### MacLeod Watts

May 15, 2020

JoAnne Lewis Administrative Assistant Ross Valley Fire Department 777 San Anselmo Avenue San Anselmo, CA 94960

Re: June 30, 2019 Actuarial Valuation and GASB 75 Report for Fiscal Year Ending June 30, 2020

Dear Ms. Lewis:

We are pleased to enclose the results of our June 30, 2019 actuarial valuation and other relevant information regarding the other post-employment benefit (OPEB) liability of the Ross Valley Fire Department. The report's text describes our analysis and assumptions in detail.

The primary purposes of this report are to:

- 1) Remeasure plan liabilities as of June 30, 2019, in accordance with GASB 75's biennial valuation requirement,
- 2) Develop Actuarially Determined Contributions levels for prefunding plan benefits,
- 3) Provide information to be submitted to the California Employers' Retiree Benefit Trust (CERBT) to satisfy filing requirements for the trust, and
- 4) 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, 2020. *Please note that contributions, retiree benefit payments and payroll shown for fiscal year end 2020 are estimates.*

The information included in this report reflects our assumption that the Department will continue contributing 100% or more of the Actuarially Determined Contributions each year and that trust assets will remain invested in CERBT Asset Allocation Strategy 1. If either assumption is incorrect, please let us know as results could change significantly.

We based the valuation on the employee data, details on plan benefits and retiree benefit payments reported to us by the Department. As with any analysis, the soundness of the report is dependent on the inputs. Please review our summary of this information 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 perform this valuation. Please let us know if we can be of further assistance.

Sincerely,

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

Casheine L. Machees

Principal & Consulting Actuary



### Ross Valley Fire Department

Actuarial Valuation of Other Post-Employment Benefit Programs As of June 30, 2019

Development of OPEB Prefunding Levels

& GASB 75 Report for the Fiscal Year Ending June 30, 2020

Submitted May 2020

# MacLeod Watts

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#### A. Executive Summary

This report presents the results of the June 30, 2019 actuarial valuation of the other post-employment benefit (OPEB) program of the Ross Valley Fire Department (the Department). The purposes of this valuation are to: 1) summarize the results of the valuation; 2) develop Actuarially Determined Contribution (ADC) levels for prefunding plan benefits; 3) provide information required by the California Employers' Retiree Benefit Trust (CERBT); and 4) assess the OPEB liabilities and provide disclosure information as required by Statement No. 75 of the Governmental Accounting Standards Board (GASB 75) for the fiscal year ending June 30, 2020.

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 financial reporting and plan funding.

Absent material changes to this program, the results of the June 30, 2019 valuation will also be applied to prepare the Department's GASB 75 report for the fiscal year ending June 30, 2021. If there are any significant changes in the employee population, plan benefits or eligibility, or to the Department's funding policy, an earlier valuation might be required or appropriate.

#### **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 the medical premiums for qualifying retirees. See Supporting Information, Section 2A for details.
- 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, retirees at most ages are likely to experience higher claims than the premiums they pay prior to eligibility for Medicare coverage. 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 assumed that the Medicare Supplement premium structure is adequate to cover their expected retiree claims.

<sup>&</sup>lt;sup>1</sup> A liability for potential future excise tax liability for "high cost" retiree coverage was included in the prior valuation. However, this provision of the Affordable Care Act was repealed in December 2019, so this liability was eliminated.



### Executive Summary (Continued)

#### **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 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 assumed annual trust return and discount rate applied for accounting and for plan funding purposes in this report is 6.8%, reflecting the Department's expectations as of the measurement date. For more information, see Expected Return on Trust Assets on page 10.

#### **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, 2020 Measurement Date June 30, 2019

Measurement Period June 30, 2018 to June 30, 2019

Valuation Date June 30, 2019



### Executive Summary (Concluded)

#### Significant Results and Differences from the Prior Valuation

No benefit changes were reported to MacLeod Watts relative to those in place at the time the July 2017 valuation was prepared. We reviewed and updated some assumptions used to project the OPEB liability. Differences between actual and expected results based on updated census and premium data since July 2017 were also reflected (referred to as "plan experience"). Overall, the Total OPEB Liability on the current measurement date is lower than that reported one year ago.

Section C. Basic Valuation Results as of June 30, 2019 provides additional information on the impact of the new assumptions and plan experience. Assumption changes are described at the end of Section 3.

#### Impact on Statement of Net Position and OPEB Expense for Fiscal 2020

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, 2020		
Total OPEB Liability	\$	8,548,295	
Fiduciary Net Position		3,718,434	
Net OPEB Liability (Asset)		4,829,861	
Deferred (Outflows) of Resources		(1,174,597)	
Deferred Inflows of Resources		1,437,667	
Impact on Statement of Net Position	\$	5,092,931	
OPEB Expense, FYE 6/30/2020	\$	471,733	

#### **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.** Valuation Process

The June 30, 2019 valuation has been based on employee census data and benefits initially submitted to us by the Department in March 2020 and clarified in various related communications. 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 described below has been performed in accordance with the actuarial methods and assumptions described in Section 3 and is consistent with our understanding of Actuarial Standards of Practice.

In projecting 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 also apply assumptions regarding:

- The probability that each individual employee will or will not continue in service with the Department to receive benefits.
- To the extent assumed to retire from the Department, the probability of various possible retirement dates 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 back to the valuation date using the discount rate. These benefit projections and liabilities have a very long time horizon. Final payments for younger active employees may not be made for 60 years or more.

Projections over such long periods that are dependent on numerous assumptions regarding future economic and demographic variables are subject to substantial revision as future events unfold. While we believe that the assumptions and methods used in this valuation are reasonable for the purposes of this report, the cost to the Department of sponsoring this plan is subject to future revision risk, perhaps materially. Demonstrating the range of potential future results was beyond the scope of our assignment.

The key outputs from an actuarial valuation are described below:

Actuarial Present Value of Projected Benefits (PVPB): PVPB refers to the discounted total value of all future benefits expected to be provided to current retirees and beneficiaries and to current active employees after they retire. In calculating the PVPB, the amount of each future payment is projected, multiplied by a probability that it will be paid and then discounted from the future payment date back to the valuation date using the assumed discount rate.

After the PVPB is calculated, the next step in the valuation process is to apportion the PVPB into

- the value of benefits already earned by prior service of current employees and retirees and
- the value of benefits expected to be earned by future service of current employees.



### Valuation Process (Concluded)

*Key valuation outputs (continued)* 

Actuarial Accrued Liability (TOL): The value of benefits deemed earned by service worked prior to the valuation date is called the Actuarial Accrued Liability (in actuarial terminology) and Total OPEB Liability (in GASB terminology). The AAL/TOL represents the portion of the PVPB that is deemed to have been earned by prior service of employees. The AAL for current retirees equals their PVPB because their service is complete. For active employees, the AAL is less than the PVPB because there is always some future service possible.

**Normal cost (NC):** Normal cost (actuarial terminology), or service cost (in GASB terminology) represents the portion of the PVPB that is deemed to be earned by active employees over a single year. The present value of all future normal costs for the periods after the valuation date plus the AAL will be equal to the PVPB. Only active members have a current service cost.

Where contributions have been made to an irrevocable OPEB trust, the accumulated value of trust assets is applied to offset the AAL. In this valuation, we set the Actuarial Value of Assets equal to the market value of assets invested in in the Department's CERBT OPEB trust. The portion of the AAL not covered by assets is referred to as the **unfunded actuarial accrued liability** (or UAAL in actuarial terminology), or **Net OPEB Liability** (in GASB terminology).

If the actuarial cost method used for plan funding is the same as that required by GASB 75, the terms may often be used interchangeably:

#### **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

Specific results from this valuation are provided in the following Section C. Plan contributions for fiscal years 2021 and 2022 based on this 2019 valuation are developed in Section E.

For the Department's OPEB plan, trust assets as of the June 30, 2019 valuation date are expressed as a percentage of the Present Value of Projected Benefits and of the Total OPEB Liability (a.k.a., Actuarial Accrued Liability), developed using a 6.8% discount rate are shown here:

PVPB	F	NP (Assets)	Funded %
\$ 11,052,490	\$ 3,718,434		34%
TOL (AAL)	F	NP (Assets)	Funded %
\$ 8,548,295	\$	3,718,434	43%



### C. June 30, 2019 Valuation Results

This chart compares the results measured as of June 30, 2018, based on the July 1, 2017 valuation, with the results measured as of June 30, 2019, based on the June 30, 2019 actuarial valuation using the 6.8% discount rate applied for financial reporting purposes.

Valuation Date		7/1/2017		6/30/2019			
Fiscal Year Ending		6/30/2019		6/30/2020			
Measurement Date		7/1/2017		6/30/2019			
Subsidy	Explicit	Implicit	Total	Explicit	Implicit	Total	
Discount rate	6.95%	6.95%	6.95%	6.80%	6.80%	6.80%	
Number of Covered Employees							
Actives	30	30	30	31	31	31	
Retirees	33	12	33	34	13	34	
Total Participants	63	42	63	65	44	65	
Actuarial Present Value of Projected Benefits							
Actives	\$ 5,291,490	\$ 1,921,513	\$ 7,213,003	\$ 4,611,742	\$ 1,709,163	\$ 6,320,905	
Retirees	4,228,293	890,010	5,118,303	4,028,280	703,305	4,731,585	
Total APVPB	9,519,783	2,811,523	12,331,306	8,640,022	2,412,468	11,052,490	
Total OPEB Liability (TOL)							
Actives	3,461,413	1,234,748	4,696,161	2,847,634	969,076	3,816,710	
Retirees	4,228,293	890,010	5,118,303	4,028,280	703,305	4,731,585	
TOL	7,689,706	2,124,758	9,814,464	6,875,914	1,672,381	8,548,295	
Fiduciary Net Position			3,013,224			3,718,434	
Net OPEB Liability			6,801,240			4,829,861	
Service Cost For the period following the measurement date	158,775	57,065	215,840	187,137	71,095	258,232	

The ratio of the Fiduciary Net Position (plan assets) to the Total OPEB Liability (Actuarial Accrued Liability) is 43.5% on June 30, 2019. This is up from 30.7% as of June 30, 2018. The change in the Total OPEB Liability, Fiduciary Net Position and Net OPEB Liability are discussed on the following page.



### June 30, 2019 Valuation Results (Concluded)

Change in plan assets: Based on the assumed contribution levels from the 2017 valuation, we projected trust assets would be \$3,025,691 on June 30, 2019. The actual (audited) trust value on that date was \$3,718,434, which is \$692,743 higher than expected. This is because contributions to the trust were higher than expected; trust earnings were \$26,573 lower than expected.

Change in TOL: The TOL has decreased by \$1,266,169 from one year ago. We expected an increase of \$422,442 from normal plan operation and the passage of time. However, unexpected changes of \$(1,688,611) more than offset this increase. The categories of unexpected changes are as follows:

- Benefit changes: No changes were reported to benefits since June 30, 2017.
- Plan experience includes differences between what was assumed would occur and what
  actually occurred since the prior valuation. In this case, \$(914,309) of the favorable plan
  experience resulted from lower than projected medical premium rates between 2017 and 2020
  (particularly for Medicare Supplement plans). An additional \$(325,233) resulted from retirees
  changing plans and/or from changes in spouse coverage. The remainder relates to differences
  in employee separations and/or retirements other than expected.
- Changes in actuarial assumptions or methodology: Changes made are shown below; together the assumption changes increased the TOL by \$6,241. For more on the assumption changes, see the last page of Supporting Information, Section 3.

This chart reconciles the TOL reported at June 30, 2019 to the TOL to be reported as of June 30, 2020.

Reported Total OPEB Liability at June 30, 2019 Measurement Date June 30, 2018	\$ 9,814,464
Expected Changes:	
Normal Cost	215,840
Benefit Payments	(474,032)
Interest Cost	680,634
Total Expected Change	422,442
Expected Total OPEB Liability at June 30, 2020 Measurement Date June 30, 2019	\$ 10,236,906
Unexpected Changes:	
Plan experience different than assumed	(1,694,852)
Changed discount rate	149,071
Change in demographic assumptions and mortality improvement scale	(55,765)
Changed medical trend to Getzen model	47,820
Updates to actuarial coding	(27,302)
Change in dependent coverage assumption	10,976
Decrease in PEMHCA minimum increase trend	(4,961)
Elimination of excise tax liability	(113,598)
Total Unexpected Change	(1,688,611)
Actual Total OPEB Liability at June 30, 2020 Measurement Date June 30, 2019	\$ 8,548,295



### D. 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, 2020. The Department is classified for GASB 75 purposes as a single employer.

The Net Deferred (Outflows) Inflows of Resources and Deferred Contributions shown in this report are subject to changes based on the final reported Employer Contributions during fiscal year 2019-2020. The implicit subsidy contribution will not change, but actual retiree benefits paid and contributions to the OPEB trust, if any, should be updated once known after the close of the year. Covered employee payroll for the current fiscal year, shown in the Schedule of Contributions exhibit will likely also change.

#### **Components of Net Position and Expense**

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

Plan Summary Information for FYE June 30, 2020 Measurement Date is June 30, 2019	Ross Valley FD			
Items Impacting Net Position:				
Total OPEB Liability	\$	8,548,295		
Fiduciary Net Position	Y	3,718,434		
Net OPEB Liability (Asset)		4,829,861		
Deferred (Outflows) Inflows of Resources Due to:				
Assumption Changes		(242,223)		
Plan Experience		1,437,667		
Investment Experience		(31,190)		
Deferred Contributions		(901,184)		
Net Deferred (Outflows) Inflows of Resources		263,070		
Impact on Statement of Net Position, FYE 6/30/2020	\$	5,092,931		
Items Impacting OPEB Expense:				
Service Cost	\$	215,840		
Cost of Plan Changes		-		
Interest Cost		680,634		
Expected Earnings on Assets		(227,770)		
Administrative Expenses		642		
Recognized Deferred Resource items:				
Assumption Changes		55,040		
Plan Experience		(257,185)		
Investment Experience		4,532		
OPEB Expense, FYE 6/30/2020	\$	471,733		



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

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

For Reporting at Fiscal Year End  Measurement Date	<b>6/30/2019</b> 6/30/2018		5/30/2020 5/30/2019	Change During Period
Total OPEB Liability	\$	9,814,464	\$ 8,548,295	\$ (1,266,169)
Fiduciary Net Position		3,013,224	3,718,434	705,210
Net OPEB Liability (Asset)		6,801,240	4,829,861	(1,971,379)
Deferred Resource (Outflows) Inflows Due to:				
Assumption Changes		(291,022)	(242,223)	48,799
Plan Experience		-	1,437,667	1,437,667
Investment Experience		14,909	(31,190)	(46,099)
Deferred Contributions		(1,002,745)	(901,184)	101,561
Net Deferred (Outflows) Inflows		(1,278,858)	263,070	1,541,928
Impact on Statement of Net Position	\$	5,522,382	\$ 5,092,931	\$ (429,451)
Change in Net Position During the Fiscal Year				
Impact on Statement of Net Position, FYE 6/30/20	)19		\$ 5,522,382	
OPEB Expense (Income)			471,733	
Employer Contributions During Fiscal Year			(901,184)	
Impact on Statement of Net Position, FYE 6/30/20	)20	;	\$ 5,092,931	
OPEB Expense				
Employer Contributions During Fiscal Year			\$ 901,184	
Deterioration (Improvement) in Net Position			(429,451)	
OPEB Expense (Income), FYE 6/30/2020			\$ 471,733	



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

	Prior Authority				Total
Fiduciary Net Position at Fiscal Year Ending 6/30/2019  Measurement Date 6/30/2018	\$	566,928	\$	2,446,296	\$ 3,013,224
Changes During the Period:					
Investment Income		31,144		145,995	177,139
Employer Contributions		446,839		555,906	1,002,745
Administrative Expenses		(120)		(522)	(642)
Benefit Payments		(237,479)		(236,553)	(474,032)
Net Changes During the Period		240,384		464,826	705,210
Fiduciary Net Position at Fiscal Year Ending 6/30/2020 Measurement Date 6/30/2019	\$	807,312	\$	2,911,122	\$ 3,718,434

#### **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%

<sup>\*</sup>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%. The Department approved 6.8% assumed asset return and discount rate for GASB 75 purposes and to develop contribution levels for prefunding the plan.



#### **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.

Changes in the Fiduciary Net Position due to investment performance different from the assumed earnings rate are always recognized over 5 years.

Liability differences due 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, 2020.

Ross Valley FD	De	eferred Outflows of Resources	C	Deferred Inflows of Resources
Changes of Assumptions	\$	242,223	\$	-
Differences Between Expected and Actual Experience		-		1,437,667
Net Difference Between Projected and Actual Earnings on Investments		31,190		-
Deferred Contributions		901,184		-
Total	\$	1,174,597	\$	1,437,667

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
2021	\$ (197,613)
2022	(197,612)
2023	(190,147)
2024	(192,018)
2025	(235,681)
Thereafter	(151,183)



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

The discount rate used for accounting purposes for the fiscal year end 2020 is 6.8%. Healthcare Cost Trend Rate was assumed to start at 5.4% (increase effective January 1, 2021) and grade down to 4% for years 2076 and later. The impact of a 1% increase or decrease in these assumptions is shown in the chart below.

	Sensitivity to:										
Change in Discount Rate											
Total OPEB Liability	9,661,846	8,548,295	7,629,458								
Increase (Decrease)	1,113,551	(918,837)									
% Increase (Decrease)	13.0%	-10.7%									
Net OPEB Liability (Asset)	5,943,412	4,829,861	3,911,024								
Increase (Decrease)	1,113,551	(918,837)									
% Increase (Decrease)	23.1%		-19.0%								
Change in Heathcare Cost Trend Rate	Current Trend - 1%	Current Trend	Current Trend + 1%								
Total OPEB Liability	7,668,821	8,548,295	9,506,019								
Increase (Decrease)	(879,474)	957,724									
% Increase (Decrease)	-10.3%	11.2%									
Net OPEB Liability (Asset)	3,950,387	4,829,861	5,787,585								
Increase (Decrease)	(879,474)		957,724								
% Increase (Decrease)	-18.2%		19.8%								



### 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, 2019 and 2020) are shown in the table.

Fiscal Year Ending	6/30/2020	6/30/2019	6/30/2018
Measurement Date	6/30/2019	6/30/2018	6/30/2017
Discount Rate on Measurement Date	6.80%	6.95%	7.25%
Total OPEB liability			
Service Cost	\$ 215,840	\$ 194,348	\$ 188,230
Interest	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	(474,032)	(422,295)	(382,896)
Net change in total OPEB liability	(1,266,169)	771,561	429,568
Total OPEB liability - beginning	9,814,464	9,042,903	8,613,336
Total OPEB liability - ending (a)	\$ 8,548,295	\$ 9,814,464	\$ 9,042,904
Plan fiduciary net position			
Contributions - employer	\$ 1,002,745	\$ 1,108,061	\$ 785,990
Net investment income	177,139	171,917	167,198
Benefit payments	(474,032)	(422,295)	(382,896)
Administrative Expenses	(642)	(1,151)	(854)
Other Expenses		(2,858)	
Net change in plan fiduciary net position	705,210	853,674	569,438
Plan fiduciary net position - beginning	3,013,224	2,159,550	1,590,112
Plan fiduciary net position - ending (b)	\$ 3,718,434	\$ 3,013,224	\$ 2,159,550
Net OPEB liability - ending (a) - (b)	\$ 4,829,861	\$ 6,801,240	\$ 6,883,354
Covered-employee payroll	\$ 4,099,185	\$ 3,781,313	\$ 3,963,937
Net OPEB liability as a % of covered-employee payroll	117.82%	179.86%	173.65%



#### **Schedule of Contributions**

Since establishing the OPEB trust, the Department has consistently contributed 100% or more of the Actuarially Determined Contribution (ADC) each year and confirmed its intention to continue doing so. This chart shows the contributions for the years since GASB 75 was implemented. *Contributions and payroll for FYE 2020 are estimates and should be replaced with actual amounts once available.* 

Fiscal Year Ending	FYE 2020	FYE 2019	FYE 2018
Actuarially Determined Contribution	\$ 750,115	\$ 727,745	\$ 696,858
Contributions in relation to the actuarially determined contribution	901,184	1,002,745	1,108,061
Contribution deficiency (excess)	\$ (151,069)	\$ (275,000)	\$ (411,203)
Covered employee payroll	\$ 4,222,161	\$ 4,099,185	\$ 3,781,313
Contributions as a % of covered employee payroll	21.34%	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

7/1/2017	7/1/2017	7/1/2015
7.25%	7.25%	7.25%
Entry Age Normal	Entry Age Normal	Entry Age Normal
Level % of Pay	Level % of Pay	Level % of Pay
20 Years Closed	21 Years Closed	22 Years Closed
Market Value	Market Value	Market Value
2.75%	2.75%	2.75%
8.0% in 2018 to 5% in steps of 0.5%	8.0% in 2018 to 5% in steps of 0.5%	7.5% in 2017 to 4.5% in steps of 0.5%
3.25%	3.25%	3.25%
50 to 75	50 to 75	50 to 75
CalPERS 2014 Experience Study	CalPERS 2014 Experience Study	CalPERS 2014 Experience Study
MW Scale 2017 generationally	MW Scale 2017 generationally	MW Scale 2014 generationally



### **Detail of Changes to Net Position**

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

	Total	Fiduciary	Net	(d) Deferred Outflows (Inflows) Due to:			Due to:	Impact on	
Ross Valley FD	OPEB	Net	OPEB						Statement of
noss rancy 12	Liability	Position	Liability	As	sumption	Plan	Investment	Deferred	Net Position
	(a)	(b)	(c) = (a) - (b)	(	Changes	Experience	Experience	Contributions	(e) = (c) - (d)
Balance at Fiscal Year Ending 6/30/2019  Measurement Date 6/30/2018	\$9,814,464	\$3,013,224	\$6,801,240	\$	291,022	\$ -	\$ (14,909)	\$ 1,002,745	\$ 5,522,382
Changes During the Period:									
Service Cost	215,840		215,840						215,840
Interest Cost	680,634		680,634						680,634
Expected Investment Income		227,770	(227,770)						(227,770)
Employer Contributions		1,002,745	(1,002,745)						(1,002,745)
Changes of Benefit Terms	-		-						-
Administrative Expenses		(642)	642						642
Benefit Payments	(474,032)	(474,032)	-						-
Assumption Changes	6,241		6,241		6,241				-
Plan Experience	(1,694,852)		(1,694,852)			(1,694,852)			-
Investment Experience		(50,631)	50,631				50,631		-
Recognized Deferred Resources					(55,040)	257,185	(4,532)	(1,002,745)	805,132
Employer Contributions in Fiscal Year								901,184	(901,184)
Net Changes in Fiscal Year 2019-2020	(1,266,169)	705,210	(1,971,379)		(48,799)	(1,437,667)	46,099	(101,561)	(429,451)
Balance at Fiscal Year Ending 6/30/2020 Measurement Date 6/30/2019	\$8,548,295	\$3,718,434	\$4,829,861	\$	242,223	\$ (1,437,667)	\$ 31,190	\$ 901,184	\$ 5,092,931



### **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, 2019

	Deferred I	Resource				Recognition of Deferred Outflow or Deferred (Inflow) in Measurement				Period:		
Date		Initial	Period	Annual	Balance as of	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	
Created	Cause	Amount	(Yrs)	Recognition	Jun 30, 2019	(FYE 2020)	(FYE 2021)	(FYE 2022)	(FYE 2023)	(FYE 2024)	(FYE 2025)	Thereafter
	Investment Earnings											
6/30/2017	Greater than Expected	\$ (37,334)	5.00	\$ (7,467)	\$ (14,933)	\$ (7,467)	\$ (7,467)	\$ (7,466)	\$ -	\$ -	\$ -	\$ -
	Loss Due To											
6/30/2018	<b>Assumption Changes</b>	345,115	6.38	54,093	236,929	54,093	54,093	54,093	54,093	54,093	20,557	-
	Investment Earnings											
6/30/2018	Less than Expected	9,364	5.00	1,873	5,618	1,873	1,873	1,873	1,872	-	-	-
	Gain Due To											
6/30/2019	Plan Experience	(1,694,852)	6.59	(257,185)	(1,437,667)	(257,185)	(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	5,294	947	947	947	947	947	947	559
	Investment Earnings											
6/30/2019	Less than Expected	50,631	5.00	10,126	40,505	10,126	10,126	10,126	10,126	10,127	-	-



#### **Department Contributions to the Plan**

Department contributions to the Plan occur as benefits are paid to retirees and/or to the OPEB trust. Benefit payments 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"). Note that the implicit subsidy contribution does not represent cash payments to retirees, but reclassification of a portion of active healthcare cost to be treated as a retiree healthcare expense.

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

Benefit Payments During the Measurement Period, Jul 1, 2018 thru Jun 30, 2019	Ros	ss Valley FD
Benefits Paid by Trust	\$	-
Benefits Paid by Employer (not reimbursed by trust)		349,200
Implicit benefit payments		124,832
Total Benefit Payments	\$	474,032
During the Measurement Period		
During the Measurement Period		
Employer Contributions During the Measurement Period, Jul 1, 2018 thru Jun 30, 2019	Ros	ss Valley FD
Employer Contributions During the	Ros \$	<b>528,713</b>
Employer Contributions During the Measurement Period, Jul 1, 2018 thru Jun 30, 2019		•
Employer Contributions During the Measurement Period, Jul 1, 2018 thru Jun 30, 2019  Employer Contributions to the Trust Employer Contributions in the Form of		528,713

Benefits payments and other Department contributions expected to be made in the year following the measurement period but prior to the end of the fiscal year are shown below. These estimates should be replaced with total actual payments once known after the close of the fiscal year.

Employer Contributions During the Fiscal Year, Jul 1, 2019 thru Jun 30, 2020	Ross Valley FD		
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	
Total Employer Contributions  During the Fiscal Year	\$	901,184	



#### **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).

Projected Annual Benefit Payments							
Fiscal Year	Explicit Subsidy Implicit Subsidy			Implicit Subsidy			
Ending	Current	Future		Current	Future		
June 30	Retirees	Retirees	Total	Retirees	Retirees	Total	Total
2020	\$ 385,090	\$ -	\$ 385,090	\$ 151,069	\$ -	\$ 151,069	\$ 536,159
2021	355,762	14,769	370,531	121,969	1,269	123,238	493,769
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

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 explicit subsidy benefit amount shown for FYE 2020 is currently an estimate and will be replaced with the actual amount, once known.

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.



### **Sample Journal Entries**

Beginning Account Balances		
As of the fiscal year beginning 7/1/2019	Debit	Credit
Net OPEB Liability		6,801,240
Deferred Resource Assumption Changes	291,022	
Deferred Resource Plan experience	-	
Deferred Resource Investment Experience		14,909
Deferred Resource Contributions	1,002,745	
Net Position	5,522,382	

<sup>\*</sup> 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

Will change at year end when actual payments are known

during the fiscal year	Debit	Credit
OPEB Expense	385,090	
Premium Expense		385,090
OPEB Expense	365,025	
Cash		365.025

<sup>\*</sup> 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	151,069	
Premium Expense	151,069	)

<sup>\*</sup> 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	1,971,379	
Deferred Resource Assumption Changes		48,799
Deferred Resource Plan experience		1,437,667
Deferred Resource Investment Experience	46,099	
Deferred Resource Contributions		101,561
OPEB Expense		429,451



### **E. Funding Information**

The employer's OPEB funding policy and level of contributions to an irrevocable OPEB trust directly affects the discount rate which is used to calculate the OPEB liability to be reported in the employer's financial statements. 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. Prefunding also improves the security of benefits for current and potential future recipients and contributes to intergenerational taxpayer equity by better matching the cost of the benefits to the service years in which they are "earned" and which correspond to years in which taxpayers benefit from those services.

#### **Paying Down the UAAL**

Once an entity decides to prefund, a decision must be made about how to pay for benefits related to accumulated prior service that have not yet been funded (the UAAL<sup>2</sup>). This is most often, though not always, handled through structured amortization payments. The period and method chosen for amortizing this unfunded liability can significantly affect the Actuarially Determined Contribution (ADC) or other basis selected for funding the OPEB program.

Much like paying off a mortgage, when the AAL exceeds plan assets, choosing a longer amortization period to pay off the UAAL means smaller payments, but the payments will be required for more years; plan investments will have less time to work toward helping reduce required contribution levels. When the plan is in a surplus position, the reverse is true, and a longer amortization period may be preferable.

There are several ways the amortization payment can be determined. The most common methods are calculating the amortization payment as a level dollar amount or as a level percentage of payroll. The employer might also choose to apply a shorter period when the UAAL only when it is positive, i.e., when trust assets are lower than the AAL, but opt for a longer period or to exclude amortization of a negative UAAL, when assets exceed the AAL. The entire UAAL may be amortized as one single component or may be broken into multiple components reflecting the timing and source of each change, such as those arising from assumption changes, benefit changes and/or liability or investment experience.

The amortization period(s) should not exceed the number of years needed for the current trust assets plus future contributions and earnings to be sufficient to pay all future benefits and trust expenses each year. Prefunding of OPEB is optional and contributions at any level are permitted. However, if trust sufficiency is not expected, a discount rate other than the assumed trust return will likely be required for accounting purposes.

### **Development of the Actuarially Determined Contributions**

The Department has approved development of ADCs based on the following two components, which are then adjusted with interest to each 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) over a closed 30 year period.
   Amortization payments are determined on a level % of pay basis; 19 years remain in the amortization period in determining the ADC for fiscal year end June 30, 2021.

<sup>&</sup>lt;sup>2</sup> We use actuarial, rather than accounting, terminology to describe the components used to develop the ADCs.



Actuarially Determined Contributions, developed as described above for the Department's fiscal years ending June 30, 2021 and June 30, 2022 are shown the exhibit on the next page. These ADCs incorporate both explicit benefits (cash payments) and implicit subsidy benefit liabilities. Contributions credited toward meeting the ADC will be comprised of: (1) direct payments to insurers toward retiree premiums to the extent not reimbursed to the Department by the trust; plus (2) each year's implicit subsidy payment; and (3) contributions to the OPEB trust.

ADCs determined on this basis should provide for trust sufficiency, based on the current plan provisions and census data, provided all assumptions are exactly realized and if the Department contributes 100% or more of the 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. Trust sufficiency cannot be guaranteed to a certainty, however, because of the non-trivial risk that the assumptions used to project future benefit liabilities may not be realized.

#### **Funding and Prefunding of the Implicit Subsidy**

An implicit subsidy liability is created when retiree medical claims are expected to exceed the premiums charged for retiree coverage. Recognition of the estimated implicit subsidy each year is handled by an accounting entry, reducing the amount paid for active employees and shifting that amount to be treated as a retiree healthcare expense/contribution (see Sample Journal Entries). The implicit subsidy is a true benefit to the retiree but can be difficult to see when medical premiums are set as a flat rate for both actives and pre-Medicare retirees. This might lead some employers to believe the benefit is not real or is merely an accounting construct, and thus to forgo prefunding of retiree implicit benefits.

Consider what would happen if the retiree premiums were based only on expected retiree claims experience. Almost certainly, retiree premiums would increase while premiums for active employees would go down if the active premiums no longer had to help support the higher retiree claims. Who would pay the increases in retiree premiums? Current plan documents and bargaining agreements would have to be consulted. Depending on circumstances, the increase in retiree premiums might remain the responsibility of the employer, pass entirely to the retirees, or some blending of the two. The answer would determine whether separate retiree-only premium rates would result in a higher or lower employer OPEB liability. In the current premium structure, with blended active and pre-Medicare retiree premiums, the employer is clearly, though indirectly, paying the implicit retiree cost.

The prefunding decision is complex. OPEB materiality, budgetary concerns, desire to use the full trust rate in developing the liability for GASB 75, and other factors must be weighed by each employer. Since prefunding OPEB benefits is not required, each employer's OPEB prefunding strategy will depend on how they balance these competing perspectives.



We develop the Actuarially Determined Contributions (ADCs) for fiscal years ending June 30, 2021 and June 30, 2022 from the results of this valuation. The ADC for fiscal year end June 30, 2020 was developed from the prior (2017) valuation and we have included this for reference as well.

Funding Policy	Prefunding	Prefunding Basis	
Valuation Date	7/1/2017	6/30,	/2019
For fiscal year ending	6/30/2020	6/30/2021	6/30/2022
Expected long-term return on assets	7.25%	6.80%	6.80%
Discount rate	7.25%	6.80%	6.80%
Number of Covered Employees			
Actives	30	31	31
Retirees	33	34	34
Total Participants	63	65	65
Actuarial Present Value of Projected Benefits			
Actives	\$ 6,800,424	\$ 6,743,990	\$ 7,185,998
Retirees	4,908,562	4,554,158	4,369,867
Total APVPB	11,708,986	11,298,148	11,555,865
Actuarial Accrued Liability (AAL)			
Actives	5,005,406	4,345,302	4,908,265
Retirees	4,908,562	4,554,158	4,369,867
Total AAL	9,913,968	8,899,460	9,278,132
Actuarial Value of Assets	3,025,691	4,348,723	4,786,947
Unfunded AAL (UAAL)	6,888,277	4,550,737	4,491,185
UAAL Amortization method	Level % of Pay	Level % of Pay	Level % of Pay
Remaining amortization period (years)	20	19	18
Amortization Factor	13.9942	13.9851	13.4641
Actuarially Determined Contribution (ADC)			
Normal Cost	\$ 207,185	\$ 265,979	\$ 273,959
Amortization of UAAL	492,223	325,400	333,567
Interest to fiscal year end	50,707	40,214	41,312
Total ADC	750,115	631,593	648,838

### Funding of the ADC

Take credit for the current implicit subsidy	(151,069)	(123,238)	(137,414)
Cash payments needed to meet ADC	599,046	508,355	511,424
Estimated retiree benefits paid by agency	385,090	370,531	383,923
Estimated contribution (refund) to/from trust	365,025	137,824	127,501

We have *estimated* the retiree premiums that the Department will pay each year. For fiscal year end 2020, we also reflected the trust contributions budgeted by the Department, with total contributions expected to exceed the ADC. For FYEs 2021 and 2022, if the actual benefits paid are lower, the contribution to the trust should be increased so that payments to the trust plus retiree benefit payments equal or exceed the "Additional payments needed to meet ADC" each year.



#### **Sensitivity of ADC to Asset Values**

As discussed earlier on page 20, one component of the ADC is the amortization payment of the Unfunded Actuarial Accrued Liability (UAAL). When developing the ADC for future years, we project the UAAL based on the actuarial methods and assumptions described in Supporting Information Section 3. This includes the assumption that the plan's trust assets will earn 6.8% return each year. Adverse investment experience will increase the UAAL, and therefore increase the ADC.

We emphasize that the ADC amounts for fiscal year ending 6/30/2021 and 6/30/2022 are not required to be recalculated if plan assets are different than projected. ADCs are typically calculated based on the assets and liabilities as of the valuation date and not updated in interim years. Gains and losses that occur between valuations are generally picked up in the next valuation and the impact reflected in future ADCs. However, changes may be reflected sooner at the agency's option. Given the current economic uncertainty, we wanted to illustrate the hypothetical impact on the ADC if asset performance is different than projected from the June 30, 2019 values.

The chart below illustrates the change in the ADC for the fiscal years ending 6/30/2021 and 6/30/2022 if the trust asset value falls by 10% or \$372,000 between June 30, 2019 and June 30, 2020 rather than increasing by 6%.

	Fiscal Year End	6	5/30/2021	6/30/2022
-	Actuarial Accrued Liability	\$	8,899,460	\$ 9,278,132
a.	Projected Actuarial Value of Assets (AVA)		4,348,723	4,786,947
	Projected Unfunded Actuarial Accrued Liability (UAAL)		4,550,737	4,491,185
b.	UAAL Amortization Factor		13.9851	13.4641
c.	ADC using Projected AVA		631,593	648,838
	ADC developed using alternative AVA			
d.	Alternative AVA at beginning of fiscal year		3,346,591	3,795,801
e.	Difference in UAAL if using alternative AVA (a d.)		1,002,132	991,146
f.	Amortization of difference in UAAL (e./b.)		71,657	73,614
g.	Interest to fiscal year end (f. * 6.8%)		4,873	5,006
h.	Change in ADC from alternative asset value (f. + g.)	\$	76,530	\$ 78,620
	Total Alternative ADC (c. + h.)		708,123	727,458

Another variable that is sensitive to the current public health situation is the potential impact on future CalPERS medical premium rates. On page 7, we noted that lower than expected premium increases between 2017 and 2020 resulted in more than a \$900,000 decrease in the Actuarial Accrued Liability. Looking ahead, should premiums increase *more* than we expect in the next year or two, some loss (liability increase) could occur with somewhat higher future ADCs from this as well.



Prior Authority refers to Department members who retired before July 1, 2012. The chart below provides the results of the June 30, 2019 valuation and develops Actuarially Determined Contribution levels for the Prior Authority members for fiscal years ending June 30, 2021 and 2022. Projected results for fiscal years ending June 30, 2023 – June 30, 2025 are also provided.

	Prior Authority					
Approach	Prefunding Ba	sis: 5 Year Proje	ction of Actuaria	ally Determined	Contributions	
For fiscal year ending	6/30/2021	6/30/2022	6/30/2023	6/30/2024	6/30/2025	
Long term asset return	6.80%	6.80%	6.80%	6.80%	6.80%	
Discount Rate	6.80%	6.80%	6.80%	6.80%	6.80%	
Amortization method	Level % of Pay	Level % of Pay	Level % of Pay	Level % of Pay	Level % of Pay	
Remaining amortization period (in years)	19	18	17	16	15	
Number of Covered Employees						
Actives	-	-	-	-	-	
Retirees	24	24	24	24	24	
Total Participants	24	24	24	24	24	
Actuarial Present Value of Projected Benefits	\$ 2,093,909	\$ 1,998,230	\$ 1,885,180	\$ 1,815,809	\$ 1,770,232	
Actuarial Accrued Liability	2,093,909	1,998,230	1,885,180	1,815,809	1,770,232	
Actuarial Value of Assets	850,451	768,406	672,597	624,382	604,204	
Unfunded Actuarial Accrued Liability	1,243,458	1,229,824	1,212,583	1,191,427	1,166,028	
Amortization Factor	13.9851	13.4641	12.9240	12.3639	11.7831	
Actuarially Determined Contribution (ADC)						
Normal Cost	-	-	-	-	-	
Amortization of UAAL	88,913	91,341	93,824	96,364	98,958	
Interest to 6/30	6,046	6,211	6,380	6,553	6,729	
ADC at Fiscal Year End	94,959	97,552	100,204	102,917	105,687	
Calculation of Expected Contribution						
Estimated payments on behalf of retirees	187,533	191,352	169,360	159,339	160,461	
Estimated current year's implicit subsidy	42,703	49,392	21,706	4,154	5,074	
Estimated contribution to OPEB trust	(135,277)	(143,192)	(90,862)	(60,576)	(59,848)	
Total Expected Employer Contribution	94,959	97,552	100,204	102,917	105,687	



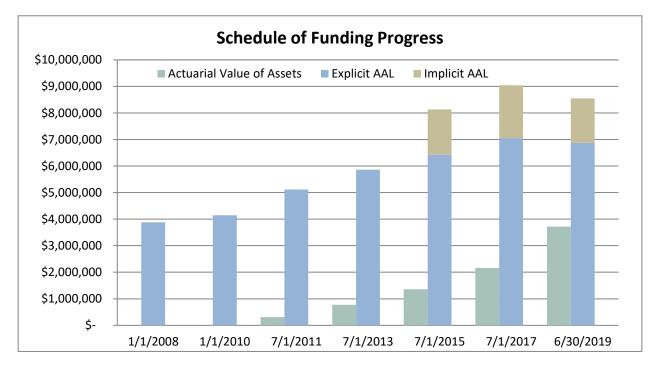
Expanded Authority refers to all other Department members who were not retired by July 1, 2012. The chart below provides the results of the June 30, 2019 valuation and develops Actuarially Determined Contribution levels for the Expanded Authority members for fiscal years ending June 30, 2021 and 2022. Projected results for fiscal years ending June 30, 2023 – June 30, 2025 are also provided.

	Expanded Authority					
Approach	Prefunding Ba	ısis: 5 Year Proje	ction of Actuaria	ally Determined	Contributions	
For fiscal year ending	6/30/2021	6/30/2022	6/30/2023	6/30/2024	6/30/2025	
Long term asset return	6.80%	6.80%	6.80%	6.80%	6.80%	
Discount Rate	6.80%	6.80%	6.80%	6.80%	6.80%	
Amortization method	Level % of Pay	Level % of Pay	Level % of Pay	Level % of Pay	Level % of Pay	
Remaining amortization period (in years)	19	18	17	16	15	
Number of Covered Employees						
Actives	31	31	31	31	31	
Retirees	10	10	10	10	10	
Total Participants	41	41	41	41	41	
Actuarial Present Value of Projected Benefits	\$ 9,204,239	\$ 9,557,635	\$ 9,917,421	\$ 10,259,876	\$ 10,605,745	
Actuarial Accrued Liability	6,805,551	7,279,902	7,777,390	8,275,689	8,797,041	
Actuarial Value of Assets	3,498,272	4,018,541	4,571,698	5,136,172	5,735,005	
Unfunded Actuarial Accrued Liability	3,307,279	3,261,361	3,205,692	3,139,517	3,062,036	
Amortization Factor	13.9851	13.4641	12.9240	12.3639	11.7831	
Actuarially Determined Contribution (ADC)						
Normal Cost	265,979	273,959	282,178	290,644	299,364	
Amortization of UAAL	236,487	242,226	248,043	253,926	259,866	
Interest to 6/30	34,168	35,101	36,055	37,031	38,028	
ADC at Fiscal Year End	536,634	551,286	566,276	581,601	597,258	
Calculation of Expected Contribution						
Estimated payments on behalf of retirees	182,998	192,571	215,786	234,250	253,920	
Estimated current year's implicit subsidy	80,535	88,022	105,230	105,984	107,631	
Estimated contribution to OPEB trust	273,101	270,693	245,260	241,367	235,707	
Total Expected Employer Contribution	536,634	551,286	566,276	581,601	597,258	



In this section, we provide a review of key components of valuation results from 2008 through 2019.

Schedule of Funding Progress								
			Unfunded			UAAL as a		
	Actuarial	Actuarial	Actuarial			Percentage		
Actuarial	Value of	Accrued	Accrued	Funded	Covered	of Covered		
Valuation	Assets	Liability	Liability	Ratio	Payroll	Payroll	Discount	
Date	(a)	(b)	(b-a)	(a/b)	(c)	((b-a)/c)	Rate	
1/1/2008	\$ -	\$ 3,880,724	\$ 3,880,724	0.0%	\$ 2,334,351	166.2%	7.75%	
1/1/2010	\$ -	\$ 4,144,877	\$ 4,144,877	0.0%	\$ 2,638,186	157.1%	7.75%	
7/1/2011	\$ 312,209	\$ 5,117,093	\$ 4,804,884	6.1%	\$ 3,161,662	152.0%	7.50%	
7/1/2013	\$ 771,411	\$ 5,864,413	\$ 5,093,002	13.2%	\$ 3,453,704	147.5%	7.50%	
7/1/2015	\$ 1,361,065	\$ 8,133,603	\$ 6,772,538	16.7%	\$ 3,965,148	170.8%	7.25%	
7/1/2017	\$ 2,158,527	\$ 9,042,903	\$ 6,884,376	23.9%	\$ 3,963,937	173.7%	7.25%	
6/30/2019	\$ 3,718,434	\$ 8,548,295	\$ 4,829,861	43.5%	\$ 4,099,185	117.8%	6.80%	



Significant changes during this period include:

- July 1, 2013: Addition of new JPA members
- July 1, 2015: First time recognition of the implicit subsidy liability relating to medical coverage;
   decrease in assumed discount rate
- July 1, 2017: Increase in assumed long term healthcare trend; increase in assumed spouse coverage for future retirees
- June 30, 2019: Continued favorable plan experience from lower than expected premiums and lower projected increases on the PEMHCA minimum benefit; partially offset by decrease in discount rate from 7.25% to 6.80% and other assumption changes.



#### F. Certification

The primary purposes of this report are: (1) 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); and (2) to provide Actuarially Determined Contributions for prefunding of this program in conformity with the Department's OPEB funding policy. The Department is not required to contribute the ADC shown in this report and we make no representation that it will, in fact, fund the OPEB trust at any particular level).

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 actuary is 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. The actuary is a member of the American Academy of Actuaries and meets the qualification standards for rendering this opinion.

Signed: May 15, 2020

Casherine L. MacLeosa
Catherine L. MacLeosa, FSA, FCA, EA, MAAA

Cou

ourtney D. Crisp, Senior Actuarial Analyst



### **G.** 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 currently enrolled in the medical program sponsored by the Department.

Distribution of Benefits-Eligible Active Employees								
	Years of Service							
<b>Current Age</b>	Under 1	Under 1						Percent
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%
Total	0	4	12	7	5	3	31	100%
Percent	0%	13%	39%	23%	16%	10%	100%	

Valuation	<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%			
Total	34	100%			
Average Age:					
On 6/30/2019	69.7				
At retirement	52.6				



### Section 1 - Summary of Employee Data (continued)

The chart below reconciles the number of actives and retirees included in the June 30, 2017 valuation of the Department plan with those included in the June 30, 2019 valuation:

Reconciliation of Department Plan Members Between Valuation Dates								
				Covered	Covered			
	Covered	Waiving	Covered	Disabled	Surviving			
Status	Actives	Actives	Retirees	Retirees	Spouses	Total		
Number reported as of June 30, 2017	29	1	12	15	6	63		
New employees	4	-	-	-	-	4		
Separated employees	-	(1)	ı	ı	-	(1)		
New retiree, elected coverage	(2)	-	1	1	-	0		
Previously covered, now waiving	-	-	-	(1)	-	(1)		
Retirement type correction	-	-	(1)	1	-	0		
Number reported as of June 30, 2019	31	0	12	16	6	65		

Overall, the number of covered plan members increased by 2, from 63 to 65. There is one more active employee and one more retiree.

The one new retiree is continuing coverage and receiving benefits. One previously covered retiree voluntarily discontinued coverage. He was receiving only the PEMHCA minimum benefit.

We consider these and other recent prior elections when setting assumptions for future retiree participation.

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.

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			

Retiree benefits and the Department's OPEB liability vary based on each member's employment date. The chart below shows the number of active and retired employees in each benefit "tier". A description of each tier begins in the next section.

Counts by Benefit Tier							
Pre-65 Post-65							
Tier	Active	Retired	Retired	Total			
1	22	13	21	56			
2	9	0	0	9			
Total	31	13	21	65			



#### **Section 2A - 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 PEPRA 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>3</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:

Plan	2020 Cap
Blue Shield Access+	\$ 1,880.44
Kaiser	1,857.77
PERS Choice	1,916.16
PERS Select	1,916.16
PERSCare	1,998.07
HealthNet Smart Care	1,880.44
Western Health Advantage	1,880.44

<sup>&</sup>lt;sup>3</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.



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#### Section 2B - Excise Taxes for High Cost Retiree Coverage (Repealed)

The Patient Protection and Affordable Care Act (ACA) included a 40% excise tax on high-cost employer-sponsored health coverage. The tax applied to the aggregate annual cost of an employee's applicable coverage that exceeds a dollar limit. Implementation of this tax had been delayed by subsequent legislation to 2022.

As noted earlier in this report, this excise tax on high cost retiree coverage was repealed by Senate Amendment to H.R. 1865, *Further Consolidated Appropriations Act, 2020*, and signed by the President on December 20, 2019. While the repeal occurred after the valuation date, we no longer assume any portion of such a tax will be paid by the Department and, accordingly, excluded the previously developed liability from the results of this valuation.



#### **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 expect costs on a level basis over the life of the plan.

Valuation Date June 30, 2019

GASB 75 Measurement Date Last day of prior fiscal year (June 30, 2019)

Funding Method Entry Age Normal Cost, level percent of pay

Asset Valuation Method Market value of assets

Trust Administrative Expenses .10% of trust assets

Long term return on assets 6.8% as of June 30, 2019 and 6.95% as of June 30, 2018

net of plan investment expenses, trust administrative expenses,

and including inflation

Discount rate 6.8% as of June 30, 2019 and 6.95% as of June 30, 2018

Participants Valued Only current active employees and retired participants and

covered dependents are valued. No future entrants are

considered in this valuation.

Salary Increase 3.0% per year; since benefits do not depend on salary, this is

used to allocate the cost of benefits between service years and to determine amortization payments for developing the

Actuarially Determined Contributions.

General Inflation Rate 2.5% per year

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. Rates for selected age and service are shown below and on the following pages. The representative mortality rates were the published CalPERS rates, adjusted to back out 15 years of Scale MP 2016 to central year 2015, then projected as described below.

Mortality Improvement MacLeod Watts Scale 2018 applied generationally from 2015

(see Addendum 3)



### **Section 3 - Actuarial Methods and Assumptions**

Mortality Before Retirement (before improvement applied)

CalPERS Public Agency Miscellaneous Non- Industrial Deaths			
Age	Age Male Female		
15	0.00019	0.00004	
20	0.00027	0.00008	
30	0.00044	0.00018	
40	0.00070	0.00040	
50	0.00135	0.00090	
60	0.00288	0.00182	
70	0.00693	0.00438	
80	0.01909	0.01080	

CalPERS Public Agency		
Police & Fire Combined		
Industrial & Non-Industrial		
Age	Male	Female
15	0.00023	0.00008
20	0.00032	0.00013
30	0.00053	0.00025
40	0.00081	0.00050
50	0.00150	0.00104
60	0.00306	0.00200
70	0.00714	0.00459
80	0.01934	0.01105

Mortality After Retirement (before improvement applied)

**Healthy Lives** 

Disabled Miscellaneous

CalPERS Public Agency			
	• ,		
Misce	Miscellaneous, Police &		
Fire	Fire Post Retirement		
Mortality			
Age	Male	Female	
40	0.00070	0.00040	
50	0.00431	0.00390	
60	0.00758	0.00524	
70	0.01490	0.01044	
80	0.04577	0.03459	
90	0.14801	0.11315	
100	0.35053	0.30412	
110	1.00000	1.00000	

	CalPERS Public Agency Disabled Miscellaneous Post-Retirement Mortality		
Α	ge	Male	Female
2	20	0.00027	0.00008
] 3	30	0.00044	0.00018
4	10	0.00070	0.00040
	50	0.01371	0.01221
6	50	0.02447	0.01545
7	70	0.03737	0.02462
8	30	0.07218	0.05338
ç	90	0.16585	0.14826

Disabled Fire

CalPERS Public Agency Disabled Fire Post- Retirement Mortality		
Age	Male	Female
20	0.00027	0.00009
30	0.00031	0.00014
40	0.00034	0.00022
50	0.00780	0.00681
60	0.01250	0.00809
70	0.02361	0.01647
80	0.06612	0.04975
90	0.18524	0.14349



### **Section 3 - Actuarial Methods and Assumptions**

#### **Termination Rates**

These rates reflect the assumed probability that an employee will leave the Department in the next 12 months for reasons other than a service or disability retirement or death.

	Miscellaneous Employees: Sum of Vested Terminated & Refund Rates From CalPERS Experience Study Report Issued December 2017							
Attained			Years of	Service				
Age	0	3	5	10	15	20		
15	0.1812	0.0000	0.0000	0.0000	0.0000	0.0000		
20	0.1742	0.1193	0.0654	0.0000	0.0000	0.0000		
25	0.1674	0.1125	0.0634	0.0433	0.0000	0.0000		
30	0.1606	0.1055	0.0615	0.0416	0.0262	0.0000		
35	0.1537	0.0987	0.0567	0.0399	0.0252	0.0184		
40	0.1468	0.0919	0.0519	0.0375	0.0243	0.0176		
45	0.1400	0.0849	0.0480	0.0351	0.0216	0.0168		

Fire Safety Employees: Sum of Vested Terminated & Refund Rates From CalPERS Experience Study Report Issued December 2017							
Attained			Years of	f Service			
Age	0	3	5	10	15	20	
15	0.1298	0.0000	0.0000	0.0000	0.0000	0.0000	
20	0.1298	0.0237	0.0146	0.0000	0.0000	0.0000	
25	0.1298	0.0237	0.0146	0.0069	0.0000	0.0000	
30	0.1298	0.0237	0.0146	0.0069	0.0052	0.0000	
35	0.1298	0.0237	0.0146	0.0069	0.0052	0.0041	
40	0.1298	0.0237	0.0146	0.0069	0.0052	0.0041	
45	0.1298	0.0237	0.0146	0.0069	0.0052	0.0041	

#### Service Retirement Rates

Each rate in these tables reflects the assumed probability that an employee with that age and service will take a service retirement from the Department in the next 12 months.

#### Miscellaneous Classic:

Miscellaneous Employees: 2.7% at 55 formula From CalPERS Experience Study Report Issued December 2017 Current Years of Service 5 10 15 20 25 30 Age 50 0.0030 0.0100 0.0160 0.0340 0.0330 0.0450 55 0.0330 0.0550 0.0780 0.1130 0.1560 0.2340 60 0.0600 0.0860 0.1120 0.1500 0.1820 0.2380 65 0.1400 0.1740 0.2080 0.2540 0.3060 0.3890 0.2430 0.1500 0.1810 0.2910 0.3500 70 0.2120 75 & over 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000



2.7% @ 55

### **Section 3 - Actuarial Methods and Assumptions**

Service Retirement Rates (Continued)

Miscellaneous PEPRA:

2% @ 62

Miscellaneous "PEPRA" Employees: 2% at 62 formula							
From Ca	From CalPERS Experience Study Report Issued December 2017						
Current			Years of S	ervice			
Age	5	10	15	20	25	30	
50	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
55	0.0100	0.0190	0.0280	0.0360	0.0610	0.0960	
60	0.0310	0.0510	0.0710	0.0910	0.1110	0.1380	
65	0.1080	0.1410	0.1730	0.2060	0.2390	0.3000	
70	0.1200	0.1560	0.1930	0.2290	0.2650	0.3330	
75 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	

Fire Classic: 3.0% @ 55

Fire Safety Employees: 3.0% at 50 formula From CalPERS Experience Study Report Issued December 2017								
Current			Years of S	ervice				
Age	5	10	15	20	25	30		
50	0.0200	0.0200	0.0200	0.0400	0.1300	0.1920		
53	0.0230	0.0230	0.0230	0.0430	0.1350	0.1980		
56	0.0530	0.0530	0.0530	0.0850	0.1960	0.2690		
59	0.0750	0.0750	0.0750	0.1160	0.2390	0.3210		
62	0.0680	30 0.0680 0.0680 0.1060 0.2240 0.30 <sup>2</sup>						
65 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		

Fire PEPRA: 2.7% @ 57

Fire Safety Employees: 2.7% at 57 formula From CalPERS Experience Study Report Issued December 2017						
Current			Years of S	ervice		
Age	5	10	15	20	25	30
50	0.0065	0.0065	0.0065	0.0065	0.0101	0.0151
53	0.0442	0.0442	0.0442	0.0442	0.0680	0.1018
56	0.0740	0.0740	0.0740	0.0740	0.1140	0.1706
59	0.0729	0.0729	0.0729	0.0729	0.1123	0.1681
62	0.1136	0.1136	0.1136	0.1136	0.1749	0.2618
65 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000



#### **Section 3 - Actuarial Methods and Assumptions**

**Disability Retirement Rates** 

CalPERS Public Agency					
Misce	ellaneous D	isability			
From D	ec 2017 E	xperience			
	Study Rep	ort			
Age	Male	Female			
20	0.00017	0.00010			
25	0.00017	0.00010			
30	0.00019	0.00024			
35	0.00039	0.00071			
40	0.00102	0.00135			
45	0.00151	0.00188			
50	0.00158	0.00199			
55	0.00158	0.00149			
60	0.00153	0.00105			

CalPERS Public Agency			
Fire Co	ombined Disability		
Fr	rom Dec 2017		
Experi	ence Study Report		
Age	Unisex		
20	0.00015		
25	0.00029		
30	0.00066		
35	0.00129		
40	0.00235		
45	0.00418		
50 0.02128			
55	0.03134		
60	0.04442		

**Healthcare Trend** 

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

Effective	Premium	Effective	Premium
January 1	Increase	January 1	Increase
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 by 4.0% annually.

**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.



#### **Section 3 - Actuarial Methods and Assumptions**

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.

Other 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.

Medicare Eligibility

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

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. Therefore, no implicit subsidy is calculated for Medicare-eligible retirees.



#### **Section 3 - Actuarial Methods and Assumptions**

Development of Age-related Medical Premiums

	Expected Monthly Claims by Medical Plan for Selected Ages						
		Male					
Region	Medical Plan	50	53	56	59	62	
	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	
Region 1	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	
Out of State	PERSCare PPO	549	648	752	862	980	
				Female			
Region	Medical Plan	50	53	56	59	62	
	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	
Region 1	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	
Out of State	PERSCare PPO	681	747	804	869	958	

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

Trust rate of return and discount rate

Decreased from 7.25% on 7/1/2017 and 6.95% on 6/30/2018 to 6.8%, reflecting updated projections of long term trust returns

**Demographic Assumptions** 

Assumed mortality, termination, and retirement rates were updated from those provided in the 2014 experience study report to those provided in the 2017 experience study report of CalPERS. In our opinion, the Department's plan population would not produce credible rates based only solely on its experience. We believe rates from the CalPERS experience study provide a reasonable estimate of the Department's future demographic experience.



#### **Section 3 - Actuarial Methods and Assumptions**

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

Mortality Improvement The mortality improvement scale was updated from MacLeod

Watts Scale 2017 to MacLeod Watts Scale 2018 (see Addendum

3), reflecting continued updates in available information.

General Inflation Rate Decreased from 2.75% to 2.5% per year

Salary Increase Decreased from 3.25% to 3.0% per year

Dependent coverage We changed the assumption about coverage of dependent

children for future Tier 1 retirees to be based on current coverage of children, since this is now a closed group with this coverage no longer to be expected to change materially

between now and retirement.

Medical Trend Updated future healthcare increases from this table:

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

to use the Getzen healthcare trend model sponsored by the Society of Actuaries. For specific rates by year, see page 36.

PEMHCA MEC Increases Decreased from 4.5% to 4.0% per year based on recent historical

and expected future increases in CPI-medical.

Excise tax on High-cost Coverage We excluded the excise tax from the results given the December

2019 repeal of this provision of the Affordable Care Act.



### **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 f	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.

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

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

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

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

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



#### **Requirements of GASB 75**

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

#### **Important Dates**

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

#### Recognition of Plan Changes and Gains and Losses

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

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

Difference between projected and actual trust earnings:

5 year straight-line recognition

All other amounts:

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



### **Implicit Subsidy Plan Contributions**

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

The following hypothetical example illustrates this treatment:

Hypothetical Illustration		For Active		For Retired		
of Implicit Subsidy Recognition		imployees	EM	ployees		
Prior to Implicit Subsidy Adjustment						
Premiums Paid by Agency During Fiscal Year	\$	411,000	\$	48,000		
A untin - Tuestus ant	Compe	ensation Cost for	Contribu	tion to Plan &		
Accounting Treatment	Active Employees		Benefits Paid from Plan			
After Implicit Sub	sidy Adj	iustment				
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		
	Reduce	es Compensation	Increases	Contributions		
Accounting Treatment Impact	Co	ost for Active	to Plan &	Benefits Paid		
	Employees		from Plan			

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



#### **Discount Rate**

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

#### **Actuarial Funding Method and Assumptions**

The "ultimate real cost" of an employee benefit plan is the value of all benefits and other expenses of the plan over its lifetime. These expenditures are dependent only on the terms of the plan and the administrative arrangements adopted, and as such are not affected by the actuarial funding method.

The actuarial funding method attempts to spread recognition of these expected costs on a level basis over the life of the plan, and as such sets the "incidence of cost". GASB 75 specifically requires that the actuarial present value of projected benefit payments be attributed to periods of employee service using the Entry Age Actuarial Cost Method, with each period's service cost determined as a level percentage of pay.

The results of this report may not be appropriate for other purposes, where other assumptions, methodology and/or actuarial standards of practice may be required or more suitable.



### **Addendum 2: MacLeod Watts Age Rating Methodology**

Both accounting standards (e.g. GASB 75) and actuarial standards (e.g. ASOP 6) require that expected retiree claims, not just premiums paid, be reflected in most situations where an actuary is calculating retiree healthcare liabilities. Unfortunately, the actuary is often required to perform these calculations without any underlying claims information. In most situations, the information is not available, but even when available, the information may not be credible due to the size of the group being considered.

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

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

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

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

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



### Addendum 3: MacLeod Watts Mortality Projection Methodology

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

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

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

The **MacLeod Watts Scale 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**

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

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

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

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

<u>Deferred Contributions</u> – 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.

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

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

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

<u>Entry Age Actuarial Cost Method</u> – An actuarial funding method where, for each individual, the actuarial present value of benefits is levelly spread over the individual's projected earnings or service from entry age to the last age at which benefits can be paid

<u>Excise Tax</u> – The Affordable Care Act created an excise tax on the value of employer sponsored coverage which exceeds certain thresholds ("Cadillac Plans"). This tax was repealed in December 2019.

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

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

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



## Glossary (Continued)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

