NOVATO SANITARY DISTRICT

VALUATION OF RETIREE HEALTH BENEFITS

REPORT OF GASB 45 VALUATION
AS OF JULY 1, 2015

Prepared by: North Bay Pensions
February 29, 2016

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, 2015 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.

2-29-16

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Summary of Results

Background

The District maintains a program which pays part or all 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, 2015, 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.

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 2015-2016 and 2016-2017 fiscal years.

Present Value of Future Benefits

The **Actuarial Present Value of Total Projected Benefits** (**APVTPB**) as of July 1, 2015, is **$6,520,800**. This is the amount the District would theoretically need to set aside at this time to fully fund all future benefits for all current and former employees and their beneficiaries.

This figure of $6,520,800 can be compared to the corresponding figure of $5,908,205 as of July 1, 2012. The main reason for the increase is the inclusion of the value of subsidized premiums, as described in more detail below. If subsidized premiums were not reflected in these numbers, the APVTPB this year would have been $5,512,008.

The total value of $6,520,800 is the sum of these amounts:

Future benefits of current employees	$ 2,690,625
Future benefits of current retirees	3,830,175
Total present value of all future benefits	$ 6,520,800

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.

Subsidized Premiums

The Actuarial Standards Board promulgates professional standards for actuaries, called "Actuarial Standards of Practice". One such standard, Actuarial Standard of Practice No. 6 (or ASOP 6), was recently modified. It requires that actuarial valuations dated after March 2015 must incorporate age-specific claims costs, which recognize that the true cost of health care coverage 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 45 requires us to use these age-specific rates when we evaluate the cost of an employer's post-retirement health care plan. However, there was 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 persons, 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", GASB 45 allows us to use only the forecasted premium amounts. This usually results in lower annual operating expense. We have been making use of this exemption for your District, because the CalPERS medical plans meet the "community rated" definition.

The change to ASOP 6 effectively eliminates the exemption described above, starting in April 2015. This means that, beginning with this July 1 2015 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 45 computations. As noted above, the value of subsidized premiums as of July 1, 2015 is approximately $1,009,000:

Value of promised benefits to retired employees	$ 5,512,008
Value of future subsidized premiums	1,008,792
Total value of all GASB 45 benefits	$ 6,520,800

One consequence of including the value of the subsidized premiums in your GASB 45 operating expense is that there is a potential for double-counting the amount of the subsidized premiums. In other words, unless you make an adjustment, you will be accruing the amount of those subsidized premiums *twice* in each fiscal year: once for your active employees, in the medical premiums you are paying, and again in the GASB 45 expense. Fortunately, GASB 45 permits you to make a simple adjustment to the medical premium costs you accrue for your employees. As shown in Exhibit 3, **for the 2015-16 year you may reduce your accrual of medical premiums by $60,296**. For the 2016-17 year, you may reduce your accrual of medical premiums by $54,975.

"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", which 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 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.

For the fiscal year beginning July 1, 2015, the District's Annual OPEB Cost is **$420,349**. For the 2016-2017 fiscal year, Annual OPEB Cost will be $427,148.

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
2015-2016 Fiscal Year	$ 182,025	$ 420,349
2016-2017 Fiscal Year	186,785	427,148
2017-2018 Fiscal Year	205,470	434,231

Exhibit 3 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 6 of this report. The calculated results are highly dependent on the assumptions selected.

The assumed mortality rates have been changed, as described in Exhibit 6. This change increased the APVTPB by approximately $40,000.

Exhibit 1 - Actuarial Values as of July 1, 2015

The Actuarial Present Value of Total Projected Benefits as of July 1, 2015 of all future benefits from the program, for all current and former employees, is as follows:

	Actuarial Present Values	**Number of Persons**
Current employees	$ 2,690,625	11
Retired former employees and surviving spouses	3,830,175	20
Totals	$ 6,520,800	31

Data Averages as of July 1, 2015

Active Employees

Number	11 employees
Average Age	51.5
Average Service	14.6

Retired Former Employees and Surviving Spouses

Number	20 persons
Average Age	68.8

Source of Information

A census of all eligible District employees and retirees as of April 1, 2015 was provided to me by the District. I assumed that this was representative of a census as of July 1, 2015. There are 4 other employees who are not eligible for these benefits .

Exhibit 2 - 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 2015-2016 year is computed in this way:

1.	Normal Cost for the 2015-16 fiscal year	$ 38,443
2.	Actuarial Accrued Liability at July 1, 2015	6,313,211
3.	Value of Plan Assets	0
4.	Unfunded Actuarial Accrued Liability: 2. minus 3.	6,313,211
5.	Level-dollar amortization of 4. over 24 years	414,063
6.	**Annual Required Contribution (ARC): 1. plus 5.**	**$ 452,506**
7.	Net OPEB Obligation at beginning of year	1,256,795
8.	One year's interest on 7.	50,272
9.	ARC Adjustment: amortization of 7. over 24 years	(82,429)
10.	**Annual OPEB Cost: 6. plus 8. plus 9.**	**$ 420,349**

Exhibit 3 - Five-Year Projection of Costs

Shown below are estimates of the way in which Annual OPEB Cost might be expected to change over the next five years. In this illustration, it is assumed that the Normal Cost will remain unchanged, 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:	2015-16	2016-17	2017-18	2018-19	2019-20
Actuarial Accd. Liability	$6,313,211	$6,357,063	$6,403,241	$6,420,993	$6,438,034
ARC					
Normal cost	$ 38,443	$ 38,443	$ 38,443	$ 38,443	$ 38,443
Amortization	414,063	427,889	443,097	457,688	473,723
Total ARC	452,506	466,332	481,540	496,131	512,166
Plus interest	50,272	57,393	64,808	71,320	78,021
Less ARC adjustment	(82,429)	(96,577)	(112,117)	(127,092)	(143,523)
Annual OPEB Cost	**$ 420,349**	**$ 427,148**	**$ 434,231**	**$ 440,359**	**$ 446,664**
Funding by the District					
Benefits paid to retirees	$ 182,025	$ 186,785	$ 205,470	$ 212,756	$ 222,390
Subsidized premiums	60,296	54,975	65,975	60,082	62,817
Other funding	0	0	0	0	0
Total Funding	**$ 242,321**	**$ 241,760**	**$ 271,445**	**$ 272,838**	**$ 285,207**
Increase in net OPEB Obligation	178,028	185,388	162,786	167,521	161,457
Net OPEB Obligation at beginning of year	$1,256,795	$1,434,823	$1,620,211	$1,782,997	$1,950,518
Net OPEB Obligation at end of year	**$1,434,823**	**$1,620,211**	**$1,782,997**	**$1,950,518**	**$2,111,975**

How to read this chart:

- Annual OPEB Cost: Each year's GASB 45 operating expense.
- Total Funding: Amount the District will contribute each year, equal to the amounts paid to retired employees, plus subsidized premiums.
- 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.

Exhibit 4 - Net OPEB Obligation

GASB 45 defines the "**Net OPEB Obligation**" as the cumulative difference between (a) amounts accrued as Annual OPEB Cost and (b) amounts actually contributed by the District. The Net OPEB Obligation (or Asset) is the unpaid liability (or prepaid asset) shown on the District's balance sheet at the end of each fiscal year.

The Net OPEB Asset as of June 30, 2015 is developed in this way:

1.	Net OPEB Obligation as of July 1, 2012	$ 745,079
2.	Annual OPEB Cost for the 2012-13 year	391,607
3.	Benefits paid to retirees during the 2012-13 year	217,375
4.	Net OPEB Obligation at June 30, 2013: 1. plus 2. minus 3.	$ 919,311
5.	Annual OPEB Cost for the 2013-14 year	391,919
6.	Benefits paid to retirees during the 2013-14 year	227,194
7.	Net OPEB Obligation at June 30, 2014: 4. plus 5. minus 6.	$ 1,084,036
8.	Annual OPEB Cost for the 2014-15 year	370,717
9.	Benefits paid to retirees during the 2014-15 year	197,958
10.	Net OPEB Obligation at June 30, 2015: 7. plus 8. minus 9.	$ 1,256,795

Exhibit 5 - 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 Bay Area amount. If the retiree is at least age 60 with at least 15 years of service, or age 55 with at least 25 years of service, the premium for the employee's eligible spouse or other eligible dependent is also paid. Coverage is for the lives of the retired employee (and spouse, if covered). Medical coverage is provided under any plans offered by CalPERS.

For all employees who retire after age 50 with at least 5 years of service, the District will pay the minimum CalPERS (PEMHCA) medical benefit for the employee only. In 2015, this minimum amount is $122 per month, increasing in future years. This benefit is paid for as long as the retiree is living, provided he/she is covered under CalPERS medical plans.

For employees hired after July 1, 2008, the District contributes 1.5% of the employee's base monthly salary toward a Medical After Retirement Account (MARA) while employed. District contributions to the MARA are not included in OPEB accounting, but are accrued each year as an operating expense as they are contributed.

Exhibit 6 - Summary of Actuarial Assumptions

Actuarial Assumptions: The following assumptions as of July 1, 2015 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.

Mortality: Mortality rates are taken from the 2014 CalPERS OPEB Assumptions Model for miscellaneous public employees. In the 2012 valuation, mortality rates were taken from the 2010 CalPERS OPEB Assumptions Model for miscellaneous public employees, projected on a generational basis using Scale BB to approximate future increases in life expectancy.

Medical Cost Increases (Trend): Medical premiums for plans offered by CalPERS are assumed to increase 5% per year after 2015. The CalPERS minimum (PEMHCA) contribution is assumed to increase 5.0% per year after 2015.

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 are taken from the 2014 CalPERS OPEB Assumptions Model for miscellaneous public employees with 2.0% at 55 retirement. Sample rates are:

Years of Service:	**10 Years**	**20 Years**	**30 Years**
Age 50	2.00 %	2.90 %	3.90 %
Age 55	6.40 %	9.40 %	12.70 %
Age 60	9.20 %	13.40 %	18.20 %
Age 62	16.20 %	23.70 %	32.20 %
Age 65	22.10 %	32.30 %	43.90 %
Age 70	17.60 %	25.70 %	34.90 %

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

	5 Years Service	10 Years Service	15 Years Service
Age 30	7.90 %	6.68 %	5.81 %
Age 35	7.11 %	5.87 %	5.03 %
Age 40	6.32 %	5.07 %	4.24 %
Age 45	5.54 %	4.27 %	3.47 %
Age 50	1.16 %	0.71 %	0.32 %

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 0.25%.

Actuarial Funding Method: The Entry Age Normal funding method has been used to develop the Actuarial Accrued Liability and Normal Cost, with normal costs computed as level dollar amounts. The Unfunded Actuarial Accrued Liability is being amortized as a level dollar amount over the closed 30-year period beginning July 1, 2009.

Age-Weighted Premiums: The assumed annual per capita age-weighted Kaiser premiums for 2015 are as follows. These figures were developed using 2013 normalized risk scores provided by CalPERS:

Age 40	$ 6,560
Age 45	7,933
Age 50	9,801
Age 55	12,087
Age 60	14,088
Age 62	14,750
Age 64	15,115
Age 65	2,835
Age 70	3,320
Age 75	3,791
Age 80	4,151

Rehires: It is assumed that no terminated employees will be rehired.