree coverage (see Table 3A).
    - *Miscellaneous employees and retirees* are covered by the CalPERS medical program. The same monthly premiums are charged for active employees and for pre-Medicare retirees. CalPERS has confirmed that the claims experience of these members is considered together in setting these premium rates. Accordingly, we have made age-related premium adjustments and computed an implicit rate subsidy for pre-Medicare retirees covered or expected to be covered in retirement.

[2] Unless unused sick leave credits are converted to provide/enhance a defined benefit OPEB; not applicable here.

Sources of OPEB Liability
(Concluded)

Implicit Subsidy Liability for Miscellaneous employees and retirees - continued

Different monthly premiums are charged for Medicare-eligible members and CalPERS has confirmed that only the claims experience of these members is considered in setting these premium rates. We have assumed that this premium structure is adequate to cover the expected claims of these retirees and believe that there is no implicit subsidy of premiums for these members by active employees.

- *Safety employees and some Safety retirees* are covered by plans in which the claims experience of active and retired members (both before and after Medicare eligibility) is co-mingled in setting premium rates. We believe an implicit subsidy of pre-65 medical claims exists for retirees covered by these plans and have included the liabilities for this subsidy in this valuation.

  Separate monthly premiums are charged for Medicare-eligible members in the Safety medical plan. Based on some testing that we did, we have assumed that this premium structure is adequate to cover the expected claims of these retirees and believe that there is no implicit subsidy of premiums for these members by active employees, or that it is insignificant.

- **Excise tax liability for "high cost" plans:** The Patient Protection and Affordable Care Act (ACA) includes a 40% excise tax on high-cost employer-sponsored health coverage. The tax was to be implemented beginning in 2018; however, implementation has been delayed by subsequent legislation until 2020. The tax applies to the aggregate cost of an employee's applicable coverage that exceeds a dollar limit. While there are discussions in Congress of eliminating or again delaying this tax, this report assumes that it will take effect as current law provides.

  For those current and future retirees assumed to retain coverage in a medical plan offered by the City, we determined the excess, if any, of projected annual plan premiums for the retiree and his or her covered dependents over the projected applicable excise tax threshold beginning in the year 2020. The excise tax burden will ultimately fall on either the City or a combination of the City and plan participants. To the extent that the excise tax is reflected as an addition to premiums, at least part of the retiree tax will be borne by the City (somewhat analogous to the implicit subsidy). If the City is able to and ultimately does pass the retiree tax burden to retirees, then no part of the excise tax reflected in this report would be retained by the City. *This report assumes that 100% of any excise tax liability for high cost retiree coverage will be borne by the City*.

D. Valuation Process

The valuation has been based on employee census data and benefits initially submitted to us by the City in May 2017 and clarified in various related communications. A summary of the employee data is provided in Table 2 and a summary of the benefits provided under the Plan is provided in Table 3A. While individual employee records have been reviewed to verify that they are reasonable in various respects, the data has not been audited and we have otherwise relied on the City as to its accuracy. The valuation described below has been performed in accordance with the actuarial methods and assumptions described in Table 4.

In developing the projected benefit values and liabilities, we first determine an expected premium or benefit stream over the employee's future retirement. Benefits may include both direct employer payments (explicit subsidies) and/or an implicit subsidy, arising when retiree premiums are expected to be subsidized by active employee premiums. The projected benefit streams reflect assumed trends in the cost of those benefits and assumptions as to the expected date(s) when benefits will end. We then apply assumptions regarding:

- The probability that each individual employee will or will not continue in service with the City to receive benefits.
- To the extent assumed to retire from the City, the probability of when such retirement will occur for each retiree, based on current age, service and employee type; and
- The likelihood that future retirees will or will not elect retiree coverage (and benefits) for themselves and/or their dependents.

We then calculate a present value of these benefits by discounting the value of each future expected benefit payment, multiplied by the assumed expectation that it will be paid, back to the valuation date using the discount rate. These benefit projections and liabilities have a very long time horizon. The final payments for currently active employees may not be made for 70 years or more.

The resulting present value for each employee is allocated as a level percent of payroll each year over the employee's career using the entry age normal cost method and the amounts for each individual are then summed to get the results for the entire plan. This creates a cost expected to increase each year as payroll increases. Amounts attributed to prior fiscal years form the "actuarial accrued liability" (AAL). The OPEB cost allocated for active employees in the current year is referred to as the "normal cost". The remaining active cost to be assigned to future years is called the "present value of future normal costs".

In summary:

Actuarial Accrued Liability	Past Years' Cost Allocations	Actives and Retirees
plus Normal Cost	Current Year's Cost Allocation	Actives only
plus Present Value of Future Normal Costs	Future Years' Cost Allocations	Actives only
equals Present Value of Projected Benefits	Total Benefit Costs	Actives and Retirees

Where contributions have been made to an irrevocable OPEB trust, the accumulated value of trust assets is applied to offset the AAL. It is our understanding that the City's plans have not yet been funded and no assets have been set aside in an irrevocable trust as of the valuation date. The portion of the AAL not covered by assets is referred to as the unfunded actuarial accrued liability (UAAL).

E. Basic Valuation Results

The following chart compares the results of the June 30, 2017 valuation of OPEB liabilities to the results of the June 30, 2015 valuation.

Funding Policy	**Pay-As-You-Go Basis**					
Valuation date	**6/30/2015**			**6/30/2017**		
Subsidy	Explicit	Implicit	Total	Explicit	Implicit	Total
Discount rate	4.00%	4.00%	4.00%	3.13%	3.13%	3.13%
Number of Covered Employees						
Actives	336	321	336	354	354	354
Retirees	197	136	203	209	109	209
Total Participants	533	457	539	563	463	563
Actuarial Present Value of Projected Benefits						
Actives	$ 60,009,320	$ 11,839,616	$ 71,848,936	$ 91,476,507	$ 12,719,399	$ 104,195,906
Retirees	49,171,676	10,411,773	59,583,449	66,588,180	6,722,397	73,310,577
Total APVPB	109,180,996	22,251,389	131,432,385	158,064,687	19,441,796	177,506,483
Actuarial Accrued Liability (AAL)						
Actives	40,219,235	7,350,409	47,569,644	60,380,940	7,950,641	68,331,581
Retirees	49,171,676	10,411,773	59,583,449	66,588,180	6,722,397	73,310,577
Total AAL	89,390,911	17,762,182	107,153,093	126,969,120	14,673,038	141,642,158
Actuarial Value of Assets	-	-	-	-	-	-
Unfunded AAL (UAAL)	89,390,911	17,762,182	107,153,093	126,969,120	14,673,038	141,642,158
Normal Cost	1,895,712	421,162	2,316,874	2,902,346	455,859	3,358,205
Percent funded	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Reported covered payroll	30,169,887	30,169,887	30,169,887	34,929,760	34,929,760	34,929,760
UAAL as percent of payroll	296.3%	58.9%	355.2%	363.5%	42.0%	405.5%

Note: The Explicit Subsidy AAL as of June 30, 2017 include approximately $9.6 million in projected excise tax liability for retirees expected to be covered by "high cost" plans under the Affordable Care Act.

Basic Valuation Results
(Concluded)

Changes Since the Prior Valuation

Even if all of our previous assumptions were met exactly as projected, liabilities often increase over time as active employees get closer to the date their benefits are expected to begin. Given the uncertainties involved and the long term nature of these projections, our prior assumptions were not and are likely never to be exactly realized. Nonetheless, it is helpful to review why results are different than we anticipated.

In comparing results shown in the exhibit on the preceding page, we can see that the Unfunded Actuarial Accrued Liability (UAAL) increased by $34.5 million (from roughly $107.1 to $141.6 million) between June 30, 2015 and June 30, 2017. The chart below summarizes the primary factors affecting the valuation results.

Source of Change	Increase (decrease) in UAAL in millions
Decrease in discount rate (from 4.0% to 3.13%)	$ 20.6
Update in mortality projection scale	(3.7)
Update in assumed future healthcare trend	15.8
Decrease in percentage of active employees assumed to elect coverage for their spouse in retirement (from 76.5% to 75% for Tier 1, 50% for Tier 2)	(0.6)
Expected increase in the AAL for the passage of time	8.3
Favorable plan experience, relative to prior assumptions	(5.8)
Change in UAAL from June 2015 to June 2017	**$ 34.5**

F. Funding Policy

The specific calculation of the ARC and annual OPEB expense for an employer depends on how the employer elects to fund these benefits. The funding levels can generally be categorized as follows:

1. *Prefunding* - contributing an amount greater than or equal to the ARC each year. Prefunding generally allows the employer to have the liability calculated using a higher discount rate, which in turn lowers the liability. In addition, following a prefunding policy does not build up a net OPEB obligation (or gradually reduces it to $0). Prefunding results in this report were illustrated using a discount rate of 6.5%.
2. *Pay-As-You-Go funding* – contributing only the amounts needed to pay retiree benefits in the current year; usually requires a lower discount rate, such as the 3.13% rate used in this report.
3. *Partial prefunding* – contributing more than the current year's retiree payments but less than 100% of the ARC; requires that liabilities be developed using a discount rate that "blends" the relative portions of benefits that are prefunded and those not.

Determination of the ARC

The Annual Required Contribution (ARC) consists of two basic components:

- The amounts attributed to service performed in the current fiscal year (the normal cost) and
- Amortization of the unfunded actuarial accrued liability (UAAL).

The ARC for fiscal year ending June 30, 2017 is developed in Table 1A.

Decisions Affecting the Amortization Payment

The period and method for amortizing the AAL can significantly affect the ARC. GASB 45:

- Prescribes a maximum amortization period of 30 years and requires no minimum amortization period (except 10 years for certain actuarial gains). Immediate full funding of the liability is also permitted.
- Allows amortization payments to be determined (a) as a level percentage of payroll, designed to increase over time as payroll increases, or (b) as a level dollar amount much like a conventional mortgage, so that this component of the ARC does not increase over time. Where a plan is closed and has no ongoing payroll base, a level percent of payroll basis is not permitted.
- Allows the amortization period to decrease annually by one year (closed basis) or to be maintained at the same number of years (open basis).

Funding Policy Illustrated in This Report

It is our understanding that the City's pay-as-you-go policy includes amortization of the unfunded AAL over a closed 30-year period initially effective for the City's fiscal year ended June 30, 2009; the remaining period applicable in determining the ARC for the fiscal year ending June 30, 2017 is 22 years. Amortization payments are determined on a level percent of pay basis.[3]

[3] With a pay-as-you-go funding policy and/or one where the UAAL is amortized on a level percent of pay basis, if all assumptions are met, the UAAL will increase, rather than decrease, over time.

Funding Policy
(Concluded)

Funding of the Implicit Subsidy

The implicit subsidy liability created when expected retiree medical claims exceed the retiree premiums was described earlier in Section C. In practical terms, when the City pays the premiums for active employees each year, their premiums include an amount expected to be transferred to cover the portion of the retirees' claims not covered by their premiums. This transfer represents the current year's implicit subsidy. Paragraph 13.g. of GASB 45 allows for recognition of payments to an irrevocable trust *or directly to the insurer* as an employer's contribution to the ARC. We have estimated the portion of this year's premium payment attributable to the implicit subsidy and recommend netting this amount against the funding requirement for the implicit subsidy (see Tables 1B and 1D).

The following hypothetical example illustrates this treatment:

Hypothetical Illustration Of Implicit Subsidy Recognition	For Active Employees	For Retired Employees	Total
Annual Agency Contribution Toward Premiums	$ 6,852,000	$ 2,618,000	$ 9,470,000
Current Year's Implicit Subsidy Adjustment	$ (662,000)	$ 662,000	$ -
Adjusted contributions reported in Financial Stmts	$ 6,190,000	$ 3,280,000	$ 9,470,000

While total Agency contributions paid toward active and retired employee healthcare premiums in this example are the same, by shifting the recognition of the current year's implicit subsidy from actives to retirees, this amount may be recognized as a contribution toward the OPEB ARC.

Suppose the City were to consider establishing an OPEB trust and begin making contributions to it. There is a larger question about whether or not the City would ever choose to prefund the implicit subsidy liability. Some possible options include:

- Pay-as-you-go financing for both the explicit and implicit subsidy liabilities.
  In this report, we assumed the City would follow this approach.
- Prefunding 100% of the ARC developed for the explicit subsidy liability, but not prefund the implicit subsidy liability. Separate discount rates could be used, i.e., 6.5% to determine the explicit subsidy ARC and 3.13% to develop the implicit subsidy ARC.
- Prefunding 100% of the ARC relating to both the explicit subsidy and implicit subsidy liabilities (see Appendix 1 for this illustration).
- Prefunding 100% of the ARC relating to both the explicit subsidy and implicit subsidy liabilities, but intentionally allocate the entire trust contribution to more quickly pay-off the explicit subsidy liability, rather than allocating any toward the implicit subsidy liability. We believe this approach would also allow the implicit subsidy liability to be developed using the prefunding discount rate of 6.5%.

We are available to review these options further with the City.

G. Choice of Actuarial Funding Method and Assumptions

The "ultimate real cost" of an employee benefit plan is the value of all benefits and other expenses of the plan over its lifetime. These expenditures are dependent only on the terms of the plan and the administrative arrangements adopted, and as such are not affected by the actuarial funding method. The actuarial funding method attempts to spread recognition of these expected costs on a level basis over the life of the plan, and as such sets the "incidence of cost". Methods that produce higher initial annual (prefunding) costs will produce lower annual costs later. Conversely, methods that produce lower initial costs will produce higher annual costs later relative to the other methods. GASB 45 allows the use of any of six actuarial funding methods; a brief description of each is in the glossary.

Factors Impacting the Selection of Funding Method

While the goal of GASB 45 is to match recognition of retiree medical expense with the periods during which the benefit is earned, the funding methods differ because they focus on different financial measures in attempting to level the incidence of cost. Appropriate selection of a funding method contributes to creating intergenerational equity between generations of taxpayers. The impact of potential new employees entering the plan may also affect selection of a funding method.

We believe it is most appropriate for the plan sponsor to adopt a theory of funding and consistently apply the funding method representing that theory. This valuation was prepared using the entry age normal cost method with normal cost determined on a level percent of pay basis. The entry age normal cost method is one of the most common methods used for OPEB valuations and often produces initial contributions between those of the other more common methods. It is the only actuarial funding method permitted under GASB 75.

Factors Affecting the Selection of Assumptions

Special considerations apply to the selection of actuarial funding methods and assumptions for the City. The actuarial assumptions used in this report were chosen, for the most part, to be the same as the actuarial assumptions used for the most recent actuarial valuation of the retirement plan covering City employees. Other assumptions, such as age related healthcare claims, healthcare trend, retiree participation rates and spouse coverage, were selected based on demonstrated plan experience and/or our best estimate of expected future experience. We will continue to gather information and monitor these assumptions for future valuations, as more experience develops.

In selecting an appropriate discount rate, GASB states that the discount rate should be based on the expected long-term yield of investments used to finance the benefits. The City approved calculation of liabilities on a pay-as-you-go basis using a 3.13% discount rate, slightly lower than the 4.0% rate used in the prior valuation. This lower discount rate was selected in anticipation of GASB 75, which will require the City to use a discount rate based on a 20-year general obligation municipal bond index. The 3.13% discount rate reflects the S&P Municipal Bond 20 Year High Grade Index as of June 30, 2017.

Since no OPEB trust has yet been established, for illustrative purposes, we have used a 6.5% discount rate in developing results assuming the City were to begin funding 100% of the ARC. The actual discount rate, should the City decide to establish an irrevocable OPEB trust, will depend on the particular investments and asset allocation strategy selected and on the percentage of the ARC expected to be funded each year.

H. Certification

This report presents the results of our actuarial valuation of the other postemployment benefits provided by the City of Palm Springs. The purpose of this valuation was to provide the actuarial information required for the City's reporting under Statement 45 of the Governmental Accounting Standards Board. The calculations were focused on determining the plan's funded status as of the valuation date, developing the Annual Required Contribution and projecting the Net OPEB Obligations for the years to which this report is expected to be applied.

We certify that this report has been prepared in accordance with our understanding of GASB 45. To the best of our knowledge, the report is complete and accurate, based upon the data and plan provisions provided to us by the City. We believe the assumptions and method used are reasonable and appropriate for purposes of the financial reporting required by GASB 45. The results may not be appropriate for other purposes.

Each of the undersigned individuals is a Fellow in the Society of Actuaries and Member of the American Academy of Actuaries who satisfies the Academy Qualification Standards for rendering this opinion.

Signed: October 31, 2017

Catherine L. MacLeod, FSA, FCA, EA, MAAA

Francis M. Schauer Jr., FSA, FCA, EA, MAAA

Table 1

Results for fiscal year ending 2017: The basic results of our June 30, 2017 valuation of OPEB liabilities for the City calculated under GASB 45 were summarized in Section E. Those results are applied to develop the annual required contribution (ARC), annual OPEB expense (AOE) and the net OPEB obligation (NOO) to be reported by the City in accordance with GASB 45 for the fiscal year ending June 30, 2017.

As noted earlier in this report, the development of the ARC reflects our assumption that the City will recognize the following as OPEB contributions:

- Direct City payments toward retiree medical premiums, plus
- Each current year's implicit subsidy.

If this understanding is incorrect or if actual City contributions differ by more than an immaterial amount, some of the results in this report should be revised.

Results for fiscal year end June 30, 2018: The liability and expense to be reported in the City's financial statements and note disclosures for the fiscal year ending June 30, 2018 will be developed under GASB 75. This information will be provided in a separate report.

To assist the City in understanding the general OPEB contribution levels required to fully prefund the liability, we have illustrated a prefunding approach in Appendix 1.

Employee Counts: We note that the number of retired employees expected to create an implicit subsidy OPEB liability are lower than the number of those which create an explicit subsidy liability. Medical premiums for retirees over age 65 and covered by Supplemental Medicare plans are not subsidized by active employee medical premiums, so do not create an implicit subsidy liability.

Table 1A
Summary of Valuation Results and ARC Calculation for FYE 2017

This table provides separate valuation results for Explicit and Implicit OPEB benefits determined on a pay-as-you-go basis. Some of these values have been adjusted from the basic valuation results presented in Section E to reflect cost and benefit payment accruals prior to the valuation date to avoid double counting of costs or contributions.

Funding Policy	**Pay-As-You-Go Basis**		
Valuation date	**6/30/2017**		
Subsidy	Explicit	Implicit	Total
For fiscal year beginning	7/1/2016	7/1/2016	7/1/2016
For fiscal year ending	6/30/2017	6/30/2017	6/30/2017
Discount rate	3.13%	3.13%	3.13%
Number of Covered Employees			
Actives	354	354	354
Retirees	209	109	209
Total Participants	563	463	563
Actuarial Present Value of Projected Benefits			
Actives	$ 91,476,507	$ 12,719,399	$ 104,195,906
Retirees	69,206,310	7,384,271	76,590,581
Total APVPB	160,682,817	20,103,670	180,786,487
Actuarial Accrued Liability (AAL)			
Actives	57,478,594	7,494,782	64,973,376
Retirees	69,206,310	7,384,271	76,590,581
Total AAL	126,684,904	14,879,053	141,563,957
Actuarial Value of Assets	-	-	-
Unfunded AAL (UAAL)	126,684,904	14,879,053	141,563,957
Amortization method	Level % of Pay	Level % of Pay	Level % of Pay
Initial amortization period (in years)	30	30	30
Remaining period (in years)	22	22	22
Determination of Amortization Payment			
UAAL	$ 126,684,904	$ 14,879,053	$ 141,563,957
Factor	21.7112	21.7112	21.7112
Payment	5,834,990	685,315	6,520,305
Annual Required Contribution (ARC)			
Normal Cost	2,902,346	455,859	3,358,205
Amortization of UAAL	5,834,990	685,315	6,520,305
Interest to fiscal year end	-	-	-
Total ARC at fiscal year end	8,737,336	1,141,174	9,878,510
Projected covered payroll	$ 34,929,760	$ 34,929,760	$ 34,929,760
Normal Cost as a percent of payroll	8.3%	1.3%	9.6%
ARC as a percent of payroll	25.0%	3.3%	28.3%
ARC per active ee	24,682	3,224	27,905

Table 1B
Expected OPEB Disclosures for FYE 2017

The table below develops the annual OPEB expense, estimates the expected OPEB contributions and projects the net OPEB obligation as of June 30, 2017 reflecting the assumed pay-as-you-go financing policy described in this report.

	Pay-As-You-Go Basis		
Fiscal Year End	**6/30/2017**	**6/30/2017**	**6/30/2017**
Subsidy	Explicit	Implicit	Total
1. Calculation of the Annual OPEB Expense			
a. ARC for current fiscal year	$ 8,737,336	$ 1,141,174	$ 9,878,510
b. Interest on Net OPEB Obligation (Asset)	1,066,051	125,207	1,191,258
c. Adjustment to the ARC	(1,617,834)	(190,013)	(1,807,847)
d. **Annual OPEB Expense (a. + b. + c.)**	8,185,553	1,076,368	9,261,921
2. Calculation of Expected Contribution			
a. Estimated payments on behalf of retirees	2,618,130	-	2,618,130
b. Estimated current year's implicit subsidy	-	661,874	661,874
c. Estimated contribution to OPEB trust	-	-	-
d. **Total Expected Employer Contribution**	2,618,130	661,874	3,280,004
3. Change in Net OPEB Obligation *(1.d. minus 2.d.)*	5,567,423	414,494	5,981,917
Net OPEB Obligation (Asset), beginning of fiscal year	34,059,146	4,000,223	38,059,369
Net OPEB Obligation (Asset) at fiscal year end	39,626,569	4,414,717	44,041,286

In the table above, we assumed that the City will contribute the current year's retiree benefit payments and take credit for the current year's implicit subsidy as an OPEB contribution. No other OPEB contributions were projected to be made.

Notes on calculations above:

- Interest on the net OPEB obligation (or asset), shown above in item 1.b. is equal to the applicable discount rate (3.13%) multiplied by the net OPEB obligation (or asset) at the beginning of the year.
- The Adjustment to the ARC, shown above in item 1.c., is always the opposite sign of the net OPEB obligation or asset and exists to avoid double-counting of the amounts previously expensed but imbedded in the current ARC. We calculated this adjustment as *the opposite of* the net OPEB obligation (or asset) at the beginning of the year, plus interest on that amount (item 1.b.) with the sum then divided by the same amortization factor used to determine the ARC for this year (see the prior page for these factors).

Table 2
Summary of Employee Data

The City reported 354 active employees in the data provided to us for the July 2017 valuation. Of these, 334 were shown as currently participating in the medical program while 20 employees were waiving coverage.

Distribution of Benefits-Eligible Active Employees								
Current Age	**Years of Service**						**Total**	**Percent**
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 & Up		
Under 25	2	2					4	1%
25 to 29	5	10	2				17	5%
30 to 34	3	8	6	15			32	9%
35 to 39	1	10	8	16	6	1	42	12%
40 to 44	1	11	5	15	19	2	53	15%
45 to 49	3	9	4	11	16	10	53	15%
50 to 54	4	3	7	13	12	17	56	16%
55 to 59	2	8	7	12	9	10	48	14%
60 to 64		7	4	8	4	7	30	8%
65 to 69		3	1	3	3	4	14	4%
70 & Up				1	3	1	5	1%
Total	21	71	44	94	72	52	**354**	**100%**
Percent	6%	20%	12%	27%	20%	15%	**100%**	

Valuation	June 2015	June 2017
Annual Covered Payroll	$30,169,887	$34,929,760
Average Attained Age for Actives	46.8	47.5
Average Years of Service	13.0	12.0

There are also 209 retirees or their beneficiaries receiving benefits. Their ages are summarized in the chart below.

Retirees by Age					
Current Age	**Misc**	**Police**	**Fire**	**Total**	**Percent**
Below 50				0	0%
50 to 54	4	6	1	11	5%
55 to 59	16	16	16	48	23%
60 to 64	29	11	10	50	24%
65 to 69	26	17	3	46	22%
70 to 74	18	5	3	26	12%
75 to 79	10	1	3	14	7%
80 & up	10	3	1	14	7%
Total	**113**	**59**	**37**	**209**	**100%**
Average Age:					
On 6/30/2017	67.9	63.6	63.1		
At retirement	59.2	53.2	52.8		

Table 2- Summary of Employee Data
(Continued)

The chart below reconciles the number of actives and retirees included in the June 30, 2017 valuation of the City plan with those included in the June 30, 2015 valuation:

Reconciliation of City Plan Members Between Valuation Dates					
Status	Covered Actives	Waiving Actives	Covered Retirees	Covered Surviving Spouses	Total
Number reported as of June 30, 2015	326	10	196	7	539
New employees	44	9			53
Terminated employees	(12)	(1)			(13)
New retiree, elected coverage	(17)	(1)	18		0
New retiree, waiving coverage	(7)	(1)			(8)
Previously covered, now waiving	(4)	4	(8)	(2)	(10)
Previously waiving, now covered	3	(3)			0
Previously Tier II Safety	4				4
Tier II Safety employee - Not OPEB eligible	(3)				(3)
Deceased	(1)		(2)	1	(2)
Data corrections	1	3	(1)		3
Number reported as of June 30, 2017	**334**	**20**	**203**	**6**	**563**

We observe that the overall number of OPEB-eligible active and retired employee increased slightly between valuations. The number of active employees increased by 18 (about 5%), and the number of covered retirees/survivors increased by 6 (about 3%).

We also note that there were 26 retirements between valuations. Of these, 18 elected to continue coverage in the City's medical plans in retirement.

Of the 18 retirees who continued coverage:

- 4 qualified only for the PEMHCA minimum contribution
- 2 qualified for 75% City-paid medical premiums
- 12 qualified for 100% City-paid medical premiums

Of the 8 retirees who waived City medical in retirement:

- 7 were Tier 1 Non-Safety employees who would have qualified only for the PEMHCA minimum contribution
- 1 was a Tier 1 Safety employee who did not meet the minimum service requirement needed to receive subsidized coverage in retirement

This section is continued on the following page

Table 2- Summary of Employee Data
(Continued)

The chart below summarizes the number of active and retired employees included in the valuation by bargaining unit:

Participants by Bargaining Unit			
Group	**Actives**	**Retirees**	**Total**
Elected Official	8	2	10
Exempt	18	13	31
Fire Management	21	13	34
Fire Safety	10	21	31
General	185	44	229
Management	71	58	129
Police Management	8	11	19
Police Safety	33	47	80
Total	**354**	**209**	**563**

Employees and retirees are currently covered by the following plans:

Plan	Actives	Pre-65 Retirees	Post-65 Retirees	Total
Blue Shield PPO (Safety)	71	59	29	159
Anthem HMO Select LA	3	-	-	3
Anthem HMO Select SoCal	43	1	-	44
Anthem HMO Traditional LA	6	-	-	6
Anthem HMO Traditional SoCal	3	-	-	3
Blue Shield Access LA	6	4	-	10
Blue Shield Access SoCal	21	5	-	26
Health Net Smart Care LA	2	-	-	2
Health Net Smart Care SoCal	8	-	-	8
Kaiser Bay	-	-	1	1
Kaiser LA	5	-	1	6
Kaiser SoCal	33	2	1	36
PERS Choice LA	6	4	7	17
PERS Choice OOS	1	6	12	19
PERS Choice SoCal	45	13	33	91
PERS Select LA	2	-	1	3
PERS Select SoCal	22	1	-	23
PERSCare LA	2	1	1	4
PERSCare OOS	-	3	3	6
PERSCare SoCal	24	5	4	33
United Healthcare LA	2	2	1	5
United Healthcare SoCal	29	3	6	38
Waived	20	-	-	20
Total	**354**	**109**	**100**	**563**

Table 3A
Summary of Retiree Benefit Provisions

OPEB provided: The City reported that the only OPEB provided is medical plan coverage. Access to coverage and the amount of benefits provided by the City depend on the employment group, date hired and date retired from the City. Retirees are generally categorized as Tier 1 or Tier 2, as shown in this chart:

Tier 1 Retirees	Retired After	Hired Prior To
Elected Officials & Exempt	7/1/1999	7/1/2007
Management	7/1/1999	9/7/2005
General	7/1/1999	12/7/2005
Fire Management	7/1/2000	7/1/2006
Fire Safety	1/1/1998	11/1/2006
Police Management	7/1/1998	10/20/2005
Police Safety	11/1/1997	10/25/2006

Tier 2 Retirees	All those not Tier 1

Access to coverage: The medical plans available to City retirees are determined by their employment group:

- All miscellaneous retirees, both Tier 1 and Tier 2, (including Elected Officials, Exempt, Management and General group members) are covered by plans in the CalPERS medical program as provided under the requirements of the Public Employees' Medical and Hospital and Care Act (PEMHCA).
- Tier 1 Police Safety, Tier 1 Fire Safety, Tier 1 Police Management and all Fire Management retirees are covered by the Blue Shield PPO plan for Safety members.
- Fire Management and Police Management retirees, both Tier 1 and Tier 2, also have access to the CalPERS medical plans in retirement.
- Tier 2 Fire Safety and Tier 2 Police Safety retirees are not eligible for medical coverage in retirement.

To be eligible for CalPERS medical coverage in retirement, whether Tier 1 or Tier 2, the employee must retire from the City under PERS and begin receiving their pension benefit within 120 days of terminating employment with the City. Coverage is available for the retiree's lifetime and a surviving spouse may also continue coverage until his or her death. The retiree may enroll in a CalPERS medical plan within 60 days of retirement or during any future open enrollment period.

To be eligible for Safety medical plan coverage in retirement, safety employees must retire from the City under PERS. All Tier 1 safety retirees may continue this coverage in retirement, whether or not they receive a direct premium subsidy from the City. Tier 2 Fire Management retirees may also continue their Safety medical plan coverage in retirement.[4] Survivors of eligible retirees may continue their coverage after the retiree's death.

[4] Tier 2 employees receive monthly contributions from the City *while actively employed* which accumulate in a Retiree Health Savings Plan (RHSP); the monthly credits vary based on bargaining agreements. These amounts accumulate until retirement and may then be applied toward the cost of retiree health coverage. In accordance with GASB 45, neither the RHSP contributions for active employees nor the RHSP balance are considered as liabilities in this valuation.

Table 3A – Summary of Retiree Benefit Provisions
(Continued)

Benefits provided: The City's contribution toward the cost of medical coverage varies for each retiree based on his or her employment group, date hired and years of City service.

- ***For Tier 1 retirees***, the amount of the subsidy provided is shown in the following chart.

Tier I Retiree Health Benefits						
Group	**Retired After**	**Hired Prior To**	**Premium % Paid By City**	**For How Long?**	**Included Parties**	**Plan**
Elected Officials and Exempt	7/1/1999	7/1/2007	50% after 7.5 years 75% after 11.5 years 100% after 15.5 years	The % of premium paid by the City continues for the retiree's lifetime.	Retiree & Spouse	CalPERS Medical
Management	7/1/1999	9/7/2005	75% after 20 years 100% after 25 years			
General	7/1/1999	12/7/2005				
Fire Management	7/1/2000	7/1/2006			Retiree & All Eligible Dependents	Blue Shield PPO
Fire Safety	1/1/1998	11/1/2006				
Police Management	7/1/1998	10/20/2005				
Police Safety	11/1/1997	10/25/2006				

- ***For Tier 2 retirees covered by the CalPERS medical program***, the City will contribute the required PEMHCA Minimum Employer Contribution (MEC) for the retiree's lifetime and that of his/her covered surviving spouse, if any.[5] The MEC is $122 per month during 2015. The retiree is responsible for paying the remainder of the medical premium.
- ***Tier 2 Fire Management Association retirees covered under the City's Safety medical plan*** are responsible for payment of the full medical premium for themselves and any covered dependents.

Current premium rates: The 2017 monthly medical plan rates are shown in the table on the following page. If different rates apply where the member resides outside of this area, those rates are reflected in the valuation, but not listed here. The additional CalPERS administration fee is assumed to be separately expensed each year and has not been projected as an OPEB liability in this valuation.

[5] The City confirms that it provides additional benefits for active employees through a pre-tax flexible benefit plan and that these benefits need not be provided to retired employees to meet PEMHCA requirements.

Table 3A – Summary of Retiree Benefit Provisions
(Concluded)

City of Palm Springs 2017 Retiree Medical Premium Rates						
Plan	Pre-Medicare			Medicare		
	Single	Two Party	Family	Single	Two Party	Family
CalPERS Other Southern California Counties						
Kaiser HMO	$ 599.54	$ 1,199.08	$ 1,558.80	$ 300.48	$ 648.42	$ 960.68
PERS Choice PPO	714.43	1,428.86	1,857.52	353.63	707.26	1,135.92
PERS Select PPO	633.46	1,266.92	1,647.00	353.63	707.26	1,087.34
PERSCare PPO	802.24	1,604.48	2,085.82	389.76	779.52	1,260.86
UnitedHealthcare HMO	549.76	1,099.52	1,429.38	324.21	648.42	960.68
CalPERS Los Angeles Area						
Kaiser HMO	$ 573.89	$ 1,147.78	$ 1,492.11	$ 300.48	$ 600.96	$ 945.29
PERS Choice PPO	637.53	1,275.06	1,657.58	353.63	707.26	1,089.78
PERS Select PPO	565.33	1,130.66	1,469.86	353.63	707.26	1,046.46
PERSCare PPO	715.88	1,431.76	1,861.29	389.76	779.52	1,209.05
UnitedHealthcare HMO	545.71	1,091.42	1,418.85	324.21	648.42	975.85
CalPERS Out of State						
Kaiser HMO	$ 930.29	$ 1,860.58	$ 2,418.75	$ 297.23	$ 594.46	$ 1,152.63
PERS Choice PPO	625.31	1,250.62	1,625.81	366.38	732.76	1,107.95
PERSCare PPO	696.49	1,392.98	1,810.87	408.04	816.08	1,233.97
Blue Shield PPO (for Police & Fire)	$ 963.66	$ 1,850.61	$ 1,968.62	$ 730.33	$ 1,334.73	$ 1,341.76

Table 3B
General CalPERS Annuitant Eligibility Provisions

The content of this section has been drawn from Section C, Summary of Plan Provisions, of the State of California OPEB Valuation as of June 30, 2016, issued January 2017, to the State Controller from Gabriel Roeder & Smith. It is provided here as a brief summary of general annuitant and survivor coverage.

Health Care Coverage

Retired Employees

A member is eligible to enroll in a CalPERS health plan if he or she retires within 120 days of separation from employment and receives a monthly retirement allowance. If the member meets this requirement, he or she may continue his or her enrollment at retirement, enroll within 60 days of retirement, or enroll during any Open Enrollment period. If a member is currently enrolled in a CalPERS health plan and wants to continue enrollment into retirement, the employee will notify CalPERS and the member's coverage will continue into retirement.

Eligibility Exceptions*:* Certain family members are not eligible for CalPERS health benefits:

- Children age 26 or older
- Children's spouses
- Former spouses
- Disabled children over age 26 who were never enrolled or were deleted from coverage
- Grandparents
- Parents
- Children of former spouses
- Other relatives

Coordination with Medicare

CalPERS retired members who qualify for premium-free Part A, either on their own or through a spouse (current, former, or deceased), must sign up for Part B as soon as they qualify for Part A. A member must then enroll in a CalPERS sponsored Medicare plan. The CalPERS-sponsored Medicare plan will pay for costs not paid by Medicare, by coordinating benefits.

Survivors of an Annuitant

If a CalPERS annuitant satisfied the requirement to retire within 120 days of separation, the survivor may be eligible to enroll within 60 days of the annuitant's death or during any future Open Enrollment period. Note: A survivor cannot add any new dependents; only dependents that were enrolled or eligible to enroll at the time of the member's death qualify for benefits.

Surviving registered domestic partners who are receiving a monthly annuity as a surviving beneficiary of a deceased employee or annuitant on or after January 1, 2002, are eligible to continue coverage if currently enrolled, enroll within 60 days of the domestic partner's death, or enroll during any future Open Enrollment period.

Surviving enrolled family members who do not qualify to continue their current coverage are eligible for continuation coverage under COBRA.

Table 4
Actuarial Methods and Assumptions

Valuation Date	June 30, 2017
Funding Method	Entry Age Normal Cost, level percent of pay[6]
Asset Valuation Method	Market value of assets ($0; no OPEB trust has been established)
Discount Rate	3.13% for pay-as-you-go; 6.5% illustrated for prefunding
Participants Valued	Only current active employees eligible for coverage in retirement and retired participants and covered dependents are valued. No future entrants are considered in this valuation.
Salary Increase	3.25% per year, used only to allocate the cost of benefits between service years
Assumed Wage Inflation	3.0% per year; used to determine amortization payments if developed on a level percent of pay basis
General Inflation Rate	2.75% per year

Demographic actuarial assumptions used in this valuation are those used in the most recent (June 30, 2016) valuation of the retirement plans covering City employees, based on the 2014 experience study of the California Public Employees Retirement System using data from 1997 to 2011, except for a different basis used to project future mortality improvements. Rates for selected age and service are shown below and on the following pages. The representative mortality rates were those published by CalPERS in their 2014 study, adjusted to back out 20 years of Scale BB to central year 2008.

Mortality Improvement — Bickmore Scale 2017 applied generationally.

Mortality Before Retirement (before improvement applied)

CalPERS Public Agency Miscellaneous Non-Industrial		
Age	Male	Female
20	0.00033	0.00021
30	0.00052	0.00027
40	0.00080	0.00053
50	0.00165	0.00106
60	0.00354	0.00223
70	0.00709	0.00467
80	0.01339	0.01036

CalPERS Public Agency Police & Fire Combined Industrial & Non-Industrial		
Age	Male	Female
20	0.00036	0.00025
30	0.00062	0.00036
40	0.00094	0.00068
50	0.00181	0.00122
60	0.00372	0.00241
70	0.00731	0.00489
80	0.01363	0.01060

[6] The level percent of pay aspect of the funding method refers to how the normal cost is determined. Use of level percent of pay cost allocations in the funding method is separate from and has no effect on a decision regarding use of a level percent of pay or level dollar basis for determining amortization payments.

Table 4 - Actuarial Methods and Assumptions
(Continued)

Mortality After Retirement
(before improvement applied)

CalPERS Public Agency Healthy Miscellaneous, Police & Fire		
Age	Male	Female
40	0.00117	0.00097
50	0.00532	0.00495
60	0.00817	0.00533
70	0.01766	0.01264
80	0.05275	0.03695
90	0.16186	0.12335
100	0.34551	0.31876
110	1.00000	1.00000

CalPERS Public Agency Disabled Miscellaneous		
Age	Male	Female
20	0.00641	0.00395
30	0.00736	0.00455
40	0.01008	0.00642
50	0.01784	0.01230
60	0.02634	0.01510
70	0.03890	0.02815
80	0.08230	0.06015
90	0.18469	0.16082

CalPERS Public Agency Disabled Fire		
Age	Male	Female
20	0.00515	0.00323
30	0.00357	0.00239
40	0.00330	0.00252
50	0.00610	0.00541
60	0.00921	0.00660
70	0.02250	0.01800
80	0.06654	0.04995
90	0.16222	0.12394

CalPERS Public Agency Disabled Police		
Age	Male	Female
20	0.00641	0.00395
30	0.00212	0.00157
40	0.00273	0.00219
50	0.00582	0.00524
60	0.00925	0.00662
70	0.02262	0.01807
80	0.06669	0.05005
90	0.16245	0.12430

Termination Rates

Miscellaneous Employees: Sum of Vested Terminated & Refund Rates From CalPERS Experience Study Report Issued January 2014						
Attained Age	Years of Service					
	0	3	5	10	15	20
15	0.1812	0.0000	0.0000	0.0000	0.0000	0.0000
20	0.1742	0.1193	0.0946	0.0000	0.0000	0.0000
25	0.1674	0.1125	0.0868	0.0749	0.0000	0.0000
30	0.1606	0.1055	0.0790	0.0668	0.0581	0.0000
35	0.1537	0.0987	0.0711	0.0587	0.0503	0.0450
40	0.1468	0.0919	0.0632	0.0507	0.0424	0.0370
45	0.1400	0.0849	0.0554	0.0427	0.0347	0.0290

Table 4 - Actuarial Methods and Assumptions
(Continued)

Termination rates - continued

Police Safety Employees: Sum of Vested Terminated & Refund Rates From CalPERS Experience Study Report Issued January 2014						
Attained Age	Years of Service					
	0	3	5	10	15	20
15	0.1013	0.0000	0.0000	0.0000	0.0000	0.0000
20	0.1013	0.0258	0.0249	0.0000	0.0000	0.0000
25	0.1013	0.0258	0.0249	0.0179	0.0000	0.0000
30	0.1013	0.0258	0.0249	0.0179	0.0109	0.0000
35	0.1013	0.0258	0.0249	0.0179	0.0109	0.0082
40	0.1013	0.0258	0.0249	0.0179	0.0109	0.0082
45	0.1013	0.0258	0.0249	0.0179	0.0109	0.0082

Fire Safety Employees: Sum of Vested Terminated & Refund Rates From CalPERS Experience Study Report Issued January 2014						
Attained Age	Years of Service					
	0	3	5	10	15	20
15	0.0710	0.0000	0.0000	0.0000	0.0000	0.0000
20	0.0710	0.0242	0.0191	0.0000	0.0000	0.0000
25	0.0710	0.0242	0.0191	0.0070	0.0000	0.0000
30	0.0710	0.0242	0.0191	0.0070	0.0064	0.0000
35	0.0710	0.0242	0.0191	0.0070	0.0064	0.0058
40	0.0710	0.0242	0.0191	0.0070	0.0064	0.0058
45	0.0710	0.0242	0.0191	0.0070	0.0064	0.0058

Service Retirement Rates

The following miscellaneous retirement formulas apply:

If hired prior to 12/24/2012:	2.7% @ 55
If hired on or after 12/24/2012,with prior PERS Service	2% @ 60
If hired on or after 1/1/2013, PEPRA:	2% @ 62

The following police safety retirement formulas apply:

If hired prior to 6/17/2011:	3% @ 50
If hired on or after 6/17/2011,with prior PERS Service	3% @ 55
If hired on or after 1/1/2013, PEPRA:	2.7% @ 57

The following fire safety retirement formulas apply:

If hired prior to 12/17/2011:	3% @ 50
If hired on or after 12/17/2011, with prior PERS Service	3% @ 55
If hired on or after 1/1/2013, PEPRA:	2.7% @ 57

Sample rates of assumed future retirements for each of these retirement benefit formulas are shown in the tables on the following pages. Rates shown reflect the probability that an employee at that age and service will retire in the next 12 months.

Table 4 - Actuarial Methods and Assumptions
(Continued)

Service retirement rates (continued)

Miscellaneous Employees: 2.7% at 55 formula
From CalPERS Experience Study Report Issued January 2014

Current Age	Years of Service					
	5	10	15	20	25	30
50	0.0040	0.0090	0.0140	0.0350	0.0550	0.0950
55	0.0760	0.1010	0.1250	0.1650	0.2050	0.2650
60	0.0690	0.0930	0.1160	0.1540	0.1920	0.2500
65	0.1340	0.1740	0.2150	0.2700	0.3260	0.4010
70	0.1410	0.1830	0.2260	0.2830	0.3410	0.4180
75 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Miscellaneous Employees: 2% at 60 formula
From CalPERS Experience Study Report Issued January 2014

Current Age	Years of Service					
	5	10	15	20	25	30
50	0.0100	0.0130	0.0150	0.0180	0.0190	0.0210
55	0.0220	0.0290	0.0350	0.0400	0.0450	0.0490
60	0.0560	0.0770	0.0920	0.1050	0.1170	0.1300
65	0.1500	0.2090	0.2550	0.2870	0.3210	0.3580
70	0.1170	0.1620	0.1970	0.2220	0.2480	0.2770
75 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Miscellaneous "PEPRA" Employees: 2% at 62 formula
From CalPERS Experience Study Report Issued January 2014

Current Age	Years of Service					
	5	10	15	20	25	30
52	0.0103	0.0132	0.0160	0.0188	0.0216	0.0244
55	0.0440	0.0560	0.0680	0.0800	0.0920	0.1040
60	0.0616	0.0784	0.0952	0.1120	0.1288	0.1456
65	0.1287	0.1638	0.1989	0.2340	0.2691	0.3042
70	0.1254	0.1596	0.1938	0.2280	0.2622	0.2964
75 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Police Safety Employees: 3.0% at 50 formula
From CalPERS Experience Study Report Issued January 2014

Current Age	Years of Service					
	5	10	15	20	25	30
50	0.0500	0.0500	0.0500	0.0990	0.2400	0.3140
53	0.0390	0.0390	0.0390	0.0800	0.2120	0.2770
56	0.0420	0.0420	0.0420	0.0870	0.2210	0.2890
59	0.0540	0.0540	0.0540	0.1080	0.2530	0.3300
62	0.0610	0.0610	0.0610	0.1220	0.2740	0.3570
65 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Table 4 - Actuarial Methods and Assumptions
(Continued)

Service retirement rates (continued)

Police Safety Employees: 3.0% at 55 formula
From CalPERS Experience Study Report Issued January 2014

Current Age	Years of Service					
	5	10	15	20	25	30
50	0.0040	0.0040	0.0040	0.0040	0.0150	0.0860
53	0.0380	0.0380	0.0380	0.0380	0.0830	0.1880
56	0.0720	0.0720	0.0720	0.0720	0.1530	0.2950
59	0.1180	0.1180	0.1180	0.1180	0.2470	0.4370
62	0.1080	0.1080	0.1080	0.1080	0.2260	0.4050
65 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Police Safety Employees: 2.7% at 57 formula
From CalPERS Experience Study Report Issued January 2014

Current Age	Years of Service					
	5	10	15	20	25	30
50	0.0138	0.0138	0.0138	0.0138	0.0253	0.0451
53	0.0497	0.0497	0.0497	0.0497	0.0909	0.1621
56	0.0606	0.0606	0.0606	0.0606	0.1108	0.1975
59	0.1396	0.1396	0.1396	0.1396	0.1735	0.2544
62	0.1396	0.1396	0.1396	0.1396	0.1719	0.2506
65 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Fire Safety Employees: 3.0% at 50 formula
From CalPERS Experience Study Report Issued January 2014

Current Age	Years of Service					
	5	10	15	20	25	30
50	0.0200	0.0200	0.0200	0.0400	0.1300	0.1920
53	0.0230	0.0230	0.0230	0.0430	0.1350	0.1980
56	0.0530	0.0530	0.0530	0.0850	0.1960	0.2690
59	0.0750	0.0750	0.0750	0.1160	0.2390	0.3210
62	0.0680	0.0680	0.0680	0.1060	0.2240	0.3040
65 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Fire Safety Employees: 3.0% at 55 formula
From CalPERS Experience Study Report Issued January 2014

Current Age	Years of Service					
	5	10	15	20	25	30
50	0.0010	0.0010	0.0010	0.0060	0.0160	0.0690
53	0.0320	0.0320	0.0320	0.0490	0.0850	0.1490
56	0.0640	0.0640	0.0640	0.0970	0.1610	0.2380
59	0.0880	0.0880	0.0880	0.1310	0.2130	0.2990
62	0.0870	0.0870	0.0870	0.1280	0.2100	0.2950
65 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Table 4 - Actuarial Methods and Assumptions (continued)

Service retirement rates (concluded)

Fire Safety Employees: 2.7% at 57 formula From CalPERS Experience Study Report Issued January 2014						
Current Age	Years of Service					
	5	10	15	20	25	30
50	0.0065	0.0065	0.0065	0.0065	0.0101	0.0151
53	0.0065	0.0065	0.0065	0.0065	0.0101	0.0151
56	0.0442	0.0442	0.0442	0.0442	0.0680	0.1018
59	0.0740	0.0740	0.0740	0.0740	0.1140	0.1706
62	0.0729	0.0729	0.0729	0.0729	0.1123	0.1681
65	0.1136	0.1136	0.1136	0.1136	0.1749	0.2618
68 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Disability Retirement Rates

CalPERS Public Agency Miscellaneous Disability From Jan 2014 Experience Study Report		
Age	Male	Female
20	0.00017	0.00010
25	0.00017	0.00010
30	0.00019	0.00024
35	0.00049	0.00081
40	0.00122	0.00155
45	0.00191	0.00218
50	0.00213	0.00229
55	0.00221	0.00179
60	0.00222	0.00135

CalPERS Public Agency Fire Combined Disability From Jan 2014 Experience Study Report	
Age	Unisex
20	0.00017
25	0.00035
30	0.00084
35	0.00168
40	0.00310
45	0.00550
50	0.02821
55	0.04184
60	0.05974

CalPERS Public Agency Police Combined Disability From Jan 2014 Experience Study Report	
Age	Unisex
20	0.00010
25	0.00175
30	0.00496
35	0.00818
40	0.01140
45	0.01461
50	0.01925
55	0.04909
60	0.06212

Healthcare Trend

Medical plan premiums and claims costs by age are assumed to increase once each year. The increases over the prior year's levels are assumed to be effective on the dates shown below:

Effective January 1	Premium Increase	Effective January 1	Premium Increase
2018	8.00%	2022	6.00%
2019	7.50%	2023	5.50%
2020	7.00%	2024	5.00%
2021	6.50%	& later	5.00%

The required PEMHCA minimum employer contribution (MEC) is assumed to increase annually by 4.5%.

Medicare Eligibility

Absent contrary data, all individuals are assumed to be eligible for Medicare Parts A and B at age 65.

Table 4 - Actuarial Methods and Assumptions
(Continued)

Participation Rate

Active employees: The following percentages of active employees eligible for retiree coverage are assumed to continue their current plan election in retirement:

Portion of Medical Premium Paid by the City	Percent Electing
75% - 100% of premium	100%
50% of premium	75%
PEMHCA Minimum only	50%
No City cost sharing	20%*

** If eligible to continue coverage through the City*

Retired employees: Existing medical plan elections are assumed to be maintained until death.

Spouse Coverage

Active employees: 75% of eligible Tier 1 employees and 50% of eligible Tier 2 employees are assumed to be married and to elect coverage for their spouse in retirement. Surviving spouses are assumed to retain coverage until their death. Husbands are assumed to be 3 years older than their wives.

Retired participants: Existing elections for spouse coverage are assumed to continue until the spouse's death. Actual spouse ages are used, where known; in not, husbands are assumed to be 3 years older than their wives.

Dependent Coverage

Where the City subsidizes the cost of dependent benefits, an existing election for coverage of dependent children is assumed to continue until the youngest child is age 26.

Excise tax on high-cost plans

The expected value of excise taxes for high cost plan coverage for retirees, now expected to be effective in the year 2020, was included in this valuation. Annual threshold amounts for 2018 under the Affordable Care Act (ACA) are shown below. A 40% excise tax rate was applied to the portion of premiums projected to exceed the threshold.

2018 Thresholds	Ages 55-64	All Other Ages
Single	11,850	10,200
Other than Single	30,950	27,500

Note: Thresholds for disability retirements are assumed to be set at a level high enough to prevent taxation on disabled retiree benefits.

The actual 2018 limits may be higher, depending on cost increases prior to the effective date. The actual thresholds are scheduled to increase by CPI plus 1% in 2019 and by CPI annually thereafter.

Table 4 - Actuarial Methods and Assumptions
(Continued)

Development of Age-related Medical Premiums	Actual premium rates for retirees and their spouses were adjusted to an age-related basis by applying medical claim cost factors developed from the data presented in the report, "Health Care Costs – From Birth to Death", sponsored by the Society of Actuaries. A description of the use of claims cost curves can be found in Bickmore's Age Rating Methodology provided in Addendum 1 to this report. *Medicare retirees*: All current and future Medicare-eligible retirees covered under the CalPERS medical progam are assumed to be covered by plans that are rated based solely on the experience of Medicare retirees. While the claims experience of Medicare-eligible retirees covered under the Blue Shield PPO Safety Plan are understood to be rated together with the claims experience of active Safety employees and pre-Medicare retirees, based on our review, we have assumed that the premium structure for the Medicare retirees in the Safety plan is adequate to cover their expected claims. Accordingly, we have developed no implicit subsidy liability for Medicare-eligible retirees under either the PEMHCA or Safety medical program. *Non-Medicare retirees*: Representative claims costs derived from the dataset provided by CalPERS for retirees not currently covered or not expected to be eligible for Medicare appear on the following page. Representative claim costs for retirees expected to be covered by the Blue Shield plan for safety employees are also shown. Representative claims costs for retirees not currently covered or not expected to be eligible for Medicare appear on the following page.

Table 4 - Actuarial Methods and Assumptions
(Continued)

Expected Monthly Claims by Medical Plan for Selected Ages										
	Male					Female				
Medical Plan	50	53	56	59	62	50	53	56	59	62
Blue Shield PPO (Safety Plan)	$ 797	$ 939	$ 1,091	$ 1,250	$ 1,422	$ 987	$ 1,084	$ 1,167	$ 1,261	$ 1,390
CalPERS Plans:										
Blue Shield Access+: Los Angeles	$ 697	$ 822	$ 954	$ 1,094	$ 1,244	$ 864	$ 948	$ 1,021	$ 1,103	$ 1,216
Blue Shield Access+: Other Southern California	768	906	1,052	1,205	1,370	952	1,045	1,125	1,215	1,340
HMO: Los Angeles	583	688	799	916	1,041	723	794	854	923	1,018
HMO: Other Southern California	625	737	856	981	1,115	774	850	915	989	1,090
Kaiser: Bay Area	719	848	985	1,129	1,283	891	979	1,053	1,138	1,254
Kaiser: Los Angeles	580	684	795	911	1,035	719	790	850	918	1,012
Kaiser: Other Southern California	595	702	815	935	1,063	738	810	872	942	1,039
PERS Choice: Los Angeles	575	678	787	903	1,026	713	783	842	910	1,003
PERS Choice: Other Southern California	612	721	838	960	1,091	758	832	896	968	1,067
PERS Choice: Out of State	428	505	586	672	764	530	582	627	677	746
PERS Select: Los Angeles	605	714	829	950	1,080	750	824	886	958	1,056
PERS Select: Other Southern California	686	809	939	1,077	1,224	850	934	1,005	1,086	1,197
PERSCare: Los Angeles	551	649	754	864	982	682	749	806	871	960
PERSCare: Other Southern California	573	676	785	900	1,023	711	780	840	907	1,000
PERSCare: Out of State	431	509	591	677	770	535	587	632	683	753

Table 4 - Actuarial Methods and Assumptions
(Concluded)

Changes Since the Prior Valuation:

Discount rate	Decreased from 4.0% to 3.13%
Mortality Improvement	The mortality improvement scale was updated from Bickmore Scale 2014 to Bickmore Scale 2017.
Healthcare trend	Medical plan premiums and claims are assumed to increase at somewhat higher rates than assumed in the prior valuation.
Spouse Coverage	The percentage of married active employees who are assumed to elect coverage for their spouse in retirement was changed from 76.5% for all future retirees to 75% for future Tier 1 retirees and to 50% for future Tier 2 retirees, based on a review of recent retiree elections and reflecting the different levels of benefits expected to be provided.

Table 5
Projected Benefit Payments

The following is an estimate of other post-employment benefits to be paid on behalf of current retirees and current employees expected to retire from the City. Expected annual benefits have been projected on the basis of the actuarial assumptions outlined in Table 4.

These projections do not include any benefits expected to be paid on behalf of current active employees *prior to* retirement, nor do they include any benefits for potential *future employees* (i.e., those who might be hired in future years).

Projected Annual Benefit Payments							
Fiscal Year Ending June 30	Explicit Subsidy			Implicit Subsidy			Total
	Current Retirees	Future Retirees	Total	Current Retirees	Future Retirees	Total	
2017	$ 2,618,130	$ -	$2,618,130	$661,874	$ -	$ 661,874	$3,280,003
2018	2,532,710	116,547	2,649,257	661,612	39,974	701,586	3,350,843
2019	2,749,936	236,857	2,986,793	738,562	82,116	820,678	3,807,471
2020	2,849,187	369,874	3,219,061	793,858	145,783	939,641	4,158,702
2021	2,939,001	522,876	3,461,877	832,946	200,548	1,033,494	4,495,371
2022	2,978,694	697,535	3,676,229	802,281	260,052	1,062,333	4,738,562
2023	3,015,995	885,963	3,901,958	772,702	321,898	1,094,600	4,996,558
2024	2,998,278	1,074,726	4,073,004	652,441	375,583	1,028,024	5,101,028
2025	2,994,871	1,296,306	4,291,177	557,596	449,582	1,007,178	5,298,355
2026	3,013,464	1,539,552	4,553,016	490,007	518,470	1,008,477	5,561,493
2027	3,014,539	1,816,919	4,831,458	420,606	602,261	1,022,867	5,854,325
2028	3,024,988	2,074,246	5,099,234	334,690	675,971	1,010,661	6,109,895
2029	3,039,343	2,317,572	5,356,915	268,366	702,343	970,709	6,327,624
2030	3,051,384	2,610,004	5,661,388	185,581	773,434	959,015	6,620,403
2031	3,065,155	2,878,333	5,943,488	140,089	786,952	927,041	6,870,529

The amounts shown in the Explicit Subsidy section reflect the expected payment by the City toward retiree medical premiums in each of the years shown. The amounts are shown separately, and in total, for those retired on the valuation date ("current retirees") and those expected to retire after the valuation date ("future retirees").

The amounts shown in the Implicit Subsidy section reflect the expected excess of retiree medical (and prescription drug) claims over the premiums expected to be charged during the year for retirees' coverage. These amounts are also shown separately and in total for those currently retired on the valuation date and for those expected to retire in the future.

Appendix 1
Prefunding Illustration for the FYE 2017

The following table compares an illustration of prefunding results to those developed on a pay-as-you-go basis for the fiscal year ending June 30, 2017. In this hypothetical illustration, we assume that the City contributes at least 100% of the ARC and invests in a trust with a long term expected return of 6.5% per year, net of expenses. Amortization of the unfunded actuarial accrued liability is developed on the same basis as described in Section F.

Valuation date	Pay-As-You-Go	Prefunding
	6/30/2017	
For fiscal year ending	6/30/2017	6/30/2017
Discount rate	3.13%	6.5%
Actuarial Present Value of Projected Benefits		
Actives	$ 104,195,906	$ 47,591,716
Retirees	76,590,581	51,983,732
Total APVPB	180,786,487	99,575,448
Actuarial Accrued Liability (AAL)		
Actives	64,973,376	35,240,196
Retirees	76,590,581	51,983,732
Total AAL	141,563,957	87,223,928
Actuarial Value of Assets	-	-
Unfunded AAL (UAAL)	141,563,957	87,223,928
Amortization Factor	21.71125	15.84012
Annual Required Contribution (ARC)		
Normal Cost	3,358,205	1,301,501
Amortization of UAAL	6,520,305	5,506,519
Interest to 6/30	-	-
Total ARC at fiscal year end	9,878,510	6,808,020
1. Calculation of the Annual OPEB Expense		
a. ARC for current fiscal year	$ 9,878,510	$ 6,808,020
b. Interest on Net OPEB Obligation (Asset) at beginning of year	1,191,258	2,473,859
c. Adjustment to the ARC	(1,807,847)	(2,558,896)
d. **Annual OPEB Expense (a. + b. + c.)**	9,261,921	6,722,983
2. Calculation of Expected Contribution		
a. Estimated payments on behalf of retirees	2,618,130	2,618,130
b. Estimated current year's implicit subsidy	661,874	661,874
c. Estimated contribution to OPEB trust	-	3,528,016
d. **Total Expected Employer Contribution**	3,280,004	6,808,020
3. Change in Net OPEB Obligation *(1.d. minus 2.d.)*	5,981,917	(85,037)
Net OPEB Obligation (Asset), beginning of fiscal year	38,059,369	38,059,369
Net OPEB Obligation (Asset) at fiscal year end	44,041,286	37,974,332

Appendix 2
Breakout of Valuation Results by Group

The chart below breaks out the valuation results for 8 employee groups for the fiscal year ending June 30, 2017. Results shown below tie to the total presented in Table 1A.

FISCAL YEAR ENDING JUNE 30, 2017 Group	Present Value of Projected Benefits	UAAL: Unfunded Actuarial Accrued Liability	Normal Cost	Amortization of UAAL	Interest to Fiscal Year End	ARC: Annual Required Contribution
Elected Official	$ 1,373,252	$ 1,019,154	$ 58,590	$ 46,942	$ -	$ 105,532
Exempt	$ 5,001,975	$ 4,476,841	$ 48,906	$ 206,200	$ -	$ 255,106
Fire Safety	$ 23,250,739	$ 17,258,049	$ 349,497	$ 794,890	$ -	$ 1,144,387
General	$ 37,472,515	$ 27,947,811	$ 856,511	$ 1,287,249	$ -	$ 2,143,760
Management	$ 21,423,767	$ 17,967,089	$ 381,034	$ 827,548	$ -	$ 1,208,582
Police Management	$ 10,554,913	$ 8,764,109	$ 189,497	$ 403,667	$ -	$ 593,164
Police Safety	$ 57,691,447	$ 45,841,696	$ 958,329	$ 2,111,425	$ -	$ 3,069,754
Fire Management	$ 24,017,879	$ 18,289,208	$ 515,841	$ 842,384	$ -	$ 1,358,225
Totals	**$ 180,786,487**	**$ 141,563,957**	**$ 3,358,205**	**$ 6,520,305**	$ -	**$ 9,878,510**

Appendix 3
General OPEB Disclosure and Required Supplementary Information

The Information necessary to complete the OPEB footnote in the City's financial reports is summarized below, or we note the location of the information contained elsewhere in this report:

Summary of Plan Provisions: See Table 3A

OPEB Funding Policy: See Section F; details provided in Table 1A

Annual OPEB Cost and Net OPEB Obligation: See Table 1B

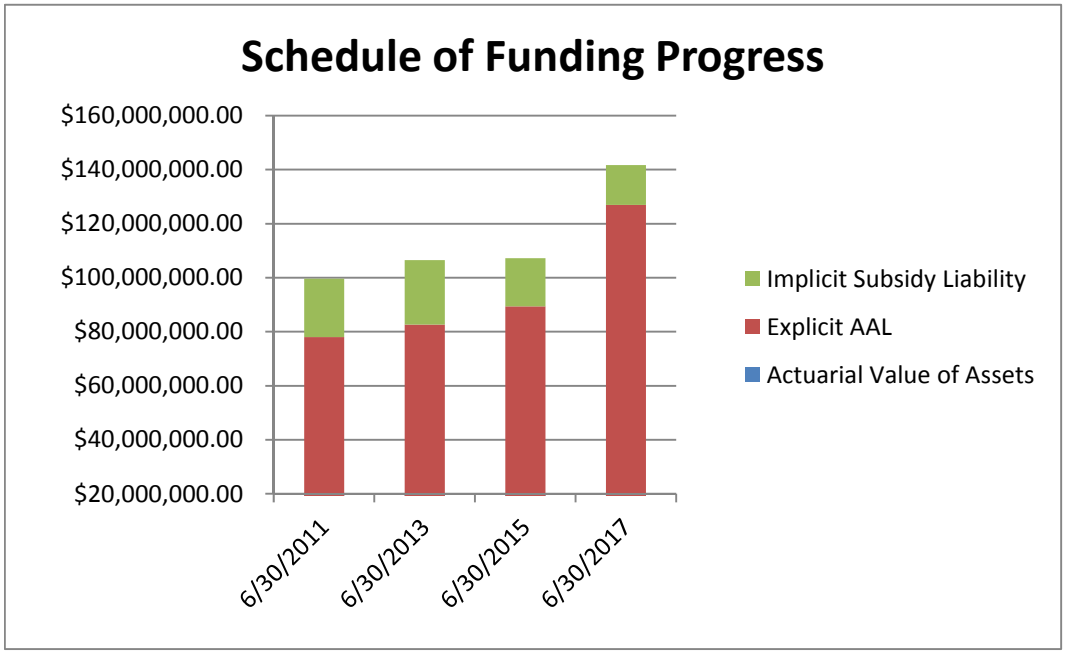
Actuarial Methods and Assumptions: See Table 4

Funding Status and Funding Progress: See Section E – Basic Valuation Results

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded Actuarial Accrued Liability (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
6/30/2011	$ -	$ 99,590,050	$ 99,590,050	0.0%	$ 31,310,364	318.1%
6/30/2013	$ -	$ 106,506,259	$ 106,506,259	0.0%	$ 34,035,753	312.9%
6/30/2015	$ -	$ 107,153,093	$ 107,153,093	0.0%	$ 30,169,887	355.2%
6/30/2017	$ -	$ 141,642,158	$ 141,642,158	0.0%	$ 34,929,760	405.5%

Some values are shown separately for explicit and implicit subsidy liabilities in Section E.



The significant changes impacting resulting as of June 30, 2017 are: (a) a decrease in the discount rate from 4.0% to 3.13% and (b) an update in assumed future healthcare trend.

Appendix 3 – General OPEB Disclosures and Required Supplementary Information
(Concluded)

Required Supplementary Information: Recent History of Amounts Funded
See chart below:

OPEB Cost Contributed

Fiscal Year Ended	Annual OPEB Cost	Employer OPEB Contributions	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation (Asset)
6/30/2013	$ 6,843,865	$ 2,378,429	34.8%	$ 24,715,030
6/30/2014	$ 7,222,728	$ 2,487,553	34.4%	$ 29,450,205
6/30/2015	$ 7,073,763	$ 2,827,548	40.0%	$ 33,696,420
6/30/2016	$ 6,120,311	$ 1,757,362	28.7%	$ 38,059,369
6/30/2017	$ 9,261,921	$ 3,280,004	35.4%	$ 44,041,286

Values for FYE 2017 are shown separately for explicit and implicit subsidy liabilities in Table 1B.

Addendum 1: Bickmore Age Rating Methodology

Both accounting standards (e.g. GASB 45) and actuarial standards (e.g. ASOP 6) require that expected retiree claims, not just premiums paid, be reflected in most situations where an actuary is calculating retiree healthcare liabilities. Unfortunately the actuary is often required to perform these calculations without any underlying claims information. In most situations, the information is not available, but even when available, the information may not be credible due to the size of the group being considered.

Actuaries have developed methodologies to approximate healthcare claims from the premiums being paid by the plan sponsor. Any methodology requires adopting certain assumptions and using general studies of healthcare costs as substitutes when there is a lack of credible claims information for the specific plan being reviewed.

Premiums paid by sponsors are often uniform for all employee and retiree ages and genders, with a drop in premiums for those participants who are Medicare-eligible. While the total premiums are expected to pay for the total claims for the insured group, on average, the premiums charged would not be sufficient to pay for the claims of older insureds, and would be expected to exceed the expected claims of younger insureds. An age-rating methodology takes the typically uniform premiums paid by plan sponsors and spreads the total premium dollars to each age and gender intended to better approximate what the insurer might be expecting in actual claims costs at each age and gender.

The process of translating premiums into expected claims by age and gender generally follows the steps below.

1. *Obtain or Develop Relative Medical Claims Costs by Age, Gender, or other categories that are deemed significant*. For example, a claims cost curve might show that, if a 50 year old male has $1 in claims, then on average a 50 year old female has claims of $1.25, a 30 year male has claims of $0.40, and an 8 year old female has claims of $0.20. The claims cost curve provides such relative costs for each age, gender, or any other significant factor the curve might have been developed to reflect. Table 4 provides the source of information used to develop such a curve and shows sample relative claims costs developed for the plan under consideration.
2. *Obtain a census of participants, their chosen medical coverage, and the premium charged for their coverage.* An attempt is made to find the group of participants that the insurer considered in setting the premiums they charge for coverage. That group includes the participant and any covered spouses and children. When information about dependents is unavailable, assumptions must be made about spouse age and the number and age of children represented in the population. These assumptions are provided in Table 4.
3. *Spread the total premium paid by the group to each covered participant or dependent based on expected claims.* The medical claims cost curve is used to spread the total premium dollars paid by the group to each participant reflecting their age, gender, or other relevant category. After this step, the actuary has a schedule of expected claims costs for each age and gender for the current premium year. It is these claims costs that are projected into the future by medical cost inflation assumptions when valuing expected future retiree claims.

The methodology described above is dependent on the data and methodologies used in whatever study might be used to develop claims cost curves for any given plan sponsor. These methodologies and assumptions can be found in the referenced paper cited as a source in the valuation report.

Addendum 2: Bickmore Mortality Projection Methodology

Actuarial standards of practice (e.g., ASOP 35, Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations, and ASOP 6, Measuring Retiree Group Benefits Obligations) indicate that the actuary should reflect the effect of mortality improvement (i.e., longer life expectancies in the future), both before and after the measurement date. The development of credible mortality improvement rates requires the analysis of large quantities of data over long periods of time. Because it would be extremely difficult for an individual actuary or firm to acquire and process such extensive amounts of data, actuaries typically rely on large studies published periodically by organizations such as the Society of Actuaries or Social Security Administration.

As noted in a recent actuarial study on mortality improvement, key principles in developing a credible mortality improvement model would include the following:

(1) Short-term mortality improvement rates should be based on recent experience.
(2) Long-term mortality improvement rates should be based on expert opinion.
(3) Short-term mortality improvement rates should blend smoothly into the assumed long-term rates over an appropriate transition period.

The **Bickmore Scale 2017** was developed from a blending of data and methodologies found in two published sources: (1) the Society of Actuaries Mortality Improvement Scale MP-2016 Report, published in October 2016 and (2) the demographic assumptions used in the 2016 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, published June 2016.

Bickmore Scale 2017 is a two-dimensional mortality improvement scale reflecting both age and year of mortality improvement. The underlying base scale is Scale MP-2016 which has two segments – (1) historical improvement rates for the period 1951-2012 and (2) an estimate of future mortality improvement for years 2013-2015 using the Scale MP-2016 methodology but utilizing the assumptions obtained from Scale MP-2015. The Bickmore scale then transitions from the 2015 improvement rate to the Social Security Administration (SSA) Intermediate Scale linearly over the 10 year period 2016-2025. After this transition period, the Bickmore Scale uses the constant mortality improvement rate from the SSA Intermediate Scale from 2025-2039. The SSA's Intermediate Scale has a final step down in 2040 which is reflected in the Bickmore scale for years 2040 and thereafter. Over the ages 100 to 115, the SSA improvement rate is graded to zero.

Scale MP-2016 can be found at the SOA website and the projection scales used in the 2016 Social Security Administrations Trustees Report at the Social Security Administration website.

Glossary

Actuarial Accrued Liability (AAL) – Total dollars required to fund all plan benefits attributable to service rendered as of the valuation date for current plan members and vested prior plan members; see "Actuarial Present Value"

Actuarial Funding Method – A procedure which calculates the actuarial present value of plan benefits and expenses, and allocates these expenses to time periods, typically as a normal cost and an actuarial accrued liability

Actuarial Present Value Projected Benefits (APVPB) – The amount presently required to fund all projected plan benefits in the future, it is determined by discounting the future payments by an appropriate interest rate and the probability of nonpayment.

Actuarial Value of Assets –The actuarial value of assets is the value used by the actuary to offset the AAL for valuation purposes. The actuarial value of assets may be the market value of assets or may be based on a methodology designed to smooth out short-term fluctuations in market values.

Aggregate – An actuarial funding method under which the excess of the actuarial present value of projected benefits over the actuarial accrued liability is levelly spread over the earnings or service of the group forward from the valuation date to the assumed exit date, based not on individual characteristics but rather on the characteristics of the group as a whole

Annual Required Contribution (ARC) – The amount the employer would contribute to a defined benefit OPEB plan for a given year, it is the sum of the normal cost and some amortization (typically 30 years) of the unfunded actuarial accrued liability

Annual OPEB Expense – The OPEB expense reported in the Agency's financial statement, which is comprised of three elements: the ARC, interest on the net OPEB obligation at the beginning of the year and an ARC adjustment.

Attained Age Normal Cost (AANC) – An actuarial funding method where, for each plan member, the excess of the actuarial present value of benefits over the actuarial accrued liability (determined under the unit credit method) is levelly spread over the individual's projected earnings or service forward from the valuation date to the assumed exit date

CalPERS – Many state governments maintain a public employee retirement system; CalPERS is the California program, covering all eligible state government employees as well as other employees of other governments within California who have elected to join the system

Defined Benefit (DB) – A pension or OPEB plan which defines the monthly income or other benefit which the plan member receives at or after separation from employment

Defined Contribution (DC) – A pension or OPEB plan which establishes an individual account for each member and specifies how contributions to each active member's account are determined and the terms of distribution of the account after separation from employment

Glossary (Continued)

Discount Rate – The rate of return that could be earned on an investment in the financial markets; for GASB 45 purposes, the discount rate should be based on the expected long-term yield of investments used to finance the benefits. The discount rate is used to adjust the dollar value of future projected benefits into a present value equivalent as of the valuation date.

Entry Age Normal Cost (EANC) – An actuarial funding method where, for each individual, the actuarial present value of benefits is levelly spread over the individual's projected earnings or service from entry age to the last age at which benefits can be paid

Excise Tax – The Affordable Care Act created a 40% excise tax on the value of "employer sponsored coverage" that exceeds certain thresholds. The tax is first effective is 2020.

Explicit Subsidy – The projected dollar value of future retiree healthcare costs expected to be paid directly by the Employer, e.g., the Employer's payment of all or a portion of the monthly retiree premium billed by the insurer for the retiree's coverage

Frozen Attained Age Normal Cost (FAANC) – An actuarial funding method under which the excess of the actuarial present value of projected benefits over the actuarial accrued liability (determined under the unit credit method) is levelly spread over the earnings or service of the group forward from the valuation date to the assumed exit date, based not on individual characteristics but rather on the characteristics of the group as a whole

Frozen Entry Age Normal Cost (FEANC) – An actuarial funding method under which the excess of the actuarial present value of projected benefits over the actuarial accrued liability (determined under the entry age normal cost method) is levelly spread over the earnings or service of the group forward from the valuation date to the assumed exit date, based not on individual characteristics but rather on the characteristics of the group as a whole

Financial Accounting Standards Board (FASB) – A private, not-for-profit organization designated by the Securities and Exchange Commission (SEC) to develop generally accepted accounting principles (GAAP) for U.S. public corporations

Government Accounting Standards Board (GASB) – A private, not-for-profit organization which develops generally accepted accounting principles (GAAP) for U.S. state and local governments; like FASB, it is part of the Financial Accounting Foundation (FAF), which funds each organization and selects the members of each board

Health Care Trend – The assumed rate(s) of increase in future dollar values of premiums or healthcare claims, attributable to increases in the cost of healthcare; contributing factors include medical inflation, frequency or extent of utilization of services and technological developments.

Implicit Subsidy – The projected difference between future retiree claims and the premiums to be charged for retiree coverage; this difference results when the claims experience of active and retired employees are pooled together and a 'blended' group premium rate is charged for both actives and retirees; a portion of the active employee premiums subsidizes the retiree premiums.

Glossary (Concluded)

Net OPEB Obligation (Asset) - The net OPEB obligation (NOO) represents the accumulated shortfall of OPEB funding since GASB 45 was implemented. If cumulative contributions have exceeded the sum of the prior years' annual OPEB expenses, then a net OPEB asset results.

Non-Industrial Disability (NID) – Unless specifically contracted by the individual Agency, PAM employees are assumed to be subject to only non-industrial disabilities.

Normal Cost – Total dollar value of benefits expected to be earned by plan members in the current year, as assigned by the chosen funding method; also called current service cost

Other Post-Employment Benefits (OPEB) – Post-employment benefits other than pension benefits, most commonly healthcare benefits but also including life insurance if provided separately from a pension plan

Pay-As-You-Go (PAYGO) – Contributions to the plan are made at about the same time and in about the same amount as benefit payments and expenses coming due

PEMHCA – The Public Employees' Medical and Hospital Care Act, established by the California legislature in 1961, provides community-rated medical benefits to participating public employers. Among its extensive regulations are the requirements that a contracting Agency contribute toward medical insurance premiums for retired annuitants and that a contracting Agency file a resolution, adopted by its governing body, with the CalPERS Board establishing any new contribution.

Plan Assets – The value of cash and investments considered as 'belonging' to the plan and permitted to be used to offset the AAL for valuation purposes. To be considered a plan asset, GASB 45 requires (a) the assets to be segregated and restricted in a trust or similar arrangement, (b) employer contributions to the trust to be irrevocable, (c) the assets be dedicated to providing benefits to retirees and their beneficiaries, and (d) that the assets be legally protected from creditors of the employer and/or plan administrator. See also "Actuarial Value of Assets"

Projected Unit Credit (PUC) – An actuarial funding method where, for each individual, the projected plan benefit is allocated by a consistent formula from entry date to assumed exit date

Public Agency Miscellaneous (PAM) – Non-safety public employees.

Select and Ultimate – Actuarial assumptions which contemplate rates which differ by year initially (the select period) and then stabilize at a constant long-term rate (the ultimate rate)

Unfunded Actuarial Accrued Liability (UAAL) – The excess of the actuarial accrued liability over the actuarial value of plan assets

Unit Credit (UC) -- An actuarial funding method where, for each individual, the unprojected plan benefit is allocated by a consistent formula from entry date to assumed exit date

Vesting – As defined by the plan, requirements which when met make a plan benefit nonforfeitable on separation of service before retirement eligibility