MacLeod Watts

October 16, 2019

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

Re: City of Palm Springs Other Post-Employment Benefits

GASB 75 Actuarial Report for the Fiscal Year Ending June 30, 2019

Dear Ms. Hardcastle:

We are pleased to enclose our actuarial report providing information needed for the June 30, 2019 accounting of the other post-employment benefit (OPEB) liabilities of the City of Palm Springs. 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, 2019. The information included in this report reflects the assumption that the City will continue financing its OPEB liability on a pay-as-you-go basis. Please let us know if we can be of assistance in preparing illustrations of how prefunding impacts the OPEB liability required to be reported under GASB 75.

The results presented are based on the results of an actuarial valuation prepared as of June 30, 2017 and on the employee data and details on plan benefits reported to us for that valuation. The City also provided information on retiree benefit payments and total covered employee payroll for the current fiscal year. The only change reflected in this report relative to the report for FYE 2018 is an update to the discount rate, reflecting the change in the underlying municipal bond index.

As with any analysis, the soundness of the report is dependent on the inputs. Please review the information shown in the report to be comfortable that it matches your records.

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

Sincerely,

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

Principal & Consulting Actuary

Enclosure



City of Palm Springs

GASB 75 Actuarial Report Measured as of June 30, 2018 For Fiscal Year End June 30, 2019 Financial Reporting

Submitted October 2019

MacLeod Watts

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A. Executive Summary

This report presents actuarial information regarding the other post-employment benefit (OPEB) program of the City of Palm Springs (the City). The purpose of this valuation is to assess the OPEB liabilities and provide disclosure information as required by Statement No. 75 of the Governmental Accounting Standards Board (GASB 75) for the fiscal year ending June 30, 2019.

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 present various exhibits and other relevant information appropriate for disclosures under GASB 75.

We anticipate that an updated valuation will be needed prior to developing this information for the City's fiscal year ending June 30, 2020.

OPEB Obligations of the City

The City provides continuation of medical coverage to its retiring employees. This benefit may create one or more of 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 pays a portion of medical premiums for qualifying retirees. Details are provided in Supporting Information Section 2A.
 - The Patient Protection and Affordable Care Act (ACA) includes a 40% excise tax on high-cost employer-sponsored health coverage. Any portion of such future excise tax paid by the employer is also a form of explicit subsidy. See Supporting Information Section 2B and Section 3 for further description and assumptions about this potential excise tax.
- 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.

OPEB Funding Policy

The City's OPEB funding policy affects the calculation of liabilities by impacting the discount rate 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. Payas-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.



Executive Summary (Continued)

Our understanding is that the City is currently financing its OPEB liability on a pay-as-you-go basis. With the City's approval, the discount rate used in this valuation is based on the S&P Municipal Bond 20 Year High Grade Index. As of the beginning and end of the Measurement Period, use of this index results in discount rates of 3.13% on June 30, 2017 and 2.98% on June 30, 2018.

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:

Fiscal Year End June 30, 2019
Valuation Date June 30, 2017
Measurement Date June 30, 2018

Measurement Period June 30, 2017 to June 30, 2018

Significant Results and Differences from the Prior Valuation

This valuation is based on a roll forward of the June 30, 2017 actuarial valuation. No benefit changes were reported to MacLeod Watts from those in place at the time the 2017 valuation was prepared, nor any material unanticipated changes in the number of members covered by the plan or in applicable premium rates. Accordingly, no plan experience was recognized, and no assumptions were changed, other than an update to the discount rate to reflect the applicable municipal bond rate as of the current measurement date. The discount rate change increased the Total OPEB Liability by 2.5% or about \$3.8 million over what was expected had there been no change in this rate.



Executive Summary (Concluded)

Impact on Statement of Net Position and OPEB Expense for Fiscal 2019

The plan's impact to Net Position will be the sum of difference between assets and liabilities as of the measurement date plus the unrecognized net outflows and inflows of resources. Different recognition periods apply to deferred resources depending on their origin. The plan's impact on Net Position on the measurement date can be summarized as follows:

Items	Fis	or Reporting At scal Year Ending June 30, 2019
Total OPEB Liability	\$	149,759,465
Fiduciary Net Position		
Net OPEB Liability (Asset)		149,759,465
Deferred (Outflows) of Resources		(6,889,064)
Deferred Inflows of Resources		8,066,798
Impact on Statement of Net Position	\$	150,937,199
OPEB Expense, FYE 6/30/2019	\$	6,672,186

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, 2019. 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 for FYE June 30, 2019 Measurement Date is June 30, 2018		City of Palm Springs
Items Impacting Net Position:		
Total OPEB Liability	\$	149,759,465
Fiduciary Net Position		-
Net OPEB Liability (Asset)		149,759,465
Deferred (Outflows) Inflows of Resources Due to:		
Assumption Changes		4,876,052
Plan Experience		-
Investment Experience		-
Deferred Contributions		(3,698,318)
Net Deferred (Outflows) Inflows of Resources		1,177,734
Impact on Statement of Net Position, FYE 6/30/2019	\$	150,937,199
Items Impacting OPEB Expense:		
Service Cost	\$	3,358,204
Cost of Plan Changes	-	-
Interest Cost		4,484,043
Expected Earnings on Assets		-
Recognized Deferred Resource items:		
Assumption Changes		(1,170,061)
Plan Experience		-
Investment Experience		-
OPEB Expense, FYE 6/30/2019	\$	6,672,186



Change in Net Position During the Fiscal Year

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

For Reporting at Fiscal Year End Measurement Date		6/30/2018 6/30/2017	6/30/2019 6/30/2018	Change During Period
Total OPEB Liability	\$	141,642,158	\$ 149,759,465	\$ 8,117,307
Fiduciary Net Position		-	-	-
Net OPEB Liability (Asset)		141,642,158	149,759,465	8,117,307
Deferred Resource (Outflows) Inflows Due to:				
Assumption Changes		9,801,593	4,876,052	(4,925,541)
Plan Experience		-	-	-
Investment Experience		-	-	-
Deferred Contributions		(3,480,420)	(3,698,318)	(217,898)
Net Deferred (Outflows) Inflows		6,321,173	1,177,734	(5,143,439)
Impact on Statement of Net Position	\$	147,963,331	\$ 150,937,199	\$ 2,973,868
Change in Net Position During the Fiscal Year				
Impact on Statement of Net Position, FYE 6/30/20	018		\$ 147,963,331	
OPEB Expense (Income)			6,672,186	
Employer Contributions During Fiscal Year			 (3,698,318)	
Impact on Statement of Net Position, FYE 6/30/20	019		\$ 150,937,199	
OPEB Expense				
Employer Contributions During Fiscal Year			\$ 3,698,318	
Deterioration (Improvement) in Net Position			2,973,868	
OPEB Expense (Income), FYE 6/30/2019			\$ 6,672,186	



Recognition Period for Deferred Resources

Liability changes due to plan experience which differs from what was assumed in the prior measurement period and/or from assumption changes during the period are recognized over the plan's Expected Average Remaining Service Life ("EARSL"). The Expected Average Remaining Service Life ("EARSL") is 6.65 years for such changes arising during the current measurement period.

When applicable, 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.

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, 2019.

City of Palm Springs	De	eferred Outflows of Resources	D	Deferred Inflows of Resources
Changes of Assumptions	\$	3,190,746	\$	8,066,798
Differences Between Expected and Actual Experience		-		-
Net Difference Between Projected and Actual Earnings on Investments		-		-
Deferred Contributions		3,698,318		-
Total	\$	6,889,064	\$	8,066,798

The City will recognize the Deferred Contributions 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
2020	\$ (1,170,061)
2021	(1,170,061)
2022	(1,170,061)
2023	(1,170,061)
2024	(562,884)
Thereafter	367,076



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

The discount rate used for the fiscal year end 2019 is 2.98%. Healthcare cost trend rate was assumed to start at 8.0% (effective January 2018) and grade down to 5% for years 2024 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% 1.98%	Current 2.98%	Current + 1% 3.98%							
Total OPEB Liability Increase (Decrease) % Increase (Decrease)	178,785,120 29,025,655 19.4%	149,759,465	127,121,566 (22,637,899) -15.1%							
Change in Heathcare Cost Trend Rate	Current Trend - 1%	Current Trend	Current Trend + 1%							
Total OPEB Liability Increase (Decrease) % Increase (Decrease)	121,153,633 (28,605,832) -19.1%	149,759,465	189,687,717 39,928,252 26.7%							



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. Since this is the second year of implementation, only results for fiscal years 2018 and 2019 are shown in the table.

Fiscal Year End		FYE 2019	FYE 2018			
Measurement Date		6/30/2018		6/30/2017		
Total OPEB liability						
Service Cost	\$	3,358,204	\$	3,726,841		
Interest		4,484,043		4,040,843		
Changes of benefit terms		-		-		
Differences between expected and actual experience		-		-		
Changes of assumptions		3,755,480		(11,536,388)		
Benefit payments		(3,480,420)		(3,280,004)		
Net change in total OPEB liability		8,117,307		(7,048,708)		
Total OPEB liability - beginning		141,642,158		148,690,866		
Total OPEB liability - ending (a)	\$	149,759,465	\$	141,642,158		
Plan fiduciary net position - beginning		-				
Plan fiduciary net position - ending (b)	\$	-	\$	-		
Net OPEB liability - ending (a) - (b)	\$	149,759,465	\$	141,642,158		
Covered-employee payroll	\$	45,672,020	\$	34,929,760		
Net OPEB liability as a % of covered-employee payroll		327.90%		405.51%		
Summary of key assumptions						
Valuation Date:	6/30/2017					
Actuarial cost method		Entry Age Normal				
Inflation		2.7	' 5%			
Healthcare cost trend rates)% in 2018, ste				
Salany increases	year to 5% in 2024 3.25%					
Salary increases Discount rate						
Retirement age		2.3870 From 5	 ;0 t≀	3.13% o 75		
Mortality		CalPERS 2014 Ex				
,	Projected with MW Scale 2017					



Accounting Information

(Continued)

Detail of Changes to Net Position

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

	Total Fiduciary Net (d) Deferred Outflows (Inflows) Due to:									
City of Palm Springs	OPEB Liability (a)	Net Position (b)	OPEB Liability (c) = (a) - (b)	Assumption Changes	Plan Experience	Investment Experience	Deferred Contributions	Statement of Net Position (e) = (c) - (d)		
Balance at Fiscal Year Ending 6/30/2018 Measurement Date 6/30/2017	\$ 141,642,158	\$ -	\$ 141,642,158	\$ (9,801,593)	\$ -	\$ -	\$ 3,480,420	\$ 147,963,331		
Changes During the Period:										
Service Cost	3,358,204		3,358,204					3,358,204		
Interest Cost	4,484,043		4,484,043					4,484,043		
Expected Investment Income		-	-					-		
Employer Contributions		3,480,420	(3,480,420)					(3,480,420)		
Changes of Benefit Terms	-		-					-		
Benefit Payments	(3,480,420)	(3,480,420)	-					-		
Assumption Changes	3,755,480		3,755,480	3,755,480				-		
Plan Experience	-		-		-			-		
Investment Experience		-	-			-		-		
Recognized Deferred Resources				1,170,061	-	-	(3,480,420)	2,310,359		
Employer Contributions in Fiscal Year							3,698,318	(3,698,318)		
Net Changes in Fiscal Year 2018-2019	8,117,307	-	8,117,307	4,925,541	-	-	217,898	2,973,868		
Balance at Fiscal Year Ending 6/30/2019 Measurement Date 6/30/2018	\$ 149,759,465	\$ -	\$ 149,759,465	\$ (4,876,052)	\$ -	\$ -	\$ 3,698,318	\$ 150,937,199		



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 Pension Expense is shown below. Deferred Contributions are not shown.

Measurement Date: June 30, 2018

	Deferr			Recognition of Deferred Outflow or Deferred (Inflow) in Measurement Period:						riod:		
Date Created	Cause	Initial Amount	Period (Yrs)		Balance as of Jun 30, 2018	2017-18 (FYE 2019)	2018-19 (FYE 2020)	2019-20 (FYE 2021)	2020-21 (FYE 2022)	2021-22 (FYE 2023)	2022-23 (FYE 2024)	Thereafter
	Gain Due To									•		
6/30/2017	Assumption Changes	\$ (11,536,388)	6.65	\$ (1,734,795)	\$ (8,066,798)	\$(1,734,795)	\$(1,734,795)	\$(1,734,795)	\$(1,734,795)	\$(1,734,795)	\$(1,127,618)	\$ -
	Loss Due To											
6/30/2018	Assumption Changes	3,755,480	6.65	564,734	3,190,746	564,734	564,734	564,734	564,734	564,734	564,734	367,076



City Contributions to the Plan

City contributions to the Plan occur as benefits are paid to or on behalf of retirees. 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.

Benefits paid by the City during the measurement period and those made in the year following the measurement period but prior to the end of the fiscal year are shown below. Note that the implicit subsidy contribution does not represent cash payments to retirees, but rather reclassification of a portion of the active healthcare expense to be recognized instead as a retiree healthcare expense.

Employer Contributions During the Measurement Period, 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	
Total Employer Contributions During the Measurement Period	\$	3,480,420	

Employer Contributions During the Fiscal Year, Jul 1, 2018 thru Jun 30, 2019	City of Palm Springs		
Employer Contributions to the Trust	\$	-	
Employer Contributions in the Form of Direct Benefit Payments (not reimbursed by trust)		2,877,640	
Implicit contributions		820,678	
Total Employer Contributions During the Fiscal Year	\$	3,698,318	



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.

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	E	xplicit Subsid	у	lr	Implicit Subsidy				
Ending	Current	Future		Current	Future				
June 30	Retirees	Retirees	Total	Retirees	Retirees	Total	Total		
2018	2,778,834	-	2,778,834	701,586	-	701,586	3,480,420		
2019	2,877,640	-	2,877,640	820,678	-	820,678	3,698,318		
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		
2032	3,082,648	3,127,883	6,210,531	111,353	814,159	925,512	7,136,043		

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.



Sample Journal Entries

Beginning Account Balances		
As of the fiscal year beginning 7/1/2018	Debit	Credit
Net OPEB Liability		141,642,158
Deferred Resource Assumption Changes		9,801,593
Deferred Resource Plan experience	-	
Deferred Resource Investment Experience	-	
Deferred Resource Contributions	3,480,420	
Net Position	147,963,331	

^{*} 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 entry to recharacterize retiree benefit payments not reimbursed by a trust, and record cash contributions to the trust

during the fiscal year	Debit	Credit
OPEB Expense	2,877,640	
Premium Expense		2,877,640
OPEB Expense	-	
Cash		_

^{*} This entry assumes a prior journal entry was made to record the payment for retiree premiums. This entry assumes the prior entry debited an account called "Premium Expense" and credited Cash. This entry reverses the prior debit to "Premium Expense" and recharacterizes that entry as an "OPEB Expense". Also, the entry for cash contributions to the trust is shown.

Journal entries to record implicit subsidies

during the fiscal year	Debit Credit
OPEB Expense	820,678
Premium Expense	820.678

^{*} This entry assumes that premiums for active employees were recorded to an account called "Premium Expense". 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	Debit	Credit
Net OPEB Liability		8,117,307
Deferred Resource Assumption Changes	4,925,541	
Deferred Resource Plan experience	-	
Deferred Resource Investment Experience	-	
Deferred Resource Contributions	217,898	
OPEB Expense	2,973,868	



C. Funding Information

Our understanding is that the City is currently financing its OPEB liability on a pay-as-you-go basis. Prefunding (setting aside funds to accumulate in an irrevocable OPEB trust) has certain advantages, one of which is the ability to (potentially) use a higher discount rate in the determination of liabilities for GASB 75 reporting purposes.

Should the City wish to explore potential future prefunding for this plan we can prepare illustrations of various funding levels and, if appropriate, perform a formal funding valuation at that time. Results under a funding scenario may be materially different from the results presented in this report.



D. 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: October 16, 2019

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

J. Kevin Watts, FSA, FCA, MAAA



E. Supporting Information

Section 1 - Summary of Employee Data

Active employees: The City reported 354 active employees in the data provided to us for the June 2017 valuation. Of these, 334 were shown as currently enrolled through the City's medical program while 20 employees were waiving coverage.

Distribution of Benefits-Eligible Active Employees								
	Years of Service							
Current Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 & Up	Total	Percent
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	<u>June 2015</u>	<u>June 2017</u>
Average Attained Age for Actives	46.8	47.5
Average Years of Service	13.0	12.0

Retired members: There were also 209 retirees or their beneficiaries receiving benefits on the valuation date. 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				



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 Tota							
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				

GASB 75 Summary of Plan Members: GASB 75 requires the employer to report specific plan member counts. The chart below shows these counts as of the June 30, 2017 valuation date:

Summary of Plan Member Counts				
Number of active plan members	354			
Number of inactive plan members currently receiving benefits	209			
Number of inactive plan members entitled to but not receiving benefits	265*			

^{*} Waiving miscellaneous retirees covered by the City's PEMHCA resolution who are eligible to re-enroll in CalPERS medical coverage



Section 2A - 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 employed, 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. 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.



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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									
			Premium %		Included				
Group	Retired After	Hired Prior To	Paid By City	For How Long?	Parties	Plan			
Elected Officials			50% after 7.5 years						
	7/1/1999	7/1/2007	75% after 11.5 years	 1 0/ 6	Dating a 0	CalPERS			
and Exempt			100% after 15.5 years	The % of	Retiree &				
Management	7/1/1999	9/7/2005		premium paid	Spouse	Medical			
General	7/1/1999	12/7/2005	750/ often 20 weems	by the City continues for					
Fire Management	7/1/2000	7/1/2006	75% after 20 years	the retiree's	Retiree & All				
Fire Safety	1/1/1998	11/1/2006	100% after 25 years	lifetime.	Eligible	Blue Shield			
Police Management	7/1/1998	10/20/2005	100% after 25 years	inetime.	Dependents	PPO			
Police Safety	11/1/1997	10/25/2006			Dependents				

- 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. The MEC is \$136 per month during 2019. 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.



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Section 2B - Excise Taxes for High Cost Retiree Coverage

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.³

For those current and future retirees assumed to retain coverage in the City's medical program, 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 2020 (the effective date was subsequently delayed to 2022). The excise tax burden will ultimately fall on the City alone, a combination of the City and plan participants, or be entirely borne by the affected retirees. The practicalities of how the tax will be recovered by insurers will likely affect the eventual cost-sharing result.

See Section 3 for assumptions about this excise tax in the valuation. Please note that any assumptions applied in this valuation are not intended to imply any legal obligation as to the City's current or future liability to absorb this potential tax. This valuation includes about \$11 million in potential excise tax liability for high cost retiree coverage, which represents about 7.5% of the Total OPEB Liability.

³ In July 2019, the U.S. House of Representatives passed a bill to repeal the excise tax on high cost health coverage. It is anticipated the Senate may draft and approve a similar bill and, if so, that the President would sign this into law.



Section 3 - Actuarial Methods and Assumptions

Valuation Date June 30, 2017

Measurement Date Last day of the prior fiscal year (June 30, 2018)

Funding Method Entry Age Normal Cost, level percent of pay

Asset Valuation Method Market value of assets (\$0; plan is not yet funded)

Municipal Bond Index S&P General Obligation Municipal Bond 20 Year High Grade

Discount Rate 3.13% as of June 30, 2017

2.98% as of June 30, 2018

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, since benefits do not depend on salary, this is

used only to allocate the cost of benefits between service years

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. The representative mortality rates were those published by CalPERS adjusted to back out 20 years of Scale BB to central year 2008.

Mortality Improvement MacLeod Watts Scale 2017 applied generationally from 2008.

Medicare Eligibility Absent contrary data, all individuals are assumed to be eligible

for Medicare Parts A and B at age 65.

Service Retirement Rates Retirement rates from the CalPERS experience study described

above were applied for the following retirement plan formulas:

	Miscellaneous	Police	Fire
Classic First Level	2.7% @ 55	3% @ 50	3% @ 50
Classic Second Level	2% @ 60	3% @ 55	3% @ 55
PEPRA	2% @ 62	2.7% @ 57	2.7% @ 57
Classic First Level Hire Date Cutoff	12/24/2012	6/17/2011	12/17/2011



Section 3 - Actuarial Methods and Assumptions

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	Premium	Effective	Premium
January 1	Increase	January 1	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%.

Increases in City cost-sharing

We assumed the fixed dollar maximum will increase by 1% per year, up to the year of each employee's retirement, remaining constant thereafter.

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.



Section 3 - Actuarial Methods and Assumptions

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

We assumed the excise tax for high cost plan coverage for retirees will go into effect in the year 2020.⁴ Annual threshold amounts under the Affordable Care Act (ACA) are shown below.

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. A 40% excise tax rate was applied to the portion of premiums projected to exceed the threshold each year. We assumed that 100% of any excise tax liability for high cost retiree coverage will be borne by the City.

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 recognized during the current measurement period:

Discount Rate

Changed from 3.13% as of June 30, 2017 to 2.98% as of June 30, 2018, based on the published change in return for the applicable municipal bond index.

⁴ The effective date has since been delayed until January 2022; repeal of this tax remains a possibility.



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 leave (unless converted to defined benefit OPEB), or other direct retiree payments.

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.

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 Table 1 and a summary of the benefits provided under the Plan is provided in Section 2. While individual employee records were 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 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 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



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.



Implicit Subsidy Plan Contributions

An implicit subsidy occurs when expected retiree claims exceed the premiums charged for retiree coverage. When this occurs, we expect part of the premiums paid for active employees to cover a portion of retiree claims. This transfer represents the current year's "implicit subsidy". Because GASB 75 treats payments to an irrevocable trust *or directly to the insurer* as employer contributions, each year's implicit subsidy is treated as a contribution toward the payment of retiree benefits.

The following hypothetical example illustrates this treatment:

Hypothetical Illustration		For Active		For Retired			
of Implicit Subsidy Recognition Employees Employees Prior to Implicit Subsidy Adjustment							
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			
After Implicit Subsidy Adjustment							
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			
	Reduc	es Compensation	Increase	es Contributions			
Accounting Treatment Impact		Cost for Active		to Plan & Benefits Paid			
		Empl oyees		from Plan			

The example above shows that total payments toward active and retired employee healthcare premiums is the same, but for accounting purposes part of the total is shifted from actives to retirees. This shifted amount is recognized as an OPEB contribution and reduces the current year's premium expense for active employees.



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

<u>Actuarial Funding Method</u> – 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

<u>Actuarial Present Value of Projected Benefits (APVPB)</u> – 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.

<u>CalPERS</u> – 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

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

<u>Defined Contribution (DC)</u> – 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

<u>Discount Rate</u> - 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.

<u>Expected Average Remaining Service Lifetime (EARSL)</u> – 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

<u>Entry Age Actuarial Cost Method</u> – 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

<u>Excise Tax</u> – 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 is 2022.

<u>Explicit Subsidy</u> — 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

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

<u>Government Accounting Standards Board (GASB)</u> – 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

<u>Health Care Trend</u> – 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)

<u>Implicit Subsidy</u> – 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.

<u>Net OPEB Liability (NOL)</u> – 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.

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

<u>OPEB Expense</u> – The OPEB expense reported in the Agency's financial statement. OPEB expense is the annual cost of the plan recognized in the financial statements.

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

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

<u>PEMHCA</u> – 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.

<u>Plan Assets</u> – 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.

<u>Public Agency Miscellaneous (PAM)</u> – Non-safety public employees.

<u>Select and Ultimate</u> – 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)

<u>Service Cost</u> – 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

<u>Total OPEB Liability (TOL)</u> – 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"

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

