

BARTEL
ASSOCIATES, LLC

Retiree Healthcare Plan

Actuarial Valuation as of July 1, 2021 For Fiscal Years 2021/22 & 2022/23 Funding Information

March 2022

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

ACTUARIAL VALUATION CERTIFICATION

This report presents the July 1, 2021 actuarial valuation for the County of Marin Retiree Healthcare Plan (“Plan”). The purpose of this valuation is to:

- determine the Plan benefit obligations and funded status as of July 1, 2021, and
- calculate the County’s 2021/22 & 2022/23 fiscal year Actuarially Determined Contributions for the Plan.

Use of this valuation for other purposes may not be appropriate.

This report includes the following sections:

- Section 1 presents a staff summary of the valuation results.
- Section 2 provides the results of the actuarial valuation.
- Sections 3, 4, 5 and 6 summarize the census data, premium rates, Plan provisions, funding method, and actuarial assumptions that form the basis for this valuation.

This report presents Bartel Associates’ valuation of the County of Marin Retiree Healthcare Plan in accordance with accepted actuarial principles. Future valuations may differ significantly if the Plan’s experience differs from our assumptions, if there are changes in plan design, actuarial methods or actuarial assumptions, or because of changes that may occur as part of the natural progression of the plan. 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. The project scope did not include an analysis of this potential variation.

We have relied on plan information, demographic and premium information supplied by the County and Marin County Employees’ Retirement Association, which has been reviewed for general reasonableness, but not audited.

The undersigned are members of the American Academy of Actuaries and meet Academy Qualification Standards to render the actuarial results and opinions in this report.

Respectfully submitted,
Bartel Associates, LLC



Marilyn M. Oliver, FSA, FCA, MAAA
Vice President and Actuary



Bianca Lin, FSA, EA, FCA, MAAA
Assistant Vice President and Actuary



Tak Frazita, FSA, EA, FCA, MAAA
Associate Actuary

March 2022

TABLE OF CONTENTS

<u>Section</u>		<u>Page</u>
1	Staff Summary	1
2	Actuarial Valuation Results	4
3	Demographic Information	13
4	Premium Rates	18
5	Plan Provisions	22
6	Actuarial Methods and Assumptions and Data	23

Actuarial and Accounting Terminology Used in this Report

- AAL – Actuarial Accrued Liability
- ADC – Actuarially Determined Contribution
- EAN – Entry Age Normal Cost Method
- GASBS 75 – Governmental Accounting Standards Board Statement No. 75
- NC – Normal Cost
- OPEB – Other (than pensions) Post-Employment Benefits
- PVPB – Present Value of Projected Benefits
- UAAL – Unfunded Actuarial Accrued Liability

SECTION 1 STAFF SUMMARY

Plan Provisions

Under the current practice, the County allows eligible service and disability retirees and their dependents to continue health coverage in the County's medical and dental plans. The County pays a portion of the premiums based on date of hire.

- Plan 1: For retirees hired before October 1, 1987, the County pays 100% of the eligible retiree's single health plan premiums, and Medicare Part B premiums.
- Plan 2: For retirees hired between October 1, 1987 and September 30, 1993, the County pays the retiree's single health plan premiums up to \$2,275 per year.
- Plan 3: For retirees hired between October 1, 1993 and December 31, 2007, the County pays a percentage of the retiree's single premium up to a dollar cap based on years of service at retirement, where the dollar cap is reviewed each year. Through January 1, 2007, the cap was increased to cover single Anthem Blue Cross Prudent Buyer Classic and Delta Dental premiums. Due to the amount of unfunded liability the County faces, the Board of Supervisors implemented a policy to limit annual increases in the maximum allocation for Plan 3 to no more than 3%, subject to annual approval regarding whether any increase will be granted and, if so, the amount of the increase. Cap increases were 3% effective January 1, 2008 and January 1, 2009. No cap increases have been adopted since that time and the Plan 3 Cap remains \$8,853 per year. The most recent action by the Board of Supervisors was on October 26, 2021 when it approved no change to the Plan 3 Cap for 2022.
- Plan 4: For retirees hired on or after January 1, 2008, the County pays \$150 per year of service up to \$3,000 per year for the retiree's single health plan premiums only.

At retirement, retirees eligible for Plans 1 and 2 may elect Plan 3 instead; and retirees eligible for Plans 1, 2, or 3 may elect Plan 4 instead. Plan selections may not be changed after retirement. Retirees eligible for Plan 1 are eligible for Part B premium reimbursement even after electing another Plan.

Beginning in 2019, and subject to the plan provisions above, Medicare Part A premiums are paid for retirees not eligible for premium-free Part A so that they can be enrolled in Medicare Advantage plans. In addition, Part B penalties for delayed enrollment are paid for certain retirees.

Medical coverage is provided through Kaiser, Western Health Advantage HMO and Teamsters Anthem PPO for non-Medicare retirees; and Kaiser Senior Advantage and UnitedHealthcare Medicare Advantage PPO for Medicare retirees. Premiums for all medical plans are the same for employees and retirees not eligible for Medicare. This premium structure results in subsidies of retiree claim costs from premiums paid for employees by the County. This implicit subsidy is included in the County post-retirement healthcare calculations.

SECTION 1
STAFF SUMMARY

Funding Policy

The County currently contributes the prefunding contribution to the CalPERS California Employers' Retiree Benefit Trust (CERBT) Fund with Asset Allocation Strategy 1.

Changes since the Prior Valuation

- Assumed long-term general inflation was lowered from 2.75% to 2.50%, lowering assumed aggregate payroll increase and healthcare cost increase trends.
- The future mortality improvement scale was updated to a newer scale (MP-2021) developed by the Society of Actuaries.
- Demographic assumptions were updated to reflect the June 30, 2020 experience study conducted by the Marin County Employees' Retirement Association (MCERA).
- Participation and spouse coverage assumptions were updated.
- Beginning with the 2021/22 actuarially determined contribution, the amortization period for the Unfunded Actuarial Accrued Liability was lowered from a closed 21-year period to a closed 15-year period.

Results

The July 1, 2021 benefit obligations and the 2021/22 Plan cost are as follows using a 5.50% interest rate, based on the assumption that the County will contribute the full Actuarially Determined Contribution. (Amounts in 000's)

	<u>July 1, 2021</u>
■ Present Value of Projected Benefits (PVPB)	\$303,013
The Present Value of Projected Benefits is a measure of the total County obligation for expected retiree healthcare benefits due to both past and future service for current employees and retirees.	
■ Actuarial Accrued Liability (AAL)	273,773
The Actuarial Accrued Liability is a measure of the County obligation for benefits earned in or allocated to past service.	
■ Plan Assets	165,941
Plan Assets include funds that have been segregated and restricted in a trust so that they can only be used to pay plan benefits.	
■ Unfunded Actuarial Accrued Liability (UAAL)	107,832
The Unfunded Actuarial Accrued Liability is the excess of the AAL over Plan Assets. This represents the amount of the Actuarial Accrued Liability at the valuation date that must still be funded.	
■ Funded Ratio	60.6%

SECTION 1
STAFF SUMMARY

July 1, 2021

The Funded Ratio is the ratio of Plan Assets to the Actuarial Accrued Liability.

2021/22
Plan Cost

■ **Normal Cost (NC)**

\$3,757

The Normal Cost is the value of County-provided benefits expected to be earned in or allocated to the 2021/22 fiscal year.

■ **Actuarially Determined Contribution (ADC)**

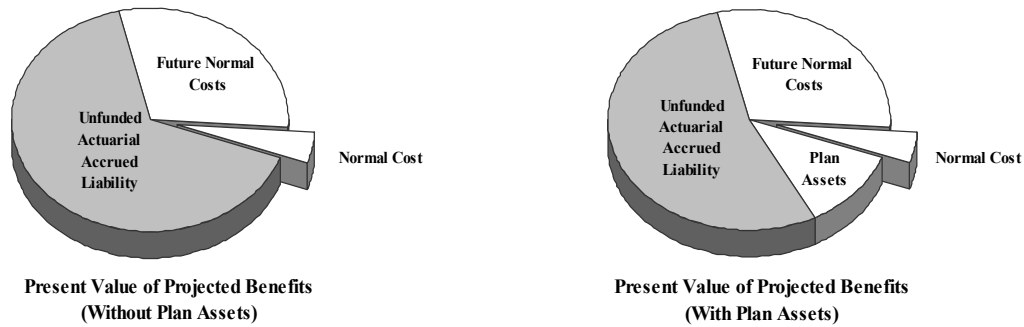
13,987

The Actuarially Determined Contribution is the sum of the Normal Cost, administrative expenses, and amortization of the Unfunded Actuarial Accrued Liability. It is determined as of the middle of the 2021/22 fiscal year.

SECTION 2 ACTUARIAL VALUATION RESULTS

Actuarial Obligations

This report develops the AAL and Normal Cost using the Entry Age Normal actuarial cost method. It is designed to produce a Normal Cost that, if all assumptions are met and the plan is not changed, will generally be a level percent of payroll. The following charts illustrate a sample PVPB, both with and without plan assets, with the shaded area representing the unfunded AAL:



- **The Present Value of Projected Benefits (PVPB)** is a measure of the total County obligation for expected retiree healthcare benefits due to both past and future service for current employees and retirees.
- **The Actuarial Accrued Liability (AAL)** is a measure of the County obligation for benefits earned or allocated to past service.
- **The Normal Cost (NC)** is the value of County-provided benefits expected to be earned or allocated to the current fiscal year determined as of the middle of the fiscal year.
- **Plan Assets** must be segregated in a trust for the sole purpose of paying Plan benefits in order to be considered Plan Assets for GASBS 75.
- **The Unfunded Actuarial Accrued Liability (UAAL)** is the difference between the AAL and the Plan Assets.
- **Expected Benefit Payments** are the County-paid retiree healthcare benefit payments for the current fiscal year. They include payments for current retirees and active employees expected to retire during the year.
- **The Actuarially Determined Contribution (ADC)** is the sum of the Normal Cost plus a 15-year level percent of pay amortization of the Unfunded Actuarial Accrued Liability (or less an amortization of excess assets) determined as of the middle of the fiscal year.
- An **Implicit Subsidy** exists when the premium for a group of employees is determined by aggregating the experience of the group.

SECTION 2
ACTUARIAL VALUATION RESULTS

Asset Reconciliation – Market Value of Assets
(amounts in 000's)

	<u>2019/20</u>	<u>2020/21</u>
■ Market Value of Assets (Beginning of Year)	\$115,337	\$124,580
• Contributions	5,000	7,000
• Disbursements ¹	-	-
• Administrative Expenses	(58)	(71)
• Investment Expenses	(42)	(52)
• Investment Earnings	<u>4,344</u>	<u>34,483</u>
■ Market Value of Assets (End of Year)	124,580	165,941

¹ Benefit payments paid directly by the County outside of the trust.

SECTION 2
ACTUARIAL VALUATION RESULTS

Benefit Obligations as of July 1, 2021
5.50% Interest Rate
(amounts in 000's)

■ Present Value of Benefits	
• Actives	\$129,031
• Retirees	<u>173,982</u>
• Total	303,013
■ Actuarial Accrued Liability	
• Actives	99,791
• Retirees	<u>173,982</u>
• Total	273,773
■ Market Value of Assets	<u>165,941</u>
■ Unfunded AAL @ 7/1/2021	107,832

SECTION 2
ACTUARIAL VALUATION RESULTS

Actuarially Determined Contribution (ADC) for 2021/22 and 2022/23²
5.50% Interest Rate
(amounts in 000's)

	<u>2021/22</u>	<u>2022/23</u>
■ ADC - \$		
• Normal Cost	\$3,757	\$3,628
• Projected Administrative Expenses	83	88
• UAAL Amortization	<u>10,147</u>	<u>9,656</u>
• ADC	13,987	13,372
■ Projected Payroll³	204,038	209,649
■ ADC - %		
• Normal Cost	1.8%	1.7%
• Projected Administrative Expenses	0.0%	0.0%
• UAAL Amortization	<u>5.0%</u>	<u>4.6%</u>
• ADC	6.9%	6.4%

Schedule of Unfunded Actuarial Accrued Liability Amortization Bases
(amounts in 000's)

	<u>2021/22</u>	<u>2022/23</u>
■ Outstanding Balance		
• 7/1/2021 Investment (gain)/loss	\$ (25,302)	\$ (25,924)
• Remaining UAAL	<u>133,134</u>	<u>129,265</u>
• Total	107,832	103,341
■ Amortization Payment⁴		
• 7/1/2021 Investment (gain)/loss	\$ (750)	\$ (1,540)
• Remaining UAAL	<u>10,897</u>	<u>11,196</u>
• Total	10,147	9,656

² Payable at middle of fiscal year.

³ Payroll projected using aggregate payroll increase assumption.

⁴ Amortized as a level percent of payroll over 15 years. Investment gain/loss includes a 3-year phase-in.

SECTION 2
ACTUARIAL VALUATION RESULTS

Comparison of July 1, 2019 and July 1, 2021 Valuations
(amounts in 000's)

	July 1, 2019	July 1, 2021
■ Interest Rate	5.50%	5.50%
■ Present Value of Benefits		
• Actives	\$159,913	\$129,031
• Retirees	<u>203,490</u>	<u>173,982</u>
• Total	363,403	303,013
■ Actuarial Accrued Liability		
• Actives	118,101	99,791
• Retirees	<u>203,490</u>	<u>173,982</u>
• Total	321,591	273,773
■ Assets	<u>115,337</u>	<u>165,941</u>
■ Unfunded AAL	206,254	107,832
■ Funded Ratio	35.9%	60.6%
	2019/20	2021/22
■ ADC - \$		
• Normal Cost	\$ 5,379	\$ 3,757
• Projected Administrative Expenses	59	83
• UAAL Amortization	<u>11,936</u> ⁵	<u>10,147</u> ⁶
• ADC	17,374	13,987
■ Projected Payroll ⁷	197,524	204,038
■ ADC - %		
• Normal Cost	2.7%	1.8%
• Projected Administrative Expenses	0.0%	0.0%
• UAAL Amortization	<u>6.0%</u>	<u>5.0%</u>
• ADC	8.8%	6.9%

⁵ Amortized as a level percent of payroll over closed 30-year period beginning 2012/13. As of 7/1/2019, 23 years remaining. Investment gain/loss includes a 3-year phase-in.

⁶ Amortized as a level percent of payroll over closed 15-year period beginning 2021/22. Investment gain/loss includes a 3-year phase-in.

⁷ Payroll projected using aggregate payroll increase assumption.

SECTION 2
ACTUARIAL VALUATION RESULTS

Actuarial Gains/Losses
(amounts in 000's)

The impacts on the Unfunded Actuarial Accrued Liability of experience gains and losses as well as assumption and method changes are shown below.

- Factors decreasing the Actuarial Accrued Liability included:
 - Lower 2021 and 2022 premiums and claims than anticipated
 - No increases to the Plan 3 cap for 2021 or 2022
 - Removal of PPACA Cadillac Tax due to its repeal and age/gender based subsidy (implicit subsidy) for Medicare Advantage plans
 - Lower general inflation assumed
 - Updating the mortality projection scale
- Factors increasing the Actuarial Accrued Liability included:
 - Updated MCERA demographic assumptions, spouse coverage assumption, and participation assumption

	<u>AAL</u>	<u>(Assets)</u>	<u>UAAL</u>
■ Actual – 7/1/2019	\$321,591	\$(115,337)	\$206,254
■ Expected – 7/1/2021	340,476	(136,417)	204,059
■ Experience (Gains)/Losses			
• Contribution (gain)/loss	-	(2,832)	(2,832)
• Actual vs. expected benefit payments		(1,390)	(1,390)
• Investment (gain)/loss	-	(25,302)	(25,302)
• Demographic & other	(6,633)	-	(6,633)
• Premium and Claims (gain)/loss	(14,925)	-	(14,925)
• Plan 3 cap	(8,220)	-	(8,220)
• Total	(29,778)	(29,524)	(59,302)
■ Assumptions and Method Changes			
• PPACA Cadillac Tax removed	(5,611)	-	(5,611)
• Age/gender based implicit subsidy for Medicare Advantage plans removed	(24,481)	-	(24,481)
• MCERA demographic assumptions	1,551	-	1,551
• Mortality projection scale	(2,902)	-	(2,902)
• General inflation	(6,183)	-	(6,183)
• Spouse coverage	476	-	476
• Participation	225	-	225
• Total	(36,925)	-	(36,925)
■ Total Change	(66,703)	(29,524)	(96,227)
■ Actual – 7/1/2021	273,773	(165,941)	107,832

SECTION 2
ACTUARIAL VALUATION RESULTS

Benefit Payment Projection
(amounts in 000's)

Fiscal Year	Estimated Cash Benefit Payments	Implicit Subsidy Benefit Payments	Total
2021/22	\$12,241	\$ 984	\$13,225
2022/23	12,691	1,087	13,778
2023/24	13,348	1,159	14,507
2024/25	13,943	1,160	15,103
2025/26	14,552	1,225	15,777
2026/27	15,181	1,314	16,495
2027/28	15,765	1,340	17,105
2028/29	16,358	1,387	17,745
2029/30	16,892	1,340	18,232
2030/31	17,401	1,419	18,820

SECTION 2
ACTUARIAL VALUATION RESULTS

Interest Rate Sensitivity
July 1, 2021
(amounts in 000's)

■ Interest Rate	<u>4.50%</u>	<u>5.50%</u>	<u>6.50%</u>
■ Present Value of Benefits			
• Actives	\$158,183	\$129,031	\$106,672
• Retirees	<u>192,899</u>	<u>173,982</u>	<u>158,077</u>
• Total	351,082	303,013	264,749
■ Actuarial Accrued Liability			
• Actives	117,661	99,791	85,334
• Retirees	<u>192,899</u>	<u>173,982</u>	<u>158,077</u>
• Total	310,560	273,773	243,411
■ Assets	<u>165,941</u>	<u>165,941</u>	<u>165,941</u>
■ Unfunded AAL	144,619	107,832	77,470
■ 2021/22 ADC - \$			
• Normal Cost	\$ 4,862	\$ 3,757	\$ 2,927
• Projected Administrative Expenses	83	83	83
• UAAL Amortization ⁸	<u>12,302</u>	<u>10,147</u>	<u>8,175</u>
• ADC	17,247	13,987	11,185
■ 2021/22 Projected Payroll	204,038	204,038	204,038
■ 2021/22 ADC - %			
• Normal Cost	2.4%	1.8%	1.4%
• Projected Administrative Expenses	0.0%	0.0%	0.0%
• UAAL Amortization	<u>6.0%</u>	<u>5.0%</u>	<u>4.0%</u>
• ADC	8.5%	6.9%	5.5%

⁸ Amortized as a level percent of payroll over 15 years. Investment gain/loss includes a 3-year phase-in.

SECTION 2
ACTUARIAL VALUATION RESULTS

Healthcare Trend Sensitivity

July 1, 2021
(amounts in 000's)

Healthcare Trend	-1%	Current Healthcare Trend	+1%
■ Present Value of Benefits			
• Actives	\$115,755	\$129,031	\$134,130
• Retirees	<u>162,384</u>	<u>173,982</u>	<u>184,359</u>
• Total	278,139	303,013	318,489
■ Actuarial Accrued Liability			
• Actives	89,453	99,791	103,287
• Retirees	<u>162,384</u>	<u>173,982</u>	<u>184,359</u>
• Total	251,837	273,773	287,646
■ Assets	<u>165,941</u>	<u>165,941</u>	<u>165,941</u>
■ Unfunded AAL	85,896	107,832	121,705
■ 2021/22 ADC - \$			
• Normal Cost	\$ 3,421	\$ 3,757	\$ 3,912
• Projected Administrative Expenses	83	83	83
• UAAL Amortization ⁹	<u>8,352</u>	<u>10,147</u>	<u>11,283</u>
• ADC	11,856	13,987	15,278
■ 2021/22 Projected Payroll	204,038	204,038	204,038
■ 2021/22 ADC - %			
• Normal Cost	1.7%	1.8%	1.9%
• Projected Administrative Expenses	0.0%	0.0%	0.0%
• UAAL Amortization	<u>4.1%</u>	<u>5.0%</u>	<u>5.5%</u>
• ADC	5.8%	6.9%	7.5%

⁹ Amortized as a level percent of payroll over 15 years. Investment gain/loss includes a 3-year phase-in.

SECTION 3
DEMOGRAPHIC INFORMATION

Participant Statistics – July 1, 2021

	Miscellaneous	Safety	Total
Actives			
Count	1,646	350	1,996
Average Age	47.4	40.3	46.1
Average Service	9.5	11.2	9.8
Average Pay	\$97,855	\$122,768	\$102,223
Total Pay (000's)	161,069	42,969	204,038
Retirees			
Count	1,405	332	1,737
Average Age	73.8	65.8	72.2

Participant Statistics – July 1, 2019

	Miscellaneous	Safety	Total
Actives			
Count	1,691	366	2,057
Average Age	48.0	40.6	46.7
Average Service	9.5	11.4	9.9
Average Pay	\$93,634	\$109,437	\$96,443
Total Pay (000's)	157,680	39,835	197,515
Retirees			
Count	1,365	312	1,677
Average Age	73.4	65.5	71.9

SECTION 3
DEMOGRAPHIC INFORMATION

Medical Coverage – July 1, 2021

Medical Plan	Employees	Retirees Under 65	Retirees 65+	Total
Kaiser Plan L	1,015	177	759	1,951
Kaiser Plan S	558	49	51	658
Kaiser – Out of State	-	7	29	36
Western Health Advantage 15C HMO	15	-	-	15
Western Health Advantage 25C HMO	11	-	-	11
Teamsters Anthem PPO	188	102	3	293
UnitedHealthcare Medicare Advantage PPO	-	-	383	383
Waived	209	42	135	386
Total	1,996	377	1,360	3,733

Plan Coverage – July 1, 2021

Plan	Plan 1	Plan 2	Plan 3	Plan 4	Self-Paying¹⁰	Total
Retirees	611	12	989	37	88	1,737
Actives	9	49	607	1,331	-	1,996

Medical Coverage – July 1, 2019

Medical Plan	Employees	Retirees Under 65	Retirees 65+	Total
Kaiser Plan L	1,062	204	731	1,997
Kaiser Plan S	584	42	35	661
Kaiser – Out of State	-	4	30	34
Western Health Advantage HMO	11	1	-	12
Teamsters Anthem PPO	153	88	5	246
UnitedHealthcare Medicare Advantage PPO	-	-	376	376
Waived	247	40	121	408
Total	2,057	379	1,298	3,734

Plan Coverage – July 1, 2019

Plan	Plan 1	Plan 2	Plan 3	Plan 4	Self-Paying¹¹	Total
Retirees	673	19	873	14	98	1,677
Actives	23	79	747	1,208	-	2,057

¹⁰ Includes surviving spouses and Plan 4 retirees with less than 5 years of service.

¹¹ Includes surviving spouses and Plan 4 retirees with less than 5 years of service.

SECTION 3
DEMOGRAPHIC INFORMATION

Miscellaneous Employees
Age & Service Distribution

July 1, 2021

Age	County Service							Total
	Under 1	1-4	5-9	10-14	15-19	20-24	25 & Over	
Under 25	7	12	-	-	-	-	-	19
25-29	28	70	7	-	-	-	-	105
30-34	25	121	46	2	1	-	-	195
35-39	17	91	71	19	4	-	-	202
40-44	20	64	57	27	26	6	-	200
45-49	10	52	48	31	38	13	5	197
50-54	10	48	48	29	35	29	22	221
55-59	16	47	43	25	40	38	33	242
60-64	6	26	35	12	28	29	20	156
65 & Over	-	14	17	13	27	21	17	109
Total	139	545	372	158	199	136	97	1,646

SECTION 3
DEMOGRAPHIC INFORMATION

Safety Employees
Age & Service Distribution

July 1, 2021

Age	County Service							Total
	Under 1	1-4	5-9	10-14	15-19	20-24	25 & Over	
Under 25	3	5	-	-	-	-	-	8
25-29	6	41	6	-	-	-	-	53
30-34	9	14	30	2	-	-	-	55
35-39	1	14	27	15	3	-	-	60
40-44	-	3	10	13	30	4	-	60
45-49	3	4	3	6	18	20	-	54
50-54	1	2	-	2	5	14	17	41
55-59	1	-	2	1	2	2	3	11
60-64	-	-	1	-	1	1	1	4
65 & Over	-	1	-	1	-	1	1	4
Total	24	84	79	40	59	42	22	350

SECTION 3
DEMOGRAPHIC INFORMATION

All Employees
Age & Service Distribution

July 1, 2021

Age	County Service							Total
	Under 1	1-4	5-9	10-14	15-19	20-24	25 & Over	
Under 25	10	17	-	-	-	-	-	27
25-29	34	111	13	-	-	-	-	158
30-34	34	135	76	4	1	-	-	250
35-39	18	105	98	34	7	-	-	262
40-44	20	67	67	40	56	10	-	260
45-49	13	56	51	37	56	33	5	251
50-54	11	50	48	31	40	43	39	262
55-59	17	47	45	26	42	40	36	253
60-64	6	26	36	12	29	30	21	160
65 & Over	-	15	17	14	27	22	18	113
Total	163	629	451	198	258	178	119	1,996

**SECTION 4
PREMIUM RATES**

2021 Monthly Premium Rates

Actives

Plan	Single	2-Party	Family
Kaiser Plan L HMO	\$812.24	\$1,624.48	\$2,160.56
Kaiser Plan S HMO	733.72	1,467.44	1,951.70
Western Health Advantage 15C HMO	741.63	1,483.27	1,972.74
Western Health Advantage 25C HMO	697.14	1,394.27	1,854.38
Teamsters Anthem PPO	827.31	1,660.62	2,322.47

Retirees

Plan	Non-Medicare			Medicare		
	Single	2-Party	Family	Single	2-Party	Family
Kaiser Plan L HMO ¹²	\$812.24	\$1,624.48	\$2,160.56	\$373.98	\$747.96	n/a
Kaiser Plan S HMO ¹³	733.72	1,467.44	1,951.70	271.69	543.38	n/a
Western Health Advantage 15C HMO	741.63	1,483.27	1,972.74	n/a	n/a	n/a
Western Health Advantage 25C HMO	697.14	1,394.27	1,854.38	n/a	n/a	n/a
Teamsters Anthem PPO	827.31	1,660.62	2,322.47	n/a	n/a	n/a
UnitedHealthcare Medicare Advantage PPO	n/a	n/a	n/a	410.71	821.42	n/a

Delta Dental 2021 monthly premiums are \$52.67 for single coverage, \$99.33 for 2-party coverage and \$156.04 for family coverage.

Medicare Part A monthly premiums for those not eligible for premium-free Medicare Part A are \$471 for those with fewer than 30 quarters of Medicare-covered employment and \$259 for those with 30-39 quarters of Medicare-covered employment, subject to late enrolment penalty.

Medicare Part B monthly premium is \$148.50 for most people (varies by income and subject to late enrollment penalty).

¹² With Senior Advantage for Medicare.

¹³ With Senior Advantage for Medicare.

**SECTION 4
PREMIUM RATES**

2022 Monthly Premium Rates

Actives

Plan	Single	2-Party	Family
Kaiser Plan L HMO	\$852.75	\$1,705.50	\$2,268.31
Kaiser Plan S HMO	770.37	1,540.74	2,049.18
Western Health Advantage 15C HMO	741.63	1,483.27	1,972.74
Western Health Advantage 25C HMO	697.14	1,394.27	1,854.38
Teamsters Anthem PPO	860.40	1,726.80	2,415.13

Retirees

Plan	Non-Medicare			Medicare		
	Single	2-Party	Family	Single	2-Party	Family
Kaiser Plan L HMO ¹⁴	\$852.75	\$1,705.50	\$2,268.31	\$373.23	\$746.46	n/a
Kaiser Plan S HMO ¹⁵	770.37	1,540.74	2,049.18	271.20	542.40	n/a
Western Health Advantage 15C HMO	741.63	1,483.27	1,972.74	n/a	n/a	n/a
Western Health Advantage 25C HMO	697.14	1,394.27	1,854.38	n/a	n/a	n/a
Teamsters Anthem PPO	860.40	1,726.80	2,415.13	n/a	n/a	n/a
UnitedHealthcare Medicare Advantage PPO	n/a	n/a	n/a	402.50	805.00	n/a

Delta Dental 2022 monthly premiums are \$52.67 for single coverage, \$99.33 for 2-party coverage and \$156.04 for family coverage.

Medicare Part A monthly premiums for those not eligible for premium-free Medicare Part A are \$499 for those with fewer than 30 quarters of Medicare-covered employment and \$274 for those with 30-39 quarters of Medicare-covered employment, subject to late enrolment penalty.

Medicare Part B monthly premium is \$170.10 for most people (varies by income and subject to late enrollment penalty).

¹⁴ With Senior Advantage for Medicare.

¹⁵ With Senior Advantage for Medicare.

**SECTION 4
PREMIUM RATES**

Medical Plan Summaries

	Kaiser Plan L HMO	Kaiser Plan S HMO	Western Health Advantage 15C HMO	Western Health Advantage 25C HMO	Teamsters Anthem PPO
	Network	Network	Network	Network	Network
Calendar Year Deductible	None	None	None	None	\$250/member \$500/family
Annual Out-of-Pocket Maximums	\$1,500/ member \$3,000/family	\$1,500/ member \$3,000/family	\$1,500/ member \$3,000/family	\$1,500/ member \$3,000/family	\$2,000/ member \$2,000/family
Hospital					
Inpatient Services	No charge	No charge	No charge	No charge	20%
Outpatient Surgery	\$5/procedure	\$25/procedure	\$15/procedure	\$25/procedure	20%
Physician Services					
Physician Office Visit	\$5/visit	\$25/visit	\$15/visit	\$25/visit	\$20/visit
Preventive Care	No charge	No charge	No charge	No charge	No charge
Diagnostic X-Ray and Lab	No charge	No charge	\$15/visit	None	20%
Ambulance Service	\$50/trip	\$50/trip	No charge		20%
Emergency	\$50/visit	\$50/visit	\$75/visit	\$50/visit	20%
Prescription Drugs ¹⁶					
	\$5/generic \$5/brand	\$10/generic \$25/brand	\$5/generic \$20/brand	\$10/generic \$25/brand	\$10/generic \$20/brand

¹⁶ Up to 100-day supply for Kaiser Plan L, Teamsters Anthem PPO. Up to 30 day supply for Kaiser Plan S and Western Health Advantage Plans

**SECTION 4
PREMIUM RATES**

Medical Plan Summaries

	Kaiser Plan L Senior Advantage	Kaiser Plan S Senior Advantage	UHC Medicare Advantage PPO
	Network	Network	Network
Calendar Year Deductible	None	None	None
Annual Out-of-Pocket Maximums	\$1,500/member \$3,000/family	\$1,500/member \$3,000/family	\$1,500
Hospital			
Inpatient Services	No charge	No charge	No charge
Outpatient Surgery	\$5/procedure	\$25/procedure	\$5/procedure
Physician Services			
Physician Office Visit	\$5/visit	\$25/visit	\$5/visit
Preventive Care	No charge	No charge	No charge
Diagnostic X-Ray and Lab	No charge	No charge	\$5/visit
Ambulance Service	\$50/trip	\$50/trip	No charge
Emergency	\$50/visit	\$50/visit	\$75/visit
Prescription Drugs ¹⁷	\$5/generic \$5/brand	\$10/generic \$25/brand	\$5/generic \$20/pref-brand

¹⁷ Up to 100 days for Kaiser L and 30 days for Kaiser S, UHC: 30 days retail, 90 days mail-order

SECTION 5
PLAN PROVISIONS

Benefits

Under current practice, the County allows eligible service and disability retirees and their dependents to continue health coverage in the County’s medical and dental plans. The County pays a portion of the premiums based on date of hire. Retirees must retire directly from the County, have 5 years of County service, and continuity of coverage to be eligible. Retirees are not eligible for open enrollment and those waiving coverage may not re-enroll.

	Plan 1	Plan 2	Plan 3	Plan 4
Eligibility	Hired before 10/1/87	Hired between 10/1/87 and 9/30/93	Hired between 10/1/93 and 12/31/07	Hired on or after 1/1/08 and at least 5 years continuous coverage under the same medical plan
Benefits	The County pays 100% of the retiree’s single health plan premiums, and Medicare Part B premiums.	The County pays the retiree’s single health plan premiums up to \$2,275 per year.	The County pays a percentage of the retiree’s single premium (and those for spouses of eligible retiree’s with 30 years of service) up to a dollar cap (\$8,853 per year from 2009 through 2022) based on years of service at retirement ¹⁸	The County pays \$150 per year of service up to \$3,000 per year for the retiree’s single health plan premiums only.

- The Plan 3 dollar cap is reviewed each year. Through January 1, 2007, the cap was increased to cover single Anthem Blue Cross Prudent Buyer Classic and Delta Dental premiums. Due to the amount of unfunded liability the County faces, the Board has implemented a policy to limit annual increases in the maximum allocation for Plan 3 to no more than 3%, subject to annual approval regarding whether any increase will be granted and, if so, the amount of the increase. The last cap increase was at 3% on January 1, 2009.
- Retirees eligible for Plans 1 and 2 may elect Plan 3 instead; and retirees eligible for Plans 1, 2, or 3 may elect Plan 4 instead. Retirees eligible for Plan 1 are eligible for Medicare Part B premium reimbursement even after electing another Plan.
- Beginning in 2019, Medicare Part A premiums, subject to plan provisions above, are paid for retirees not eligible for premium-free Part A when they enroll in a Medicare Advantage plan. In addition, Part B penalties for delayed enrollment are paid for certain retirees.

The County also implicitly subsidizes a portion of retirees’ benefits because non-Medicare retirees are charged the same premiums as employees. Under Actuarial Standard of Practices, the value of the implicit subsidy must be included in the County’s ADC and AAL calculations.

The County also provides retirees with 20 years of service \$10,000 of life insurance and, on an 8-year phase-out basis, continuance of supplemental life coverage.

¹⁸ 100% for 20 years of service, prorated for those with less than 20 years of service.

SECTION 6
ACTUARIAL METHODS AND ASSUMPTIONS AND DATA

Data

Results were based on the demographic data as of July 1, 2021 provided by the County and MCERA. Data has been reviewed for reasonability but not audited.

Actuarial Methods

Actuarial Cost Method

The actuarial cost method used for this valuation is the Entry Age Normal (EAN) cost method. Under the EAN cost method, the plan's Normal Cost is developed as a level percent of payroll payable throughout the participant's working lifetime. The Actuarial Accrued Liability (AAL) is the cumulative value, on the valuation date, of prior Normal Costs. For retirees, the AAL is the present value of all projected benefits.

Amortization of Unfunded AAL

The remaining unfunded AAL is amortized over a closed 15-year period as a level percentage of payroll from July 1, 2021 with a 3-year contribution phase-in for investment gains and losses.

Actuarial Value of Assets

Market value of assets

Actuarial Assumptions – Economic Assumptions

Interest (Discount) Rate

5.50%, assuming that the County continues to prefund with CERBT Asset Allocation Strategy 1 (49% global equity, 23% fixed income (5% long US treasuries, 5% mortgage-backed securities, 4% investment grade corporates, 4% high yield, 5% sovereigns), 5% TIPS, 20% REITs, and 3% commodities). The 5.50% assumption is based on a median long-term rate of return net of investment expenses of 6.25% with a margin for adverse deviation of 0.75%. Capital market real rates of return underlying the 6.25% rate are 4.6% global equity, 0.3% long US treasuries, 0.5% mortgage-backed securities, 1.6% investment grade corporates, 3.0% high yield, 2.8% sovereigns), -0.1% TIPS, 1.2% commodities, and 4.1% REITs and are based on a study of investment consultant and investment bank 2021 capital market short and long-term assumptions. Also considered in setting fixed income returns were Social Security long-term return projections.

CERBT Administrative Expenses

0.05% of trust balance included in the ADC

Inflation

Assumed to increase 2.50% per annum over the long-term.
(Prior assumption – Assumed to increase 2.75% per annum over the long-term.)

Aggregate Payroll

Assumed to increase 2.75% per annum. (Used to amortize unfunded AAL.)
(Prior assumption – Assumed to increase 3.00% per annum.)

SECTION 6
ACTUARIAL METHODS AND ASSUMPTIONS AND DATA

Plan 3 Cap Trend Rate

Assumed to increase at 3.00% per year

Dental Care Cost Trend Rate

Assumed to increase at 3.50% per year.

(Prior assumption – Assumed to increase at 3.75% per year.)

Medical Care Cost Trend Rates

Based on initial rates provided by Axene Health Partners, with long-term rates calculated using the Society of Actuaries Getzen Model.

Year	Current Assumption				Prior Assumption		
	Non-Medicare	Medicare	Kaiser Senior Advantage	Medicare Part A & B Premiums	Non-Medicare	Medicare	Medicare Part A & B Premiums
2021	n/a	n/a	n/a	n/a	7.25%	6.30%	4.40%
2022	n/a	n/a	n/a	n/a	7.00%	6.10%	5.10%
2023	6.50%	5.65%	4.60%	5.65%	6.75%	5.90%	5.90%
2024	6.25%	5.45%	4.45%	5.45%	6.50%	5.70%	5.70%
2025	6.00%	5.25%	4.35%	5.25%	6.25%	5.50%	5.50%
2026	5.75%	5.05%	4.25%	5.05%	6.00%	5.30%	5.30%
2027	5.55%	4.90%	4.20%	4.90%	5.80%	5.15%	5.15%
2028	5.35%	4.75%	4.15%	4.75%	5.60%	5.00%	5.00%
2029	5.15%	4.60%	4.10%	4.60%	5.40%	4.85%	4.85%
2030	4.95%	4.45%	4.05%	4.45%	5.20%	4.70%	4.70%
2031-35	4.80%	4.35%	4.00%	4.35%	5.05%	4.60%	4.60%
2036-45	4.65%	4.25%	3.95%	4.25%	4.90%	4.50%	4.50%
2046-55	4.50%	4.20%	3.90%	4.20%	4.75%	4.45%	4.45%
2056-65	4.35%	4.15%	3.85%	4.15%	4.60%	4.40%	4.40%
2066-75	4.05%	3.95%	3.80%	3.95%	4.30%	4.20%	4.20%
2076+	3.75%	3.75%	3.75%	3.75%	4.00%	4.00%	4.00%

Patient Protection and Affordable Care Act (PPACA) Cadillac Tax

Not valued. Repealed

(Prior assumption – Assumed to increase employer costs by 2% of the cash benefit costs.)

SECTION 6
ACTUARIAL METHODS AND ASSUMPTIONS AND DATA

Monthly Claims Costs

Monthly claims costs are based on the monthly premium rates reported by the County for 2022 by health plan and covered population..

Age-/gender-dependent rates were developed using the monthly premium rates, supporting demographics, and benefit values for each plan. Benefit values were determined using Axene Health Partners, LLC’s proprietary actuarial value model. Member cost-sharing was evaluated for each age/gender cell for each plan design.

Demographics for the Kaiser pre-Medicare retiree plans reflect the full plan pool as reported in Kaiser’s renewal material. For the other plans, we used plan-specific demographics as reported by the County.

Age	2022 Age/Gender Claims Costs					
	Kaiser Plan L Non-Medicare		Kaiser Plan S Non-Medicare		Teamsters Anthem PPO Non-Medicare	
	Male	Female	Male	Female	Male	Female
30	\$419	\$702	\$376	\$635	\$383	\$652
35	451	695	405	627	414	645
40	504	708	453	639	462	658
45	583	738	526	666	538	687
50	700	791	632	715	650	739
55	889	904	806	818	835	850
60	1,165	1,076	1,058	976	1,108	1,020
64	1,298	1,139	1,179	1,034	1,240	1,083

SECTION 6
ACTUARIAL METHODS AND ASSUMPTIONS AND DATA

Demographic Assumptions – Health Plans

Participation, Medical Plan Coverage, and Health Plan Election assumptions below were based on a study of experience between 2011 and 2021.

Percentage of Future Retirees Participating in Medical Plans

Plan	Current Assumption				Prior Assumption			
	<10	10-14	15-19	20+	<10	10-14	15-19	20+
Plan 1	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Plan 2/3	37.5%	85.0%	90.0%	100.0%	37.5%	85.0%	90.0%	100.0%
Plan 4	35.0%	40.0%	45.0%	55.0%	30.0%	37.5%	42.5%	55.0%

Percentage of Future Retirees Participating in Dental Plans

Plan	Current Assumption	Prior Assumption
Plan 1	97.5%	97.5%
Plan 2/3	95.0%	90.0%
Plan 4	95.0%	90.0%

Medical Plan Coverage after Retirement

Current Employees:

	Plan 1	Plan 2/3	Plan 4
Kaiser Plan L	60.0%	65.0%	60.0%
Kaiser Plan S	5.0%	15.0%	30.0%
Teamsters Anthem	35.0%	20.0%	10.0%
Total	100.0%	100.0%	100.0%

Teamsters Anthem participants assumed to elect UnitedHealthcare once Medicare eligible.

Current Retirees and Beneficiaries:

Current medical plan election. Annual open enrollment is only available for employees and does not apply to retirees.

Election of Plan 3 at Retirement by Currently Employed Plan 1 and 2 Members

Plan 1 members with 30 years' service and eligible spouses are assumed to elect Plan 3. All Plan 2 members are assumed to elect Plan 3.

Medicare Coverage

100% except 10% of those hired between July 1, 1967 and March 31, 1986 are assumed to be ineligible for premium-free Medicare Part A coverage.

Fewer than 30 quarters of Medicare-covered employment is assumed for those ineligible for premium-free Medicare Part A.

SECTION 6
ACTUARIAL METHODS AND ASSUMPTIONS AND DATA

The most common Medicare Part B premiums (\$148.50/month in 2021, \$170.10/month in 2022) are assumed for future Medicare enrollees.

Spouse Coverage

30 years of service at retirement: 80% of male retirees and 50% of female retirees cover a spouse.

All others: 35% of male retirees and 15% of female retirees cover a spouse.

Male members are assumed to be 3 years older than their spouses and female members are assumed to be 2 years younger than their spouses.

(Prior assumption –

30 years of service at retirement: 80% of male retirees and 50% of female retirees cover a spouse.

All others: 35% of male retirees and 20% of female retirees cover a spouse.

(Female spouse is assumed to be 3 years younger than male spouse.)

Supplemental Life Insurance

Based on current election.

SECTION 6
ACTUARIAL METHODS AND ASSUMPTIONS AND DATA

Demographic Assumptions –Turnover, Disablement, Salary Merit and Longevity Increases, Retirement, Mortality

Assumptions are based on the Marin County Employees’ Retirement Association 2017-2020 Experience Study except for the allowance for future mortality improvement, which is based on a more recent mortality projection scale (MP-2021) developed by the Society of Actuaries.

The prior assumptions (used in the 7/1/2019 valuation) were based on the Marin County Employees’ Retirement Association 2014-2017 Experience Study except for the allowance for future post-retirement mortality improvement, which was based on mortality projection scale MP-2018 developed by the Society of Actuaries. See July 1, 2019 actuarial valuation report for this plan for more details.

Miscellaneous Employees

Age	Withdrawal and Vested Termination (by service)								
	0	1	2	3	4	5	10	15	20+
25	14.00%	13.00%	12.00%	9.50%	8.25%	7.50%	5.00%	3.50%	0.00%
35	14.00%	13.00%	12.00%	9.50%	8.25%	7.50%	5.00%	3.50%	0.00%
55	14.00%	13.00%	12.00%	9.50%	8.25%	7.50%	0.00%	0.00%	0.00%

Age	Disability Ordinary – Male	Disability Ordinary – Female	Disability Duty – Male	Disability Duty – Female
25	0.0042%	0.0025%	0.0128%	0.0075%
35	0.0097%	0.0178%	0.0293%	0.0533%
55	0.0395%	0.0373%	0.1185%	0.1119%

Safety Employees

Age	Withdrawal and Vested Termination (by service)								
	0	1	2	3	4	5-9	10-14	15-19	20+
25	9.00%	7.00%	5.00%	5.00%	5.00%	2.24%	2.24%	2.24%	0.00%
35	9.00%	7.00%	5.00%	5.00%	5.00%	3.41%	3.41%	3.41%	0.00%
55	9.00%	7.00%	5.00%	5.00%	5.00%	0.09%	0.09%	0.09%	0.00%

Age	Disability Ordinary	Disability Duty
25	0.0000%	0.1404%
35	0.0000%	0.3828%
55	0.0000%	1.9020%

SECTION 6
ACTUARIAL METHODS AND ASSUMPTIONS AND DATA

Salary Merit and Longevity Increases

Assumptions based on the Marin County Employees' Retirement Association 2017-2020 Experience Study.

Service	Miscellaneous	Safety
0	6.00%	5.00%
1	6.00%	5.00%
2	5.00%	4.50%
3	4.00%	4.00%
4	3.00%	3.50%
5	2.25%	3.00%
6	1.75%	2.50%
7	1.40%	2.20%
8	1.20%	1.90%
9	1.00%	1.70%
10	0.85%	1.50%
11	0.75%	1.40%
12	0.75%	1.30%
13+	0.75%	1.25%

SECTION 6
ACTUARIAL METHODS AND ASSUMPTIONS AND DATA

Retirement Probabilities:

Age	Miscellaneous (by service)					
	Classic			PEPRA (2017 CalPERS 2%@62)		
	<20	20-29	30+	15	20	25
50	3.00%	3.00%	3.00%	n/a	n/a	n/a
51	3.00%	3.00%	3.00%	n/a	n/a	n/a
52	3.00%	3.00%	3.00%	1.20%	1.50%	1.90%
53	5.00%	5.00%	10.00%	1.40%	1.80%	2.10%
54	5.00%	5.00%	15.00%	1.50%	1.90%	2.30%
55	5.00%	10.00%	15.00%	2.80%	3.60%	6.10%
56	5.00%	10.00%	15.00%	3.80%	5.00%	7.50%
57	5.00%	10.00%	15.00%	3.90%	5.00%	7.40%
58	5.00%	10.00%	15.00%	4.80%	6.00%	7.30%
59	5.00%	10.00%	15.00%	5.10%	6.50%	9.20%
60	10.00%	10.00%	30.00%	7.10%	9.10%	11.10%
61	10.00%	10.00%	30.00%	7.90%	10.00%	12.10%
62	12.00%	20.00%	30.00%	10.40%	13.40%	16.40%
63	14.00%	20.00%	30.00%	13.40%	16.30%	19.20%
64	16.00%	20.00%	30.00%	12.90%	15.80%	18.70%
65	18.00%	20.00%	30.00%	17.30%	20.60%	23.90%
66	20.00%	30.00%	30.00%	21.20%	25.20%	29.20%
67	20.00%	30.00%	30.00%	21.20%	25.20%	29.20%
68	20.00%	30.00%	30.00%	19.30%	22.90%	26.50%
69	20.00%	30.00%	30.00%	19.30%	22.90%	26.50%
70	25.00%	30.00%	30.00%	19.30%	22.90%	26.50%
71	25.00%	30.00%	30.00%	19.30%	22.90%	26.50%
72	25.00%	30.00%	30.00%	19.30%	22.90%	26.50%
73	25.00%	30.00%	30.00%	19.30%	22.90%	26.50%
74	25.00%	30.00%	30.00%	19.30%	22.90%	26.50%
75	25.00%	30.00%	30.00%	100.00%	100.00%	100.00%
76	25.00%	30.00%	30.00%	100.00%	100.00%	100.00%
77	25.00%	30.00%	30.00%	100.00%	100.00%	100.00%
78	25.00%	30.00%	30.00%	100.00%	100.00%	100.00%
79	25.00%	30.00%	30.00%	100.00%	100.00%	100.00%
80+	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

SECTION 6
ACTUARIAL METHODS AND ASSUMPTIONS AND DATA

Age	Safety (by service)								
	Classic 3%@50			Classic 3%@55 (2017 CalPERS 3%@55)			PEPRA 2.7%@57 (2017 CalPERS 2.7%@57)		
	<20	20-29	30+	15	20	25	15	20	25
40-44	0.00%	3.00%	3.00%	n/a	0.00%	0.00%	n/a	n/a	n/a
45-48	0.00%	3.00%	3.00%	n/a	0.00%	0.00%	n/a	n/a	n/a
49	0.00%	15.00%	15.00%	n/a	0.00%	0.00%	n/a	n/a	n/a
50	5.00%	15.00%	50.00%	3.50%	3.50%	7.00%	5.00%	5.00%	5.00%
51	5.00%	10.00%	20.00%	2.80%	2.90%	6.50%	4.00%	4.00%	5.75%
52	5.00%	10.00%	20.00%	3.20%	3.90%	6.60%	3.80%	3.80%	5.80%
53	10.00%	10.00%	20.00%	2.80%	4.30%	7.50%	3.80%	3.80%	7.74%
54	10.00%	10.00%	20.00%	3.80%	7.40%	11.80%	3.80%	4.37%	9.31%
55	10.00%	25.00%	50.00%	7.00%	12.00%	17.50%	6.84%	9.12%	13.40%
56	10.00%	30.00%	50.00%	6.00%	11.00%	16.50%	6.27%	8.36%	12.28%
57	10.00%	35.00%	50.00%	6.00%	11.00%	16.50%	6.00%	8.00%	11.75%
58	10.00%	40.00%	50.00%	8.00%	10.00%	18.50%	8.00%	8.80%	13.75%
59	10.00%	45.00%	50.00%	9.50%	13.00%	18.50%	8.00%	9.20%	14.00%
60	50.00%	50.00%	50.00%	15.00%	15.00%	18.50%	15.00%	15.00%	15.00%
61	50.00%	50.00%	50.00%	12.00%	12.00%	16.00%	14.40%	14.40%	14.40%
62	50.00%	50.00%	50.00%	15.00%	15.00%	20.00%	15.00%	15.00%	15.00%
63	50.00%	50.00%	50.00%	15.00%	15.00%	20.00%	15.00%	15.00%	15.00%
64	50.00%	50.00%	50.00%	15.00%	15.00%	17.50%	15.00%	15.00%	15.00%
65+	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

SECTION 6
ACTUARIAL METHODS AND ASSUMPTIONS AND DATA

Pre-retirement Mortality:

Miscellaneous: Sex distinct Public 2010 General Employee Amount-Weighted Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2021, with no adjustments.

Safety: Sex distinct Public 2010 Safety Employee Amount-Weighted Above-Median Income Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2021, with no adjustments.

Post-retirement Mortality for Service Retirees:

Miscellaneous: Sex distinct Public 2010 General Healthy Retiree Amount-Weighted Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2021, with no adjustments.

Safety: Sex distinct Public 2010 Safety Healthy Retiree Amount-Weighted Above-Median Income Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2021, with no adjustments.

Post-retirement Mortality after Disabled:

Miscellaneous: Sex distinct Public 2010 General Disabled Retiree Amount-Weighted Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2021, with no adjustments.

Safety: Sex distinct Public 2010 Safety Disabled Retiree Amount-Weighted Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2021, adjusted by 95% for males with no adjustments for females.

Post-retirement Mortality for Beneficiaries:

Sex distinct Public 2010 Contingent Survivor Amount-Weighted Mortality Table, using General 2010 Healthy Retiree Amount-Weighted Mortality Table before age 45, with generational mortality improvements projected from 2010 using Projection Scale MP-2021, adjusted by 105% for females and no adjustments for males.

Sample life expectancies are shown below.

7/1/2021 Age	Miscellaneous				Safety			
	Service		Disability		Service		Disability	
	Male	Female	Male	Female	Male	Female	Male	Female
50	35.4	38.3	26.1	29.0	36.7	37.9	34.5	36.2
55	30.5	33.3	22.6	25.4	31.6	32.8	29.6	31.3
60	25.8	28.5	19.4	22.1	26.7	27.9	24.9	26.7
65	21.3	23.8	16.5	18.9	22.1	23.2	20.5	22.3
70	17.1	19.2	13.8	15.5	17.7	18.8	16.5	18.2
75	13.1	15.0	11.0	12.3	13.7	14.7	12.8	14.3
80	9.7	11.2	8.5	9.3	10.2	11.1	9.5	10.8
85	6.8	8.0	6.3	7.0	7.2	8.0	6.8	7.8