CENTRAL MARIN SANITARY AGENCY

VALUATION OF RETIREE HEALTH BENEFITS

REPORT OF GASB 45 VALUATION
AS OF JULY 1, 2013

Prepared by: North Bay Pensions
November 6, 2013

Contents of This Report

Actuarial Certification

This report presents the determination of benefit obligations under **Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)** as of July 1, 2013 for the retiree health and welfare benefits provided by the Central Marin Sanitary Agency (CMSA). I was retained by CMSA to perform these calculations.

GASB Statement 45, "Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions", was issued to provide standards for governmental employers to record expense for **Other Postemployment Benefits (OPEB)**. OPEB includes postretirement health and welfare benefits hence GASB 45 is the appropriate Standard to follow when recording CMSA's OPEB obligations.

The information contained in this report was based on participant census information 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 45.

Actuarial computations under GASB 45 are for purposes of fulfilling employer accounting requirements. The calculations reported herein have been made on a basis consistent with my understanding of GASB 45. Determinations for purposes other than meeting employer financial accounting requirements may be significantly different from the results reported herein.

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.

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Nick Franceschine, F.S.A.

North Bay Pensions
550 Du Franc Avenue
Sebastopol, CA 95472
1-800-594-4590
FAX 707-823-6189
nick@northbaypensions.com

Summary of Results

Background

CMSA maintains a plan which pays part or all of monthly medical insurance premiums on behalf of retired former employees, provided that the employee has satisfied the minimum CalPERS requirement of attaining age 50 with at least 5 years of service. The plan's provisions are described in detail in Exhibit 5 of this report. This plan is being funded through the CalPERS CERBT (California Employers Retirement Benefit Trust). **As of June 30, 2013, the CERBT has assets of $1,255,329** toward the cost of future benefits for retired CMSA employees.

In June 2004, the Governmental Accounting Standards Board (GASB) released Statement No. 45, "Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions". This statement, often referred to as GASB 45, 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 plan are, and what the fiscal impact of GASB 45 will be for the 2013-2014 and 2014-2015 fiscal years. It is my understanding that CMSA intends to make a contribution each year (including payments to retired employees) equal to the Annual Required Contribution (ARC).

Present Value of Future Benefits

The Actuarial Present Value of Total Projected Benefits (APVTPB) for all current and former employees as of July 1, 2013, is **$4,188,730**. This is the amount CMSA would theoretically need to set aside at this time to fully fund all those future benefits.

The APVTPB of $4,188,730 is the sum of these amounts:

	July 1, 2013	July 1, 2011
Future benefits of current employees	$ 2,255,762	$ 2,353,222
Future benefits of current retirees	1,932,968	1,661,123
Total present value of all future benefits	$ 4,188,730	$ 4,014,345

This APVTPB of $4,188,730 can be compared to the $4,014,345 amount that was calculated in the July 1, 2011 valuation. If the APVTPB had been calculated using a 4.25% discount rate (assuming pay-as-you-go funding), the figure would be $7,656,558.

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.

“Annual OPEB Cost” Under GASB 45

GASB 45 requires that the cost of the program be recognized in a systematic manner over the working careers of employees. There are six different budgeting methods, called “actuarial funding methods”, that can be used to determine what the annual operating expense (called the **Annual OPEB Cost**) will be. CMSA has elected to use the Entry Age Normal actuarial funding method with a closed 30-year level dollar amortization of the unfunded actuarial accrued liability.

The actuarial funding method is used to compute the **Annual Required Contribution** (**ARC**). The ARC is generally equal to the sum of (1) the value of benefits earned by employees in the current year, plus (2) an amortization of the value of benefits earned by employees in prior years. Annual OPEB Cost is equal to the sum of (a) the ARC, and (b) interest on any unfunded OPEB operating expense from prior years, less (c) an adjustment to reflect the amortization of unfunded OPEB already included in the ARC.

Please note that the ARC is not the amount that CMSA should record as an operating expense each year. The annual operating expense is the Annual OPEB Cost.

For the fiscal year beginning July 1, 2013, CMSA’s Annual OPEB Cost is **$310,687**. A detailed derivation of this amount is shown in Exhibit 2. For the 2014-2015 fiscal year, Annual OPEB Cost is estimated to be $314,292.

Exhibit 3 shows a 5-year projection of expected benefits, CMSA contributions and GASB 45 operating expense.

Comments on Funding

GASB 45 doesn’t require CMSA to fund these benefits under any particular timetable or schedule, or to accumulate assets toward future obligations. In fact, many public agencies have chosen to only pay the amounts that are currently due to retired employees as those amounts become payable; this is called “pay-as-you-go” funding. The numbers in my report show the amounts that CMSA must accrue as annual cost on its financial statements, but how CMSA actually pays for those benefits is not mandated at all.

Over the last few years, CMSA has followed a policy of making contributions into a special trust established by CalPERS, called the CERBT. The amount that CMSA pays into the CERBT each year is the excess of (1) GASB 45’s “Annual Required Contribution” over (2) the amounts paid to retirees. This fund has accumulated to about $1.2 million as of July 1 2013. It’s natural to ask when CMSA could start to withdraw funds from the CERBT to pay benefits to retirees.

Actually, there is no obstacle to withdrawing funds from the CERBT to pay benefits at any time, even starting right away. CMSA is free to reduce its level of annual funding to pay-as-you-go (which means paying retirees but not sending any more money to the CERBT), or CMSA could even stop funding the benefits entirely and just make payments to retirees out of the CERBT. In the latter case, I estimate that it would take about 7 years to exhaust the funds in the CERBT, before CMSA needs to start funding again.

How long would CMSA need to continue funding at the current level before all benefits already earned by employees have been adequately funded? CMSA is currently funding the plan over the 30-year period that began July 1 2009. That means that past service benefits will be fully paid for by the year 2039. It is certainly possible that favorable investment performance or other events might make it happen sooner.

CMSA has a great deal of flexibility in deciding how much to fund each year, and can change its policy frequently if it wishes to. For example, CMSA could send a fixed dollar amount, like $250,000, to the CERBT, then have all benefits paid out of the CERBT for that year. <u>At a minimum</u>, CMSA must contribute enough so that there is enough money available to pay benefits as needed. With $1.2 million already in the CERBT, there is little reason to fear failing that in the near term.

There is one aspect of the situation that must be seriously considered in any decision to change the current funding pattern. Under GASB 45 rules, we use a special interest rate, called the "discount rate", to calculate the discounted present value of future benefit payments. The discount rate is supposed to reflect the expected long-term rate of return on the assets that are used to fund the plan. As long as CMSA continues its current policy, we are allowed to use CalPERS' estimate of the CERBT's investment return; currently this is estimated to be 7.61%. If CMSA switches to a less rapid funding pattern, we will need to change the discount rate to a blend of the CERBT rate and a lower interest rate that is closer to what CMSA earns on its investments. This lower discount rate will result in significantly higher annual GASB 45 costs. Another side effect of funding the benefits less rapidly, besides shifting more of the cost to future taxpayers, is that the long-term cost of the benefits would be higher since CMSA won't benefit from investment earnings to the same extent.

Actuarial Assumptions

The calculations of the program's obligations involve various estimates of future events. These estimates are called "actuarial assumptions". The assumptions are described in detail in Exhibit 6 of this report. The calculated results are highly dependent on the assumptions selected.

Exhibit 1 - Actuarial Values as of July 1, 2013

The Actuarial Present Value of Total Projected Benefits as of July 1, 2013 of all future benefits from the program, for all current and former employees, is as follows:

	Actuarial Present Values	Actuarial Accrued Liability	Number of Persons
Current employees	$ 2,255,762	$ 1,873,206	41
Retired former employees	1,932,968	1,932,968	27
Totals	$ 4,188,730	$ 3,806,174	68

The Actuarial Present Value of Total Projected Benefits (APVTPB) is the total present value of all future benefits for all current and former employees. The Actuarial Accrued Liability (AAL) is the portion of the APVTPB that has been "earned" already by employees, based on how many years they have already worked. The difference between the APVTPB and the AAL is entirely due to future years of employment. Therefore, for persons already retired, the APVTPB and AAL are equal, since there aren't any future years of employment. As of July 1, 2013, CMSA has assets of $1,255,329 in an irrevocable trust toward this liability.

Statistical Averages as of July 1, 2013

	July 1, 2013	July 1, 2011
Active Employees		
Number	41 employees	39 employees
Average Age	46.2 years	46.9 years
Average Service	9.8 years	10.3 years
Retired Former Employees and Surviving Spouses		
Number	27 persons	23 persons
Covered Dependents	10 persons	8 persons
Average Age of Retirees	66.3 years	65.2 years

Source of Information

A census of all eligible CMSA employees and retirees as of July 1, 2013 was provided to me by CMSA.

Exhibit 2 - Annual OPEB Cost

Under the Entry Age Normal method, the cost of each employee's OPEB benefits is amortized on a straight-line basis over his/her working career. For each employee, a "normal cost" is computed, the amount which, if accumulated during each year of employment, will at retirement be sufficient to fund the expected benefits for that individual. The sum of all the individual normal costs for all employees is called the Normal Cost. The accumulated value of all normal costs attributed to prior years, including the full value of benefits for all currently retired employees, is called the Actuarial Accrued Liability. The Unfunded Actuarial Accrued Liability is amortized over the closed 30-year period beginning July 1, 2009. The ARC is the sum of the Normal Cost and the amortization of the unfunded Actuarial Accrued Liability.

The Annual OPEB Cost for the 2013-2014 year is computed in this way:

1.	Normal Cost for the 2013-14 fiscal year	$ 82,443
2.	Actuarial Accrued Liability at July 1, 2013	3,806,174
3.	Value of Plan Assets	
	CERBT Balance at June 30, 2013	1,255,329.29
	Total assets at June 30, 2013	1,255,329
4.	Unfunded Actuarial Accrued Liability: 2. minus 3.	2,550,845
5.	Level-dollar Amortization of 4. over 26 years	227,978
6.	Annual Required Contribution (ARC): 1. plus 5.	$ 310,421
7.	Net OPEB Asset at June 30, 2013	(19,993)
8.	One year's interest on 7.	(1,521)
9.	ARC Adjustment: amortization of 7. over 26 years	1,787
10.	**Annual OPEB Cost: 6. plus 8. plus 9.**	**$ 310,687**

Exhibit 3 - Five-Year Projection of Costs

Shown below are estimates of the way in which Annual OPEB Cost might be expected to increase over the next five years. In this illustration, it is assumed that the Normal Cost will increase 5% per year, that all actuarial assumptions will remain unchanged, and that CMSA will continue to fund the full ARC each year.

Fiscal Year:	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**
Act. Accrued Liability	$3,806,174	$4,010,474	$4,214,762	$4,430,505	$4,655,061
ARC					
Normal cost	$ 82,443	$ 86,565	$ 90,893	$ 95,438	$ 100,210
Amortization	227,978	227,441	226,823	226,164	225,449
Total ARC	$ 310,421	$ 314,006	$ 317,716	$ 321,602	$ 325,659
Plus interest	(1,521)	(1,501)	(1,479)	(1,456)	(1,431)
Plus ARC adjustment	1,787	1,787	1,787	1,787	1,787
Annual OPEB Cost	**$ 310,687**	**$ 314,292**	**$ 318,024**	**$ 321,933**	**$ 326,015**
Funding by CMSA					
Benefits paid to retired employees and spouses	$ 161,751	$ 180,724	$ 188,840	$ 200,552	$ 209,443
Contributions to CERBT	148,670	133,282	128,876	121,050	116,216
Total Funding	**$ 310,421**	**$ 314,006**	**$ 317,716**	**$ 321,602**	**$ 325,659**
Increase in net OPEB Obligation	266	286	308	331	356
Net OPEB Obligation/(Asset) at beginning of year	$ (19,993)	$ (19,727)	$ (19,441)	$ (19,133)	$ (18,802)
Net OPEB Obligation at end of year	**$ (19,727)**	**$ (19,441)**	**$ (19,133)**	**$ (18,802)**	**$ (18,446)**

How to read this chart:

- Annual OPEB Cost: Each year's operating expense. Not the same as the ARC.
- Total Funding: Amount CMSA will contribute each year, equal to the amount paid for retired employees plus an additional amount paid to the CERBT.
- Net OPEB Obligation at end of year: The amount on CMSA's balance sheet at the end of each year, as an unpaid liability.

Exhibit 4 - Comparison of Amortization Schedules

For illustrative purposes only, this Exhibit shows a projection of certain amounts over the next five years, assuming that CMSA (1) continues its current policy of amortizing the past service liability over 30 years from 2009, (2) amortizes its past service liability over 10 years from 2013, and (3) amortizes its past service liability over 15 years from 2013. Based on the actuarial assumptions set forth in Exhibit 6, (a) Annual OPEB Cost, (b) the total benefits expected to be paid to participants and beneficiaries, and (c) the total amounts contributed to the CERBT trust over the next five years are estimated to be:

	Current: 30-Year Amortization	10-Year Amortization	15-Year Amortization
Fiscal 2013-14			
Annual OPEB Cost	$ 310,687	$ 457,326	$ 374,162
Projected benefits paid	161,751	161,751	161,751
Contributions to the CERBT trust	148,670	294,169	211,652
Fiscal 2014-15			
Annual OPEB Cost	$ 314,292	$ 460,649	$ 377,631
Projected benefits paid	180,724	180,724	180,724
Contributions to the CERBT trust	133,282	278,411	196,090
Fiscal 2015-16			
Annual OPEB Cost	$ 318,024	$ 463,880	$ 381,178
Projected benefits paid	188,840	188,840	188,840
Contributions to the CERBT trust	128,876	273,412	191,460
Fiscal 2016-17			
Annual OPEB Cost	$ 321,933	$ 467,204	$ 384,858
Projected benefits paid	200,552	200,552	200,552
Contributions to the CERBT trust	121,050	264,900	183,361
Fiscal 2017-18			
Annual OPEB Cost	$ 326,015	$ 470,554	$ 388,684
Projected benefits paid	209,443	209,443	209,443
Contributions to the CERBT trust	116,216	259,226	178,223
Total 5 Years' Contribution to CERBT	$ 648,094	$ 1,370,118	$ 960,786

Exhibit 5 - Summary of Plan 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 ($115 per month in 2013, $119 in 2014, increases each year).

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.

Exhibit 6 - Summary of Actuarial Assumptions

Actuarial Assumptions: The following assumptions as of July 1, 2013 were selected by CMSA in accordance with the requirements of GASB 45. In my opinion, these assumptions are reasonable and appropriate for purposes of determining OPEB costs under GASB 45.

Discount rate: 7.61% per year, assuming that CMSA follows CalPERS Asset Allocation Strategy #1. This represents what the CERBT expects to earn on its investments over the long term (20 to 60 years).

Mortality: Mortality rates are taken from the 2010 CalPERS OPEB Assumptions Model, projected to future years on a generational basis with Scale BB to approximate the effect of future improvements in life expectancy.

Coverage Elections: 100% of eligible employees are assumed to elect coverage upon retirement, and to remain covered under CMSA plans for life.

Retirement: Retirement rates are taken from the 2010 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 2010 CalPERS OPEB Assumptions Model. 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 %

Medical Cost Increases (Trend): CalPERS medical premiums are assumed to increase as follows:

2015	6.70 %
2016	6.40 %
2017	6.10 %
2018	5.80 %
2019 and later	5.50 %

The CalPERS minimum monthly contribution (PEMHCA minimum) is assumed to increase 5% per year after 2014.

Baseline Medical Costs: CalPERS is widely-considered to be a community-rated plan, so no age-grading of the base premium rates is necessary.

Actuarial Funding Method: The ARC is computed using the Entry Age Normal cost method with normal costs computed as level dollar amounts. The Unfunded Actuarial Accrued Liability in each year is amortized on a straight line level-dollar basis over the closed 30-year period beginning July 1, 2009.

Actuarial Value of Assets: The fair value of assets, including any receivable employer contributions.

Inflation: Inflation in future years is assumed to be 3% per year.