NOVATO SANITARY DISTRICT

VALUATION OF RETIREE HEALTH BENEFITS

REPORT OF GASB 45 VALUATION
AS OF JULY 1, 2010

Prepared by: North Bay Pensions
January 5, 2011

NORTH BAY PENSIONS

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, 2010 for the retiree health and welfare benefits provided by the Novato Sanitary District. I was retained by the District 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 District's OPEB obligations.

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

1-5-11

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Summary of Results

Background

The District maintains a program which pays part of monthly medical insurance premiums on behalf of retired former employees, provided that the employee has satisfied certain requirements. This program is being funded on a pay-as-you-go basis. As of July 1, 2010, the District has funded $0 in a secure trust toward the cost of future benefits.

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.

It is my understanding that the District implemented the requirements of GASB 45 in its fiscal year beginning July 1, 2009. The District has requested this actuarial valuation to determine what its OPEB obligations under the program are, and what the fiscal impact of GASB 45 will be for the 2010-2011 and 2011-2012 fiscal years.

Present Value of Future Benefits

The **Actuarial Present Value of Total Projected Benefits (APVTPB)** as of July 1, 2009, is **$6,112,283**. This is the amount the District would theoretically need to set aside at this time to fully fund <u>all</u> future benefits for <u>all</u> current and former employees and their beneficiaries.

The total value of $6,112,283 is the sum of these amounts:

Future benefits of current employees	$ 2,239,892
Future benefits of current retirees	<u>3,872,391</u>
Total present value of all future benefits	$ 6,112,283

These figures are computed by (1) estimating the OPEB benefits that will be paid to each current and former employee and their beneficiaries, upon the employee's retirement from the District, (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 District 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 which is already included in the ARC. In the initial year of application of GASB 45, Annual OPEB Cost is equal to the ARC.

For the fiscal year beginning July 1, 2010, the District's Annual OPEB Cost is **$438,581.** For the 2011-2012 fiscal year, Annual OPEB Cost will be $447,887.

Over the next 3 years, the total benefits that the District is expected to pay to retired employees and their beneficiaries, and the GASB 45 operating expense, are as follows:

	Expected Benefits	Operating Expense
2010-2011 Fiscal Year	$ 199,982	$ 438,581
2011-2012 Fiscal Year	202,954	447,887
2012-2013 Fiscal Year	216,310	457,439

Exhibit 2 is the most important schedule in this report. It shows a 5-year projection of expected benefits 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 5 of this report. The calculated results are highly dependent on the assumptions selected.

Some of the most important assumptions that have been used are:

- Discount rate: This is the interest rate at which future benefit obligations are discounted back to the present time. GASB 45 requires that the discount rate reflect the expected investment return on the investments used to fund the benefits. In this valuation, a discount rate of 4.00% per year has been used, which represents what the District expects to earn on its investments over the long term.

- Future increases in the cost of health care: Insurance premiums for medical coverage continue to increase, and those increases seem likely to continue. In this valuation, we have assumed that CalPERS health care premiums will increase 7.0% in 2012, 6.0% in 2013, and 5.0% in each later year. Actual premium amounts for 2010 and 2011 have been reflected in the numbers. This pattern of future increases in health care cost reflects an expectation that the cost of health care cannot indefinitely increase faster than the nation's Gross National Product.

- Rates of termination, retirement and death: These are the estimated probabilities that a person will leave employment, retire or die in each year. We have used the same termination, retirement and death rate assumptions that CalPERS uses each year in its valuations of the PERS retirement system benefits.

Exhibit 1 - Actuarial Values as of July 1, 2010

The Actuarial Present Value of Total Projected Benefits as of July 1, 2010 of all future benefits from the program, for all current and former employees, is as follows:

	Actuarial Present Values	Number of Persons
Current employees	$ 2,239,892	22
Retired former employees	3,872,391	22
Totals	$ 6,112,283	44

This $6,112,283 is theoretically the amount that the District would need to set aside as of July 1, 2010 to fully fund the OPEB promises for all current and former employees. As of July 1, 2010, the District has accrued and funded $ 0 toward this liability.

Statistical Averages as of July 1, 2010

Active Employees

Number	22 employees
Average Age	46.0
Average Service	7.7

Retired Former Employees and Surviving Spouses

Number	22 persons
Average Age	65.5

Source of Information

A census of all eligible District employees and retirees as of June 23, 2010 was provided to me by the District.

Exhibit 2 - 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 0% per year, that all actuarial assumptions will remain unchanged, and that the District will continue to fund the plan on a pay-as-you-go basis.

Fiscal Year:	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**
ARC					
Normal cost	$ 136,746	$ 136,746	$ 136,746	$ 136,746	$ 136,746
Amortization	307,137	321,536	336,926	352,760	369,212
Total ARC	$ 443,883	$ 458,282	$ 473,672	$ 489,506	$ 505,958
Plus interest	11,233	20,777	30,575	40,220	49,773
Less ARC adjustment	(16,535)	(31,172)	(46,808)	(62,911)	(79,651)
Annual OPEB Cost	**$ 438,581**	**$ 447,887**	**$ 457,439**	**$ 466,815**	**$ 476,080**
Funding by the District					
Benefits paid to retirees	$ 199,982	$ 202,954	$ 216,310	$ 227,990	$ 230,186
Additional funding	0	0	0	0	0
Total Funding	**$199,982**	**$ 202,954**	**$ 216,310**	**$ 227,990**	**$ 230,186**
Increase in net OPEB Obligation	$ 238,599	$ 244,933	$ 241,129	$ 238,825	$ 245,894
Net OPEB Obligation at beginning of year	$ 280,831	$ 519,430	$ 764,363	$ 1,005,492	$1,244,317
Net OPEB Obligation at end of year	**$ 519,430**	**$ 764,363**	**$ 1,005,492**	**$1,244,317**	**$ 1,490,211**
Expected benefits paid	**$ 199,982**	**$ 202,954**	**$ 216,310**	**$ 227,990**	**$ 230,186**

How to read this chart:

- Annual OPEB Cost: Each year's operating expense.
- Total Funding: Amount the District will contribute each year, equal to the amount paid to retired employees.
- Net OPEB Obligation at end of year: The amount on the District's balance sheet at the end of each year, as an unpaid liability.
- Expected benefits paid: Anticipated payments to retired employees.

Exhibit 3 - Annual OPEB Cost

In the Entry Age Normal method, the cost of each individual'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 a period of future years. The ARC is the sum of the Normal Cost and the amortization of the Unfunded Actuarial Accrued Liability.

The Annual OPEB Cost for the 2010-2011 year is computed in this way:

1.	Normal Cost for the 2010-11 fiscal year	$ 136,746
2.	Actuarial Accrued Liability at July 1, 2010	5,216,328
3.	Value of Plan Assets	0
4.	Unfunded Actuarial Accrued Liability: 2. minus 3.	5,216,328
5.	Level-dollar Amortization of 4. over 30 years	307,137
6.	**Annual Required Contribution (ARC):** 1. plus 5.	**$ 443,883**
7.	Net OPEB Obligation at beginning of year	280,831
8.	One year's interest on 7.	11,233
9.	ARC Adjustment: amortization of 7. over 29 years	(16,535)
10.	Annual OPEB Cost: 6. plus 8. plus 9.	**$ 438,581**

Exhibit 4 - Summary of Plan Provisions

The District contributes toward post-retirement benefits for employees who retire after age 50 with at least 5 years of service.

For those employed prior to July 1 2008, who retire after age 55 with at least 10 years of service, the District will pay the full monthly premiums for medical coverage for the retired employee, but not more than the Kaiser Northern California amount. If the retiree is at least age 60 with at least 15 years of service, the premium for the employee's eligible spouse is also paid. Coverage is for the lives of the retired employee and spouse. Medical coverage is provided under any plans offered by CalPERS.

For all other employees who retire after age 50 with at least 5 years of service, the District will pay the minimum CalPERS medical benefit. In 2010, this minimum amount is $105 per month. This benefit is paid for as long as the retiree or spouse is living, provided he/she is covered under CalPERS medical plans.

The medical plans offered by CalPERS are considered "community rated"; that is, the premiums charged to contributing employers and participating retirees are not affected by the demographics of the specific employer, but are the same for all employers in the geographic region. For that reason, no implicit subsidized cost has been valued. If these medical plans ever cease to be community rated, GASB 45 may require a higher cost to be recognized. Such higher cost would reflect the fact that the true cost of healthcare coverage for retirees under age 65 is more than the premiums being assessed.

Exhibit 5 - Summary of Actuarial Assumptions

Actuarial Assumptions: The following assumptions as of July 1, 2010 were selected by the District 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: 4.0% per year.

Medical Cost Increases (Trend): Medical premiums for plans offered by CalPERS are assumed to increase as follows:

2012	7.0 %
2013	6.0 %
2014 and later	5.0 %

The CalPERS minimum contribution is assumed to increase 5.0% per year after 2011.

Mortality: Mortality rates used in the most recent CalPERS valuation for "Public Agency Miscellaneous". Sample rates are:

	Before Retirement		After Retirement	
	Male	Female	Male	Female
Age 30	0.038 %	0.021 %		
Age 40	0.077 %	0.046 %		
Age 50	0.156 %	0.102 %	0.245 %	0.136 %
Age 60	0.314 %	0.226 %	0.721 %	0.442 %
Age 70	0.634 %	0.500 %	2.135 %	1.276 %

Coverage Elections: All eligible employees are assumed to elect coverage under a CalPERS medical plan upon retirement, and to remain covered for life.

Retirement: Retirement rates used in the most recent CalPERS valuation for miscellaneous public employees with 2.0% at 55 retirement. Sample rates are:

Years of Service:	10 Years	20 Years	30 Years
Age 50	1.84 %	2.69 %	3.66 %
Age 55	6.04 %	8.83 %	12.00 %
Age 60	9.08 %	13.28 %	18.04 %
Age 62	16.20 %	23.69 %	32.19 %
Age 65	22.09 %	32.31 %	43.90 %
Age 70	15.55 %	22.74 %	30.90 %

Turnover (withdrawal): Likelihood of termination within the next year is taken from the most recent CalPERS valuations for miscellaneous public employees. Sample rates are:

	5 Years Service	10 Years Service	15 Years Service
Age 30	6.96 %	5.74 %	5.15 %
Age 35	6.27 %	5.04 %	4.46 %
Age 40	5.57 %	4.35 %	3.76 %
Age 45	4.88 %	3.66 %	3.07 %
Age 50	1.55 %	0.95 %	0.64 %

Baseline Medical Costs: The CalPERS medical plans are considered to be "community rated", so there is no implicit subsidy in the rates to be valued.

Family Status: All employees are assumed to have the same family status (married, single) after retirement that they have now, and to be married to the same spouse at retirement.

CalPERS Administrative Charge: The administrative charge that CalPERS levies on all premium payments is assumed to remain 0.43%.