

# MacLeod Watts

July 23, 2021

Corey Spray  
Senior Accountant, Financial Supervisor  
Ross Valley Fire Department  
777 San Anselmo Avenue  
San Anselmo, CA 94960

Re: Ross Valley Fire Department Other Post-Employment Benefits  
GASB 75 Actuarial Report for Fiscal Year Ending June 30, 2021

Dear Corey:

We are pleased to enclose our actuarial report providing financial information about the other post-employment benefit (OPEB) liabilities of the Ross Valley Fire Department. 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 Department's financial statements for the fiscal year ending June 30, 2021. The information included in this report reflects our understanding that the Department plans to contribute 100% or more of the Actuarially Determined Contribution this year and for the foreseeable future.

The exhibits presented are based on the results of an actuarial valuation prepared as of June 30, 2019, and on the employee data and details on plan benefits provided to us by the Department for that valuation. The Department also provided information on retiree benefit payments and total covered employee payroll for the current fiscal year. 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 Department 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,



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

Enclosure



# Ross Valley Fire Department

GASB 75 Actuarial Report  
Measured as of June 30, 2020  
For Fiscal Year End June 30, 2021 Financial Reporting

Submitted July 2021

MacLeod Watts

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## A. Executive Summary

This report presents actuarial information for financial reporting of the other post-employment benefit (OPEB) program of the Ross Valley Fire Department (the Department). The purpose of this valuation is to assess the OPEB liabilities and provide disclosure information required by Statement No. 75 of the Governmental Accounting Standards Board (GASB 75) for the fiscal year ending June 30, 2021.

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.

A new biennial valuation should be prepared as of June 30, 2021. The results of this new valuation will first be applied for the Department's financial reporting for its fiscal year ending June 30, 2022.

### OPEB Obligations of the Department

The Department provides continuation of medical coverage to its retiring employees. Access to this coverage 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 Department pays a portion of medical premiums for qualifying retirees. Details are provided in Supporting Information Section 2.
- **Implicit subsidy liabilities:** An "implicit subsidy" exists when the premiums charged for retiree coverage are lower than the expected retiree claims for that coverage. In the 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.

As is the nature of group premium rate structures, at some ages, retirees may be expected to experience higher claims than the premiums they pay, where at other ages, the reverse may be true. 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 see Section 3 and Addendum 2: MacLeod Watts Age Rating Methodology.

Different monthly premiums are charged for Medicare-eligible members. CalPERS confirmed that only the claims experience of these members is considered in setting Medicare-eligible premium rates. As such, there is no implicit subsidy by active employee premiums. We assume that the Medicare Supplement premium structure is adequate to cover expected claims for these retirees.

### OPEB Funding Policy

The Department's OPEB 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



## Executive Summary

(Continued)

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

The Department has been and continues to prefund its OPEB liability, contributing 100% or more of the Actuarially Determined Contributions each year. With the Department’s approval, the discount rate used in this valuation is 6.80%, reflecting the Department’s expectation of the long-term return on trust assets as of the measurement date. For additional information, see Expected Return on Trust Assets on page 6.

## 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 Department 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 for GASB 75 in this Report

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, 2021
Measurement Date	June 30, 2020
Measurement Period	June 30, 2019 to June 30, 2020
Valuation Date	June 30, 2019

## Significant Results and Differences from the Prior Valuation

This report was prepared based on a roll forward of the June 2019 actuarial valuation. No benefit changes and no material changes in plan members or premium rates were reported to MacLeod Watts since the 2019 valuation was prepared. Accordingly, no plan (liability) experience was analyzed, and no assumptions were changed.



## Executive Summary

(Concluded)

### Impact on Statement of Net Position and OPEB Expense for Fiscal 2021

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	For Reporting At Fiscal Year Ending June 30, 2021
Total OPEB Liability	\$ 8,850,982
Fiduciary Net Position	4,215,523
Net OPEB Liability (Asset)	4,635,459
Deferred (Outflows) of Resources	(1,073,158)
Deferred Inflows of Resources	1,180,482
Impact on Statement of Net Position	<u>\$ 4,742,783</u>
 <b>OPEB Expense, FYE 6/30/2021</b>	 <u><u>\$ 404,111</u></u>

### Important Notices

This report is intended to be used only to present the actuarial information relating to other postemployment benefits for the Department'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 Department 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 Department 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, 2021.

### Components of Net Position and Expense

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

<b>Plan Summary Information for FYE June 30, 2021</b> <i>Measurement Date is June 30, 2020</i>	<b>Ross Valley FD</b>
<b>Items Impacting Net Position:</b>	
Total OPEB Liability	\$ 8,850,982
Fiduciary Net Position	4,215,523
Net OPEB Liability (Asset)	4,635,459
<i>Deferred (Outflows) Inflows of Resources Due to:</i>	
Assumption Changes	(187,183)
Plan Experience	1,180,482
Investment Experience	(131,716)
Deferred Contributions	(754,259)
Net Deferred (Outflows) Inflows of Resources	107,324
<b>Impact on Statement of Net Position, FYE 6/30/2021</b>	<b>\$ 4,742,783</b>
<b>Items Impacting OPEB Expense:</b>	
Service Cost	\$ 258,232
Cost of Plan Changes	-
Interest Cost	580,614
Expected Earnings on Assets	(265,203)
Administrative Expenses	1,817
<i>Recognized Deferred Resource items:</i>	
Assumption Changes	55,040
Plan Experience	(257,185)
Investment Experience	30,796
<b>OPEB Expense, FYE 6/30/2021</b>	<b>\$ 404,111</b>



**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.

For Reporting at Fiscal Year End <i>Measurement Date</i>	6/30/2020 <i>6/30/2019</i>	6/30/2021 <i>6/30/2020</i>	Change During Period
Total OPEB Liability	\$ 8,548,295	\$ 8,850,982	\$ 302,687
Fiduciary Net Position	3,718,434	4,215,523	497,089
Net OPEB Liability (Asset)	4,829,861	4,635,459	(194,402)
<i>Deferred Resource (Outflows) Inflows Due to:</i>			
Assumption Changes	(242,223)	(187,183)	55,040
Plan Experience	1,437,667	1,180,482	(257,185)
Investment Experience	(31,190)	(131,716)	(100,526)
Deferred Contributions	(901,184)	(754,259)	146,925
Net Deferred (Outflows) Inflows	263,070	107,324	(155,746)
Impact on Statement of Net Position	<u>\$ 5,092,931</u>	<u>\$ 4,742,783</u>	<u>\$ (350,148)</u>

**Change in Net Position During the Fiscal Year**

Impact on Statement of Net Position, FYE 6/30/2020	\$ 5,092,931
OPEB Expense (Income)	404,111
Employer Contributions During Fiscal Year	(754,259)
Impact on Statement of Net Position, FYE 6/30/2021	<u>\$ 4,742,783</u>

**OPEB Expense**

Employer Contributions During Fiscal Year	\$ 754,259
Deterioration (Improvement) in Net Position	(350,148)
OPEB Expense (Income), FYE 6/30/2021	<u>\$ 404,111</u>





## Accounting Information

(Continued)

### Change in Fiduciary Net Position During the Measurement Period

	Prior Authority	Expanded Authority	Total
<b>Fiduciary Net Position at Fiscal Year Ending 6/30/2020</b>	<b>\$ 807,312</b>	<b>\$ 2,911,122</b>	<b>\$ 3,718,434</b>
<i>Measurement Date 6/30/2019</i>			
<b>Changes During the Period:</b>			
Investment Income	28,524	105,357	133,881
Employer Contributions	248,956	652,228	901,184
Administrative Expenses	(394)	(1,423)	(1,817)
Benefit Payments	(248,956)	(287,203)	(536,159)
<b>Net Changes During the Period</b>	<b>28,130</b>	<b>468,959</b>	<b>497,089</b>
<b>Fiduciary Net Position at Fiscal Year Ending 6/30/2021</b>	<b>\$ 835,442</b>	<b>\$ 3,380,081</b>	<b>\$ 4,215,523</b>
<i>Measurement Date 6/30/2020</i>			

### Expected Long-term Return on Trust Assets

The expected long-term return on trust assets was derived from information published by CalPERS for CERBT Strategy 1. CalPERS determined its returns using a building-block method and best-estimate ranges of expected future real rates of return for each major asset class (expected returns, net of OPEB plan investment expense and inflation). The target allocation and best estimates of geometric real rates of return published by CalPERS for each major class are summarized in the following table:

CERBT Strategy 1		Years 1-10			Years 11+		
Major Asset Classification	Target Allocation	General Inflation Rate Assumption	1-10 Year Expected Real Rate of Return*	Compound Return Yrs 1-10	General Inflation Rate Assumption	11+ Year Expected Real Rate of Return*	Compound Return Years 11+
Global Equity	59%	2.00%	4.80%	6.80%	2.92%	5.98%	8.90%
Fixed Income	25%	2.00%	1.10%	3.10%	2.92%	2.62%	5.54%
Global Real Estate(REITs)	8%	2.00%	3.20%	5.50%	2.92%	5.00%	7.92%
Treasury Inflation Protected Securities	5%	2.00%	0.25%	2.25%	2.92%	1.46%	4.38%
Commodities	3%	2.00%	1.50%	3.50%	2.92%	2.87%	5.79%
Volatility	11.83%		weighted	5.85%		weighted	8.07%

\*Real rates of return come from a geometric representation of returns that assume a general inflation rate of 2.00%.

CalPERS' expected returns are split for years 1-10 and years 11 and thereafter. To derive the expected return specifically for the Department, we projected plan benefits in each future year. Then applying the plan specific benefit payments to CalPERS' bifurcated return expectations, we determined the single equivalent long-term rate of return to be 6.95% (6.85% after offset for expected trust administrative fees). The Department is less optimistic about potential future investment returns and requested use of a lower the expected long-term rate of return to 6.8% for accounting (GASB 75) purposes and to develop contribution levels for prefunding the plan.



**Accounting Information**

(Continued)

**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 EARSL of 6.59 years is the period used to recognize such changes in the OPEB Liability 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, 2021.

Ross Valley FD	Deferred Outflows of Resources	Deferred Inflows of Resources
Changes of Assumptions	\$ 187,183	\$ -
Differences Between Expected and Actual Experience	-	1,180,482
Net Difference Between Projected and Actual Earnings on Investments	131,716	-
Deferred Contributions	754,259	-
<b>Total</b>	<b>\$ 1,073,158</b>	<b>\$ 1,180,482</b>

The Department 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
2022	\$ (171,348)
2023	(163,883)
2024	(165,754)
2025	(209,415)
2026	(151,183)
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 2021 is 6.80%. Healthcare Cost Trend Rate was assumed to start at 5.40% (effective January 2021) and grade down to 4.0% for years 2076 and thereafter. The impact of a 1% increase or decrease in these assumptions is shown in the chart below.

<b>Sensitivity to:</b>			
<b>Change in Discount Rate</b>	<b>Current - 1% 5.80%</b>	<b>Current 6.80%</b>	<b>Current + 1% 7.80%</b>
<b>Total OPEB Liability</b>	10,011,205	8,850,982	7,892,800
Increase (Decrease)	1,160,223		(958,182)
% Increase (Decrease)	13.1%		-10.8%
<b>Net OPEB Liability (Asset)</b>	5,795,682	4,635,459	3,677,277
Increase (Decrease)	1,160,223		(958,182)
% Increase (Decrease)	25.0%		-20.7%
<b>Change in Healthcare Cost Trend Rate</b>	<b>Current Trend - 1%</b>	<b>Current Trend</b>	<b>Current Trend + 1%</b>
<b>Total OPEB Liability</b>	7,940,367	8,850,982	9,842,618
Increase (Decrease)	(910,615)		991,636
% Increase (Decrease)	-10.3%		11.2%
<b>Net OPEB Liability (Asset)</b>	3,724,844	4,635,459	5,627,095
Increase (Decrease)	(910,615)		991,636
% Increase (Decrease)	-19.6%		21.4%



**Accounting Information**

(Continued)

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

GASB 75 requires presentation of the 10-year history of changes in the Net OPEB Liability. Only results for years since GASB 75 was implemented (fiscal years 2018 through 2021) are shown in the table.

<b>Fiscal Year Ending</b>	<b>6/30/2021</b>	<b>6/30/2020</b>	<b>6/30/2019</b>	<b>6/30/2018</b>
Measurement Date	6/30/2020	6/30/2019	6/30/2018	6/30/2017
Discount Rate on Measurement Date	6.80%	6.80%	6.95%	7.25%
<b>Total OPEB liability</b>				
Service Cost	\$ 258,232	\$ 215,840	\$ 194,348	\$ 188,230
Interest	580,614	680,634	654,393	624,234
Changes of benefit terms	-	-	-	-
Differences between expected and actual experience	-	(1,694,852)	-	-
Changes of assumptions	-	6,241	345,115	-
Benefit payments	(536,159)	(474,032)	(422,295)	(382,896)
<b>Net change in total OPEB liability</b>	<b>302,687</b>	<b>(1,266,169)</b>	<b>771,561</b>	<b>429,568</b>
<b>Total OPEB liability - beginning</b>	<b>8,548,295</b>	<b>9,814,464</b>	<b>9,042,903</b>	<b>8,613,336</b>
<b>Total OPEB liability - ending (a)</b>	<b>\$ 8,850,982</b>	<b>\$ 8,548,295</b>	<b>\$ 9,814,464</b>	<b>\$ 9,042,904</b>
<b>Plan fiduciary net position</b>				
Contributions - employer	\$ 901,184	\$ 1,002,745	\$ 1,108,061	\$ 785,990
Net investment income	133,881	177,139	171,917	167,198
Benefit payments	(536,159)	(474,032)	(422,295)	(382,896)
Administrative Expenses	(1,817)	(642)	(1,151)	(854)
Other Expenses	-	-	(2,858)	-
<b>Net change in plan fiduciary net position</b>	<b>497,089</b>	<b>705,210</b>	<b>853,674</b>	<b>569,438</b>
<b>Plan fiduciary net position - beginning</b>	<b>3,718,434</b>	<b>3,013,224</b>	<b>2,159,550</b>	<b>1,590,112</b>
<b>Plan fiduciary net position - ending (b)</b>	<b>\$ 4,215,523</b>	<b>\$ 3,718,434</b>	<b>\$ 3,013,224</b>	<b>\$ 2,159,550</b>
<b>Net OPEB liability - ending (a) - (b)</b>	<b>\$ 4,635,459</b>	<b>\$ 4,829,861</b>	<b>\$ 6,801,240</b>	<b>\$ 6,883,354</b>
<b>Covered-employee payroll</b>	<b>\$ 4,055,818</b>	<b>\$ 4,099,185</b>	<b>\$ 3,781,313</b>	<b>\$ 3,963,937</b>
<b>Net OPEB liability as a % of covered-employee payroll</b>	<b>114.29%</b>	<b>117.82%</b>	<b>179.86%</b>	<b>173.65%</b>



**Accounting Information**  
 (Continued)

**Schedule of Contributions**

Since establishing the OPEB trust, the Department has made regular contributions toward funding the Actuarially Determined Contribution (ADC) and confirmed its intention to continue doing so. This chart shows the contributions for the years since GASB 75 was implemented.

Fiscal Year Ending	FYE 2021	FYE 2020	FYE 2019	FYE 2018
Actuarially Determined Contribution	\$ 631,593	\$ 750,115	\$ 727,745	\$ 696,858
Contributions in relation to the actuarially determined contribution	754,259	901,184	1,002,745	1,108,061
Contribution deficiency (excess)	<u>\$ (122,666)</u>	<u>\$ (151,069)</u>	<u>\$ (275,000)</u>	<u>\$ (411,203)</u>
Covered employee payroll	\$ 3,995,857	\$ 4,055,818	\$ 4,099,185	\$ 3,781,313
Contributions as a % of covered employee payroll	18.88%	22.22%	24.46%	29.30%

**Notes to Schedule**

Valuation Date used to determine ADC

Discount rate used to determine ADC

Actuarial cost method

Amortization method

Amortization period

Asset valuation method

Inflation

Healthcare cost trend rates

Salary increases

Retirement age

Mortality

Mortality Improvement

	6/30/2019	6/30/2017	7/1/2015
	6.80%	7.25%	7.25%
	Entry Age Normal	Entry Age Normal	Entry Age Normal
	Level % of Pay	Level % of Pay	Level % of Pay
	19 Years Closed	20 Years Closed	21 Years Closed
	22 Years Closed		
	Market Value	Market Value	Market Value
	2.50%	2.75%	2.75%
	5.4% in 2021 fluctuating down to 4% by 2076	8.0% in 2018 to 5% in steps of 0.5%	7.5% in 2017 to 4.5% in steps of 0.5%
	3.00%	3.25%	3.25%
	50 to 75	50 to 75	50 to 75
	CalPERS 2017 Experience Study	CalPERS 2014 Experience Study	CalPERS 2014 Experience Study
	MW Scale 2018 generationally	MW Scale 2017 generationally	MW Scale 2014 generationally



**Accounting Information**  
 (Continued)

**Detail of Changes to Net Position**

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

Ross Valley FD	Total OPEB Liability (a)	Fiduciary Net Position (b)	Net OPEB Liability (c) = (a) - (b)	(d) Deferred Outflows (Inflows) Due to:				Impact on Statement of Net Position (e) = (c) - (d)
				Assumption Changes	Plan Experience	Investment Experience	Deferred Contributions	
<b>Balance at Fiscal Year Ending 6/30/2020</b> <i>Measurement Date 6/30/2019</i>	\$8,548,295	\$3,718,434	\$4,829,861	\$ 242,223	\$(1,437,667)	\$ 31,190	\$ 901,184	\$ 5,092,931
<b>Changes During the Period:</b>								
Service Cost	258,232		258,232					258,232
Interest Cost	580,614		580,614					580,614
Expected Investment Income		265,203	(265,203)					(265,203)
Employer Contributions		901,184	(901,184)					(901,184)
Changes of Benefit Terms	-		-					-
Administrative Expenses		(1,817)	1,817					1,817
Benefit Payments	(536,159)	(536,159)	-					-
Assumption Changes	-		-	-				-
Plan Experience	-		-		-			-
Investment Experience		(131,322)	131,322			131,322		-
Recognized Deferred Resources				(55,040)	257,185	(30,796)	(901,184)	729,835
Employer Contributions in Fiscal Year							754,259	(754,259)
<b>Net Changes in Fiscal Year 2020-2021</b>	302,687	497,089	(194,402)	(55,040)	257,185	100,526	(146,925)	(350,148)
<b>Balance at Fiscal Year Ending 6/30/2021</b> <i>Measurement Date 6/30/2020</i>	\$8,850,982	\$4,215,523	\$4,635,459	\$ 187,183	\$(1,180,482)	\$ 131,716	\$ 754,259	\$ 4,742,783



**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. Deferred Contributions are not shown.

Measurement Date: June 30, 2020

Deferred Resource					Balance as of Jun 30, 2020	Recognition of Deferred Outflow or Deferred (Inflow) in Measurement Period:						
Date Created	Cause	Initial Amount	Period (Yrs)	Annual Recognition		2019-20 (FYE 2021)	2020-21 (FYE 2022)	2021-22 (FYE 2023)	2022-23 (FYE 2024)	2023-24 (FYE 2025)	2024-25 (FYE 2026)	Thereafter
Investment Earnings												
6/30/2017	Greater than Expected	\$ (37,334)	5.00	\$ (7,467)	\$ (7,466)	\$ (7,467)	\$ (7,466)	\$ -	\$ -	\$ -	\$ -	\$ -
Loss Due To												
6/30/2018	Assumption Changes	345,115	6.38	54,093	182,836	54,093	54,093	54,093	54,093	20,557	-	-
Investment Earnings												
6/30/2018	Less than Expected	9,364	5.00	1,873	3,745	1,873	1,873	1,872	-	-	-	-
Gain Due To												
6/30/2019	Plan Experience	(1,694,852)	6.59	(257,185)	(1,180,482)	(257,185)	(257,185)	(257,185)	(257,185)	(257,185)	(151,742)	-
Loss Due To												
6/30/2019	Assumption Changes	6,241	6.59	947	4,347	947	947	947	947	947	559	-
Investment Earnings												
6/30/2019	Less than Expected	50,631	5.00	10,126	30,379	10,126	10,126	10,126	10,127	-	-	-
Investment Earnings												
6/30/2020	Less than Expected	131,322	5.00	26,264	105,058	26,264	26,264	26,264	26,264	26,266	-	-



**Accounting Information**

(Continued)

**Department Contributions to the Plan**

Department 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 (“explicit subsidies”) and/or indirect payments to retirees in the form of higher premiums for active employees (“implicit subsidies”). Note that the implicit subsidy contribution does not represent cash payments to retirees, but rather the reclassification of a portion of active healthcare expense to be recognized as a retiree healthcare cost. For details, see Addendum 1 – Important Background Information.

Benefits and contributions paid by the Department during the measurement period are shown below.

<b>Benefit Payments During the Measurement Period, Jul 1, 2019 thru Jun 30, 2020</b>	<b>Ross Valley FD</b>
Benefits Paid by Trust	\$ -
Benefits Paid by Employer (not reimbursed by trust)	385,090
Implicit benefit payments	151,069
<b>Total Benefit Payments During the Measurement Period</b>	<b>\$ 536,159</b>

<b>Employer Contributions During the Measurement Period, Jul 1, 2019 thru Jun 30, 2020</b>	<b>Ross Valley FD</b>
Employer Contributions to the Trust	\$ 365,025
Employer Contributions in the Form of Direct Benefit Payments (not reimbursed by trust)	385,090
Implicit contributions	151,069
<b>Total Employer Contributions During the Measurement Period</b>	<b>\$ 901,184</b>

Department retiree health benefits payments reported as made after the measurement date but prior to the current fiscal year end are shown below.

<b>Employer Contributions During the Fiscal Year, Jul 1, 2020 thru Jun 30, 2021</b>	<b>Ross Valley FD</b>
Employer Contributions to the Trust	\$ 230,084
Employer Contributions in the Form of Direct Benefit Payments (not reimbursed by trust)	400,937
Implicit contributions	123,238
<b>Total Employer Contributions During the Fiscal Year</b>	<b>\$ 754,259</b>





**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 Department. 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).

<b>Projected Annual Benefit Payments</b>							
<b>Fiscal Year Ending June 30</b>	<b>Explicit Subsidy</b>			<b>Implicit Subsidy</b>			<b>Total</b>
	<b>Current Retirees</b>	<b>Future Retirees</b>	<b>Total</b>	<b>Current Retirees</b>	<b>Future Retirees</b>	<b>Total</b>	
2021	\$ 400,937	\$ -	\$ 400,937	\$ 123,238	\$ -	\$ 123,238	\$ 524,175
2022	356,997	26,926	383,923	133,980	3,434	137,414	521,337
2023	341,931	43,215	385,146	119,551	7,385	126,936	512,082
2024	327,155	66,434	393,589	95,268	14,870	110,138	503,727
2025	322,566	91,815	414,381	88,097	24,608	112,705	527,086
2026	298,603	121,648	420,251	55,025	37,041	92,066	512,317
2027	297,110	157,378	454,488	51,686	52,814	104,500	558,988
2028	286,552	198,533	485,085	35,766	73,182	108,948	594,033
2029	279,831	239,696	519,527	27,540	98,673	126,213	645,740
2030	284,003	281,533	565,536	31,619	129,696	161,315	726,851
2031	278,779	322,321	601,100	23,417	149,854	173,271	774,371
2032	264,308	369,638	633,946	12,005	189,169	201,174	835,120
2033	256,270	410,239	666,509	-	221,378	221,378	887,887
2034	257,889	415,041	672,930	-	200,096	200,096	873,026
2035	259,147	460,358	719,505	-	246,186	246,186	965,691

The amounts shown in the Explicit Subsidy table reflect the expected payment by the Department 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 table 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.



**Accounting Information**  
 (Concluded)

**Sample Journal Entries**

**Beginning Account Balances**

**As of the fiscal year beginning 7/1/2020**

	Debit	Credit
Net OPEB Liability		4,829,861
Deferred Resource -- Assumption Changes	242,223	
Deferred Resource -- Plan experience		1,437,667
Deferred Resource -- Investment Experience	31,190	
Deferred Resource -- Contributions	901,184	
Net Position	5,092,931	

*\* 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	400,937	
Premium Expense		400,937
OPEB Expense	230,084	
Cash		230,084

*\* 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	123,238	
Premium Expense		123,238

*\* 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	194,402	
Deferred Resource -- Assumption Changes		55,040
Deferred Resource -- Plan experience	257,185	
Deferred Resource -- Investment Experience	100,526	
Deferred Resource -- Contributions		146,925
OPEB Expense		350,148



### 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. The Department has been prefunding its OPEB liability by contributing 100% or more of the Actuarially Determined Contribution (ADC) each year.

Different terminology is sometimes used by actuaries and accountants when referring to key liability and expense components. Here are some of these terms which are often interchangeable:

**Actuarial Funding Terminology**

Present Value of Projected Benefits (PVPB)  
 Actuarially Accrued Liability (AAL)  
 Market Value of Assets  
 Unfunded Actuarially Accrued Liability (UAAL)  
 Normal Cost

**GASB 75 Terminology**

N/A; typically not reported for accounting purposes  
 Total OPEB Liability (TOL)  
 Fiduciary Net Position  
 Net OPEB Liability  
 Service Cost

The Department approved development of Actuarially Determined Contributions (ADC) based on the following two components, which are then adjusted with interest to the Department’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 determined for the Department’s fiscal year ending June 30, 2021 was developed based on the June 2019 actuarial valuation using a 6.80% discount rate. A summary is shown below:

Discount Rate	6.80%
Actuarial Accrued Liability (projected)	\$ 8,899,460
Actuarial Value of Assets (projected)	4,348,723
Unfunded Actuarial Accrued Liability (UAAL)	4,550,737
Amortization Factor*	13.9851
<b>Actuarially Determined Contribution for FYE 2021</b>	
Amortization of UAAL	\$ 325,400
Normal Cost	265,979
Interest to Fiscal Year End	40,214
<b>Total ADC</b>	<b>\$ 631,593</b>

\* Determined on a level % of pay basis over a closed 30 year period; 19 years remain for FYE 2021

In our professional judgement, the ADC determined on this basis should provide for trust sufficiency, based on the current plan provisions and employee data, if all assumptions are exactly realized *and providing that the Department contribute 100% or more of the total ADC each year*. When an agency commits to funding the trust at or above the ADC, GASB 75 allows use of the expected long term trust return to be used as the discount rate in determining the plan liability. Even so, the ADC developed on this basis does not guarantee trust sufficiency due to the non-trivial risk that the assumptions used to determine plan contributions may not be realized.



## D. Certification

The purpose of this report is to provide actuarial information of the other postemployment benefits (OPEB) provided by the Ross Valley Fire Department (the Department) in compliance with Statement 75 of the Governmental Accounting Standards Board (GASB 75). 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 Department. 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 and in accordance with the Department's stated OPEB funding policy. 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 Department and may not be provided to third parties without prior written consent of MacLeod Watts. Exceptions are: The Department may provide copies of this report to their professional accounting and legal advisors who are subject to a duty of confidentiality, and the Department 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: July 23, 2021

  
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 Department reported 31 active members in the data provided to us for the July 2019 valuation. All were reported to be enrolled in the medical program sponsored by the Department.

Distribution of Benefits-Eligible Active Employees								
Current Age	Years of Service						Total	Percent
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 & Up		
Under 25							0	0%
25 to 29		2	1				3	10%
30 to 34		2	2	1			5	16%
35 to 39			1	2	2		5	16%
40 to 44			2	2	2		6	19%
45 to 49			5	2	1		8	26%
50 to 54			1			3	4	13%
55 to 59							0	0%
60 to 64							0	0%
65 to 69							0	0%
70 & Up							0	0%
<b>Total</b>	0	4	12	7	5	3	<b>31</b>	<b>100%</b>
<b>Percent</b>	0%	13%	39%	23%	16%	10%	<b>100%</b>	

<u>Valuation</u>	<u>July 2017</u>	<u>June 2019</u>
Average Attained Age for Actives	41.7	41.2
Average Years of Service	14.0	11.3

**Retirees:** There were 28 retirees and 6 surviving spouses receiving benefits under this program on the valuation date. This chart summarizes the ages of current retirees and beneficiaries included in this valuation.

Retirees by Age		
Current Age	Number	Percent
Below 50	0	0%
50 to 54	2	6%
55 to 59	5	15%
60 to 64	6	18%
65 to 69	6	18%
70 to 74	4	12%
75 to 79	5	15%
80 & up	6	18%
<b>Total</b>	<b>34</b>	<b>100%</b>
<b>Average Age:</b>		
On 6/30/2019	69.7	
At retirement	52.6	

**Summary of Plan Member Counts:** The number of members currently or potentially eligible to receive benefits under the OPEB plan are required to be reported in the notes to the financial statements. These were the counts from the data provided to us for the June 30, 2019 valuation.

Summary of Plan Member Counts	
Number of active plan members	31
Number of inactive plan members currently receiving benefits	34
Number of inactive plan members entitled to but not receiving benefits	3



## Supporting Information

(Continued)

### Section 2 - Summary of Retiree Benefit Provisions

**OPEB provided:** The Department reported that it provides lifetime retiree medical 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 PEPR employee) 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 Department to be eligible to continue medical coverage through the Department 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 condition of participation in the CalPERS medical program, the Department is obligated to contribute toward the cost of retiree medical coverage for the retiree's lifetime or until coverage is discontinued, as well as to a surviving spouse, if the spouse is entitled to survivor pension benefits.

- According to the Department's current PEMHCA resolution, executed in 2013, all employees who satisfy the requirements under "Access to Coverage" above and continue their medical coverage through the Department in retirement will receive the PEMHCA minimum employer contribution (MEC)<sup>1</sup>. The MEC was \$136 per month in 2019 and increased to \$139 per month in 2020.
- Instead of the minimum contribution described above, employees first covered by the Ross Valley Firefighters Association or the Ross Valley Fire Chief Officers Association prior to April 1, 2013 and Miscellaneous employees hired prior to April 1, 2013 will be reimbursed an amount equal to the Department's share of CalPERS medical premiums as of January 1, 2013, increased annually by a maximum of \$100 per month *but not more than* the Basic Family Kaiser rate in the Department's CalPERS rate region. This chart shows the maximum amounts payable per month during 2020:

Region 1 2020 Health Plan Rates							2020 Cap Amount
Plan	Actives and Pre-Med Retirees			Medicare Eligible Retirees			
	Ee Only	Ee & 1	Ee & 2+	Ee Only	Ee & 1	Ee & 2+	
Blue Shield Access+ HMO	\$ 1,127.77	\$ 2,255.54	\$ 2,932.20	Not Available			\$1,880.44
Health Net SmartCare	1,000.52	2,001.04	2,601.35	Not Available			1,880.44
Kaiser HMO	768.49	1,536.98	1,998.07	\$ 339.43	\$ 678.86	\$ 1,139.95	1,857.77
PERS Choice PPO	861.18	1,722.36	2,239.07	351.39	702.78	1,219.49	1,916.16
PERS Select PPO	520.29	1,040.58	1,352.75	351.39	702.78	1,014.95	1,916.16
PERSCare PPO	1,133.14	2,266.28	2,946.16	384.78	769.56	1,449.44	1,998.07
Western Health Adv. HMO	731.96	1,463.92	1,903.10	Not Available			1,880.44

<sup>1</sup> The Department confirmed that it maintains a pre-tax flexible benefit (a.k.a. "Cafeteria plan") for active employees providing medical and other healthcare benefits in excess of the PEMHCA minimum. It is our understanding that these additional payments are not required to be provided to retired employees to meet PEMHCA requirements.



**Supporting Information**  
(Continued)

**Section 3 - Actuarial Methods 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 payments depend only on the terms of the plan and the administrative arrangements adopted. The actuarial assumptions are used to estimate the cost of these benefits; the funding method spreads the expected costs on a level basis over the life of the plan.

**Important Dates**

Fiscal Year End	June 30, 2021
GASB 75 Measurement Date	Last day of the prior fiscal year (June 30, 2020)
Valuation Date	June 30, 2019

**Valuation Methods**

Funding Method	Entry Age Normal Cost, level percent of pay
Asset Valuation Method	Market value of assets
Participants Valued	Only current active employees and retired participants and covered dependents are valued. No future entrants are considered in this valuation.

**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 2 to this report.

Representative claims costs derived from the dataset provided by CalPERS for non-Medicare retirees are shown in the chart on the following page. Monthly baseline premium costs were set equal to the active single premiums shown in the chart at the bottom of Section 2.

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. There is no subsidy by active employee premiums; age-based premiums were not developed for Medicare-eligible retirees.



**Supporting Information**  
 (Continued)

**Section 3 - Actuarial Methods and Assumptions**

Development of Age-related  
 Medical Premiums

Expected Monthly Claims by Medical Plan for Selected Ages						
Region	Medical Plan	Male				
		50	53	56	59	62
Region 1	Anthem Traditional HMO	\$ 1,145	\$ 1,350	\$ 1,568	\$ 1,797	\$ 2,043
	Health Net SmartCare	725	855	993	1,138	1,293
	Kaiser HMO	763	900	1,045	1,198	1,362
	PERS Choice PPO	773	912	1,059	1,214	1,380
	PERS Select PPO	543	640	744	852	969
	PERSCare PPO	960	1,132	1,315	1,507	1,714
	Western Health Advantage HMO	684	807	937	1,074	1,221
Out of State	PERS Choice PPO	455	536	623	714	812
	PERSCare PPO	549	648	752	862	980
Region	Medical Plan	Female				
		50	53	56	59	62
Region 1	Anthem Traditional HMO	\$ 1,419	\$ 1,558	\$ 1,677	\$ 1,812	\$ 1,998
	Health Net SmartCare	898	986	1,062	1,147	1,265
	Kaiser HMO	946	1,039	1,118	1,208	1,331
	PERS Choice PPO	958	1,052	1,132	1,224	1,349
	PERS Select PPO	673	739	795	859	947
	PERSCare PPO	1,190	1,307	1,406	1,520	1,675
	Western Health Advantage HMO	848	931	1,002	1,083	1,194
Out of State	PERS Choice PPO	564	619	666	720	794
	PERSCare PPO	681	747	804	869	958

**Economic Assumptions**

Long Term Return on Assets	6.80% as of June 30, 2020 and June 30, 2019 net of plan investment expenses
Discount Rate	6.80% as of June 30, 2020 and June 30, 2019
General Inflation Rate	2.5% per year
Salary Increase	3.0% per year; since benefits do not depend on salary, this is used to allocate the cost of benefits between service years.
Healthcare Trend	Medical plan premiums and claims costs by age are assumed to increase once each year. Increases over the prior year's levels are assumed to be effective on the dates shown in a table on the following page.





## Supporting Information

(Continued)

### Section 3 - Actuarial Methods and Assumptions

Healthcare Trend  
(concluded)

Effective January 1	Premium Increase	Effective January 1	Premium Increase
2020	Actual	2060-66	4.80%
2021	5.40%	2067	4.70%
2022	5.30%	2068	4.60%
2023-26	5.20%	2069	4.50%
2027-46	5.30%	2070-71	4.40%
2047	5.20%	2072	4.30%
2048-49	5.10%	2073-74	4.20%
2050-53	5.00%	2075	4.10%
2054-59	4.90%	2076 & later	4.00%

The required PEMHCA minimum employer contribution (MEC) is assumed to increase annually by 4.0%.

### Participant Election Assumptions

Medicare Eligibility

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

Participation Rate

*Active employees:* 100% of those hired prior to April 1, 2013 and 80% of those hired on or after that date are assumed to continue their current medical plan election in retirement. These different percentages reflect different benefit levels provided.

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

Spouse Coverage

*Active employees:* 80% of those hired prior to April 1, 2013 and 60% of those hired after that date 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 be continued through retirement 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.

Dependent Coverage

*Tier 1 Active employees and retirees* covering dependent children are assumed to end such coverage when the youngest currently covered dependent reaches age 26.



## Supporting Information

(Continued)

### Section 3 - Actuarial Methods and Assumptions

#### Demographic Assumptions

*Demographic actuarial assumptions used in this valuation are based on the 2017 experience study of the California Public Employees Retirement System using data from 1997 to 2015, except for a different basis used to project future mortality improvements.*

Mortality Improvement                      MacLeod Watts Scale 2018 applied generationally from 2015  
(see Addendum 3)

Retirement Formulas

	Safety	Misc
Classic:	3% @ 55	2.7% @ 55
PEPRA:	2.7% @ 57	2% @ 62

For sample rates of assumed mortality, service and disability retirement and separation (termination) prior to retirement at selected ages, please refer to our June 2019 valuation report and/or the CalPERS experience study referenced above.

#### Changes recognized in the current measurement period:

None



## 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”. 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 Agency does not impact the amount of the implicit subsidy.*

### Valuation Process

The valuation was based on employee census data and benefits provided by the Department. 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 Department 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 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.



## Important Background Information

(Continued)

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

The resulting present value for each employee is allocated as a level percent of payroll each year over the employee's career using the entry age normal cost method and the amounts for each individual are then summed to get the results for the entire plan. This creates a cost expected to increase each year as payroll increases. Amounts attributed to prior fiscal years form the "Total OPEB Liability". The OPEB cost allocated for active employees in the current year is referred to as "Service Cost".

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

It is important to remember that an actuarial valuation is, by its nature, a projection of one possible future outcome based on many assumptions. To the extent that actual experience is not what we assumed, future results will differ. Some possible sources of future differences may include:

- A significant change in the number of covered or eligible plan members
- A significant increase or decrease in the future premium rates
- A change in the subsidy provided by the Agency toward retiree premiums
- Longer life expectancies of retirees
- Significant changes in expected retiree healthcare claims by age, relative to healthcare claims for active employees and their dependents
- Higher or lower returns on plan assets or contribution levels other than were assumed, and/or
- Changes in the discount rate used to value the OPEB liability



## Important Background Information

(Continued)

### Requirements of GASB 75

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

### Important Dates

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

### Recognition of Plan Changes and Gains and Losses

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

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

Difference between projected  
and actual trust earnings:

5 year straight-line recognition

All other amounts:

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



**Important Background Information**

(Continued)

**Implicit Subsidy Plan Contributions**

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

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.



## **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 2018** was developed from a blending of data and methodologies found in two published sources: (1) the Society of Actuaries Mortality Improvement Scale MP-2017 Report, published in October 2017 and (2) the demographic assumptions used in the 2017 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, published July 2017.

MacLeod Watts Scale 2018 is a two-dimensional mortality improvement scale reflecting both age and year of mortality improvement. The underlying base scale is Scale MP-2017 which has two segments: (1) historical improvement rates for the period 1951-2013 and (2) an estimate of future mortality improvement for years 2014-2016 using the Scale MP-2017 methodology but utilizing the assumptions obtained from Scale MP-2015. The MacLeod Watts scale then transitions from the 2016 improvement rate to the Social Security Administration (SSA) Intermediate Scale linearly over the 10-year period 2017-2026. After this transition period, the MacLeod Watts Scale uses the constant mortality improvement rate from the SSA Intermediate Scale from 2026-2040. The SSA's Intermediate Scale has a final step down in 2041 which is reflected in the MacLeod Watts scale for years 2041 and thereafter. Over the ages 95 to 115, the SSA improvement rate is graded to zero.

Scale MP-2017 can be found at the SOA website and the projection scales used in the 2017 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

Deferred Contributions – When an employer makes contributions after the measurement date and prior to the fiscal year end, recognition of these contributions is deferred to a subsequent accounting period by creating a deferred resource. We refer to these contributions as Deferred Contributions.

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

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

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

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

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



## Glossary

(Continued)

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

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

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

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

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

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

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

Plan Assets – The value of cash and investments considered as ‘belonging’ to the plan and permitted to be used to offset the AAL for valuation purposes. To be considered a plan asset, GASB 75 requires (a) contributions to the OPEB plan be irrevocable, (b) OPEB assets to dedicated to providing OPEB benefit to plan members in accordance with the benefit terms of the plan, and (c) plan assets be legally protected from creditors, the OPEB plan administrator and the plan members.

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

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

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

Total OPEB Liability (TOL) – Total dollars required to fund all plan benefits attributable to service rendered as of the valuation date for current plan members and vested prior plan members; a subset of “Actuarial Present Value”

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

