September 9, 2015

Mr. David L. Bentley
Auditor-Controller
North Marin Water District
P.O. Box 146

Novato, CA 94945
Re: North Marin Water District ("District")
GASB 45 Valuation as of July 1, 2015
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, 2015.

In June, 2004 the Governmental Accounting Standards Board (GASB) issued accrual accounting standards for retiree healthcare benefits, GASB 43 and GASB 45. GASB 43/45 require public employers such as the District to perform periodic actuarial valuations to measure and disclose their retiree healthcare liabilities for the financial statements of both the employer and the trust, if any, set aside to pre-fund these liabilities. The District must obtain actuarial valuations of its retiree health insurance program under GASB 43/45 not less frequently than once every three years.

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, 2015. This report may be compared with the valuation performed by DF\&A as of July 1, 2012, 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 $\$ 5,584,227$ as of July 1, 2015. 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 $4.0 \%$ 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 32 retirees as well as 52 active employees who may become eligible to retire and receive benefits in the future. It excludes employees hired after the valuation date.

When we apportion the $\$ 5,584,227$ into past service and future service components under the Projected Unit Credit Cost Method, the past service liability (or "Accrued Liability") component is $\$ 4,085,375$ as of July 1, 2015. 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 $\$ 4,085,375$ is comprised of liabilities of $\$ 2,123,509$ for active employees and $\$ 1,961,866$ 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 \$4,085,375.

We have determined that North Marin Water District's "Annual Required Contributions", or "ARC", for the fiscal year 2015-16, is $\$ 384,395$. The $\$ 384,395$ 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 $\$ 170,607$ for the 2015-16 fiscal year in healthcare costs for its retirees, so the difference between the accrual accounting expense (ARC) and pay-as-you-go is an increase of $\$ 213,788$.

There are two adjustments to the ARC that are required in order to determine the District's Annual OPEB Cost (AOC) for the 2015-16 fiscal year. We have calculated these adjustments based on an estimated Net OPEB Obligation of $\$ 792,339$ as of June 30, 2015, resulting in an AOC for 2015-16 of \$370,268.

We show these numbers in the table on the next page and in Exhibit II. 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

| Item | Amounts for Fiscal 2015-16 |
| :---: | :---: |
| Present Value of Future Benefits (PVFB) |  |
| Active | \$3,622,361 |
| Retired | 1,961,866 |
| Total: PVFB | \$5,584,227 |
| Accrued Liability (AL) |  |
| Actives | \$2,123,509 |
| Retired | 1,961,866 |
| Total: AL | \$4,085,375 |
| Assets | (0) |
| Total: Unfunded AL | \$4,085,375 |
| Annual Required Contributions (ARC) |  |
| Service Cost At Year-End | \$148,137 |
| 30-year Amortization of Unfunded AL | 236,258 |
| Total: ARC | \$384,395 |
| Adjustments to ARC |  |
| Interest on Net OPEB Obligation* | 31,694 |
| Adjustment to ARC* | $(45,821)$ |
| Total: Annual OPEB Cost (AOC) for 2015-16 | \$370,268 |

*Amounts based on estimated June 30, 2015 Net OPEB Obligation of \$792,339.

The ARC of \$384,395, shown above, should be used for the 2015-16, 2016-17 and 2017-18 fiscal years, but the Annual OPEB Cost for all years must include an adjustment based on the Net OPEB Obligation as reported in the preceding year's financial statement, which is not known precisely in advance.

When the District begins preparation of the June 30, 2016 government-wide 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, 2012 by DF\&A. The AL (Accrued Liability) as of that date was $\$ 3,130,628$ (see page 3 of the prior report), compared to $\$ 4,085,375$ as of July 1, 2015. 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 2012. 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 of $\$ 83,342$ (a decrease in the AL) due to increases in healthcare premiums less than expected.
2. The PERS Health administration fee changed from $0.25 \%$ of premium to $0.34 \%$ of premium. This caused an increase in the AL of $\$ 966$.
3. We changed to more up-to-date mortality tables. This change increased the AL by $\$ 119,681$.
4. We increased the initial healthcare trend rate from $5 \%$ to $8 \%$ to better reflect our expectations of average premium increases over the next several years. This change increased the AL by \$55,061.
5. We included the "implicit subsidy" as required by Actuarial Standard of Practice Number 6 (ASOP 6). Please see page 8 for further details. This change increased the AL by $\$ 771,080$.
6. There was a net census gain (a decrease in the AL) of $\$ 94,091$.

The estimated changes to the AL from July 1, 2012 to July 1, 2015 may be summarized as follows:

| Changes to AL | AL |
| :--- | :---: |
| AL as of $7 / 1 / 12$ | $\mathbf{\$ 3 , 1 3 0 , 6 2 8}$ |
| Passage of time | 185,392 |
| Premium increases < expected | $(83,342)$ |
| Change in PERS Health admin. fee | 966 |
| Change in mortality tables | 119,681 |
| Change in trend rates | 55,061 |
| Valuation of implicit subsidy | 771,080 |
| Census (gain) | $(94,091)$ |
| AL as of $7 / 1 / 15$ | $\mathbf{\$ 4 , 0 8 5 , 3 7 5}$ |

## 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. However, 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, or is otherwise credited with, $4.0 \%$ per annum on its investments, a starting payable and reserve fund value of $\$ 3,415,000$ as of July 1,2015 , and that contributions and benefits are paid midyear.

The schedules are:

1. A level contribution amount for the next 20 years.
2. A level percent of the Unfunded Accrued Liability.
3. An amount equal to $\$ 1,500 /$ year per active employee plus pay-as-you-go costs until fully funded. Because of the $\$ 3,415,000$ starting balance, full funding is now projected to occur within 4 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-yougo" costs; therefore, the amount of pre-funding is the excess over the "pay-as-you-go" amount.

We use unadjusted premiums for these funding schedules because we do not recommend that the District pre-fund for the full age-adjusted costs reflected in the GASB 45 liabilities shown in the first section of this report. If the District's premium structure changes in the future to explicitly charge under-age 65 retirees for the full actuarial cost of their benefits, this change will be offset by a lowering of the active employee rates (all else remaining equal), resulting in a direct reduction in District operating expenses on behalf of active employees from that point forward. For this reason among others, we believe that pre-funding of the full GASB liability would be redundant.

## North Marin Water District

Sample Funding Schedules (Closed Group)
Starting Payable \& Reserve Fund Values of \$3,415,000 as of July 1, 2015

| Fiscal Year Beginning | Pay-as-you-go | Level Contribution for 20 years | Level \% of Unfunded Liability | $\begin{aligned} & \$ 1,500 / \mathrm{yr} \\ & \text { per employee } \\ & \text { + PAYG } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 2015 | \$170,607 | \$66,500 | \$0 | \$248,607 |
| 2016 | 175,908 | 66,500 | 0 | 253,908 |
| 2017 | 201,800 | 66,500 | 8,188 | 279,800 |
| 2018 | 228,812 | 66,500 | 22,374 | 211,225 |
| 2019 | 232,231 | 66,500 | 35,007 | 0 |
| 2020 | 244,981 | 66,500 | 45,259 | 0 |
| 2021 | 274,215 | 66,500 | 53,867 | 0 |
| 2022 | 290,814 | 66,500 | 61,650 | 0 |
| 2023 | 306,271 | 66,500 | 68,151 | 0 |
| 2024 | 304,805 | 66,500 | 73,456 | 0 |
| 2025 | 275,334 | 66,500 | 77,126 | 0 |
| 2026 | 255,642 | 66,500 | 78,552 | 0 |
| 2027 | 214,364 | 66,500 | 78,518 | 0 |
| 2028 | 211,092 | 66,500 | 76,738 | 0 |
| 2029 | 203,977 | 66,500 | 74,697 | 0 |
| 2030 | 191,634 | 66,500 | 72,348 | 0 |
| 2031 | 195,434 | 66,500 | 69,649 | 0 |
| 2032 | 203,381 | 66,500 | 67,064 | 0 |
| 2033 | 213,310 | 66,500 | 64,637 | 0 |
| 2034 | 213,203 | 66,500 | 62,337 | 0 |
| 2035 | 227,962 | 0 | 59,918 | 0 |
| 2036 | 245,359 | 0 | 57,628 | 0 |
| 2037 | 194,343 | 0 | 55,409 | 0 |
| 2038 | 209,445 | 0 | 52,279 | 0 |
| 2039 | 225,686 | 0 | 49,365 | 0 |
| 2040 | 227,152 | 0 | 46,567 | 0 |
| 2041 | 208,250 | 0 | 43,658 | 0 |
| 2042 | 225,816 | 0 | 40,503 | 0 |
| 2043 | 210,642 | 0 | 37,412 | 0 |
| 2044 | 183,743 | 0 | 34,161 | 0 |
| 2045 | 161,039 | 0 | 30,811 | 0 |
| 2046 | 138,730 | 0 | 27,497 | 0 |
| 2047 | 114,647 | 0 | 23,572 | 0 |
| 2048 | 103,854 | 0 | 19,711 | 0 |
| 2049 | 104,391 | 0 | 16,482 | 0 |
| 2050 | 92,740 | 0 | 13,783 | 0 |
| 2055 | 49,630 | 0 | 5,637 | 0 |
| 2060 | 25,452 | 0 | 2,308 | 0 |
| 2065 | 15,568 | 0 | 945 | 0 |
| 2070 | 8,592 | 0 | 388 | 0 |

Note to auditor: when calculating the employer OPEB contribution for the year ending on the statement date, we recommend multiplying the actual District-paid premiums on behalf of retirees by a factor of 1.2176 to adjust for the implicit subsidy.

## 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 matches the District's historic turnover patterns. Retirement rates were also based on recent District retirement patterns. Both assumptions should be reviewed in the next valuation to see if they are tracking well with experience.

The discount rate of $4.0 \%$ 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:

| FYB | Pay-as-you-go |
| :---: | :---: |
| 2015 | $\$ 170,607$ |
| 2016 | 175,908 |
| 2017 | 201,800 |
| 2018 | 228,812 |
| 2019 | 232,231 |
| 2020 | 244,981 |
| 2025 | 275,334 |
| 2030 | 191,634 |
| 2035 | 227,962 |
| 2040 | 227,152 |
| 2045 | 161,039 |
| 2050 | 92,740 |
| 2055 | 49,630 |
| 2060 | 25,452 |
| 2065 | 15,568 |
| 2070 | 8,592 |

## Valuation of Implicit Subsidy

Since the District's implementation of GASB 45, we have availed ourselves of the "community rating" exception to PERS Health (PEMHCA). This exception has permitted an actuary to ignore the effects of the use of a blended premium for active employees and early retirees (those under age 65) as is the case for PEMHCA. This unique treatment of PEMHCA resulted in actuarial estimates for PEMHCA agencies that were significantly lower than for most other insurance providers, and has been prevailing practice among California-based actuarial firms. The Actuarial Standards Board has amended Actuarial Standard of Practice Number 6 (ASOP 6) to virtually eliminate this practice for valuations beginning with the July 1, 2015 fiscal year. As shown on page 4 of this report, the implicit subsidy for the District is approximately $\$ 771,000$. The new GASB OPEB standards, expected to take effect in 2017, contain guidance that will require actuaries to continue to include this subsidy, where applicable, for all future OPEB valuations. Please feel free to call us at (818) 718-1266 if you would like further explanation of this change.

## Breakdown by Employee/Retiree Group

Exhibit I, attached at the end of the report, shows a breakdown of the GASB 45 components (ARC, AL, Service Cost, and PVFB) by represented versus unrepresented employment, and separately by active employees (future retirees) and current retirees.

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

Exhibit II, attached at the end of this report, shows a development of the District's Net OPEB Obligation ("NOO") as of June 30, 2007 through June 30, 2015, and the Annual OPEB Cost ("AOC") for the fiscal years ending June 30, 2008 through June 30, 2016. The NOO as of June 30, 2015 and the AOC for 2015-16 are estimates as of the date this report is being published.

## 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.


## 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 July, 2015 and PERS Health premiums for 2015 , projected to the valuation year at the assumed healthcare trend rate. 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 January 1, 2013, all groups: Up to $85 \%$ 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 $85 \%$ of the Kaiser 1-party rate. The supplement ends upon the retiree's attainment of age 65. ${ }^{1}$
(1) 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.

## Benefit Plan Provisions (Continued)

Supplemental District contributions, continued:
(2) Retiring on or after June 1, 2005, but before January 1, 2013, 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. ${ }^{1}$
(3) 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. 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. All amounts are offset by the District's basic $\$ 319.22 /$ month to PEMHCA.

The following table shows January 1, 2015 monthly PERS Health (PEMHCA) premiums for retirees within the Bay Area:

|  | Blue Shield HMO | Kaiser <br> HMO | PERS Choice PPO | PERS Care PPO |
| :---: | :---: | :---: | :---: | :---: |
| Basic Plan |  |  |  |  |
| Retiree | \$928.87 | \$714.45 | \$700.84 | \$775.08 |
| Retiree + 1 | 1,857.74 | 1,428.90 | 1,401.68 | 1,550.16 |
| Family | 2,415.06 | 1,857.57 | 1,822.18 | 2,015.21 |
| Medicare Supplement |  |  |  |  |
| Retiree | \$352.63 | \$295.51 | \$339.47 | \$368.76 |
| Retiree + 1 | 705.26 | 591.02 | 678.94 | 737.52 |
| Family | 1,057.89 | 886.53 | 1,018.41 | 1,106.28 |

## 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.
(1) 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.

## Valuation Data

## Active and Retiree Census

Age distribution of retirees and surviving spouses included in the valuation

| Age | Retirees | Surviving <br> Spouses | Total |
| :--- | ---: | :---: | ---: |
| Under 50 | 0 | 0 | 0 |
| $50-54$ | 0 | 0 | 0 |
| $55-59$ | 0 | 0 | 0 |
| $60-64$ | 4 | 0 | 4 |
| $65-69$ | 4 | 0 | 4 |
| $70-74$ | 12 | 1 | 13 |
| $75-79$ | 2 | 0 | 2 |
| $80-84$ | 2 | 1 | 3 |
| $85-89$ | 2 | 1 | 3 |
| $90-94$ | 1 | 1 | 2 |
| $95+$ | $\underline{1}$ | $\underline{0}$ | $\underline{1}$ |
| All Ages | 28 | 4 | 32 |
| Average Age | 73.32 | 82.75 | 74.50 |

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

| Years $\rightarrow$ | $0-4$ | $5-9$ | $10-14$ | $15-19$ | $20-24$ | $25-29$ | $30-34$ | $35+$ | Total |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age |  |  |  |  |  |  |  |  |  |
| $20-24$ | 2 |  |  |  |  |  |  |  | 2 |
| $25-29$ | 2 | 1 |  |  |  |  |  |  | 3 |
| $30-34$ | 0 | 3 | 3 |  |  |  |  |  | 6 |
| $35-39$ | 0 | 1 | 6 | 2 |  |  |  |  | 5 |
| $40-44$ | 1 | 1 | 2 | 1 | 0 |  |  |  | 1 |
| $45-49$ | 0 | 1 | 0 | 0 | 0 | 0 |  |  | 10 |
| $50-54$ | 0 | 0 | 4 | 2 | 1 | 3 | 0 |  | 10 |
| $55-59$ | 0 | 0 | 3 | 3 | 1 | 3 | 0 | 0 | 1 |
| $60-64$ | 0 | 0 | 0 | 1 | 2 | 2 | 0 | 1 | 6 |
| $65+$ | 0 | 0 | $\underline{0}$ | $\underline{0}$ | $\underline{0}$ | $\underline{0}$ | $\underline{0}$ | $\underline{0}$ | $\underline{0}$ |
| All Ages | 5 | 7 | 18 | 9 | 4 | 8 | 0 | 1 | 52 |

Average Age: $\quad 45.62$
Average Service $\quad 14.52$

## Actuarial Assumptions

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

Valuation Date:
Actuarial Cost Method:
Amortization Method:
Discount Rate:
Return on Assets:
Pre-retirement Turnover:

Pre-retirement Mortality:

Post-retirement Mortality:

July 1, 2015
Projected Unit Credit
30-year level dollar, open period
$4.0 \%$ per annum
4.0\% per annum

According to Crocker-Sarason Table T-5 less mortality, increased by $25 \%$ at all ages. 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 |

RP-2014 Employee Mortality, without projection. Sample deaths per 1,000 employees are as follows:

| Age | Males | Females |
| :---: | :---: | :---: |
| 25 | 0.48 | 0.17 |
| 30 | 0.45 | 0.22 |
| 35 | 0.52 | 0.29 |
| 40 | 0.63 | 0.40 |
| 45 | 0.97 | 0.66 |
| 50 | 1.69 | 1.10 |
| 55 | 2.79 | 1.67 |
| 60 | 4.69 | 2.44 |

RP-2014 Healthy Annuitant Mortality, without projection. Sample deaths per 1,000 retirees are as follows:

| Age | Males | Females |
| :---: | :---: | :---: |
| 55 | 5.74 | 3.62 |
| 60 | 7.78 | 5.19 |
| 65 | 11.01 | 8.05 |
| 70 | 16.77 | 12.87 |
| 75 | 26.83 | 20.94 |
| 80 | 44.72 | 34.84 |
| 85 | 77.50 | 60.50 |
| 90 | 135.91 | 107.13 |

## Actuarial Assumptions

## (Continued)

Claim Cost per Retiree or Spouse:

| Age | Medical/Rx |
| :---: | :---: |
| 50 | $\$ 9,280$ |
| 55 | 10,758 |
| 60 | 12,472 |
| 64 | 14,037 |
| $65+$ | 4,050 |

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 eligibility to receive supplemental retirement 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:
Healthcare costs were assumed to increase according to the following schedule:

| FYB | Medical/Rx |
| :---: | :---: |
| 2015 | $8.0 \%$ |
| 2016 | 7.0 |
| 2017 | 6.0 |
| $2018+$ | 5.0 |

Percent Waiving Coverage: $\quad 9 \%$ 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.

Changes in dollar caps: Grandfathered caps assumed frozen for all future years.

Administrative Fees:
District pays $0.34 \%$ of total premium to PEMHCA for all future years.

## 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, 2015.

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 July, 2015. 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 postretirement healthcare benefits. We have assumed no post-valuation mortality improvements, consistent with our belief that there will be no further significant, sustained increases in life expectancy in the United States over the projection period covered by the valuation.

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: 9/9/15

Partner \& Actuary

## North Marin Water District

|  | 7/1/2015 <br> Valuation Results <br> Represented |  | 7/1/2015 <br> Valuation Results Unrepresented |  | $7 / 1 / 2015$ <br> Valuation Results Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Present Value of Benefits |  |  |  |  |  |  |
| Actives | \$ | 3,422,626 | \$ | 199,735 | \$ | 3,622,361 |
| Retirees |  | 1,455,145 |  | 506,721 |  | 1,961,866 |
| Total Present Value of Benefits (PVB): | \$ | 4,877,771 | \$ | 706,456 | \$ | 5,584,227 |
| Accrued Liability: |  |  |  |  |  |  |
| Actives | \$ | 1,948,147 | \$ | 175,362 | \$ | 2,123,509 |
| Retirees |  | 1,455,145 |  | 506,721 |  | 1,961,866 |
| Total Accrued Liability (AL): | \$ | 3,403,292 | \$ | 682,083 | \$ | 4,085,375 |
| Assets |  | - |  | - |  | - |
| Unfunded Accrued Liability ("UAL") | \$ | 3,403,292 | \$ | 682,083 | \$ | 4,085,375 |
| GASB 45 ARC ("Annual Required Contributions") |  |  |  |  |  |  |
| Service Cost at Year-end | \$ | 139,780 | \$ | 8,357 | \$ | 148,137 |
| 30-year amortization of UAL |  | 196,813 |  | 39,445 |  | 236,258 |
| Total ARC for 2015-16 | \$ | 336,593 | \$ | 47,802 | \$ | 384,395 |


|  | Amount |
| :---: | :---: |
| Net OPEB Obligation 6/30/2007 | - |
| ARC for 2007-8 | 272,806 |
| Interest on Net OPEB Obligation |  |
| Amortization adjustment to ARC | (615) |
| Annual OPEB Cost 2007-8 | 272,191 |
| Employer Contribution | $(182,003)$ |
| Net OPEB Obligation 6/30/2008 | $\mathbf{9 0 , 1 8 8}$ |
| ARC for 2008-9 | 272,806 |
| Interest on Net OPEB Obligation | - |
| Amortization adjustment to ARC | 615 |
| Annual OPEB Cost 2008-9 | 273,421 |
| Employer Contribution | $(182,220)$ |
| Change in Net OPEB Obligation 2008-9 | 91,201 |
| Net OPEB Obligation 6/30/2008 | 90,188 |
| Net OPEB Obligation 6/30/2009 | 181,389 |
| ARC for 2009-10 | 250,776 |
| Interest on Net OPEB Obligation | 9,069 |
| Amortization adjustment to ARC | $(11,800)$ |
| Annual OPEB Cost 2009-10 | 248,045 |
| Employer Contribution | $(138,105)$ |
| Change in Net OPEB Obligation 2009-10 | 109,940 |
| Net OPEB Obligation 6/30/2009 | 181,389 |
| Net OPEB Obligation 6/30/2010 | 291,329 |
| ARC for 2010-11 | 250,776 |
| Interest on Net OPEB Obligation | 14,566 |
| Amortization adjustment to ARC | $(18,951)$ |
| Annual OPEB Cost 2010-11 | 246,391 |
| Employer Contribution | $(147,084)$ |
| Change in Net OPEB Obligation 2010-11 | 99,307 |
| Net OPEB Obligation 6/30/2010 | 291,329 |
| Net OPEB Obligation 6/30/2011 | 390,636 |
| ARC for 2011-12 | 250,776 |
| Interest on Net OPEB Obligation | 19,532 |
| Amortization adjustment to ARC | $(25,486)$ |
| Annual OPEB Cost 2011-12 | 244,822 |
| Employer Contribution | $(160,725)$ |
| Change in Net OPEB Obligation 2011-12 | 84,097 |
| Net OPEB Obligation 6/30/2011 | 390,636 |
| Net OPEB Obligation 6/30/2012 | 474,733 |
| ARC for 2012-13 | 286,640 |
| Interest on Net OPEB Obligation | 18,989 |
| Amortization adjustment to ARC | $(27,454)$ |
| Annual OPEB Cost 2012-13 | 278,175 |
| Employer Contribution | $(166,699)$ |
| Change in Net OPEB Obligation 2012-13 | 111,476 |
| Net OPEB Obligation 6/30/2012 | 474,733 |
| Net OPEB Obligation 6/30/2013 | 586,209 |
| ARC for 2013-14 | 286,640 |
| Interest on Net OPEB Obligation | 23,448 |
| Amortization adjustment to ARC | $(33,900)$ |
| Annual OPEB Cost 2013-14 | 276,188 |
| Employer Contribution | $(168,750)$ |
| Change in Net OPEB Obligation 2013-14 | 107,438 |
| Net OPEB Obligation 6/30/2013 | 586,209 |
| Net OPEB Obligation 6/30/2014 | 693,647 |
| ARC for 2014-15 | 286,640 |
| Interest on Net OPEB Obligation | 27,746 |
| Amortization adjustment to ARC | $(40,114)$ |
| Annual OPEB Cost 2014-15 | 274,272 |
| Employer Contribution | $(175,580)$ |
| Change in Net OPEB Obligation 2014-15 | 98,692 |
| Net OPEB Obligation 6/30/2014 * | 702,706 |
| Net OPEB Obligation 6/30/2015 | 792,339 |
| ARC for 2015-16 | 384,395 |
| Interest on Net OPEB Obligation | 31,694 |
| Amortization adjustment to ARC | $(45,821)$ |
| Annual OPEB Cost 2015-16 | 370,268 |

