

MacLeod Watts

August 28, 2018

Ms. Kim Hardcastle
Human Resources Manager
City of Palm Springs
3200 E. Tahquitz Canyon Way
Palm Springs, CA 92263-2743

Re: GASB 75 Actuarial Report for the Fiscal Year Ending June 30, 2018

Dear Ms. Hardcastle:

We are pleased to enclose our report providing the results for the June 30, 2018 accounting 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 purpose of this report is to provide information required by GASB 75 ("Accounting and Financial Reporting for Postemployment Benefits Other Than Pension") to be reported in the City's financial statements for the fiscal year ending June 30, 2018. The information included in this report reflects our understanding that the City continues to finance its OPEB liability on a pay-as-you-go basis. These results were developed from the results of the June 30, 2017 actuarial valuation, adjusted as needed to comply with GASB 75.

This report reflects the employee data and details on plan benefits as well as benefit payments provided to us by the City. As with any analysis, the soundness of the report is dependent on the inputs. Please review our summary of this information shown in the report to be sure that it matches your records.

We appreciate the opportunity to work on this analysis. Thank you for your help in providing your time and the information needed to enable us to prepare this report. Please let us know if we can be of further assistance.

Sincerely,



Catherine L. MacLeod, FSA, FCA, EA, MAAA
Principal & Consulting Actuary

Enclosure



City of Palm Springs

GASB 75 Actuarial Report
Measured as of June 30, 2017
For Fiscal Year End June 30, 2018 Financial Reporting

Submitted August 2018

MacLeod Watts

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A. Executive Summary

This report presents the accounting information for the City of Palm Springs (the City) other post-employment benefit (OPEB) programs for the fiscal year ending June 30, 2018. This information is required by Statement No. 75 of the Governmental Accounting Standards Board (GASB 75).

Important background information regarding the valuation process can be found in Addendum 1. We recommend users of the report read this information to familiarize themselves with the process and context of actuarial valuations, including the requirements of GASB 75. The pages following this Executive Summary discuss the valuation results in detail and present various exhibits appropriate for disclosures under GASB 75. We anticipate that the next actuarial valuation will be as of June 30, 2019. If there are any significant changes in the employee population, benefits provided under the plan, or the City's funding policy, please contact us to discuss whether an earlier valuation might be required.

OPEB Obligations of the City

The City provides continuation of medical coverage to its retiring employees. This benefit creates the following types of OPEB liabilities:

- **Explicit subsidy liabilities:** An "explicit subsidy" exists when the employer contributes directly toward the cost of retiree healthcare. In this program, the City contributes a portion of retiree healthcare premiums for certain qualifying retirees. These benefits are described in Section 2.
- **Implicit subsidy liabilities:** An "implicit subsidy" exists when the premiums charged for retiree coverage are lower than the expected retiree claims for that coverage. In the City's program, the claims experience of active employees and retirees not covered by Medicare is co-mingled in setting premium rates for some members and gives rise to an implicit subsidy. Where applicable, we determine the implicit rate subsidy as the projected difference between (a) retiree medical claim costs by age and (b) premiums charged for retiree coverage. For more information on this process see Section 3 and Addendum 2: MacLeod Watts Age Rating Methodology. For further details on which specific plans were considered to result in an implicit subsidy liability for retirees, please refer to the June 30, 2017 Actuarial Valuation Report issued in October 2017.
- **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 applies to the aggregate annual cost of an employee's applicable coverage that exceeds a dollar limit. Implementation of this tax has been delayed by subsequent legislation to 2022; while there are discussions in Congress of eliminating or again delaying the tax, this report assumes that it will take effect as current law provides. The excise tax burden will ultimately fall on the City or a combination of the City and plan participants. Any excise tax assumed to be paid by the City is a form of explicit subsidy. See Section 3 for assumptions about excise taxes.

City Funding Policy

The City's funding policy affects the calculation of liabilities by impacting the discount rate that is used to develop the plan liability and expense. "Prefunding" is the term used when an agency consistently contributes an amount based on an actuarially determined contribution (ADC) each year. GASB 75 allows prefunded plans to use a discount rate that reflects the expected earnings on trust assets. Pay-



Executive Summary

(Continued)

as-you-go, or “PAYGO”, is the term used when an agency only contributes the required retiree benefits when due. When an agency finances retiree benefits on a pay-as-you-go basis, GASB 75 requires the use of a discount rate equal to a 20-year high grade municipal bond rate.

The City has been and continues to finance its OPEB liability on a pay-as-you-go basis. With the City’s approval, the discount rates used in this valuation are based on the S&P Municipal Bond 20 Year High Grade Index. As of the beginning and end of the Measurement Period, this index indicates discount rates of 2.68% as of June 30, 2016 and 3.13% as of June 30, 2017.

Actuarial Assumptions

The actuarial “demographic” assumptions (i.e. rates of retirement, death, disability or other termination of employment) used in this report were chosen, for the most part, to be the same as the actuarial demographic assumptions used for the most recent valuation of the retirement plan(s) 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. All these assumptions, and more, impact expected future benefits. Please note that this valuation has been prepared on a closed group basis. This means that only employees and retirees present as of the valuation date are considered. We do not consider replacement employees for those we project to leave the current population of plan participants until the valuation date following their employment.

We emphasize that this actuarial valuation provides a projection of future results based on many assumptions. Actual results are likely to vary to some extent and we will continue to monitor these assumptions in future valuations. See Section 3 for a description of assumptions used in this valuation.

Important Dates Used in the Valuation

GASB 75 allows reporting liabilities as of any fiscal year end based on: (1) a *valuation date* no more than 30 months plus 1 day prior to the close of the fiscal year end; and (2) a *measurement date* up to one year prior to the close of the fiscal year. The following dates were used for this report:

Valuation Date	June 30, 2017
Measurement Date	June 30, 2017
Measurement Period	June 30, 2016 to June 30, 2017
Fiscal Year	June 30, 2018

Significant Results and Differences from the Prior Valuation

This is the first report for the City reflecting the requirements of GASB 75. No benefit changes were reported to MacLeod Watts relative to those in place at the time the June 30, 2017 valuation was prepared. Because the valuation date occurred at the end of the Measurement Period, we rolled back the valuation results to develop the plan’s liability on June 30, 2016. With this approach, no assumption changes occur, other than the required update to the discount rate, and no plan experience (difference between assumed and actual results) is recognized.



Executive Summary

(Concluded)

Because the valuation date occurred at the end of the Measurement Period, we rolled back the valuation results to develop the plan’s liability on June 30, 2016. With this approach, no assumption changes occur, other than the required update to the discount rate, and no plan experience (difference between assumed and actual results) is recognized.

Impact on Statement of Net Position and OPEB Expense for Fiscal 2018

The accounting impact of the plan as of the City’s fiscal year end June 30, 2018 is shown below.

Items	For Reporting At Fiscal Year Ending June 30, 2018
Total OPEB Liability	\$ 141,642,158
Fiduciary Net Position	-
Net OPEB Liability (Asset)	141,642,158
Deferred (Outflows) of Resources	(3,480,420)
Deferred Inflows of Resources	9,801,593
Impact on Statement of Net Position	<u>\$ 147,963,331</u>
 OPEB Expense, FYE 2018	 <u><u>\$ 6,032,889</u></u>

Recognition Period for Deferred Resources

The plan’s Expected Average Remaining Service Life (“EARSL”) is 6.65 years for deferred resources arising in this fiscal year. Liability changes due to plan experience which differs from what was assumed in the prior year and/or from assumption changes during the year are recognized over the EARSL period. GASB 75 requires that changes in the Fiduciary Net Position due to investment performance different from the assumed earnings rate are always recognized over 5 years. Liability changes attributable to benefit changes occurring during the period are recognized immediately.

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. 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; MacLeod Watts 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. Accounting Information (GASB 75)

The following exhibits are designed to satisfy the reporting and disclosure requirements of GASB 75 for the fiscal year end June 30, 2018. The City is classified for GASB 75 purposes as a single employer.

Components of Net Position and Expense

The exhibit below shows the development of Net Position and Expense as of the Measurement Date.

Plan Summary Information <i>Measurement Date is June 30, 2017</i>	City of Palm Springs
 <i>Items Impacting Net Position:</i>	
Total OPEB Liability	\$ 141,642,158
Fiduciary Net Position	-
Net OPEB Liability (Asset)	141,642,158
 <i>Deferred (Outflows) Inflows of Resources Due to:</i>	
Assumption Changes	9,801,593
Plan Experience	-
Investment Experience	-
Contributions Subsequent to Measurement Date	(3,480,420)
Net Deferred (Outflows) Inflows of Resources	6,321,173
 Impact on Statement of Net Position, FYE 6/30/2018	\$ 147,963,331
 <i>Items Impacting OPEB Expense:</i>	
Service Cost	\$ 3,726,841
Cost of Plan Changes	-
Interest Cost	4,040,843
Expected Earnings on Assets	-
 <i>Recognized Deferred Resource items:</i>	
Assumption Changes	(1,734,795)
Plan Experience	-
Investment Experience	-
 OPEB Expense, FYE 6/30/2018	\$ 6,032,889



Accounting Information
 (Continued)

Change in Net Position During the Fiscal Year

The exhibit below shows the year-to-year changes in the components of Net Position.

City of Palm Springs			
For Reporting at Fiscal Year End	6/30/2017	6/30/2018	Change
<i>Measurement Date</i>	<i>6/30/2016</i>	<i>6/30/2017</i>	During Period
Total OPEB Liability	\$ 148,690,866	\$ 141,642,158	\$ (7,048,708)
Fiduciary Net Position	-	-	-
Net OPEB Liability (Asset)	148,690,866	141,642,158	(7,048,708)
<i>Deferred Resource (Outflows) Inflows Due to:</i>			
Assumption Changes	-	9,801,593	9,801,593
Plan Experience	-	-	-
Investment Experience	-	-	-
Contributions Made Subsequent to the Measurement Date	(3,280,004)	(3,480,420)	(200,416)
Net Deferred (Outflows) Inflows	(3,280,004)	6,321,173	9,601,177
Impact on Statement of Net Position	<u>\$ 145,410,862</u>	<u>\$ 147,963,331</u>	<u>\$ 2,552,469</u>

Change in Net Position During the Fiscal Year

Impact on Statement of Net Position, FYE 2017	\$ 145,410,862
OPEB Expense (Income)	6,032,889
Employer Contributions During Fiscal Year	<u>(3,480,420)</u>
Impact on Statement of Net Position, FYE 2018	<u>\$ 147,963,331</u>

OPEB Expense

Employer Contributions During Fiscal Year	\$ 3,480,420
Deterioration (Improvement) in Net Position	<u>2,552,469</u>
OPEB Expense (Income), FYE 2018	<u>\$ 6,032,889</u>



Accounting Information
 (Continued)

Deferred Resources as of Fiscal Year End and Expected Future Recognition

The exhibit below shows deferred resources as of the fiscal year end June 30, 2018.

City of Palm Springs	Deferred Outflows of Resources	Deferred Inflows of Resources
Changes of Assumptions	\$ -	\$ 9,801,593
Differences Between Expected and Actual Experience	-	-
Net Difference Between Projected and Actual Earnings on Investments	-	-
Contributions Made Subsequent to the Measurement Date	3,480,420	-
Total	\$ 3,480,420	\$ 9,801,593

The City will recognize the Contributions Made Subsequent to the Measurement Date in the next fiscal year. In addition, future recognition of these deferred resources is shown below.

For the Fiscal Year Ending June 30	Recognized Net Deferred Outflows (Inflows) of Resources
2019	\$ (1,734,795)
2020	(1,734,795)
2021	(1,734,795)
2022	(1,734,795)
2023	(1,734,795)
Thereafter	(1,127,618)



Accounting Information
 (Continued)

Sensitivity of Liabilities to Changes in the Discount Rate and Healthcare Cost Trend Rate

The discount rate used for the fiscal year end 2018 is 3.13%. Medical Cost Inflation was assumed to start at 7.0% and grade down to 4.5% for years 2023 and thereafter. The impact of a 1% increase or decrease in these assumptions is shown in the chart below.

Sensitivity to:			
Change in Discount Rate	Current - 1% 2.13%	Current 3.13%	Current + 1% 4.13%
Total OPEB Liability	169,198,001	141,642,158	120,149,710
Increase (Decrease)	27,555,843		(21,492,448)
% Increase (Decrease)	19.5%		-15.2%
Net OPEB Liability (Asset)	169,198,001	141,642,158	120,149,710
Increase (Decrease)	27,555,843		(21,492,448)
% Increase (Decrease)	19.5%		-15.2%
Change in Healthcare Cost Trend Rate	Current Trend - 1%	Current Trend	Current Trend + 1%
Total OPEB Liability	115,818,582	141,642,158	177,453,777
Increase (Decrease)	(25,823,576)		35,811,619
% Increase (Decrease)	-18.2%		25.3%
Net OPEB Liability (Asset)	115,818,582	141,642,158	177,453,777
Increase (Decrease)	(25,823,576)		35,811,619
% Increase (Decrease)	-18.2%		25.3%



Accounting Information
 (Continued)

Schedule of Changes in the City's Net OPEB Liability and Related Ratios

GASB 75 requires presentation of the 10-year history of changes in the Net OPEB Liability. However, since this is the initial year of implementation, only one year is currently available.

Fiscal Year Ending 2018	City of Palm Springs
Total OPEB liability	
Service Cost	\$ 3,726,841
Interest	4,040,843
Changes of benefit terms	-
Differences between expected and actual experience	-
Changes of assumptions	(11,536,388)
Benefit payments	(3,280,004)
Total OPEB liability - beginning	148,690,866
Total OPEB liability - ending (a)	\$ 141,642,158
 Plan fiduciary net position	
Contributions - employer	\$ 3,280,004
Net investment income	-
Benefit payments	(3,280,004)
Net change in plan fiduciary net position	-
Plan fiduciary net position - beginning	-
Plan fiduciary net position - ending (b)	\$ -
 Net OPEB liability - ending (a) - (b)	\$ 141,642,158
 Covered-employee payroll	\$ 34,929,760
 Net OPEB liability as a percentage of covered-employee payroll	405.51%



Accounting Information
 (Continued)

Detail of Changes to Net Position

The chart below details changes to all components of Net Position.

City of Palm Springs	Total OPEB Liability (a)	Fiduciary Net Position (b)	Net OPEB Liability (c) = (a) - (b)	(d) Deferred Outflows (Inflows) Due to:				Impact on Statement of Net Position (e) = (c) - (d)
				Assumption Changes	Plan Experience	Investment Experience	Contributions Subsequent to Measurement Date	
Balance at Fiscal Year Ending 6/30/2017 <i>Measurement Date 6/30/2016</i>	\$ 148,690,866	\$ -	\$ 148,690,866	\$ -	\$ -	\$ -	\$ 3,280,004	\$ 145,410,862
Changes During the Period:								
Service Cost	3,726,841		3,726,841					3,726,841
Interest Cost	4,040,843		4,040,843					4,040,843
Expected Investment Income		-	-					-
Employer Contributions		3,280,004	(3,280,004)					(3,280,004)
Changes of Benefit Terms	-		-					-
Benefit Payments	(3,280,004)	(3,280,004)	-					-
Assumption Changes	(11,536,388)		(11,536,388)	(11,536,388)				-
Plan Experience	-		-		-			-
Investment Experience		-	-			-		-
Recognized Deferred Resources				1,734,795	-	-	(3,280,004)	1,545,209
Employer Contributions Subsequent to Measurement date							3,480,420	(3,480,420)
Net Changes in Fiscal Year 2017-2018	(7,048,708)	-	(7,048,708)	(9,801,593)	-	-	200,416	2,552,469
Balance at Fiscal Year Ending 6/30/2018 <i>Measurement Date 6/30/2017</i>	\$ 141,642,158	\$ -	\$ 141,642,158	\$ (9,801,593)	\$ -	\$ -	\$ 3,480,420	\$ 147,963,331



Accounting Information
 (Continued)

Schedule of Deferred Outflows and Inflows of Resources

A listing of all deferred resource bases used to develop the Net Position and OPEB Expense is shown below. Contributions subsequent to the measurement date are not shown.

Measurement Date: June 30, 2017

Date Created	Cause of Deferred Resource	Initial Amount	Annual Recognition	Balance as of Jun 30, 2017	Recognition of Deferred Outflow or Deferred (Inflow) in Measurement Period:							
					2016-17 (FYE 2018)	2017-18 (FYE 2019)	2018-19 (FYE 2020)	2019-20 (FYE 2021)	2020-21 (FYE 2022)	2021-22 (FYE 2023)	Thereafter	
6/30/2017	Gain Due To Assumption Changes	\$(11,536,388)	\$ (1,734,795)	\$ (9,801,593)	\$(1,734,795)	\$(1,734,795)	\$(1,734,795)	\$(1,734,795)	\$(1,734,795)	\$(1,734,795)	\$(1,734,795)	\$(1,127,618)

The Expected Average Remaining Service Life (“EARSL”) was 6.65 years. This is the period used to recognize changes in the OPEB Liability arising during this measurement period *other than* those arising from investment gains and losses or relating to improvements in plan benefits.



Accounting Information
 (Continued)

City Contributions to the Plan

City contributions to the Plan may occur as benefits are paid to retirees and/or to an irrevocable OPEB trust. Benefit payments may occur in the form of direct payments for premiums and taxes (“explicit subsidies”) and/or indirect payments to retirees in the form of higher premiums for active employees (“implicit subsidies”). For details, see Addendum 1 – Important Background Information.

The charts below show the benefits paid by the City on behalf of retirees (a) during the measurement period and (b) during the year following the measurement period but prior to the end of fiscal year ending 2018.

Employer Contributions During the Measurement Period, Jul 1, 2016 thru Jun 30, 2017	City of Palm Springs
Employer Contributions to the Trust	\$ -
Employer Contributions in the Form of Direct Benefit Payments (not reimbursed by trust)	2,618,130
Implicit contributions	661,874
<i>Total Employer Contributions During the Measurement Period</i>	\$ 3,280,004

Employer Contributions Subsequent to the Measurement Date, Jul 1, 2017 thru Jun 30, 2018	City of Palm Springs
Employer Contributions to the Trust	\$ -
Employer Contributions in the Form of Direct Benefit Payments (not reimbursed by trust)	2,778,834
Implicit contributions	701,586
<i>Total Employer Contributions Subsequent to the Measurement Date</i>	\$ 3,480,420



Accounting Information

(Continued)

Projected Benefit Payments (15-year projection)

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 Section 3.

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	\$3,280,004
2018	2,778,834	-	2,778,834	701,586	-	701,586	3,480,420
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, dental and/or vision 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.

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).



Accounting Information
 (Concluded)

Sample Journal Entries

Beginning Account Balances

As of the fiscal year beginning 7/1/2017

<i>City of Palm Springs</i>	
Debit	Credit
Net OPEB Liability	148,690,866
Deferred Resource -- Assumption Changes	-
Deferred Resource -- Plan experience	-
Deferred Resource -- Investment Experience	-
Deferred Resource -- Contributions	3,280,004
Net Position	145,410,862

* The entries above assume nothing is on the books at the beginning of the year. So to the extent that values already exist in, for example, the Net OPEB Liability account, then only the difference should be adjusted. The entries above represent the values assumed to exist at the start of the fiscal year.

Journal entries to record retiree premium (or other benefit)

payments that were not reimbursed by a trust, and contributions to the trust during the fiscal year

<i>City of Palm Springs</i>	
Debit	Credit
OPEB Expense	2,778,834
Employer Contributions for Retiree Benefits During Fiscal Year	2,778,834

* This entry assumes that when cash is used to pay retiree premiums directly (and not reimbursed by a trust), or when cash is used to contribute to an OPEB trust, then an account called "Employer Contributions for Retiree Benefits During Fiscal Year" was debited (increased). This entry reassigns these premium payments to OPEB Expense. If OPEB Expense was originally debited, then this entry is unnecessary.

Journal entries to record implicit subsidies during the fiscal year

<i>City of Palm Springs</i>	
Debit	Credit
OPEB Expense	701,586
Premium Expense During Fiscal Year	701,586

* This entry assumes that when premiums for active employees are paid, then an account called "Premium Expense During Fiscal Year" is debited (increased). This entry reverses the portion of premium payments that represent implicit subsidies and assigns that value to OPEB Expense.

Journal entries to record other account activity during the fiscal year

<i>City of Palm Springs</i>	
Debit	Credit
Net OPEB Liability	7,048,708
Deferred Resource -- Assumption Changes	9,801,593
Deferred Resource -- Plan experience	-
Deferred Resource -- Investment Experience	-
Deferred Resource -- Contributions	200,416
OPEB Expense	2,552,469



C. Certification

The purpose of this report is to provide actuarial information in compliance with Statement 75 of the Governmental Accounting Standards Board (GASB 75) for other postemployment benefits provided by the City of Palm Springs (the City). We summarized the benefits in this report and our calculations were based on our understanding of the benefits as described herein.

In preparing this report we relied without audit on information provided by the City. This information includes, but is not limited to, plan provisions, census data, and financial information. We performed a limited review of this data and found the information to be reasonably consistent. The accuracy of this report is dependent on this information and if any of the information we relied on is incomplete or inaccurate, then the results reported herein will be different from any report relying on more accurate information.


We consider the actuarial assumptions and methods used in this report to be individually reasonable under the requirements imposed by GASB 75 and taking into consideration reasonable expectations of plan experience. The results provide an estimate of the plan's financial condition at one point in time. Future actuarial results may be significantly different due to a variety of reasons including, but not limited to, demographic and economic assumptions differing from future plan experience, changes in plan provisions, changes in applicable law, or changes in the value of plan benefits relative to other alternatives available to plan members.

Alternative assumptions may also be reasonable; however, demonstrating the range of potential plan results based on alternative assumptions was beyond the scope of our assignment except to the limited extent required by GASB 75. Plan results for accounting purposes may be materially different than results obtained for other purposes such as plan termination, liability settlement, or underlying economic value of the promises made by the plan.

This report is prepared solely for the use and benefit of the City and may not be provided to third parties without prior written consent of MacLeod Watts. Exceptions are: The City may provide copies of this report to their professional accounting and legal advisors who are subject to a duty of confidentiality, and the City may provide this work to any party if required by law or court order. No part of this report should be used as the basis for any representations or warranties in any contract or agreement without the written consent of MacLeod Watts.

The undersigned actuaries are unaware of any relationship that might impair the objectivity of this work. Nothing within this report is intended to be a substitute for qualified legal or accounting counsel. Both actuaries are members of the American Academy of Actuaries and meet the qualification standards for rendering this opinion.

Signed: August 28, 2018


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


J. Kevin Watts, FSA, FCA, MAAA



D. Supporting Information

Section 1 - 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%	

<u>Valuation</u>	<u>June 2015</u>	<u>June 2017</u>
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	65.9	
At retirement	59.2	53.2	52.8	56.4	



Supporting Information

(Continued)

Section 1 - 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



Supporting Information

(Continued)

Section 2 - 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.¹ Survivors of eligible retirees may continue their coverage after the retiree's death.

¹ 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.



Supporting Information

(Continued)

Section 2 - 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			
General	7/1/1999	12/7/2005			100% after 25 years	Retiree & All Eligible Dependents
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				

➤ **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.² 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.

² 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.



Supporting Information

(Continued)

Section 3 - Actuarial Methods and Assumptions

Valuation Date	June 30, 2017
Funding Method	Entry Age Normal Cost, level percent of pay
Asset Valuation Method	Market value of assets (\$0; plan is not yet funded)
Discount Rates	3.13% on June 30, 2017 and 2.68% on June 30, 2016
Participants Valued	Only current active employees 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 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. Mortality rates used were those published by CalPERS, adjusted to back out 20 years of Scale BB to central year 2008, then projected as described below.

Mortality Improvement	MacLeod Watts Scale 2017 applied generationally.
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.
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Supporting Information

(Continued)

Section 3 - 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 is expected to be effective in the year 2022. Annual threshold amounts 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.

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



Supporting Information

(Concluded)

Section 3 - Actuarial Methods and Assumptions

(Concluded)

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 MacLeod Watts's Age Rating Methodology provided in Addendum 1 to this report.

Please refer to Table 4 of the June 2017 Actuarial Valuation Report For specific claim costs used in developing the liability.

Changes Since the Prior Valuation:

Not applicable. The beginning of measurement period liability was developed based on a roll back of the June 2017 valuation results. Except for updating the discount rate as noted above, this methodology produces no liability gains or losses between the beginning of the measurement period and the measurement date.



Addendum 1: Important Background Information

General Types of Other Post-Employment Benefits (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 leave³ or other direct retiree payments which fall under other GASB accounting statements.

A direct employer payment toward the cost of OPEB benefits is referred to as an “explicit subsidy”. Upcoming excise taxes under the Affordable Care Act for retirees covered by high cost plans is another potential source of explicit subsidies.

In addition, if claims experience of employees and retirees are pooled when determining premiums, retiree premiums are based on a pool of members which, 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. GASB 75 and Actuarial Standards of Practice generally require that an implicit subsidy of retiree premium rates be valued as an OPEB liability.

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

Expected retiree claims		
Premium charged for retiree coverage		Covered by higher active premiums
Retiree portion of premium	Agency portion of premium Explicit subsidy	Implicit subsidy

retirees. The portion of the premium paid by the Agency does not impact the amount of the implicit subsidy.

Under GASB 45, for actuarial valuations dated prior to March 31, 2015, an exception allowed plan employers with a very small membership in a large “community-rated” healthcare program to avoid reporting of implicit subsidy liability. Following a change in Actuarial Standards of Practice and in accordance with GASB 75 requirements, this exception is no longer available.

Valuation Process

The valuation was based on employee census data and benefits provided by the City. A summary of the employee data is provided in Section 1 and a summary of the benefits provided under the Plan is provided in Section 2. 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 was also based on the actuarial methods and assumptions described in Section 3.

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

³ Unless unused sick leave credits are converted to provide or enhance a defined benefit OPEB.



Important Background Information

(Continued)

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 to receive benefits.
- 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 many decades.

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 "Total OPEB Liability". The OPEB cost allocated for active employees in the current year is referred to as "Service Cost".

Where contributions have been made to an irrevocable OPEB trust, the accumulated value of trust assets ("Fiduciary Net Position") is applied to offset the "Total OPEB Liability", resulting in the "Net OPEB Liability". If a plan is not being funded, then the Net OPEB Liability is equal to the Total OPEB Liability.

It is important to remember that an actuarial valuation is, by its nature, a projection of one possible future outcome based on many assumptions. To the extent that actual experience is not what we assumed, future results will differ. 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 premium rates;
- A change in the subsidy provided by the Agency toward retiree 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;
- Higher or lower returns on plan assets or contribution levels other than were assumed; and/or
- Changes in the discount rate used to value the OPEB liability



Important Background Information

(Continued)

Requirements of GASB 75

The Governmental Accounting Standards Board (GASB) issued GASB Statement No. 75, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*. This Statement establishes standards for the measurement, recognition, and disclosure of OPEB expense and related liabilities (assets), note disclosures, and, required supplementary information (RSI) in the financial reports of state and local governmental employers.

Important Dates

GASB 75 requires that the information used for financial reporting falls within prescribed timeframes. Actuarial valuations of the total OPEB liability are generally required at least every two years. If a valuation is not performed as of the Measurement Date, then liabilities are required to be based on roll forward procedures from a prior valuation performed no more than 30 months and 1 day prior to the most recent year-end. In addition, the net OPEB liability is required to be measured as of a date no earlier than the end of the prior fiscal year (the "Measurement Date").

Recognition of Plan Changes and Gains and Losses

Under GASB 75, gains and losses related to changes in Total OPEB Liability and Fiduciary Net Position are recognized in OPEB expense systematically over time.

- *Timing of recognition:* Changes in the Total OPEB Liability relating to changes in plan benefits are recognized immediately (fully expensed) in the year in which the change occurs. Gains and Losses are amortized, with the applicable period based on the type of gain or loss. The first amortized amounts are recognized in OPEB expense for the year the gain or loss occurs. The remaining amounts are categorized as deferred outflows and deferred inflows of resources related to OPEB and are to be recognized in future OPEB expense.
- *Deferred recognition periods:* These periods differ depending on the source of the gain or loss.

Difference between projected
and actual trust earnings:

5 year straight-line recognition

All other amounts:

Straight-line recognition over the expected average remaining service lifetime (EARSL) of all members that are provided with benefits, determined as of the beginning of the Measurement Period. In determining the EARSL, all active, retired and inactive (vested) members are counted, with the latter two groups having 0 remaining service years.



Important Background Information

(Continued)

Implicit Subsidy Plan Contributions

An implicit subsidy liability is created when expected retiree claims exceed the premiums charged for retiree coverage. This typically occurs when the same premium rates are charged for active and retired members prior to coverage under Medicare. In practical terms, when premiums for active employees each year exceed active employee claims, their premiums include an amount expected to be transferred to cover a portion of the retirees' claims not covered by the premiums charged for retiree coverage. This transfer represents the current year's implicit subsidy. GASB 75 allows for recognition of payments to an irrevocable trust *or directly to the insurer* as an employer's contribution. Therefore, each year's implicit subsidy is a contribution toward the payment of retiree benefits.

The following hypothetical example illustrates this treatment:

Hypothetical Illustration of Implicit Subsidy Recognition	For Active Employees	For Retired Employees
<i>Prior to Implicit Subsidy Adjustment</i>		
Premiums Paid by Agency During Fiscal Year	\$ 411,000	\$ 48,000
Accounting Treatment	Compensation Cost for Active Employees	Contribution to Plan & Benefits Paid from Plan
<i>After Implicit Subsidy Adjustment</i>		
Premiums Paid by Agency During Fiscal Year	\$ 411,000	\$ 48,000
Implicit Subsidy Adjustment	(23,000)	23,000
Accounting Cost of Premiums Paid	\$ 388,000	\$ 71,000
Accounting Treatment Impact	Reduces Compensation Cost for Active Employees	Increases Contributions to Plan & Benefits Paid from Plan

In this example, while total contributions paid toward active and retired employee healthcare premiums is the same, by shifting the recognition of the current year's implicit subsidy from actives to retirees, this amount is recognized as an OPEB contribution and at the same time reduces premium expense for active employees.



Important Background Information

(Continued)

Discount Rate

When the financing of OPEB liabilities is on a pay-as-you-go basis, GASB 75 requires that the discount rate used for valuing liabilities be based on the yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale). When a plan sponsor makes regular, sufficient contributions to a trust in order to prefund the OPEB liabilities, GASB 75 allows use of a rate up to the expected rate of return of the trust. Therefore, prefunding has an advantage of potentially being able to report overall lower liabilities due to future expected benefits being discounted at a higher rate.

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”. GASB 75 specifically requires that the actuarial present value of projected benefit payments be attributed to periods of employee service using the Entry Age Actuarial Cost Method, with each period’s service cost determined as a level percentage of pay.

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.



Addendum 2: MacLeod Watts Age Rating Methodology

Both accounting standards (e.g. GASB 75) 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. Section 3 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 Section 3.
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 3: MacLeod Watts 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 **MacLeod Watts 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.

MacLeod Watts 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 MacLeod Watts 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 MacLeod Watts 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 MacLeod Watts 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 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 of Projected Benefits (APVPB) – The amount presently required to fund all projected plan benefits in the future. This value is determined by discounting the future payments by an appropriate interest rate and the probability of nonpayment.

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

Discount Rate – Interest rate used to discount future potential benefit payments to the valuation date. Under GASB 75, if a plan is prefunded, then the discount rate is equal to the expected trust return. If a plan is not prefunded (pay-as-you-go), then the rate of return is based on a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher.

Expected Average Remaining Service Lifetime (EARSL) – Average of the expected remaining service lives of all employees that are provided with benefits through the OPEB plan (active employees and inactive employees), beginning in the current period

Entry Age Actuarial Cost Method – 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 an excise tax on the value of employer sponsored coverage which exceeds certain thresholds ("Cadillac Plans"). The tax is first effective in 2022.

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

Fiduciary Net Position – The value of trust assets used to offset the Total OPEB Liability to determine the Net OPEB Liability.

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.



Glossary
(Continued)

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.

Net OPEB Liability (NOL) – The liability to employees for benefits provided through a defined benefit OPEB. Only assets administered through a trust that meet certain criteria may be used to reduce the Total OPEB Liability.

Net Position – The Impact on Statement of Net Position is the Net OPEB Liability adjusted for deferred resource items

OPEB Expense – The OPEB expense reported in the Agency’s financial statement. OPEB expense is the annual cost of the plan recognized in the financial statements.

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 75 requires (a) contributions to the OPEB plan be irrevocable, (b) OPEB assets to dedicated to providing OPEB benefit to plan members in accordance with the benefit terms of the plan, and (c) plan assets be legally protected from creditors, the OPEB plan administrator and the plan members.

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)

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

Total OPEB Liability (TOL) – 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; a subset of “Actuarial Present Value”

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

