Central Marin Sanitation Agency

Valuation of Retiree Health Benefits

REPORT OF GASB 75 ACTUARIAL VALUATION
AS OF JANUARY 1, 2018

Prepared by: North Bay Pensions LLC
May 8, 2018

Contents of This Report

Actuarial Certification

This report presents the determination of benefit obligations under **Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)** as of January 1, 2018 for the retiree health and welfare benefits provided by the Central Marin Sanitation Agency (CMSA). I was retained by CMSA to perform these calculations.

GASB Statement 75, "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions", was issued to provide standards for governmental employers to record expense for **Other Postemployment Benefits (OPEB)**. GASB 75 replaces GASB 45 for CMSA, effective July 1, 2017.

The information contained in this report was based on a participant census as of January 1, 2018 provided to me by CMSA. The actuarial assumptions and methods used in this valuation were selected by CMSA after consultation with me. I believe the assumptions and methods are reasonable and appropriate for purposes of actuarial computations under GASB 75.

Actuarial computations under GASB 75 are for purposes of fulfilling employer accounting requirements. The calculations reported herein have been made on a basis consistent with my understanding of GASB 75. Determinations for purposes other than meeting employer financial accounting requirements may be significantly different from the results reported herein. Due to the limited scope of my assignment, I did not perform an analysis of the potential range of future measurements.

To the best of my knowledge, this report is complete and accurate. This valuation has been conducted in accordance with generally accepted actuarial principles and practices. The undersigned is a Fellow of the Society of Actuaries, a Fellow of the Conference of Consulting Actuaries, and a Member of the American Academy of Actuaries, and meets their continuing education requirements and qualification standards for public statements of actuarial opinion relating to retirement plans. In my opinion, I am qualified to perform this valuation.

5-8-18

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Summary of Results

Background

The CMSA OPEB plan (Other Post Employment Benefits) began in the 1990's as a means to assist retirees with their post-retirement healthcare costs. The substantive plan (as understood by employees) was a lifetime benefit for retiree-only fully paid medical insurance at the Kaiser single person rate. The plan was administered using the pay-as-you-go method in accordance with the requirements of GASB Statement No. 12. In 2008, the Agency implemented GASB Statement No. 45 to account for post-retirement healthcare benefits on an actuarial basis. Due to rising costs, it was later negotiated and agreed to limit the fully paid employee-only medical benefits to employees hired through June 30, 2010 and to discontinue the benefit for employees hired thereafter. Employees hired after June 30, 2010 receive 1.5% of base salary into a health reimbursement account and the PEMHCA minimum contribution (Public Employees Medical Health Care Act) to their selected health plan at retirement.

Funding for the Agency's plan was established by Board policy as the Actuarially Determined Contribution (ADC) amount. The Agency may elect to fund an amount above the ADC that fits within its operating budget. Total OPEB expense includes premium payments on behalf of retirees to CalPERS medical, plus contribution amounts to plan funding. The plan is approximately 42% funded as of the January 1, 2018 actuarial report date.

As of June 30, 2017, CMSA has accumulated $2,226,727 in the CalPERS CERBT (California Employers' Retirement Benefit Trust) toward the cost of future benefits.

In June 2015, the Governmental Accounting Standards Board (GASB) released Statement No. 75, "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions". This statement, often referred to as **GASB 75**, requires governmental entities to (1) record annual expense for their OPEB and (2) disclose certain information in their year-end financial statements.

CMSA has requested this actuarial valuation to determine what its OPEB obligations under the program are, and what the impact of GASB 75 will be for the 2017-2018 fiscal year.

Actuarial Present Value of Projected Benefit Payments

The Actuarial Present Value of Projected Benefit Payments (APVPBP) for all current and former employees, as of January 1, 2018, is **$5,244,054**. This is the amount CMSA would theoretically need to set aside at this time to fully fund <u>all</u> those future benefits.

The total value of $5,244,054 is the sum of these amounts:

Future benefits of current employees	$ 3,144,073
Future benefits of current retirees	2,099,981
APVPBP	$ 5,244,054

This figure may be compared to the Actuarial Present Value of Total Projected Benefits (APVTPB, the GASB 45 term for the same quantity) of $4,512,143 that was shown in the 2015 valuation report. We would have expected the APVTPB to increase to approximately $4,937,000 by 2018, as employees continue working and grow closer to retirement. The difference between the 2015 figure of $4,512,143 and this year's figure of $5,244,054 is due to these reasons:

• Expected increase in the APVPBP since 2015	$ 424,886
• Lower medical premiums in 2018 than anticipated	(389,680)
• Inclusion of the value of subsidized premiums	1,082,667
• Miscellaneous experience gains and losses	(385,962)
	$ 731,911

The experience gain of $385,962 is from normal demographic effects (i.e., terminations, deaths and retirements different than expected).

The inclusion of the value of subsidized premiums requires more explanation, provided below.

These figures are computed by (1) estimating the OPEB benefits that will be paid to each current and former employee and their beneficiaries (if applicable), upon the employee's retirement from CMSA, (2) estimating the likelihood that each payment will be made, taking into consideration the likelihood of remaining employed until retirement age and the likelihood of survival after retirement, and (3) discounting each expected future payment back to the present date at an assumed rate of investment return.

Net OPEB Liability

The **Total OPEB Liability** (TOL) is the portion of the APVPBP which has been "earned" by employees based on past years of service (i.e. benefits allocated to past years of service).

The **Plan Fiduciary Net Position** (FNP) is equal to the value of assets that have been accumulated in an irrevocable trust for these benefits.

The **Net OPEB Liability** or **Asset** (NOL) is the excess of the Total OPEB Liability over the Plan Fiduciary Net Position. At the end of each fiscal year, beginning June 30 2018, CMSA must show a liability equal to the NOL.

Actuarial values have been rolled back from January 1, 2018 to June 30 2016, and to June 30 2017, to produce the amounts needed to calculate CMSA's OPEB expense for the 2017-18 year.

At June 30, 2016 and June 30, 2017, these amounts are:

	June 30, 2016	June 30, 2017
Present value of benefits for employees	$ 1,983,263	$ 2,238,994
Present value of benefits for retirees	2,129,042	2,107,157
Total OPEB Liability	$ 4,112,305	$ 4,346,151
Accumulated assets in the CERBT trust	$ 1,903,765	$ 2,226,727
Plan Fiduciary Net Position	$ 1,903,765	$ 2,226,727
Total OPEB Liability	$ 4,112,305	$ 4,346,151
Plan Fiduciary Net Position	(1,903,765)	(2,226,727)
Net OPEB Liability	$ 2,208,540	$ 2,119,424

OPEB Expense under GASB 75

GASB 75 requires that the annual change in the NOL be recognized as OPEB expense, except for certain specific changes which are to be recognized over different periods of time. Changes in actuarial assumptions, and experience gains and losses, are to be recognized over the average of the expected remaining service lives of all employees. As of June 30, 2017, this average for CMSA employees is 10.3 years. Differences between actual and expected investment earnings are to be recognized over 5 years. The unrecognized remaining amounts of assumption changes, experience gains/losses and investment earnings differences are called "deferred outflows and inflows of resources relating to OPEB" (see Exhibit 5).

The OPEB Expense for the fiscal year ending June 30, 2018 is **$253,171**. A derivation of this amount is shown in Exhibit 4.

Disclosure Information as of June 30, 2018

Amounts to be disclosed in the footnotes to CMSA's audited financial statements as of June 30, 2018 are shown in Exhibits 2 through 6 of this report.

Exhibit 7 shows estimated retiree benefits and OPEB expense for the next nine years after that.

Subsidized Premiums

Recent changes to the accounting rules require that actuarial valuations dated after March 2015 must incorporate “age-specific claims costs”, which recognize that the true cost of health care increases with age. This is a significant change from prior practice, in which we only valued health care premiums.

The theory behind the change is the well-known fact that the actual cost of health care increases as people get older. Insurance companies know this, of course. When an insurance company (like Kaiser or Anthem Blue Cross) calculates a single monthly premium which applies to all employees, that single amount is a blended figure which combines the lower cost of health care for younger workers and the higher cost of health care for older workers. In a certain sense, the younger employees are subsidizing the cost of health care for the older employees.

GASB 75 requires us to use these age-specific rates when we evaluate the cost of an employer’s post-retirement health care plan. However, there used to be an exemption from this rule in the case of a health plan where the premium amounts are determined based on the pooled experience of a large group of employers (like CalPERS), and the actual demographics of a specific employer have little or no effect on the actual premium amount. In that type of plan, called a “community rated plan”, the accounting standards allowed us to use only the forecasted premium amounts. This usually results in lower annual operating expense. We have been making use of this exemption, because the CalPERS medical plans meet the “community rated” definition.

The recent changes effectively eliminate the exemption described above, starting in April 2015. This means that, beginning with this January 1, 2018 valuation, we will need to calculate the liabilities of your post-retirement benefit plan using age-specific claims costs. Another way of saying the same thing is that we will need to include the value of subsidized premiums in our GASB 75 computations. As noted above, the value of subsidized premiums as of January 1, 2018 is approximately $1,083,000:

Value of promised benefits to retired employees	$ 4,161,387
Value of future subsidized premiums	1,082,667
Total value of all GASB 45 benefits	$ 5,244,054

Actuarial Assumptions

All actuarial assumptions are unchanged from the January 1, 2015 valuation, and are described in detail in Exhibit 9.

Exhibit 1 - Actuarial Values as of January 1, 2018

The Actuarial Present Value of Projected Benefit Payments (APVPBP) as of January 1, 2018 of all future employer-paid benefits from the program, for all current and former employees, is as follows:

	Actuarial Present Values	Number of Persons
Current employees	$ 3,144,073	43
Retired former employees	2,099,981	32
Totals	$ 5,244,054	75

As of June 30, 2017, CMSA has accumulated $2,226,727 in an irrevocable trust toward this liability.

The Total OPEB Liability (TOL) as of June 30, 2017 is the portion of the APVPBP which has been "earned" to date by current and former employees, based on the years of service already completed:

Current employees	$ 2,238,994
Retired former employees	2,107,157
Totals	$ 4,346,151

Summary of Participating Employees as of January 1, 2018

Active Employees

Number	43 employees
Average Age	45.3 years
Average Service	8.7 years

Retired Former Employees and Surviving Spouses

Number	32 persons
Average Age	69.1 years

Exhibit 2 - Net OPEB Liability

The Net OPEB Liability (NOL) is the excess of the Total OPEB Liability (TOL) over the Plan Fiduciary Net Position (FNP). As of June 30, 2016 and June 30, 2017 these are:

		June 30, 2016	June 30, 2017
	Total OPEB Liability		
1.	Value of benefits for employees	$ 1,983,263	$ 2,238,994
2.	Value of benefits for retirees	2,129,042	2,107,157
3.	Total OPEB Liability	$ 4,112,305	$ 4,346,151
	Plan Fiduciary Net Position		
4.	Fair value of accumulated assets in CERBT	$ 1,903,765	$ 2,226,727
5.	Plan Fiduciary Net Position	$ 1,903,765	$ 2,226,727
6.	Net OPEB Liability: 3. minus 5.	$ 2,208,540	$ 2,119,424

The Net OPEB Liability has changed from June 30, 2016 to June 30, 2017 in this way:

		TOL	FNP	NOL
7.	Values at June 30, 2016	$ 4,112,305	$ 1,903,765	$ 2,208,540
8.	Service cost	111,349		111,349
9.	Interest	293,164		293,164
10.	Differences between actual and expected experience	0		0
11.	Employer contributions		287,122	(287,122)
12.	Net investment income		207,513	(207,513)
13.	Benefits paid to retirees	(170,667)	(170,667)	0
14.	Administrative expense		(1,006)	1,006
15.	Net changes	$ 233,846	$ 322,962	$ (89,116)
16.	Values at June 30, 2017	$ 4,346,151	$ 2,226,727	$ 2,119,424

Exhibit 3 - Sensitivity of the Net OPEB Liability

The following presents the Net OPEB Liability (NOL) as well as what the NOL would be if it were calculated using a discount rate that is 1-percentage-point higher or lower than the current discount rate, as of June 30, 2017:

	1% Decrease 6.28 %	**Discount Rate 7.28 %**	**1% Increase 8.28 %**
Net OPEB Liability (Asset)	$ 2,729,159	$ 2,119,424	$ 1,619,079

The following presents the Net OPEB Liability (NOL) as well as what the NOL would be if it were calculated using healthcare cost trend rates that are 1-percentage-point higher or lower than the current healthcare cost trend rates, as of June 30, 2017:

	1% Decrease 4.5 %	**Trend Rate 5.5 %**	**1% Increase 6.5 %**
Net OPEB Liability (Asset)	$ 1,669,462	$ 2,119,424	$ 2,659,476

Exhibit 4 - OPEB Expense for the Fiscal Year Ending June 30, 2018

For the year ending June 30, 2018, CMSA will recognize OPEB expense of **$253,171**, computed as follows:

Service cost	$ 111,349
Interest	293,164
Expected investment return	(138,557)
Administrative expense	1,006
Change in NOL due to changes in benefits	0
Recognition of difference between actual and expected experience	0
Recognition of changes in assumptions	0
Recognition of difference between projected and actual earnings on investments	(13,791)
Total	**$ 253,171**

Exhibit 5 - Deferred Outflows and Inflows of Resources

The values of deferred outflows and inflows of resources related to OPEB as of June 30, 2017, **to be reported as of June 30, 2018**, are:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 0	$ 0
Changes of assumptions	0	0
Net difference between projected and actual earnings on OPEB plan investments	0	55,165
CMSA contributions subsequent to the measurement date	UNKNOWN	0
Total	$ UNKNOWN	$ 55,165

The amounts shown as UNKNOWN are the total amounts contributed by CMSA to retirees' benefits and to the CERBT trust during the year ending June 30, 2018, net of any reimbursements.

Amounts reported as deferred outflows and inflows of resources related to OPEB as of June 30 2017, to be reported as of June 30, 2018, will be recognized in OPEB expense as follows:

Year Ended June 30	
2019	$ (13,791)
2020	(13,791)
2021	(13,791)
2022	(13,792)
2023	0
Thereafter	0

Exhibit 6 - Schedule of Changes in the Net OPEB Liability

Reporting date	**6/30/2018**
Total OPEB liability	
Service cost	$ 111,349
Interest	293,164
Changes of benefit terms	0
Differences between actual and expected experience	0
Changes of assumptions	0
Benefits paid to retirees	(170,667)
Net change in Total OPEB liability	233,846
Total OPEB liability – beginning	4,112,305
Total OPEB liability - ending	$ 4,346,151
Plan fiduciary net position	
Contributions - employer	$ 287,122
Net investment income	207,513
Benefits paid to retirees	(170,667)
Administrative expense	(1,006)
Net change in plan fiduciary net position	$ 322,962
Plan fiduciary net position - beginning	1,903,765
Plan fiduciary net position - ending	$ 2,226,727
Net OPEB Liability - ending	$ 2,119,424
Plan fiduciary net position as a percentage of the Total OPEB liability	51.23 %
Covered-employee payroll	$ 4,716,585
Net OPEB liability as a percentage of covered-employee payroll	44.94 %

Exhibit 7 - Ten-Year Projection of Costs

Shown below are estimates of (a) the benefits expected to be paid to retirees, (b) the projected subsidized premiums, and (c) the amounts CMSA is expected to accrue as GASB 75 OPEB expense, for the next ten years. For these estimates, it is assumed that all actuarial assumptions and the size of the workforce will remain unchanged, that the promised benefits will remain the same, that CMSA will contribute an amount to CERBT each year equal to the excess of the OPEB Expense over the retiree benefits and the subsidy payments, and that there are no experience gains or losses.

	Employer-Paid Retiree Payments	Projected Implicit Rate Subsidy Payments	GASB 75 OPEB Expense
Fiscal Year Ending:			
2018	$ 154,000	$ 11,000	$ 253,171
2019	167,000	15,000	250,000
2020	182,000	24,000	254,000
2021	196,000	32,000	258,000
2022	211,000	44,000	263,000
2023	224,000	57,000	281,000
2024	239,000	60,000	285,000
2025	253,000	60,000	289,000
2026	270,000	66,000	292,000
2027	290,000	80,000	294,000

Exhibit 8 - Summary of Benefit Provisions

CMSA maintains a program which provides health benefits to employees who retire from CMSA, provided that the employee has satisfied the minimum CalPERS requirement of attaining age 50 with at least 5 years of service. CMSA contracts with CalPERS to provide medical coverage for both current and retired employees. CMSA does not provide post-retirement coverage for dental, vision or life insurance benefits. Retired employees are required to enroll in Medicare Part B when eligible.

Certain retirees who were first employed with the San Rafael Sanitation District and then subsequently transferred to CMSA are eligible to receive fully-paid health benefits (regardless of plan selection) for employee, spouse and surviving spouse provided that the employee had at least 30 years of combined SRSD and CMSA service.

For unrepresented employees hired before January 1, 2010 and represented employees hired before June 1, 2010 who retire under CalPERS on or after age 50 with at least 5 years of service, CMSA's contribution to retiree health benefits is based on the monthly CalPERS premiums for single party enrollment in the Kaiser Bay Area Region Health Plan. After age 65, the amount paid will be the lesser of the Kaiser Bay Area Region Health Plan or the enrolled CalPERS Medicare supplement plan premium. A retiree is eligible to include his/her spouse on a CalPERS health plan however CMSA does not contribute toward the premium for spousal coverage. Surviving spouses are paid the CalPERS minimum monthly benefit ($128 per month in 2017, increases each year) when enrolled in the plan at the time of retirement.

For unrepresented employees hired after January 1, 2010 and represented employees hired after June 1, 2010 who retire under CalPERS on or after age 50 with at least 5 years of service, CMSA's contribution to retiree health benefits is based on the CalPERS minimum monthly benefit (as described above) for as long as the retiree or surviving spouse is living, assuming they were enrolled to receive the benefit at the time of retirement.

Exhibit 9 - Summary of Actuarial Assumptions

Actuarial Assumptions: The following assumptions as of January 1, 2018 were selected by CMSA in accordance with the requirements of GASB 75. These assumptions are consistent with the 2014 CalPERS OPEB Assumptions Model and, in my opinion, are reasonable and appropriate for purposes of determining OPEB costs under GASB 75.

Long-Term Expected Rate of Return on Investments: CalPERS' own long-term expected rate of return for the Strategy #1 Fund (the one that CMSA is invested in) has a mean expected yield of 7.28%. Given average returns in recent years in excess of 9%, CMSA believes that 7.28% is a reasonable long-term return for those assets.

Discount rate: 7.28% per year. The cash flows of the OPEB plan were projected to future years, assuming that CMSA will contribute an amount so that the assets always exceed expected benefits to retirees. Under that projection, the plan assets are projected to be adequate to pay all benefits to retirees in all future years, so the discount rate has been set equal to the long-term expected rate of return on investments, 7.28%.

Medical Cost Increases (Trend): Medical premiums are assumed to increase 5.50% per year after 2018.

Payroll Growth: Total payroll is assumed to increase 3.0% per year in the future.

Coverage Elections: 100% of eligible employees are assumed to elect coverage upon retirement, and to remain covered for life. Employees with no current medical coverage are assumed to elect Kaiser employee-only coverage upon retirement.

Mortality: Mortality rates are taken from the 2014 CalPERS OPEB Assumptions Model for "public agency miscellaneous".

Funding Method: The Entry Age actuarial cost method has been used, with normal costs calculated as a level percentage of payroll, as required by GASB 75.

Retirement: Retirement rates are taken from the 2014 CalPERS OPEB Assumptions Model for public miscellaneous employees with a 2.7% at 55 retirement plan. Sample rates are:

	10 Years Service	20 Years Service	30 Years Service
Age 55	11.55 %	16.50 %	21.45 %
Age 58	9.45 %	13.50 %	17.55 %
Age 61	10.85 %	15.50 %	20.15 %
Age 64	13.65 %	19.50 %	25.35 %

Turnover (withdrawal): Likelihood of termination within the next year is taken from the 2014 CalPERS OPEB Assumptions Model for "public agency miscellaneous". Sample rates are:

	5 Years Service	10 Years Service	15 Years Service
Age 20	9.46 %		
Age 30	7.90 %	6.68 %	5.81 %
Age 40	6.32 %	5.07 %	4.24 %
Age 50	1.16 %	0.71 %	0.32 %

Age-Specific Medical Claims: The estimated per person medical costs (true costs of coverage) during 2018 are as follows (rates are shown for certain ages only):

Age	
40	$ 7,387
45	8,933
50	11,038
55	13,612
60	15,865
64	17,021

These age-specific rates were developed so as to reproduce in the aggregate the same total premium that would be paid to the carriers for all current employees and all current retirees. These are the amounts used to compute the value of "subsidized premiums".

Inflation: Inflation in future years is assumed to be 2.75% per year.

Family Status: Future retirees are assumed to choose the same level of medical coverage (employee-only or with dependents) as they have while employed. Spouses are assumed to be the same age as the employee, unless actual birth dates are available.