SAUSALITO - MARIN CITY SANITARY DISTRICT

VALUATION OF RETIREE HEALTH BENEFITS

REPORT OF GASB 45 VALUATION
AS OF JULY 1, 2015

Prepared by: North Bay Pensions
November 13, 2015

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 Sausalito - Marin City 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. 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, including Actuarial Standards of Practice. 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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Summary of Results

Key Results	
Discount Rate	6.73 %
Present Value of All Future Benefits at July 1, 2015 (Exhibit 1)	$ 2,856,474
Actuarial Accrued Liability (Past Service Liability) (Exhibit 1)	$ 2,411,352
GASB 45 Operating Expense for 2015-2016	$ 240,058
GASB 45 Operating Expense for 2016-2017	242,053
Est. GASB 45 Operating Expense for 2017-2018 (Exhibits 2-3)	245,434
Estimated Balance Sheet Liability as of June 30, 2016 (Exhibit 3)	$ 412,034
Benefits expected to be paid in the 2015-2016 year (Exhibit 3)	$ 135,062

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 employees have satisfied certain requirements. The District participates in the CERBT (California Employers' Retirement Benefit Trust) sponsored by CalPERS, and makes periodic contributions into that irrevocable trust. As of June 30, 2015, the District has accumulated $161,796 in the CERBT.

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 operating expense under GASB 45 will be for the 2015-2016 and 2016-2017 fiscal years. In the computations below, it is assumed that the District will contribute $50,000 per year to CERBT in each of the next three years.

Present Value of Future Benefits

The Actuarial Present Value of Total Projected Benefits (APVTPB) for all current and former employees, as of July 1, 2015, is **$2,856,474**. This is the amount the District would theoretically need to set aside at this time to fully fund all those future benefits.

The APVTPB at July 1, 2013 was $2,588,841. I would have expected the APVTPB this year to be $2,604,923, in the absence of any changes. The difference between the 2013 figure of $2,588,841 and this year's $2,856,474 is due to:

• Expected increase as employees grow closer to retirement	$ 16,082
• Inclusion of the value of subsidized premiums	333,917
• New mortality assumption	(30,461)
• New trend assumption	(141,677)
• Change in assumed discount rate	120,485
• Miscellaneous experience gains and losses	(30,713)
Total impact of changes	$ 267,633

The biggest change is the inclusion of the value of subsidized premiums, which is described below in more detail. The changes in actuarial assumptions are described below under "Actuarial Assumptions".

These figures were 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, net of contributions by employees, (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

Another way to look at the APVTPB is like this:

Present value of District-paid premiums	$ 2,522,557
Present value of subsidized premiums	333,917
APVTPB	$ 2,856,474

The first line, "Present value of District-paid premiums "represents the value of the actual benefits that the District is promising to current and retired former employees. The second line, "Present value of subsidized premiums", calls for some explanation. It is well known that the cost of healthcare increases as people grow older. When the CalPERS insurance carriers calculate a single monthly premium that applies to all employees, they calculate an average premium rate which is based on the distribution of ages of all covered employees and their dependents. Generally speaking, this average

premium rate is higher than the true cost of medical care for younger employees and lower than the true cost for older employees and early retirees. For your retired employees under age 65, you are actually paying a monthly premium which is less than the true cost of their medical coverage. This difference, called a "subsidy", is being paid by the District and all other participating employers as part of the monthly premiums which are paid for all employees. The GASB 45 accounting rules require us to include the value of the subsidy for current and future retirees, so that the entire value of employer-paid benefits has been accrued by the time employees retire.
In this year's valuation, we are including the value of these subsidized premiums for the first time. This was not required in past years. A recent change in the accounting rules mandates inclusion for the 2015-16 fiscal year and later years. As you can see, including the value of subsidized premiums has increased the APVTPB by $333,917, or approximately 13%.

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 $50,512**. For the 2016-17 year, you may reduce your accrual of medical premiums by $30,976.

"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 GASB 45 permits 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 (past service 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 included in the ARC.

The expected annual cash funding and GASB 45 operating expense for the next 3 years will be:

	Expected Funding	**Operating Expense**
2015-2016 Fiscal Year	$ 185,062	$ 240,058
2016-2017 Fiscal Year	188,067	242,053
2017-2018 Fiscal Year	183,476	245,434

Exhibit 3 shows a 5-year projection of expected benefits, expected funding, 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.

Three assumptions have been changed in this year's valuation:

- The assumed discount rate, the interest rate at which future benefit obligations are discounted back to the present time, has been changed from 7.06% to 6.73%. This is consistent with a change in CalPERS' estimate of long-term investment earnings in the CERBT under Investment Strategy #2.
- The assumed probabilities of survival in future years (aka "mortality") have been changed consistent with the 2014 CalPERS OPEB Assumptions Model.
- Future increases in CalPERS medical premiums have been changed as follows:

	2013 Assumption	2015 Assumption
2017	6.1 %	6.1 %
2018	5.8 %	5.8 %
2019	5.5 %	5.5 %
2020	5.5 %	5.2 %
2021 and later years	5.5 %	5.0 %

These assumption changes have been made to better reflect expected future experience.

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:

	Actuarial Present Value	Actuarial Accrued Liability	Number of Persons
Current employees	$ 988,355	$ 543,233	11
Retired former employees	1,868,119	1,868,119	14
Totals	$ 2,856,474	$ 2,411,352	25

Statistical Averages as of July 1, 2015

Active Employees

Number	11 employees
Average Age	40.3 years
Average Service	6.3 years

Retired Former Employees

Number	14 persons
Average Age	69.4 years

Source of Information

A census of all eligible District employees and retirees as of June 30, 2015 was provided to me by the District.

Exhibit 2 - Annual OPEB Cost

Under 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 2015-16 and 2016-17 years are computed in this way:

		2015-16	**2016-17**
1.	Normal Cost for the fiscal year	$ 55,810	$ 58,042
2.	Actuarial Accrued Liability	2,411,352	2,437,729
3.	Value of Plan Assets	161,796	222,685
4.	Unfunded Actuarial Accrued Liability: 2. minus 3.	2,249,556	2,215,044
5.	Remaining amortization period	24 years	23 years
6.	Level-dollar Amortization of 4.	191,517	191,995
7.	Annual Required Contribution (ARC): 1. plus 6.	247,327	250,037
8.	Net OPEB Obligation at beginning of year	407,550	412,034
9.	One year's interest on 8.	27,428	27,730
10.	ARC Adjustment: amortization of 8.	(34,697)	(35,714)
11.	**Annual OPEB Cost: 7. plus 9. plus 10.**	**$ 240,058**	**$ 242,053**

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 4% per year, that all actuarial assumptions will remain unchanged, and that the District will contribute $50,000 per year to the CalPERS CERBT for the next three years, and fund the full ARC each year thereafter.

Fiscal Year:	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**
Accrued Liability	$ 2,411,352	$ 2,437,729	$ 2,485,191	$ 2,524,734	$ 2,584,628
Plan Assets	161,796	222,685	287,672	357,032	472,305
Unfunded Accd. Liability	2,249,556	2,215,044	2,197,519	2,167,702	2,112,323
ARC					
Normal cost	$ 55,810	$ 58,042	$ 60,364	$ 62,779	$ 65,290
Amortization	191,517	191,995	194,247	195,729	195,224
Total ARC	247,327	250,037	254,611	258,508	260,514
Plus interest	27,428	27,730	29,278	30,179	29,485
Less ARC adjustment	(34,697)	(35,714)	(38,455)	(40,490)	(40,492)
Annual OPEB Cost	**$ 240,058**	**$ 242,053**	**$ 245,434**	**$ 248,197**	**$ 249,507**
Funding by the District					
Benefits to retirees	$ 135,062	$ 138,067	$ 133,476	$ 133,896	$ 134,692
Subsidized premiums	50,512	30,976	48,572	33,367	37,476
Funding to CERBT	50,000	50,000	50,000	91,245	88,346
Total Funding	**$ 235,574**	**$ 219,043**	**$ 232,048**	**$ 258,508**	**$ 260,514**
Increase in net OPEB Obligation	4,484	23,010	13,386	(10,311)	(11,007)
Net OPEB Obligation at beginning of year	$ 407,550	$ 412,034	$ 435,044	$ 448,430	$ 438,119
Net OPEB Obligation at end of year	**$ 412,034**	**$ 435,044**	**$ 448,430**	**$ 438,119**	**$ 427,112**

- 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, subsidized premiums, plus additional funding sent to CalPERS.
- 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, 2013	$ 383,736
2.	Annual OPEB Cost for the 2013-14 year	242,815
3.	Benefits paid to retirees during the 2013-14 year	175,841
4.	Contributions into CERBT during 2013-14	43,403
5.	Net OPEB Obligation at June 30, 2014: 1. plus 2. minus 3. minus 4.	$ 407,307
6.	Annual OPEB Cost for the 2014-15 year	244,532
7.	Benefits paid to retirees during the 2014-15 year	161,959
8.	Contributions into CERBT during 2014-15	82,330
9.	Net OPEB Obligation at June 30, 2015: 5. plus 6. minus 7. minus 8.	$ 407,550

Exhibit 5 - Summary of Benefit Provisions

The District contributes toward post-retirement medical benefits for retired employees who satisfy certain eligibility requirements.

1. **Eligibility:** Employees hired before 2004 are eligible for medical benefits upon retirement. Employees hired after 2004 must have 10 years of service credit, 5 of which must be with the District, to be eligible for medical benefits upon retirement.

2. **Benefits:** Eligible employees receive benefits for life. An eligible employee's family members are also covered, both during the employee's lifetime and after the employee's death, provided employee has elected a retirement option that provides for continuation of retirement benefits for the spouse. For employees hired before 2004, the District pays the entire premium for employees and family members. Employees hired after 2004 with 10 years of service, 5 of which must be with the District, receive 50% of the District's contribution toward post employment health benefits. The amount of health benefit increases proportionally based on the employee's credited years of service to 100% after 20 years. For employees hired after 2004, the maximum premium paid by the District is the Kaiser premium for family coverage, and eligible employee's family members receive 90% of the retirees health benefit. Retired employees over age 65 are responsible for enrolling in Medicare Parts B and D. Medical benefits are provided through CalPERS.

3. **Current Year Premiums:** A sample (there are other options not shown here) of monthly Bay Area CalPERS medical premiums in effect for 2015 and 2016 is:

	2015			2016		
	Employee Only	Employee Plus One	Family	Employee Only	Employee Plus One	Family
Before Age 65:						
Kaiser	$ 714.45	$ 1,428.90	$ 1,857.57	$ 746.47	$ 1,492.94	$ 1,940.82
Blue Shield	928.87	1,857.74	2,415.06	1,016.18	2,032.36	2,642.07
PERS Choice	700.84	1,401.68	1,822.18	798.36	1,596.72	2,075.74
PERS Care	775.08	1,550.16	2,015.21	889.27	1,778.54	2,312.10
After Age 65:						
Kaiser	$ 295.51	$ 591.02	$ 886.53	$ 297.23	$ 594.46	$ 891.69
Blue Shield	352.63	705.26	1,057.89	Not available		
PERS Choice	339.47	678.94	1,018.41	366.38	732.76	1,099.14
PERS Care	368.76	737.52	1,106.28	408.04	816.08	1,224.12

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: 6.73%. This represents the mean expected long-term rate of return in the CalPERS CERBT under Investment Strategy #2. In 2013, the assumed discount rate was 7.06%, which was the expected long-term rate of return under Investment Strategy #2 at that time.

Medical Cost Increases (Trend): Actual CalPERS medical premium amounts are used for 2015 and 2016. Premiums are estimated to increase after 2016 as follows:

	2013 Assumption	2013 Assumption
2017	6.1 %	6.1 %
2018	5.8 %	5.8 %
2019	5.5 %	5.5 %
2020	5.5 %	5.2 %
2021 and later	5.5 %	5.0 %

The trend assumption has been modified as shown in expectation of lower future increases in CalPERS medical premiums.

Mortality: Mortality rates are taken from the "public agency miscellaneous" tables from the 2014 CalPERS OPEB Assumptions Model. In 2013, the rates were taken from the "public agency miscellaneous" tables from the 2010 CalPERS OPEB Assumptions Model, projected to future years on a generational basis using Scale BB to approximate the effect of future improvements in life expectancy. No such projection is needed for the 2014 rates, they already include some projection to future years.

Coverage: Both retired employees and current employees are assumed to continue the same health plan (Kaiser, Blue Shield, etc.) and level of family coverage that they have currently. Employees with family coverage before retirement are assumed to have "employee plus one" coverage after retirement. 100% of eligible employees are assumed to elect coverage upon retirement.

Actuarial Method: The Actuarial Accrued Liability and Normal Cost have been calculated under the Entry Age Normal cost method, with normal costs computed as level dollar amounts from entry to retirement age. The Unfunded Actuarial Accrued Liability is being amortized as a level dollar amount over the closed 30-year period beginning July 1, 2009.

Retirement: Based on the 2014 CalPERS OPEB Assumptions Model for employees in CalPERS "public agency miscellaneous" 2% at 55 retirement plans. Rates of retirement vary by both age and length of employment. Some sample rates are:

Service:	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
Age 50	1.5 %	2.0 %	2.4 %	2.9 %	3.3 %	3.9 %
Age 55	5.0 %	6.4 %	7.8 %	9.4 %	10.7 %	12.7 %
Age 60	7.2 %	9.2 %	11.2 %	13.4 %	15.3 %	18.2 %
Age 65	17.4 %	22.1 %	26.9 %	32.3 %	36.9 %	43.9 %
Age 70	13.8 %	17.6 %	21.4 %	25.7 %	29.3 %	34.9 %
Age 75	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

Turnover: Based on the 2014 CalPERS OPEB Assumptions Model for CalPERS non-safety employees. Sample rates (probability of leaving within one year) are:

Service:	5 Years	10 Years	15 Years
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 60	0.78 %	0.38 %	0.14 %

Disability: Incidence of disability is considered to be included in the rates above, so no explicit recognition of disability benefits has been included.

Inflation: Long-term inflation is assumed to be 3% per year.

Age-Graded Baseline Costs: Age-graded claims rates for 2015 were developed from age-based claims data for 2013 released by CalPERS. Some specific values (net of Medicare) are:

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