March 30, 2018

Mr. David L. Bentley
Director of Fiscal Services
North Marin Water District
P.O. Box 146
Novato, CA 94945

Re: North Marin Water District ("District") GASB 75 Valuation

Dear Mr. Bentley:

This report sets forth the results of our GASB 75 actuarial valuation of the District's retiree health insurance program as of July 1, 2017.

In June 2004, the Governmental Accounting Standards Board (GASB) issued its 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. In June 2015, GASB released new accounting standards for postretirement benefit programs, GASB 74 and GASB 75, which replace GASB 43 and GASB 45, respectively.

The District selected Demsey, Filliger and Associates (DF&A) to perform an actuarial valuation of the retiree health insurance program as of July 1, 2017. This report may be compared with the valuation performed by DF&A as of July 1, 2015, to see how the liabilities have changed since the last valuation.

## Financial Results

We have determined that the amount of actuarial liability for District-paid retiree benefits is $5,103,199 as of July 1, 2017. 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 4.00% per year, and all other actuarial assumptions were exactly met, the fund would have exactly enough to pay all expected benefits.

This valuation includes benefits for 38 retirees as well as 53 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 $5,103,199 into past service and future service components under the Entry Age, Level Percent of Pay Cost Method, the Total OPEB Liability is $4,075,696 as of July 1, 2017. This represents the present value of all benefits accrued through the valuation date if each employee's liability is expensed from hire date until retirement date as a level percentage of pay. The $4,075,696 is comprised of liabilities of $2,397,171 for active employees and $1,678,525 for retirees.

The District has not adopted an irrevocable trust for the pre-funding of retiree healthcare benefits. As of June 30, 2017, the trust balance or Plan Fiduciary's Net Position (GASB 75) is $0.

The Net OPEB Liability, Total OPEB Liability over the Plan Fiduciary's Net Position, is $4,075,696.

## Discount Rate under GASB 75

For financial reporting purposes, GASB 75 requires a discount rate that reflects the following:

a. The long-term expected rate of return on OPEB plan investments – to the extent that the OPEB plan's fiduciary net position is projected to be sufficient to make projected benefit payments and assets are expected to be invested using a strategy to achieve that return)

b. A yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher – to the extent that the conditions in (a) are not met.

The amount of the plan's projected fiduciary net position and the amount of projected benefit payments should be compared in each period of projected benefit payments.

Based on these requirements and the following information, we have determined a discount rate of 3.13% for GASB 75 reporting purposes:

| | |
|---|---|
| Expected Return on Assets | 4.00% |
| S&P Municipal Bond 20-Year High Grade Rate Index at June 30, 2017 | 3.13% |
| GASB 75 Discount Rate | 3.13% |

## Net OPEB Expense

We have determined the following components of the District's Net OPEB Expense for fiscal year 2017-18: Service Cost, Interest Cost, and Expected Return on Assets. The Service Cost represents the present value of benefits accruing in the current year. Interest Cost represents the interest on the Total OPEB Obligation. Expected Return on Assets is the expected return based on a 4.00% investment rate of return. Other components (Deferred Outflows and Inflows) will be determined based on the Net OPEB Obligation as of June 30, 2018.

We summarize the valuation results in the table on the next page. We provide results at three discount rates (the expected return on assets, the S&P Municipal Bond rate index, and the blended GASB 75 rate, discussed above). All amounts are net of expected future retiree contributions, if any.

When the District begins preparation of the June 30, 2018 government-wide financial statements, DF&A will be available to assist the District and its auditors in preparing the footnotes and required supplemental information for compliance with GASB 75 (and GASB 74, if applicable).

In the meantime, we are available to answer any questions the District may have concerning the report.

## North Marin Water District

## Net OPEB Liabilities and Expense Under GASB 75 Accrual Accounting Standard

| | July 1, 2017 | | |
|---|---|---|---|
| | **Actuarial Liability** | **S&P Municipal Bond Rate Index** | **GASB 75 Blended Rate** |
| Discount Rate | 4.00% | 3.13% | 3.13% |
| | | | |
| Present Value of Future Benefits | | | |
| Active | $3,424,674 | $3,930,535 | $3,930,535 |
| Retired | 1,678,525 | 1,784,845 | 1,784,845 |
| Total | $5,103,199 | $5,715,380 | $5,715,380 |
| | | | |
| Total OPEB Liability (Actuarial Liability) | | | |
| Active | $2,397,171 | $2,633,360 | $2,633,360 |
| Retired | 1,678,525 | 1,784,845 | 1,784,845 |
| Total | $4,075,696 | $4,418,205 | $4,418,205 |
| | | | |
| Plan Fiduciary Net Position (Plan Assets) | $0 | $0 | $0 |
| | | | |
| Net OPEB Liability (Unfunded Actuarial Liability) | $4,075,696 | $4,418,205 | $4,418,205 |
| | | | |
| Components of Net OPEB Expense for fiscal year 2018 | | | |
| Service Cost at Year-End | $124,600 | $145,989 | $145,989 |
| Interest Cost | 157,475 | 133,936 | 133,936 |
| Expected Return on Assets | 0 | 0 | 0 |
| Subtotal | $282,075 | $279,925 | $279,925 |
| Change in Deferred Outflows[1] | | | |
| Change in Deferred Inflows[2] | | | |

1. To be determined based on the Total OPEB Obligation and Plan Fiduciary Net Position as of June 30, 2018.
2. To be determined based on the Total OPEB Obligation and Plan Fiduciary Net Position as of June 30, 2018.

## Differences from Prior Valuation

The most recent prior valuation was completed as of July 1, 2015 by DF&A. The AL (Accrued Liability) as of that date was $4,085,375, compared to $4,075,696 as of July 1, 2017. 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 2015. The AL increases as 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. We changed our valuation software to be able to track experience more precisely over time. This change decreased the AL by $120,051.
2. There was a net census loss (an increase in the AL) of $121,707.
3. There was a gain (a decrease in the AL) of $420,172 due to increases in healthcare premiums and statutory minimum contributions less than expected.
4. There was a gain (a decrease in the AL) of $517 due to a decrease in the PERS Health administrative fee from 0.34% of premium to 0.33% of premium.
5. We changed the actuarial cost method from Projected Unit Credit to Entry Age, Level Percent of Pay, as required by GASB 75. This change increased the AL by $206,694.

The estimated changes to the AL from July 1, 2015 to July 1, 2017 are as follows:

| **Changes to AL** | **AL** |
|---|---|
| AL as of July 1, 2015 | **$4,085,375** |
| Passage of time | 202,660 |
| Change in system | (120,051) |
| Change in census | 121,707 |
| Change in premium rates | (420,172) |
| Change in administration fees | (517) |
| Change in cost method | 206,694 |
| AL as of July 1, 2017[1] | **$4,075,696** |

1. Based on a discount rate of 4.00%.

## 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 75 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, 4.00% per annum on its investments, a starting reserve fund value of $3,924,287 as of July 1, 2017, 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. Because the reserve fund is sufficient to cover the Total OPEB Liability calculate (1) using a 4.00% discount rate and (2) considering no implicit subsidy, a depletion of funds until additional funds are needed to cover future pay-as-you-go payments.

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.**

## Treatment of Implicit Subsidy

We exclude the implicit subsidy from these funding schedules because we do not recommend that the District pre-fund for the full age-adjusted costs reflected in the 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 Reserve of $3,924,287 as of July 1, 2017

| Fiscal Year Beginning | Pay-as-you-go | Level Contribution for 20 years | Level % of Unfunded Liability | Constant Percentage Increase |
|---|---|---|---|---|
| 2017 | $225,160 | $5,489 | $0 | $0 |
| 2018 | 214,132 | 5,489 | 0 | 0 |
| 2019 | 212,613 | 5,489 | 0 | 0 |
| 2020 | 228,330 | 5,489 | 0 | 0 |
| 2021 | 253,253 | 5,489 | 0 | 0 |
| 2022 | 266,666 | 5,489 | 0 | 0 |
| 2023 | 278,467 | 5,489 | 0 | 0 |
| 2024 | 276,439 | 5,489 | 0 | 0 |
| 2025 | 249,517 | 5,489 | 0 | 0 |
| 2026 | 230,500 | 5,489 | 0 | 0 |
| 2027 | 189,464 | 5,489 | 0 | 0 |
| 2028 | 183,360 | 5,489 | 0 | 0 |
| 2029 | 180,420 | 5,489 | 0 | 0 |
| 2030 | 173,555 | 5,489 | 0 | 0 |
| 2031 | 179,382 | 5,489 | 0 | 0 |
| 2032 | 175,550 | 5,489 | 0 | 0 |
| 2033 | 180,484 | 5,489 | 3,456 | 0 |
| 2034 | 178,062 | 5,489 | 28,508 | 0 |
| 2035 | 173,193 | 5,489 | 26,882 | 0 |
| 2036 | 184,519 | 5,489 | 24,668 | 0 |
| 2037 | 169,308 | 0 | 22,948 | 0 |
| 2038 | 184,645 | 0 | 20,469 | 0 |
| 2039 | 201,616 | 0 | 18,615 | 0 |
| 2040 | 206,991 | 0 | 16,394 | 0 |
| 2041 | 193,188 | 0 | 5,111 | 0 |
| 2042 | 197,340 | 0 | 139 | 0 |
| 2043 | 201,406 | 0 | 43 | 0 |
| 2044 | 182,275 | 0 | 40 | 0 |
| 2045 | 166,797 | 0 | 36 | 0 |
| 2046 | 151,409 | 0 | 34 | 0 |
| 2047 | 133,351 | 0 | 30 | 0 |
| 2048 | 113,970 | 0 | 27 | 0 |
| 2049 | 105,874 | 0 | 23 | 0 |
| 2050 | 96,478 | 0 | 21 | 0 |
| 2055 | 55,830 | 0 | 12 | 0 |
| 2060 | 34,876 | 0 | 7 | 34,876 |
| 2065 | 19,146 | 0 | 5 | 19,146 |
| 2070 | 11,411 | 0 | 3 | 11,411 |

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 1.2351 to adjust for the implicit subsidy.

## Actuarial Assumptions

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. Retirement rates are based on recent District retirement patterns.

The discount rate of 4.00% is based on our best estimate of expected long-term plan experience for unfunded plans such as the District's. As discussed above, for financial reporting purposes under GASB 75, a discount rate of 3.13% reflects the required blend between discount and municipal bond rates. The healthcare trend rates are based on our analysis of recent District experience and our knowledge of the 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 |
|---|---|
| 2017 | $225,160 |
| 2018 | 214,132 |
| 2019 | 212,613 |
| 2020 | 228,330 |
| 2021 | 253,253 |
| 2022 | 266,666 |
| 2023 | 278,467 |
| 2024 | 276,439 |
| 2025 | 249,517 |
| 2026 | 230,500 |
| 2030 | 173,555 |
| 2035 | 173,193 |
| 2040 | 206,991 |
| 2045 | 166,797 |
| 2050 | 96,478 |
| 2055 | 55,830 |
| 2060 | 34,876 |
| 2065 | 19,146 |
| 2070 | 11,411 |

**Implicit Subsidy and ASOP 6**

When premiums charged for retiree healthcare are lower than expected claims, an implicit subsidy is realized. This occurs, for example, when pre-Medicare retirees are afforded medical coverage at the same rates as active employees.

Actuarial Standard of Practice No. 6 (ASOP 6), revised in May 2014, provides guidance in measuring OPEB obligations and determining periodic costs or actuarially determined contributions. The standard specifies that in (almost all instances), the actuary must include the value of this implicit subsidy in the GASB 45/75 liabilities.

This valuation reflects the value of the implicit subsidy equal to $775,833.

**Certification**

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

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

Sincerely,
DEMSEY, FILLIGER AND ASSOCIATES

Carlos Diaz, ASA, EA, MAAA
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 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/month 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, 2017 monthly PERS Health (PEMHCA) premiums for retirees within the Bay Area:

| | Kaiser HMO | PERS Choice PPO | PERS Care PPO | United HealthCare HMO |
|---|---|---|---|---|
| Basic Plan | | | | |
| Retiree | $733.39 | $830.30 | $932.39 | $1,062.26 |
| Retiree + 1 | 1,466.78 | 1,660.60 | 1,864.78 | 2,124.52 |
| Family | 1,906.81 | 2,158.78 | 2,424.21 | 2,761.88 |
| Medicare Supplement | | | | |
| Retiree | $300.48 | $353.63 | $389.76 | $324.21 |
| Retiree + 1 | 600.96 | 707.26 | 779.52 | 648.42 |
| Family | 901.44 | 1,060.89 | 1,169.28 | 972.63 |

**Dental Benefits**

The District also offers a self-insured dental plan to its employees and retirees. 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 included in the valuation

| Age | Represented | Unrepresented | Total |
|---|---|---|---|
| Under 50 | 0 | 0 | 0 |
| 50-54 | 0 | 0 | 0 |
| 55-59 | 0 | 0 | 0 |
| 60-64 | 5 | 2 | 7 |
| 65-69 | 4 | 2 | 6 |
| 70-74 | 5 | 5 | 10 |
| 75-79 | 3 | 1 | 4 |
| 80-84 | 4 | 0 | 4 |
| 85-89 | 4 | 0 | 4 |
| 90+ | 3 | 0 | 3 |
| All Ages | 28 | 10 | 38 |
| Average Age | 75.4 | 69.8 | 73.9 |

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 |
|---|---|---|---|---|---|---|---|---|---|
| Age | | | | | | | | | |
| <25 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 25-29 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 30-34 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| 35-39 | 1 | 1 | 8 | 1 | 0 | 0 | 0 | 0 | 11 |
| 40-44 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 4 |
| 45-49 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| 50-54 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 4 |
| 55-59 | 0 | 0 | 6 | 4 | 1 | 5 | 1 | 0 | 17 |
| 60-64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65+ | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 3 |
| All Ages | 11 | 5 | 18 | 8 | 2 | 5 | 3 | 1 | 53 |

| | |
|---|---|
| Average Age: | 45.5 |
| Average Service: | 14.1 |

## Actuarial Assumptions

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

Valuation Date: July 1, 2017

Actuarial Cost Method: Entry Age, Level Percent of Pay

Discount Rate:

Accrued Liability: 4.00% per annum

GASB 75: 3.13% per annum

Return on Assets: 4.00% per annum

Salary Increases: 3.00% per annum

Pre-retirement Turnover: 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% |
| 35 | 7.8 |
| 45 | 5.0 |
| 55 | 1.1 |

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

| Age | Males | Females |
|---|---|---|
| 25 | 0.48 | 0.17 |
| 35 | 0.52 | 0.29 |
| 45 | 0.97 | 0.66 |
| 55 | 2.79 | 1.67 |

Post-retirement Mortality: 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 | $9,696 |
| 55 | 11,241 |
| 60 | 13,031 |
| 64 | 14,666 |
| 65+ | 3,901 |

Retirement Rates:

| Age | Percent Retiring |
|---|---|
| 50 | 3.0% |
| 51 | 3.0 |
| 52 | 3.0 |
| 53 | 3.0 |
| 54 | 3.0 |
| 55 | 7.0 |
| 56 | 7.0 |
| 57 | 7.0 |
| 58 | 7.0 |
| 59 | 15.0 |
| 60 | 18.0 |
| 61 | 20.0 |
| 62 | 22.0 |
| 63 | 25.0 |
| 64 | 30.0 |
| 65 | 100.0 |

* The percentage refers to the probability that an active employee who has reached the stated age will retire within the following year.

Trend Rate: Healthcare costs were assumed to increase according to the following schedule:

| FYB | Medical/Rx | Dental/Vision | Medical CPI |
|---|---|---|---|
| 2017 | 6.0% | 4.0% | 3.5% |
| 2018+ | 5.0 | 4.0 | 3.5 |

Percent Waiving Coverage: 9% (applies to future retirees only)

Percent of Retirees with Spouses: Future Retirees: 60% of future retirees were assumed to have spouses. Female spouses assumed three years younger than male spouses. Current Retirees: Based on actual spousal data.

Change in Dollar Cap: Grandfathered caps assumed frozen for all future years.

Administrative Fees: 0.33% of total premium to PEMCHA 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, 2017.

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. 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, and (when applicable) trust statements prepared by the trustee and 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 74 and GASB 75, 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:

Carlos Diaz, ASA, EA, MAAA
Actuary

**North Marin Water District**
**GASB 75 Valuation Results By Employee Group**

| | 7/1/2017 Represented | 7/1/2017 Unrepresented | 7/1/2017 Total All Groups |
|---|---|---|---|
| District-paid Present Value of Benefits | | | |
| Actives | $ 3,670,814 | $ 259,721 | $ 3,930,535 |
| Retirees | 1,266,887 | 517,958 | 1,784,845 |
| Total District-Paid PVFB: | $ 4,937,701 | $ 777,679 | $ 5,715,380 |
| District-paid Total OPEB Liability: | | | |
| Actives | $ 2,447,006 | $ 186,354 | $ 2,633,360 |
| Retirees | 1,266,887 | 517,958 | 1,784,845 |
| Total District-Paid AL: | $ 3,713,893 | $ 704,312 | $ 4,418,205 |
| Assets* | - | - | - |
| District-paid Unfunded Accrued Liability ("UAL" ) | **$ 3,713,893** | **$ 704,312** | **$ 4,418,205** |
| Components of Net OPEB Expense | | | |
| Service Cost at Year-end | $ 136,289 | $ 9,700 | $ 145,989 |
| Interest Cost | 113,173 | 20,763 | 133,936 |
| Expected Return on Assets | - | - | - |
| Total** | **$ 249,462** | **$ 30,463** | **$ 279,925** |

*Assets, if any, allocated in proportion to AL for illustration purposes only; GASB 75 does not provide authority for this calculation.

**Does not include Deferred Inflows/Outflows components that may apply at fiscal year-end.