

MacLeod Watts

July 31, 2020

Ms. Sandy Wong
Executive Director
City/County Association of Governments of San Mateo County
555 County Center, 5th Floor
Redwood City, CA 94063

Re: GASB 75 Actuarial Report for the Fiscal Year Ending June 30, 2020

Dear Ms. Wong:

We are pleased to enclose the results of our June 30, 2019 actuarial valuation and other information regarding the other post-employment benefit (OPEB) liability of the City/County Association of Governments of San Mateo County. The report 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 Contribution 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 C/CAG's financial statements for the fiscal year ending June 30, 2020.

The information included in this report reflects our assumption that C/CAG 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 2. 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 C/CAG. 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 C/CAG 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
Principal & Consulting Actuary



City/County Association of Governments
of San Mateo County

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 July 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 City/County Association of Governments of San Mateo County (C/CAG). 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 after this executive summary present exhibits and other 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 C/CAG'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 C/CAG's funding policy, an earlier valuation might be required or appropriate.

OPEB Obligations of C/CAG

C/CAG provides continuation of medical coverage to its retiring employees. This benefit creates 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.¹ In this program, C/CAG pays a portion of the medical premiums for qualifying retirees. Details are provided in Supporting Information, Section 2A.
- **Implicit subsidy liabilities:** An "implicit subsidy" exists when the premiums charged for retiree coverage are lower than the expected retiree claims for that coverage. In the CalPERS medical program, the same monthly premiums are charged for active employees and for pre-Medicare retirees. CalPERS has confirmed that the claims experience of these members is considered together in setting premium rates.

As is the nature of group premium rate structures, at some ages, retirees may be expected to experience higher claims than the premiums they pay, where at other ages, the reverse may be true. We determine the implicit rate subsidy for pre-Medicare retirees as the projected difference between (a) retiree medical claim costs by age and (b) premiums charged for retiree coverage. For more information see Section 3 and Addendum 2: MacLeod Watts Age Rating Methodology.

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

¹ 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

C/CAG'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.

C/CAG has been and continues to prefund its OPEB liability, contributing 100% or more of the Actuarially Determined Contributions each year. With C/CAG's approval, the assumed trust rate and discount rate applied for accounting purposes in this report is 6.25% reflecting the C/CAG's expectations as of the measurement date. For more information, see Expected Return on Trust Assets on page 11. Actuarially Determined Contributions for plan funding purposes were developed using a 6.15% discount rate, equal to the assumed trust rate of return less 0.10% for trust administrative fees.

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 C/CAG employees. Other assumptions, such as age-related healthcare claims, healthcare trend, retiree participation rates and spouse coverage, were selected based on demonstrated plan experience and/or our best estimate of expected future experience. All these assumptions, and more, impact expected future benefits. Please note that this valuation has been prepared on a closed group basis. This means that only employees and retirees present as of the valuation date are considered. We do not consider replacement employees for those we project to leave the current population of plan participants until the valuation date following their employment.

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

Important Dates Used in the Valuation

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

Fiscal Year	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 higher than that reported one year ago.

Section C. provides additional information on the impact of the new assumptions and plan experience. Assumption changes are described at the end of Section 3. See *Recognition Period for Deferred Resources* on page 12 for details on accounting recognition of these changes.

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	\$ 339,526
Fiduciary Net Position	<u>189,237</u>
Net OPEB Liability (Asset)	150,289
Deferred (Outflows) of Resources	(94,838)
Deferred Inflows of Resources	<u>19,339</u>
Impact on Statement of Net Position	<u><u>\$ 74,790</u></u>
 OPEB Expense, FYE 6/30/2020	 <u><u>\$ 39,514</u></u>

Important Notices

This report is intended to be used only to present the actuarial information relating to other postemployment benefits for C/CAG’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. C/CAG 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 C/CAG consult with their internal accounting staff or external auditor or accounting firm about the accounting treatment of OPEB liabilities.



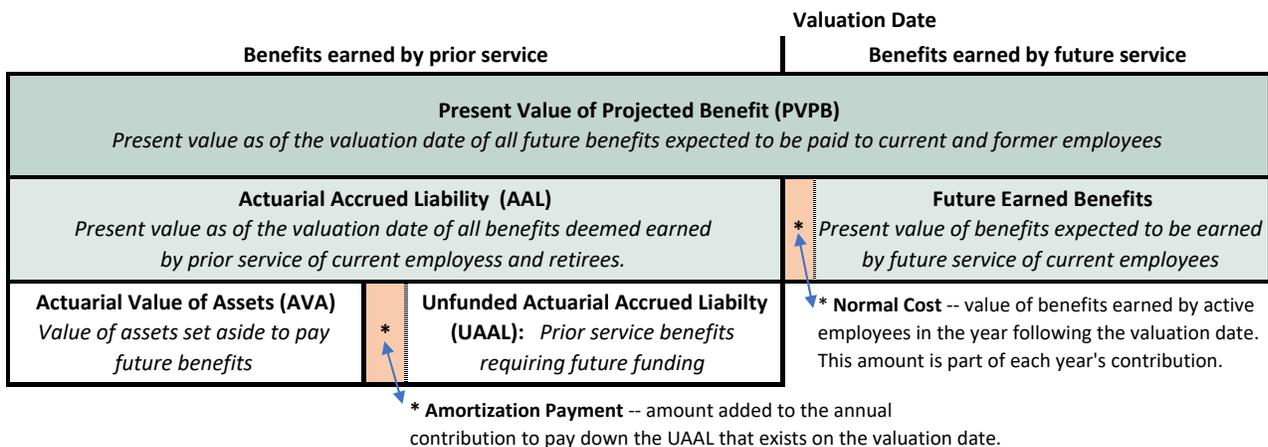
B. Valuation Process

The June 30, 2019 valuation has been based on employee census data and benefits initially submitted to us by C/CAG 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 C/CAG 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.

Projecting Plan Benefits and Liabilities

In projecting benefit values and liabilities, we first determine an expected premium or benefit stream over each current retiree’s or active employee’s future retirement. Benefits may include both direct employer payments (explicit subsidies) and any implicit subsidies arising when retiree premiums are expected to be partially subsidized by premiums paid for active employees. The projected benefit streams reflect assumed trends in the cost of those benefits and assumptions as to the expected dates when benefits will end. We also apply important assumptions regarding the probability that each employee will remain in service to receive benefits, if so, when they will begin, and the likelihood the employee will elect coverage for themselves and their dependents.

We then calculate a present value of these future benefit streams by discounting the value of each future expected employer payment, multiplied by the probability of payment, back to the valuation date using the discount rate. This present value is called the **Present Value of Projected Benefits (PVPB)** and represents the current value of all expected future plan payments to current retirees and current active employees. Note that this long-term projection does not anticipate entry of future employees.



The next step in the valuation process splits the Present Value of Projected Benefits into 1) the value of benefits already earned by *prior service* of current employees and retirees and 2) the value of benefits expected to be earned by *future service* of current employees. Actuaries employ an “attribution method” to divide the PVPB into prior service liabilities and future service liabilities. For this valuation we used the **Entry Age Normal** attribution method. This is the most common method used by public agencies for plan funding and is the only attribution method allowed for financial reporting under GASB 75.



Valuation Process

(Concluded)

Certain actuarial terms and GASB 75 terms may be used interchangeably. Some are compared below.

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

Using funding terminology, we call the value of benefits deemed earned by prior service the **Actuarial Accrued (AAL)**. Benefits deemed earned by service of active employees in a single year is called the **Normal Cost** of benefits. The present value of all future normal costs (PVFNC) plus the Actuarial Accrued Liability will equal the Present Value of Projected Benefits (i.e. $PVPB = AAL + PVFNC$).

Incorporating Plan Assets

Funds set aside for future benefits may be considered contributions to an OPEB plan only if the account established for holding the accumulated assets are separate from and independent of the control of the employer and legally protected from its creditors. Furthermore, the sole purpose of the account should be to provide benefits and/or pay expenses of the plan. These conditions generally require the establishment of a legal trust, such as C/CAG's trust account with CERBT.

C/CAG makes regular contributions to the trust to prefund plan benefits. Trust assets and earnings accumulate so that the trust can make benefit payments to retirees or reimburse C/CAG for making those payments directly, to the extent that benefit payments exceed the Actuarially Determined Contributions. The difference between the value of trust assets (i.e. the Market Value of Assets), or a smoothed asset value (i.e. the Actuarial Value of Assets), and the Actuarial Accrued Liability is referred to as the **Unfunded Actuarial Accrued Liability (UAAL)**. The UAAL represents the past service portion of the present value of benefits which remains unfunded as of the valuation date. A plan is generally considered "fully funded" when the UAAL is zero, i.e., when the accumulated prior service costs and plan assets are in equilibrium.

Future contributions by C/CAG will fund 1) the remaining part of OPEB benefits earned by past service (the Unfunded Actuarial Accrued Liability) and 2) the value of benefits earned each year by service of active employees (i.e. annual Normal Costs). Various strategies might be employed to pay down the UAAL such as longer or shorter amortization payments, and flat or escalating payments depending on the plan sponsors goals and funding philosophy.

Variation in Future Results

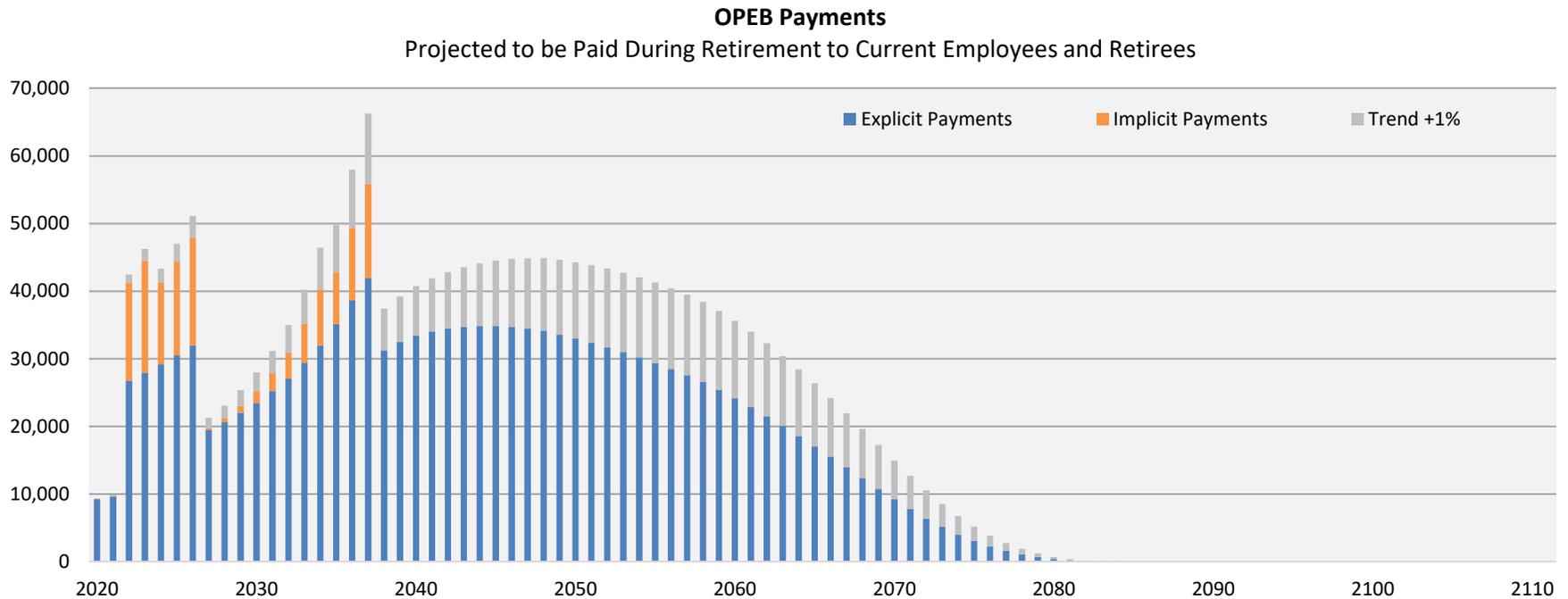
Please note that projections of future benefits over such long periods (frequently 60 or more years) which are dependent on numerous assumptions regarding future economic and demographic variables are subject to revision as future events unfold. While we believe that the assumptions and methods used in this valuation are reasonable for the purposes of this report, the costs to C/CAG reflected in this report may change in the future, perhaps materially. Demonstrating the range of potential future plan costs was beyond the scope of our assignment.



C. June 30, 2019 Valuation Results

This section presents the basic results of our recalculation of the OPEB liability using the updated employee data, plan provisions and asset information provided to us for the June 30, 2019 valuation. We described the general process for projecting all future benefits to be paid to retirees and current employees in Section B. Projected annual benefit payments are illustrated in the graph below.

Explicit subsidy benefits are paid for the retiree’s lifetime, though the benefit amount decreases once the member qualifies for coverage under Medicare. Implicit subsidy benefits end earlier, when retirees and/or their spouse are assumed to qualify for coverage under Medicare Supplement plans. The projections (in gray) reflect increases in benefit levels if actual healthcare trend is 1% higher than assumed.



Projected annual benefit payments for the next 15 years are provided in tabular form in the Accounting Section of the report.



June 30, 2019 Valuation Results

(continued)

This chart compares the results measured as of June 30, 2018, based on the June 30, 2017 valuation, with the results measured as of June 30, 2019, based on the June 30, 2019 actuarial valuation using the 6.25% discount rate applied for accounting purposes.

Valuation Date	7/1/2017			6/30/2019		
Fiscal Year Ending	6/30/2019			6/30/2020		
Measurement Date	6/30/2018			6/30/2019		
	Explicit	Implicit	Total	Explicit	Implicit	Total
Subsidy						
Discount rate	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%
Number of Covered Employees						
Actives	2	2	2	2	2	2
Retirees	2	-	2	2	-	2
Total Participants	4	2	4	4	2	4
Actuarial Present Value of Projected Benefits						
Actives	\$ 204,373	\$ 49,886	\$ 254,259	\$ 244,818	\$ 74,025	\$ 318,843
Retirees	176,091	-	176,091	158,644	-	158,644
Total APVPB	380,464	49,886	430,350	403,462	74,025	477,487
Total OPEB Liability (TOL)						
Actives	90,400	23,598	113,998	136,904	43,978	180,882
Retirees	176,091	-	176,091	158,644	-	158,644
TOL	266,491	23,598	290,089	295,548	43,978	339,526
Fiduciary Net Position			136,803			189,237
Net OPEB Liability			153,286			150,289
Service Cost						
For the period following the measurement date	18,943	5,297	24,240	21,141	6,738	27,879

The ratio of the Fiduciary Net Position (plan assets) to the Total OPEB Liability measured for accounting purposes is 55.7% on June 30, 2019. This is up from 47.2% as of June 30, 2018. The change in these values compared to those one year ago are discussed on the following page.



June 30, 2019 Valuation Results

(Concluded)

Change in plan assets: Assets reported as of June 30, 2018 were expected to grow to \$189,462 on June 30, 2019. The actual trust value on that date was \$189,237 which is \$225 lower than expected, due to slightly lower trust investment earnings.

Change in TOL: The TOL increased by \$49,437 from the TOL on the prior measurement date. We expected an increase of \$33,233 from normal plan operation and the passage of time. Unexpected increases of \$16,204 account for the remaining increase. Unexpected changes include:

- *Benefit changes:* No benefit changes were reported since the June 2017 valuation was prepared.
- *Plan experience* includes differences between what was previously assumed and what actually occurred since the prior valuation. The net decrease from plan experience was \$21,201. The majority of this decrease in liability resulted from lower medical premiums than previously projected.
- *Changes in actuarial assumptions or methodology:* Changes made are shown below; collectively these assumption changes increased the TOL by \$37,405. For more on the assumption changes, see the last page of Supporting Information, Section 3.

This chart reconciles the TOL reported on 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	\$ 290,089
<i>Expected Changes:</i>	
Service Cost	24,240
Benefit Payments	(10,330)
Interest Cost	19,323
Total Expected Change	33,233
Expected Total OPEB Liability at June 30, 2020 Measurement Date June 30, 2019	\$ 323,322
<i>Unexpected Changes:</i>	
<i>Plan experience</i>	
Medical premiums and caps other than expected	\$ (26,454)
Other plan experience different than assumed	5,253
<i>Assumption changes</i>	
Change in demographic and economic assumptions and mortality improvement scale	40,634
Elimination of liability for repealed excise tax	(4,265)
Change in healthcare trend model	1,471
Decrease in PEMHCA minimum benefit trend	(435)
Total Unexpected Change	16,204
Actual Total OPEB Liability at June 30, 2020 Measurement Date June 30, 2019	\$ 339,526



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. C/CAG is classified for GASB 75 purposes as a single employer.

Components of Net Position and Expense

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

Plan Summary Information for FYE June 30, 2020 <i>Measurement Date is June 30, 2019</i>	C/CAG
 Items Impacting Net Position:	
Total OPEB Liability	\$ 339,526
Fiduciary Net Position	189,237
Net OPEB Liability (Asset)	150,289
 <i>Deferred (Outflows) Inflows of Resources Due to:</i>	
Assumption Changes	(35,772)
Plan Experience	19,339
Investment Experience	(1,397)
Deferred Contributions	(57,669)
Net Deferred (Outflows) Inflows of Resources	(75,499)
 Impact on Statement of Net Position, FYE 6/30/2020	\$ 74,790
 Items Impacting OPEB Expense:	
Service Cost	\$ 24,240
Cost of Plan Changes	-
Interest Cost	19,323
Expected Earnings on Assets	(9,887)
Administrative expenses	30
 <i>Recognized Deferred Resource items:</i>	
Assumption Changes	12,411
Plan Experience	(7,086)
Investment Experience	483
 OPEB Expense, FYE 6/30/2020	\$ 39,514



Accounting Information

(Continued)

Change in Net Position During the Fiscal Year

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

For Reporting at Fiscal Year End <i>Measurement Date</i>	6/30/2019 <i>6/30/2018</i>	6/30/2020 <i>6/30/2019</i>	Change During Period
Total OPEB Liability	\$ 290,089	\$ 339,526	\$ 49,437
Fiduciary Net Position	136,803	189,237	52,434
Net OPEB Liability (Asset)	153,286	150,289	(2,997)
<i>Deferred Resource (Outflows) Inflows Due to:</i>			
Assumption Changes	(10,778)	(35,772)	(24,994)
Plan Experience	5,224	19,339	14,115
Investment Experience	(1,655)	(1,397)	258
Deferred Contributions	(53,132)	(57,669)	(4,537)
Net Deferred (Outflows) Inflows	(60,341)	(75,499)	(15,158)
Impact on Statement of Net Position	\$ 92,945	\$ 74,790	\$ (18,155)

Change in Net Position During the Fiscal Year

Impact on Statement of Net Position, FYE 6/30/2019	\$ 92,945
OPEB Expense (Income)	39,514
Employer Contributions During Fiscal Year	(57,669)
Impact on Statement of Net Position, FYE 6/30/2020	\$ 74,790

OPEB Expense

Employer Contributions During Fiscal Year	\$ 57,669
Deterioration (Improvement) in Net Position	(18,155)
OPEB Expense (Income), FYE 6/30/2020	\$ 39,514



Accounting Information

(Continued)

Change in Fiduciary Net Position During the Measurement Period

		C/CAG
Fiduciary Net Position at Fiscal Year Ending 6/30/2019	\$	136,803
<i>Measurement Date 6/30/2018</i>		
Changes During the Period:		
Investment Income		9,662
Employer Contributions		53,132
Administrative expenses		(30)
Benefit Payments		(10,330)
Net Changes During the Period		52,434
Fiduciary Net Position at Fiscal Year Ending 6/30/2020	\$	189,237
<i>Measurement Date 6/30/2019</i>		

Expected Long-term Return on Trust Assets

The expected long-term return on trust assets was derived from information published by CalPERS for CERBT Strategy 2. 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 2		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	40%	2.00%	4.80%	6.80%	2.92%	5.98%	8.90%
Fixed Income	43%	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	4%	2.00%	1.50%	3.50%	2.92%	2.87%	5.79%
Volatility	9.24%		weighted	5.22%		weighted	7.49%

*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 C/CAG, 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 6.25%. C/CAG approved 6.25% as the assumed asset return and discount rate for GASB 75 purposes. To develop the Actuarially Determined contributions for prefunding the plan, we decreased the discount rate by 10 basis points to 6.15% (to accommodate expected trust administrative fees).



Accounting Information

(Continued)

Recognition Period for Deferred Resources

Liability changes due to plan experience which differs from what was assumed in the prior measurement period and/or from assumption changes during the period are recognized over the plan's Expected Average Remaining Service Life ("EARSL"). The EARSL of 4.31 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.

C/CAG	Deferred Outflows of Resources	Deferred Inflows of Resources
Changes of Assumptions	\$ 35,772	\$ -
Differences Between Expected and Actual Experience	-	19,339
Net Difference Between Projected and Actual Earnings on Investments	1,397	-
Deferred Contributions	57,669	-
Total	\$ 94,838	\$ 19,339

C/CAG 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	\$ 5,808
2022	5,936
2023	4,877
2024	1,209
2025	-
Thereafter	-



Accounting Information

(Continued)

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 6.25%. 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	Current - 1% 5.25%	Current 6.25%	Current + 1% 7.25%
Total OPEB Liability	380,872	339,526	305,105
Increase (Decrease)	41,346		(34,421)
% Increase (Decrease)	12.2%		-10.1%
Net OPEB Liability (Asset)	191,635	150,289	115,868
Increase (Decrease)	41,346		(34,421)
% Increase (Decrease)	27.5%		-22.9%
Change in Healthcare Cost Trend Rate	Current Trend - 1%	Current Trend	Current Trend + 1%
Total OPEB Liability	302,213	339,526	384,406
Increase (Decrease)	(37,313)		44,880
% Increase (Decrease)	-11.0%		13.2%
Net OPEB Liability (Asset)	112,976	150,289	195,169
Increase (Decrease)	(37,313)		44,880
% Increase (Decrease)	-24.8%		29.9%



Accounting Information

(Continued)

Schedule of Changes in C/CAG'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
<i>Measurement Date</i>	<i>6/30/2019</i>	<i>6/30/2018</i>	<i>6/30/2017</i>
<i>Discount Rate on Measurement Date</i>	<i>6.25%</i>	<i>6.25%</i>	<i>6.50%</i>
Total OPEB liability			
Service Cost	\$ 24,240	\$ 22,676	\$ 20,211
Interest	19,323	17,515	16,127
Changes of benefit terms	-	-	-
Differences between expected and actual experience	(21,201)	-	(9,558)
Changes of assumptions	37,405	7,876	8,580
Benefit payments	(10,330)	(9,531)	(23,408)
Net change in total OPEB liability	49,437	38,536	11,952
Total OPEB liability - beginning	290,089	251,553	239,601
Total OPEB liability - ending (a)	\$ 339,526	\$ 290,089	\$ 251,553
Plan fiduciary net position			
Contributions - employer	\$ 53,132	\$ 54,162	\$ 48,408
Net investment income	9,662	5,389	4,093
Benefit payments	(10,330)	(9,531)	(23,408)
Administrative expenses	(30)	(46)	(31)
Other expenses	-	(115)	-
Net change in plan fiduciary net position	52,434	49,859	29,062
Plan fiduciary net position - beginning	136,803	86,944	57,882
Plan fiduciary net position - ending (b)	\$ 189,237	\$ 136,803	\$ 86,944
Net OPEB liability - ending (a) - (b)	\$ 150,289	\$ 153,286	\$ 164,609
Covered-employee payroll	\$ 298,420	\$ 283,864	\$ 311,785
Net OPEB liability as a % of covered-employee payroll	50.36%	54.00%	52.80%



Accounting Information

(Continued)

Schedule of Contributions

Since establishing the OPEB trust, C/CAG 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:

Fiscal Year Ending	6/30/2020	6/30/2019	6/30/2018
Actuarially Determined Contribution	\$ 55,709	\$ 54,899	\$ 54,162
Contributions in relation to the actuarially determined contribution	57,669	53,132	54,162
Contribution deficiency (excess)	\$ (1,960)	\$ 1,767	\$ -
Covered employee payroll	\$ 308,984	\$ 298,418	\$ 283,864
Contributions as a percentage of covered employee payroll	18.66%	17.80%	19.08%

Notes to Schedule

Valuation Date	6/30/2017	6/30/2017	6/30/2017
Actuarial cost method	Entry Age Normal Level % of Pay	Entry Age Normal Level % of Pay	Entry Age Normal Level % of Pay
Amortization method	10 year closed Level Dollar	10 year closed Level Dollar	10 year closed Level Dollar
Amortization period	5 years remain	6 years remain	7 years remain
Asset valuation method	Market Value	Market Value	Market Value
Inflation	2.75%	2.75%	2.75%
Healthcare cost trend rates	7.5% in 2019, step down .5% per year to 5.0% by 2024	7.5% in 2019, step down .5% per year to 5.0% by 2024	7.5% in 2019, step down .5% per year to 5.0% by 2024
Salary increases	3.25%	3.25%	3.25%
Investment rate of return	6.50%	6.50%	6.50%
Retirement age	50 to 75	50 to 75	50 to 75
Mortality	2014 CalPERS Experience Study	2014 CalPERS Experience Study	2014 CalPERS Experience Study
Mortality Improvement	MW Scale 2017	MW Scale 2017	MW Scale 2017



Accounting Information
(Continued)

Detail of Changes to Net Position

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

C/CAG	Total OPEB Liability (a)	Fiduciary Net Position (b)	Net OPEB Liability (c) = (a) - (b)	(d) Deferred Outflows (Inflows) Due to:				Impact on Statement of Net Position (e) = (c) - (d)
				Assumption Changes	Plan Experience	Investment Experience	Deferred Contributions	
Balance at Fiscal Year Ending 6/30/2019 <i>Measurement Date 6/30/2018</i>	\$ 290,089	\$ 136,803	\$ 153,286	\$ 10,778	\$ (5,224)	\$ 1,655	\$ 53,132	\$ 92,945
Changes During the Period:								
Service Cost	24,240		24,240					24,240
Interest Cost	19,323		19,323					19,323
Expected Investment Income		9,887	(9,887)					(9,887)
Employer Contributions		53,132	(53,132)					(53,132)
Changes of Benefit Terms	-		-					-
Administrative expenses		(30)	30					30
Benefit Payments	(10,330)	(10,330)	-					-
Assumption Changes	37,405		37,405	37,405				-
Plan Experience	(21,201)		(21,201)		(21,201)			-
Investment Experience		(225)	225			225		-
Recognized Deferred Resources				(12,411)	7,086	(483)	(53,132)	58,940
Employer Contributions in Fiscal Year							57,669	(57,669)
Net Changes in Fiscal Year 2019-2020	49,437	52,434	(2,997)	24,994	(14,115)	(258)	4,537	(18,155)
Balance at Fiscal Year Ending 6/30/2020 <i>Measurement Date 6/30/2019</i>	\$ 339,526	\$ 189,237	\$ 150,289	\$ 35,772	\$ (19,339)	\$ 1,397	\$ 57,669	\$ 74,790



Accounting Information
(Continued)

Schedule of Deferred Outflows and Inflows of Resources

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

Measurement Date: June 30, 2019

Deferred Resource					Balance as of Jun 30, 2019	Recognition of Deferred Outflow or Deferred (Inflow) in Measurement Period:						
Date Created	Cause	Initial Amount	Period (Yrs)	Annual Recognition		2018-19 (FYE 2020)	2019-20 (FYE 2021)	2020-21 (FYE 2022)	2021-22 (FYE 2023)	2022-23 (FYE 2024)	2023-24 (FYE 2025)	Thereafter
	Loss Due To											
6/30/2017	Assumption Changes	\$ 8,580	4.41	\$ 1,946	\$ 2,742	\$ 1,946	\$ 1,946	\$ 796	\$ -	\$ -	\$ -	\$ -
	Investment Earnings											
6/30/2017	Less than Expected	481	5.00	96	193	96	96	97	-	-	-	-
	Gain Due To											
6/30/2017	Plan Experience	(9,558)	4.41	(2,167)	(3,057)	(2,167)	(2,167)	(890)	-	-	-	-
	Loss Due To											
6/30/2018	Assumption Changes	7,876	4.41	1,786	4,304	1,786	1,786	1,786	732	-	-	-
	Investment Earnings											
6/30/2018	Less than Expected	1,708	5.00	342	1,024	342	342	342	340	-	-	-
	Gain Due To											
6/30/2019	Plan Experience	(21,201)	4.31	(4,919)	(16,282)	(4,919)	(4,919)	(4,919)	(4,919)	(1,525)	-	-
	Loss Due To											
6/30/2019	Assumption Changes	37,405	4.31	8,679	28,726	8,679	8,679	8,679	8,679	2,689	-	-
	Investment Earnings											
6/30/2019	Less than Expected	225	5.00	45	180	45	45	45	45	45	-	-



Accounting Information

(Continued)

C/CAG Contributions to the Plan

C/CAG contributions to the Plan occur as benefits are paid to retirees and/or to the OPEB trust. Benefit payments may occur in the form of direct payments for premiums (“explicit subsidies”) and/or indirect payments to retirees in the form of higher premiums for active employees (“implicit subsidies”). Note: 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 health cost.

Benefits and other contributions paid by C/CAG during the measurement period are shown below.

Benefit Payments During the Measurement Period, Jul 1, 2018 thru Jun 30, 2019	C/CAG
Benefits Paid by Trust	\$ -
Benefits Paid by Employer (not reimbursed by trust)	8,901
Implicit benefit payments	1,429
Total Benefit Payments During the Measurement Period	\$ 10,330

Employer Contributions During the Measurement Period, Jul 1, 2018 thru Jun 30, 2019	C/CAG
Employer Contributions to the Trust	\$ 42,802
Employer Contributions in the Form of Direct Benefit Payments (not reimbursed by trust)	8,901
Implicit contributions	1,429
Total Employer Contributions During the Measurement Period	\$ 53,132

Benefits payments and other C/CAG contributions made in the year following the measurement period but prior to the end of the fiscal year are shown below.

Employer Contributions During the Fiscal Year, Jul 1, 2019 thru Jun 30, 2020	C/CAG
Employer Contributions to the Trust	\$ 48,452
Employer Contributions in the Form of Direct Benefit Payments (not reimbursed by trust)	9,217
Implicit contributions	-
Total Employer Contributions During the Fiscal Year	\$ 57,669



Accounting Information

(Continued)

Projected Benefit Payments (15-year projection)

The following is an estimate of other post-employment benefits to be paid on behalf of current retirees and current employees expected to retire from C/CAG. Expected annual benefits have been projected on the basis of the actuarial assumptions outlined in Section 3.

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

Projected Annual Benefit Payments							
Fiscal Year Ending June 30	Explicit Subsidy			Implicit Subsidy			Total
	Current Retirees	Future Retirees	Total	Current Retirees	Future Retirees	Total	
2020	\$ 9,217	\$ -	\$ 9,217	\$ -	\$ -	\$ -	\$ 9,217
2021	9,264	-	9,264	-	-	-	9,264
2022	9,667	-	9,667	-	-	-	9,667
2023	10,068	16,677	26,745	-	14,515	14,515	41,260
2024	10,469	17,448	27,917	-	16,579	16,579	44,496
2025	10,873	18,253	29,126	-	12,153	12,153	41,279
2026	11,277	19,220	30,497	-	13,891	13,891	44,388
2027	11,675	20,283	31,958	-	15,860	15,860	47,818
2028	12,063	7,410	19,473	-	273	273	19,746
2029	12,436	8,184	20,620	-	556	556	21,176
2030	12,786	9,228	22,014	-	1,047	1,047	23,061
2031	13,104	10,386	23,490	-	1,690	1,690	25,180
2032	13,385	11,812	25,197	-	2,629	2,629	27,826
2033	13,618	13,434	27,052	-	3,875	3,875	30,927
2034	13,797	15,610	29,407	-	5,802	5,802	35,209

The amounts shown in the Explicit Subsidy table reflect the expected payment by C/CAG toward retiree medical premiums in each of the years shown. The amounts are shown separately, and in total, for those retired on the valuation date (“current retirees”) and those expected to retire after the valuation date (“future retirees”).

The amounts shown in the Implicit Subsidy table reflect the expected excess of retiree medical and prescription drug claims over the premiums expected to be charged during the year for retirees’ coverage. These amounts are also shown separately and in total for those currently retired on the valuation date and for those expected to retire in the future.



Accounting Information

(Concluded)

Sample Journal Entries

Beginning Account Balances

As of the fiscal year beginning 7/1/2019

	Debit	Credit
Net OPEB Liability		153,286
Deferred Resource -- Assumption Changes	10,778	
Deferred Resource -- Plan experience		5,224
Deferred Resource -- Investment Experience	1,655	
Deferred Resource -- Contributions	53,132	
Net Position	92,945	

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

Journal entry to recharacterize retiree benefit payments not reimbursed by a trust, and record cash contributions to the trust during the fiscal year

	Debit	Credit
OPEB Expense	9,217	
Premium Expense		9,217
OPEB Expense	48,452	
Cash		48,452

* 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 other account activity during the fiscal year

	Debit	Credit
Net OPEB Liability	2,997	
Deferred Resource -- Assumption Changes	24,994	
Deferred Resource -- Plan experience		14,115
Deferred Resource -- Investment Experience		258
Deferred Resource -- Contributions	4,537	
OPEB Expense		18,155



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 UAAL²). 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 which would allow 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.

Some Current Economic Factors

Return on Trust Assets: On page 10 of this report, we describe the selection of the 6.15% long term return on trust assets for plan funding purposes. This expected return is based on CalPERS' long term capital market projections mapped against our year-by-year projections of the agency's future retiree benefits. However, the social and economic situation in recent months has been extreme. Trust assets fell significantly between December 31, 2019 and March 31, 2020, though rebounded to some extent by June 30, 2020. The return for this fiscal year will likely fall somewhat short of the 6.15% expected return this year.

² We use actuarial, rather than accounting, terminology to describe the components used to develop the ADCs.



OPEB Funding Information (Continued)

Medical premiums: Another variable sensitive to the current public health situation is the potential impact on future CalPERS medical premium rates. 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. Health experts have expressed mixed opinions about how employer health plans will be impacted by COVID-19. There is clear evidence that some medical services are being deferred and some annual services may be skipped altogether. This decrease in current utilization must then be contrasted against the potentially high cost of care for those who contract COVID-19. Current information indicates there has been little difference in access to prescription drugs.

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.

Development of the Actuarially Determined Contributions

C/CAG 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 over a closed period, reset to 10 years for determining the ADC for the fiscal year ending June 30, 2021. Amortization payments are determined on a level dollar basis.

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.



OPEB Funding Information

(Continued)

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.

Valuation date	6/30/2017	6/30/2019	
For fiscal year beginning	7/1/2019	7/1/2020	7/1/2021
For fiscal year ending	6/30/2020	6/30/2021	6/30/2022
Expected long-term return on assets	6.50%	6.15%	6.15%
Discount rate	6.50%	6.15%	6.15%
Number of Covered Employees			
Actives	2	2	2
Retirees	2	2	2
Total Participants	4	4	4
Actuarial Present Value of Projected Benefits	\$ 430,643	\$ 504,648	\$ 526,135
Actuarial Accrued Liability (AAL)			
Actives	140,024	224,266	268,997
Retirees	173,448	160,827	161,169
Total AAL	313,472	385,093	430,166
Actuarial Value of Assets	188,948	250,817	307,522
Unfunded AAL (UAAL)	124,524	134,276	122,644
UAAL Amortization method	Level Dollar	Level Dollar	Level Dollar
Remaining amortization period (years)	5	10	9
Amortization Factor	4.4258	7.7575	7.1731
Actuarially Determined Contribution (ADC)			
Normal Cost	\$ 24,173	\$ 29,146	\$ 30,021
Amortization of UAAL	28,136	17,309	17,097
Interest to fiscal year end	3,400	2,857	2,898
Total ADC	55,709	49,312	50,016

Funding of the ADC

1 Implicit subsidy contribution	\$ -	\$ -	\$ -
Additional payments needed to meet ADC	55,709	49,312	50,016
2 Projected agency paid premiums for retirees	9,217	9,264	9,667
3 Expected agency contribution to OPEB trust	48,452	40,048	40,349
Total Expected Employer Contributions (1+2+3)	\$ 57,669	\$ 49,312	\$ 50,016

Contributions shown for fiscal year end 2020 were actual amounts reported as paid by C/CAG. For the fiscal years ending 2021 and 2022, we illustrated OPEB contributions for retiree benefit payments and the trust contribution to equal those shown in the highlighted row. If retiree benefit payments for those years are lower than our projection, the contribution to the trust should be increased to balance.

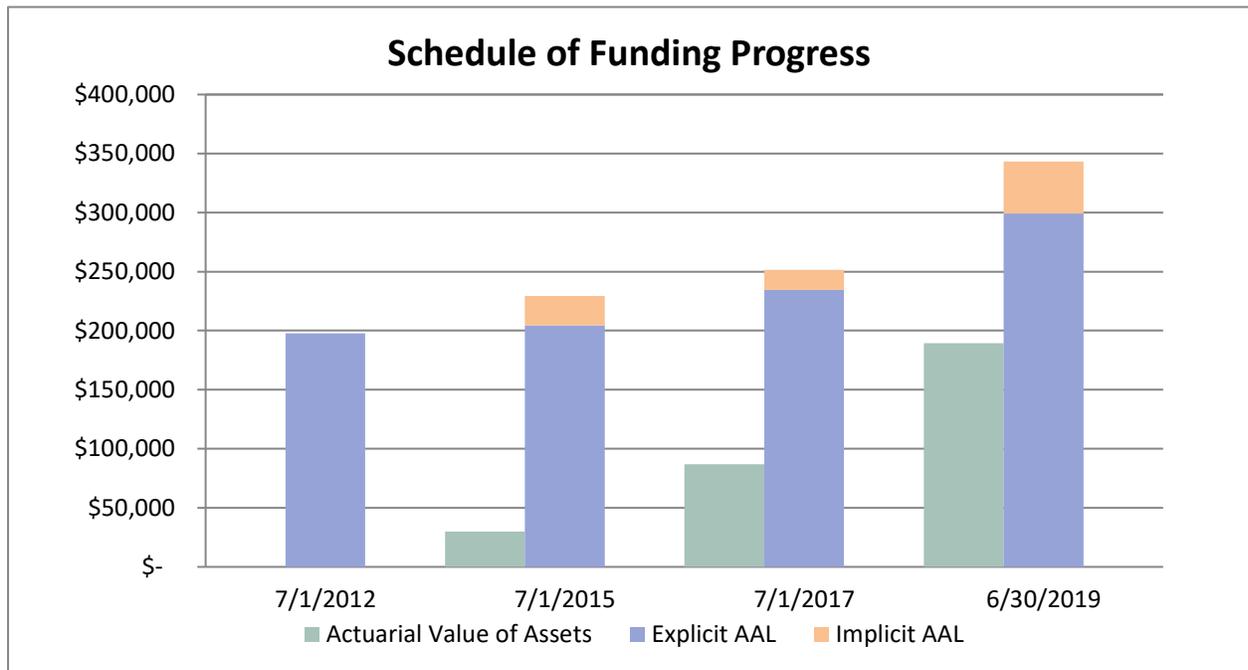


OPEB Funding Information

(Concluded)

In this section, we provide a review of key components of valuation results from 2012 through 2019.

Schedule of Funding Progress							
Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded Actuarial Accrued Liability (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)	Discount Rate
7/1/2012	\$ -	\$ 197,811	\$ 197,811	0.0%	\$247,208	80.0%	4.00%
7/1/2015	\$ 30,000	\$ 229,309	\$ 199,309	13.1%	\$239,064	83.4%	6.50%
7/1/2017	\$ 86,944	\$ 251,553	\$ 164,609	34.6%	\$275,124	59.8%	6.50%
6/30/2019	\$ 189,237	\$ 343,321	\$ 154,084	55.1%	\$298,420	51.6%	6.15%



Significant changes during this period include:

- **July 1, 2015:** First time recognition of the implicit subsidy liability relating to medical coverage; discount rate increased from 4% to 6.5%; plan members increased from 2 to 4
- **June 30, 2017:** Increase in assumed future healthcare trend; decrease in assumed spouse coverage for future retirees
- **June 30, 2019:** Discount rate decreased to reflect lower future expected trust return; updated demographic assumptions based on new CalPERS experience study and estimated timing of retirement for one employee



F. Certification

The primary purposes of this report are: (1) to provide actuarial information of the other postemployment benefits (OPEB) provided by the City/County Association of Governments of San Mateo County (C/CAG) 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 C/CAG's OPEB funding policy. C/CAG 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 C/CAG. 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 C/CAG'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.

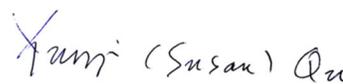
This report is prepared solely for the use and benefit of C/CAG and may not be provided to third parties without prior written consent of MacLeod Watts. Exceptions are: C/CAG may provide copies of this report to their professional accounting and legal advisors who are subject to a duty of confidentiality, and C/CAG 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: July 31, 2020



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



Yunyi (Susan) Qu, ASA, ACA, MAAA



G. Supporting Information

Section 1 - Summary of Employee Data

C/CAG reported 2 active employees in the data provided to us for the June 2019 valuation. There are also 2 retirees currently receiving benefits under this program:

The chart below summarizes census data used for valuation:

2019 Valuation Census	Active	Retired	Total
Number	2	2	4
Average Age	51.4	68.8	60.1
Average Service	5.4	15.4	10.4
Average Age at Retirement	n/a	63.3	n/a

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	2
Number of inactive plan members currently receiving benefits	2
Number of inactive plan members entitled to but not receiving benefits	0

Changes in covered members: C/CAG reported no new hires, termination, retirements or deaths since the prior valuation.



Supporting Information

(Continued)

Section 2A - Summary of Retiree Benefit Provisions

OPEB provided: C/CAG reported the following OPEB are provided: 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 employee new to PERS on or after January 1, 2013) with 5 years of State or public agency service or (b) an approved disability retirement.

The employee must begin his or her retirement benefit within 120 days of terminating employment with C/CAG to be eligible to continue medical coverage through C/CAG and be entitled to the benefits described below. In other words, it is the timing of initiating retirement benefits and not timing of enrollment in the medical program which determines whether or not the retiree qualifies for lifetime medical coverage and any benefits defined in the PEMHCA resolution.

If an eligible employee is not already enrolled in the medical plan, he or she may enroll within 60 days of retirement, during any future open enrollment period or with a qualifying life event. Once eligible, 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.

Retiree medical benefits provided: As a PEMHCA employer, C/CAG is obligated to contribute toward the cost of retiree medical coverage for the retiree's lifetime or until coverage is discontinued. It is our understanding that C/CAG has or will execute a resolution with CalPERS defining the level of its contribution toward the cost of medical plan premiums for *active and retired* employees to be the PEMHCA minimum employer contribution (MEC)³. The MEC was \$136 per month in 2018, \$139 per month in 2020, and will increase to \$143 per month in 2021.

C/CAG provides a higher benefit for retirees who satisfy the following additional requirements:

- Executive management group: 5 or more years of service with C/CAG
- All other employees: 10 or more years of C/CAG service

For these retirees, C/CAG will pay 100% of the retiree-only premium so long as the premium is not more than the Kaiser Region 1 family premium (\$1,998.07 in 2020). Upon the retiree's death, surviving annuitants may continue coverage, but the only subsidy they will receive is the PEMHCA MEC. Monthly premiums for selected plans in 2020 are shown below.

Region 1 2020 Health Plan Rates						
Plan	Actives and Pre-Med Retirees			Medicare Eligible Retirees		
	Ee Only	Ee & 1	Ee & 2+	Ee Only	Ee & 1	Ee & 2+
Anthem Traditional HMO	\$1,184.84	\$2,369.68	\$3,080.58	\$ 388.15	\$ 776.30	\$ 1,487.20
PERS Choice PPO	861.18	1,722.36	2,239.07	351.39	702.78	1,219.49
PERSCare PPO	1,133.14	2,266.28	2,946.16	384.78	769.56	1,449.44

³ It is our understanding that C/CAG has established a pre-tax flexible benefit plan to provide premiums in excess of the MEC for active employees and that PEMHCA does not require these additional payments to be paid to retirees.



Supporting Information

(Continued)

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 C/CAG and, accordingly, excluded the previously developed liability from the results of this valuation.



Supporting Information

(Continued)

Section 3 - Actuarial Methods and Assumptions

The ultimate real cost of an employee benefit plan is the value of all benefits and other expenses of the plan over its lifetime. These payments depend only on the terms of the plan and the administrative arrangements adopted. The actuarial assumptions are used to estimate the cost of these benefits; the funding method spreads the expected costs on a level basis over the life of the plan.

Valuation Date	June 30, 2019
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
Long Term Return on Assets/ Discount Rates for Accounting	6.25% as of June 30, 2019 and June 30, 2018, net of plan investment expenses and including inflation
Long Term Return on Assets/ Discount Rates for Funding	6.15% as of June 30, 2019 and 6.5% as of June 30, 2018, net of plan investment expenses, trust administrative expenses, and including inflation
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 only to allocate the cost of benefits between service years
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 2020 applied generationally from 2015 (see Addendum 3)
Mortality Before Retirement	None assumed, due to the small size of the employee group and low likelihood of occurrence



Supporting Information

(Continued)

Section 3 - Actuarial Methods and Assumptions

Mortality After Retirement
(before improvement applied)

Healthy Lives			Disabled Miscellaneous		
CalPERS Public Agency Miscellaneous, Police & Fire Post Retirement Mortality			CalPERS Public Agency Disabled Miscellaneous Post-Retirement Mortality		
Age	Male	Female	Age	Male	Female
40	0.00070	0.00040	20	0.00027	0.00008
50	0.00431	0.00390	30	0.00044	0.00018
60	0.00758	0.00524	40	0.00070	0.00040
70	0.01490	0.01044	50	0.01371	0.01221
80	0.04577	0.03459	60	0.02447	0.01545
90	0.14801	0.11315	70	0.03737	0.02462
100	0.35053	0.30412	80	0.07218	0.05338
110	1.00000	1.00000	90	0.16585	0.14826

Termination Rates

These rates reflect the assumed probability that an employee will leave C/CAG 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 Age	Years of Service					
	0	3	5	10	15	20
15	0.1812	0.0000	0.0000	0.0000	0.0000	0.0000
20	0.1742	0.1193	0.0654	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

Service Retirement Rates

The following miscellaneous retirement formulas apply:

If hired prior to 1/1/2013 or with prior PERS service⁴ : 2.7% @ 55
If hired on or after 1/1/2013, PEPRA: 2% @ 62

Sample rates of assumed future retirements applicable to each of these retirement benefit formulas are shown in tables on the following page. Each rate reflects the probability that an employee with that age and service will take a service retirement in the next 12 months.

⁴ We assumed the Executive Director will retire at age 60.



Supporting Information

(Continued)

Section 3 - Actuarial Methods and Assumptions

Service Retirement Rates

(continued)

Miscellaneous Employees: 2.7% at 55 formula						
From CalPERS Experience Study Report Issued December 2017						
Current Age	Years of Service					
	5	10	15	20	25	30
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
70	0.1500	0.1810	0.2120	0.2430	0.2910	0.3500
75 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Miscellaneous "PEPRA" Employees: 2% at 62 formula						
From CalPERS Experience Study Report Issued December 2017						
Current Age	Years of Service					
	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

Disability Retirement Rates

None assumed, due to the small size of the employee group and low likelihood of occurrence.

Participation Rate

Active employees: 70% of those expected to qualify for only the PEMHCA MEC and 100% of those assumed to qualify for the higher C/CAG subsidy are assumed to continue their current plan election in retirement.

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

Spouse Coverage

Active employees: 40% are assumed to be married and elect coverage for their spouse in retirement. Surviving spouses are assumed to continue coverage until their death. Husbands are assumed to be 3 years older than their wives.

Retired participants: Existing elections for spouse coverage are assumed to continue 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.



Supporting Information

(Continued)

Section 3 - Actuarial Methods and Assumptions

Healthcare Trend

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

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

The healthcare trend shown above was developed using the Getzen Model 2019_b published by the Society of Actuaries using the following settings: CPI 2.5%; Real GDP Growth 1.5%; Excess Medical Growth 1.2%; Expected Health Share of GDP in 2028 20.5%; Resistance Point 25%; Year after which medical growth is limited to growth in GDP 2075.

The required PEMHCA minimum employer contribution (MEC) is assumed to increase by 4.0% annually. This implies a long-term spread between CPI and CPI-Med of 1.5%.

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.

Sample claim costs used in developing the liability are shown in the chart on the following page.

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



Supporting Information

(Continued)

Section 3 - Actuarial Methods and Assumptions

Development of Age-related
Medical Premiums (concluded)

Expected Monthly Claims by Region 1 Medical Plan for Selected Ages						
Age	Anthem Traditional HMO		PERS Choice PPO		PERSCare PPO	
	Male	Female	Male	Female	Male	Female
50	\$ 1,145	\$ 1,419	\$ 773	\$ 958	\$ 960	\$ 1,190
53	1,350	1,558	912	1,052	1,132	1,307
56	1,568	1,677	1,059	1,132	1,315	1,406
59	1,797	1,812	1,214	1,224	1,507	1,520
62	2,043	1,998	1,380	1,349	1,714	1,675

Changes reflected in the current measurement period:

Trust rate of return
and discount rate

For plan funding purposes: Decreased from 6.5% to 6.15%, reflecting updated projections of long term return on trust assets, less 10 basis points for annual trust administrative fees.

General Inflation Rate

Decreased from 2.75% to 2.5% per year

Salary Increase

Decreased from 3.25% to 3.0% per year

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.

Demographic Assumptions

Assumed mortality after retirement, 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, C/CAG's plan population would not produce credible rates based only solely on its experience.

Disability and pre-retirement mortality rates were not used, based on the low incidence of occurrence expected in this plan.

Custom retirement rates were used for the current Executive Director (assuming 100% probability of retiring at age 60).

Mortality Improvement

The mortality improvement scale was updated from MacLeod Watts Scale 2017 to MacLeod Watts Scale 2020 (see Addendum 3), reflecting continued updates in available information.

Medical Trend

Updated to use the Getzen healthcare trend model sponsored by the Society of Actuaries

PEMHCA MEC Increases

Decreased from 4.5% to 4.0% per year based on recent historical and expected future increases in CPI-medical.



Addendum 1: Important Background Information

General Types of Other Post-Employment Benefits (OPEB)

Post-employment benefits other than pensions (OPEB) comprise a part of compensation that employers offer for services received. The most common OPEB are medical, prescription drug, dental, vision, and/or life insurance coverage. Other OPEB may include outside group legal, long-term care, or disability benefits outside of a pension plan. OPEB does not generally include COBRA, vacation, sick leave (unless converted to defined benefit OPEB), or other direct retiree payments.

A direct employer payment toward the cost of OPEB benefits is referred to as an “explicit subsidy”. In addition, if claims experience of employees and retirees are pooled when determining premiums, retiree premiums are based on a pool of members which, on average, are younger and healthier. For certain types of coverage such as medical insurance, this results in an “implicit subsidy” of retiree premiums by active employee premiums since the retiree premiums are lower than they would have been if retirees were insured separately. GASB 75 and Actuarial Standards of Practice generally require that an implicit subsidy of retiree premium rates be valued as an OPEB liability.

Expected retiree claims		
Premium charged for retiree coverage		<i>Covered by higher active premiums</i>
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 C/CAG. 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 C/CAG 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



Important Background Information

(Continued)

- The likelihood that future retirees will or will not elect retiree coverage (and benefits) for themselves and/or their dependents.

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

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

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

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

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



Important Background Information

(Continued)

Requirements of GASB 75

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

Important Dates

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

Recognition of Plan Changes and Gains and Losses

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

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

Difference between projected and actual trust earnings:	5 year straight-line recognition
All other amounts:	Straight-line recognition over the expected average remaining service lifetime (EARSL) of all members that are provided with benefits, determined as of the beginning of the Measurement Period. In determining the EARSL, all active, retired and inactive (vested) members are counted, with the latter two groups having 0 remaining service years.



Important Background Information

(Continued)

Implicit Subsidy Plan Contributions

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

The following hypothetical example illustrates this treatment:

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

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



Important Background Information

(Continued)

Discount Rate

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

Actuarial Funding Method and Assumptions

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

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

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



Addendum 2: MacLeod Watts Age Rating Methodology

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

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

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

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

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

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



Addendum 3: MacLeod Watts Mortality Projection Methodology

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

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

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

The **MacLeod Watts Scale 2020** was developed from a blending of data and methodologies found in two published sources: (1) the Society of Actuaries Mortality Improvement Scale MP-2019 Report, published in October 2019 and (2) the demographic assumptions used in the 2019 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, published April 2019.

MacLeod Watts Scale 2020 is a two-dimensional mortality improvement scale reflecting both age and year of mortality improvement. The underlying base scale is Scale MP-2019 which has two segments – (1) historical improvement rates for the period 1951-2015 and (2) an estimate of future mortality improvement for years 2016-2018 using the Scale MP-2019 methodology but utilizing the assumptions obtained from Scale MP-2015. The MacLeod Watts scale then transitions from the 2018 improvement rate to the Social Security Administration (SSA) Intermediate Scale linearly over the 10-year period 2019-2028. After this transition period, the MacLeod Watts Scale uses the constant mortality improvement rate from the SSA Intermediate Scale from 2028-2042. The SSA's Intermediate Scale has a final step down in 2043 which is reflected in the MacLeod Watts scale for years 2043 and thereafter. Over the ages 95 to 115, the SSA improvement rate is graded to zero.

Scale MP-2019 can be found at the SOA website and the projection scales used in the 2019 Social Security Administrations Trustees Report at the Social Security Administration website.



Glossary

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

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

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

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

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

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

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

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

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

Excise Tax – The Affordable Care Act created an excise tax on the value of employer sponsored coverage which exceeds certain thresholds (“Cadillac Plans”). The tax is first effective in 2022.

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

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

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



Glossary

(Continued)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

