

BARTEL
ASSOCIATES, LLC

Retiree Healthcare Plan

Actuarial Valuation as of July 1, 2019 For Fiscal Years 2019/20 & 2020/21 Funding Information

January 2020

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ACTUARIAL VALUATION CERTIFICATION

This report presents the July 1, 2019 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, 2019, and
- calculate the County’s 2019/20 & 2020/21 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 or if there are changes in plan design, actuarial methods or actuarial assumptions. 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 MCERA, 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,
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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 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. 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 August 20, 2019 when it approved no change to the Plan 3 Cap for 2020.
- 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 implied subsidy is included in the County post-retirement healthcare calculations.

SECTION 1
STAFF SUMMARY

Funding Policy

Through the 2011/12 fiscal year, the County used pay-as-you-go funding in conjunction with contributions to a reserve intended to be used to fund the plan. The County transferred the reserve balance to the CalPERS California Employers' Retiree Benefit Trust (CERBT) Fund with Asset Allocation Strategy 2 and began contributing the prefunding contribution beginning in the 2012/13 fiscal year. The County changed their investment to Asset Allocation Strategy 1 in the 2014/15 fiscal year.

Changes since the Prior Valuation

- Under a new policy the County is now paying for Medicare Part A premiums, up to plan caps, for current retirees, and Medicare Part B late-enrollment penalties for all current and future retirees who are not eligible for premium-free Part A coverage so that they can be enrolled in Medicare Advantage plans.
- The County changed the medical plan carriers effective January 1, 2019. Western Health Advantage HMO, Teamsters Anthem PPO, and UnitedHealthcare Medicare Advantage PPO replaced Anthem Blue Cross PPO. A special open enrollment was implemented for affected retirees.
- The future mortality improvement scale was updated to a newer scale (MP-2018) developed by the Society of Actuaries.
- Demographic assumptions were updated to reflect the June 30, 2017 experience study conducted by the Marin County Employees' Retirement Association (MCERA).
- Participation and medical plan election assumptions were updated.

Results

The July 1, 2019 benefit obligations and the 2019/20 Plan cost are as follows using a 5.50% discount rate, based on the assumption that the County will contribute the full Actuarially Determined Contribution. (amounts in 000's):

	<u>July 1, 2019</u>
■ Present Value of Projected Benefits (PVPB)	\$ 363,403
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)	321,591
The Actuarial Accrued Liability is a measure of the County obligation for benefits earned in or allocated to past service.	
■ Plan Assets	115,337
Plan Assets include funds that have been segregated and restricted in a trust so that they can only be used to pay plan benefits.	

SECTION 1
STAFF SUMMARY

July 1, 2019

■ **Unfunded Actuarial Accrued Liability (UAAL)** 206,254

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** 35.9%

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

2019/20
Plan Cost

■ **Normal Cost (NC)** \$ 5,379

The Normal Cost is the value of County-provided benefits expected to be earned in or allocated to the 2019/20 fiscal year.

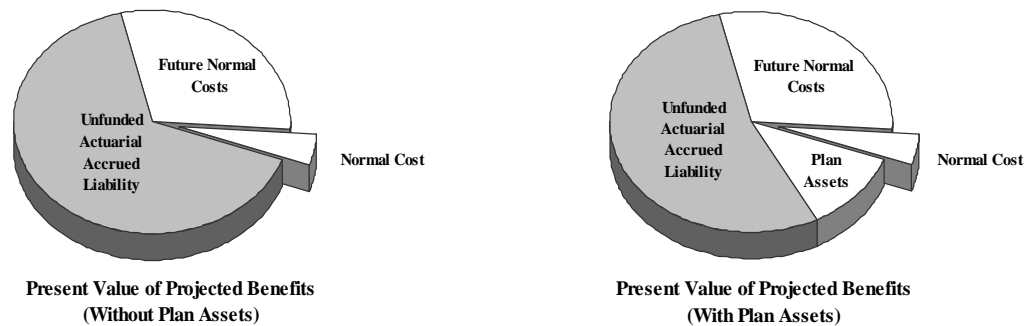
■ **Actuarially Determined Contribution (ADC)** 17,374

The Actuarially Determined Contribution is the sum of the Normal Cost, administrative expense, and amortization of the Unfunded Actuarial Accrued Liability. It is determined as of the middle of the 2019/20 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. It includes 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 23-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 **Implied 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>2017/18</u>	<u>2018/19</u>
■ Market Value of Assets (Beginning of Year)	\$ 84,626	\$ 99,995
• Contributions	8,802	9,100
• Disbursements ¹	-	-
• Investment Expenses	(33)	(36)
• Administrative Expenses	(45)	(50)
• Investment Earnings	<u>6,646</u>	<u>6,327</u>
■ Market Value of Assets (End of Year)	99,995	115,337

¹ Paid directly by the County outside of the trust.

SECTION 2
ACTUARIAL VALUATION RESULTS

Benefit Obligations as of July 1, 2019
5.50% Interest Rate
(amounts in 000's)

■ Present Value of Benefits	
• Actives	\$ 159,913
• Retirees	<u>203,490</u>
• Total	363,403
■ Actuarial Accrued Liability	
• Actives	118,101
• Retirees	<u>203,490</u>
• Total	321,591
■ Market Value of Assets	<u>115,337</u>
■ Unfunded AAL @ 7/1/2019	206,254

SECTION 2
ACTUARIAL VALUATION RESULTS

Actuarially Determined Contribution (ADC) for 2019/20 and 2020/21²
5.50% Interest Rate
(amounts in 000's)

	<u>2019/20</u>	<u>2020/21</u>
■ ADC - \$		
• Normal Cost	\$ 5,379	\$ 5,418
• Projected Administrative Expenses	59	64
• UAAL Amortization	<u>11,936</u>	<u>12,241</u>
• ADC	17,374	17,723
■ Projected Payroll³	197,524	203,450
■ ADC - %		
• Normal Cost	2.7%	2.7%
• Projected Administrative Expenses	0.0%	0.0%
• UAAL Amortization	<u>6.0%</u>	<u>6.0%</u>
• ADC	8.8%	8.7%

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

	<u>2019/20</u>	<u>2020/21</u>
■ Outstanding Balance		
• 7/1/2019 Investment (gain)/loss	\$ (2,564)	\$ (2,652)
• Remaining UAAL	<u>208,818</u>	<u>207,990</u>
• Total	206,254	205,338
■ Amortization Payment⁴		
• 7/1/2019 Investment (gain)/loss	\$ (52)	\$ (107)
• Remaining UAAL	<u>11,988</u>	<u>12,348</u>
• Total	11,936	12,241

² Payable at middle of fiscal year.

³ Payroll projected using aggregate payroll increase assumption.

⁴ Amortized as a level percent of payroll over 23 years. Investment gain/loss includes a 3-year phrase-in.

SECTION 2
ACTUARIAL VALUATION RESULTS

Comparison of July 1, 2017 and July 1, 2019 Valuations
(amounts in 000's)

	July 1, 2017	July 1, 2019
■ Interest Rate	<u>5.50%</u>	<u>5.50%</u>
■ Present Value of Benefits		
• Actives	\$ 178,631	\$ 159,913
• Retirees	<u>239,109</u>	<u>203,490</u>
• Total	417,740	363,403
■ Actuarial Accrued Liability		
• Actives	131,583	118,101
• Retirees	<u>239,109</u>	<u>203,490</u>
• Total	370,692	321,591
■ Assets	<u>84,626</u>	<u>115,337</u>
■ Unfunded AAL	286,066	206,254
■ Funded Ratio	22.8%	35.9%
	2017/18	2019/20
■ ADC - \$		
• Normal Cost	\$ 6,064	\$ 5,379
• Projected Administrative Expenses	44	59
• UAAL Amortization ⁵	<u>15,454</u>	<u>11,936</u>
• ADC	21,561	17,374
■ Projected Payroll⁶	186,192	197,524
■ ADC - %		
• Normal Cost	3.3%	2.7%
• Projected Administrative Expenses	0.0%	0.0%
• UAAL Amortization	<u>8.3%</u>	<u>6.0%</u>
• ADC	11.6%	8.8%

⁵ Amortized as a level percent of payroll over closed 30-year period beginning 2012/13. 25 years remaining 7/1/2017. 23 years remaining 7/1/2019. Investment gain/loss includes a 3-year phrase-in.

⁶ 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 2019 and 2020 premiums and claims than anticipated
 - No increases to the Plan 3 cap for 2019 or 2020
 - Medicare enrollment permitted for previously non-Medicare retirees
 - Updating the mortality projection scale and medical plan election assumptions
- Factors increasing the Actuarial Accrued Liability included:
 - Updated MCERA demographic assumptions and participation assumption

	<u>AAAL</u>	<u>(Assets)</u>	<u>UAAL</u>
■ Actual – 7/1/2017	\$ 370,692	\$ (84,626)	\$ 286,066
■ Expected – 7/1/2019	393,937	(108,627)	285,310
■ Experience (Gains)/Losses			
• Contribution (gain)/loss	-	(1,894)	(1,894)
• Actual vs. expected benefit payments		(2,252)	(2,252)
• Investment (gain)/loss	-	(2,564)	(2,564)
• Demographic & other	(1,439)	-	(1,439)
• Premium and Claims (gain)/loss	(46,637)	-	(46,637)
• Medicare enrollment of previously non-Medicare retirees	(12,764)	-	(12,764)
• Plan 3 cap	(9,549)	-	(9,549)
• Total	(70,389)	(6,710)	(77,099)
■ Assumptions and Method Changes			
• Mortality projection scale	(1,021)	-	(1,021)
• MCERA demographic assumptions	3,700	-	3,700
• Medicare participation	(5,143)	-	(5,143)
• Medical plan election	(430)	-	(430)
• Participation	937	-	937
• Total	(1,957)	-	(1,957)
■ Total Change	(72,346)	(6,710)	(79,056)
■ Actual – 7/1/2019	321,591	(115,337)	206,254

SECTION 2
ACTUARIAL VALUATION RESULTS

Benefit Payment Projection
(amounts in 000's)

Fiscal Year	Estimated Cash Benefit Payments	Implied Subsidy Benefit Payments	Total
2019/20	\$ 12,382	\$ 955	\$ 13,337
2020/21	12,997	1,027	14,024
2021/22	13,867	1,107	14,974
2022/23	14,800	1,240	16,040
2023/24	15,716	1,303	17,019
2024/25	16,573	1,361	17,934
2025/26	17,455	1,437	18,892
2026/27	18,388	1,549	19,937
2027/28	19,246	1,631	20,877
2028/29	20,092	1,697	21,789

SECTION 2
ACTUARIAL VALUATION RESULTS

Interest Rate Sensitivity
July 1, 2019
(amounts in 000's)

■ Interest Rate	4.50%	5.50%	6.50%
■ Present Value of Benefits			
• Actives	\$ 197,793	\$ 159,913	\$ 131,116
• Retirees	<u>227,822</u>	<u>203,490</u>	<u>183,220</u>
• Total	425,615	363,403	314,336
■ Actuarial Accrued Liability			
• Actives	140,257	118,101	100,350
• Retirees	<u>227,822</u>	<u>203,490</u>	<u>183,220</u>
• Total	368,079	321,591	283,570
■ Assets	<u>115,337</u>	<u>115,337</u>	<u>115,337</u>
■ Unfunded AAL	252,742	206,254	168,233
■ 2019/20 ADC - \$			
• Normal Cost	\$ 6,927	\$ 5,379	\$ 4,216
• Projected Administrative Expenses	59	59	59
• UAAL Amortization ⁷	<u>13,196</u>	<u>11,936</u>	<u>10,743</u>
• ADC	20,182	17,374	15,018
■ 2019/20 Projected Payroll	197,524	197,524	197,524
■ 2019/20 ADC - %			
• Normal Cost	3.5%	2.7%	2.1%
• Projected Administrative Expenses	0.0%	0.0%	0.0%
• UAAL Amortization	<u>6.7%</u>	<u>6.0%</u>	<u>5.4%</u>
• ADC	10.2%	8.8%	7.6%

⁷ Amortized as a level percent of payroll over 23 years. Investment gain/loss includes a 3-year phrase-in.

SECTION 2
ACTUARIAL VALUATION RESULTS

Healthcare Trend Sensitivity
July 1, 2019
(amounts in 000's)

Healthcare Trend	-1%	Current Healthcare Trend	+1%
■ Present Value of Benefits			
• Actives	\$ 151,581	\$ 159,913	\$ 159,933
• Retirees	<u>190,976</u>	<u>203,490</u>	<u>213,007</u>
• Total	342,557	363,403	372,940
■ Actuarial Accrued Liability			
• Actives	111,763	118,101	117,100
• Retirees	<u>190,976</u>	<u>203,490</u>	<u>213,007</u>
• Total	302,739	321,591	330,107
■ Assets	<u>115,337</u>	<u>115,337</u>	<u>115,337</u>
■ Unfunded AAL	187,402	206,254	214,770
■ 2019/20 ADC - \$			
• Normal Cost	\$ 5,151	\$ 5,379	\$ 5,409
• Projected Administrative Expenses	59	59	59
• UAAL Amortization ⁸	<u>10,854</u>	<u>11,936</u>	<u>12,425</u>
• ADC	16,064	17,374	17,893
■ 2019/20 Projected Payroll	197,524	197,524	197,524
■ 2019/20 ADC - %			
• Normal Cost	2.6%	2.7%	2.7%
• Projected Administrative Expenses	0.0%	0.0%	0.0%
• UAAL Amortization	<u>5.5%</u>	<u>6.0%</u>	<u>6.3%</u>
• ADC	8.1%	8.8%	9.1%

⁸ Amortized as a level percent of payroll over 23 years. Investment gain/loss includes a 3-year phrase-in.

SECTION 3
DEMOGRAPHIC INFORMATION

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

Participant Statistics – July 1, 2017

	Miscellaneous	Safety	Total
Actives			
Count	1,684	356	2,040
Average Age	48.6	40.6	47.2
Average Service	10.0	11.4	10.3
Average Pay	\$ 88,245	\$ 105,581	\$ 91,270
Total Pay (000's)	148,605	37,587	186,192
Retirees			
Count	1,295	296	1,591
Average Age	73.3	64.7	71.7

SECTION 3
DEMOGRAPHIC INFORMATION

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-Paying⁹	Total
Retirees	673	19	873	14	98	1,677
Actives	23	79	747	1,208	-	2,057

Medical Coverage – July 1, 2017

Medical Plan	Employees	Retirees Under 65	Retirees 65+	Total
Kaiser Plan L	1,068	232	674	1,974
Kaiser Plan S	576	33	22	631
Kaiser – Out of State	-	6	21	27
Anthem Blue Cross PPO	130	85	375	590
Waived	266	32	111	409
Total	2,040	388	1,203	3,631

Plan Coverage – July 1, 2017

Plan	Plan 1	Plan 2	Plan 3	Plan 4	Self-Paying¹⁰	Total
Retirees	726	24	744	4	93	1,591
Actives	53	97	895	995	-	2,040

⁹ Includes surviving spouses and Plan 4 retirees with less than 5 years of service.

¹⁰ 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, 2019

Age	County Service							Total
	Under 1	1-4	5-9	10-14	15-19	20-24	25 & Over	
Under 25	8	7	-	-	-	-	-	15
25-29	49	49	7	-	-	-	-	105
30-34	47	120	28	5	-	-	-	200
35-39	18	74	46	31	6	-	-	175
40-44	23	68	40	43	17	1	-	192
45-49	13	60	35	49	35	20	3	215
50-54	24	49	35	37	44	36	13	238
55-59	12	57	35	38	41	31	28	242
60-64	3	25	26	47	37	22	20	180
65 & Over	4	11	14	32	33	13	22	129
Total	201	520	266	282	213	123	86	1,691

SECTION 3
DEMOGRAPHIC INFORMATION

Safety Employees
Age & Service Distribution

July 1, 2019

Age	County Service							Total
	Under 1	1-4	5-9	10-14	15-19	20-24	25 & Over	
Under 25	9	6	-	-	-	-	-	15
25-29	10	37	3	-	-	-	-	50
30-34	3	24	20	3	-	-	-	50
35-39	4	13	24	19	4	-	-	64
40-44	1	3	5	20	27	3	-	59
45-49	2	4	2	13	20	12	7	60
50-54	-	2	-	5	11	11	15	44
55-59	-	1	2	2	4	1	6	16
60-64	-	1	1	1	1	-	1	5
65 & Over	-	-	-	1	-	1	1	3
Total	29	91	57	64	67	28	30	366

SECTION 3
DEMOGRAPHIC INFORMATION

All Employees
Age & Service Distribution

July 1, 2019

Age	County Service							Total
	Under 1	1-4	5-9	10-14	15-19	20-24	25 & Over	
Under 25	17	13	-	-	-	-	-	30
25-29	59	86	10	-	-	-	-	155
30-34	50	144	48	8	-	-	-	250
35-39	22	87	70	50	10	-	-	239
40-44	24	71	45	63	44	4	-	251
45-49	15	64	37	62	55	32	10	275
50-54	24	51	35	42	55	47	28	282
55-59	12	58	37	40	45	32	34	258
60-64	3	26	27	48	38	22	21	185
65 & Over	4	11	14	33	33	14	23	132
Total	230	611	323	346	280	151	116	2,057

SECTION 4
PREMIUM RATES

2019 Monthly Premium Rates

Actives

Plan	Single	2-Party	Family
Kaiser Plan L HMO	\$789.21	\$1,578.41	\$2,099.29
Kaiser Plan S HMO	712.87	1,425.75	1,896.25
Western Health Advantage HMO	780.85	1,561.69	2,077.05
Teamsters Anthem PPO	746.22	1,490.21	2,084.97

Retirees

Plan	Non-Medicare			Medicare		
	Single	2-Party	Family	Single	2-Party	Family
Kaiser Plan L HMO ¹¹	\$789.21	\$1,578.41	\$2,099.29	\$397.86	\$ 795.72	n/a
Kaiser Plan S HMO ¹²	712.87	1,425.75	1,896.25	289.03	578.06	n/a
Western Health Advantage HMO	780.85	1,561.69	2,077.05	n/a	n/a	n/a
Teamsters Anthem PPO	746.22	1,490.21	2,084.97	n/a	n/a	n/a
UnitedHealthcare Medicare Advantage PPO	n/a	n/a	n/a	414.78	829.56	n/a

Delta Dental monthly premiums are \$51.16 for single coverage, \$96.47 for 2-party coverage and \$151.55 for family coverage.

Medicare Part A monthly premiums for those not eligible for premium-free Medicare Part A are \$437 for those with fewer than 30 quarters of Medicare-covered employment and \$240 for those with 30-39 quarters of Medicare-covered employment, subject to late enrolment penalty.

Medicare Part B monthly premium is \$135.50 for most people (varies by income and subject to late enrollment penalty).

¹¹ With Senior Advantage for Medicare.

¹² With Senior Advantage for Medicare.

**SECTION 4
PREMIUM RATES**

2020 Monthly Premium Rates

Actives

Plan	Single	2-Party	Family
Kaiser Plan L HMO	\$854.99	\$1,709.98	\$2,274.27
Kaiser Plan S HMO	772.35	1,544.70	2,054.45
Western Health Advantage HMO	857.28	1,714.57	2,280.37
Teamsters Anthem PPO	782.20	1,564.40	2,190.16

Retirees

Plan	Non-Medicare			Medicare		
	Single	2-Party	Family	Single	2-Party	Family
Kaiser Plan L HMO ¹³	\$854.99	\$1,709.98	\$2,274.27	\$380.05	\$ 760.10	n/a
Kaiser Plan S HMO ¹⁴	772.35	1,544.70	2,054.45	276.19	552.38	n/a
Western Health Advantage HMO	857.28	1,714.57	2,280.37	n/a	n/a	n/a
Teamsters Anthem PPO	782.20	1,564.40	2,190.16	n/a	n/a	n/a
UnitedHealthcare Medicare Advantage PPO	n/a	n/a	n/a	439.67	879.34	n/a

Delta Dental 2020 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 \$458 for those with fewer than 30 quarters of Medicare-covered employment and \$252 for those with 30-39 quarters of Medicare-covered employment, subject to late enrolment penalty.

Medicare Part B monthly premium is \$144.60 for most people (varies by income and subject to late enrollment penalty).

¹³ With Senior Advantage for Medicare.

¹⁴ With Senior Advantage for Medicare.

**SECTION 4
PREMIUM RATES**

Medical Plan Summaries

	Kaiser Plan L HMO	Kaiser Plan S HMO	Teamsters Anthem PPO	Western Health Advantage HMO
	Network	Network	Network	Network
Calendar Year Deductible	None	None	\$250/member \$500/family	None
Annual Out-of-Pocket Maximums	\$1,500/member \$3,000/family	\$1,500/member \$3,000/family	\$2,000/member \$2,000/family	\$1,500/member \$3,000/family
Lifetime Maximum	None	None	None	None
Hospital				
Inpatient Services	No charge	No charge	No charge	No charge
Outpatient Surgery	\$5/procedure	\$25/procedure	\$20/procedure	\$15/procedure
Physician Services				
Physician Office Visit	\$5/visit	\$25/visit	\$20/visit	\$15/visit
Preventive Care	No charge	No charge	No charge	No charge
Diagnostic X-Ray and Lab	No charge	No charge	20%	\$15/visit
Ambulance Service	\$50/trip	\$50/trip	20%	No charge
Emergency	\$50/visit	\$50/visit	20%	\$75/visit
Prescription Drugs				
Retail (30-day supply)	\$5/generic \$5/brand-name	\$10/generic \$25/brand-name	\$10/generic \$20/brand-name	\$5/generic \$20/brand-name
Mail Order (90-day supply)	\$5/generic \$5/brand-name	\$20/generic \$50/brand-name	\$10/generic \$20/brand-name	\$10/generic \$40/brand-name

**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
Lifetime Maximum	None	None	None
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			
Retail (30-day supply)	\$5/generic \$5/brand-name	\$10/generic \$25/brand-name	\$5/generic \$20/pref-brand
Mail Order (90-day supply)	\$5/generic \$5/brand-name	\$20/generic \$50/brand-name	\$10/generic \$40/pref-brand

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 2020) based on years of service at retirement ¹⁵	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, and 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 implied 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.

¹⁵ 100% 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, 2019 provided by the County. 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 23-year period as a level percentage of payroll from July 1, 2019 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 (59% global equity, 25% fixed income, 5% TIPS, 8% REITs, and 3% commodities). The 5.50% assumption is based on a median long-term rate of return of 6.75% net of investment expenses and a margin for adverse deviation of 1.25%. Capital market real rates of return underlying the 6.75% rate are 4.8% global equity, 1.5% fixed income, 1.3% TIPS, 0.8% commodities, and 3.8% REITs and are based on a study of investment consultant and investment bank 2017 capital market short and long-term assumptions adjusted in some cases for long-term trends in investment returns.

CERBT Administrative Expenses

0.05% of trust balance included in the ADC

Inflation

Assumed to increase 2.75% per annum over the long-term.

Aggregate Payroll

Assumed to increase 3.00% per annum. (Used to amortize unfunded AAL.)

Plan 3 Cap Trend Rate

Assumed to increase at 3.00% per year

Dental Care Cost Trend Rate

Assumed to increase at 3.75% per year.

SECTION 6
ACTUARIAL METHODS AND ASSUMPTIONS AND DATA

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		
	Teamsters Anthem / WHA / Kaiser		Medicare Part A & B Premiums	Anthem Blue Cross / Kaiser		Medicare B Premiums
	Non- Medicare	Medicare		Non- Medicare	Medicare	
2018	n/a	n/a	n/a	n/a	n/a	n/a
2019	n/a	n/a	n/a	7.50%	6.50%	0.00%
2020	n/a	n/a	n/a	7.50%	6.50%	3.70%
2021	7.25%	6.30%	4.40%	7.25%	6.30%	4.40%
2022	7.00%	6.10%	5.10%	7.00%	6.10%	5.10%
2023	6.75%	5.90%	5.90%	6.75%	5.90%	5.90%
2024	6.50%	5.70%	5.70%	6.50%	5.70%	5.70%
2025	6.25%	5.50%	5.50%	6.25%	5.50%	5.50%
2026	6.00%	5.30%	5.30%	6.00%	5.30%	5.30%
2027	5.80%	5.15%	5.15%	5.80%	5.15%	5.15%
2028	5.60%	5.00%	5.00%	5.60%	5.00%	5.00%
2029	5.40%	4.85%	4.85%	5.40%	4.85%	4.85%
2030	5.20%	4.70%	4.70%	5.20%	4.70%	4.70%
2031-35	5.05%	4.60%	4.60%	5.05%	4.60%	4.60%
2036-45	4.90%	4.50%	4.50%	4.90%	4.50%	4.50%
2046-55	4.75%	4.45%	4.45%	4.75%	4.45%	4.45%
2056-65	4.60%	4.40%	4.40%	4.60%	4.40%	4.40%
2066-75	4.30%	4.20%	4.20%	4.30%	4.20%	4.20%
2076+	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%

Patient Protection and Affordable Care Act (PPACA) Cadillac Tax

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 2020 by health plan and covered population. Premiums were reviewed for reasonability, but we did not audit the premium development and do not attest herein to their adequacy.

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 Kaiser Medicare Advantage plans, we relied on the most recently reported CalPERS enrollment distribution as reflective of the pool used to determine the rates. For the other plans, we used plan-specific demographics as reported by the County.

Age	2020 Age/Gender Claims Costs			
	Kaiser Plan L Non-Medicare		Kaiser Plan L Medicare	
	Male	Female	Male	Female
30	\$414	\$700	n/a	n/a
35	447	692	n/a	n/a
40	500	706	n/a	n/a
45	580	736	n/a	n/a
50	697	789	n/a	n/a
55	888	903	n/a	n/a
60	1,166	1,077	n/a	n/a
65	1,301	1,133	\$291	\$252
70	1,465	1,235	354	298
75	1,781	1,475	431	356
80	2,141	1,761	518	425
85	2,516	2,069	609	500

SECTION 6
ACTUARIAL METHODS AND ASSUMPTIONS AND DATA

Age	2020 Age/Gender Claims Costs			
	Kaiser Plan S Non-Medicare		Kaiser Plan S Medicare	
	Male	Female	Male	Female
30	\$371	\$633	n/a	n/a
35	401	625	n/a	n/a
40	449	637	n/a	n/a
45	523	665	n/a	n/a
50	630	713	n/a	n/a
55	805	817	n/a	n/a
60	1,059	977	n/a	n/a
65	1,182	1,028	\$212	\$183
70	1,332	1,120	258	216
75	1,619	1,338	314	258
80	1,946	1,598	377	308
85	2,288	1,877	444	362

Age	2020 Age/Gender Claims Costs	
	Teamsters Anthem PPO Non-Medicare	
	Male	Female
30	\$347	\$596
35	375	589
40	420	601
45	490	628
50	593	676
55	765	779
60	1,017	936
65	1,140	987
70	1,284	1,075
75	1,561	1,284
80	1,876	1,533
85	2,205	1,801

Age	2020 Age/Gender Claims Costs	
	UnitedHealthcare Medicare Advantage PPO	
	Male	Female
30	n/a	n/a
35	n/a	n/a
40	n/a	n/a
45	n/a	n/a
50	n/a	n/a
55	n/a	n/a
60	n/a	n/a
65	\$350	\$304
70	309	334
75	471	387
80	567	461
85	666	542

Demographic Assumptions – Health Plans

Participation, Medical Plan Coverage, and Health Plan Election assumptions below were based on a study of experience between 2011 and 2014, and between 2015 and 2018.

SECTION 6
ACTUARIAL METHODS AND ASSUMPTIONS AND DATA

Percentage of Future Retirees Participating in Medical Plans

	<10	10-14	15-19	20+
Plan 1	100.0%	100.0%	100.0%	100.0%
Plan 2/3	37.5%	85.0%	90.0%	100.0%
Plan 4	30.0%	37.5%	42.5%	55.0%

Prior assumption:

	<10	10-14	15-19	20+
Plan 1	100.0%	100.0%	100.0%	100.0%
Plan 2/3	37.5%	85.0%	85.0%	100.0%
Plan 4	30.0%	37.5%	40.0%	42.5%

Percentage of Future Retirees Participating in Dental Plans

	Current Employees
Plan 1	97.5%
Plan 2/3	90.0%
Plan 4	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	<u>35.0%</u>	<u>20.0%</u>	<u>10.0%</u>
Total	100.0%	100.0%	100.0%

Teamsters Anthem participants assumed to elect UnitedHealthcare once Medicare eligible.

Prior assumption:

	Plan 1	Plan 2/3	Plan 4
Kaiser Plan L	60.0%	70.0%	60.0%
Kaiser Plan S	5.0%	10.0%	30.0%
Teamsters Anthem	<u>35.0%</u>	<u>20.0%</u>	<u>10.0%</u>
Total	100.0%	100.0%	100.0%

Current Retirees and Beneficiaries:

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

SECTION 6
ACTUARIAL METHODS AND ASSUMPTIONS AND DATA

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.

The most common Medicare Part B premiums (\$135.50/month in 2019, \$144.60/month in 2020) 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 20% of female retirees cover a spouse.

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

SECTION 6
ACTUARIAL METHODS AND ASSUMPTIONS AND DATA

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

Assumptions based on the Marin County Employees’ Retirement Association 2014-2017 Experience Study except for the allowance for future post-retirement mortality improvement, which is based on a more recent mortality projection scale (MP-2018) developed by the Society of Actuaries.

Miscellaneous Employees

Age	Withdrawal and Vested Termination Male (by service)								
	0	1	2	3	4	5-9	10-14	15-29	30+
25	15.00%	9.00%	7.00%	7.00%	7.00%	7.00%	5.30%	3.00%	0.00%
35	15.00%	9.00%	7.00%	7.00%	7.00%	6.75%	4.50%	2.50%	0.00%
55	15.00%	9.00%	7.00%	7.00%	7.00%	1.20%	0.00%	0.00%	0.00%
Age	Withdrawal and Vested Termination Female (by service)								
	0	1	2	3	4	5-9	10-14	15-29	30+
25	15.00%	10.00%	8.00%	8.00%	8.00%	7.75%	5.30%	3.00%	0.00%
35	15.00%	10.00%	8.00%	8.00%	8.00%	7.75%	4.50%	2.50%	0.00%
55	15.00%	10.00%	8.00%	8.00%	8.00%	2.20%	0.00%	0.00%	0.00%

Age	Disability Ordinary – Male	Disability Ordinary – Female	Disability Duty – Male	Disability Duty – Female
25	0.0085%	0.0050%	0.0085%	0.0050%
35	0.0195%	0.0355%	0.0195%	0.0355%
55	0.0790%	0.0745%	0.0790%	0.0745%

Safety Employees

Age	Withdrawal and Vested Termination (by service)								
	0	1	2	3	4	5-9	10-14	15-19	20+
25	8.00%	5.00%	4.00%	4.00%	4.00%	2.24%	2.24%	2.24%	0.00%
35	8.00%	5.00%	4.00%	4.00%	4.00%	3.41%	3.41%	3.41%	0.00%
55	8.00%	5.00%	4.00%	4.00%	4.00%	0.10%	0.10%	0.10%	0.00%

Age	Disability Ordinary	Disability Duty
25	0.0053%	0.0998%
35	0.0264%	0.5022%
55	0.0625%	1.1875%

SECTION 6
ACTUARIAL METHODS AND ASSUMPTIONS AND DATA

Salary Merit and Longevity Increases

Assumptions based on the Marin County Employees' Retirement Association 2014-2017 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)			Safety (by service)					
	All			3% @ 50			3% @ 55 & PEPRA		
	<20	20-29	30+	<20	20-29	30+	<20	20-29	30+
40-44	n/a	n/a	n/a	0%	3%	3%	0%	1%	1%
45-48	n/a	n/a	n/a	0%	3%	3%	0%	5%	5%
49	n/a	n/a	n/a	0%	15%	3%	0%	5%	5%
50	3%	3%	3%	5%	15%	50%	5%	10%	30%
51	3%	3%	3%	5%	10%	20%	5%	10%	30%
52	3%	3%	3%	5%	10%	20%	5%	10%	30%
53	5%	5%	10%	10%	10%	20%	5%	10%	30%
54	5%	5%	15%	10%	10%	20%	5%	10%	30%
55	5%	10%	15%	10%	25%	50%	20%	30%	30%
56	5%	10%	15%	10%	30%	50%	10%	30%	30%
57	5%	10%	15%	10%	35%	50%	10%	20%	30%
58	5%	10%	15%	10%	40%	50%	10%	20%	30%
59	5%	10%	15%	10%	45%	50%	10%	20%	30%
60	5%	10%	30%	50%	50%	50%	20%	20%	50%
61	10%	10%	30%	50%	50%	50%	20%	20%	50%
62	10%	20%	30%	50%	50%	50%	20%	20%	50%
63	10%	20%	30%	50%	50%	50%	20%	20%	50%
64	15%	20%	30%	50%	50%	50%	20%	20%	50%
65	15%	20%	30%	100%	100%	100%	100%	100%	100%
66-67	15%	30%	30%	100%	100%	100%	100%	100%	100%
68-79	20%	30%	30%	100%	100%	100%	100%	100%	100%
80+	100%	100%	100%	100%	100%	100%	100%	100%	100%

For PEPRA Miscellaneous members, the rates are only applied once a member is eligible to retire (i.e. at age 52 with 5 years of service).

SECTION 6
ACTUARIAL METHODS AND ASSUMPTIONS AND DATA

Pre-retirement Mortality:

CalPERS 1997-2015 Experience Study Pre-Retirement Non-Industrial Death rates (plus Duty-Related Death rates for Safety members), projected fully generational using Projection Scale MP-2018. (Prior assumption – CalPERS 1997-2011 Experience Study Pre-Retirement Non-Industrial Death rates (plus Duty-Related Death rates for Safety members), projected fully generational using Projection Scale MP-2017.)

Post-retirement Mortality:

Service Retirements and Spouses: CalPERS 1997-2015 Experience Study Post-Retirement Healthy Mortality rates, adjusted by 90% for Males, projected fully generational from a base year of 2014 using Projection Scale MP-2018.

(Prior assumption – CalPERS 1997-2011 Experience Study Post-Retirement Healthy Mortality rates, adjusted by 110% for Safety males and 95% for Miscellaneous and Safety females, projected fully generational using Projection Scale MP-2017.)

Mortality after Disability Retirement:

CalPERS 1997-2015 Experience Study Disability Mortality rates (Non-Industrial rates for Miscellaneous members and Industrial Disability rates for Safety members), adjusted by 90% for Males (Miscellaneous and Safety) and 90% for Miscellaneous Females, projected fully generational with a base year of 2014 using Projection Scale MP-2018.

(Prior assumption – CalPERS 1997-2011 Experience Study Disability Mortality rates (Non-Industrial rates for Miscellaneous members and Industrial Disability rates for Safety members), adjusted by 90% for Males and Females, projected fully generational using Projection Scale MP-2017.)

Sample life expectancies are shown below.

7/1/2019 Age	Miscellaneous				Safety			
	Service		Disability		Service		Disability	
	Male	Female	Male	Female	Male	Female	Male	Female
50	35.9	37.4	27.6	31.5	35.9	37.4	34.6	36.3
55	31.1	32.7	23.8	27.6	31.1	32.7	29.8	31.6
60	26.4	28.1	20.4	23.8	26.4	28.1	25.1	26.9
65	22.0	23.5	17.3	20.1	22.0	23.5	20.8	22.4
70	17.7	19.0	14.4	16.6	17.7	19.0	16.6	18.0
75	13.7	14.8	11.5	13.0	13.7	14.8	12.8	13.9
80	10.2	11.0	8.8	9.8	10.2	11.0	9.5	10.3
85	7.2	7.9	6.5	7.1	7.2	7.9	6.7	7.4