

NORTH BAY PENSIONS

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October 5, 2011

Mr. Hank Jen
Finance Manager
Central Marin Sanitation Agency
1301 Andersen Drive
San Rafael, CA 94901

Re: 2011 GASB 45 Actuarial Reports Enclosed

Hank:

I am enclosing two signed copies of my report on the GASB 45 actuarial valuation as of June 30, 2011.

Thank you again for the opportunity to assist the Agency with this important work. Please call me at 1-800-594-4590 if you need additional information.

Sincerely,

Nick Franceschine, F.S.A.
Consulting Actuary

CENTRAL MARIN SANITARY AGENCY

VALUATION OF RETIREE HEALTH BENEFITS

**REPORT OF GASB 45 VALUATION
AS OF JULY 1, 2011**

**Prepared by: North Bay Pensions
October 5, 2011**

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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, 2011 for the retiree health and welfare benefits provided by the Central Marin Sanitary Agency. I was retained by the Agency 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 the Agency's OPEB obligations.

The information contained in this report was based on participant census information provided to me by the Agency. The actuarial assumptions and methods used in this valuation were selected by the Agency 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.



10-5-11

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Summary of Results

Background

The Agency 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, 2011, the CERBT has assets of \$676,399 toward the cost of future benefits for retired Agency 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.

The Agency 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 2011-2012 and 2012-2013 fiscal years. It is my understanding that the Agency 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, 2011, is **\$4,014,345**. This is the amount the Agency would theoretically need to set aside at this time to fully fund all those future benefits.

The APVTPB of \$4,014,345 is the sum of these amounts:

	<u>June 30, 2011</u>	<u>June 30, 2010</u>
Future benefits of current employees	\$ 2,353,222	\$ 2,228,399
Future benefits of current retirees	<u>1,661,123</u>	<u>1,703,335</u>
Total present value of all future benefits	\$ 4,014,345	\$ 3,931,734

This APVTPB of \$4,014,345 can be compared to the \$3,931,734 amount that was calculated in the July 1, 2010 valuation. If the APVTPB had been calculated using a 4.25% discount rate (assuming pay-as-you-go funding), the figure would be \$7,208,562.

The primary difference between the two valuations is the change in the discount rate from 7.75% in the 2010 valuation to 7.61% for this valuation. It is my understanding that the Agency intends to select CalPERS Asset Allocation Strategy One with a corresponding discount rate of 7.61%.

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 the Agency, (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. The Agency 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 the Agency should record as an operating expense each year. The annual operating expense is the Annual OPEB Cost.

For the fiscal year beginning July 1, 2011, the Agency's Annual OPEB Cost is **\$375,764**. A detailed derivation of this amount is shown in Exhibit 2. For the 2012-2013 fiscal year, Annual OPEB Cost is estimated to be \$381,524.

Exhibit 2 shows a 5-year projection of expected benefits, Agency contributions and GASB 45 operating expense.

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, 2011

The Actuarial Present Value of Total Projected Benefits as of July 1, 2011 of all future benefits from the program, for all current and former employees, is as follows:

	<u>Actuarial Present Values</u>	<u>Actuarial Accrued Liability</u>	<u>Number of Persons</u>
Current employees	\$ 2,353,222	\$ 1,887,325	39
Retired former employees	<u>1,661,123</u>	<u>1,661,123</u>	<u>23</u>
Totals	\$ 4,014,345	\$ 3,548,448	62

This \$4,014,345 is theoretically the total amount that the Agency would need as of July 1, 2011 to fully fund the OPEB promises for all current and former employees. As of July 1, 2011, the Agency has assets of \$676,399 in an irrevocable trust toward this liability.

Statistical Averages as of July 1, 2011

	<u>June 30, 2011</u>	<u>June 30, 2010</u>
Active Employees		
Number	39 employees	39 employees
Average Age	46.9 years	46.6 years
Average Service	10.3 years	9.5 years
Retired Former Employees and Surviving Spouses		
Number	23 persons	23 persons
Covered Dependents	8 persons	8 persons
Average Age of Retirees	65.2 years	64.2 years

Source of Information

A census of all eligible Agency employees and retirees as of June 30, 2011 was provided to me by the Agency.

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 2011-2012 year is computed in this way:

1.	Normal Cost for the 2011-12 fiscal year	\$ 124,728
2.	Actuarial Accrued Liability at July 1, 2011	3,548,448
3.	Value of Plan Assets	
	CERBT Balance at June 30, 2011	676,399.17
	Total assets at June 30, 2011	676,399
4.	Unfunded Actuarial Accrued Liability: 2. minus 3.	2,872,049
5.	Level-dollar Amortization of 4. over 28 years	250,724
6.	Annual Required Contribution (ARC): 1. plus 5.	\$ 375,452
7.	Net OPEB Asset at June 30, 2011	(27,867)
	From Exhibit 4	
8.	One year's interest on 7.	(2,121)
9.	ARC Adjustment: amortization of 7. over 28 years	<u>2,433</u>
10.	Annual OPEB Cost: 6. plus 8. plus 9.	\$ 375,764

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 the Agency will continue to fund the full ARC each year.

Fiscal Year:	<u>2011-12</u>	<u>2012-13</u>	<u>2013-14</u>	<u>2014-15</u>	<u>2015-16</u>
Act. Accrued Liability	\$ 3,548,448	\$ 3,787,529	\$ 4,048,538	\$ 4,319,175	\$ 4,593,978
ARC					
Normal cost	\$ 124,728	\$ 130,964	\$ 137,512	\$ 144,388	\$ 151,607
Amortization	<u>250,724</u>	<u>250,224</u>	<u>249,714</u>	<u>249,154</u>	<u>248,501</u>
Total ARC	\$ 375,452	\$ 381,188	\$ 387,226	\$ 393,542	\$ 400,108
Plus interest	(2,121)	(2,097)	(2,071)	(2,044)	(2,014)
Plus ARC adjustment	<u>2,433</u>	<u>2,433</u>	<u>2,433</u>	<u>2,433</u>	<u>2,433</u>
Annual OPEB Cost	\$ 375,764	\$ 381,524	\$ 387,588	\$ 393,931	\$ 400,527
<u>Funding by the Agency</u>					
Benefits paid to retired employees and spouses	\$ 150,078	\$ 152,490	\$ 168,669	\$ 191,135	\$ 206,362
Contributions to CERBT	<u>225,374</u>	<u>228,698</u>	<u>218,557</u>	<u>202,407</u>	<u>193,746</u>
Total Funding	\$ 375,452	\$ 381,188	\$ 387,226	\$ 393,542	\$ 400,108
Increase in net OPEB Obligation	312	336	362	389	419
Net OPEB Obligation/(Asset) at beginning of year	\$ (27,867)	\$ (27,555)	\$ (27,219)	\$ (26,857)	\$ (26,468)
Net OPEB Obligation at end of year	\$ (27,555)	\$ (27,219)	\$ (26,857)	\$ (26,468)	\$ (26,049)

How to read this chart:

- Annual OPEB Cost: Each year's operating expense. Not the same as the ARC.
- Total Funding: Amount the Agency 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 the Agency's balance sheet at the end of each year, as an unpaid liability.

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 the Agency will continue to fund the full ARC each year.

Fiscal Year:	<u>2011-12</u>	<u>2012-13</u>	<u>2013-14</u>	<u>2014-15</u>	<u>2015-16</u>
Act. Accrued Liability	\$ 3,548,448	\$ 3,787,529	\$ 4,048,538	\$ 4,319,175	\$ 4,593,978
Estimated value of plan assets on July 1	\$ 676,399	\$ 953,247	\$ 1,254,489	\$ 1,558,511	\$ 1,890,282
Unfunded Act. Accrued Liability	\$ 2,872,049	\$ 2,834,282	\$ 2,794,282	\$ 2,750,664	\$ 2,703,696
ARC					
Normal cost	\$ 124,728	\$ 130,964	\$ 137,512	\$ 144,388	\$ 151,607
Amortization	250,724	250,224	249,714	249,154	248,501
Total ARC	\$ 375,452	\$ 381,188	\$ 387,226	\$ 393,542	\$ 400,108
Plus interest	(2,121)	(2,097)	(2,071)	(2,044)	(2,014)
Plus ARC adjustment	2,433	2,433	2,433	2,433	2,433
Annual OPEB Cost	\$ 375,764	\$ 381,524	\$ 387,588	\$ 393,931	\$ 400,527
<u>Funding by the Agency</u>					
Benefits paid to retired employees and spouses	\$ 150,078	\$ 152,490	\$ 168,669	\$ 191,135	\$ 206,362
Contributions to CERBT	225,374	228,698	218,557	202,407	193,746
Total Funding	\$ 375,452	\$ 381,188	\$ 387,226	\$ 393,542	\$ 400,108
Increase in net OPEB Obligation	312	336	362	389	419
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Net OPEB Obligation at end of year	\$ (27,555)	\$ (27,219)	\$ (26,857)	\$ (26,468)	\$ (26,049)

How to read this chart:

- Annual OPEB Cost: Each year's operating expense. Not the same as the ARC.
- Total Funding: Amount the Agency 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 the Agency's balance sheet at the end of each year, as an unpaid liability.

Exhibit 4 - Net OPEB Asset

In the vocabulary of GASB 45, the "Net OPEB Obligation/(Asset)" is the balance sheet liability or asset that the Agency should report at the end of each fiscal year. The Net OPEB Obligation/(Asset) is the cumulative sum of all operating expenses that have been accrued under GASB 45, minus the sum of all contributions made (and benefits paid) by the Agency since the adoption of GASB 45.

The Net OPEB Asset as of June 30, 2011 is developed in this way:

1.	Net OPEB Obligation/Asset as of July 1, 2010	\$ (92,644)
2.	Annual OPEB Cost for the 2010-11 year	381,594
3.	Benefits paid during the 2010-11 year	135,040
4.	Additional amounts contributed to CERBT during the 2010-2011 fiscal year	181,777
5.	Net OPEB Asset at June 30, 2011:	\$ (27,867)
	1. plus 2. minus 3. minus 4	

Exhibit 5 - Summary of Plan Provisions

The Agency maintains a program which provides health benefits to employees who retire from the Agency, provided that the employee has satisfied the minimum CalPERS requirement of attaining age 50 with at least 5 years of service. The Agency contracts with CalPERS to provide medical coverage for both current and retired employees. The Agency 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, the Agency'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 the Agency does not contribute towards the premium for spousal coverage. Surviving spouses are paid the CalPERS minimum monthly benefit (\$108 per month in 2011, \$112 in 2012, 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, the Agency'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, 2011 were selected by the Agency 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. Sample rates are:

	<u>Male Rates</u>	<u>Female Rates</u>
Age 30	0.053 %	0.036 %
Age 40	0.087 %	0.065 %
Age 50	0.239 %	0.125 %
Age 60	0.720 %	0.431 %
Age 70	1.675 %	1.244 %

Coverage Elections: 100% of eligible employees are assumed to elect coverage upon retirement, and to remain covered under Agency 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:

	<u>10 Years Service</u>	<u>20 Years Service</u>	<u>30 Years Service</u>
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:

	<u>5 Years Service</u>	<u>10 Years Service</u>	<u>15 Years Service</u>
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:

2013	7.30 %
2014	7.00 %
2015	6.70 %
2016	6.40 %
2017	6.10 %
2018	5.80 %
2019 and later	5.50 %

The CalPERS minimum monthly contribution is assumed to increase 5% per year after 2011.

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.