



**Marin/Sonoma
Mosquito & Vector Control District**

BARTEL
ASSOCIATES, LLC

**Retiree Healthcare Plan
July 1, 2021 Actuarial Valuation**

November 2021

Bartel Associates, LLC
411 Borel Avenue, Suite 620
San Mateo, California 94402
Phone: 650/377-1618
Email: moliver@bartel-associates.com

**Marin/Sonoma Mosquito Vector Control District
Retiree Healthcare Plan
July 1, 2021 Actuarial Valuation**

TABLE OF CONTENTS

SECTION	PAGE
Background	1
Changes Since the Last Valuation	1
Valuation Results	2
Basic Definitions	8
Summary of Retiree Healthcare Benefits	9
Actuarial Methods and Assumptions	11
Summary of Participant Data	15
Actuarial Certification	17



BACKGROUND

The District provides medical benefits through Marin County's medical plans, paying the 2-party premium for employees who were hired before July 1, 2009 and retire directly from the District under the Marin County Employees' Retirement System (MCERA) with 10 years District service. The District pays the retiree-only premium for employees hired on or after July 1, 2009 who retire with 10 years District service.

The District does not pay retiree medical premiums for employees hired after July 30, 2014. These employees receive contributions into a Health Reimbursement Account while active and are not eligible to continue coverage under the District medical plans after retirement.

The District commenced pre-funding the plan during the 2014/15 fiscal year with contributions that would phase into the full Actuarially Determined Contribution (ADC) over nine years. The phase-in period has since been eliminated and the District started contributing the full ADC each year beginning in the 2019/20 fiscal year. In the 2018/19 fiscal year, the District made an additional \$1.6 million contribution which increased the plan's funded ratio significantly. In the 2020/21 fiscal year, the District made an additional \$2.5 million contribution which increased the plan's funded ratio significantly.

Funds are held in the California Employees Retirement Benefit Trust (CERBT) and invested under CERBT Asset Allocation Strategy #1 (59% Global Equity, 25% Fixed Income, 8% Real Estate Investment Trusts, 5% Treasury Inflation-Protected Securities, 3% Commodities).

The purpose of this report is to provide information to be used in determining funding contributions and the plan's funded progress. It also provides information to be used as a basis for determining information used in GASBS 75 reporting.

CHANGES SINCE THE LAST VALUATION

Contributions:

In addition to funding the actuarially determined contributions, the District made a Special Contribution of \$2,500,000.

Actuarial Assumptions:

- Discount rate lowered from 6.5% to 6.25%
- General inflation rate decreased from 2.75% to 2.5%
- Demographic assumptions updated based on 6/30/2020 MCERA experience study.
- Removal of PPACA Cadillac Tax
- Implied subsidy no longer valued for Medicare Advantage plans.

Actuarial Methods:

A modification was made to the method used to determine the contribution rate towards the UAAL that spreads gains and losses on assets into amortization contributions over a 5-year period.



VALUATION RESULTS

Summary of Results: The unfunded actuarial accrued liability (UAAL) as of July 1, 2019 was \$6.0 million. Had the District contributed only the actuarially determined contribution and if actuarial assumptions and methods had remained the same, a July 1, 2021 UAAL of \$5.5 million would have been expected. However, the actual Unfunded Actuarial Accrued Liability/(Asset) was \$(0.6) million. The difference includes decreases in the UAAL due to a special contribution of \$2.5 million as well as favorable investment, medical premium rate and demographic experience.

The current funded ratio (portion of actuarial accrued liability covered by assets) rose to 108% in this valuation compared to 36% as of July 1, 2019.

Plan Assets: The following table shows the asset reconciliation for the 2019/20 and 2020/21 fiscal years (000's omitted):

	<u>2019/20</u>	<u>2020/21</u>
■ Market Value of Assets (Beginning of Year)	\$3,368	\$4,170
• Contributions	667	2,781
• Benefit Payments	-	-
• Investment Income	139	1,501
• Investment Expenses	(1)	(2)
• Administrative Expenses	<u>(2)</u>	<u>(3)</u>
■ Market Value of Assets (End of Year)	4,170	8,447

To be considered Plan Assets for GASBS 75 purposes, funds must be set aside in a trust that cannot legally be used for any purpose other than to pay retiree healthcare benefits.



Marin/Sonoma Mosquito & Vector Control District Retiree Healthcare Plan
July 1, 2021 Actuarial Valuation
Page 3

Funded Status: The following table summarizes the Plan’s funded status for the current valuation and the prior valuation (000’s omitted). Due to factors such as favorable investment returns, special additional contributions, and demographic and premium gains, the Actuarial Accrued Liability Funded Ratio has increased to 108%, and the net present value of benefits is only \$250,000.

	<u>July 1, 2019 Valuation</u>	<u>July 1, 2021 Valuation</u>
■ Discount Rate	6.50%	6.25%
■ Present Value of Benefits (PVB)		
• Actives	\$5,522	\$4,347
• Retirees	<u>5,345</u>	<u>4,350</u>
• Total	10,867	8,697
■ Market Value of Assets	<u>3,368</u>	<u>8,447</u>
■ Net Present Value Benefits	7,499	250
■ Actuarial Accrued Liability		
• Actives	4,038	3,467
• Retirees	<u>5,345</u>	<u>4,350</u>
• Total	9,383	7,817
■ Market Value of Assets	<u>3,368</u>	<u>8,447</u>
■ Unfunded AAL	6,015	(630)
■ Funded Ratio (Assets/AAL)	36%	108%



Marin/Sonoma Mosquito & Vector Control District Retiree Healthcare Plan
July 1, 2021 Actuarial Valuation
Page 4

Actuarial Gains/Losses: The gain/loss analysis for the 2 year period between valuation dates is shown below (000's omitted).

Actuarial Accrued Liabilities were lower than anticipated due to medical premium levels being lower than anticipated. Assets were higher than anticipated due to the District's additional contribution to the plan as well as higher than expected investment returns.

Assumption changes (shown below) had similar impact on results as experience. Due to age-risk adjusted federal subsidies to Medicare Advantage plans, no age-based claims costs were included for these plans. General inflation and the discount rate were reduced based on our economic assumptions review. In addition, the .25% margin in the discount rate was removed. Other changes include the following:

- Demographic assumptions were updated based on a newer MCERA experience study.
- A newer projection scale for future mortality improvement was implemented.
- PPACA Cadillac Tax was repealed and is no longer valued.

	<u>AAL</u> <u>(Gain)/Loss</u>	<u>Asset</u> <u>(Gain)/Loss</u>	<u>Unfunded AAL</u> <u>(Gain)/Loss</u>
■ July 1, 2019 Actual Value	\$9,383	\$(3,368)	\$6,015
■ July 1, 2021 Expected Value	10,433	(4,951)	5,482
■ Experience (Gains/Losses)			
• Demographic & other experience	(536)	-	(536)
• Premium (gain)/loss	(1,006)	-	(1,006)
• Contribution (gain)/loss	-	(2,500)	(2,500)
• Investment (gain)/loss	<u>-</u>	<u>(996)</u>	<u>(996)</u>
• Subtotal	(1,542)	(3,496)	(5,038)
■ Assumption Changes			
• Remove PPACA Cadillac Tax	(161)	-	(161)
• No Medicare Adv. Implied Subsidy	(652)	-	(652)
• Mortality Improvement	(96)	-	(96)
• MCERA Experience Study Demographic Assumptions	17	-	17
• Kaiser Medicare Trend	(229)	-	(229)
• Inflation Decrease 2.5% to 2.25% ¹	(191)	-	(191)
• Discount Rate to 6.25%	<u>238</u>	<u>-</u>	<u>238</u>
• Subtotal	(1,074)	-	(1,074)
■ Total Change	(2,616)	(3,496)	(6,112)
■ July 1, 2021 Actual Value	7,817	(8,447)	(630)

¹ Impact on assumptions other than the discount rate (including future increases in medical premiums and Medicare B premiums)



Marin/Sonoma Mosquito & Vector Control District Retiree Healthcare Plan
July 1, 2021 Actuarial Valuation
Page 5

Actuarially Determined Contribution (ADC): The District’s Actuarially Determined Contribution is the current employer Normal Cost plus administrative expenses and an amortization of the unfunded actuarial accrued liability. In other words, the ADC is the value of benefits actuarially considered earned during the year plus an amount to keep the plan on track for funding the UAAL.

Due to the Plan’s funded status, contribution rates will be more sensitive to investment experience than in the past. In order to help stabilize contribution rates we have added a 5-year phase-in (or ramp up) of the amortization contribution for investment gains/losses starting with the investment gains between July 1, 2019 and July 1, 2021. Thus, in the 5th year, the full amortization of the gain or loss will be recognized in the ADC. As illustrated below, the new method increased the 2022/23 ADC from \$21 thousand to \$92 thousand.

ADCs are shown as of the middle of the fiscal year (000’s omitted).

	<u>July 1, 2019 Valuation</u>		<u>July 1, 2021 Valuation</u>		
Discount Rate	6.50%		6.25%		
■ Ramp up	n/a	n/a	No	Yes	Yes
■ Fiscal Year	<u>2020/21</u>	<u>2021/22</u>	<u>2022/23</u>	<u>2022/23</u>	<u>2023/24</u>
■ Normal Cost	\$200	\$193	\$133	\$133	\$125
■ CERBT Administrative Expense	3	3	5	5	5
■ UAAL Contribution					
• Outstanding UAAL Balance					
♦ 7/1/2021 Investment (gain)/loss	n/a	n/a	(996)	(996)	(1,034)
♦ Remaining UAAL	<u>5,637</u>	<u>5,478</u>	<u>(250)</u>	<u>(250)</u>	<u>(242)</u>
♦ Total	5,637	5,478	(1,246)	(1,246)	(1,276)
• Amortization Payment ²					
♦ 7/1/2021 Investment (gain)/loss	n/a	n/a	(93)	(22)	(45)
♦ Remaining UAAL	<u>509</u>	<u>509</u>	<u>(24)</u>	<u>(24)</u>	<u>(24)</u>
♦ Total UAAL Contribution	509	509	(117)	(46)	(69)
■ ADC	712	705	21	92	61
■ Estimated Covered Payroll ³	2,700	2,630	2,308	2,308	2,197
■ ADC as a % of estimated payroll	26.4%	26.8%	0.9%	4.0%	2.8%

² Amortized as a level dollar over 17 years. Investment gain/loss includes a 5-year phrase-in.

³ Payroll projected on a closed group basis.



Marin/Sonoma Mosquito & Vector Control District Retiree Healthcare Plan

July 1, 2021 Actuarial Valuation

Page 6

Contributions Projection (000's omitted)

The following table illustrates the estimated contribution amounts for the next 10 years assuming investment returns of 6.25% per year. The ADC has been shown with a minimum of the Normal Cost to ensure that benefits actuarially considered earned during the year by employees are funded each year.

<u>Year</u>	<u>Normal Cost⁴</u>	<u>UAAL Amortization</u>	<u>ADC Minimum \$0</u>	<u>ADC with Normal Cost Minimum</u>
2021/22	\$196	\$509	\$705	\$705
2022/23	138	(46)	92	138
2023/24	130	(69)	61	130
2024/25	121	(92)	29	121
2025/26	109	(114)	0	109
2026/27	97	(137)	0	97
2027/28	86	(137)	0	86
2028/29	76	(137)	0	76
2029/30	67	(137)	0	67
2030/31	58	(137)	0	58

Benefit payments paid by the District are counted as contributions towards the ADC. When the benefit payments exceed the ADC, the District may be reimbursed from the trust for the excess as illustrated below. (In this table we have assumed that the ADC would be set equal to the higher of the calculated ADC and the Normal Cost.)

<u>Year</u>	<u>District Paid Benefit Payments</u>	<u>Reimbursement from Trust</u>	<u>ADC with Normal Cost Minimum</u>
2021/22	\$362 ⁵	n/a	\$705
2022/23	344	206	138
2023/24	378	248	130
2024/25	418	297	121
2025/26	452	343	109
2026/27	488	391	97
2027/28	494	408	86
2028/29	518	442	76
2029/30	553	486	67
2030/31	576	518	58

⁴ Includes CERBT administrative expense.

⁵ Expected benefit payments from the 2019 valuation report.



Marin/Sonoma Mosquito & Vector Control District Retiree Healthcare Plan
July 1, 2021 Actuarial Valuation
Page 7

Projected Benefit Payments: Following is a 10-year projection of benefit payments starting in 2021/22 (000's omitted):

<u>Year</u>	<u>Cash Payments</u>	<u>Implied Subsidy Payments</u>	<u>Total Benefit Payments</u>
2021/22	\$265	\$33	\$298
2022/23	298	46	344
2023/24	328	50	378
2024/25	360	58	418
2025/26	392	60	452
2026/27	426	62	488
2027/28	446	48	494
2028/29	472	46	518
2029/30	504	49	553
2030/31	528	48	576



BASIC DEFINITIONS

Present Value of Benefits (PVB): When an actuary prepares an actuarial valuation, the first step is gathering participant data (including active employees and participants and beneficiaries in payment status) at the valuation date (for example July 1, 2021). Using this data and actuarial assumptions, future benefit payments are projected. (The assumptions predict, among other things, when people will retire, terminate, die or become disabled, as well as what salary increases, general (and healthcare) inflation and investment return might be). Those future benefit payments are discounted, using expected future investment return, back to the valuation date. This discounted present value is the plan's present value of benefits. It represents the amount the plan needs as of the valuation date to pay all future benefits – if all assumptions are met and no future contributions (employee or employer) are made. The District's July 1, 2021 retiree healthcare Present Value of Benefits is \$8.7 million using a 6.25% discount rate, with \$4.4 million of this for former employees who have already retired.

Actuarial Accrued Liability (AAL): This represents the portion of the present value of benefits that participants have earned (on an actuarial, not actual, basis) through the valuation date. The District's July 1, 2021 retiree healthcare Actuarial Accrued Liability is \$7.8 million using a 6.25% discount rate, with \$4.4 million of this for former employees who have already retired.

Plan Assets: This includes funds that have been segregated and restricted in a trust so they can only be used to pay plan benefits. The market value of the District's July 1, 2021 assets is \$8.4 million.

Unfunded Actuarial Accrued Liability (UAAL): This is the difference between the Actuarial Accrued Liability and Plan Assets. This represents the amount of the Actuarial Accrued Liability that must still be funded. As of July 1, 2021, the District has an Unfunded Actuarial Accrued Liability/(Asset) of \$(630) thousand.

Normal Cost (NC): The Normal Cost represents the portion of the present value of benefits expected to be earned (on an actuarial, not actual, basis) in the coming year. The District's 2022/23 retiree healthcare Normal Cost as of the middle of the fiscal year is \$133 thousand (5.8% of covered payroll) using a 6.25% discount rate.

Actuarial Cost Method: This determines the method in which benefits are actuarially earned (allocated) to each year of service. It has no effect on the Present Value of Benefits, but has significant effect on the Actuarial Accrued Liability and Normal Cost. The District's July 1, 2021 retiree healthcare valuation was prepared using the Entry Age Normal cost method. Under the Entry Age Normal cost method, the Plan's Normal Cost is developed as a level percent of payroll throughout the participant's working lifetime.

Implied Subsidy: An implied subsidy exists when premiums charged for employees subsidize retiree premiums. This occurs when premiums for retirees are not sufficient to pay anticipated claims.



SUMMARY OF RETIREE HEALTHCARE BENEFITS

Benefit Summary	
<p>■ Eligibility</p>	<p>■ Hired July 30, 2014 or earlier:</p> <ul style="list-style-type: none"> ● Retire directly from the District under Marin County Employees' Retirement Association (Service Retirement at Age 50 with 10 years MCERA service or Age 52 with 5 years MCERA service depending on Retirement Tier, or disability retirement) ● 10 years of District service <p>■ Hired after July 30, 2014:</p> <ul style="list-style-type: none"> ● Not eligible for District payment of retiree medical premiums or coverage under District's medical plans after retirement.
<p>■ Medical Benefit</p>	<p>■ Hired July 30, 2014 or earlier:</p> <ul style="list-style-type: none"> ● District pays the full medical and Medicare B premiums for retirees ● For retirees hired prior to July 1, 2009, the District also pays the premium for 1 dependent <p>■ Hired after July 30, 2014:</p> <ul style="list-style-type: none"> ● No District contributions towards retiree medical premiums, and may not participate in District medical plans ● Eligible for Health Reimbursement Account (HRA) contributions after 2 years of service with the District
<p>■ Surviving Spouse Medical Benefit</p>	<p>■ Premium paid for those hired prior to July 1, 2009</p> <p>■ Same benefit continues to surviving spouse</p>
<p>■ Dental, Vision & Life</p>	<p>■ None</p>
<p>■ Medical Plans</p>	<p>■ County of Marin Medical Plans</p>

2021 Monthly Medical Premiums

Actives

Medical Plan	Non Medicare Eligible		
	Single	2-Party	Family
Kaiser Plan L	\$812.24	\$1,624.48	\$2,160.56
Teamsters Anthem PPO	827.31	1,660.62	2,322.47

Retirees

Medical Plan	Non Medicare Eligible			Medicare Eligible		
	Single	2-Party	Family	Single	2-Party	Family
Kaiser Plan L	\$812.24	\$1,624.48	\$2,160.56	\$373.98	\$747.96	n/a
Teamsters Anthem PPO	827.31	1,660.62	2,322.47	n/a	n/a	n/a
UnitedHealthcare PPO	n/a	n/a	n/a	410.71	821.42	n/a

2022 Monthly Medical Premiums

Actives

Medical Plan	Non Medicare Eligible		
	Single	2-Party	Family
Kaiser Plan L	\$852.75	\$1,705.50	\$2,268.31
Teamsters Anthem PPO	860.40	1,726.80	2,415.13

Retirees

Medical Plan	Non Medicare Eligible			Medicare Eligible		
	Single	2-Party	Family	Single	2-Party	Family
Kaiser Plan L	\$852.75	\$1,705.50	\$2,268.31	\$373.23	\$746.46	n/a
Teamsters Anthem PPO	860.40	1,726.80	2,415.13	n/a	n/a	n/a
UnitedHealthcare PPO	n/a	n/a	n/a	402.50	805.00	n/a

ACTUARIAL METHODS AND ASSUMPTIONS

Actuarial Methods

The actuarial cost method used for this valuation is the Entry Age Normal (“EAN”) cost method. Under the EAN cost method, the Normal Cost for each participant is determined as a level percent of payroll throughout the participant’s working career. The actuarial value of assets is market value as of the valuation date.

The July 1, 2021 Unfunded Actuarial Accrued Liability was amortized as a level dollar amount over a fixed 17-year period starting in 2022/23. In order to help stabilize contribution rates we have added a 5-year phase-in (or ramp up) of the amortization contribution for investment gains/losses starting with the investment gains between July 1, 2019 and July 1, 2021.

Actuarial Assumptions

Actuarial assumptions are shown below. Where appropriate, the demographic assumptions proposed in the Marin County Employees’ Retirement Association (MCERA) June 30, 2019 Actuarial Experience Study have been used.

Actuarial Assumptions	July 1, 2019 Valuation	July 1, 2021 Valuation
<ul style="list-style-type: none"> ■ Discount Rate 	<ul style="list-style-type: none"> ● 6.50%, pre-funded through CalPERS CERBT Asset Allocation Strategy #1 (59% Global Equity, 25% Fixed Income, 8% Real Estate Investment Trusts, 5% Treasury Inflation-Protected Securities, 3% Commodities) 	<ul style="list-style-type: none"> ● 6.25%, pre-funded through CalPERS CERBT Asset Allocation Strategy #1 (59% Global Equity, 25% Fixed Income, 8% Real Estate Investment Trusts, 5% Treasury Inflation-Protected Securities, 3% Commodities)
<ul style="list-style-type: none"> ■ General Inflation Rate 	<ul style="list-style-type: none"> ● 2.75% per year 	<ul style="list-style-type: none"> ● 2.50% per year
<ul style="list-style-type: none"> ■ Aggregate Payroll Increases 	<ul style="list-style-type: none"> ● 3% per year 	<ul style="list-style-type: none"> ● 2.75% per year
<ul style="list-style-type: none"> ■ Pay Merit and Longevity Increases 	<ul style="list-style-type: none"> ● MCERA 6/30/2017 Experience Study 	<ul style="list-style-type: none"> ● MCERA 6/30/2020 Experience Study
<ul style="list-style-type: none"> ■ Mortality, Termination 	<ul style="list-style-type: none"> ● MCERA 6/30/2017 Experience Study ● Post-retirement mortality improvement projected fully generational using Scale MP-2018 	<ul style="list-style-type: none"> ● MCERA 6/30/2020 Experience Study ● Mortality improvement projected fully generational using Scale MP-2020
<ul style="list-style-type: none"> ■ Disability 	<ul style="list-style-type: none"> ● MCERA 6/30/2017 Experience Study 	<ul style="list-style-type: none"> ● MCERA 6/30/2020 Experience Study
<ul style="list-style-type: none"> ■ Service Retirement 	<ul style="list-style-type: none"> ● MCERA 6/30/2017 Experience Study 	<ul style="list-style-type: none"> ● MCERA 6/30/2020 Experience Study



Marin/Sonoma Mosquito & Vector Control District Retiree Healthcare Plan
July 1, 2021 Actuarial Valuation
Page 12

Actuarial Assumptions	July 1, 2019 Valuation	July 1, 2021 Valuation																																																																																																																																				
<ul style="list-style-type: none"> ■ Participation at Retirement 	<ul style="list-style-type: none"> ● 100% 	<ul style="list-style-type: none"> ● Same 																																																																																																																																				
<ul style="list-style-type: none"> ■ Medical Trend 	<ul style="list-style-type: none"> ● Increases from prior year: <table border="0" style="margin-left: 20px;"> <thead> <tr> <th><u>Year</u></th> <th><u>Non-Medicare</u></th> <th><u>Medicare</u></th> </tr> </thead> <tbody> <tr> <td>2019</td> <td colspan="2">Actual Premiums</td> </tr> <tr> <td>2020</td> <td colspan="2">Actual Premiums</td> </tr> <tr> <td>2021</td> <td>7.25%</td> <td>6.30%</td> </tr> <tr> <td>2022</td> <td>7.00%</td> <td>6.10%</td> </tr> <tr> <td>2023</td> <td>6.75%</td> <td>5.90%</td> </tr> <tr> <td>2024</td> <td>6.50%</td> <td>5.70%</td> </tr> <tr> <td>2025</td> <td>6.25%</td> <td>5.50%</td> </tr> <tr> <td>2026</td> <td>6.00%</td> <td>5.30%</td> </tr> <tr> <td>2027</td> <td>5.80%</td> <td>5.15%</td> </tr> <tr> <td>2028</td> <td>5.60%</td> <td>5.00%</td> </tr> <tr> <td>2029</td> <td>5.40%</td> <td>4.85%</td> </tr> <tr> <td>2030</td> <td>5.20%</td> <td>4.70%</td> </tr> <tr> <td>2031-35</td> <td>5.05%</td> <td>4.60%</td> </tr> <tr> <td>2036-45</td> <td>4.90%</td> <td>4.50%</td> </tr> <tr> <td>2046-55</td> <td>4.75%</td> <td>4.45%</td> </tr> <tr> <td>2056-65</td> <td>4.60%</td> <td>4.40%</td> </tr> <tr> <td>2066-75</td> <td>4.30%</td> <td>4.20%</td> </tr> <tr> <td>2076+</td> <td>4.00%</td> <td>4.00%</td> </tr> </tbody> </table> 	<u>Year</u>	<u>Non-Medicare</u>	<u>Medicare</u>	2019	Actual Premiums		2020	Actual Premiums		2021	7.25%	6.30%	2022	7.00%	6.10%	2023	6.75%	5.90%	2024	6.50%	5.70%	2025	6.25%	5.50%	2026	6.00%	5.30%	2027	5.80%	5.15%	2028	5.60%	5.00%	2029	5.40%	4.85%	2030	5.20%	4.70%	2031-35	5.05%	4.60%	2036-45	4.90%	4.50%	2046-55	4.75%	4.45%	2056-65	4.60%	4.40%	2066-75	4.30%	4.20%	2076+	4.00%	4.00%	<ul style="list-style-type: none"> ● Increases from prior year: <table border="0" style="margin-left: 20px;"> <thead> <tr> <th rowspan="2"><u>Year</u></th> <th colspan="3"><u>Increase from Prior Year</u></th> </tr> <tr> <th><u>Non-Medicare</u></th> <th><u>Medicare</u></th> <th><u>Kaiser Sr. Advantage</u></th> </tr> </thead> <tbody> <tr> <td>2020</td> <td colspan="3">n/a</td> </tr> <tr> <td>2021</td> <td colspan="3">Actual Premiums</td> </tr> <tr> <td>2022</td> <td colspan="3">Actual Premiums</td> </tr> <tr> <td>2023</td> <td>6.50%</td> <td>5.65%</td> <td>4.60%</td> </tr> <tr> <td>2024</td> <td>6.25%</td> <td>5.45%</td> <td>4.45%</td> </tr> <tr> <td>2025</td> <td>6.00%</td> <td>5.25%</td> <td>4.35%</td> </tr> <tr> <td>2026</td> <td>5.75%</td> <td>5.05%</td> <td>4.25%</td> </tr> <tr> <td>2027</td> <td>5.55%</td> <td>4.90%</td> <td>4.20%</td> </tr> <tr> <td>2028</td> <td>5.35%</td> <td>4.75%</td> <td>4.15%</td> </tr> <tr> <td>2029</td> <td>5.15%</td> <td>4.60%</td> <td>4.10%</td> </tr> <tr> <td>2030</td> <td>4.95%</td> <td>4.45%</td> <td>4.05%</td> </tr> <tr> <td>2031-2035</td> <td>4.80%</td> <td>4.35%</td> <td>4.00%</td> </tr> <tr> <td>2036-2045</td> <td>4.65%</td> <td>4.25%</td> <td>3.95%</td> </tr> <tr> <td>2046-2055</td> <td>4.50%</td> <td>4.20%</td> <td>3.90%</td> </tr> <tr> <td>2056-2065</td> <td>4.35%</td> <td>4.15%</td> <td>3.85%</td> </tr> <tr> <td>2066-2075</td> <td>4.05%</td> <td>3.95%</td> <td>3.80%</td> </tr> <tr> <td>2076+</td> <td>3.75%</td> <td>3.75%</td> <td>3.75%</td> </tr> </tbody> </table> 	<u>Year</u>	<u>Increase from Prior Year</u>			<u>Non-Medicare</u>	<u>Medicare</u>	<u>Kaiser Sr. Advantage</u>	2020	n/a			2021	Actual Premiums			2022	Actual Premiums			2023	6.50%	5.65%	4.60%	2024	6.25%	5.45%	4.45%	2025	6.00%	5.25%	4.35%	2026	5.75%	5.05%	4.25%	2027	5.55%	4.90%	4.20%	2028	5.35%	4.75%	4.15%	2029	5.15%	4.60%	4.10%	2030	4.95%	4.45%	4.05%	2031-2035	4.80%	4.35%	4.00%	2036-2045	4.65%	4.25%	3.95%	2046-2055	4.50%	4.20%	3.90%	2056-2065	4.35%	4.15%	3.85%	2066-2075	4.05%	3.95%	3.80%	2076+	3.75%	3.75%	3.75%
<u>Year</u>	<u>Non-Medicare</u>	<u>Medicare</u>																																																																																																																																				
2019	Actual Premiums																																																																																																																																					
2020	Actual Premiums																																																																																																																																					
2021	7.25%	6.30%																																																																																																																																				
2022	7.00%	6.10%																																																																																																																																				
2023	6.75%	5.90%																																																																																																																																				
2024	6.50%	5.70%																																																																																																																																				
2025	6.25%	5.50%																																																																																																																																				
2026	6.00%	5.30%																																																																																																																																				
2027	5.80%	5.15%																																																																																																																																				
2028	5.60%	5.00%																																																																																																																																				
2029	5.40%	4.85%																																																																																																																																				
2030	5.20%	4.70%																																																																																																																																				
2031-35	5.05%	4.60%																																																																																																																																				
2036-45	4.90%	4.50%																																																																																																																																				
2046-55	4.75%	4.45%																																																																																																																																				
2056-65	4.60%	4.40%																																																																																																																																				
2066-75	4.30%	4.20%																																																																																																																																				
2076+	4.00%	4.00%																																																																																																																																				
<u>Year</u>	<u>Increase from Prior Year</u>																																																																																																																																					
	<u>Non-Medicare</u>	<u>Medicare</u>	<u>Kaiser Sr. Advantage</u>																																																																																																																																			
2020	n/a																																																																																																																																					
2021	Actual Premiums																																																																																																																																					
2022	Actual Premiums																																																																																																																																					
2023	6.50%	5.65%	4.60%																																																																																																																																			
2024	6.25%	5.45%	4.45%																																																																																																																																			
2025	6.00%	5.25%	4.35%																																																																																																																																			
2026	5.75%	5.05%	4.25%																																																																																																																																			
2027	5.55%	4.90%	4.20%																																																																																																																																			
2028	5.35%	4.75%	4.15%																																																																																																																																			
2029	5.15%	4.60%	4.10%																																																																																																																																			
2030	4.95%	4.45%	4.05%																																																																																																																																			
2031-2035	4.80%	4.35%	4.00%																																																																																																																																			
2036-2045	4.65%	4.25%	3.95%																																																																																																																																			
2046-2055	4.50%	4.20%	3.90%																																																																																																																																			
2056-2065	4.35%	4.15%	3.85%																																																																																																																																			
2066-2075	4.05%	3.95%	3.80%																																																																																																																																			
2076+	3.75%	3.75%	3.75%																																																																																																																																			
<ul style="list-style-type: none"> ■ Medicare B Trend 	<ul style="list-style-type: none"> ● Increases from prior year: <table border="0" style="margin-left: 20px;"> <thead> <tr> <th><u>Year</u></th> <th></th> </tr> </thead> <tbody> <tr> <td>2019</td> <td>Actual Premiums</td> </tr> <tr> <td>2020</td> <td>6.50%</td> </tr> <tr> <td>2021</td> <td>4.40%</td> </tr> <tr> <td>2022</td> <td>5.10%</td> </tr> <tr> <td>2023+</td> <td>Same as Medicare Medical Trend above</td> </tr> </tbody> </table> 	<u>Year</u>		2019	Actual Premiums	2020	6.50%	2021	4.40%	2022	5.10%	2023+	Same as Medicare Medical Trend above	<ul style="list-style-type: none"> ● Increases from prior year: <table border="0" style="margin-left: 20px;"> <thead> <tr> <th><u>Year</u></th> <th></th> </tr> </thead> <tbody> <tr> <td>2019</td> <td>n/a</td> </tr> <tr> <td>2020</td> <td>n/a</td> </tr> <tr> <td>2021</td> <td>Actual Premiums</td> </tr> <tr> <td>2022</td> <td>4.85%</td> </tr> <tr> <td>2023+</td> <td>Same as Medicare Medical Trend above</td> </tr> </tbody> </table> 	<u>Year</u>		2019	n/a	2020	n/a	2021	Actual Premiums	2022	4.85%	2023+	Same as Medicare Medical Trend above																																																																																																												
<u>Year</u>																																																																																																																																						
2019	Actual Premiums																																																																																																																																					
2020	6.50%																																																																																																																																					
2021	4.40%																																																																																																																																					
2022	5.10%																																																																																																																																					
2023+	Same as Medicare Medical Trend above																																																																																																																																					
<u>Year</u>																																																																																																																																						
2019	n/a																																																																																																																																					
2020	n/a																																																																																																																																					
2021	Actual Premiums																																																																																																																																					
2022	4.85%																																																																																																																																					
2023+	Same as Medicare Medical Trend above																																																																																																																																					
<ul style="list-style-type: none"> ■ Medicare Eligibility Rate for those hired before Medicare Contributions Required (4/1/1986) 	<ul style="list-style-type: none"> ● Current pre-Medicare retirees: 50% where unable to determine eligibility ● Current employees: None hired before 4/1/1986 	<ul style="list-style-type: none"> ● Same 																																																																																																																																				
<ul style="list-style-type: none"> ■ Medical Plan at Retirement 	<ul style="list-style-type: none"> ● Same plan as current election 	<ul style="list-style-type: none"> ● Same 																																																																																																																																				
<ul style="list-style-type: none"> ■ Marital Status 	<ul style="list-style-type: none"> ● Based on current medical coverage election 	<ul style="list-style-type: none"> ● Same 																																																																																																																																				



Marin/Sonoma Mosquito & Vector Control District Retiree Healthcare Plan
July 1, 2021 Actuarial Valuation
Page 13

Actuarial Assumptions	July 1, 2019 Valuation	July 1, 2021 Valuation
<ul style="list-style-type: none"> ■ Spouse Participation 	<ul style="list-style-type: none"> ● 100%, if benefit paid by the District ● 50%, if benefit not paid by the District 	<ul style="list-style-type: none"> ● Same
<ul style="list-style-type: none"> ■ Surviving Spouse Participation 	<ul style="list-style-type: none"> ● 100% 	<ul style="list-style-type: none"> ● Same
<ul style="list-style-type: none"> ■ Non-Spouse Dependent Participation 	<ul style="list-style-type: none"> ● 50%, if coverage includes non-spouse dependents while active ● 0%, otherwise ● 1.75 children per family ● No non-spouse dependents assumed after retiree's age 67 	<ul style="list-style-type: none"> ● Same
<ul style="list-style-type: none"> ■ Implied Subsidy 	<ul style="list-style-type: none"> ● Valued for Non-Medicare and Medicare 	<ul style="list-style-type: none"> ● Valued for Non-Medicare
<ul style="list-style-type: none"> ■ Patient Protection and Affordable Care Act (PPACA) Cadillac Tax 	<ul style="list-style-type: none"> ● Assumed to increase employer costs by 2% of the cash benefit costs 	<ul style="list-style-type: none"> ● None ● PPACA Cadillac Tax repealed



Marin/Sonoma Mosquito & Vector Control District Retiree Healthcare Plan
July 1, 2021 Actuarial Valuation
Page 14

Monthly Claims Costs

Age	2022 Age/Gender Claims Costs			
	Kaiser Plan L Non-Medicare		Teamsters Anthem PPO Non-Medicare	
	Male	Female	Male	Female
Children	\$439	\$439	\$403	\$403
30	426	693	390	643
35	469	696	430	646
40	528	717	486	667
45	623	753	576	702
50	756	817	705	765
55	991	967	935	912
60	1,298	1,156	1,240	1,099
65	1,298	1,115	1,240	1,058
70	1,582	1,319	1,512	1,252
75	1,920	1,586	1,835	1,505
80	2,293	1,884	2,191	1,788
85	2,667	2,199	2,548	2,086



SUMMARY OF PARTICIPANT DATA

Participant Statistics

Statistic	July 1, 2019		July 1, 2021	
	Actives	Retirees	Actives	Retirees
■ Count	26	19	21	21
■ Average Age	53.3	66.3	54.4	67.5
■ Average Retirement Age				
• Service	n/a	57.9	n/a	58.7
• Disability	n/a	48.7	n/a	48.7
■ Average Service	16.1	n/a	17.9	n/a
■ Payroll				
• Total	\$ 2,767,000	n/a	\$ 2,384,000	n/a
• Average	\$ 106,416	n/a	\$ 113,501	n/a

Actives by Age and Service
 July 1, 2021

Age	District Service							Total
	< 1	1-4	5-9	10-14	15-19	20-24	≥ 25	
< 25								
25-29								
30-34								
35-39								
40-44					2	1		3
45-49				1	2	2		5
50-54								
55-59			1		7		1	9
60-64			1	1	1	1		4
≥ 65								
Total			2	2	12	4	1	21



Participant Medical Coverage Elections
July 1, 2021

Medical Plan	Actives					
	EE Only	EE+ Spouse	EE+ Child(ren)	Family	Waived	Total
Kaiser Plan L	1	9	3	8		21
Total	1	9	3	8		21

Medical Plan	Retirees Age < 65					
	EE Only	EE+ Spouse	EE+ Child(ren)	Family	Waived	Total
Kaiser Plan L	2	4				6
Teamsters Anthem	1					1
Total	3	4				7

Medical Plan	Retirees Age ≥ 65					
	EE Only	EE+ Spouse	EE+ Child(ren)	Family	Waived	Total
Kaiser Plan L	3	5				8
Teamsters Anthem	1					1
UnitedHealthcare	2	3				5
Total	6	8				14

ACTUARIAL CERTIFICATION

This report presents the Marin/Sonoma Mosquito Vector Control District Retiree Healthcare Plan (“Plan”) July 1, 2021 actuarial valuation. The purpose of this valuation is to:

- Determine the Plan’s July 1, 2021 Funded Status, and
- Calculate the 2022/23 and 2023/24 Actuarially Determined Contributions.

Information provided in this report may be useful to the District for the Plan’s financial management. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as: plan experience differing from that anticipated by the assumptions; changes in assumptions; changes expected as part of the natural progression of the plan; and changes in plan provisions or applicable law. Actuarial models necessarily rely on the use of estimates and are sensitive to changes. Small variations in estimates may lead to significant changes in actuarial measurements. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of such measurements.

The valuation is based on Plan provisions, participant data, and asset information provided by the District as summarized in this report, which we relied on and did not audit. We reviewed the participant data for reasonableness.

To the best of our knowledge, this report is complete and accurate and has been conducted using generally accepted actuarial principles and practices. As members of the American Academy of Actuaries meeting the Academy Qualification Standards, we certify the actuarial results and opinions herein.

Respectfully submitted,



Marilyn Oliver, FSA, FCA, MAAA
Vice President
Bartel Associates, LLC
November 18, 2021



Catherine A Wandro, ASA, FCA, MAAA
Assistant Vice President
Bartel Associates, LLC
November 18, 2021



Tak Frazita, FSA, EA, FCA, MAAA
Associate Actuary
Bartel Associates, LLC
November 18, 2021

