MacLeod Watts

September 5, 2018

Mr. Daniel Schwarz
City Manager
City of Larkspur
400 Magnolia Ave
Larkspur, CA 94939

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

Dear Mr. Schwarz:

We are pleased to enclose our report providing information for the June 30, 2018 accounting of other post-employment benefit (OPEB) liabilities for City of Larkspur (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 basic results were developed in our actuarial valuation dated January 1, 2017. The information included in this report reflects a discount rate of 3.56%, the Fidelity Municipal Bond AA 20-Year Yield on June 30, 2017.

This report reflects the employee data and details on plan benefits provided by the City as well as benefit payments, trust contribution and payroll information. 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 comfortable that we have captured this correctly.

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

Sincerely,

Catherine L. MacLeod

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

Enclosure

City of Larkspur

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

Submitted September 2018

MacLeod Watts

Table of Contents

A. Executive Summary

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

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 in detail the valuation results and present various exhibits intended to assist the City with the required disclosures under GASB 75. We anticipate that the next actuarial valuation will be dated as of January 1, 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. These benefits create 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 retiree medical premiums for qualifying retirees. These benefits are described in 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 CalPERS medical program, the same monthly premiums are charged for active employees and for pre-Medicare retirees. CalPERS has confirmed that the claims experience of these members is considered together in setting premium rates. We determine the implicit rate subsidy for pre-Medicare retirees 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 Medicare-eligible members different monthly premiums are charged. CalPERS has confirmed that only the claims experience of Medicare eligible members is considered in setting Medicare-eligible premium rates. We have assumed that this premium structure is adequate to cover the expected claims of retirees and believe that there is no implicit subsidy of premiums for these members by active employees.

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-as-you-go, or "PAYGO", is the term used when an agency only contributes the required retiree

Executive Summary
(Continued)

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 established an irrevocable OPEB trust with assets dedicated toward paying future retiree medical benefits. The City expects the trust assets to yield 6.5% over the long term, based on information published by CalPERS as of the January 1, 2017 valuation date. Net contributions to the trust in recent years have been limited, however, with the City annually contributing modest amounts in excess of the current year's retiree benefits.

When total OPEB contributions are less than the ADC, the discount rate is typically determined based on the results of a "Crossover Test". In this test, plan benefits for all current and future retirees are projected by year by year. Where the trust is expected to have sufficient assets to pay all retiree benefits in a particular year, the assumed trust rate of return is applied; once the trust is no longer expected to be able to pay plan benefits, a municipal bond rate is applied for the remainder of the projection period. Trust assets as of the Measurement Date would not cover one year of retiree benefits; accordingly, a municipal bond rate was used for all years in developing the results presented in this report. The City approved use of the Fidelity 20 Year AA General Obligation Municipal Bond Index. As of the beginning and end of the Measurement Period, use of this index results in discount rates of 2.92% as of June 30, 2016 and 3.56% as of June 30, 2017.

Actuarial Assumptions

The actuarial "demographic" assumptions (e.g., rates of service retirement, disability, withdrawal and death) 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. Section 3 describes the assumptions used in this report.

Important Dates Used in the Valuation

GASB75 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	January 1, 2017
Measurement Date	June 30, 2017
Measurement Period	June 30, 2016 to June 30, 2017
Fiscal Year	June 30, 2018

Executive Summary
(Concluded)

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 us during this period and no assumptions changes were made other than in the discount rate used to value the liabilities. To develop the liability at the beginning and end of the Measurement Period, we rolled back and rolled forward the results of the January 1, 2017 valuation by 6 months. Using this approach, 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	$ 18,319,049
Fiduciary Net Position	357,656
Net OPEB Liability (Asset)	17,961,393
Deferred (Outflows) of Resources	(805,119)
Deferred Inflows of Resources	1,432,178
Impact on Statement of Net Position	$ 18,588,452
OPEB Expense, FYE 2018	$ 916,012

Recognition Period for Deferred Resources

The plan's Expected Average Remaining Service Life ("EARSL") is 4.86 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 *Measurement Date is June 30, 2017*	**City of Larkspur**
Items Impacting Net Position:	
Total OPEB Liability	$ 18,319,049
Fiduciary Net Position	357,656
Net OPEB Liability (Asset)	17,961,393
Deferred (Outflows) Inflows of Resources Due to:	
Assumption Changes	1,432,178
Plan Experience	-
Investment Experience	(5,909)
Contributions Subsequent to Measurement Date	(799,210)
Net Deferred (Outflows) Inflows of Resources	627,059
Impact on Statement of Net Position, FYE 6/30/2018	**$ 18,588,452**
Items Impacting OPEB Expense:	
Service Cost	$ 721,450
Cost of Plan Changes	-
Interest Cost	578,714
Expected Earnings on Assets	(14,652)
Administrative Expense	53
Recognized Deferred Resource items:	
Assumption Changes	(371,030)
Plan Experience	-
Investment Experience	1,477
OPEB Expense, FYE 6/30/2018	**$ 916,012**

The Total OPEB Liability (TOL) as of the June 30, 2017 Measurement Date is comprised of these three components:

Explicit	Excise Tax	Implicit	TOL
$ 15,776,644	$ 120,859	$ 2,421,546	$ 18,319,049
86.1%	0.7%	13.2%	100.0%

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 Larkspur			
For Reporting at Fiscal Year End	**6/30/2017**	**6/30/2018**	**Change During Period**
Measurement Date	*6/30/2016*	*6/30/2017*	
Total OPEB Liability	$ 19,372,957	$ 18,319,049	$ (1,053,908)
Fiduciary Net Position	100,443	357,656	257,213
Net OPEB Liability (Asset)	19,272,514	17,961,393	(1,311,121)
Deferred Resource (Outflows) Inflows Due to:			
Assumption Changes	-	1,432,178	1,432,178
Plan Experience	-	-	-
Investment Experience	-	(5,909)	(5,909)
Contributions Made Subsequent to the Measurement Date	(800,864)	(799,210)	1,654
Net Deferred (Outflows) Inflows	(800,864)	627,059	1,427,923
Impact on Statement of Net Position	$ 18,471,650	$ 18,588,452	$ 116,802

Change in Net Position During the Fiscal Year	
Impact on Statement of Net Position, FYE 2017	$ 18,471,650
OPEB Expense (Income)	916,012
Employer Contributions During Fiscal Year	(799,210)
Impact on Statement of Net Position, FYE 2018	$ 18,588,452

OPEB Expense	
Employer Contributions During Fiscal Year	$ 799,210
Deterioration (Improvement) in Net Position	116,802
OPEB Expense (Income), FYE 2018	$ 916,012

Accounting Information
(Continued)

Change in Fiduciary Net Position During the Measurement Period

		City of Larkspur
Fiduciary Net Position at Fiscal Year Ending 6/30/2017 *Measurement Date 6/30/2016*	**$**	**100,443**
Changes During the Period:		
Investment Income		7,266
Employer Contributions		800,864
Administrative Expense		(53)
Benefit Payments		(550,864)
Net Changes in Fiscal Year 2017-2018		257,213
Fiduciary Net Position at Fiscal Year Ending 6/30/2018 *Measurement Date 6/30/2017*	**$**	**357,656**

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 Larkspur	Deferred Outflows of Resources	Deferred Inflows of Resources
Changes of Assumptions	$ -	$ 1,432,178
Differences Between Expected and Actual Experience	-	-
Net Difference Between Projected and Actual Earnings on Investments	5,909	-
Contributions Made Subsequent to the Measurement Date	799,210	-
Total	$ 805,119	$ 1,432,178

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	$ (369,553)
2020	(369,553)
2021	(369,553)
2022	(317,610)
2023	-
Thereafter	-

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 (measurement date June 30, 2017) is 3.56%. The Healthcare Cost Trend Rate was assumed to start at 7.5% and grade down to 5.0% 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% 2.56%**	**Current 3.56%**	**Current + 1% 4.56%**
Total OPEB Liability	21,122,766	18,319,049	15,832,492
Increase (Decrease)	2,803,717		(2,486,557)
% Increase (Decrease)	15.3%		-13.6%
Net OPEB Liability (Asset)	20,765,110	17,961,393	15,474,836
Increase (Decrease)	2,803,717		(2,486,557)
% Increase (Decrease)	15.6%		-13.8%
Change in Heathcare Cost Trend Rate	**Current Trend - 1%**	**Current Trend**	**Current Trend + 1%**
Total OPEB Liability	15,461,667	18,319,049	21,929,028
Increase (Decrease)	(2,857,382)		3,609,979
% Increase (Decrease)	-15.6%		19.7%
Net OPEB Liability (Asset)	15,104,011	17,961,393	21,571,372
Increase (Decrease)	(2,857,382)		3,609,979
% Increase (Decrease)	-15.9%		20.1%

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 Larkspur
Total OPEB liability	
Service Cost	$ 721,450
Interest	578,714
Changes of benefit terms	-
Differences between expected and actual experience	-
Changes of assumptions	(1,803,208)
Benefit payments	(550,864)
Total OPEB liability - beginning	19,372,957
Total OPEB liability - ending (a)	$ 18,319,049
Plan fiduciary net position	
Contributions - employer	$ 800,864
Net investment income	7,266
Benefit payments	(550,864)
Administrative Expense	(53)
Net change in plan fiduciary net position	257,213
Plan fiduciary net position - beginning	100,443
Plan fiduciary net position - ending (b)	$ 357,656
Net OPEB liability - ending (a) - (b)	$ 17,961,393
Covered-employee payroll	$ 4,854,741
Net OPEB liability as a percentage of covered-employee payroll	369.98%

Accounting Information
(Continued)

Detail of Changes to Net Position

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

City of Larkspur	Total OPEB Liability (a)	Fiduciary Net Position (b)	Net OPEB Liability (c) = (a) - (b)	(d) Deferred Outflows (Inflows) Due to: Assumption Changes	Plan Experience	Investment Experience	Contributions Subsequent to Measurement Date	Impact on Statement of Net Position (e) = (c) - (d)
Balance at Fiscal Year Ending 6/30/2017 *Measurement Date 6/30/2016*	$ 19,372,957	$ 100,443	$ 19,272,514	$ -	$ -	$ -	$ 800,864	$ 18,471,650
Changes During the Period:								
Service Cost	721,450		721,450					721,450
Interest Cost	578,714		578,714					578,714
Expected Investment Income		14,652	(14,652)					(14,652)
Employer Contributions		800,864	(800,864)					(800,864)
Changes of Benefit Terms	-		-					-
Administrative Expense		(53)	53					53
Benefit Payments	(550,864)	(550,864)	-					-
Assumption Changes	(1,803,208)		(1,803,208)	(1,803,208)				-
Plan Experience	-		-		-			-
Investment Experience		(7,386)	7,386			7,386		-
Recognized Deferred Resources				371,030	-	(1,477)	(800,864)	431,311
Employer Contributions Subsequent to Measurement date							799,210	(799,210)
Net Changes in Fiscal Year 2017-2018	(1,053,908)	257,213	(1,311,121)	(1,432,178)	-	5,909	(1,654)	116,802
Balance at Fiscal Year Ending 6/30/2018 *Measurement Date 6/30/2017*	$ 18,319,049	$ 357,656	$ 17,961,393	$ (1,432,178)	$ -	$ 5,909	$ 799,210	$ 18,588,452

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

					Recognition of Deferred Outflow or Deferred (Inflow) in Measurement Period:						
Date Created	Cause of Deferred Resource	Initial Amount	Annual Recognition	Balance as of Jun 30, 2017	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	$ (1,803,208)	$ (371,030)	$ (1,432,178)	$ (371,030)	$ (371,030)	$ (371,030)	$ (371,030)	$ (319,088)	$ -	$ -
6/30/2017	Investment Earnings Less than Expected	7,386	1,477	5,909	1,477	1,477	1,477	1,477	1,478	-	-

Accounting Information
(Continued)

City Contributions to the Plan

City contributions to the Plan occur as benefits are paid to retirees and/or to the 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.

Benefits and other contributions 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.

Benefit Payments During the Measurement Period, Jul 1, 2016 thru Jun 30, 2017	**City of Larkspur**
Benefits Paid by Trust	$ -
Benefits Paid by Employer (not reimbursed by trust)	434,928
Implicit benefit payments	115,936
Total Benefit Payments During the Measurement Period	$ 550,864

Employer Contributions During the Measurement Period, Jul 1, 2016 thru Jun 30, 2017	**City of Larkspur**
Employer Contributions to the Trust	$ 250,000
Employer Contributions in the Form of Direct Benefit Payments (not reimbursed by trust)	434,928
Implicit contributions	115,936
Total Employer Contributions During the Measurement Period	$ 800,864

Employer Contributions Subsequent to the Measurement Date, Jul 1, 2017 thru Jun 30, 2018	**City of Larkspur**
Employer Contributions to the Trust	$ 200,000
Employer Contributions in the Form of Direct Benefit Payments (not reimbursed by trust)	454,036
Implicit contributions	145,174
Total Employer Contributions Subsequent to the Measurement Date	$ 799,210

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.

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

Projected Annual Benefit Payments							
Fiscal Year Ending June 30	Explicit Subsidy			Implicit Subsidy			Total
	Current Retirees	Future Retirees	Total	Current Retirees	Future Retirees	Total	
2017	$ 434,928	$ -	$ 434,928	$ 115,936	$ -	$ 115,936	$ 550,864
2018	454,036	-	454,036	145,174	-	145,174	599,210
2019	397,883	90,266	488,149	90,236	45,032	135,268	623,417
2020	414,290	131,559	545,849	102,045	62,977	165,022	710,871
2021	422,504	177,452	599,956	104,507	81,974	186,481	786,437
2022	417,445	230,855	648,300	88,884	104,797	193,681	841,981
2023	412,263	283,787	696,050	70,951	127,251	198,202	894,252
2024	407,205	334,443	741,648	61,601	144,633	206,234	947,882
2025	398,366	385,634	784,000	54,019	160,121	214,140	998,140
2026	372,525	440,626	813,151	31,150	183,716	214,866	1,028,017
2027	353,098	491,589	844,687	16,484	200,800	217,284	1,061,971
2028	349,957	534,675	884,632	15,852	206,870	222,722	1,107,354
2029	342,948	571,436	914,384	14,972	209,214	224,186	1,138,570
2030	340,380	610,757	951,137	17,605	223,926	241,531	1,192,668
2031	334,071	642,868	976,939	11,823	232,140	243,963	1,220,902

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.

PVPB: The Actuarial Present Value of Projected Future Benefits is $23,687,885, determined using the same 3.56% discount rate used to develop the Total OPEB Liability as of June 30, 2017.

Accounting Information
(Concluded)

Sample Journal Entries

Beginning Account Balances As of the fiscal year beginning 7/1/2017	City of Larkspur Debit	 Credit
Net OPEB Liability		19,272,514
Deferred Resource -- Assumption Changes	-	
Deferred Resource -- Plan experience	-	
Deferred Resource -- Investment Experience	-	
Deferred Resource -- Contributions	800,864	
Net Position	18,471,650	

** 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	City of Larkspur Debit	 Credit
OPEB Expense	654,036	
Employer Contributions for Retiree Benefits During Fiscal Year		654,036

** 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	City of Larkspur Debit	 Credit
OPEB Expense	145,174	
Premium Expense During Fiscal Year		145,174

** 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	City of Larkspur Debit	 Credit
Net OPEB Liability	1,311,121	
Deferred Resource -- Assumption Changes		1,432,178
Deferred Resource -- Plan experience	-	
Deferred Resource -- Investment Experience	5,909	
Deferred Resource -- Contributions		1,654
OPEB Expense	116,802	

C. Funding Information

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. Use of a long term expected trust rate of return typically requires a demonstrated history of contributions consistently equal to or greater than an Actuarially Determined Contributions (ADC). In this plan, the ADC is determined using of two basic components, which have been adjusted with interest to the City 's fiscal year end:

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

The ADC for the City's fiscal year ending June 30, 2018 was determined as part of the January 1, 2017 valuation using a 6.5% discount rate. Actual City contributions, relative to the ADC, for the fiscal year ending June 30, 2018 are shown below:

Schedule of Contributions	**City of Larkspur**
Actuarially determined contribution during fiscal year	$ 1,191,237
Contributions in relation to the actuarially determined contribution	799,210
Contribution deficiency (excess)	$ 392,027
Covered employee payroll during fiscal year	$ 6,069,881
Contributions as a percentage of covered employee payroll	13.17%

The chart below summarizes the development of the ADC shown above for the fiscal year ending June 30, 2018:

Discount Rate		**6.50%**
Actuarial Accrued Liability (AAL)	$	12,876,670
Actuarial Value of Assets		357,656
Unfunded Actuarial Accrued Liability (UAAL)		12,519,014
Amortization Factor*		15.8401
Actuarially Determined Contribution for FYE 2018		
Amortization of UAAL	$	790,336
Normal Cost		328,196
Interest to Fiscal Year End		72,705
Total ADC	**$**	**1,191,237**

*Determined on of level % of pay basis over a closed 30 year period; 22 years remain for FYE 2018

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 Larkspur (the City).

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 summarized the benefits in this report and our calculations were based on our understanding of the benefits as described herein. A limited review of this data was performed, and we 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, and the assumptions on which they depend, 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: September 5, 2018

Catherine L. MacLeod

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

J. Kevin Watts

J. Kevin Watts, FSA, FCA, MAAA

E. Supporting Information

Section 1 - Summary of Employee Data

The City reported 60 active employees; of these, 48 are currently participating in the medical program while 12 employees were waiving coverage as of the valuation date. Age and service information for the reported individuals is provided below:

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	3%
25 to 29		4					4	7%
30 to 34		2					2	3%
35 to 39				2			2	3%
40 to 44				1	3		4	7%
45 to 49		3	2		2	5	12	20%
50 to 54		4	2		4	2	12	20%
55 to 59		3	2	1	1	4	11	18%
60 to 64		1	1	3		2	7	12%
65 to 69					3		3	5%
70 & Up						1	1	2%
Total	0	19	7	7	13	14	**60**	**100%**
Percent	0%	32%	12%	12%	22%	23%	**100%**	

Valuation	July 2015	January 2017
Annual Covered Payroll	$4,496,457	$4,854,741
Average Attained Age for Actives	48.3	49.8
Average Years of Service	11.1	12.6

There are also 44 retirees or their beneficiaries receiving benefits. The following chart summarizes the ages of current retirees in the City plan.

Retirees by Age				
Current Age	**Misc**	**Fire**	**Total**	**Percent**
Below 50	0	0	0	0%
50 to 54	0	0	0	0%
55 to 59	5	3	8	18%
60 to 64	4	2	6	14%
65 to 69	2	0	2	5%
70 to 74	3	4	7	16%
75 to 79	6	7	13	30%
80 & up	8	0	8	18%
Total	**28**	**16**	**44**	**100%**
Average Age:				
On 1/1/2017	72.8	70.5	72.0	
At retirement	59.8	52.7	57.2	

Supporting Information
(Continued)

Section 2 - Summary of Retiree Benefit Provisions

OPEB provided: The City reported that the only OPEB is medical insurance coverage.

Access to coverage: Medical coverage is currently provided through CalPERS as permitted under the Public Employees' Medical and Hospital Care Act (PEMHCA). This coverage requires the employee to satisfy the requirements for retirement under CalPERS: either (a) attainment of age 50 (age 52, if a miscellaneous employee new to PERS on or after January 1, 2013) with 5 years of State or public agency service or (b) an approved disability retirement.

The employee must begin his or her retirement warrant within 120 days of terminating employment with the City to be eligible to continue medical coverage through the City and be entitled to the employer subsidy described below. If an eligible employee is not already enrolled in the medical plan, he or she may enroll within 60 days of retirement or during any future open enrollment period. Coverage may be continued at the retiree's option for his or her lifetime. A surviving spouse and other eligible dependents may also continue coverage.

Benefits provided: As a PEMHCA employer, the City is obligated to contribute toward the cost of retiree medical coverage for the retiree's lifetime or until coverage is discontinued. In addition, the City provides higher benefits by agreement for retirees meeting certain eligibility requirements. The benefit grid below summarizes the OPEB structure for Miscellaneous employees who retire after June 30, 2007, and Fire employees who retire after August 31, 2010:

<table>
<tr><th colspan="5">City of Larkspur Retiree Medical Benefits</th></tr>
<tr><th>Category</th><th>Years of Service</th><th>Benefit Provided</th><th>Term of Benefit</th><th>Survivor Benefit</th></tr>
<tr><td rowspan="3">Misc Employees hired prior to July 1, 2007 and Fire Employees hired prior to September 1, 2008</td><td>5 years in PERS but less than 10 years with the City</td><td>PEMHCA Minimum ($128 per month in 2017)</td><td>Lifetime</td><td>PEMHCA Minimum, if spouse eligible for survivor pension</td></tr>
<tr><td>At least 10 but less than 15 years with the City</td><td>100% premium paid for retiree only, up to Kaiser Ee only rate</td><td>Lifetime</td><td>PEMHCA Minimum, if spouse eligible for survivor pension</td></tr>
<tr><td>15 or more years with the City</td><td>100% premium paid for retiree & spouse, up to Kaiser Ee + Spouse rate</td><td>Lifetime</td><td>100% premium paid for surviving spouse, up to Kaiser rate</td></tr>
<tr><td rowspan="2">Misc Employees hired on/after July 1, 2007 but before Jan 1, 2015 and Fire Employees hired on/after Sept 1, 2008 but before April 1, 2015</td><td>5 years in PERS but less than 10 years with the City</td><td>PEMHCA Minimum ($128 per month in 2017)</td><td>Lifetime</td><td>PEMHCA Minimum, if spouse eligible for survivor pension</td></tr>
<tr><td>10 or more years with the City</td><td>100% premium paid for retiree only, up to Kaiser Ee only rate</td><td>Lifetime</td><td>PEMHCA Minimum, if spouse eligible for survivor pension</td></tr>
<tr><td>Misc Employees hired on/after Jan. 1, 2015 and Fire Employees hired on/after April 1, 2015</td><td>5 years in PERS</td><td>PEMHCA Minimum ($128 per month in 2017)</td><td>Lifetime</td><td>PEMHCA Minimum, if spouse eligible for survivor pension</td></tr>
</table>

Supporting Information

(Continued)

Section 2 - Summary of Retiree Benefit Provisions

In the chart on the preceding page, where benefits paid by the City are described as being limited to the Kaiser rate, this means that the City pays no more than the Kaiser premium for:

- The *type* of coverage provided for the retiree (i.e., Basic, Supplemental or Combination); and
- The *level* of subsidized coverage (i.e., single or retiree and spouse) for which the retiree qualifies.

Benefits for earlier retirees: Miscellaneous employees who retired prior to July 1, 2007, and Fire employees who retired prior to September 1, 2010, are eligible for benefits provided by the bargaining agreement in effect at the time of their retirement. For many of these retirees, the benefit provided is 100% of the premium for the retiree, spouse and/or other eligible dependents, not to exceed the monthly Kaiser premium for family coverage.

Current premium rates: The 2017 CalPERS monthly medical plan rates in the Bay Area rate group are shown below. Different rates may apply to some members but are not listed here. The additional CalPERS administration fee has not been projected as an OPEB liability in this valuation.

Bay Area 2017 Health Plan Rates						
	Actives and Pre-Med Retirees			Medicare Eligible Retirees		
Plan	Ee Only	Ee & 1	Ee & 2+	Ee Only	Ee & 1	Ee & 2+
Anthem Select HMO	$783.46	$1,566.92	$2,037.00	*Not Available*		
Anthem Traditional HMO	990.05	1,980.10	2574.13	*Not Available*		
Blue Shield Access+ HMO	1024.85	2,049.70	2664.61	*Not Available*		
Health Net SmartCare	733.29	1,466.58	1906.55	*Not Available*		
Kaiser HMO	733.39	1,466.78	1906.81	$300.48	$ 600.96	$ 1,040.99
UnitedHealthcare HMO	1062.26	2,124.52	2761.88	324.21	648.42	1,285.78
PERS Choice PPO	830.30	1,660.60	$2,158.78	353.63	707.26	1,205.44
PERS Select PPO	736.27	1,472.54	1,914.30	353.63	707.26	1,149.02
PERSCare PPO	932.39	1,864.78	2,424.21	389.76	779.52	1,338.95
PORAC Association Plan	699.00	1,467.00	1,876.00	464.00	924.00	1,333.00

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.

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 2022. The excise tax burden will ultimately fall some combination of the City and plan participants. 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.

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
Long Term Return on Assets	6.5% as of June 30, 2016 and June 30, 2017, net of plan investment expenses and including inflation
Discount Rates	3.56% as of June 30, 2017 2.92% as of 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 as a component of assumed salary increases
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.

Mortality Before Retirement
(before improvement applied)

CalPERS Public Agency Miscellaneous Non-Industrial Deaths		
Age	Male	Female
15	0.00023	0.00017
20	0.00033	0.00021
30	0.00052	0.00027
40	0.00080	0.00053
50	0.00165	0.00106
60	0.00354	0.00223
70	0.00709	0.00467
80	0.01339	0.01036

CalPERS Public Agency Police & Fire Combined Industrial & Non-Industrial		
Age	Male	Female
15	0.00023	0.00017
20	0.00036	0.00025
30	0.00062	0.00036
40	0.00094	0.00068
50	0.00181	0.00122
60	0.00372	0.00241
70	0.00731	0.00489
80	0.01363	0.01060

Supporting Information
(Continued)

Section 3 - Actuarial Methods and Assumptions

Mortality After Retirement (before improvement applied)

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

CalPERS Public Agency Disabled Miscellaneous Post-Retirement Mortality From Jan 2014 Experience Study Report		
Age	Male	Female
20	0.00641	0.00395
30	0.00736	0.00455
40	0.01008	0.00642
50	0.01784	0.01230
60	0.02634	0.01510
70	0.03890	0.02815
80	0.08230	0.06015
90	0.18469	0.16082

CalPERS Public Agency Disabled Fire Post-Retirement Mortality From Jan 2014 Experience Study Report		
Age	Male	Female
20	0.00515	0.00323
30	0.00357	0.00239
40	0.00330	0.00252
50	0.00610	0.00541
60	0.00921	0.00660
70	0.02250	0.01800
80	0.06654	0.04995
90	0.16222	0.12394

Termination Rates

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

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

Supporting Information

(Continued)

Section 3 - Actuarial Methods and Assumptions

Service Retirement Rates

The following miscellaneous retirement formulas apply:

If hired prior to 11/12/2012:	2.5% @ 55
If hired on/after 11/12/2012, with prior PERS Service:	2% @ 55
If hired on or after 1/1/2013, PEPRA:	2% @ 62

The following fire safety retirement formulas apply:

If hired prior to 11/12/2012:	3% @ 55
If hired on/after 1/1/2013, with prior PERS Service:	3% @ 55
If hired on or after 1/1/2013, PEPRA:	2.7% @ 57

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

Miscellaneous Employees: 2.5% at 55 formula From CalPERS Experience Study Report Issued January 2014						
Current	Years of Service					
Age	5	10	15	20	25	30
50	0.0040	0.0090	0.0190	0.0290	0.0490	0.0940
55	0.0660	0.0880	0.1150	0.1420	0.1790	0.2410
60	0.0660	0.0880	0.1150	0.1420	0.1790	0.2410
65	0.1220	0.1600	0.2020	0.2450	0.2970	0.3740
70	0.1270	0.1650	0.2090	0.2530	0.3060	0.3850
75 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Miscellaneous Employees: 2% at 55 formula From CalPERS Experience Study Report Issued January 2014						
Current	Years of Service					
Age	5	10	15	20	25	30
50	0.0140	0.0180	0.0210	0.0250	0.0270	0.0310
55	0.0480	0.0610	0.0740	0.0880	0.1000	0.1170
60	0.0670	0.0860	0.1030	0.1230	0.1390	0.1640
65	0.1550	0.1970	0.2380	0.2850	0.3250	0.3860
70	0.1300	0.1650	0.2000	0.2400	0.2720	0.3230
75 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Miscellaneous "PEPRA" Employees: 2% at 62 formula From CalPERS Experience Study Report Issued January 2014						
Current	Years of Service					
Age	5	10	15	20	25	30
52	0.0103	0.0132	0.0160	0.0188	0.0216	0.0244
55	0.0440	0.0560	0.0680	0.0800	0.0920	0.1040
60	0.0616	0.0784	0.0952	0.1120	0.1288	0.1456
65	0.1287	0.1638	0.1989	0.2340	0.2691	0.3042
70	0.1254	0.1596	0.1938	0.2280	0.2622	0.2964
75 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Supporting Information

(Continued)

Section 3 - Actuarial Methods and Assumptions

Retirement Rates (Concluded)

Fire Safety Employees: 3.0% at 55 formula From CalPERS Experience Study Report Issued January 2014						
Current Age	Years of Service					
	5	10	15	20	25	30
50	0.0010	0.0010	0.0010	0.0060	0.0160	0.0690
53	0.0320	0.0320	0.0320	0.0490	0.0850	0.1490
56	0.0640	0.0640	0.0640	0.0970	0.1610	0.2380
59	0.0880	0.0880	0.0880	0.1310	0.2130	0.2990
62	0.0870	0.0870	0.0870	0.1280	0.2100	0.2950
65 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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

Disability Retirement Rates

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

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

Medicare Eligibility

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

Supporting Information
(Continued)

Section 3 - Actuarial Methods and Assumptions

Healthcare Trend

Medical plan premiums, benefit caps, and age-related claims costs 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	Actual	2022	6.00%
2019	7.50%	2023	5.50%
2020	7.00%	2024	5.00%
2021	6.50%	2025 & later	5.00%

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

Participation Rate

Active employees: 100% of those expected to qualify for benefits in excess of the PEMHCA MEC are assumed to continue their current plan election in retirement. Only 50% of those expected to qualify for the PEMHCA MEC only are assumed to continue their medical coverage through the City in retirement.

Retired participants: Existing medical plan elections are assumed to be continued until the retiree's death.

Spouse Coverage

Active employees: If expected to qualify for benefits greater than the PEMHCA MEC, 70% are assumed to elect spousal coverage in retirement. If expected to qualify only for the PEMHCA MEC benefit, 50% are assumed to elect spousal coverage in retirement.

Spouses are assumed to continue 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 be maintained until the spouse's death. Actual spouse ages are used, where known; if not, husbands are assumed to be 3 years older than their wives.

Excise tax on high-cost plans

The expected value of excise taxes for high cost plan coverage for retirees, assumed to be effective in the 2020, was included in this valuation. Annual threshold amounts for 2018 under the Affordable Care Act (ACA) were assumed to increase at the General Inflation Rate. A 40% excise tax rate was applied to the portion of premiums projected to exceed the threshold.

Supporting Information

(Continued)

Section 3 - Actuarial Methods and Assumptions

Excise tax on high-cost plans (continued)

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

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

The actual limits may be higher, depending on cost increases prior to the effective date. These thresholds are scheduled to increase by CPI plus 1% in 2019 and by CPI annually thereafter. This report assumes 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 Watt's Age Rating Methodology provided in Addendum 2 to this report.

Representative claims costs derived from the dataset provided by CalPERS for retirees not currently covered or not expected to be eligible for Medicare appear on the following page.

All current and future Medicare-eligible retirees are assumed to be covered by plans that are rated based solely on the experience of Medicare retirees. Therefore, no implicit subsidy is calculated for Medicare-eligible retirees.

Changes reflected During This Measurement Period:

Discount rate

The discount rate was changed from 2.92% as of June 30, 2016, and to 3.56% as of June 30, 2017, based on the published change in return for the applicable municipal bond index.

Supporting Information
(Concluded)

Section 3 - Actuarial Methods and Assumptions

Illustrative 2017 monthly claims:

Expected Monthly Claims by Medical Plan for Selected Ages					
	Male				
Medical Plan	50	53	56	59	62
Blue Shield Access+: Bay Area	$ 985	$ 1,161	$ 1,349	$ 1,546	$ 1,757
HMO: Bay Area	869	1,025	1,190	1,364	1,551
HMO: Other Southern California	625	737	856	981	1,115
Kaiser: Bay Area	719	848	985	1,129	1,283
Kaiser: Other Northern California	703	829	963	1,104	1,255
Kaiser: Sacramento	685	808	939	1,076	1,223
PERS Choice: Bay Area	745	878	1,020	1,169	1,329
PERS Choice: Other Northern California	776	915	1,063	1,218	1,385
PERS Choice: Out of State	428	505	586	672	764
PERS Select: Bay Area	775	914	1,062	1,217	1,383
PERSCare: Bay Area	675	796	925	1,060	1,205
PERSCare: Other Northern California	599	707	821	941	1,069
PPO: Out of State	396	467	542	622	707
	Female				
Medical Plan	50	53	56	59	62
Blue Shield Access+: Bay Area	$ 1,220	$ 1,340	$ 1,442	$ 1,558	$ 1,718
HMO: Bay Area	1,077	1,183	1,273	1,375	1,516
HMO: Other Southern California	774	850	915	989	1,090
Kaiser: Bay Area	891	979	1,053	1,138	1,254
Kaiser: Other Northern California	871	957	1,030	1,113	1,227
Kaiser: Sacramento	849	933	1,004	1,085	1,196
PERS Choice: Bay Area	923	1,013	1,091	1,178	1,299
PERS Choice: Other Northern California	962	1,056	1,136	1,228	1,354
PERS Choice: Out of State	530	582	627	677	746
PERS Select: Bay Area	960	1,055	1,135	1,227	1,352
PERSCare: Bay Area	837	919	989	1,068	1,178
PERSCare: Other Northern California	743	816	878	948	1,045
PPO: Out of State	491	539	580	627	691

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[1] 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.

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

This chart shows the sources of funds needed to cover expected medical claims for pre-Medicare retirees. The portion of the premium paid by the City 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

[1] 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 City 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
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
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 is 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

Glossary
(Continued)

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

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

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 City'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 City contribute toward medical insurance premiums for retired annuitants and that a contracting City 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 City 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

Glossary
(Concluded)

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