

June 5, 2010

Mr. David L. Bentley  
Auditor-Controller  
North Marin Water District  
999 Rush Creek Place  
Novato, CA 94948

**RECEIVED**  
JUN 18 2010  
NORTH MARIN WATER DISTRICT

Re: North Marin Water District ("District") GASB 45 Valuation

Dear Mr. Bentley:

This report sets forth the results of our GASB 45 actuarial valuation of the District's retiree health insurance program as of July 1, 2009.

In June, 2004 the Government Accounting Standards Board (GASB) issued its final accrual accounting standards for retiree healthcare benefits, GASB 45. GASB 45 requires public employers such as the District to perform periodic actuarial valuations to measure and disclose their retiree healthcare liabilities on the employer's financial statements. The District must obtain triennial actuarial valuations of its retiree health insurance program under GASB 45.

To accomplish these objectives the District selected Demsey, Filliger and Associates (DF&A) to perform an actuarial valuation of the retiree health insurance program as of July 1, 2009. This report may be compared with the valuation performed by DF&A as of July 1, 2006, to see how the liabilities have changed since the last valuation. We are available to answer any questions the District may have concerning the report.

### **Financial Results**

We have determined that the amount of actuarial liability for District-paid retiree benefits is \$3,470,834 as of July 1, 2009. This represents the present value of all benefits expected to be paid by the District for its current and future retirees. If the District were to place this amount in a fund earning interest at the rate of 5.0% per year, and all other actuarial assumptions were exactly met, the fund would have exactly enough to pay all expected benefits.

This includes benefits for 31 retirees as well as 60 active employees who may become eligible to retire and receive benefits in the future. It excludes employees hired after the census date (March, 2010).

When we apportion the \$3,470,834 into past service and future service components under the Projected Unit Credit Cost Method, the past service liability (or "Accrued Liability") component is \$2,601,556 as of July 1, 2009. This represents the present value of all benefits earned to date assuming that an employee earns retiree healthcare benefits ratably over his or her career. The \$2,601,556 is comprised of liabilities of \$1,019,849 for active employees and \$1,581,707 for retirees. Because the District has not established an irrevocable trust for the pre-funding of retiree healthcare benefits, the Unfunded Accrued Liability (called the UAL, equal to the AL less Assets) is also \$2,601,556.

The District adopted GASB 45 as of July 1, 2007. GASB 43, a companion statement to GASB 45 pertaining to the financial statements of a retiree trust itself, would have taken effect one year earlier (June 30, 2007); however, the District has no trust at present so GASB 43 is not applicable.

We have determined that North Marin Water District's "Annual Required Contributions", or "ARC", for the fiscal year 2009-10, is \$250,776. The \$250,776 is comprised of the present value of benefits accruing in the current year, called the "Service Cost", and a 30-year amortization of the UAL. We estimate that the District will pay approximately \$159,006 for the 2009-10 fiscal year in healthcare costs for its retirees and their covered dependents, so the difference between the accrual accounting expense (ARC) and pay-as-you-go is an increase of \$91,770.

There are two adjustments to the ARC that are required in order to determine the District's Annual OPEB Cost (AOC) for the 2009-10 fiscal year. We have calculated these adjustments based on a reported Net OPEB Obligation (NOO) of \$181,389 as of June 30, 2009, resulting in an AOC for 2009-10 of \$248,045.

We show these numbers in the table on the next page and in Exhibit I. All amounts are net of expected future retiree contributions, if any.

**North Marin Water District**  
**Annual Liabilities and Expense under**  
**GASB 45 Accrual Accounting Standard**  
**Projected Unit Credit Cost Method**

<b>Item</b>	<b>Amounts for Fiscal 2009-10</b>
Present Value of Future Benefits (PVFB)	
Active	\$1,889,127
Retired	<u>1,581,707</u>
<b>Total: PVFB</b>	<b>\$3,470,834</b>
Accrued Liability (AL)	
Actives	\$1,019,849
Retired	<u>1,581,707</u>
<b>Total: AL</b>	<b>\$2,601,556</b>
Assets	<u>(0)</u>
<b>Total: Unfunded AL</b>	<b>\$2,601,556</b>
Annual Required Contributions (ARC)	
Service Cost At Year-End	\$81,541
30-year Amortization of Unfunded AL	<u>169,235</u>
<b>Total: ARC</b>	<b>\$250,776</b>
Adjustments to ARC	
Interest on Net OPEB Obligation*	9,069
Adjustment to Net OPEB Obligation*	<u>(11,800)</u>
<b>Total: Annual OPEB Cost (AOC) for 2009-10</b>	<b>\$248,045</b>

\*Amounts based on reported June 30, 2009 Net OPEB Obligation of \$181,389.

The ARC of \$250,776, shown above, should be used without adjustment for the 2009-10, 2010-11, and 2011-12 fiscal years. The Annual OPEB Cost (AOC) of \$248,045 should be used without adjustment for the 2009-10 fiscal year, but the AOC for the 2010-11 and 2011-12 fiscal years must include an adjustment based on the Net OPEB Obligation (NOO) as disclosed in the June 30, 2010 and June 30, 2011 financial statements, which can not be precisely determined at this point.

When the District begins preparation of the June 30, 2010 financial statements, DF&A will provide the District and its auditors with complimentary assistance in preparation of footnotes and required supplemental information for compliance with GASB 45 (and GASB 43, if applicable).

## **Differences from Prior Valuation**

The most recent prior valuation was completed as of July 1, 2006 by DF&A. The AL (Accrued Liability) as of that date was \$2,637,574 (see page 3 of the prior report), compared to \$2,601,556 as of July 1, 2009. In this section, we provide a reconciliation between the two numbers so that it is possible to trace the AL from one actuarial report to the next.

Several factors have caused the AL to change since 2006. The passage of time increases the AL as the employees accrue more service and get closer to receiving benefits. There are actuarial gains/losses from one valuation to the next, and changes in actuarial assumptions and methodology for the current valuation. To summarize, the most important changes were as follows:

1. There was a gain (a decrease in the AL) of \$35,316 resulting from increases in PEMHCA premium less than expected.
2. We lowered the discount rate to 5% (from 6%) given the District's decision not to establish an irrevocable trust. GASB 45 recommends the use of a lower discount rate for unfunded plans such as the District's. This change caused an increase in the AL of \$255,727.
3. Final GASB 45 guidance permits a slightly longer attribution method (the assumed period from plan entry until retirement) than we used in the prior valuation. The change to the GASB 45-sanctioned method resulted in a one-time decrease of \$96,124 in the AL.
4. We lowered the retirement rates to reflect 15% fewer retirements than expected since 2006. This decreased the AL by \$92,495.
5. There was a net census gain (a decrease in the AL) of \$203,736, primarily due to fewer retirements than expected.

The estimated changes to the AL from July 1, 2006 to July 1, 2009 may be summarized as follows:

<b>Changes to AL</b>	<b>AL</b>
AL as of 7/1/06	<b>\$2,637,574</b>
Passage of time	135,926
Change in attribution method	(96,124)
Premium increases < expected	(35,316)
Change in retirement rates	(92,495)
Change in discount rate	255,727
Census and other changes	(203,736)
AL as of 7/1/09	<b>\$2,601,556</b>

## **Funding Schedules**

There are many ways to approach the pre-funding of retiree healthcare benefits. In the *Financial Results* section, we determined the annual expense for all District-paid benefits. The expense is an orderly methodology, developed by the GASB, to account for retiree healthcare benefits. This amount will fluctuate from year to year based on the asset performance and as the population matures. It will eventually reach zero when the last eligible retiree dies. The GASB 45 expense has no direct relation to amounts the District may set aside to pre-fund healthcare benefits.

The table on the next page provides the District with three alternative schedules for funding (as contrasted with expensing) retiree healthcare benefits. The schedules all assume that the retiree fund earns 5.0% per annum on its investments, and that contributions and benefits are paid mid-year.

The schedules are:

1. A level contribution amount for the next 20 years.
2. A level percent of the Unfunded Accrued Liability.
3. A constant percentage (3%) increase for the next 20 years.

We provide these funding schedules to give the District a sense of the various alternatives available to it to pre-fund its retiree healthcare obligation. The three funding schedules are simply three different examples of how the District may choose to spread its costs.

By comparing the schedules, you can see the effect that early pre-funding has on the total amount the District will eventually have to pay. Because of investment earnings on fund assets, the earlier contributions are made, the less the District will have to pay in the long run. Of course, the advantages of pre-funding will have to be weighed against other uses of the money.

The table on the following page shows the required annual outlay under the pay-as-you-go method and each of the above schedules. **The three funding schedules include the "pay-as-you-go" costs; therefore, the amount of pre-funding is the excess over the "pay-as-you-go" amount.**

These numbers are computed on a closed group basis, assuming no new entrants, and using unadjusted premiums.

**North Marin Water District**  
**Sample Funding Schedules (Closed Group)**

<b>Fiscal Year</b>	<b>Pay-as-you-go</b>	<b>Level Contribution for 20 years</b>	<b>Level % of Unfunded Liability</b>	<b>Constant Percentage Increase</b>
<b>Beginning</b>				
2009	\$159,006	\$271,800	\$442,265	\$212,166
2010	164,019	271,800	398,697	218,531
2011	175,420	271,800	360,556	225,087
2012	186,736	271,800	327,400	231,840
2013	185,847	271,800	298,563	238,795
2014	197,665	271,800	273,009	245,959
2015	203,466	271,800	250,788	253,337
2016	215,003	271,800	231,229	260,937
2017	221,860	271,800	214,168	268,766
2018	236,796	271,800	199,096	276,829
2019	238,017	271,800	185,982	285,133
2020	253,044	271,800	174,118	293,687
2021	275,435	271,800	163,725	302,498
2022	284,863	271,800	154,752	311,573
2023	293,611	271,800	146,595	320,920
2024	284,979	271,800	139,092	330,548
2025	248,528	271,800	131,720	340,464
2026	225,232	271,800	123,888	350,678
2027	184,650	271,800	116,055	361,198
2028	176,426	271,800	107,977	372,034
2029	165,927	0	100,408	0
2030	152,960	0	93,273	0
2031	151,715	0	86,519	0
2032	153,294	0	80,305	0
2033	156,793	0	74,599	0
2034	152,850	0	69,349	0
2035	160,466	0	64,409	0
2036	169,518	0	59,846	0
2037	146,471	0	55,589	0
2038	156,128	0	51,373	0
2039	167,639	0	47,423	0
2040	170,399	0	43,669	0
2041	161,304	0	40,018	0
2042	161,896	0	36,433	0
2043	144,310	0	32,362	0
2044	118,729	0	28,349	0
2045	97,877	0	24,833	0
2050	42,259	0	12,806	0
2055	22,474	0	6,602	0
2060	12,999	0	3,405	0
2065	7,182	0	1,756	0

## **Actuarial Assumptions**

In order to perform the valuation, the actuary must make certain assumptions regarding such items as rates of employee turnover, retirement, and mortality, as well as economic assumptions regarding healthcare inflation and interest rates. Our assumptions are based on a standard set of assumptions we have used for similar valuations, modified as appropriate for the District. For example, turnover rates are taken from a standard actuarial table, T-5, increased by 25% at all ages. This closely matches the District's historic turnover patterns. Retirement rates were also based on District data, and have been reduced since the prior valuation to reflect evolving retirement patterns. Both assumptions should be reviewed in the next valuation to see if they are tracking well with experience.

The discount rate of 5.0% is based on our best estimate of expected long-term plan experience. It is in accordance with our understanding of the guidelines for selection of this rate under GASB 45 for unfunded plans such as the District's. The healthcare trend rates are based on our analysis of recent District experience and our knowledge of the general healthcare environment.

A complete description of the actuarial assumptions used in the valuation is set forth in the "Actuarial Assumptions" section.

## **Projected Annual Pay-as-you go Costs**

As part of the valuation, we prepared a projection of the expected annual cost to the District to pay benefits on behalf of its retirees on a pay-as-you-go basis. These numbers are computed on a closed group basis, assuming no new entrants, and are net of retiree contributions. Projected pay-as-you-go costs for selected years are as follows:

<b>FYB</b>	<b>Pay-as-you-go</b>
2009	\$159,006
2010	164,019
2011	175,420
2012	186,736
2013	185,847
2014	197,665
2015	203,466
2020	253,044
2025	248,528
2030	152,960
2035	160,466
2040	170,399
2045	97,877
2050	42,259
2055	22,474
2060	12,999
2065	7,182

### **Net OPEB Obligation (NOO) and Annual OPEB Cost (AOC)**

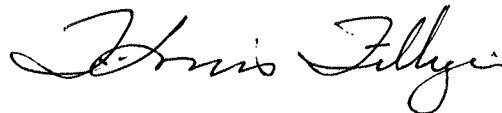
Exhibit I shows a development of the District's Net OPEB Obligation ("NOO") as of June 30, 2008 and 2009, and the Annual OPEB Cost ("AOC") for the fiscal year 2009-10. The development of the NOO through June 30, 2009 was based on information taken from the District's June 30, 2009 financial statement.

### **Certification**

The actuarial certification, including a caveat regarding limitations of scope, if any, is contained in the "Actuarial Certification" section at the end of the report.

We have enjoyed working with the District on this report, and are available to answer any questions you may have concerning any information contained herein.

Sincerely,  
DEMSEY, FILLIGER AND ASSOCIATES

A handwritten signature in cursive script, appearing to read "T. Louis Filliger".

T. Louis Filliger, FSA, EA, MAAA  
Partner & Actuary



## **Benefit Plan Provisions**

This report analyzes the actuarially projected costs of the District's retiree health insurance program. Our findings and assumptions are based on census data as of March, 2010 and PERS Health premiums for 2009 and 2010, blended 50/50. The postretirement medical plans are basically continuations of the plans for active employees, so that the active employee plans will be described first.

### **Active Employee Coverage**

The District sponsors the California PERS Health Plan, referred to here as "PEMHCA". The program provides comprehensive health insurance through a variety of Health Maintenance Organization (HMO) and Preferred Provider Organization (PPO) options. The above plans are provided by the District through a Section 125 Plan, with contributions made to PEMHCA at the employee's option, in addition to the flat \$319.22/month that the District has contributed directly to PEMHCA pursuant to a contractual agreement between the District and PEMHCA effective June 1, 2005. The \$319.22/mo will not increase unless the agreement is explicitly amended at the District's request.

### **Post-retirement Coverage**

The District also offers PEMHCA to its retirees. The District contributes up to \$319.22 to PEMHCA on behalf of each retiree eligible for PEMHCA, pursuant to the unequal contribution method (which has evolved to the point where the same amount is now contributed on behalf of retirees and active employees). Furthermore, the District will make supplemental contributions towards certain retirees' PEMHCA premiums according to provisions of the District MOUs with its various represented and unrepresented employee and retiree groups, as described below.

A retiree is eligible for supplemental District contributions towards retiree health benefits if the retiree has attained age 55 and has completed at least 12 years of service with the District at the time of retirement. The District's contribution varies by group and retirement date, as follows:

(1) Retiring on or after June 1, 2005, all groups: Up to 90% of the Kaiser 2-party rate each year, offset by the District's basic contribution of \$319.22/month to PEMHCA. If there is no covered spouse, or once the spouse has attained age 65, this changes to 90% of the Kaiser 1-party rate. The supplement ends upon the retiree's attainment of age 65.<sup>1</sup>

<sup>1</sup> Note that the District policy reads: Coverage terminates for the spouse when the spouse becomes eligible for Medicare, or for both the retiree and spouse when the retiree becomes eligible for Medicare.

<p align="center"><b>Benefit Plan Provisions (Continued)</b></p>
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Supplemental District contributions, continued:

(2) Retiring before June 1, 2005:

Represented: Up to 100% of the Kaiser 2-party rate (or 1-party rate if single or if spouse has attained age 65) until retiree's age 65; after age 65, the dollar amount is capped at a flat \$409.91/month.<sup>2</sup> All amounts are offset by the District's basic \$319.22/month to PEMHCA.

Unrepresented: Up to 90% of the Kaiser 2-party rate (or 1-party rate if single or if spouse has attained age 65) until retiree's age 65; after age 65, the dollar amount is capped at a flat \$364.87/month.<sup>2</sup> All amounts are offset by the District's basic \$319.22/month to PEMHCA.

The following table shows January 1, 2009 monthly PERS Health (PEMHCA) premiums for retirees within the Bay Area:

	Blue Shield HMO	Kaiser HMO	PERS Choice PPO	PERS Care PPO
<u>Basic Plan</u>				
Retiree	\$560.57	\$508.30	\$482.48	\$749.83
Retiree + 1	1,121.14	1,016.60	964.96	1,499.66
Family	1,457.48	1,321.58	1,254.45	1,949.56
<u>Medicare Supplement</u>				
Retiree	\$341.44	\$280.16	\$349.11	\$404.60
Retiree + 1	682.88	560.32	698.22	809.20
Family	1,024.32	840.48	1,047.33	1,213.80

### **Dental Benefits**

The District also offers a self-insured dental plan to its employees and retirees. Retirees may elect to be covered under the dental plan by self-paying a tiered premium. We reviewed these premiums in 2006 and found that the premiums appear to be approximately sufficient to pay expected benefits under the Plan's benefit schedule, and in our opinion do not constitute an implicit subsidy as discussed in GASB 45; therefore, retiree dental benefits have been excluded from the scope of this report.

<sup>2</sup> Note that the District policy reads: Coverage terminates for the spouse when the spouse becomes eligible for Medicare, or for both the retiree and spouse when the retiree becomes eligible for Medicare.

<b>Valuation Data</b>
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Age distribution of retirees receiving District-paid health benefits

Age	Count
55-59	3
60-64	5
65-69	9
70-74	4
75-79	3
80-84	4
85-89	<u>3</u>
All Ages	31
Average Age	71.10

Age/Years of service distribution of active employees included in the valuation

Years->	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35+	Total
<u>Age</u>									
20-24	2								2
25-29	8	1							9
30-34	4	5	2						11
35-39	1	1	1	0					3
40-44	1	0	0	0	1				2
45-49	1	5	2	4	2	0			14
50-54	1	2	1	0	2	0	0		6
55-59	1	1	0	3	2	1	2	0	10
60-64	0	0	0	0	0	0	0	0	0
65-69	0	0	0	0	0	1	1	0	2
70+	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>
Total	19	16	6	7	7	2	3	0	60

Average Age: 43.13  
Average Service 11.08

## Actuarial Assumptions

The liabilities set forth in this report are based on the actuarial assumptions described in this section.

Valuation Date:	July 1, 2009
Actuarial Cost Method:	Projected Unit Credit
Amortization Method:	30-year level dollar, open period
Discount Rate:	5.0% per annum
Return on Assets:	5.0% per annum
Pre-retirement Turnover:	According to 125% of the Crocker-Sarason Table T-5 less mortality. Sample rates are as follows:

Age	Turnover (%)
25	9.7%
30	9.1
35	7.8
40	6.5
45	5.0
50	3.2
55	1.1

Pre-retirement Mortality: 1994 Group Annuity Mortality, Male and Female tables. Sample deaths per 1,000 employees are as follows:

Age	Males	Females
25	0.71	0.31
30	0.86	0.38
35	0.92	0.51
40	1.15	0.76
45	1.70	1.05
50	2.77	1.54
55	4.76	2.47
60	8.58	4.77

Post-retirement Mortality: 1994 Group Annuity Mortality, Male and Female tables. Sample deaths per 1,000 retirees are as follows:

Age	Males	Females
65	15.63	9.29
70	25.52	14.73
75	40.01	24.39
80	66.70	42.36
85	104.56	72.84
90	164.44	125.02

<p align="center"><b>Actuarial Assumptions (Continued)</b></p>
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Retirement Rates:

Age	Percent Retiring*
50-54	3.0%
55	10.0
56-58	7.0
59	15.0
60	18.0
61	20.0
62	22.0
63	25.0
64	30.0
65	100.0

\* Of those having met the eligibility for PERS benefits. The percentage refers to the probability that an active employee who has reached the stated age will retire within the following year.

Trend Rates:

Year	Medical/Rx
2009	7.0%
2010	6.0
2011+	5.0

Percent Waiving Coverage: 9% of future retirees

Percent of Retirees with Spouses:

Future Retirees: 60% of future retirees were assumed to have spouses at the time of retirement. Female spouses assumed three years younger than male spouses.

Current Retirees: Based on actual spousal data.

<p style="text-align: center;"><b>Actuarial Assumptions (Continued)</b></p>
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Retiree Plan Selection (percentages add down to 100%):

	<u>Under 65</u>	<u>65 +</u>
Blue Shield HMO	0%	27%
Kaiser HMO	38%	39%
PERSChoice PPO	50%	17%
PERSCare PPO	12%	17%

Retiree Percentage by PEMHCA Region (percentages add across to 100%):

<u>Region--&gt;</u>	<u>Bay Area</u>	<u>Other</u>
Blue Shield	83%	17%
Kaiser	100%	0%
PERSChoice	63%	37%
PERSCare	60%	40%

## Actuarial Certification

The results set forth in this report are based on our actuarial valuation of the health and welfare benefit plans of the North Marin Water District ("District") as of July 1, 2009.

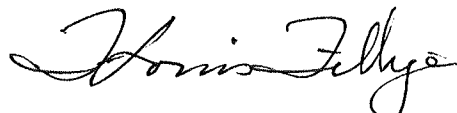
The valuation was performed in accordance with generally accepted actuarial principles and practices. We relied on census data for active employees and retirees provided to us by the District in March, 2010. We also made use of claims, premium, expense, and enrollment data, and copies of relevant sections of healthcare documents provided to us by the District.

The assumptions used in performing the valuation, as summarized in this report, and the results based thereupon, represent our best estimate of the actuarial costs of the program under GASB 43 and GASB 45, and the existing and proposed Actuarial Standards of Practice for measuring post-retirement healthcare benefits.

Throughout the report, we have used unrounded numbers, because rounding and the reconciliation of the rounded results would add an additional, and in our opinion unnecessary, layer of complexity to the valuation process. By our publishing of unrounded results, no implication is made as to the degree of precision inherent in those results. Clients and their auditors should use their own judgment as to the desirability of rounding when transferring the results of this valuation report to the clients' financial statements.

The undersigned actuary meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report.

Certified by:



T. Louis Filliger, FSA, EA, MAAA Date: 6/5/10  
Partner & Actuary

**North Marin Water District  
Development of Annual OPEB Costs**

**Exhibit I**

	<b>Amount</b>
<b>Net OPEB Obligation 6/30/2007</b>	-
ARC for 2007-8	272,806
Interest adjustment to ARC	-
Amortization adjustment to ARC	<u>(615)</u>
<b>Annual OPEB Cost 2007-8</b>	<b>272,191</b>
Employer Contribution	<u>(182,003)</u>
<b>Net OPEB Obligation 6/30/2008</b>	<b>90,188</b>
ARC for 2008-9	272,806
Interest adjustment to ARC	-
Amortization adjustment to ARC	<u>615</u>
<b>Annual OPEB Cost 2008-9</b>	<b>273,421</b>
Employer Contribution	<u>(182,220)</u>
Change in Net OPEB Obligation 2008-9	91,201
Net OPEB Obligation 6/30/2008	<u>90,188</u>
<b>Net OPEB Obligation 6/30/2009</b>	<b>181,389</b>
ARC for 2009-10	250,776
Interest adjustment to ARC	9,069
Amortization adjustment to ARC	<u>(11,800)</u>
<b>Annual OPEB Cost 2009-10</b>	<b>248,045</b>