

Marin County Employees' Retirement Association

Actuarial Valuation Report as of June 30, 2019

Produced by Cheiron

February 2020

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February 4, 2020

Board of Retirement
Marin County Employees' Retirement Association
1 McInnis Parkway, Suite 100
San Rafael, CA 94903-2764

Dear Members of the Board:

At your request, we have conducted an actuarial valuation of the Marin County Employees' Retirement Association (MCERA, the Plan) as of June 30, 2019. The purpose of this report is to present the results of the annual actuarial valuation of MCERA, including information on the Plan's assets and liabilities and the development of employer and employee contribution rates for the fiscal year beginning July 1, 2020.

This report was prepared for MCERA for the purposes described herein and for the use by the plan auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

In preparing our report, we relied on information supplied by the MCERA staff. This information includes, but is not limited to, plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Future results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the assumptions, changes in assumptions, and changes in plan provisions or applicable law.

This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

Sincerely,
Cheiron



Graham A. Schmidt, ASA, EA, FCA, MAAA
Consulting Actuary



William R. Hallmark, ASA, EA, FCA, MAAA
Consulting Actuary

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SECTION I – EXECUTIVE SUMMARY

The primary purpose of the actuarial valuation and this report is to measure, describe, and identify the following as of the valuation date:

- The funded status of the Plan,
- Past and expected trends in the funding progress of the Plan,
- Employer and employee contribution rates for Plan Year 2020-2021, and
- An assessment and disclosure of key risks.

The balance of this Executive Summary presents (A) the basis upon which this year's valuation was completed, (B) the key findings of this valuation including a summary of all key results, (C) an examination of the historical trends, and (D) the projected outlook for the Plan.

A. Valuation Basis

This valuation determines the employer contributions required for the employers' fiscal years beginning July 1, 2020. The employers are divided into three subgroups: the County of Marin and related Special Districts, the Novato Fire Protection District, and the City of San Rafael.

The Plan's funding policy is to collect contributions from the employers and employees equal to the sum of:

- The normal cost under the Entry Age Normal Cost Method,
- An amortization payment on the Unfunded Actuarial Liability (UAL), and
- The Plan's expected administrative expenses.

Effective with the June 30, 2013 valuation, the UAL as of June 30, 2013 is amortized over a closed 17-year period (11 years remaining as of June 30, 2019), except for the additional UAL attributable to the outstanding unfunded actuarial loss from 2009, which is being amortized over a separate closed period (currently 19 years).

Effective with the June 30, 2014 valuation, any new sources of UAL due to actuarial gains and losses or method changes are amortized over a closed 24-year period, with a five-year ramp up at the beginning of the period, a four-year ramp down at the end of the period, and 15 years of payments as a level percentage of payroll between the ramping periods. This amortization method for gains and losses is similar to a 20-year amortization period with payments as a level percentage of payroll, in conjunction with traditional five-year asset smoothing.

Assumption changes are amortized over a closed 22-year period, with a three-year ramp up period, two-year ramp down period, and 17 years of payments as a level percentage of payroll.

This valuation was prepared based on the Plan provisions shown in Appendix C. There have been no changes in assumptions since the prior valuation. This valuation does not include any consideration of external liabilities (or related debt service payments) incurred by the Plan sponsors outside of MCERA, such as those related to pension obligation bonds.

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B. Key Findings of this Valuation

Tables I-1 and I-2 summarize the key results of the valuation with respect to assets and liabilities for the Plan as a whole, contributions by the main valuation subgroups, and overall membership. The tables compare the results for the current plan year to the results for the prior plan year.

Table I-1			
Marin County Employees' Retirement Association			
Summary of Key Valuation Results			
(in millions)			
Valuation Date	June 30, 2018	June 30, 2019	
Actuarial Liability	\$ 2,847.3	\$ 2,972.7	
Market Value of Valuation Assets	<u>2,480.9</u>	<u>2,573.3</u>	
Unfunded Actuarial Liability	\$ 366.4	\$ 399.4	
Funded Ratio	87.1%	86.6%	
Net Employer Contribution Rate			
County of Marin	23.48%	24.08%	
Novato Fire Protection District	45.40%	46.80%	
City of San Rafael	57.67%	60.77%	
Total MCERA	28.90%	29.68%	

Table I-2			
Membership Total			
Item	June 30, 2018	June 30, 2019	% Change
Actives	2,732	2,689	-1.6%
Current Inactives	668	852	27.5%
Retired Members	<u>3,270</u>	<u>3,394</u>	<u>3.8%</u>
Total Members	6,670	6,935	4.0%
Ratio of Retired Members to Active Members	119.7%	126.2%	
Active Member Payroll (FYE 2019/2020)	\$ 263,107,566	\$ 267,101,968	1.5%
Average Pay per Active	\$ 96,306	\$ 99,331	3.1%

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The key results of the June 30, 2019 actuarial valuation are as follows:

- The actuarially determined employer contribution rate for the County increased from 23.48% to 24.08% of payroll, Novato from 45.40% to 46.80%, and San Rafael from 57.67% to 60.77%.
- The Plan's funded ratio, the ratio of assets over Actuarial Liability, decreased from 87.1% last year to 86.6% as of June 30, 2019.
- The Unfunded Actuarial Liability (UAL) is the excess of the Plan's Actuarial Liability over the Market Value of Assets. The UAL increased from \$366.4 to \$399.4 million. This increase in UAL was primarily due to lower than expected investment returns and unfavorable demographic experience.
- During the year ending June 30, 2019, the return on Plan assets was 5.51% net of investment expenses, as compared to the prior year's assumption of 7.00%. Our calculation of this rate of return assumes that external cash flows (i.e., benefit payments, contributions, and administrative expenses) all occur on average mid-year. The use of this simplifying assumption may result in a return that is slightly different from that provided by the investment consultant.
- Overall Plan membership increased compared to last year, but the number of active members declined. There were 336 new hires, rehires, and incoming transfers during 2018-2019, and 379 retirements, disabilities, deaths, and other terminations during that same period, resulting in a decrease in the total active population from 2,732 to 2,689. The number of members in pay status and deferred status increased from 3,938 to 4,246. Total projected payroll increased slightly from \$263.1 million to \$267.1 million.

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SECTION I – EXECUTIVE SUMMARY

Assets and Liabilities

Table I-3 below presents the assets, liabilities, Unfunded Actuarial Liability, and funding ratios as of June 30, 2019 for each of the three main subgroups.

Table I-3			
Assets & Liabilities			
(in millions)			
Item	County	Novato	San Rafael
Actuarial Liability			
Actives	\$ 695.2	\$ 66.4	\$ 131.6
Current Inactives	88.8	3.3	24.0
Retired Members	<u>1,377.5</u>	<u>136.9</u>	<u>449.0</u>
Total Actuarial Liability	\$ 2,161.5	\$ 206.6	\$ 604.6
Market Value Assets	\$ 1,924.0	\$ 181.9	\$ 467.4
Unfunded Actuarial Liability	\$ 237.5	\$ 24.7	\$ 137.2
Funded Ratio - Market Value	89.0%	88.0%	77.3%
Inactive-Only Funded Ratio	67.8%	67.9%	78.2%

The Inactive-Only Funded Ratio shown in Table I-3 represents the percentage of the Actuarial Liability attributable to members who are not active employees. A funded ratio of 67.8% or more is required just to fund the liabilities of the inactive County members: those currently retired, disabled, terminated with vested benefits, and their beneficiaries. We note that the funded ratio for San Rafael is slightly below the Inactive-Only Funded Ratio for the current valuation.

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Changes in Employer Contributions

Table I-4 summarizes the impact of actuarial experience and other changes on the employer contribution rate.

Table I-4				
Employer Contribution Reconciliation				
Item	Total	County	Novato	San Rafael
FYE 2020 Net Employer Contribution Rate	28.90%	23.48%	45.40%	57.67%
Expected change in amortization from prior changes	0.48%	0.36%	1.83%	0.88%
Change due to asset loss	0.20%	0.18%	0.18%	0.28%
Change due to demographic (gains)/losses	0.09%	0.07%	0.33%	0.15%
Change due to PEPRA new hires	(0.21%)	(0.10%)	(0.65%)	(0.57%)
Change due to salaries	0.00%	0.00%	0.03%	(0.02%)
Change due to effect of payroll on amortization	<u>0.22%</u>	<u>0.09%</u>	<u>(0.32%)</u>	<u>2.38%</u>
Total change from current year's changes	0.30%	0.24%	(0.43%)	2.22%
FYE 2021 Net Employer Contribution Rate	29.68%	24.08%	46.80%	60.77%

Before adjusting for Plan experience during the year, there was an expected change in amortization due to the phase-in of prior UAL gains, losses, and assumption changes. This increased the contribution rates by 0.36%, 1.83%, and 0.88% for County, Novato, and San Rafael, respectively.

Plan experience during the year – including demographic and salary changes, as well as asset experience – resulted in a net increase in the overall employer contribution rate of 0.30% of pay:

- Asset experience produced an investment loss.

The 5.51% return, compared to last year's 7.00% assumption, resulted in a loss that increased the contribution rate by 0.20% of pay in the current year. The amortization payment for this year's investment losses will be phased-in over five years, resulting in similar increases in the employer contribution rates in each of the next four years.

- Demographic experience produced a small loss for all three groups.

The demographic experience of the Plan – rates of retirement, death, disability, and termination – was close to that predicted by the actuarial assumptions in aggregate. Rates increased due to demographic changes for the County, Novato, and San Rafael. The losses were partly due to COLA increases larger than expected.

- PEPRA new hires reduced the contribution rates.

PEPRA members make up a growing proportion of the active member population, and they have lower benefits and generally contribute a larger share of their cost. PEPRA new

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hires decreased the contribution rate by 0.21%. As these changes only affect the normal cost, they are not subject to further phase-in.

- Changes in salaries and payroll overall increased the contribution rates.

Liability-weighted salary increases for continuing active members were higher than anticipated for Novato and lower than expected for San Rafael, increasing the contribution rates by 0.03% for Novato and reducing contribution rates by 0.02% for San Rafael. The amortization of these gains and losses will be phased-in over five years, resulting in similar increases in the contribution rate for each of the next four years.

However, the lower than expected overall payroll growth as a result of reductions in the active population for County (-1.0%) and San Rafael (-5.8%) meant that the UAL is being amortized over a smaller than expected payroll base, which increased the contribution rate by 0.09% for County and 2.38% for San Rafael. Novato's active population increased slightly, and its higher than anticipated payroll growth meant that its UAL is being amortized over a larger than expected payroll base, which decreased the contribution rate by 0.32%. The changes in payroll do not affect the dollar amount of the unfunded liability payments, and therefore are not subject to further phase-in.

The net impact of salaries and payroll was an increase in the current year contribution rate of 0.09% for County and 2.36% for San Rafael, and a reduction in the current year contribution rate of 0.29% for Novato.

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Changes in UAL

The Unfunded Actuarial Liability (UAL) for MCERA increased by \$33.0 million, from \$366.4 million to \$399.4 million. Table I-5 below presents the specific components of the change in the UAL.

Table I-5				
Change in Unfunded Actuarial Liability				
(in millions)				
Experience	Total	County	Novato	San Rafael
1. Unfunded actuarial liability, 6/30/2018	\$ 366.4	\$ 211.2	\$ 21.1	\$ 134.1
2. Expected change in unfunded actuarial liability	(11.3)	(6.7)	(0.3)	(4.2)
3. Change due to unexpected contributions	(10.9)	(8.8)	(0.7)	(1.3)
4. Change due to investment loss	34.2	26.6	1.1	6.5
5. Change due to demographic (gains) / losses	20.6	14.6	3.3	2.5
6. Change due to salary (gains) / losses	0.4	0.6	0.2	(0.4)
7. Total change in unfunded actuarial liability	\$ 33.0	\$ 26.3	\$ 3.6	\$ 3.1
8. Unfunded actuarial liability, 6/30/2019	\$ 399.4	\$ 237.5	\$ 24.7	\$ 137.2

The overall dollar amount of contributions was slightly higher than expected, based on the one-year delay in the implementation of contribution rates, which reduced the UAL by \$10.9 million (row 3).

The return on the assets was 5.51% during the 2018-19 plan year compared to last year's assumed rate of 7.00%, resulting in an increase in the UAL of \$34.2 million (row 4).

Net salary losses compounded by other liability losses (rows 5 and 6 above) – including higher than expected COLAs – increased the UAL by \$21.0 million. All of the above combined with the expected UAL reduction (\$11.3 million) from contributions produced an overall increase of \$33.0 million in the UAL last year.

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SECTION I – EXECUTIVE SUMMARY

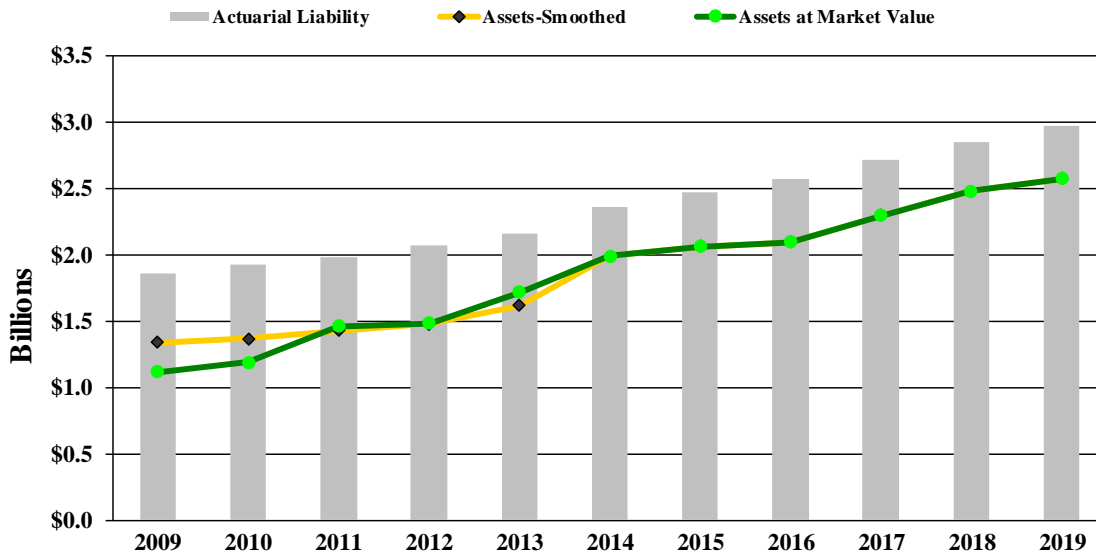
C. Historical Trends

For most retirement plans the greatest attention is given to the current valuation results, but it is important to remember that each valuation is merely a snapshot in the long-term progress of a pension plan. It is more important to judge a current year's valuation result relative to historical trends, as well as trends expected into the future.

Assets and Liabilities

The chart below compares the Market Value of Assets (MVA) and Actuarial Value of Assets (AVA) to the Actuarial Liability for the overall MCERA Plan. The percentage shown in the table below the graph is the ratio of the Actuarial Value of Assets to the Actuarial Liability (the funded ratio). The funded ratio is 86.6% as of June 30, 2019, and is higher than the 72.1% funded ratio in 2009.

Chart I-1: Assets and Actuarial Liabilities



Valuation Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Funded Ratio	72.1%	70.9%	72.1%	71.3%	75.1%	84.3%	83.7%	81.5%	84.4%	87.1%	86.6%
UAL (Billions)	\$ 0.52	\$ 0.56	\$ 0.55	\$ 0.59	\$ 0.54	\$ 0.37	\$ 0.40	\$ 0.48	\$ 0.42	\$ 0.37	\$ 0.40

* Beginning in 2014, there is no smoothing of the asset value, thus AVA = MVA.

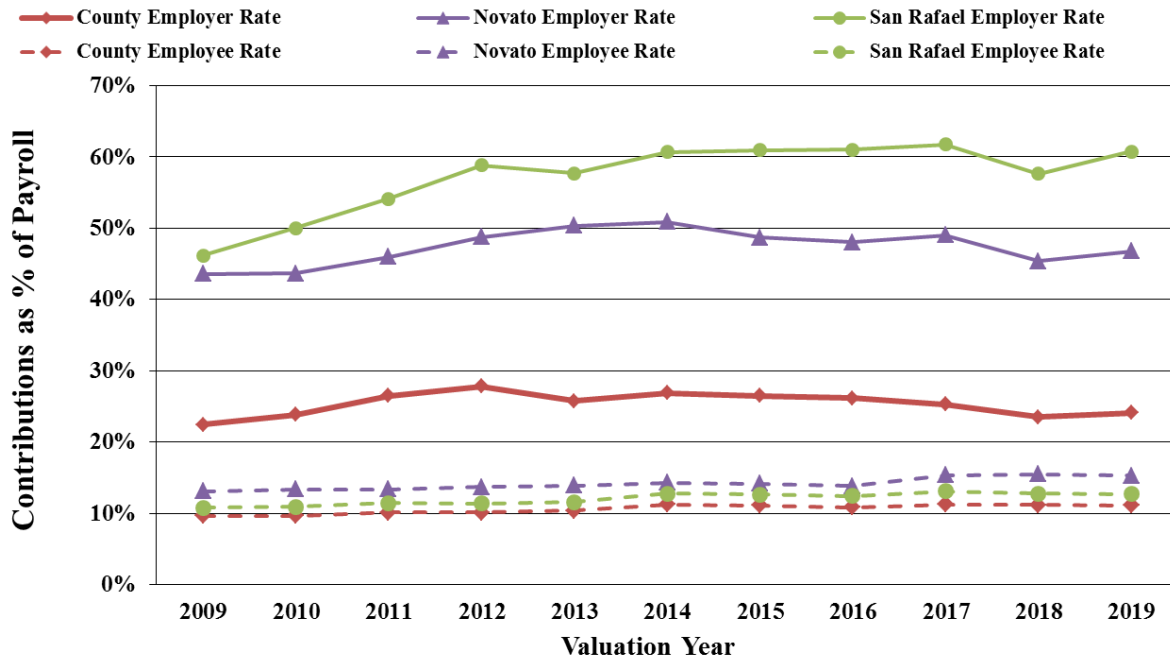
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SECTION I – EXECUTIVE SUMMARY

Contribution Trends

Chart I-2 presents the historical trends for the MCERA contribution rates. The employer contribution rates rose steadily from 2008 through 2012, as the investment losses from 2008-2009 were recognized in the smoothed value of assets. Since then, employer contribution rates have remained relatively stable with some decrease for the County and Novato and some additional increase for San Rafael. The average employee contribution rates have stayed relatively stable, increasing slightly as the Plan's economic and mortality assumptions have changed.

Chart I-2: Marin County Employees' Retirement Association



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D. Future Expected Financial Trends

The analysis of projected financial trends is an important component of this valuation. In this section, we present projections based on the June 30, 2019 valuation results of contributions, assets, and liabilities. All the projections in this section are based on the current investment return assumption of 7.00% and future base salary increases of 3.00% per year.

The following graphs show the expected employer contribution rates based on achieving the 7.00% assumption **each year** for the next 20 years. This scenario is highly unlikely: even if the Plan does achieve an **average** return of 7.00% over this time period, the returns in each given year will certainly vary.

The contribution rate graphs which follow – shown separately for the County, Novato, and San Rafael – project that employer contribution rates are expected to gradually decline through 2029, as the bulk of the current unfunded liability is amortized over this period as a level percentage of payroll. After an initial small increase next year, there is a small short-term reduction in rates projected, as the deferred investment gains from prior years are recognized. There is also a moderate longer-term decline projected in the employer normal cost rates, primarily due to the PEPRA members becoming a larger proportion of the active member population over time. A significant reduction in contribution rates is projected to occur in 2030, once the bulk of the unfunded liability from the original amortization base established in 2013 has been paid down.

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Chart I-3: Projection of Contributions, 7.00% Return Each Year – County of Marin

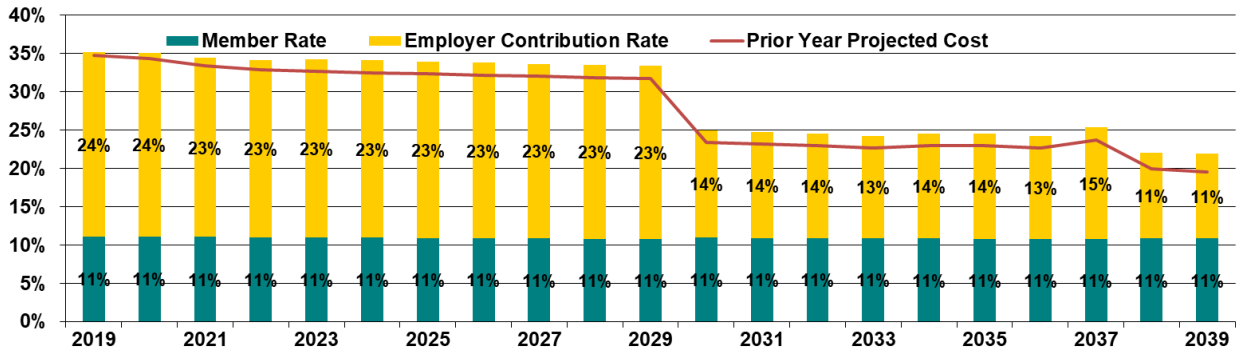


Chart I-4: Projection of Contributions, 7.00% Return Each Year – Novato FPD

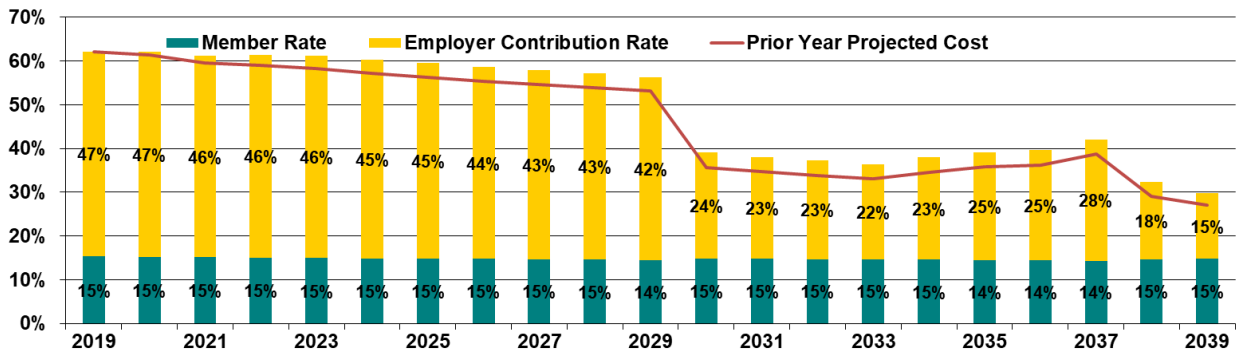
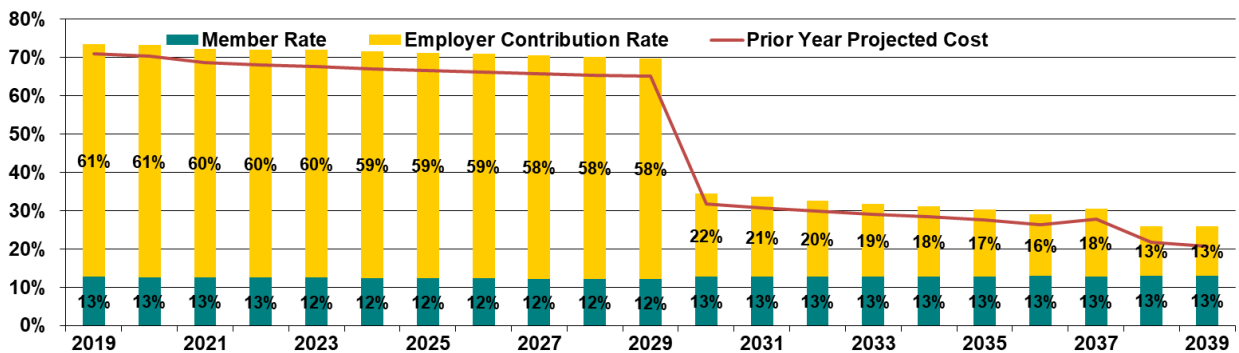


Chart I-5: Projection of Contributions, 7.00% Return Each Year – City of San Rafael



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SECTION I – EXECUTIVE SUMMARY

Asset and Liability Projections

The following charts show the projection of assets and liabilities assuming that assets will earn the 7.00% assumption each year during the projection period, and the actuarially determined contributions shown in the projections above are made. The percentages shown at the top of the charts are the ratios of the Market Value of Assets to the Actuarial Liability (the funded ratios).

The charts on the next page show that the projected funded status increases over the next 11 years to approach 100%, as can be expected based on the 11-year amortization policy for the majority of the current unfunded liability, assuming the actuarial assumptions are achieved. However, as above, it is the **actual** return on Plan assets that will determine the future funding status and contribution rate to the Plan.

The liabilities have been divided into those associated with the active employees and the inactive members (members in pay status or eligible to receive a deferred benefit). If the Plan's asset level drops below the liabilities for the inactive members, it indicates that no Plan assets have been set aside to fund future benefits for current active participants. The County and Novato currently have asset levels greater than their inactive liabilities. San Rafael's asset level is currently slightly below the level of the inactive liabilities, but is expected to exceed that level next year if all assumptions are met.

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SECTION I – EXECUTIVE SUMMARY

Chart I-6: Projection of Assets and Liabilities, 7.00% Return – County of Marin
(\$ millions)

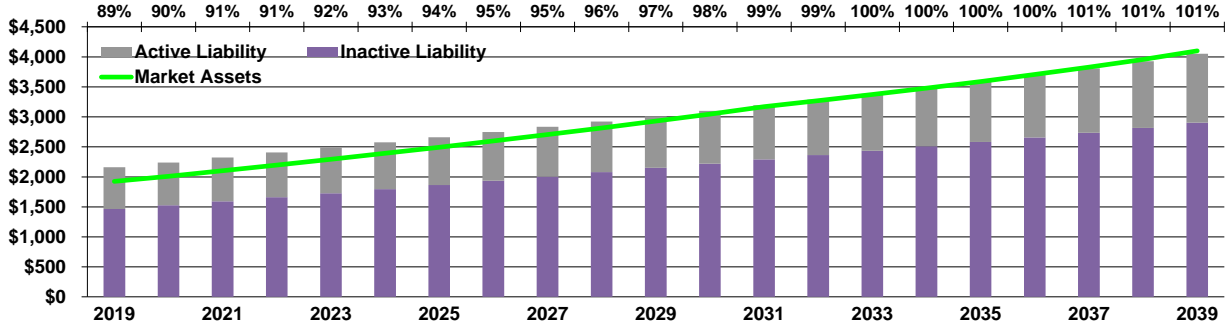


Chart I-7: Projection of Assets and Liabilities, 7.00% Return – Novato FPD
(\$ millions)

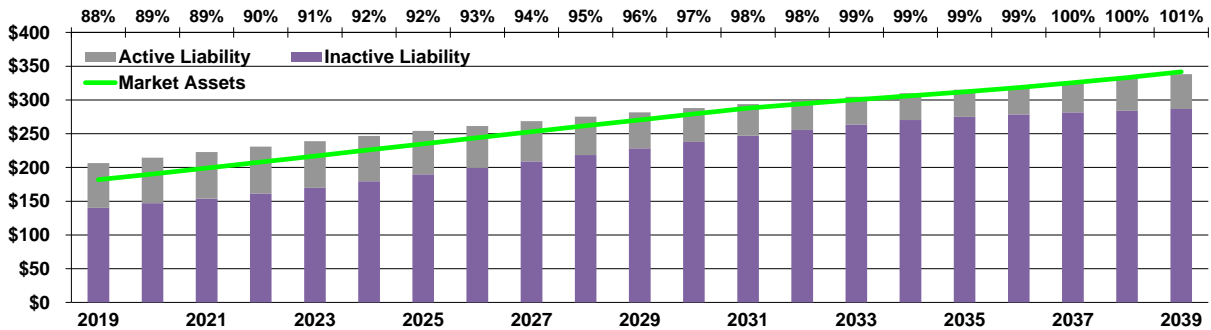
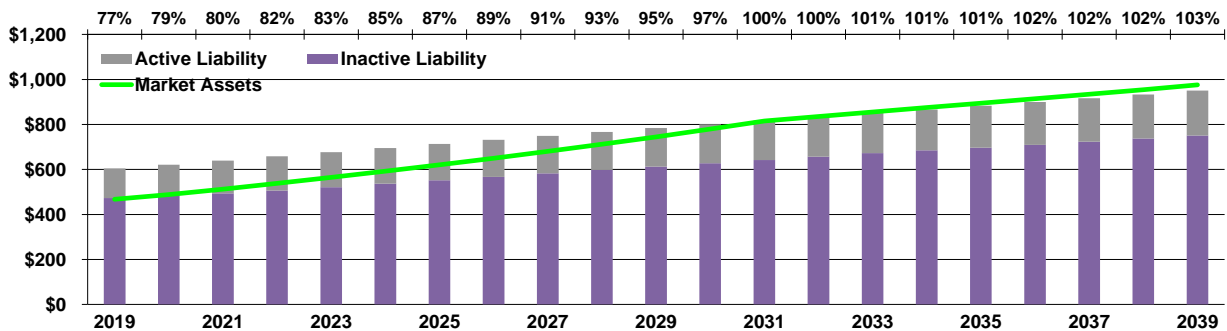


Chart I-8: Projection of Assets and Liabilities, 7.00% Return – City of San Rafael
(\$ millions)



SECTION II – RISK ANALYSIS

Actuarial valuations are based on a set of assumptions about future economic and demographic experience. These assumptions represent a reasonable estimate of future experience, but actual future experience will undoubtedly be different and may vary significantly.

A new Actuarial Standard of Practice (ASOP 51) has been issued which requires actuaries to identify and assess risks that “may reasonably be anticipated to significantly affect the plan’s future financial condition.” This section of the report is intended to identify the primary risks to the Plan, provide some background information about those risks, and provide an assessment of those risks.

Identification of Risks

A fundamental risk to a pension plan is that the contributions needed to pay the benefits become unaffordable. While we believe it is unlikely that the Plan by itself would become unaffordable, the contributions needed to support the Plan may differ significantly from expectations. While there are a number of factors that could lead to contribution amounts deviating from expectations, we believe the primary risks are:

- Investment risk,
- Assumption change risk, and
- Contribution risk.

Other risks that we have not identified may also turn out to be important.

Investment Risk is the potential for investment returns to be different than expected. Lower investment returns than anticipated will increase the Unfunded Actuarial Liability necessitating higher contributions in the future unless there are other gains that offset these investment losses. The potential volatility of future investment returns is determined by the Plan’s asset allocation and the affordability of the investment risk is determined by the amount of assets invested relative to the size of the plan sponsors or other contribution base.

Assumption change risk is the potential for the environment to change such that future valuation assumptions are different than the current assumptions. For example, declines in interest rates over the last three decades resulted in higher investment returns for fixed income investments, but lower expected future returns necessitating either a change in investment policy, a reduction in discount rate, or some combination of the two. Assumption change risk is an extension of the other risks identified, but rather than capturing the risk as it is experienced, it captures the cost of recognizing a change in environment when the current assumption is no longer reasonable.

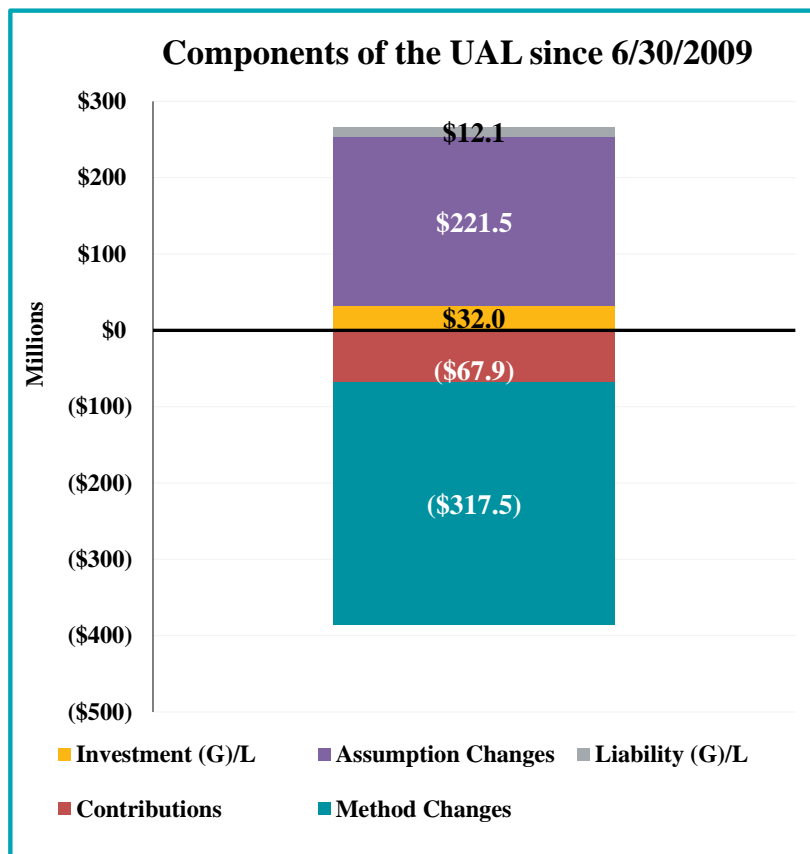
Contribution risk is the potential for actual future contributions to deviate from expected future contributions. There are different sources of contribution risk such as the contribution requirement becoming such a financial strain on the sponsor as a result of material changes in the contribution base (e.g., covered employees, covered payroll) that affect the amount of contributions the Plan can collect.

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SECTION II – RISK ANALYSIS

The chart below shows the components contributing to the Unfunded Actuarial Liability (UAL) from June 30, 2009 through June 30, 2019. Over the last 10 years, the UAL has decreased by approximately \$120 million. The decrease is primarily due to method changes (teal bar) of \$317 million (about \$205 million of which actually represent deferred investment gains from 2009-2014 that were fully recognized in 2014) and contributions in excess of the “tread water” level (red bar) of \$68 million. The assumption changes (purple bar) of \$222 million, other investment losses (gold bar), and net liability losses (gray bar) have increased the UAL since June 30, 2009.

Chart II-1

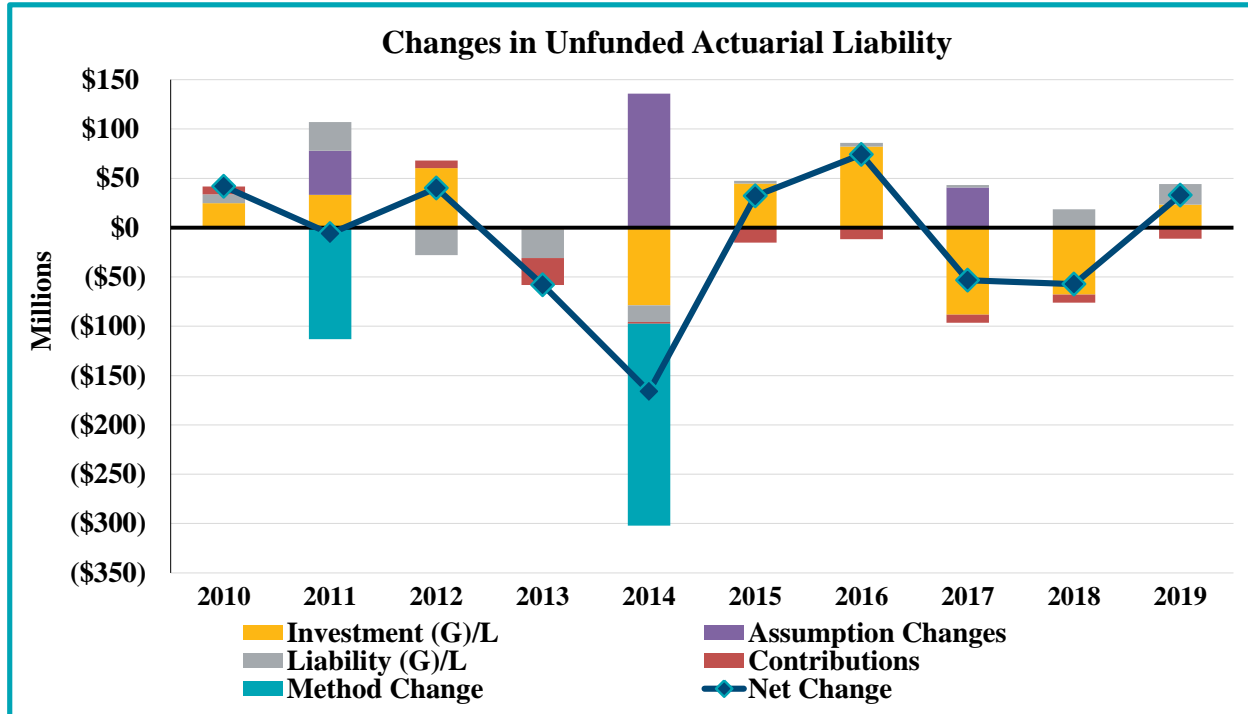


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SECTION II – RISK ANALYSIS

Chart II-2 below details the annual sources of the UAL change (colored bars) for the plan years ending December 31. The net UAL change for each year is represented by the blue diamonds.

Chart II-2



Effective with the June 30, 2011 valuation, the actuarial cost method was modified from the Entry Age Normal-to-Decrement method to the Entry Age Normal-to-Final-Decrement method to comply with the accounting standards issued by the Government Accounting Standards Board. The impact of this was to shift some of the liability from past service to future, thereby decreasing the actuarial accrued liability and increasing the normal cost.

Effective with the June 30, 2014 valuation, the Board adopted a direct rate smoothing policy. As a result the smoothed Actuarial Value of Assets was replaced with the Market Value of Assets for valuation purposes, and any unexpected change in the UAL is amortized over a closed period with ramp up and ramp down periods. A full description of these methods can be found in Appendix B. This change in funding policy materially reduced the UAL, as at the time there were significant deferred investment gains not yet reflected in the Actuarial Value of Assets. These deferred gains would have been recognized in subsequent years under the prior method.

On a valuation assets basis, there were losses on investments in 2010, 2011, 2012, 2015, 2016, and 2019, offset by gains in 2013, 2014, 2017, and 2018, resulting in overall UAL losses. Prior to 2014, the investment gains and losses were measured on a smoothed basis; since 2014 investment gains and losses have been measured based on the return on the Market Value of Assets. As noted above, the gain from the 2014 method change was a recognition of investment gains that had been deferred under the asset smoothing method. Adding those investment gains

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SECTION II – RISK ANALYSIS

to the total net losses for the last 10 years produces an overall UAL gain due to investment returns.

Over the same time period, the assumed rate of return decreased from 7.75% to 7.00%. It is important to note that these changes simply reflect a downward revision to the estimate of future investment earnings and ultimately costs will be determined by actual investment earnings. Future expectations of investment returns may continue to decline necessitating further reductions in the discount rate.

The impact of all assumption changes is represented by the purple bars and also includes decreases in mortality rates projected in the future which had a significant impact on the measurement of the UAL. Assumptions are expected to change again in 2020 as a result of the scheduled experience study.

Each year the UAL is expected to increase for benefits earned in the current year (the normal cost), administrative expenses, and interest on the UAL. This expected increase is referred to as the tread water level. If contributions are greater than the tread water level, the UAL is expected to decrease. Conversely, if contributions are less than the tread water level, the UAL is expected to increase. The amortization policy (as well as the contribution-timing lag) can impact whether or not the contributions exceed the tread water level. For example, the Board changed the amortization policy in 2009 to amortize 50% of the extraordinary asset loss over a 30-year period and the remaining UAL over a 17-year period. Initially, the relatively long amortization period resulted in contributions being below the tread water level.

However, the single equivalent amortization period is now much lower (just over 12 years), and for the last seven years there have been payments made toward principal as well as interest on the current UAL.

Table II-1

Unfunded Actuarial Liability (UAL) Change by Source						
(in thousands)						
June 30,	Investment Experience	Liability Experience	Assumption Changes	Method Changes	Contributions	Total UAL Change
2010	\$24,805	\$9,085	\$0	\$0	\$7,889	\$41,779
2011	33,317	28,853	44,785	(112,861)	(236)	(6,142)
2012	60,319	(27,934)	0	0	7,741	40,126
2013	(1,645)	(29,202)	0	0	(27,253)	(58,100)
2014	(78,889)	(16,820)	135,957	(204,619)	(1,830)	(166,201)
2015	44,750	2,581	0	0	(15,152)	32,179
2016	82,195	3,639	0	0	(11,571)	74,263
2017	(88,225)	2,294	40,802	0	(8,217)	(53,346)
2018	(67,931)	18,644	0	0	(8,014)	(57,301)
2019	23,347	20,910	0	0	(11,287)	32,970
Total	\$32,043	\$12,050	\$221,544	(\$317,480)	(\$67,930)	(\$119,773)

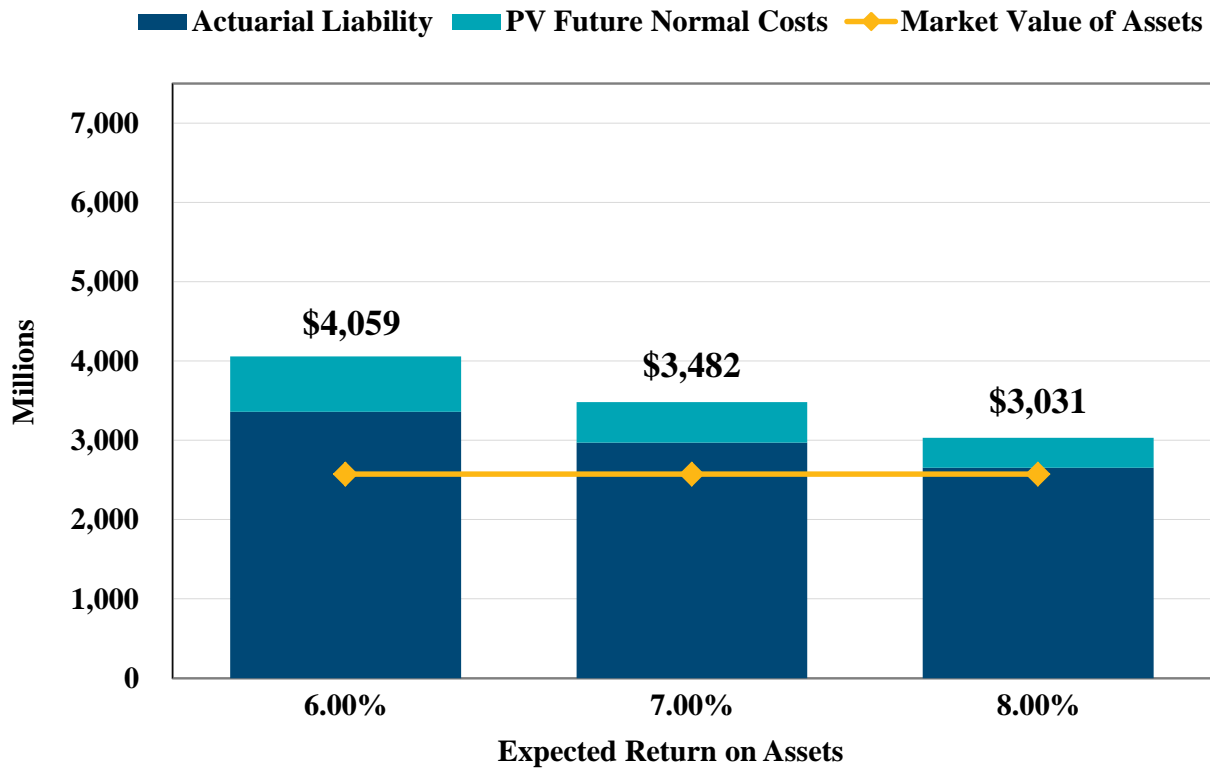
SECTION II – RISK ANALYSIS

Assessing Costs and Risks

Sensitivity to Investment Returns

The chart below compares assets to the present value of all projected future benefits discounted at the current expected rate of return and at discount rates 100 basis points above and below the expected rate of return. The present value of future benefits is shown as a bar with the portion attributable to past service in dark blue (Actuarial Liability) and the portion attributable to future service in teal (Present Value of Future Normal Costs). The Market Value of Assets is shown by the gold line.

Present Value of Future Benefits versus Assets



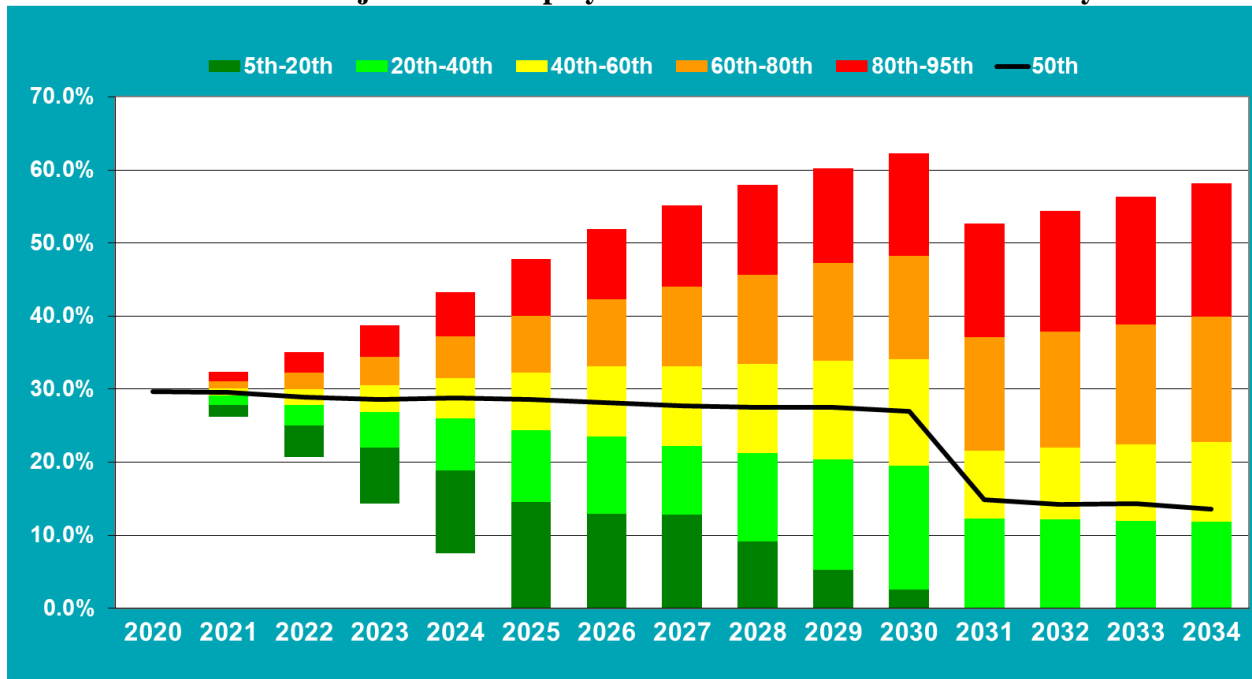
If investments return 7.00% annually, the Plan would need approximately \$3.5 billion in assets today to pay all projected benefits compared to current assets of \$2.6 billion. If investment returns are only 6.00%, the Plan would need approximately \$4.1 billion in assets today, and if investment returns are 8.00%, the Plan would need approximately \$3.0 billion in assets today.

SECTION II – RISK ANALYSIS

Sensitivity to Investment Returns – Stochastic Projections

Stochastic projections show the range of probable outcomes of various measurements. The graphs below and on the following page show the projected range of the employer contribution rate (calculated for MCERA in aggregate) and of the funded ratio. The range in both scenarios is driven by the volatility of investment returns, using a 13.0% assumed standard deviation of annual returns (based on the average from various investment consultants reported in the most recent experience study).

Stochastic Projection of Employer Contributions as a Percent of Pay

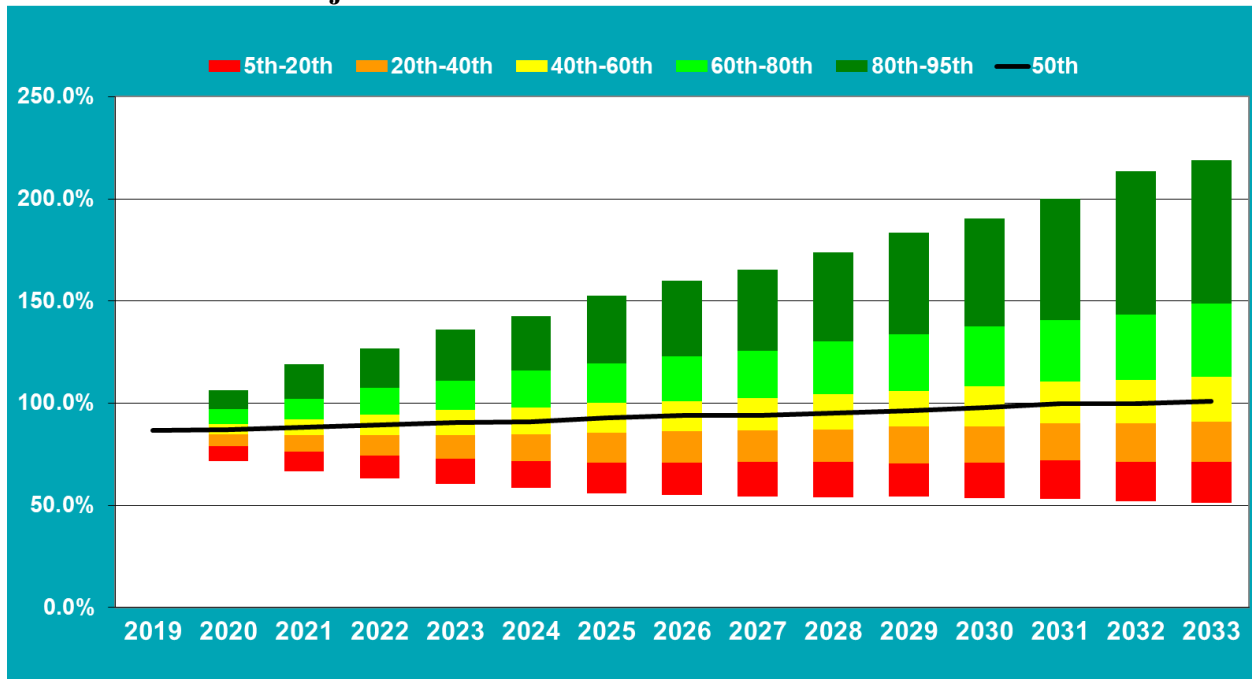


The stochastic projection of employer contributions as a percent of pay shows the probable range of future contribution rates. The baseline contribution rate (black line), which is based on the median of the simulations using an average return of 7.00%, aligns closely with the projections discussed in subsection D. of the Executive Summary of this report. In the most pessimistic scenario shown, the 95th percentile, the projected employer contribution rate exceeds 60% of pay in 2030. Conversely, the most optimistic scenario shown, the 5th percentile, the projected employer contribution rate declines to 0% beginning in 2025. We note that these projections allow the employer contribution to drop below the normal cost only if the Plan becomes extremely over-funded (above 120%), as required under PEPRA.

SECTION II – RISK ANALYSIS

In addition, as noted above, these projected contributions are calculated as the average across all MCERA employers. The projected contribution rates for some of the individual employers – in particular for the City of San Rafael and for the individual Safety districts – will exhibit significantly more rate volatility due to their higher leverage ratios, as discussed later in this section.

Stochastic Projection of Funded Ratio on a Market Value of Assets Basis



The graph above shows the projection of the MCERA funded ratio based on the Market Value of Assets. While the baseline-funded ratio (black line) is projected to be approximately 100% at the end of the 15-year period, there is a wide range of potential outcomes. Good investment returns have the likelihood of bringing the funded ratio well over 100%. Due to the current funding policy of the Plan, even in scenarios with unfavorable investment returns, the Plan is projected to remain over 50% funded, as long as the actuarially determined contributions continue to be made.

Contribution Risk

While investment returns are typically the dominant factor in volatility, contribution rates can also be sensitive to future salary increases and the hiring of new members. When member payroll growth stagnates or even declines, the dollar level of contributions made to the Plan also stagnate or decline since contributions are based on payroll levels, though this will generally only present a funding issue if there is an extended period of payroll reductions.

There is also a risk of the contribution rate increasing even higher when payroll decreases since the Plan’s funding policy amortizes the UAL as a level percentage of pay. This means that the UAL payments increase at the assumed payroll growth rate of 3.00%, so that the payment is expected to remain constant as a percentage of payroll. If payroll growth is less than the expected

SECTION II – RISK ANALYSIS

3.00% or there is a decline in payroll, the UAL payments are spread over a smaller payroll base and the contribution rate as a percentage of pay increases, making the Plan less affordable for those sponsors with declining payroll bases (such as was seen in the current valuation for San Rafael).

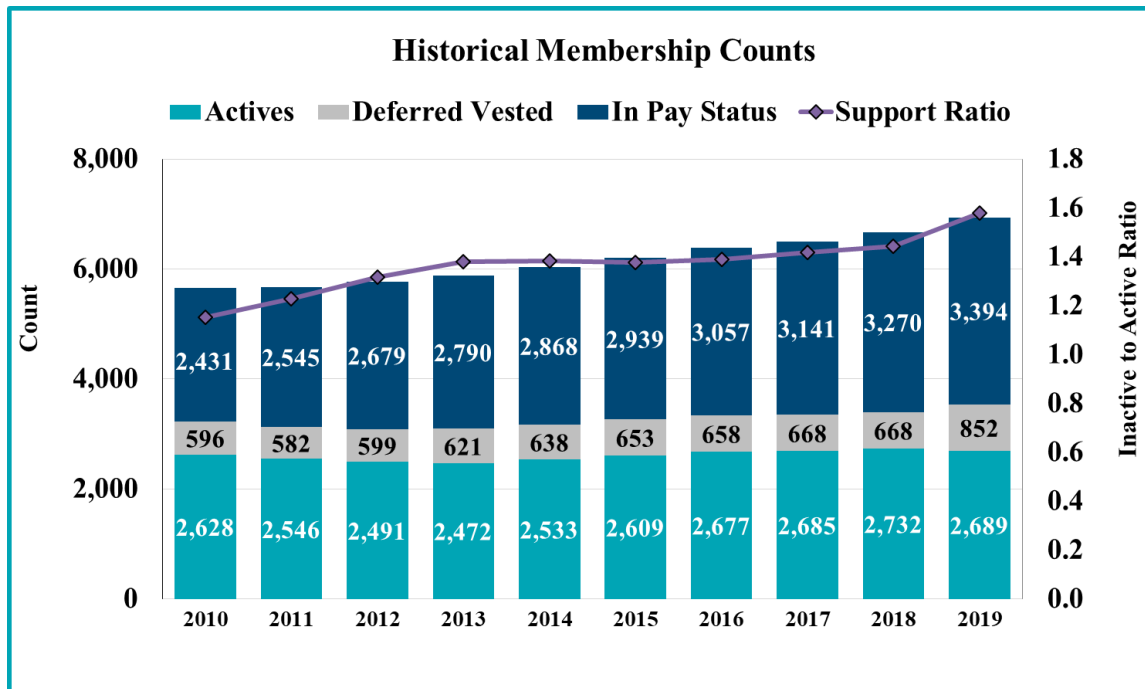
Plan Maturity Measures

The future financial condition of a mature pension plan is more sensitive to each of the risks identified above than a less mature plan. As part of assessing each of these risks, it is important to understand the maturity of the Plan and how the maturity has changed over time.

Plan maturity can be measured in a variety of ways, but they all get at one basic dynamic – the larger the plan is compared to the contribution or revenue base that supports it, the more sensitive the plan will be to risk. The measures below have been selected as the most important in understanding the primary risks identified for the Plan.

Inactives per Active (Support Ratio)

One simple measure of plan maturity is the ratio of the number of inactive members (those receiving benefits and those entitled to a deferred benefit) to the number of active members. The Support Ratio is expected to increase gradually as a plan matures. The chart below shows the growth in the Support Ratio from 2010 to 2019. The inactive membership level was about 115% of the active membership level in 2010, so the Support Ratio was approximately 1.15. During the past few years, the growth in retired membership exceeded the growth in active membership, increasing the Support Ratio to approximately 1.6. That means for 2019, there are approximately 1.6 inactive members per active member.



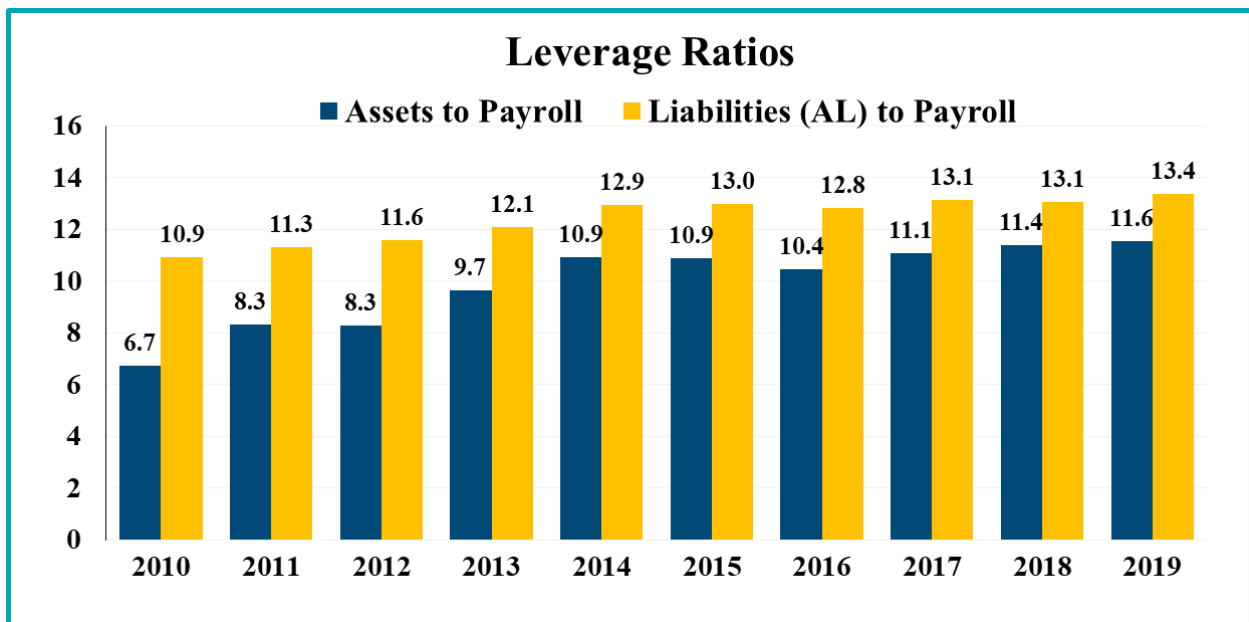
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SECTION II – RISK ANALYSIS

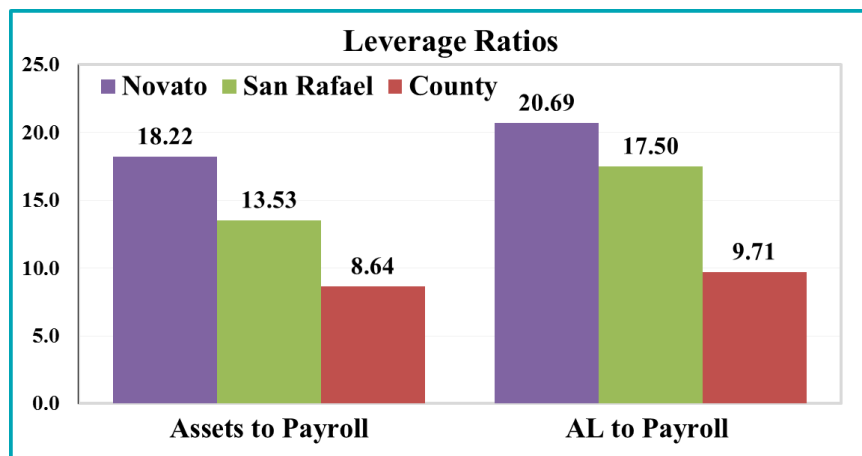
Leverage Ratios

Leverage or volatility ratios measure the size of the plan compared to its revenue base more directly. The asset leverage ratio is simply the Market Value of Assets to active member payroll and indicates the sensitivity of the Plan to investment returns. The liability leverage ratio is the plan's Actuarial Liability to active member payroll and indicates the sensitivity of the Plan to assumption changes or demographic experience.

The chart below shows the historical leverage ratios of the Plan. Both leverage ratios have increased substantially since 2012.



As the Plan becomes better funded, the asset leverage ratio will increase. If it was 100% funded, the asset leverage ratio would be close to 13.4 times payroll, or the Actuarial Liability (AL) leverage ratio.



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We note in the table above that assets are currently nearly nine times covered payroll for the County, the ratio is nearly 14 for San Rafael, and over 18 for Novato. As funding improves and the Plan reaches 100% funding, the ratio of assets to payroll will increase: to nearly 10 times payroll for the County, over 17 for San Rafael, and nearly 21 for Novato.

To appreciate the impact of the ratio of assets to payroll on the contribution rate, consider the situation for a new plan with almost no assets. Even if the assets suffer a bad year of investment returns, the impact on the plan cost is nil because the assets are so small.

On the other hand, consider the situation for the County. Suppose MCERA's assets lose 10.0% of their value in a year. Since they were assumed to earn 7.0%, there is an actuarial loss of 17.0% of plan assets. Based on the current ratio of assets to payroll (864%) for the County, that means the loss in assets is about 147% of active County payroll (864% of the 17.0% loss).

There is only one source of funding to make up for this loss: contributions. Consequently, barring future offsetting investment gains, the County and special district employers would have to make up the asset loss in future contributions. In this example of a one-year loss of 10.0%, this shortfall will eventually require an average additional amortization payment of approximately 11.5% of payroll once fully phased-in under the Plan's current amortization policy.

As the plan matures and becomes better funded, the ratio of assets to payroll will increase. When assets are 971% of pay for the County, the 10.0% loss discussed above will translate to a loss of 165% of payroll, which when amortized will increase the employer contribution rate by 12.9% once fully phased-in. Therefore, the plan is likely to become more sensitive to market variation in the future than it is today.

The expected contribution volatility is higher for San Rafael and Novato due to their higher relative number of Safety members who receive higher benefits relative to their payroll, and more mature populations. A 10.0% loss for San Rafael would currently translate to a loss of 230% of pay, which would require an eventual 18.0% of pay amortization payment. The same loss for Novato would translate to a loss of 310% of pay, requiring a 24.2% of pay payment once phased-in.

More Detailed Assessment

While a more detailed assessment is always valuable to enhance the understanding of the risks identified above, we believe the scenarios illustrated cover the primary risks facing the Plan at this time. We would be happy to provide the Board with a more in-depth analysis at their request.

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SECTION III – ASSETS

Pension Plan assets play a key role in the financial operation of the Plan and in the decisions the Board may make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact employer contributions and the ultimate security of participants' benefits.

In this section, we present detailed information on Plan assets including:

- **Disclosure** of Plan assets as of June 30, 2018 and June 30, 2019,
- Statement of the **changes** in market values during the year,
- An assessment of historical **investment performance versus inflation**, and
- An allocation of the assets between the **employers and their valuation subgroups**.

Disclosure

The Actuarial Value of Assets is equal to the Market Value of Assets. The market value represents “snap-shot” or “cash-out” values that provide the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with corresponding swings in the marketplace.

The valuation assets are equal to the market/actuarial value, minus any non-valuation reserves that are to be excluded from the calculation of the Unfunded Actuarial Liability. For MCERA, the only such non-valuation reserves are the Statutory Contingency Reserves, which are established and maintained in accordance with Government Code section 31592.2 and the Plan's Interest Crediting Policy.

Table III-1 on the next page discloses asset value as of June 30, 2018 and June 30, 2019.

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SECTION III – ASSETS

Table III-1 Statement of Assets at Market Value		
Assets:	June 30, 2018	June 30, 2019
Cash and Cash Equivalents	\$ 31,491,712	\$ 37,208,516
Collateral held for Securities Loaned	<u>42,146,367</u>	<u>50,460,741</u>
Total Cash and Short Term Investments	73,638,079	87,669,257
Receivables:		
Contributions	3,823,704	5,407,235
Interest and Dividends	2,220,718	3,238,825
Due from Brokers for Securities Sold	1,164,332	7,708,555
Other Receivables	<u>396,149</u>	<u>970,825</u>
Total Receivables	7,604,903	17,325,440
Investments, at Fair Value:		
Domestic Fixed Income	374,675,426	416,276,932
International Fixed Income	63,128,698	70,117,793
Domestic Equities	863,910,598	808,156,989
International Equities	548,340,898	579,503,649
Private Equity	247,799,003	269,766,773
Real Estate	266,170,531	283,865,908
Real Assets	<u>110,306,759</u>	<u>126,982,871</u>
Total Investments	2,474,331,913	2,554,670,915
Other Assets:		
Capital Assets	4,986,167	5,117,829
Prepaid Insurance	<u>97,798</u>	<u>74,234</u>
Total Assets	2,560,658,860	2,664,857,676
Liabilities:		
Accounts Payable and Accrued Expenses	1,740,483	1,695,561
Due to Brokers for Securities Purchased	15,334,500	20,304,782
Retiree Payroll Payable	15,378	11,008
Obligations Under Securities Lending Program	<u>42,146,367</u>	<u>50,460,741</u>
Total Liabilities	59,236,728	72,472,092
Net Assets Held in Trust for Pension Benefits	\$ 2,501,422,132	\$ 2,592,385,584
Statutory Contingency Reserve (County)	18,756,440	19,105,640
Statutory Contingency Reserve (Novato)	1,757,909	0
Statutory Contingency Reserve (San Rafael)	<u>0</u>	<u>0</u>
Total Non-Valuation Reserves	20,514,349	19,105,640
Market Value of Valuation Assets	\$ 2,480,907,783	\$ 2,573,279,944

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SECTION III – ASSETS

Changes in Market Value

The components of asset change are:

- Contributions (employer and employee)
- Benefit payments
- Expenses (investment and administrative)
- Investment income (realized and unrealized)

Table III-2 below shows the components of changes in the Market Value of Assets during the fiscal years ending June 30, 2018 and June 30, 2019.

Table III-2 Changes in Market Values		
<u>Additions</u>	Fiscal Year ending <u>June 30, 2018</u>	Fiscal Year ending <u>June 30, 2019</u>
Contributions		
Employers' Contributions	\$ 78,754,476	\$ 78,738,814
Members' Contributions	28,628,627	30,010,459
Total Contributions	<u>107,383,103</u>	<u>108,749,273</u>
Investment Income		
Net Appreciation/(Depreciation) in Fair Value of Investments	202,684,595	110,011,373
Interest and Dividends	16,508,622	23,907,650
Real Estate Operating Income, net	13,921,217	13,706,707
Other Investment Income	<u>1,633,974</u>	<u>1,196,750</u>
Total Investment Income/(Loss)	234,748,408	148,822,480
Investment Expenses	<u>(13,093,197)</u>	<u>(12,500,905)</u>
Net Investment Income/(Loss)	221,655,211	136,321,575
Securities Lending Activities		
Net Securities Lending Income/(Loss)	183,985	161,938
Total Investment Income/(Loss)	221,839,196	136,483,513
Total Additions/(Declines)	<u>\$ 329,222,299</u>	<u>\$ 245,232,786</u>

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION III – ASSETS

Table III-2 Changes in Market Values (Continued)		
<u>Deductions</u>	Fiscal Year ending <u>June 30, 2018</u>	Fiscal Year ending <u>June 30, 2019</u>
Benefit payments	138,640,109	147,990,796
Refunds of Members' Contributions	1,216,563	1,222,187
Administrative Costs	3,343,486	4,109,428
Legal Costs & Litigation Settlement	484,563	467,249
Computer Expenses	214,827	223,065
Actuarial Expenses	<u>160,829</u>	<u>256,608</u>
Total Deductions	144,060,377	154,269,334
Net increase (Decrease)	185,161,922	90,963,452
Net Assets Held in Trust for Pension Benefits		
Beginning of Year	2,316,260,210	2,501,422,132
End of Year	2,501,422,132	2,592,385,584
Approximate Return (Net of Investment Expenses)*	9.7%	5.5%

*The approximate return is computed using an assumption that cash flows occur mid-year, on average. This calculation will not necessarily match the actual time- or money-weighted returns of the Plan.

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION III – ASSETS

Historical Investment Performance

Table III-3 shows the historical annual asset returns on a market value basis, as well as the increase in the Consumer Price Index (CPI) since 2007.

Table III-3 Net Return on Assets vs. Increase in Consumer Price Index		
Year Ended June 30	Net Return at Market Value	Increase in Consumer Price Index*
2007	18.1%	3.4%
2008	-6.7%	4.2%
2009	-19.8%	0.2%
2010	8.2%	1.1%
2011	23.4%	2.4%
2012	1.6%	2.6%
2013	13.9%	2.6%
2014	18.1%	3.0%
2015	5.0%	2.3%
2016	2.1%	2.7%
2017	11.9%	3.5%
2018	9.7%	3.9%
2019	5.5%	3.2%
10-Year Compound Average	9.7%	2.7%
5-Year Compound Average	6.8%	3.1%

*Based on Consumer Price Index for San Francisco-Oakland-Hayward Area (1982-1984 base period).

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION III – ASSETS

Asset Allocation by Valuation Subgroup

Table III-4 below shows the allocation of the valuation assets between the employers and their valuation subgroups (Miscellaneous vs. Safety). These allocations are based on a roll-forward of the asset balances from the prior year, adjusted for employee and employer contributions, and are used to calculate the UAL amortizations for each employer and subgroup. Assets are first allocated to cover the liabilities for inactive members (members in pay status or eligible to receive a deferred benefit), and any remaining assets are allocated to each group's active members based on the employer's share of the rolled-forward balances.

The top portion of the table shows the allocations for the active members of each employer. A negative balance indicates that the allocated assets are not sufficient to cover a group's inactive liabilities. The bottom portion of the table shows the total asset allocation (active and inactive) for each of the three main subgroups.

The column on the right shows the funded ratios. For the top portion of the table, the funded ratio is the percentage of the active liabilities covered by the valuation assets. For the bottom portion, the funded ratio represents the total funded ratio for each group.

Table III-4 Market Assets and Funding Ratios - Active Members Only					
Plan	Group	Assets 2018	Ratios 2018	Assets 2019	Ratios 2019
County	County Misc	\$ 300,652,700	69.9%	\$ 285,294,364	66.8%
	County Safety	134,068,385	69.2%	127,389,742	64.7%
	Courts	19,359,393	73.7%	17,886,315	68.1%
	South Marin Fire Misc	258,160	100.0%	282,902	84.2%
	South Marin Fire Safety	16,317,193	62.0%	16,033,172	58.1%
	Mosquito District	8,465,225	67.5%	8,059,467	56.5%
	LAFCO	167,409	100.0%	157,002	84.9%
	Tamalpais CSD	2,379,443	64.5%	2,355,455	89.8%
	Marin City CSD	249,214	96.4%	232,525	100.0%
	Novato	Novato Misc	2,805,074	81.2%	2,367,265
Novato Safety		41,517,170	67.0%	39,285,697	62.2%
San Rafael	San Rafael Misc	1,316,667	2.2%	(2,893,222)	(5.1%)
	San Rafael Safety	6,015,211	7.3%	(2,721,713)	(3.7%)

Market Assets and Funding Ratios - Total					
County		\$ 1,856,887,569	89.8%	\$ 1,923,991,252	89.0%
Novato		174,032,950	89.2%	181,901,455	88.0%
San Rafael		449,987,265	77.0%	467,387,237	77.3%

MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION IV – LIABILITIES

In this section, we present detailed information on Plan liabilities.

Disclosure

Several measures of liabilities are calculated and presented in this report. Note that these measures of liabilities are not applicable for settlement purposes, including the purchase of annuities and the payment of lump sums.

- **Present Value of Future Benefits:** Used for measuring all future Plan obligations, represents the expected amount of money needed today to fully fund all benefits of the Plan both earned as of the valuation date and those to be earned in the future by current plan participants under the current Plan provisions if all assumptions are met.
- **Actuarial Liability:** Used for funding calculations, this liability is calculated taking the present value of future benefits and subtracting the present value of future member contributions and future employer normal costs under an acceptable actuarial cost method. The method used for this Plan is called the **Entry Age Normal** (EAN) Cost Method. The Actuarial Liability represents the expected amount of money needed today to pay for benefits attributed to service prior to the valuation date. As such, it is the amount of assets targeted by the actuarial cost method for the Plan to hold as of the valuation date.

Table IV-1 on the next page shows the present value of future benefits and Table IV-2 shows the Actuarial Liability for each valuation subgroup for the current and prior valuations. The top portion of each table shows the liabilities for the active members for each employer. The bottom portion of the table shows the total liability (active and inactive) for each of the three main subgroups.

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ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

SECTION IV – LIABILITIES

Table IV-1				
Present Value of Benefits - Active Members Only				
Plan	Group	2018	2019	
County	County Misc Tier 1	\$ 9,227,337	\$ 4,877,186	
	County Misc Tier 2	19,008,378	17,927,709	
	County Misc Tier 3	441,740,994	420,274,928	
	County Misc Tier 3A	39,419,788	35,783,118	
	County Misc Tier 4	41,089,202	42,475,930	
	County Misc Tier 5 (PEPRA)	120,313,430	144,813,281	
	County Safety Tier 1A	3,013,364	3,025,360	
	County Safety Tier 2A	43,390,319	38,707,481	
	County Safety Tier 2B	221,509,310	222,454,944	
	County Safety Tier 3 (PEPRA)	40,475,238	52,273,768	
	Courts Tier 1	1,374,242	1,385,102	
	Courts Tier 2	308,997	326,984	
	Courts Tier 3	29,522,804	28,678,492	
	Courts Tier 4	1,818,858	1,750,828	
	Courts Tier 5 (PEPRA)	3,630,240	4,703,763	
	South Marin Fire Misc Tier 1	0	0	
	South Marin Fire Misc Tier 2 (PEPRA)	839,763	1,087,286	
	South Marin Fire Safety Tier 1	21,330,950	19,701,094	
	South Marin Fire Safety Tier 2	17,960,205	19,693,024	
	South Marin Fire Safety Tier 2A	1,300,484	2,050,342	
	South Marin Fire Safety Tier 3A (PEPRA)	4,388,012	6,555,709	
	Mosquito District Tier 1	17,713,826	18,950,216	
	Mosquito District Tier 2 (PEPRA)	768,644	1,334,580	
	LAFCO Tier 3	324,366	333,253	
	LAFCO Tier 4 (PEPRA)	0	375,440	
	Tamalpais CSD Tier 1	4,833,727	3,579,497	
	Tamalpais CSD Tier 2 (PEPRA)	869,952	1,314,548	
	Marin City CSD Tier 1	505,957	696,140	
	Marin City CSD Tier 2 (PEPRA)	600,857	116,736	
	Novato	Novato Misc Tier 1	4,701,904	4,133,481
		Novato Misc Tier 2A (PEPRA)	402,477	723,706
		Novato Safety Tier 1	74,685,228	73,961,745
		Novato Safety Tier 2	6,093,380	6,829,755
Novato Safety Tier 3 (PEPRA)		3,312,412	3,634,063	
Novato Safety Tier 3A (PEPRA)		1,270,952	3,090,569	
San Rafael	San Rafael Misc Tier 1	75,523,438	68,301,686	
	San Rafael Misc Tier 2	5,391,951	5,594,325	
	San Rafael Misc Tier 3 (PEPRA)	11,549,087	14,077,456	
	San Rafael Fire Tier 1	50,511,347	44,905,842	
	San Rafael Police Tier 1	54,642,023	46,579,103	
	San Rafael Fire Tier 2	10,753,352	11,736,607	
	San Rafael Police Tier 2	4,143,263	3,081,662	
	San Rafael Safety Tier 3 (PEPRA)	17,008,993	21,034,069	

Total Present Value of Benefits - Active and Inactive Members		
County	\$ 2,462,249,691	\$ 2,561,547,047
Novato	220,177,059	232,621,811
San Rafael	672,178,841	688,312,921

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

SECTION IV – LIABILITIES

Table IV-2				
Actuarial Liabilities - Active Members Only				
Plan	Group	2018	2019	
County	County Misc Tier 1	\$ 8,762,103	\$ 4,613,599	
	County Misc Tier 2	16,520,741	15,878,405	
	County Misc Tier 3	344,558,190	334,998,722	
	County Misc Tier 3A	19,898,606	19,752,743	
	County Misc Tier 4	12,875,168	15,214,264	
	County Misc Tier 5 (PEPRA)	27,426,534	36,323,307	
	County Safety Tier 1A	3,013,364	3,025,360	
	County Safety Tier 2A	31,042,178	27,052,289	
	County Safety Tier 2B	152,407,792	156,584,784	
	County Safety Tier 3 (PEPRA)	7,181,259	10,219,516	
	Courts Tier 1	1,328,771	1,338,841	
	Courts Tier 2	234,974	256,873	
	Courts Tier 3	22,988,063	22,675,179	
	Courts Tier 4	997,244	1,087,830	
	Courts Tier 5 (PEPRA)	705,432	924,250	
	South Marin Fire Misc Tier 1	0	0	
	South Marin Fire Misc Tier 2 (PEPRA)	258,160	335,901	
	South Marin Fire Safety Tier 1	16,981,020	16,019,558	
	South Marin Fire Safety Tier 2	8,194,705	9,955,923	
	South Marin Fire Safety Tier 2A	216,338	308,203	
	South Marin Fire Safety Tier 3A (PEPRA)	912,088	1,297,963	
	Mosquito District Tier 1	12,471,827	14,090,415	
	Mosquito District Tier 2 (PEPRA)	70,067	177,294	
	LAFCO Tier 3	167,409	184,851	
	LAFCO Tier 4 (PEPRA)	0	0	
	Tamalpais CSD Tier 1	3,581,803	2,430,885	
	Tamalpais CSD Tier 2 (PEPRA)	105,077	191,997	
	Marin City CSD Tier 1	177,816	218,338	
	Marin City CSD Tier 2 (PEPRA)	80,751	14,187	
	Novato	Novato Misc Tier 1	3,369,151	3,018,277
		Novato Misc Tier 2A (PEPRA)	85,402	133,164
		Novato Safety Tier 1	58,186,033	59,006,843
		Novato Safety Tier 2	2,843,681	2,900,780
Novato Safety Tier 3 (PEPRA)		816,611	1,078,841	
Novato Safety Tier 3A (PEPRA)		74,274	217,055	
San Rafael	San Rafael Misc Tier 1	56,101,393	52,612,013	
	San Rafael Misc Tier 2	1,469,796	1,763,554	
	San Rafael Misc Tier 3 (PEPRA)	1,895,288	2,691,015	
	San Rafael Fire Tier 1	35,162,135	31,111,770	
	San Rafael Police Tier 1	40,243,671	35,008,824	
	San Rafael Fire Tier 2	2,894,816	3,676,008	
	San Rafael Police Tier 2	1,248,192	1,179,061	
	San Rafael Safety Tier 3 (PEPRA)	2,463,190	3,569,567	

Total Actuarial Liabilities - Active and Inactive Members		
County	\$ 2,068,127,927	\$ 2,161,471,785
Novato	195,085,858	206,603,452
San Rafael	584,133,868	604,613,983

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For this Plan, there are three components to the total contribution: the **normal cost rate** (employee and employer), the **Unfunded Actuarial Liability rate** (UAL rate), and the **administrative expense** contribution.

The normal cost rate is determined in the following steps. First, an individual normal cost rate is determined by taking the value, as of entry age into the Plan, of each member's projected future benefits. This value is then divided by the value, also at entry age, of the member's expected future salary producing a normal cost rate that is expected to remain constant over a member's career.

The total normal cost is computed by adding up the expected dollar amount of each active member's normal cost for the current year. The total normal cost is adjusted with interest to the middle of the year, to reflect the fact that the normal cost contributions are paid throughout the year as member payroll payments are made. Finally, the total normal cost is reduced by the expected contributions for each member and divided by the projected pay for each subgroup.

The Unfunded Actuarial Liability (UAL) is the difference between the EAN Actuarial Liability and the Market Value of Assets. The UAL payment is determined using the following pieces, and then divided by the projected payroll for each employer to calculate a UAL rate for each group:

- The amount needed to fund the extraordinary UAL resulting from the 2008-2009 investment losses as a level percent of member payroll over a fixed period (19 years remaining as of the current valuation, reduced from 20 years in the prior valuation),
- The remaining UAL as of June 30, 2013 over a period of 17 years as a level percentage of member payroll (11 years as of June 30, 2019), and
- Any subsequent unexpected change in the Unfunded Actuarial Liability after June 30, 2013 is amortized over 24 years (22 years for assumption changes) that includes a five-year phase-in and four year phase-out (three/two years for assumption changes) of the payments/credits for each annual layer.

Administrative expenses are assumed to be \$5.217 million per year as of June 30, 2019, increasing at 3% per annum. The administrative expenses are split between employees and employers based on their share of the overall contributions.

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Table V-1 below presents the calculation of employer contribution rates for each of the three main Plan groups, as well as a comparison to the prior year rates.

Table V-1 Development of the Net Employer Contribution Rates as of June 30, 2019 for FYE 2021						
	June 30, 2018			June 30, 2019		
	County	Novato	San Rafael	County	Novato	San Rafael
1. Total Normal Cost Rate	22.72%	38.53%	29.12%	22.58%	37.54%	28.41%
2. Member Contribution Rate	<u>10.62%</u>	<u>14.76%</u>	<u>12.19%</u>	<u>10.59%</u>	<u>14.59%</u>	<u>12.10%</u>
3. Employer Normal Cost Rate (1-2)	12.10%	23.77%	16.93%	11.99%	22.95%	16.31%
4. UAL Amortization	10.26%	19.46%	37.99%	10.95%	21.63%	41.57%
5. Administrative Expense Rate	<u>1.12%</u>	<u>2.17%</u>	<u>2.75%</u>	<u>1.14%</u>	<u>2.22%</u>	<u>2.89%</u>
6. Final Employer Contribution Rate (3+4+5)	23.48%	45.40%	57.67%	24.08%	46.80%	60.77%

Table V-2 on the following page presents the calculation of the UAL payments for the Plan for this valuation.

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Table V-2 Development of Amortization Payment For the June 30, 2019 Actuarial Valuation								
Type of Base	Date Established	Initial Amount	Initial Amortization Years	June 30, 2019 Outstanding Balance	Remaining Amortization Years	Length of Phase In/Out	Current Phase In/Out Percentage	Amortization Amount
Charges / (Credits)								
1. County - 2009 Extraordinary Loss	6/30/2009	\$ 146,241,604	30	\$ 155,679,331	19	N/A	100%	\$ 11,686,190
2. County - Initial UAL	6/30/2013	188,358,828	17	162,506,889	11	N/A	100%	18,355,080
3. County - (Gain)/Loss Base	6/30/2014	(223,502,748)	24	(250,480,654)	19	5	100%	(20,349,026)
4. County - Assumption Changes	6/30/2014	99,117,401	22	102,470,202	17	3	100%	8,686,433
5. County - (Gain)/Loss Base	6/30/2015	36,267,023	24	41,027,132	20	5	100%	3,201,293
6. County - (Gain)/Loss Base	6/30/2016	62,321,452	24	69,902,998	21	5	80%	4,265,599
7. County - (Gain)/Loss Base	6/30/2017	(56,402,352)	24	(61,721,078)	22	5	60%	(2,805,495)
8. County - Assumption Changes	6/30/2017	27,391,858	22	29,135,084	20	3	100%	2,188,045
9. County - (Gain)/Loss Base	6/30/2018	(45,161,446)	24	(47,592,658)	23	5	40%	(1,453,958)
10. County - Audit Changes	6/30/2018	1,870,282	24	1,970,966	23	5	40%	60,213
11. County - (Gain)/Loss Base	6/30/2019	34,582,319	24	34,582,319	24	5	20%	540,469
12. Novato - 2009 Extraordinary Loss	6/30/2009	14,765,994	30	15,718,919	19	N/A	100%	1,179,953
13. Novato - Initial UAL	6/30/2013	17,008,202	17	14,673,854	11	N/A	100%	1,657,405
14. Novato - (Gain)/Loss Base	6/30/2014	(22,114,107)	24	(24,783,390)	19	5	100%	(2,013,400)
15. Novato - Assumption Changes	6/30/2014	6,230,650	22	6,441,411	17	3	100%	546,041
16. Novato - (Gain)/Loss Base	6/30/2015	2,876,813	24	3,254,400	20	5	100%	253,937
17. Novato - (Gain)/Loss Base	6/30/2016	6,441,310	24	7,224,910	21	5	80%	440,876
18. Novato - (Gain)/Loss Base	6/30/2017	(7,837,057)	24	(8,576,089)	22	5	60%	(389,821)
19. Novato - Assumption Changes	6/30/2017	4,583,960	22	4,875,685	20	3	100%	366,164
20. Novato - (Gain)/Loss Base	6/30/2018	1,668,937	24	1,758,782	23	5	40%	53,731
21. Novato - Audit Changes	6/30/2018	14,052	24	14,808	23	5	40%	452
22. Novato - (Gain)/Loss Base	6/30/2019	4,098,708	24	4,098,708	24	5	20%	64,057
23. San Rafael - 2009 Extraordinary Loss	6/30/2009	34,997,031	30	37,255,571	19	N/A	100%	2,796,619
24. San Rafael - Initial UAL	6/30/2013	124,305,953	17	107,245,169	11	N/A	100%	12,113,293
25. San Rafael - (Gain)/Loss Base	6/30/2014	(54,710,285)	24	(61,314,091)	19	5	100%	(4,981,151)
26. San Rafael - Assumption Changes	6/30/2014	30,608,707	22	31,644,094	17	3	100%	2,682,480
27. San Rafael - (Gain)/Loss Base	6/30/2015	8,187,631	24	9,262,271	20	5	100%	722,723
28. San Rafael - (Gain)/Loss Base	6/30/2016	18,955,168	24	21,261,107	21	5	80%	1,297,389
29. San Rafael - (Gain)/Loss Base	6/30/2017	(19,744,705)	24	(21,606,625)	22	5	60%	(982,116)
30. San Rafael - Assumption Changes	6/30/2017	8,825,862	22	9,387,543	20	3	100%	705,004
31. San Rafael - (Gain)/Loss Base	6/30/2018	(3,777,871)	24	(3,981,248)	23	5	40%	(121,627)
32. San Rafael - Audit Changes	6/30/2018	380,007	24	400,464	23	5	40%	12,234
33. San Rafael - (Gain)/Loss Base	6/30/2019	7,672,490	24	7,672,490	24	5	20%	119,909
Total				\$ 399,409,277				\$ 40,898,993

The single equivalent amortization period – i.e., the length of time required to amortize the overall UAL as a level percentage of payroll based on the total current amortization payment – is approximately 12 years.



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Tables V-3 through V-6 present the calculation of employer contribution rates for each employer and Tier.

**Table V-3
Development of the County Misc/Safety Contribution Rates as of June 30, 2019 for FYE 2021**

	County Misc Tier 1	County Misc Tier 2	County Misc Tier 3	County Misc Tier 3A	County Misc Tier 4	County Misc Tier 5	County Misc
A. Total Normal Cost Rate	22.98%	20.48%	19.74%	21.67%	20.78%	17.63%	19.09%
B. Member Contribution Rate (Excluding Admin Expense Load)	<u>3.56%</u>	<u>8.59%</u>	<u>8.87%</u>	<u>9.70%</u>	<u>8.56%</u>	<u>8.79%</u>	8.84%
C. Employer Normal Cost Rate (A-B)	19.42%	11.89%	10.87%	11.97%	12.22%	8.84%	10.25%
D. UAL Amortization Rate	9.40%	9.40%	9.40%	9.40%	9.40%	9.40%	9.40%
E. Administrative Expense Rate	<u>1.44%</u>	<u>1.06%</u>	<u>1.01%</u>	<u>1.07%</u>	<u>1.08%</u>	<u>0.91%</u>	0.98%
F. Net June 30, 2019 Contribution Rate (C+D+E)	30.26%	22.35%	21.28%	22.44%	22.70%	19.15%	20.63%

	County Safety Tier 2A	County Safety Tier 2B	County Safety Tier 3	County Safety	County Misc / Safety
A. Total Normal Cost Rate	35.98%	35.94%	27.87%	33.66%	22.15%
B. Member Contribution Rate (Excluding Admin Expense Load)	<u>15.81%</u>	<u>18.60%</u>	<u>13.72%</u>	<u>16.90%</u>	10.53%
C. Employer Normal Cost Rate (A-B)	20.17%	17.34%	14.15%	16.76%	11.62%
D. UAL Amortization Rate	16.00%	16.00%	16.00%	16.00%	10.79%
E. Administrative Expense Rate	<u>1.80%</u>	<u>1.66%</u>	<u>1.50%</u>	<u>1.63%</u>	1.12%
F. Net June 30, 2019 Contribution Rate (C+D+E)	37.97%	35.00%	31.65%	34.39%	23.53%

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SECTION V – CONTRIBUTIONS

**Table V-4
Development of the County Special Districts Contribution Rates as of June 30, 2019 for FYE 2021**

	South Marin Fire Misc Tier 1*	South Marin Fire Misc Tier 2	Tamalpais CSD Tier 1	Tamalpais CSD Tier 2	Marin City CSD Tier 1	Marin City CSD Tier 2	Mosquito District Tier 1	Mosquito District Tier 2
A. Total Normal Cost Rate		19.24%	27.00%	20.21%	24.03%	27.28%	24.98%	18.36%
B. Member Contribution Rate (Excluding Admin Expense Load)		<u>9.77%</u>	<u>12.38%</u>	<u>9.77%</u>	<u>11.16%</u>	<u>9.77%</u>	<u>10.01%</u>	<u>9.77%</u>
C. Employer Normal Cost Rate (A-B)		9.47%	14.62%	10.44%	12.87%	17.51%	14.97%	8.59%
D. UAL Amortization Rate		3.81%	14.44%	14.44%	3.86%	3.86%	16.42%	16.42%
E. Administrative Expense Rate		<u>0.66%</u>	<u>1.45%</u>	<u>1.24%</u>	<u>0.83%</u>	<u>1.07%</u>	<u>1.57%</u>	<u>1.25%</u>
F. Net June 30, 2019 Contribution Rate (C+D+E)		13.94%	30.51%	26.12%	17.56%	22.44%	32.96%	26.26%

	LAFCO Tier 3	LAFCO Tier 4	South Marin Fire Safety Tier 1	South Marin Fire Safety Tier 2	South Marin Fire Safety Tier 2A	South Marin Fire Safety Tier 3A	Special Districts	Total County
A. Total Normal Cost Rate	21.90%	18.31%	41.43%	43.13%	40.35%	32.06%	32.21%	22.58%
B. Member Contribution Rate (Excluding Admin Expense Load)	<u>8.12%</u>	<u>8.79%</u>	<u>14.84%</u>	<u>15.00%</u>	<u>12.73%</u>	<u>16.03%</u>	12.93%	10.59%
C. Employer Normal Cost Rate (A-B)	13.78%	9.52%	26.59%	28.13%	27.62%	16.03%	19.28%	11.99%
D. UAL Amortization Rate	2.62%	2.62%	11.94%	11.94%	11.94%	11.94%	12.76%	10.95%
E. Administrative Expense Rate	<u>0.82%</u>	<u>0.61%</u>	<u>1.92%</u>	<u>2.00%</u>	<u>1.97%</u>	<u>1.40%</u>	1.60%	1.14%
F. Net June 30, 2019 Contribution Rate (C+D+E)	17.22%	12.75%	40.45%	42.07%	41.53%	29.37%	33.64%	24.08%

* Rates for this group have been removed, as there are no longer any active members.

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**Table V-5
Development of the Courts and Novato Contribution Rates as of June 30, 2019 for FYE 2021**

	Courts Tier 1	Courts Tier 2	Courts Tier 3	Courts Tier 4	Courts Tier 5	Courts Total					
A. Total Normal Cost Rate	17.56%	16.71%	19.56%	23.52%	17.40%	19.05%					
B. Member Contribution Rate (Excluding Admin Expense Load)	0.00%	7.88%	8.81%	10.40%	8.79%	8.77%					
C. Employer Normal Cost Rate (A-B)	17.56%	8.83%	10.75%	13.12%	8.61%	10.28%					
D. UAL Amortization Rate	12.54%	12.54%	12.54%	12.54%	12.54%	12.54%					
E. Administrative Expense Rate	<u>1.50%</u>	<u>1.07%</u>	<u>1.16%</u>	<u>1.28%</u>	<u>1.06%</u>	1.14%					
F. Net June 30, 2019 Contribution Rate (C+D+E)	31.60%	22.44%	24.45%	26.94%	22.21%	23.96%					
	Novato Misc Tier 1	Novato Misc Tier 2A	Novato Misc	Novato Safety Tier 1	Novato Safety Tier 2	Novato Safety Tier 3	Novato Safety Tier 3A	Novato Safety	Novato Total		
A. Total Normal Cost Rate	21.78%	17.69%	20.25%	41.00%	44.91%	33.02%	27.17%	39.51%	37.54%		
B. Member Contribution Rate (Excluding Admin Expense Load)	<u>9.48%</u>	<u>8.79%</u>	<u>9.23%</u>	<u>15.18%</u>	<u>15.48%</u>	<u>16.51%</u>	<u>13.72%</u>	<u>15.17%</u>	14.59%		
C. Employer Normal Cost Rate (A-B)	12.30%	8.90%	11.02%	25.82%	29.43%	16.51%	13.45%	24.34%	22.95%		
D. UAL Amortization Rate	6.65%	6.65%	6.65%	23.32%	23.32%	23.32%	23.32%	23.32%	21.63%		
E. Administrative Expense Rate	<u>0.95%</u>	<u>0.78%</u>	<u>0.88%</u>	<u>2.45%</u>	<u>2.63%</u>	<u>1.99%</u>	<u>1.83%</u>	<u>2.38%</u>	2.22%		
F. Net June 30, 2019 Contribution Rate (C+D+E)	19.90%	16.33%	18.55%	51.59%	55.38%	41.82%	38.60%	50.04%	46.80%		

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**Table V-6
Development of the San Rafael Contribution Rates as of June 30, 2019 for FYE 2021**

	San Rafael Misc Tier 1	San Rafael Misc Tier 2	San Rafael Misc Tier 3	San Rafael Misc
A. Total Normal Cost Rate	27.27%	22.38%	17.08%	22.75%
B. Member Contribution Rate (Excluding Admin Expense Load)	<u>11.47%</u>	<u>8.44%</u>	<u>8.79%</u>	<u>10.10%</u>
C. Employer Normal Cost Rate (A-B)	15.80%	13.94%	8.29%	12.65%
D. UAL Amortization Rate	35.75%	35.75%	35.75%	35.75%
E. Administrative Expense Rate	<u>2.57%</u>	<u>2.48%</u>	<u>2.20%</u>	<u>2.42%</u>
F. Net June 30, 2019 Contribution Rate (C+D+E)	54.12%	52.17%	46.24%	50.82%

	San Rafael Fire Tier 1	San Rafael Police Tier 1	San Rafael Fire Tier 2	San Rafael Police Tier 2	San Rafael Safety Tier 3	San Rafael Safety	San Rafael Total
A. Total Normal Cost Rate	38.27%	37.19%	34.22%	37.92%	26.48%	34.09%	28.41%
B. Member Contribution Rate (Excluding Admin Expense)	<u>15.07%</u>	<u>14.33%</u>	<u>12.24%</u>	<u>14.04%</u>	<u>13.72%</u>	<u>14.13%</u>	<u>12.10%</u>
C. Employer Normal Cost Rate (A-B)	23.20%	22.86%	21.98%	23.88%	12.76%	19.96%	16.31%
D. UAL Amortization Rate	47.51%	47.51%	47.51%	47.51%	47.51%	47.51%	41.57%
E. Administrative Expense Rate	<u>3.53%</u>	<u>3.51%</u>	<u>3.47%</u>	<u>3.56%</u>	<u>3.01%</u>	<u>3.37%</u>	<u>2.89%</u>
F. Net June 30, 2019 Contribution Rate (C+D+E)	74.24%	73.88%	72.96%	74.95%	63.28%	70.84%	60.77%

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The following table shows the contribution rates for the new benefit Tiers for those employers that did not have any active members in those Tiers as of June 30, 2019. The normal cost rates for these Tiers are based on the pooled demographic profiles of the employers with current active PEPRA members.

Table V-7 Development of Contribution Rates for New Tiers with No Active Members as of June 30, 2019 for FYE 2021		
	South Marin Fire Safety Tier 3	Novato Misc Tier 2
A. Total Normal Cost Rate	33.02%	19.54%
B. Member Contribution Rate (Excluding Admin Expense Load)	<u>16.51%</u>	<u>9.77%</u>
C. Employer Normal Cost Rate (A-B)	16.51%	9.77%
D. UAL Amortization Rate	11.94%	6.65%
E. Administrative Expense Rate	<u>1.42%</u>	<u>0.82%</u>
F. Net June 30, 2019 Contribution Rate (C+D+E)	29.87%	17.24%

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Table V-8 contains a comparison of the employer contribution rates for each employer and Tier to the prior year rates, as well as the number of active members in each Tier as of June 30, 2019.

Table V-8				
Plan	Group	# of Active Members	2018	2019
County	County Misc Tier 1	4	29.23%	30.26%
	County Misc Tier 2	35	21.23%	22.35%
	County Misc Tier 3	668	20.50%	21.28%
	County Misc Tier 3A	82	21.47%	22.44%
	County Misc Tier 4	136	21.66%	22.70%
	County Misc Tier 5 (PEPRA)	780	18.43%	19.15%
	County Misc	1,705	19.95%	20.63%
	County Safety Tier 1A	1	16.25%	16.80%
	County Safety Tier 2A	46	37.04%	37.97%
	County Safety Tier 2B	193	34.63%	35.00%
	County Safety Tier 3 (PEPRA)	124	30.98%	31.65%
	County Safety	364	34.21%	34.39%
	County Misc/Safety	2,069	22.86%	23.53%
	Courts Tier 1	1	31.67%	31.60%
	Courts Tier 2	1	22.54%	22.44%
	Courts Tier 3	59	24.56%	24.45%
	Courts Tier 4	4	26.82%	26.94%
	Courts Tier 5 (PEPRA)	33	22.86%	22.21%
	Courts	98	24.35%	23.96%
	South Marin Fire Misc Tier 1	0	N/A	N/A
	South Marin Fire Misc Tier 2 (PEPRA)	4	16.77%	13.94%
	South Marin Fire Safety Tier 1	12	38.99%	40.45%
	South Marin Fire Safety Tier 2	23	41.48%	42.07%
	South Marin Fire Safety Tier 2A	3	39.56%	41.53%
	South Marin Fire Safety Tier 3A (PEPRA)	13	28.65%	29.37%
	Mosquito District Tier 1	27	31.93%	32.96%
	Mosquito District Tier 2 (PEPRA)	6	23.53%	26.26%
	LAFCO Tier 3	1	22.60%	17.22%
	LAFCO Tier 4 (PEPRA)	2	17.36%	12.75%
	Tamalpais CSD Tier 1	6	31.92%	30.51%
	Tamalpais CSD Tier 2 (PEPRA)	7	27.84%	26.12%
	Marin City CSD Tier 1	4	17.14%	17.56%
	Marin City CSD Tier 2 (PEPRA)	1	18.61%	22.44%
Special Districts	109	34.07%	33.64%	
Total County	2,276	23.48%	24.08%	
Novato	Novato Misc Tier 1	5	20.05%	19.90%
	Novato Misc Tier 2A (PEPRA)	4	18.06%	16.33%
	Novato Safety Tier 1	45	49.32%	51.59%
	Novato Safety Tier 2	8	52.06%	55.38%
	Novato Safety Tier 3 (PEPRA)	6	38.95%	41.82%
	Novato Safety Tier 3A (PEPRA)	7	36.61%	38.60%
	Total Novato	75	45.40%	46.80%
San Rafael	San Rafael Misc Tier 1	98	50.93%	54.12%
	San Rafael Misc Tier 2	16	49.89%	52.17%
	San Rafael Misc Tier 3 (PEPRA)	93	42.84%	46.24%
	San Rafael Misc	207	48.11%	50.82%
	San Rafael Fire Tier 1	32	70.33%	74.24%
	San Rafael Police Tier 1	34	69.61%	73.88%
	San Rafael Fire Tier 2	15	68.40%	72.96%
	San Rafael Police Tier 2	4	69.28%	74.95%
	San Rafael Safety Tier 3 (PEPRA)	46	59.13%	63.28%
	San Rafael Safety	131	67.44%	70.84%
	Total San Rafael	338	57.67%	60.77%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

The data for this valuation was provided by MCERA as of June 30, 2019. Cheiron did not audit any of the data; however, it was reviewed to ensure that it complies with generally accepted actuarial standards.

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2019: County of Marin														
	Miscellaneous		Marin County Safety		Total		Miscellaneous		Marin Special Districts Safety		Total		Total County and Special Districts	
	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019
Active Participants														
Number	1,737	1,705	358	364	2,095	2,069	154	156	50	51	204	207	2,299	2,276
Average Age	48.09	47.92	40.80	40.56	46.84	46.63	49.86	48.82	42.85	41.71	48.14	47.07	46.96	46.67
Average Service	9.94	9.75	11.28	10.99	10.17	9.96	11.95	11.47	9.82	9.24	11.43	10.92	10.28	10.05
Average Pay*	\$89,573	\$91,924	\$110,577	\$114,289	\$93,162	\$95,859	\$79,112	\$82,755	\$114,215	\$121,553	\$87,716	\$92,314	\$92,679	\$95,536
Service Retired														
Number	1,544	1,606	261	259	1,805	1,865	134	134	28	31	162	165	1,967	2,030
Average Age	72.44	72.47	64.30	64.83	71.26	71.41	68.08	68.89	63.15	62.60	67.23	67.71	70.93	71.11
Average Total Benefit*	\$37,648	\$38,660	\$69,084	\$69,086	\$42,194	\$42,886	\$38,058	\$39,010	\$68,112	\$70,634	\$43,252	\$44,951	\$42,281	\$43,053
Beneficiaries														
Number	270	275	69	73	339	348	15	14	10	10	25	24	364	372
Average Age	74.84	74.37	69.04	69.23	73.66	73.29	66.86	66.76	66.59	67.59	66.75	67.11	73.18	72.89
Average Total Benefit*	\$25,134	\$25,736	\$41,203	\$42,685	\$28,404	\$29,291	\$17,215	\$21,886	\$43,240	\$44,969	\$27,625	\$31,504	\$28,351	\$29,434
Duty Disabled														
Number	85	84	104	125	189	209	4	6	17	18	21	24	210	233
Average Age	68.25	68.22	63.19	62.93	65.46	65.06	67.11	64.88	66.31	66.89	66.46	66.39	65.56	65.19
Average Total Benefit*	\$37,561	\$38,902	\$53,655	\$60,943	\$46,417	\$52,084	\$21,530	\$33,315	\$55,720	\$58,971	\$49,208	\$52,557	\$46,696	\$52,133
Ordinary Disabled														
Number	30	29	7	7	37	36	2	2	1	0	3	2	40	38
Average Age	70.27	69.86	57.85	58.11	67.92	67.57	63.85	64.85	58.93	0.00	62.21	64.85	67.49	67.43
Average Total Benefit*	\$21,220	\$21,858	\$63,339	\$49,083	\$29,188	\$27,152	\$25,364	\$25,871	\$73,398	\$0	\$41,375	\$25,871	\$30,102	\$27,084
Total In Pay														
Number	1,929	1,994	441	464	2,370	2,458	155	156	56	59	211	215	2,581	2,673
Average Age	72.56	72.52	64.68	64.91	71.09	71.08	67.88	68.49	64.65	64.76	67.02	67.47	70.76	70.79
Average Total Benefit*	\$35,637	\$36,644	\$60,992	\$62,437	\$40,355	\$41,513	\$35,450	\$37,086	\$60,003	\$62,726	\$41,967	\$44,122	\$40,487	\$41,722
Terminated Vested														
Number	188	234	20	22	208	256	18	18	2	2	20	20	228	276
Average Age	50.14	48.12	45.10	45.52	49.66	47.90	44.90	45.73	51.70	52.70	45.58	46.43	49.30	47.79
Average Service	7.65	8.25	7.37	7.73	7.62	8.20	9.16	8.89	3.10	3.50	8.55	8.35	7.70	8.21
Transfers														
Number	187	179	59	53	246	232	23	27	11	11	34	38	280	270
Average Age	49.96	50.04	45.55	45.73	48.90	49.05	50.99	50.95	45.26	46.25	49.14	49.59	48.93	49.13
Average Service	4.98	4.96	4.15	4.51	4.78	4.86	4.86	5.15	5.31	5.18	5.00	5.16	4.81	4.90
Total Inactive														
Number	375	413	79	75	454	488	41	45	13	13	54	58	508	546
Average Age	50.05	48.95	45.44	45.67	49.25	48.45	48.32	48.87	46.25	47.24	47.82	48.50	49.10	48.45
Average Service	6.32	6.82	4.97	5.45	6.08	6.61	6.75	6.64	4.97	4.92	6.32	6.26	6.11	6.58

*All payroll and benefit figures shown are annual.



**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2019: County of Marin												
	Tier 1		Tier 2		Tier 3		Tier 3A		Tier 4		Tier 5	
	Miscellaneous	Miscellaneous	Miscellaneous	Miscellaneous	Miscellaneous	Miscellaneous	Miscellaneous	Miscellaneous	Miscellaneous	Miscellaneous	Miscellaneous	Miscellaneous
	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019
Active Participants												
Number	7	4	39	35	758	668	99	82	143	136	691	780
Average Age	67.52	67.76	63.81	65.02	53.91	54.53	48.26	50.06	46.12	47.33	41.00	41.27
Average Service	37.15	35.25	20.07	21.34	17.02	17.91	8.36	9.41	4.57	5.26	2.67	2.92
Average Pay*	\$121,642	\$115,442	\$82,402	\$83,512	\$96,793	\$100,659	\$99,283	\$103,093	\$95,326	\$98,466	\$79,151	\$82,385
Service Retired												
Number	514	492	239	238	776	851	8	12	3	3	4	10
Average Age	78.21	78.64	78.25	78.53	66.97	67.41	64.36	65.36	66.19	67.19	66.23	65.76
Average Total Benefit*	\$51,576	\$54,761	\$23,398	\$23,758	\$33,297	\$34,234	\$14,813	\$16,496	\$12,341	\$12,588	\$8,105	\$12,296
Beneficiaries												
Number	161	154	50	50	59	70	0	1	0	0	0	0
Average Age	80.02	80.10	72.82	73.57	62.41	62.56	0.00	59.07	0.00	0.00	0.00	0.00
Average Total Benefit*	\$29,237	\$30,802	\$15,013	\$15,662	\$22,513	\$22,015	\$0	\$9,762	\$0	\$0	\$0	\$0
Duty Disabled												
Number	22	18	28	28	35	38	0	0	0	0	0	0
Average Age	75.03	75.20	67.86	68.86	64.29	64.44	0.00	0.00	0.00	0.00	0.00	0.00
Average Total Benefit*	\$41,236	\$47,736	\$29,461	\$30,051	\$41,731	\$41,239	\$0	\$0	\$0	\$0	\$0	\$0
Ordinary Disabled												
Number	10	8	11	11	8	8	1	2	0	0	0	0
Average Age	74.37	75.29	72.68	73.68	62.79	63.79	62.48	51.38	0.00	0.00	0.00	0.00
Average Total Benefit*	\$25,800	\$27,927	\$18,395	\$18,763	\$19,442	\$8	\$1	\$2	\$0	\$0	\$0	\$0
Total In Pay												
Number	707	672	328	327	878	967	9	15	3	3	4	10
Average Age	78.47	78.84	76.35	76.78	66.52	66.91	64.15	63.07	66.19	67.19	66.23	65.76
Average Total Benefit*	\$45,803	\$48,763	\$22,470	\$22,891	\$32,782	\$33,342	\$13,167	\$13,848	\$12,341	\$12,588	\$8,105	\$12,296
Terminated Vested												
Number	2	2	3	1	151	166	19	31	10	27	3	7
Average Age	76.35	77.35	63.50	52.74	50.85	49.96	42.87	42.06	42.45	44.49	55.39	36.43
Average Service	5.95	6.00	5.42	0.00	8.22	9.37	6.07	7.06	3.15	3.96	7.52	5.14
Transfers												
Number	2	0	5	4	148	141	12	13	4	5	16	16
Average Age	63.01	0.00	59.06	58.45	50.88	51.31	45.92	46.90	41.33	42.96	42.14	41.50
Average Service	0.46	0.00	2.97	3.50	5.64	5.55	3.76	3.92	1.53	1.40	1.88	2.06
Total Inactive												
Number	4	2	8	5	299	307	31	44	14	32	19	23
Average Age	69.68	77.35	60.73	57.31	50.87	50.58	44.05	43.49	42.13	44.25	44.23	39.96
Average Service	3.20	6.00	3.89	2.80	6.94	7.62	5.17	6.14	2.69	3.56	2.77	3.00



**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2019: County of Marin										
	Tier 1A Safety		Tier 2A Safety		Tier 1B Safety		Tier 2B Safety		Tier 3 Safety	
	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019
Active Participants										
Number	1	1	52	46	0	0	203	193	102	124
Average Age	70.91	71.91	47.23	47.28	0.00	0.00	43.84	44.53	31.18	31.64
Average Service	33.31	34.00	14.34	13.93	0.00	0.00	14.58	15.14	2.95	3.25
Average Pay*	\$236,212	\$244,937	\$106,261	\$111,533	\$0	\$0	\$122,756	\$128,438	\$87,308	\$92,235
Service Retired										
Number	64	62	32	38	30	27	135	132	0	0
Average Age	74.69	75.37	65.96	65.16	65.08	65.90	58.81	59.57	0.00	0.00
Average Total Benefit*	\$80,920	\$84,150	\$43,402	\$49,659	\$102,031	\$106,530	\$62,239	\$59,943	\$0	\$0
Beneficiaries										
Number	45	46	6	6	4	4	14	17	0	0
Average Age	74.86	75.68	61.49	62.48	55.78	56.78	57.35	57.07	0.00	0.00
Average Total Benefit*	\$43,225	\$45,155	\$34,093	\$34,775	\$26,856	\$27,930	\$41,847	\$42,262	\$0	\$0
Duty Disabled										
Number	37	37	26	26	6	8	35	53	0	0
Average Age	74.16	75.16	58.91	59.91	63.01	64.08	54.80	56.17	0.00	0.00
Average Total Benefit*	\$54,587	\$56,771	\$39,280	\$40,066	\$112,854	\$125,877	\$53,199	\$64,569	\$0	\$0
Ordinary Disabled										
Number	1	1	2	2	0	0	4	4	0	0
Average Age	71.72	72.72	56.37	57.37	0.00	0.00	55.13	54.83	0.00	0.00
Average Total Benefit*	\$25,957	\$26,995	\$31,307	\$31,933	\$0	\$0	\$88,701	\$63,181	\$0	\$0
Total In Pay										
Number	147	146	66	72	40	39	188	206	0	0
Average Age	74.59	75.40	62.48	62.83	63.84	64.59	57.87	58.39	0.00	0.00
Average Total Benefit*	\$62,379	\$64,534	\$40,566	\$44,462	\$96,137	\$102,437	\$59,600	\$59,737	\$0	\$0
Terminated Vested										
Number	0	0	9	10	0	0	11	12	0	0
Average Age	0.00	0.00	45.21	46.31	0.00	0.00	45.01	44.86	0.00	0.00
Average Service	0.00	0.00	9.56	10.40	0.00	0.00	5.58	5.50	0.00	0.00
Transfers										
Number	0	0	7	7	0	0	50	43	2	3
Average Age	0.00	0.00	42.45	43.45	0.00	0.00	46.41	46.81	35.05	35.45
Average Service	0.00	0.00	4.38	4.29	0.00	0.00	4.28	4.77	0.11	1.33
Total Inactive										
Number	0	0	16	17	0	0	61	55	2	3
Average Age	0.00	0.00	44.01	45.13	0.00	0.00	46.16	46.39	35.05	35.45
Average Service	0.00	0.00	7.29	7.88	0.00	0.00	4.52	4.93	0.11	1.33



**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2019: Marin Special Districts												
	Court Tier 1 Miscellaneous		Court Tier 2 Miscellaneous		Court Tier 3 Miscellaneous		Court Tier 4 Miscellaneous		Court Tier 5 Miscellaneous		Total	
	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019
Active Participants												
Number	1	1	1	1	64	59	5	4	27	33	98	98
Average Age	61.00	62.00	50.60	51.60	52.54	53.10	51.34	54.79	40.73	39.83	49.29	48.77
Average Service	36.37	37.00	17.03	18.00	17.46	18.10	8.04	10.25	2.18	2.15	12.96	12.60
Average Pay*	\$100,796	\$102,317	\$57,642	\$58,520	\$75,411	\$77,748	\$84,950	\$94,114	\$63,788	\$68,864	\$72,773	\$75,479
Service Retired												
Number	18	17	11	11	70	73	0	0	0	0	99	101
Average Age	70.93	71.96	79.05	80.05	66.45	66.99	0.00	0.00	0.00	0.00	68.67	69.25
Average Total Benefit*	\$69,034	\$72,889	\$37,033	\$37,774	\$27,804	\$28,651	\$0	\$0	\$0	\$0	\$36,326	\$37,091
Beneficiaries												
Number	0	0	0	0	6	6	0	0	0	0	6	6
Average Age	0.00	0.00	0.00	0.00	70.04	71.04	0.00	0.00	0.00	0.00	70.04	71.04
Average Total Benefit*	\$0	\$0	\$0	\$0	\$20,697	\$21,048	\$0	\$0	\$0	\$0	\$20,697	\$21,048
Duty Disabled												
Number	0	0	0	0	1	1	0	0	0	0	1	1
Average Age	0.00	0.00	0.00	0.00	73.93	74.93	0.00	0.00	0.00	0.00	73.93	74.93
Average Total Benefit*	\$0	\$0	\$0	\$0	\$30,253	\$30,858	\$0	\$0	\$0	\$0	\$30,253	\$30,858
Ordinary Disabled												
Number	0	0	1	1	1	1	0	0	0	0	2	2
Average Age	0.00	0.00	71.71	72.71	55.98	56.98	0.00	0.00	0.00	0.00	63.85	64.85
Average Total Benefit*	\$0	\$0	\$14,120	\$14,403	\$36,608	\$37,340	\$0	\$0	\$0	\$0	\$25,364	\$25,871
Total In Pay												
Number	18	17	12	12	78	81	0	0	0	0	108	110
Average Age	70.93	71.96	78.44	79.43	66.69	67.27	0.00	0.00	0.00	0.00	68.70	69.32
Average Total Benefit*	\$69,034	\$72,889	\$35,124	\$35,826	\$27,401	\$28,223	\$0	\$0	\$0	\$0	\$35,198	\$35,955
Terminated Vested												
Number	0	0	0	0	14	13	0	0	0	0	14	13
Average Age	0.00	0.00	0.00	0.00	44.07	44.84	0.00	0.00	0.00	0.00	44.07	44.84
Average Service	0.00	0.00	0.00	0.00	9.24	9.46	0.00	0.00	0.00	0.00	9.24	9.46
Transfers												
Number	0	0	2	2	17	18	1	2	2	4	22	26
Average Age	0.00	0.00	61.44	62.43	51.02	52.04	31.81	37.66	49.44	46.46	50.95	50.88
Average Service	0.00	0.00	3.52	4.00	5.20	5.89	2.04	2.50	1.66	2.25	4.58	4.92
Total Inactive												
Number	0	0	2	2	31	31	1	2	2	4	36	39
Average Age	0.00	0.00	61.44	62.43	47.88	49.02	31.81	37.66	49.44	46.46	48.27	48.86
Average Service	0.00	0.00	3.52	4.00	7.02	7.39	2.04	2.50	1.66	2.25	6.39	6.44

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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Participant Data as of June 30, 2019: Marin Special Districts																
	Southern Marin Fire Tier 1 Miscellaneous		Southern Marin Fire Tier 2 Miscellaneous		Total		Southern Marin Fire Tier 1 Safety		Southern Marin Fire Tier 2 Safety		Southern Marin Fire Tier 2A Safety		Southern Marin Fire Tier 3A Safety		Total	
	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019
Active Participants																
Number	0	0	3	4	3	4	15	12	24	23	2	3	9	13	50	51
Average Age	0.00	0.00	48.02	40.53	48.02	40.53	49.12	49.04	42.70	43.46	34.92	35.19	34.56	33.35	42.85	41.71
Average Service	0.00	0.00	3.28	2.75	3.28	2.75	18.45	19.00	7.40	8.52	3.12	2.67	3.37	3.00	9.82	9.24
Average Pay*	\$0	\$0	\$100,961	\$105,768	\$100,961	\$105,768	\$128,241	\$143,695	\$110,281	\$120,347	\$99,007	\$105,826	\$104,705	\$106,877	\$114,215	\$121,553
Service Retired																
Number	4	4	0	0	4	4	26	28	2	3	0	0	0	0	28	31
Average Age	68.23	69.23	0.00	0.00	68.23	69.23	63.39	63.16	60.07	57.42	0.00	0.00	0.00	0.00	63.15	62.60
Average Total Benefit*	\$27,322	\$28,415	\$0	\$0	\$27,322	\$28,415	\$72,319	\$76,630	\$13,422	\$14,672	\$0	\$0	\$0	\$0	\$68,112	\$70,634
Beneficiaries																
Number	0	0	0	0	0	0	10	10	0	0	0	0	0	0	10	10
Average Age	0.00	0.00	0.00	0.00	0.00	0.00	66.59	67.59	0.00	0.00	0.00	0.00	0.00	0.00	66.59	67.59
Average Total Benefit*	\$0	\$0	\$0	\$0	\$0	\$0	\$43,240	\$44,969	\$0	\$0	\$0	\$0	\$0	\$0	\$43,240	\$44,969
Duty Disabled																
Number	1	1	0	0	1	1	16	17	1	1	0	0	0	0	17	18
Average Age	74.28	75.27	0.00	0.00	74.28	75.27	67.42	67.92	48.51	49.51	0.00	0.00	0.00	0.00	66.31	66.89
Average Total Benefit*	\$4,372	\$4,547	\$0	\$0	\$4,372	\$4,547	\$56,307	\$59,605	\$46,334	\$48,188	\$0	\$0	\$0	\$0	\$55,720	\$58,971
Ordinary Disabled																
Number	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
Average Age	0.00	0.00	0.00	0.00	0.00	0.00	58.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.93	0.00
Average Total Benefit*	\$0	\$0	\$0	\$0	\$0	\$0	\$73,398	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$73,398	\$0
Total In Pay																
Number	5	5	0	0	5	5	53	55	3	4	0	0	0	0	56	59
Average Age	69.44	70.44	0.00	0.00	69.44	70.44	65.12	65.43	56.21	55.44	0.00	0.00	0.00	0.00	64.65	64.76
Average Total Benefit*	\$22,732	\$23,641	\$0	\$0	\$22,732	\$23,641	\$62,019	\$65,611	\$24,392	\$23,051	\$0	\$0	\$0	\$0	\$60,003	\$62,726
Terminated Vested																
Number	1	1	0	1	1	2	0	0	2	2	0	0	0	0	2	2
Average Age	74.85	75.85	0.00	44.95	74.85	60.40	0.00	0.00	51.70	52.70	0.00	0.00	0.00	0.00	51.70	52.70
Average Service	8.92	9.00	0.00	1.00	8.92	5.00	0.00	0.00	3.10	3.50	0.00	0.00	0.00	0.00	3.10	3.50
Transfers																
Number	0	0	0	0	0	0	6	6	5	5	0	0	0	0	11	11
Average Age	0.00	0.00	0.00	0.00	0.00	0.00	50.78	51.78	38.62	39.62	0.00	0.00	0.00	0.00	45.26	46.25
Average Service	0.00	0.00	0.00	0.00	0.00	0.00	6.46	6.33	3.93	3.80	0.00	0.00	0.00	0.00	5.31	5.18
Total Inactive																
Number	1	1	0	1	1	2	6	6	7	7	0	0	0	0	13	13
Average Age	74.85	75.85	0.00	44.95	74.85	60.40	50.78	51.78	42.36	43.36	0.00	0.00	0.00	0.00	46.25	47.24
Average Service	8.92	9.00	0.00	1.00	8.92	5.00	6.46	6.33	3.69	3.71	0.00	0.00	0.00	0.00	4.97	4.92



**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2019: Marin Special Districts														
	Southern Marin Fire		Marin City CSD		Marin City CSD		Total	Total	Mosquito District		Mosquito District		Total	
	6/30/2018	6/30/2019	Tier 1 Miscellaneous	6/30/2019	Tier 2 Miscellaneous	6/30/2018			6/30/2019	Tier 1 Miscellaneous	Tier 2 Miscellaneous	6/30/2018	6/30/2019	6/30/2018
Active Participants														
Number	53	55	3	4	4	1	7	5	28	27	4	6	32	33
Average Age	43.14	41.62	53.69	48.65	51.25	57.51	52.29	50.42	51.63	52.95	35.56	37.21	49.62	50.09
Average Service	9.45	8.76	4.43	3.75	1.19	1.00	2.58	3.20	14.05	15.33	1.17	1.67	12.44	12.85
Average Pay*	\$113,464	\$120,405	\$51,917	\$53,659	\$58,980	\$52,000	\$55,953	\$53,327	\$98,940	\$103,537	\$87,637	\$89,805	\$97,527	\$101,040
Service Retired														
Number	32	35	1	1	0	0	1	1	17	14	0	0	17	14
Average Age	63.78	63.36	69.52	70.52	0.00	0.00	69.52	70.52	65.24	66.05	0.00	0.00	65.24	66.05
Average Total Benefit*	\$63,014	\$65,809	\$32,725	\$34,034	\$0	\$0	\$32,725	\$34,034	\$59,735	\$66,783	\$0	\$0	\$59,735	\$66,783
Beneficiaries														
Number	10	10	1	0	0	0	1	0	4	4	0	0	4	4
Average Age	66.59	67.59	83.31	0.00	0.00	0.00	83.31	0.00	73.45	74.44	0.00	0.00	73.45	74.44
Average Total Benefit*	\$43,240	\$44,969	\$26,454	\$0	\$0	\$0	\$26,454	\$0	\$16,678	\$17,346	\$0	\$0	\$16,678	\$17,346
Duty Disabled														
Number	18	19	0	0	0	0	0	0	1	3	0	0	1	3
Average Age	66.75	67.34	0.00	0.00	0.00	0.00	0.00	0.00	73.91	63.92	0.00	0.00	73.91	63.92
Average Total Benefit*	\$52,868	\$56,106	\$0	\$0	\$0	\$0	\$0	\$0	\$36,670	\$49,690	\$0	\$0	\$36,670	\$49,690
Ordinary Disabled														
Number	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Age	58.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Total Benefit*	\$73,398	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total In Pay														
Number	61	64	2	1	0	0	2	1	22	21	0	0	22	21
Average Age	65.04	65.20	76.42	70.52	0.00	0.00	76.42	70.52	67.13	67.35	0.00	0.00	67.13	67.35
Average Total Benefit*	\$56,948	\$59,672	\$29,589	\$34,034	\$0	\$0	\$29,589	\$34,034	\$50,858	\$54,924	\$0	\$0	\$50,858	\$54,924
Terminated Vested														
Number	3	4	2	2	0	0	2	2	1	1	0	0	1	1
Average Age	59.41	56.55	40.27	41.27	0.00	0.00	40.27	41.27	35.97	36.97	0.00	0.00	35.97	36.97
Average Service	5.04	4.25	8.33	8.50	0.00	0.00	8.33	8.50	9.85	10.00	0.00	0.00	9.85	10.00
Transfers														
Number	11	11	0	0	0	0	0	0	1	1	0	0	1	1
Average Age	45.26	46.25	0.00	0.00	0.00	0.00	0.00	0.00	52.03	53.02	0.00	0.00	52.03	53.02
Average Service	5.31	5.18	0.00	0.00	0.00	0.00	0.00	0.00	11.00	11.00	0.00	0.00	11.00	11.00
Total Inactive														
Number	14	15	2	2	0	0	2	2	2	2	0	0	2	2
Average Age	48.29	49.00	40.27	41.27	0.00	0.00	40.27	41.27	44.00	45.00	0.00	0.00	44.00	45.00
Average Service	5.25	4.93	8.33	8.50	0.00	0.00	8.33	8.50	10.43	10.50	0.00	0.00	10.43	10.50



**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2019: Marin Special Districts														
	LAFCO Tier 2 Miscellaneous		LAFCO Tier 3 Miscellaneous		LAFCO Tier 4 Miscellaneous		Total		Tamalpais CSD Tier 1 Miscellaneous		Tamalpais CSD Tier 2 Miscellaneous		Total	
	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019
Active Participants														
Number	0	0	1	1	0	2	1	3	8	6	5	7	13	13
Average Age	0.00	0.00	48.05	49.04	0.00	40.04	48.05	43.04	60.92	59.31	42.71	40.61	53.91	49.24
Average Service	0.00	0.00	9.39	10.00	0.00	0.00	9.39	3.33	15.57	13.17	2.11	2.00	10.40	7.15
Average Pay*	\$0	\$0	\$73,784	\$71,670	\$0	\$114,876	\$73,784	\$100,474	\$101,087	\$109,993	\$70,715	\$75,336	\$89,405	\$91,332
Service Retired														
Number	2	2	2	2	0	0	4	4	9	10	0	0	9	10
Average Age	70.38	71.38	59.76	60.76	0.00	0.00	65.07	66.07	68.12	70.07	0.00	0.00	68.12	70.07
Average Total Benefit*	\$27,836	\$28,949	\$5,948	\$6,067	\$0	\$0	\$16,892	\$17,508	\$30,934	\$32,847	\$0	\$0	\$30,934	\$32,847
Beneficiaries														
Number	0	0	0	0	0	0	0	0	4	4	0	0	4	4
Average Age	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	51.40	52.68	0.00	0.00	51.40	52.68
Average Total Benefit*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,216	\$27,683	\$0	\$0	\$10,216	\$27,683
Duty Disabled														
Number	0	0	0	0	0	0	0	0	1	1	0	0	1	1
Average Age	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46.31	47.31	0.00	0.00	46.31	47.31
Average Total Benefit*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,824	\$15,417	\$0	\$0	\$14,824	\$15,417
Ordinary Disabled														
Number	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Age	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Total Benefit*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total In Pay														
Number	2	2	2	2	0	0	4	4	14	15	0	0	14	15
Average Age	70.38	71.38	59.76	60.76	0.00	0.00	65.07	66.07	61.79	63.92	0.00	0.00	61.79	63.92
Average Total Benefit*	\$27,836	\$28,949	\$5,948	\$6,067	\$0	\$0	\$16,892	\$17,508	\$23,864	\$30,308	\$0	\$0	\$23,864	\$30,308
Terminated Vested														
Number	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Age	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Service	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transfers														
Number	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Age	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Service	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Inactive														
Number	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Age	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Service	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2019: Novato Fire Protection District												
	Tier 1 Miscellaneous		Tier 2A Miscellaneous		Tier 1 Safety		Tier 2 Safety		Tier 3 Safety		Tier 3A Safety	
	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019
Active Participants												
Number	6	5	3	4	49	45	7	8	6	6	3	7
Average Age	50.70	49.39	45.67	41.45	46.95	47.30	43.21	42.56	36.92	37.92	31.72	31.54
Average Service	14.67	15.80	2.06	2.25	18.02	18.71	8.35	7.00	4.21	5.17	0.71	1.14
Average Pay*	\$125,008	\$123,440	\$58,173	\$95,814	\$133,663	\$139,852	\$121,031	\$120,306	\$117,785	\$121,293	\$102,995	\$110,362
Service Retired												
Number	5	6	0	0	55	57	0	0	0	0	0	0
Average Age	64.77	63.67	0.00	0.00	67.46	68.11	0.00	0.00	0.00	0.00	0.00	0.00
Average Total Benefit*	\$34,432	\$38,935	\$0	\$0	\$104,948	\$107,490	\$0	\$0	\$0	\$0	\$0	\$0
Beneficiaries												
Number	1	1	0	0	14	15	0	0	0	0	0	0
Average Age	55.67	56.67	0.00	0.00	63.90	65.41	0.00	0.00	0.00	0.00	0.00	0.00
Average Total Benefit*	\$11,890	\$12,366	\$0	\$0	\$43,966	\$46,045	\$0	\$0	\$0	\$0	\$0	\$0
Duty Disabled												
Number	0	0	0	0	32	32	0	1	0	0	0	0
Average Age	0.00	0.00	0.00	0.00	69.96	69.46	0.00	40.95	0.00	0.00	0.00	0.00
Average Total Benefit*	\$0	\$0	\$0	\$0	\$71,412	\$77,638	\$0	\$61,283	\$0	\$0	\$0	\$0
Ordinary Disabled												
Number	0	0	0	0	0	0	0	0	0	0	0	0
Average Age	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Total Benefit*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total In Pay												
Number	6	7	0	0	101	104	0	1	0	0	0	0
Average Age	63.25	62.67	0.00	0.00	67.76	68.13	0.00	40.95	0.00	0.00	0.00	0.00
Average Total Benefit*	\$30,675	\$35,139	\$0	\$0	\$85,870	\$89,442	\$0	\$61,283	\$0	\$0	\$0	\$0
Terminated Vested												
Number	2	1	0	0	2	2	0	0	0	0	0	0
Average Age	51.34	44.12	0.00	0.00	50.21	51.20	0.00	0.00	0.00	0.00	0.00	0.00
Average Service	9.27	12.00	0.00	0.00	4.82	5.00	0.00	0.00	0.00	0.00	0.00	0.00
Transfers												
Number	0	0	0	0	10	10	0	0	1	1	0	0
Average Age	0.00	0.00	0.00	0.00	44.71	45.71	0.00	0.00	26.65	27.64	0.00	0.00
Average Service	0.00	0.00	0.00	0.00	4.04	4.00	0.00	0.00	3.31	40.00	0.00	0.00
Total Inactive												
Number	2	1	0	0	12	12	0	0	1	1	0	0
Average Age	51.34	44.12	0.00	0.00	45.63	46.62	0.00	0.00	26.65	27.64	0.00	0.00
Average Service	9.27	12.00	0.00	0.00	4.17	4.17	0.00	0.00	3.31	40.00	0.00	0.00

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2019: Novato Fire Protection District						
	Miscellaneous		Safety		Total	
	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019
Active Participants						
Number	9	9	65	66	74	75
Average Age	49.02	45.86	44.92	44.20	45.42	44.40
Average Service	10.47	9.78	14.91	14.20	14.37	13.67
Average Pay*	\$102,730	\$111,162	\$129,421	\$132,668	\$126,175	\$130,087
Service Retired						
Number	5	6	55	57	60	63
Average Age	64.77	63.67	67.46	68.11	67.23	67.69
Average Total Benefit*	\$34,432	\$38,935	\$104,948	\$107,490	\$99,072	\$100,961
Beneficiaries						
Number	1	1	14	15	15	16
Average Age	55.67	56.67	63.90	65.41	63.35	64.86
Average Total Benefit*	\$11,890	\$12,366	\$43,966	\$46,045	\$41,828	\$43,940
Duty Disabled						
Number	0	0	32	33	32	33
Average Age	0.00	0.00	69.96	68.59	69.96	68.59
Average Total Benefit*	\$0	\$0	\$71,412	\$77,142	\$71,412	\$77,142
Ordinary Disabled						
Number	0	0	0	0	0	0
Average Age	0.00	0.00	0.00	0.00	0.00	0.00
Average Total Benefit*	\$0	\$0	\$0	\$0	\$0	\$0
Total In Pay						
Number	6	7	101	105	107	112
Average Age	63.25	62.67	67.76	67.88	67.50	67.55
Average Total Benefit*	\$30,675	\$35,139	\$85,870	\$89,174	\$82,775	\$85,797
Terminated Vested						
Number	2	1	2	2	4	3
Average Age	51.34	44.12	50.21	51.20	50.77	48.84
Average Service	9.27	12.00	4.82	5.00	7.04	7.33
Transfers						
Number	0	0	11	11	11	11
Average Age	0.00	0.00	43.07	44.07	43.07	44.07
Average Service	0.00	0.00	3.97	3.91	3.97	3.91
Total Inactive						
Number	2	1	13	13	15	14
Average Age	51.34	44.12	44.17	45.16	45.12	45.09
Average Service	9.27	12.00	4.10	4.08	4.79	4.64



**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2019: City of San Rafael										
	Miscellaneous		Police		Fire		Total Safety		Total	
	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019
Active Participants										
Number	218	207	69	64	72	67	141	131	359	338
Average Age	46.19	45.90	39.65	39.08	39.11	39.04	39.37	39.06	43.51	43.25
Average Service	9.66	9.49	11.11	10.36	9.67	9.63	10.38	9.98	9.94	9.68
Average Pay*	\$80,502	\$82,386	\$119,062	\$121,082	\$124,285	\$132,974	\$121,729	\$127,165	\$96,694	\$99,741
Service Retired										
Number	257	274	80	79	89	87	169	166	426	440
Average Age	69.92	69.58	66.22	66.27	67.63	67.88	66.96	67.11	68.75	68.65
Average Total Benefit*	\$38,150	\$38,401	\$68,987	\$71,207	\$89,764	\$94,357	\$79,929	\$83,340	\$54,724	\$55,355
Beneficiaries										
Number	33	39	18	23	21	21	39	44	72	83
Average Age	75.96	75.90	66.49	69.45	73.47	72.78	70.25	71.04	72.87	73.32
Average Total Benefit*	\$20,539	\$20,051	\$34,439	\$37,040	\$40,634	\$40,621	\$37,775	\$38,749	\$29,875	\$29,963
Duty Disabled										
Number	19	18	42	41	21	24	63	65	82	83
Average Age	65.97	66.93	61.61	62.03	68.81	68.97	64.01	64.59	64.46	65.10
Average Total Benefit*	\$28,228	\$29,526	\$57,310	\$62,066	\$86,166	\$92,113	\$66,928	\$73,160	\$57,961	\$63,698
Ordinary Disabled										
Number	2	3	0	0	0	0	0	0	2	3
Average Age	85.45	72.53	0.00	0.00	0.00	0.00	0.00	0.00	85.45	72.53
Average Total Benefit*	\$12,433	\$17,986	\$0	\$0	\$0	\$0	\$0	\$0	\$12,433	\$17,986
Total In Pay										
Number	311	334	140	143	131	132	271	275	582	609
Average Age	70.42	70.20	64.87	65.57	68.76	68.86	66.75	67.15	68.71	68.82
Average Total Benefit*	\$35,509	\$35,596	\$61,042	\$63,091	\$81,312	\$85,400	\$70,840	\$73,799	\$51,961	\$52,847
Terminated Vested										
Number	27	43	6	13	1	1	7	14	34	57
Average Age	49.54	48.28	46.81	43.12	51.84	40.11	47.53	42.91	49.13	46.96
Average Service	6.62	6.09	10.89	11.08	3.51	9.00	9.83	10.93	7.28	7.28
Transfers										
Number	75	67	13	15	5	5	18	20	93	87
Average Age	45.46	42.76	44.69	46.78	40.95	41.95	43.65	45.57	45.11	43.41
Average Service	3.14	3.18	4.40	4.93	3.44	3.60	4.13	4.60	3.33	3.51
Total Inactive										
Number	102	110	19	28	6	6	25	34	127	144
Average Age	46.54	44.92	45.36	45.08	42.76	41.64	44.74	44.47	46.19	44.81
Average Service	4.06	4.32	6.45	7.79	3.45	4.50	5.73	7.21	4.39	5.00



**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2019: City of San Rafael																		
	Tier 1 Miscellaneous		Tier 2 Miscellaneous		Tier 3 Miscellaneous		Tier 1 Police		Tier 2 Police		Tier 3 Safety		Tier 1 Fire		Tier 2 Fire		Tier 3 Fire	
	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019	6/30/2018	6/30/2019
Active Participants																		
Number	118	98	17	16	83	93	42	34	6	4	21	26	37	32	15	15	20	20
Average Age	52.20	53.06	47.37	46.13	37.39	38.31	45.61	46.31	37.30	41.23	28.40	29.29	45.30	45.04	34.84	35.84	30.85	31.85
Average Service	15.83	17.14	4.28	4.81	1.99	2.23	16.48	17.00	4.63	6.00	2.22	2.35	15.34	15.16	5.09	5.93	2.64	3.55
Average Pay*	\$84,777	\$87,829	\$99,606	\$106,877	\$70,511	\$72,438	\$131,627	\$137,815	\$123,976	\$135,569	\$92,528	\$96,972	\$143,762	\$149,948	\$118,895	\$125,611	\$92,294	\$111,339
Service Retired																		
Number	257	272	0	1	0	1	80	79	0	0	0	0	89	87	0	0	0	0
Average Age	69.92	69.56	0.00	75.55	0.00	67.10	66.22	66.27	0.00	0.00	0.00	0.00	67.63	67.88	0.00	0.00	0.00	0.00
Average Total Benefit*	\$38,150	\$38,656	\$0	\$3,806	\$0	\$3,562	\$68,987	\$71,207	\$0	\$0	\$0	\$0	\$89,764	\$94,357	\$0	\$0	\$0	\$0
Beneficiaries																		
Number	33	39	0	0	0	0	18	23	0	0	0	0	21	21	0	0	0	0
Average Age	75.96	75.90	0.00	0.00	0.00	0.00	66.49	69.45	0.00	0.00	0.00	0.00	73.47	72.78	0.00	0.00	0.00	0.00
Average Total Benefit*	\$20,539	\$20,051	\$0	\$0	\$0	\$0	\$34,439	\$37,040	\$0	\$0	\$0	\$0	\$40,634	\$40,621	\$0	\$0	\$0	\$0
Duty Disabled																		
Number	19	18	0	0	0	0	42	41	0	0	0	0	21	24	0	0	0	0
Average Age	65.97	66.93	0.00	0.00	0.00	0.00	61.61	62.03	0.00	0.00	0.00	0.00	68.81	68.97	0.00	0.00	0.00	0.00
Average Total Benefit*	\$28,228	\$29,526	\$0	\$0	\$0	\$0	\$57,310	\$62,066	\$0	\$0	\$0	\$0	\$86,166	\$92,113	\$0	\$0	\$0	\$0
Ordinary Disabled																		
Number	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Age	85.45	72.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Total Benefit*	\$12,433	\$17,986	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total In Pay																		
Number	311	332	0	1	0	1	140	143	0	0	0	0	131	132	0	0	0	0
Average Age	70.42	70.19	0.00	75.55	0.00	67.10	64.87	65.57	0.00	0.00	0.00	0.00	68.76	68.86	0.00	0.00	0.00	0.00
Average Total Benefit*	\$35,509	\$35,789	\$0	\$3,806	\$0	\$3,562	\$61,042	\$63,091	\$0	\$0	\$0	\$0	\$81,312	\$85,400	\$0	\$0	\$0	\$0
Terminated Vested																		
Number	26	32	1	6	0	5	6	10	0	2	0	1	1	1	0	0	0	0
Average Age	49.45	50.24	51.92	45.38	0.00	39.22	46.81	46.29	0.00	32.45	0.00	32.81	51.84	40.11	0.00	0.00	0.00	0.00
Average Service	6.81	7.13	1.69	2.00	0.00	4.40	10.89	13.00	0.00	4.50	0.00	5.00	3.51	9.00	0.00	0.00	0.00	0.00
Transfers																		
Number	55	45	7	6	13	16	13	15	0	0	0	0	4	4	0	0	1	1
Average Age	49.59	47.97	42.81	41.93	29.41	28.42	44.69	46.78	0.00	0.00	0.00	0.00	43.44	44.44	0.00	0.00	30.98	31.98
Average Service	3.90	4.27	2.27	2.50	0.38	0.38	4.40	4.93	0.00	0.00	0.00	0.00	3.88	4.00	0.00	0.00	1.65	2.00
Total Inactive																		
Number	81	77	8	12	13	21	19	25	0	2	0	1	5	5	0	0	1	1
Average Age	49.55	48.91	43.95	43.65	29.41	30.99	45.36	46.58	0.00	32.45	0.00	32.81	45.12	43.57	0.00	0.00	30.98	31.98
Average Service	4.84	5.45	2.19	2.25	0.38	1.33	6.45	8.16	0.00	4.50	0.00	5.00	3.81	5.00	0.00	0.00	1.65	2.00



**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

**MARIN COUNTY
DISTRIBUTION OF MISCELLANEOUS ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2019**

COUNTS BY AGE/SERVICE

Age	Service													Total
	0	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up		
0 to 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	7	7	2	0	0	0	0	0	0	0	0	0	0	0
25 to 29	48	20	14	11	5	10	0	0	0	0	0	0	0	0
30 to 34	47	30	32	38	19	32	5	1	0	0	0	0	0	0
35 to 39	21	17	21	13	24	44	34	6	0	0	0	0	0	0
40 to 44	21	24	13	17	9	46	45	17	1	0	0	0	0	0
45 to 49	12	16	15	15	7	35	55	36	21	3	0	0	0	0
50 to 54	24	9	7	17	11	36	34	47	39	11	2	0	0	0
55 to 59	10	12	15	12	12	40	36	45	29	21	6	4	4	4
60 to 64	4	7	3	5	5	24	44	46	22	9	9	3	3	3
65 to 69	3	2	2	2	2	16	24	25	9	8	7	1	1	1
70 & up	1	0	0	0	0	0	3	12	5	2	4	1	1	1
Total	198	144	124	130	94	283	280	235	126	54	28	9	9	1,705

**MARIN COUNTY
DISTRIBUTION OF MISCELLANEOUS ACTIVE MEMBERS
PAYROLL BY AGE AND SERVICE AS OF JULY 1, 2019**

AVERAGE PAY BY AGE/SERVICE

Age	Service													Total
	0	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up		
0 to 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	60,509	56,982	62,585	0	0	0	0	0	0	0	0	0	0	0
25 to 29	65,452	79,170	76,238	74,624	73,895	79,345	0	0	0	0	0	0	0	0
30 to 34	76,559	77,369	73,758	84,416	83,192	87,641	98,347	78,780	0	0	0	0	0	0
35 to 39	78,810	84,749	86,032	84,663	84,211	98,285	103,741	73,573	0	0	0	0	0	0
40 to 44	95,005	85,028	96,927	89,033	76,679	88,287	100,635	103,748	112,418	0	0	0	0	0
45 to 49	66,345	98,001	91,513	106,002	75,249	101,667	103,383	107,510	95,921	99,589	0	0	0	0
50 to 54	77,369	90,422	74,738	85,961	105,482	98,383	94,703	114,414	106,930	100,185	94,765	0	0	0
55 to 59	78,189	94,993	93,572	91,644	101,884	95,468	90,430	93,735	95,144	122,142	83,529	127,270	127,270	127,270
60 to 64	76,771	96,430	88,803	75,948	83,495	101,788	100,966	92,012	96,956	128,729	95,457	107,885	107,885	107,885
65 to 69	95,671	114,920	115,856	105,895	71,764	84,429	86,983	87,006	94,571	114,288	110,367	96,077	96,077	96,077
70 & up	49,491	0	0	0	0	0	98,921	87,025	73,139	79,507	79,638	84,942	84,942	84,942
Total	75,213	84,801	84,008	87,581	86,510	94,333	98,342	98,731	98,461	114,771	94,319	112,640	112,640	91,924

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

**MARIN COUNTY
DISTRIBUTION OF SAFETY ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2019**

COUNTS BY AGE/SERVICE

Age	Service												Total	
	0	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up		
0 to 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	9	1	5	0	0	0	0	0	0	0	0	0	0	15
25 to 29	10	7	5	7	12	9	0	0	0	0	0	0	0	50
30 to 34	2	3	7	6	7	22	3	0	0	0	0	0	0	50
35 to 39	4	2	3	4	5	24	18	4	0	0	0	0	0	64
40 to 44	1	2	1	1	0	5	18	26	4	0	0	0	0	58
45 to 49	3	1	1	0	2	2	13	18	12	7	0	0	0	59
50 to 54	0	1	0	0	1	0	8	16	9	9	1	0	0	45
55 to 59	0	0	0	0	1	3	3	5	1	2	1	0	0	16
60 to 64	0	1	0	0	0	1	0	2	0	0	0	0	0	4
65 to 69	0	0	0	0	0	0	1	1	0	0	0	0	0	2
70 & up	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total	29	18	22	18	28	66	64	72	26	18	3	0	0	364

**MARIN COUNTY
DISTRIBUTION OF SAFETY ACTIVE MEMBERS
PAYROLL BY AGE AND SERVICE AS OF JULY 1, 2019**

AVERAGE PAY BY AGE/SERVICE

Age	Service												Total	
	0	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up		
0 to 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	82,615	88,437	92,768	0	0	0	0	0	0	0	0	0	0	86,388
25 to 29	79,223	83,111	93,737	95,041	103,368	94,233	0	0	0	0	0	0	0	91,930
30 to 34	83,793	88,357	85,888	90,487	98,326	110,571	122,660	0	0	0	0	0	0	101,312
35 to 39	82,855	82,655	113,785	78,614	103,936	107,118	123,173	139,081	0	0	0	0	0	109,633
40 to 44	87,589	160,542	91,832	112,786	0	106,981	122,559	123,009	171,059	0	0	0	0	124,771
45 to 49	125,175	87,693	119,075	0	106,267	114,347	122,035	120,577	133,206	140,544	0	0	0	124,791
50 to 54	0	117,291	0	0	182,894	0	129,268	128,569	127,982	149,056	134,605	0	0	133,764
55 to 59	0	0	0	0	92,082	130,465	150,231	123,650	120,639	137,903	125,466	0	0	129,646
60 to 64	0	128,711	0	0	0	120,072	0	99,097	0	0	0	0	0	111,744
65 to 69	0	0	0	0	0	0	132,309	109,554	0	0	0	0	0	120,931
70 & up	0	0	0	0	0	0	0	0	0	0	244,937	0	0	244,937
Total	86,134	97,521	94,818	90,858	104,853	107,978	124,918	123,723	136,738	144,507	168,336	0	0	114,289

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

**MARIN SPECIAL DISTRICTS
DISTRIBUTION OF MISCELLANEOUS ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2019**

COUNTS BY AGE/SERVICE

Age	Service													Total
	0	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up		
0 to 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	6	0	2	2	0	0	0	0	0	0	0	0	0	10
30 to 34	7	2	1	0	1	1	0	0	0	0	0	0	0	12
35 to 39	2	2	2	1	0	1	5	1	0	0	0	0	0	14
40 to 44	4	2	1	2	0	2	5	6	2	0	0	0	0	24
45 to 49	3	2	4	0	0	2	3	8	2	0	0	0	0	24
50 to 54	0	1	0	0	0	1	6	3	2	2	1	0	0	16
55 to 59	2	0	0	1	2	2	6	10	2	1	1	0	0	27
60 to 64	0	0	1	0	1	1	6	4	3	1	1	1	1	19
65 to 69	0	0	0	0	0	1	1	2	1	0	1	0	0	6
70 & up	0	0	0	0	0	1	1	0	1	1	0	0	0	4
Total	24	9	11	6	4	12	33	34	13	5	4	1	1	156

**MARIN SPECIAL DISTRICTS
DISTRIBUTION OF MISCELLANEOUS ACTIVE MEMBERS
PAYROLL BY AGE AND SERVICE AS OF JULY 1, 2019**

AVERAGE PAY BY AGE/SERVICE

Age	Service													Total
	0	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up		
0 to 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	51,373	0	71,130	54,581	0	0	0	0	0	0	0	0	0	55,966
30 to 34	68,315	60,899	54,834	0	60,470	59,946	0	0	0	0	0	0	0	64,604
35 to 39	82,475	97,743	46,917	81,702	0	71,926	77,122	69,430	0	0	0	0	0	75,924
40 to 44	86,468	82,132	120,437	152,487	0	110,053	75,654	92,951	106,904	0	0	0	0	96,060
45 to 49	84,228	106,236	113,958	0	0	65,095	97,825	68,588	78,922	0	0	0	0	85,467
50 to 54	0	60,470	0	0	0	102,317	83,785	78,343	80,418	85,919	65,754	0	0	81,184
55 to 59	45,276	0	0	102,317	88,186	70,473	88,333	75,106	109,171	98,842	58,520	0	0	80,257
60 to 64	0	0	72,592	0	56,414	193,739	79,677	92,629	117,382	122,995	65,754	102,317	0	95,502
65 to 69	0	0	0	0	0	53,859	102,317	115,061	101,196	0	81,973	0	0	94,911
70 & up	0	0	0	0	0	52,000	93,207	0	81,973	78,146	0	0	0	76,331
Total	68,354	83,832	85,435	99,692	73,314	85,419	83,747	81,252	98,934	94,364	68,000	102,317	1	82,755

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

**MARIN SPECIAL DISTRICTS
DISTRIBUTION OF SAFETY ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2019**

COUNTS BY AGE/SERVICE

Age	Service												Total	
	0	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up		
0 to 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	1	0	0	0	0	0	0	0	0	0	0	0	0	1
25 to 29	2	0	0	0	0	0	0	0	0	0	0	0	0	2
30 to 34	1	0	0	4	0	5	0	0	0	0	0	0	0	10
35 to 39	1	0	0	0	1	6	1	0	0	0	0	0	0	9
40 to 44	0	0	0	1	0	3	2	0	0	0	0	0	0	6
45 to 49	0	0	0	0	0	4	3	4	1	0	0	0	0	12
50 to 54	0	0	0	0	0	4	1	2	0	1	0	0	0	8
55 to 59	0	0	0	0	1	0	0	0	1	1	0	0	0	3
60 to 64	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	5	0	0	5	2	22	7	6	2	2	0	0	0	51

**MARIN SPECIAL DISTRICTS
DISTRIBUTION OF SAFETY ACTIVE MEMBERS
PAYROLL BY AGE AND SERVICE AS OF JULY 1, 2019**

AVERAGE PAY BY AGE/SERVICE

Age	Service												Total	
	0	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up		
0 to 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	81,070	0	0	0	0	0	0	0	0	0	0	0	0	81,070
25 to 29	91,038	0	0	0	0	0	0	0	0	0	0	0	0	91,038
30 to 34	105,500	0	0	98,665	0	112,162	0	0	0	0	0	0	0	106,097
35 to 39	91,831	0	0	0	108,414	112,064	115,649	0	0	0	0	0	0	109,809
40 to 44	0	0	0	94,893	0	120,627	118,365	0	0	0	0	0	0	115,584
45 to 49	0	0	0	0	0	126,346	123,100	162,100	113,274	0	0	0	0	136,363
50 to 54	0	0	0	0	0	124,274	136,777	154,245	0	135,973	0	0	0	134,792
55 to 59	0	0	0	0	206,107	0	0	0	138,326	134,178	0	0	0	159,537
60 to 64	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	92,095	0	0	97,910	157,260	118,070	122,636	159,482	125,800	135,076	0	0	0	121,553

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

**NOVATO FIRE PROTECTION DISTRICT
DISTRIBUTION OF MISCELLANEOUS ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2019**

COUNTS BY AGE/SERVICE

Age	Service													Total
	0	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up		
0 to 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30 to 34	1	0	0	0	1	0	0	0	0	0	0	0	0	2
35 to 39	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0	1	1	0	0	0	0	0	2
45 to 49	1	0	0	0	0	0	0	0	0	0	0	0	0	1
50 to 54	0	0	0	0	0	0	0	2	0	0	0	0	0	2
55 to 59	0	0	0	1	0	0	0	1	0	0	0	0	0	2
60 to 64	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	1	1	0	1	4	0	0	0	0	0	9

**NOVATO FIRE PROTECTION DISTRICT
DISTRIBUTION OF MISCELLANEOUS ACTIVE MEMBERS
PAYROLL BY AGE AND SERVICE AS OF JULY 1, 2019**

AVERAGE PAY BY AGE/SERVICE

Age	Service													Total
	0	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up		
0 to 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30 to 34	95,000	0	0	0	57,535	0	0	0	0	0	0	0	0	76,267
35 to 39	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0	159,750	88,944	0	0	0	0	0	124,347
45 to 49	156,796	0	0	0	0	0	0	0	0	0	0	0	0	156,796
50 to 54	0	0	0	0	0	0	0	107,623	0	0	0	0	0	107,623
55 to 59	0	0	0	73,926	0	0	0	153,261	0	0	0	0	0	113,594
60 to 64	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	125,898	0	0	73,926	57,535	0	159,750	114,363	0	0	0	0	0	111,162

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

**NOVATO FIRE PROTECTION DISTRICT
DISTRIBUTION OF SAFETY ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2019**

COUNTS BY AGE/SERVICE

Age	Service												Total	
	0	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up		
0 to 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	2	1	0	0	1	1	0	0	0	0	0	0	0	5
30 to 34	2	1	0	0	0	1	0	0	0	0	0	0	0	4
35 to 39	2	1	0	0	0	0	1	1	0	0	0	0	0	5
40 to 44	0	0	0	0	0	3	1	12	0	0	0	0	0	16
45 to 49	0	0	0	0	0	0	2	17	3	1	0	0	0	23
50 to 54	0	0	0	2	0	0	0	2	5	1	0	0	0	10
55 to 59	0	0	0	0	0	0	0	1	0	0	1	0	0	2
60 to 64	0	0	0	0	0	0	0	0	1	0	0	0	0	1
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	6	3	0	2	1	5	4	33	9	2	1	0	0	66

**NOVATO FIRE PROTECTION DISTRICT
DISTRIBUTION OF SAFETY ACTIVE MEMBERS
PAYROLL BY AGE AND SERVICE AS OF JULY 1, 2019**

AVERAGE PAY BY AGE/SERVICE

Age	Service												Total	
	0	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up		
0 to 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	106,372	113,128	0	0	120,175	120,757	0	0	0	0	0	0	0	113,361
30 to 34	106,081	113,128	0	0	0	121,369	0	0	0	0	0	0	0	111,665
35 to 39	110,202	113,128	0	0	0	0	128,930	137,443	0	0	0	0	0	119,981
40 to 44	0	0	0	0	0	121,169	120,408	130,824	0	0	0	0	0	128,363
45 to 49	0	0	0	0	0	0	120,772	131,754	146,205	190,818	0	0	0	135,252
50 to 54	0	0	0	130,676	0	0	0	128,919	165,629	222,282	0	0	0	156,962
55 to 59	0	0	0	0	0	0	0	120,175	0	0	132,926	0	0	126,550
60 to 64	0	0	0	0	0	0	0	0	155,397	0	0	0	0	155,397
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	107,552	113,128	0	130,676	120,175	121,127	122,720	131,066	158,018	206,550	132,926	0	0	132,668

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

**CITY OF SAN RAFAEL
DISTRIBUTION OF MISCELLANEOUS ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2019**

COUNTS BY AGE/SERVICE

Age	Service												Total
	0	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up	
0 to 19	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	4	4	1	1	0	0	0	0	0	0	0	0	10
25 to 29	3	4	4	3	0	3	0	0	0	0	0	0	17
30 to 34	5	5	2	4	1	2	0	0	0	0	0	0	19
35 to 39	3	3	3	0	2	6	2	1	0	0	0	0	20
40 to 44	7	3	2	2	1	5	7	4	0	0	0	0	31
45 to 49	2	0	2	2	1	2	7	5	3	0	0	0	24
50 to 54	1	1	1	1	2	2	5	9	5	3	1	0	31
55 to 59	2	3	2	0	3	3	1	4	4	0	3	0	25
60 to 64	1	0	0	2	0	1	9	5	3	0	2	0	23
65 to 69	0	0	0	0	0	1	2	2	0	1	0	0	6
70 & up	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	28	23	17	15	10	25	33	30	15	4	7	0	207

**CITY OF SAN RAFAEL
DISTRIBUTION OF MISCELLANEOUS ACTIVE MEMBERS
PAYROLL BY AGE AND SERVICE AS OF JULY 1, 2019**

AVERAGE PAY BY AGE/SERVICE

Age	Service												Total
	0	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up	
0 to 19	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	53,517	52,664	63,765	39,042	0	0	0	0	0	0	0	0	52,753
25 to 29	52,981	61,559	82,030	78,505	0	84,572	0	0	0	0	0	0	71,913
30 to 34	69,678	74,892	74,246	57,952	117,975	61,915	0	0	0	0	0	0	70,787
35 to 39	85,579	93,781	65,228	0	91,926	95,171	85,852	41,324	0	0	0	0	85,083
40 to 44	65,621	62,546	128,232	65,198	87,653	58,885	82,781	67,720	0	0	0	0	73,105
45 to 49	56,322	0	60,640	138,782	58,422	68,884	85,867	71,831	78,876	0	0	0	79,355
50 to 54	63,512	149,955	106,470	149,175	84,461	103,474	121,741	72,527	119,557	77,420	89,070	0	97,598
55 to 59	107,796	129,220	61,796	0	80,594	118,513	129,110	96,389	73,124	0	110,386	0	98,499
60 to 64	30,656	0	0	134,092	0	88,023	89,899	107,611	80,731	0	57,159	0	90,892
65 to 69	0	0	0	0	0	78,488	62,170	79,050	0	69,744	0	0	71,779
70 & up	0	0	0	0	0	0	0	0	0	0	77,259	0	77,259
Total	66,424	79,911	79,051	88,779	85,860	84,390	91,621	80,194	91,273	75,501	87,401	0	82,386

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

**CITY OF SAN RAFAEL
DISTRIBUTION OF POLICE ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2019**

COUNTS BY AGE/SERVICE

Age	Service												Total	
	0	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up		
0 to 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	1	4	1	1	0	0	0	0	0	0	0	0	0	7
25 to 29	1	2	1	1	2	2	0	0	0	0	0	0	0	9
30 to 34	1	2	2	1	0	3	0	0	0	0	0	0	0	9
35 to 39	1	0	0	2	0	0	5	0	0	0	0	0	0	8
40 to 44	0	0	0	0	0	1	2	7	0	0	0	0	0	10
45 to 49	0	0	0	0	0	0	4	5	4	0	0	0	0	13
50 to 54	0	0	0	0	0	0	1	0	2	2	0	0	0	5
55 to 59	0	0	0	0	0	1	0	0	0	0	0	0	0	1
60 to 64	0	0	0	0	0	0	1	0	1	0	0	0	0	2
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	4	8	4	5	2	7	13	12	7	2	0	0	0	64

**CITY OF SAN RAFAEL
DISTRIBUTION OF POLICE ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2019**

AVERAGE PAY BY AGE/SERVICE

Age	Service												Total	
	0	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up		
0 to 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	80,353	84,883	92,834	95,808	0	0	0	0	0	0	0	0	0	86,932
25 to 29	80,353	87,826	105,502	91,253	103,037	115,892	0	0	0	0	0	0	0	98,958
30 to 34	80,353	90,920	109,900	105,647	0	113,056	0	0	0	0	0	0	0	102,979
35 to 39	107,707	0	0	109,163	0	0	125,507	0	0	0	0	0	0	119,196
40 to 44	0	0	0	0	0	121,539	133,034	144,495	0	0	0	0	0	139,907
45 to 49	0	0	0	0	0	0	126,801	134,217	136,716	0	0	0	0	132,704
50 to 54	0	0	0	0	0	0	123,188	0	167,483	163,081	0	0	0	156,863
55 to 59	0	0	0	0	0	190,028	0	0	0	0	0	0	0	190,028
60 to 64	0	0	0	0	0	0	124,254	0	146,937	0	0	0	0	135,596
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	87,192	87,128	104,534	102,207	103,037	126,074	126,788	140,212	146,967	163,081	0	0	0	121,082

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

**CITY OF SAN RAFAEL
DISTRIBUTION OF FIRE ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2019**

AVERAGE PAY BY AGE/SERVICE

Age	Service												Total	
	0	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up		
0 to 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	2	1	2	1	1	0	0	0	0	0	0	0	7
30 to 34	0	2	0	3	1	8	3	0	0	0	0	0	0	17
35 to 39	0	1	1	0	3	10	4	0	0	0	0	0	0	19
40 to 44	0	0	0	0	0	2	2	3	0	0	0	0	0	7
45 to 49	0	0	0	0	0	1	0	7	1	0	0	0	0	9
50 to 54	0	0	0	0	0	0	1	3	3	0	0	0	0	7
55 to 59	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60 to 64	0	0	0	0	0	0	1	0	0	0	0	0	0	1
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	5	2	5	5	22	11	13	4	0	0	0	0	67

**CITY OF SAN RAFAEL
DISTRIBUTION OF FIRE ACTIVE MEMBERS
PAYROLL BY AGE AND SERVICE AS OF JULY 1, 2019**

AVERAGE PAY BY AGE/SERVICE

Age	Service												Total	
	0	1	2	3	4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up		
0 to 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	103,184	106,518	107,595	113,973	113,594	0	0	0	0	0	0	0	107,949
30 to 34	0	103,184	0	112,604	109,081	125,438	141,453	0	0	0	0	0	0	122,419
35 to 39	0	82,902	88,350	0	117,879	133,637	146,716	0	0	0	0	0	0	128,848
40 to 44	0	0	0	0	0	128,697	148,534	187,572	0	0	0	0	0	159,597
45 to 49	0	0	0	0	0	157,652	0	142,679	152,441	0	0	0	0	145,427
50 to 54	0	0	0	0	0	0	132,091	145,292	145,063	0	0	0	0	143,308
55 to 59	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60 to 64	0	0	0	0	0	0	195,220	0	0	0	0	0	0	195,220
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	99,128	97,434	110,601	115,338	130,387	148,691	153,642	146,908	0	0	0	0	132,974

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

Changes in Plan Membership: Marin County Miscellaneous

	Actives	Transfer to Participating Agency	Non-vested Terminations Due Refunds	Vested Terminations	Ordinary Disability	Duty Disability	Retired	Beneficiaries	Total Participants
June 30, 2018	1,737	187	263	188	30	85	1,544	270	4,304
New Entrants	226	0	0	0	0	0	0	0	226
Rehires	2	(1)	(1)	0	0	0	0	0	0
Duty Disabilities	(1)	0	0	0	0	1	0	0	0
Ordinary Disabilities	(1)	0	0	0	1	0	0	0	0
Retirements	(72)	(13)	(4)	(18)	0	0	104	3	0
Retirements from Safety with Misc Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(66)	(2)	0	68	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	(1)	0	0	0	0	(3)	(9)	13	0
Non-Vested Terminations and Death without beneficiary	(106)	(2)	106	0	(2)	(2)	(30)	0	(36)
Transfers	4	12	(4)	(4)	0	0	0	0	8
Beneficiary Deaths	0	0	0	0	0	0	0	(14)	(14)
Domestic Relations Orders	0	0	0	1	0	0	0	2	3
Withdrawals Paid	(17)	(1)	(10)	(1)	0	0	0	0	(29)
Data Corrections	0	(1)	0	0	0	3	(3)	1	0
June 30, 2019	1,705	179	350	234	29	84	1,606	275	4,462

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

Changes in Plan Membership: Marin County Safety

	Actives	Transfer to Participating Agency	Non-vested Terminations Due Refunds	Vested Terminations	Ordinary Disability	Duty Disability	Retired	Beneficiaries	Total Participants
June 30, 2018	358	59	26	20	7	104	261	69	904
New Entrants	31	0	0	0	0	0	0	0	31
Rehires	1	0	(1)	0	0	0	0	0	0
Duty Disabilities	(4)	0	0	0	0	4	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(11)	(5)	0	(2)	0	0	17	1	0
Retirements from Safety with Misc Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(2)	(2)	0	4	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	0	(2)	2	0
Non-Vested Terminations and Death without beneficiary	(7)	0	7	0	0	0	(1)	0	(1)
Transfers	0	3	(1)	0	0	0	0	0	2
Beneficiary Deaths	0	0	0	0	0	0	0	(1)	(1)
Domestic Relations Orders	0	0	0	0	0	0	0	2	2
Withdrawals Paid	(2)	(1)	0	0	0	0	0	0	(3)
Data Corrections	0	(1)	0	0	0	17	(16)	0	0
June 30, 2019	364	53	31	22	7	125	259	73	934

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

Changes in Plan Membership: Marin Special Districts Miscellaneous

	Actives	Transfer to Participating Agency	Non-vested Terminations Due Refunds	Vested Terminations	Ordinary Disability	Duty Disability	Retired	Beneficiaries	Total Participants
June 30, 2018	154	23	35	18	2	4	134	15	385
New Entrants	25	0	0	0	0	0	0	0	25
Rehires	0	0	0	0	0	0	0	0	0
Duty Disabilities	0	0	0	0	0	0	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(6)	0	0	0	0	0	6	0	0
Retirements from Safety with Misc Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(1)	0	0	1	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	0	(1)	1	0
Non-Vested Terminations and Death without beneficiary	(7)	0	7	0	0	0	(3)	0	(3)
Transfers	(4)	4	0	0	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0	(2)	(2)
Domestic Relations Orders	0	0	0	0	0	0	0	0	0
Withdrawals Paid	(5)	0	(3)	(1)	0	0	0	0	(9)
Data Corrections	0	0	0	0	0	2	(2)	0	0
June 30, 2019	156	27	39	18	2	6	134	14	396

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

Changes in Plan Membership: Marin Special Districts Safety

	Actives	Transfer to Participating Agency	Non-vested Terminations Due Refunds	Vested Terminations	Ordinary Disability	Duty Disability	Retired	Beneficiaries	Total Participants
June 30, 2018	50	11	1	2	1	17	28	10	120
New Entrants	5	0	0	0	0	0	0	0	5
Rehires	0	0	0	0	0	0	0	0	0
Duty Disabilities	0	0	0	0	0	0	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(4)	0	0	0	0	0	4	0	0
Retirements from Safety with Misc Service	0	0	0	0	0	0	0	0	0
Vested Terminations	0	0	0	0	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	0	0	0	0
Non-Vested Terminations and Death without beneficiary	0	0	0	0	0	0	(1)	0	(1)
Transfers	0	0	0	0	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0	0	0
Domestic Relations Orders	0	0	0	0	0	0	0	0	0
Withdrawals Paid	0	0	0	0	0	0	0	0	0
Data Corrections	0	0	0	0	(1)	1	0	0	0
June 30, 2019	51	11	1	2	0	18	31	10	124

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

Changes in Plan Membership: Marin County and Special Districts All Groups

	Actives	Transfer to Participating Agency	Non-vested Terminations Due Refunds	Vested Terminations	Ordinary Disability	Duty Disability	Retired	Beneficiaries	Total Participants
June 30, 2018	2,299	280	325	228	40	210	1,967	364	5,713
New Entrants	287	0	0	0	0	0	0	0	287
Rehires	3	(1)	(2)	0	0	0	0	0	0
Duty Disabilities	(5)	0	0	0	0	5	0	0	0
Ordinary Disabilities	(1)	0	0	0	1	0	0	0	0
Retirements	(93)	(18)	(4)	(20)	0	0	131	4	0
Retirements from Safety with Misc Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(69)	(4)	0	73	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	(1)	0	0	0	0	(3)	(12)	16	0
Non-Vested Terminations and Death without beneficiary	(120)	(2)	120	0	(2)	(2)	(35)	0	(41)
Transfers	0	19	(5)	(4)	0	0	0	0	10
Beneficiary Deaths	0	0	0	0	0	0	0	(17)	(17)
Domestic Relations Orders	0	0	0	1	0	0	0	4	5
Withdrawals Paid	(24)	(2)	(13)	(2)	0	0	0	0	(41)
Data Corrections	0	(2)	0	0	(1)	23	(21)	1	0
June 30, 2019	2,276	270	421	276	38	233	2,030	372	5,916

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

Changes in Plan Membership: Novato Fire Protection District Miscellaneous

	Actives	Transfer to Participating Agency	Non-vested Terminations Due Refunds	Vested Terminations	Ordinary Disability	Duty Disability	Retired	Beneficiaries	Total Participants
June 30, 2018	9	0	0	2	0	0	5	1	17
New Entrants	2	0	0	0	0	0	0	0	2
Rehires	0	0	0	0	0	0	0	0	0
Duty Disabilities	0	0	0	0	0	0	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(1)	0	0	(1)	0	0	2	0	0
Retirements from Safety with Misc Service	0	0	0	0	0	0	0	0	0
Vested Terminations	0	0	0	0	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	0	0	0	0
Non-Vested Terminations and Death without beneficiary	(1)	0	1	0	0	0	(1)	0	(1)
Transfers	0	0	0	0	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0	0	0
Domestic Relations Orders	0	0	0	0	0	0	0	0	0
Withdrawals Paid	0	0	0	0	0	0	0	0	0
Data Corrections	0	0	0	0	0	0	0	0	0
June 30, 2019	9	0	1	1	0	0	6	1	18

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX A – MEMBERSHIP INFORMATION

Changes in Plan Membership: Novato Fire Protection District Safety

	Actives	Transfer to Participating Agency	Non-vested Terminations Due Refunds	Vested Terminations	Ordinary Disability	Duty Disability	Retired	Beneficiaries	Total Participants
June 30, 2018	65	11	3	2	0	32	55	14	182
New Entrants	6	0	0	0	0	0	0	0	6
Rehires	0	0	0	0	0	0	0	0	0
Duty Disabilities	(2)	0	0	0	0	2	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(3)	0	0	0	0	0	3	0	0
Retirements from Safety with Misc Service	0	0	0	0	0	0	0	0	0
Vested Terminations	0	0	0	0	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	(1)	0	1	0
Non-Vested Terminations and Death without beneficiary	0	0	0	0	0	(1)	0	0	(1)
Transfers	0	0	0	0	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0	0	0
Domestic Relations Orders	0	0	0	0	0	0	0	0	0
Withdrawals Paid	0	0	0	0	0	0	0	0	0
Data Corrections	0	0	0	0	0	1	(1)	0	0
June 30, 2019	66	11	3	2	0	33	57	15	187

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX A – MEMBERSHIP INFORMATION

Changes in Plan Membership: Novato Fire Protection District All Groups

	Actives	Transfer to Participating Agency	Non-vested Terminations Due Refunds	Vested Terminations	Ordinary Disability	Duty Disability	Retired	Beneficiaries	Total Participants
June 30, 2018	74	11	3	4	0	32	60	15	199
New Entrants	8	0	0	0	0	0	0	0	8
Rehires	0	0	0	0	0	0	0	0	0
Duty Disabilities	(2)	0	0	0	0	2	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(4)	0	0	(1)	0	0	5	0	0
Retirements from Safety with Misc Service	0	0	0	0	0	0	0	0	0
Vested Terminations	0	0	0	0	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	(1)	0	1	0
Non-Vested Terminations and Death without beneficiary	(1)	0	1	0	0	(1)	(1)	0	(2)
Transfers	0	0	0	0	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0	0	0
Domestic Relations Orders	0	0	0	0	0	0	0	0	0
Withdrawals Paid	0	0	0	0	0	0	0	0	0
Data Corrections	0	0	0	0	0	1	(1)	0	0
June 30, 2019	75	11	4	3	0	33	63	16	205

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX A – MEMBERSHIP INFORMATION

Changes in Plan Membership: City of San Rafael Miscellaneous

	Actives	Transfer to Participating Agency	Non-vested Terminations Due Refunds	Vested Terminations	Ordinary Disability	Duty Disability	Retired	Beneficiaries	Total Participants
June 30, 2018	218	75	60	27	2	19	257	33	691
New Entrants	29	4	0	0	0	0	0	0	33
Rehires	0	0	0	0	0	0	0	0	0
Duty Disabilities	0	0	0	0	0	0	0	0	0
Ordinary Disabilities	(1)	0	0	0	1	0	0	0	0
Retirements	(13)	(9)	0	(3)	0	0	23	2	0
Retirements from Safety with Misc Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(13)	(3)	0	16	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	0	(3)	3	0
Non-Vested Terminations and Death without beneficiary	(14)	(2)	16	0	0	(1)	(3)	0	(4)
Transfers	2	3	(1)	0	0	0	0	0	4
Beneficiary Deaths	0	0	0	0	0	0	0	0	0
Domestic Relations Orders	0	0	0	2	0	0	0	0	2
Withdrawals Paid	(1)	(2)	(1)	0	0	0	0	0	(4)
Data Corrections	0	1	1	1	0	0	0	1	4
June 30, 2019	207	67	75	43	3	18	274	39	726

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX A – MEMBERSHIP INFORMATION

Changes in Plan Membership: City of San Rafael Police

	Actives	Transfer to Participating Agency	Non-vested Terminations Due Refunds	Vested Terminations	Ordinary Disability	Duty Disability	Retired	Beneficiaries	Total Participants
June 30, 2018	69	13	6	6	0	42	80	18	234
New Entrants	8	1	0	0	0	0	0	0	9
Rehires	0	0	0	0	0	0	0	0	0
Duty Disabilities	0	0	0	0	0	0	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(3)	0	0	0	0	0	3	0	0
Retirements from Safety with Misc Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(7)	0	0	7	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	(2)	(4)	6	0
Non-Vested Terminations and Death without beneficiary	(2)	0	2	0	0	0	0	0	0
Transfers	(1)	1	0	0	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0	(1)	(1)
Domestic Relations Orders	0	0	0	0	0	0	0	0	0
Withdrawals Paid	0	0	0	0	0	0	0	0	0
Data Corrections	0	0	0	0	0	1	0	0	1
June 30, 2019	64	15	8	13	0	41	79	23	243

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX A – MEMBERSHIP INFORMATION

Changes in Plan Membership: City of San Rafael Fire

	Actives	Transfer to Participating Agency	Non-vested Terminations Due Refunds	Vested Terminations	Ordinary Disability	Duty Disability	Retired	Beneficiaries	Total Participants
June 30, 2018	72	5	8	1	0	21	89	21	217
New Entrants	0	0	0	0	0	0	0	0	0
Rehires	0	0	0	0	0	0	0	0	0
Duty Disabilities	0	0	0	0	0	0	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(4)	0	0	(1)	0	0	4	1	0
Retirements from Safety with Misc Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(1)	0	0	1	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	0	0	0	0
Non-Vested Terminations and Death without beneficiary	0	0	0	0	0	0	(2)	0	(2)
Transfers	0	0	0	0	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0	(1)	(1)
Domestic Relations Orders	0	0	0	0	0	0	0	0	0
Withdrawals Paid	0	0	0	0	0	0	0	0	0
Data Corrections	0	0	0	0	0	3	(4)	0	(1)
June 30, 2019	67	5	8	1	0	24	87	21	213

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX A – MEMBERSHIP INFORMATION

Changes in Plan Membership: City of San Rafael All Groups

	Actives	Transfer to Participating Agency	Non-vested Terminations Due Refunds	Vested Terminations	Ordinary Disability	Duty Disability	Retired	Beneficiaries	Total Participants
June 30, 2018	359	93	74	34	2	82	426	72	1,142
New Entrants	37	5	0	0	0	0	0	0	42
Rehires	0	0	0	0	0	0	0	0	0
Duty Disabilities	0	0	0	0	0	0	0	0	0
Ordinary Disabilities	(1)	0	0	0	1	0	0	0	0
Retirements	(20)	(9)	0	(4)	0	0	30	3	0
Retirements from Safety with Misc Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(21)	(3)	0	24	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	(2)	(7)	9	0
Non-Vested Terminations and Death without beneficiary	(16)	(2)	18	0	0	(1)	(5)	0	(6)
Transfers	1	4	(1)	0	0	0	0	0	4
Beneficiary Deaths	0	0	0	0	0	0	0	(2)	(2)
Domestic Relations Orders	0	0	0	2	0	0	0	0	2
Withdrawals Paid	(1)	(2)	(1)	0	0	0	0	0	(4)
Data Corrections	0	1	1	1	0	4	(4)	1	4
June 30, 2019	338	87	91	57	3	83	440	83	1,182

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX A – MEMBERSHIP INFORMATION

Benefit Form Elections: Marin County and Special Districts					
Status	Marin County		Marin Special Districts		Total
	Misc	Safety	Misc	Safety	
Service Retired					
Option 1 - Cash Refund Annuity	57	2	5	0	64
Option 2 - J&S 100%	75	21	10	6	112
Option 3 - J&S 50%	10	2	0	1	13
Option 4	1	0	0	0	1
Unmodified Benefit Option	1,463	233	119	23	1,838
Unmodified Option - Service Connected Disability	0	1	0	1	2
(missing)	0	0	0	0	0
Total Service Retired	1,606	259	134	31	2,030
Ordinary Disability					
Option 1 - Cash Refund Annuity	4	0	0	0	4
Option 2 - J&S 100%	3	0	0	0	3
Option 3 - J&S 50%	0	0	0	0	0
Option 4	0	0	0	0	0
Unmodified Benefit Option	22	7	2	0	31
Unmodified Option - Service Connected Disability	0	0	0	0	0
(missing)	0	0	0	0	0
Total Ordinary Disability	29	7	2	0	38
Duty Disability					
Option 1 - Cash Refund Annuity	1	2	1	0	4
Option 2 - J&S 100%	0	1	0	1	2
Option 3 - J&S 50%	1	1	0	0	2
Option 4	0	0	0	0	0
Unmodified Benefit Option	1	0	0	0	1
Unmodified Option - Service Connected Disability	81	121	5	17	224
(missing)	0	0	0	0	0
Total Duty Disability	84	125	6	18	233
Total	1,719	391	142	49	2,301

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX A – MEMBERSHIP INFORMATION

Benefit Form Elections: Novato Fire Protection District			
Status	Miscellaneous	Safety	Total
Service Retired			
Option 1 - Cash Refund Annuity	0	0	0
Option 2 - J&S 100%	0	2	2
Option 3 - J&S 50%	1	0	1
Option 4	0	0	0
Unmodified Benefit Option	5	54	59
Unmodified Option - Service Connected Disability	0	0	0
(missing)	0	0	0
Total Service Retired	6	56	62
Ordinary Disability			
Option 1 - Cash Refund Annuity	0	0	0
Option 2 - J&S 100%	0	0	0
Option 3 - J&S 50%	0	0	0
Option 4	0	0	0
Unmodified Benefit Option	0	0	0
Unmodified Option - Service Connected Disability	0	0	0
(missing)	0	0	0
Total Ordinary Disability	0	0	0
Duty Disability			
Option 1 - Cash Refund Annuity	0	0	0
Option 2 - J&S 100%	0	0	0
Option 3 - J&S 50%	0	0	0
Option 4	0	0	0
Unmodified Benefit Option	0	0	0
Unmodified Option - Service Connected Disability	0	33	33
(missing)	0	0	0
Total Duty Disability	0	33	33
Total	6	89	95

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX A – MEMBERSHIP INFORMATION

Benefit Form Elections: City of San Rafael				
	Miscellaneous	Police	Fire	Total
Service Retired				
Option 1 - Cash Refund Annuity	6	1	0	7
Option 2 - J&S 100%	25	14	6	45
Option 3 - J&S 50%	2	0	1	3
Option 4	0	0	0	0
Unmodified Benefit Option	241	63	80	384
Unmodified Option - Service Connected Disability (missing)	0	0	0	0
	0	1	0	1
Total Service Retired	274	79	87	440
Ordinary Disability				
Option 1 - Cash Refund Annuity	0	0	0	0
Option 2 - J&S 100%	0	0	0	0
Option 3 - J&S 50%	0	0	0	0
Option 4	0	0	0	0
Unmodified Benefit Option	3	0	0	3
Unmodified Option - Service Connected Disability (missing)	0	0	0	0
	0	0	0	0
Total Ordinary Disability	3	0	0	3
Duty Disability				
Option 1 - Cash Refund Annuity	1	1	0	2
Option 2 - J&S 100%	0	0	0	0
Option 3 - J&S 50%	0	0	0	0
Option 4	0	0	0	0
Unmodified Benefit Option	0	0	0	0
Unmodified Option - Service Connected Disability (missing)	17	40	24	81
	0	0	0	0
Total Duty Disability	18	41	24	83
Total	295	120	111	526

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX A – MEMBERSHIP INFORMATION

Marin County and Special Districts: Service Retired

Age	Marin County				Marin Special Districts				Total	
	Miscellaneous		Safety		Miscellaneous		Safety		Number	Average Annual Benefit
	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit		
0 to 24	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
25 to 29	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
30 to 34	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
35 to 39	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
40 to 44	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
45 to 49	1	\$6,662	5	\$56,402	0	\$0	0	\$0	6	\$48,112
50 to 54	26	\$19,650	30	\$38,078	1	\$3,680	4	\$40,621	61	\$29,826
55 to 59	94	\$27,171	49	\$64,635	17	\$28,413	6	\$40,475	166	\$38,838
60 to 64	203	\$35,611	56	\$75,893	26	\$43,760	12	\$79,402	297	\$45,689
65 to 69	318	\$42,234	45	\$79,941	33	\$40,626	6	\$92,161	402	\$47,068
70 to 74	374	\$40,262	39	\$67,823	28	\$38,184	1	\$44,221	442	\$42,571
75 to 79	279	\$43,263	20	\$102,326	21	\$39,162	2	\$117,150	322	\$47,123
80 to 84	170	\$39,370	11	\$55,802	5	\$58,512	0	\$0	186	\$40,856
85 to 89	90	\$34,417	3	\$27,878	2	\$28,793	0	\$0	95	\$34,092
90 to 94	38	\$28,732	1	\$65,305	1	\$20,507	0	\$0	40	\$29,440
95+	13	\$26,685	0	\$0	0	\$0	0	\$0	13	\$26,685
<Total>	1,606	\$38,660	259	\$69,086	134	\$39,010	31	\$70,634	2,030	\$43,053

Marin County and Special Districts: Duty Disabled

Age	Marin County				Marin Special Districts				Total	
	Miscellaneous		Safety		Miscellaneous		Safety		Number	Average Annual Benefit
	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit		
0 to 24	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
25 to 29	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
30 to 34	0	\$0	1	\$51,189	0	\$0	0	\$0	1	\$51,189
35 to 39	0	\$0	2	\$52,309	0	\$0	0	\$0	2	\$52,309
40 to 44	0	\$0	4	\$46,352	0	\$0	0	\$0	4	\$46,352
45 to 49	3	\$33,180	4	\$60,139	1	\$15,417	1	\$48,188	9	\$44,856
50 to 54	4	\$26,273	20	\$50,960	0	\$0	1	\$59,841	25	\$47,365
55 to 59	11	\$37,277	25	\$55,160	2	\$55,467	2	\$65,097	40	\$50,755
60 to 64	7	\$37,746	20	\$84,840	0	\$0	3	\$66,977	30	\$72,065
65 to 69	27	\$35,265	17	\$61,552	0	\$0	4	\$40,518	48	\$45,013
70 to 74	12	\$41,794	10	\$69,052	2	\$34,497	5	\$75,228	29	\$56,455
75 to 79	10	\$38,655	14	\$62,090	1	\$4,547	2	\$42,051	27	\$49,795
80 to 84	9	\$59,448	4	\$42,576	0	\$0	0	\$0	13	\$54,256
85 to 89	1	\$13,600	3	\$43,823	0	\$0	0	\$0	4	\$36,267
90 to 94	0	\$0	1	\$33,109	0	\$0	0	\$0	1	\$33,109
95+	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
<Total>	84	\$38,902	125	\$60,943	6	\$33,315	18	\$58,971	233	\$52,133

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APPENDIX A – MEMBERSHIP INFORMATION

Marin County and Special Districts: Ordinary Disabled

Age	Marin County				Marin Special Districts				Total	
	Miscellaneous		Safety		Miscellaneous		Safety		Number	Average Annual Benefit
	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit		
0 to 24	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
25 to 29	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
30 to 34	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
35 to 39	1	\$24,296	0	\$0	0	\$0	0	\$0	1	\$24,296
40 to 44	0	\$0	1	\$37,241	0	\$0	0	\$0	1	\$37,241
45 to 49	1	\$2,335	0	\$0	0	\$0	0	\$0	1	\$2,335
50 to 54	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
55 to 59	1	\$24,804	4	\$45,786	1	\$37,340	0	\$0	6	\$40,881
60 to 64	5	\$25,187	0	\$0	0	\$0	0	\$0	5	\$25,187
65 to 69	3	\$25,073	1	\$96,204	0	\$0	0	\$0	4	\$42,856
70 to 74	9	\$18,680	1	\$26,995	1	\$14,403	0	\$0	11	\$19,047
75 to 79	6	\$23,341	0	\$0	0	\$0	0	\$0	6	\$23,341
80 to 84	1	\$10,012	0	\$0	0	\$0	0	\$0	1	\$10,012
85 to 89	1	\$3,012	0	\$0	0	\$0	0	\$0	1	\$3,012
90 to 94	1	\$60,101	0	\$0	0	\$0	0	\$0	1	\$60,101
95+	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
<Total>	29	\$21,858	7	\$49,083	2	\$25,871	0	\$0	38	\$27,084

Marin County and Special Districts: Beneficiaries

Age	Marin County				Marin Special Districts				Total	
	Miscellaneous		Safety		Miscellaneous		Safety		Number	Average Annual Benefit
	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit		
0 to 24	3	\$31,514	0	\$0	0	\$0	0	\$0	3	\$31,514
25 to 29	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
30 to 34	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
35 to 39	1	\$33,233	1	\$30,795	0	\$0	0	\$0	2	\$32,014
40 to 44	3	\$6,580	0	\$0	0	\$0	1	\$15,417	4	\$8,789
45 to 49	4	\$26,814	1	\$11,943	0	\$0	1	\$9,028	7	\$25,057
50 to 54	4	\$23,266	8	\$44,661	0	\$0	0	\$0	13	\$36,187
55 to 59	16	\$14,298	8	\$42,556	0	\$0	2	\$43,144	28	\$27,706
60 to 64	30	\$22,366	9	\$41,574	0	\$0	0	\$0	42	\$28,410
65 to 69	33	\$24,444	13	\$39,129	0	\$0	0	\$0	47	\$28,861
70 to 74	47	\$34,319	8	\$75,256	0	\$0	0	\$0	61	\$38,429
75 to 79	39	\$21,454	11	\$30,929	0	\$0	0	\$0	52	\$23,963
80 to 84	35	\$32,758	6	\$36,355	0	\$0	0	\$0	43	\$33,068
85 to 89	29	\$26,693	5	\$43,417	0	\$0	0	\$0	35	\$28,459
90 to 94	20	\$20,771	2	\$40,918	0	\$0	0	\$0	23	\$21,975
95+	11	\$21,584	1	\$33,340	0	\$0	0	\$0	12	\$22,563
<Total>	275	\$25,736	73	\$42,684	0	\$0	4	\$27,683	372	\$29,434

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX A – MEMBERSHIP INFORMATION

Novato Fire Protection District: Service Retired

Age	<u>Miscellaneous</u>		<u>Safety</u>		<u>Total</u>	
	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit
0 to 24	0	\$0	0	\$0	0	\$0
25 to 29	0	\$0	0	\$0	0	\$0
30 to 34	0	\$0	0	\$0	0	\$0
35 to 39	0	\$0	0	\$0	0	\$0
40 to 44	0	\$0	0	\$0	0	\$0
45 to 49	0	\$0	0	\$0	0	\$0
50 to 54	0	\$0	4	\$131,131	4	\$131,131
55 to 59	2	\$7,770	5	\$121,746	7	\$89,181
60 to 64	2	\$39,665	10	\$99,730	12	\$89,719
65 to 69	1	\$29,765	13	\$103,978	14	\$98,677
70 to 74	0	\$0	10	\$106,274	10	\$106,274
75 to 79	1	\$108,974	12	\$113,244	13	\$112,915
80 to 84	0	\$0	3	\$74,326	3	\$74,326
85 to 89	0	\$0	0	\$0	0	\$0
90 to 94	0	\$0	0	\$0	0	\$0
95+	0	\$0	0	\$0	0	\$0
<Total>	6	\$38,935	57	\$107,490	63	\$100,961

Novato Fire Protection District: Duty Disabled

Age	<u>Miscellaneous</u>		<u>Safety</u>		<u>Total</u>	
	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit
0 to 24	0	\$0	0	\$0	0	\$0
25 to 29	0	\$0	0	\$0	0	\$0
30 to 34	0	\$0	0	\$0	0	\$0
35 to 39	0	\$0	0	\$0	0	\$0
40 to 44	0	\$0	1	\$61,283	1	\$61,283
45 to 49	0	\$0	0	\$0	0	\$0
50 to 54	0	\$0	3	\$102,749	3	\$102,749
55 to 59	0	\$0	3	\$79,589	3	\$79,589
60 to 64	0	\$0	2	\$104,090	2	\$104,090
65 to 69	0	\$0	7	\$71,008	7	\$71,008
70 to 74	0	\$0	6	\$89,957	6	\$89,957
75 to 79	0	\$0	10	\$61,410	10	\$61,410
80 to 84	0	\$0	1	\$78,310	1	\$78,310
85 to 89	0	\$0	0	\$0	0	\$0
90 to 94	0	\$0	0	\$0	0	\$0
95+	0	\$0	0	\$0	0	\$0
<Total>	0	\$0	33	\$77,142	33	\$77,142

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

Novato Fire Protection District: Ordinary Disabled

Age	<u>Miscellaneous</u>		<u>Safety</u>		<u>Total</u>	
	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit
0 to 24	0	\$0	0	\$0	0	\$0
25 to 29	0	\$0	0	\$0	0	\$0
30 to 34	0	\$0	0	\$0	0	\$0
35 to 39	0	\$0	0	\$0	0	\$0
40 to 44	0	\$0	0	\$0	0	\$0
45 to 49	0	\$0	0	\$0	0	\$0
50 to 54	0	\$0	0	\$0	0	\$0
55 to 59	0	\$0	0	\$0	0	\$0
60 to 64	0	\$0	0	\$0	0	\$0
65 to 69	0	\$0	0	\$0	0	\$0
70 to 74	0	\$0	0	\$0	0	\$0
75 to 79	0	\$0	0	\$0	0	\$0
80 to 84	0	\$0	0	\$0	0	\$0
85 to 89	0	\$0	0	\$0	0	\$0
90 to 94	0	\$0	0	\$0	0	\$0
95+	0	\$0	0	\$0	0	\$0
<Total>	0	\$0	0	\$0	0	\$0

Novato Fire Protection District: Surviving Beneficiaries

Age	<u>Miscellaneous</u>		<u>Safety</u>		<u>Total</u>	
	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit
0 to 24	0	\$0	0	\$0	0	\$0
25 to 29	0	\$0	0	\$0	0	\$0
30 to 34	0	\$0	0	\$0	0	\$0
35 to 39	0	\$0	0	\$0	0	\$0
40 to 44	0	\$0	0	\$0	0	\$0
45 to 49	0	\$0	0	\$0	0	\$0
50 to 54	0	\$0	1	\$79,208	1	\$79,208
55 to 59	1	\$12,366	3	\$41,393	4	\$34,136
60 to 64	0	\$0	2	\$30,954	2	\$30,954
65 to 69	0	\$0	3	\$41,135	3	\$41,135
70 to 74	0	\$0	5	\$47,700	5	\$47,700
75 to 79	0	\$0	1	\$63,474	1	\$63,474
80 to 84	0	\$0	0	\$0	0	\$0
85 to 89	0	\$0	0	\$0	0	\$0
90 to 94	0	\$0	0	\$0	0	\$0
95+	0	\$0	0	\$0	0	\$0
<Total>	1	\$12,366	15	\$46,045	16	\$43,940

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

City of San Rafael: Service Retired

Age	<u>Miscellaneous</u>		<u>Police</u>		<u>Fire</u>		<u>Total</u>	
	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit
0 to 24	0	\$0	0	\$0	0	\$0	0	\$0
25 to 29	0	\$0	0	\$0	0	\$0	0	\$0
30 to 34	0	\$0	0	\$0	0	\$0	0	\$0
35 to 39	0	\$0	0	\$0	0	\$0	0	\$0
40 to 44	0	\$0	0	\$0	0	\$0	0	\$0
45 to 49	0	\$0	0	\$0	0	\$0	0	\$0
50 to 54	7	\$21,616	7	\$48,307	4	\$70,269	18	\$42,808
55 to 59	28	\$41,097	12	\$63,871	16	\$85,321	56	\$58,613
60 to 64	50	\$46,491	17	\$56,979	21	\$112,396	88	\$64,244
65 to 69	68	\$40,754	17	\$83,680	14	\$118,019	99	\$59,051
70 to 74	63	\$40,656	16	\$104,392	13	\$94,404	92	\$59,335
75 to 79	23	\$35,592	7	\$46,066	6	\$59,515	36	\$41,616
80 to 84	19	\$16,129	3	\$45,614	9	\$82,605	31	\$38,282
85 to 89	8	\$37,277	0	\$0	2	\$47,615	10	\$39,345
90 to 94	7	\$19,706	0	\$0	1	\$68,046	8	\$25,749
95+	1	\$1,356	0	\$0	1	\$59,178	2	\$30,267
<Total>	274	\$38,400	79	\$71,207	87	\$94,357	440	\$55,355

City of San Rafael: Duty Disabled

Age	<u>Miscellaneous</u>		<u>Police</u>		<u>Fire</u>		<u>Total</u>	
	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit
0 to 24	0	\$0	0	\$0	0	\$0	0	\$0
25 to 29	0	\$0	0	\$0	0	\$0	0	\$0
30 to 34	0	\$0	0	\$0	0	\$0	0	\$0
35 to 39	0	\$0	0	\$0	0	\$0	0	\$0
40 to 44	0	\$0	6	\$62,219	0	\$0	6	\$62,219
45 to 49	1	\$36,900	4	\$59,701	1	\$52,096	6	\$54,634
50 to 54	2	\$20,832	3	\$50,725	1	\$62,967	6	\$42,801
55 to 59	1	\$41,451	2	\$62,787	0	\$0	3	\$55,674
60 to 64	3	\$14,309	6	\$76,737	4	\$111,344	13	\$72,978
65 to 69	4	\$34,791	9	\$79,168	6	\$96,865	19	\$75,414
70 to 74	4	\$32,945	3	\$42,628	9	\$97,127	16	\$70,863
75 to 79	2	\$30,033	6	\$47,069	2	\$79,758	10	\$50,199
80 to 84	1	\$37,522	2	\$35,809	0	\$0	3	\$36,380
85 to 89	0	\$0	0	\$0	1	\$35,420	1	\$35,420
90 to 94	0	\$0	0	\$0	0	\$0	0	\$0
95+	0	\$0	0	\$0	0	\$0	0	\$0
<Total>	18	\$29,526	41	\$62,066	24	\$92,113	83	\$63,698

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

City of San Rafael: Ordinary Disabled

Age	<u>Miscellaneous</u>		<u>Police</u>		<u>Fire</u>		<u>Total</u>	
	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit
0 to 24	0	\$0	0	\$0	0	\$0	0	\$0
25 to 29	0	\$0	0	\$0	0	\$0	0	\$0
30 to 34	0	\$0	0	\$0	0	\$0	0	\$0
35 to 39	0	\$0	0	\$0	0	\$0	0	\$0
40 to 44	1	\$28,346	0	\$0	0	\$0	1	\$28,346
45 to 49	0	\$0	0	\$0	0	\$0	0	\$0
50 to 54	0	\$0	0	\$0	0	\$0	0	\$0
55 to 59	0	\$0	0	\$0	0	\$0	0	\$0
60 to 64	0	\$0	0	\$0	0	\$0	0	\$0
65 to 69	0	\$0	0	\$0	0	\$0	0	\$0
70 to 74	0	\$0	0	\$0	0	\$0	0	\$0
75 to 79	1	\$16,914	0	\$0	0	\$0	1	\$16,914
80 to 84	0	\$0	0	\$0	0	\$0	0	\$0
85 to 89	0	\$0	0	\$0	0	\$0	0	\$0
90 to 94	0	\$0	0	\$0	0	\$0	0	\$0
95+	1	\$8,698	0	\$0	0	\$0	1	\$8,698
<Total>	3	\$17,986	0	\$0	0	\$0	3	\$17,986

City of San Rafael: Surviving Beneficiaries

Age	<u>Miscellaneous</u>		<u>Police</u>		<u>Fire</u>		<u>Total</u>	
	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit	Number	Average Annual Benefit
0 to 24	0	\$0	0	\$0	0	\$0	0	\$0
25 to 29	0	\$0	0	\$0	0	\$0	0	\$0
30 to 34	0	\$0	0	\$0	0	\$0	0	\$0
35 to 39	0	\$0	0	\$0	0	\$0	0	\$0
40 to 44	0	\$0	0	\$0	0	\$0	0	\$0
45 to 49	0	\$0	1	\$22,230	0	\$0	1	\$22,230
50 to 54	2	\$9,969	2	\$31,059	1	\$15,835	5	\$19,578
55 to 59	5	\$14,630	2	\$37,415	3	\$31,426	10	\$24,226
60 to 64	3	\$6,984	3	\$29,556	3	\$50,956	9	\$29,165
65 to 69	0	\$0	3	\$25,059	3	\$82,261	6	\$53,660
70 to 74	6	\$33,213	4	\$40,910	0	\$0	10	\$36,292
75 to 79	7	\$28,370	4	\$45,809	5	\$32,278	16	\$33,951
80 to 84	5	\$25,310	2	\$55,980	1	\$30,613	8	\$33,640
85 to 89	5	\$11,720	2	\$35,027	4	\$31,803	11	\$23,261
90 to 94	4	\$15,737	0	\$0	1	\$24,056	5	\$17,401
95+	2	\$10,987	0	\$0	0	\$0	2	\$10,987
<Total>	39	\$20,051	23	\$37,040	21	\$40,621	83	\$29,963

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX A – MEMBERSHIP INFORMATION

Plan	Retirement Eligibility								
	Current Actives	Number Reaching Service Retirement Eligibility As Defined in Section 1.1 in Year(s)							
		0	1	2	3	4	5	6-10	Total
County									
Miscellaneous Tier 1	4	4	0	0	0	0	0	0	4
Miscellaneous Tier 2	35	35	0	0	0	0	0	0	35
Miscellaneous Tier 3	666	424	24	22	24	24	24	76	618
Miscellaneous Tier 3A	81	4	10	8	6	7	5	10	50
Miscellaneous Tier 4	124	2	2	3	3	10	12	41	73
Miscellaneous Tier 5	580	27	22	22	36	32	44	54	237
Safety Tier 1A	1	1	0	0	0	0	0	0	1
Safety Tier 2A	45	16	4	2	6	1	1	8	38
Safety Tier 2B	191	57	14	8	6	14	11	49	159
Safety Tier 3	94	0	1	2	0	0	2	3	8
Total County	1,821	570	77	67	81	88	99	241	1,223
Courts									
Courts Tier 1	1	1	0	0	0	0	0	0	1
Courts Tier 2	1	1	0	0	0	0	0	0	1
Courts Tier 3	59	34	1	1	4	3	0	8	51
Courts Tier 4	4	1	1	0	0	0	0	2	4
Courts Tier 5	19	2	0	2	0	1	0	3	8
Total Courts	84	39	2	3	4	4	0	13	65
Special Districts									
South Marin Fire Miscellaneous	2	0	0	1	0	0	0	1	2
South Marin Fire Safety	46	10	5	1	2	2	1	9	30
Mosquito District	31	15	0	1	0	2	0	8	26
LAFCO	1	0	0	1	0	0	0	0	1
Tamalpais CSD	11	5	0	0	0	1	0	2	8
Marin CSD	2	1	0	0	0	0	0	0	1
Total Special Districts	93	31	5	4	2	5	1	20	68
Total County and Special Districts	1,998	640	84	74	87	97	100	274	1,356
Novato									
Miscellaneous	7	2	1	0	0	0	0	3	6
Safety	60	17	3	5	5	7	2	14	53
Total Novato	67	19	4	5	5	7	2	17	59
San Rafael									
Miscellaneous Tier 1	98	52	10	3	4	5	4	14	92
Miscellaneous Tier 2	16	1	0	0	0	2	2	3	8
Miscellaneous Tier 3	64	1	1	4	2	2	3	4	17
Fire Tier 1	32	9	1	5	2	2	1	8	28
Fire Tier 2	15	0	0	0	0	0	0	1	1
Safety Tier 1	34	13	2	2	2	5	3	7	34
Safety Tier 2	4	0	0	0	0	1	0	1	2
Safety Tier 3	38	0	0	0	0	0	0	0	0
Total San Rafael	301	76	14	14	10	17	13	38	182

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX B – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

The assumptions and methods used in the actuarial valuation as of June 30, 2019 are:

Actuarial Methods

1. Actuarial Cost Method

The actuarial valuation is prepared using the entry age actuarial cost method (CERL 31453.5). Under the principles of this method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated as a level percentage of the individual's projected compensation between entry age and assumed exit (until maximum retirement age). For members who transferred from outside of MCERA, entry age is based on entry into the system. The normal cost for the Plan is based on the sum of the individual normal costs for each member (Individual Entry Age Method).

The UAL (or Surplus Funding) is amortized as a percentage of the projected salaries of present and future members of MCERA. Effective with the June 30, 2013 valuation, the UAL as of June 30, 2013 is amortized over a closed 17-year period (11 years remaining as of June 30, 2019), except for the additional UAL attributable to the extraordinary loss from 2008-2009, which is being amortized over a separate closed period (19 years as of June 30, 2019). Surplus Funding is only amortized if the Plan's Funded Ratio exceeds 120%.

Any subsequent unexpected change in the Unfunded Actuarial Liability after June 30, 2013 is amortized over 24 years (22 years for assumption changes) that includes a five-year phase-in and four-year phase-out (three/two years for assumption changes) of the payments/credits for each annual layer.

2. Valuation of Assets

As of the June 30, 2014 valuation, assets are valued using the market value. The assets used to compute the UAL are the Market Value of Assets, minus the value of any non-valuation contingency reserves.

Actuarial Assumptions

3. Rate of Return

Assets are assumed to earn 7.00% net of investment, but not administrative expenses.

4. Administrative Expenses

Administrative expenses are assumed to be \$5.217 million for the next year, to be split between employees and employers based on their share of the overall contributions. Administrative expenses are assumed to increase by 3.0% per year.

5. Cost-of-Living

The cost-of-living as measured by the Consumer Price Index (CPI) will increase at the rate of 2.75% per year.

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX B – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

6. Post Retirement COLA

Post retirement COLAs are assumed at the rate of 2.7% for members with a 4% COLA cap, 2.6% for members with a 3% COLA cap, and 1.9% for members with a 2% COLA cap.

7. Internal Revenue Code Section 415 Limit

The Internal Revenue Code Section 415 maximum benefit limitations are not reflected in the valuation for funding purposes. Any limitation is reflected in a member's benefit at the time of retirement.

8. Internal Revenue Code Section 401(a)(17)

The Internal Revenue Code Section 401(a)(17) maximum compensation limitation is reflected in the valuation to project compensation and benefits. The limit is expected to increase by 2.75% in future years.

9. PEPRA Compensation Limit

The PEPRA Pensionable Compensation Limit (GC 7522.10) is reflected in the valuation to project compensation and benefits for PEPRA members. The limit is expected to increase by 2.75% in future years.

10. Interest on Member Contributions

The annual credited interest rate on member contributions is assumed to be 7.00%.

11. Sick Leave Service Credit Upon Retirement

Non-PEPRA active members' benefits are adjusted by a percentage, in accordance with the table below, for anticipated conversions of sick leave or other terminal earnings to retirement service credit or final compensation.

	Rate
Marin County	2.00%
Marin Courts	2.00%
Marin Special Districts	2.00%
Novato Fire Protection District	3.00%
City of San Rafael	2.50%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX B – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

12. Family Composition

Percentage married for all active members who retire, become disabled, or die during active service is shown in the table below. Male members are assumed to be three years older than their spouses and female members are assumed to be one year younger than their spouses.

Percentage Married	
Class and Gender	Percentage
Miscellaneous Males	75%
Miscellaneous Females	55%
Safety Males	85%
Safety Females	55%

13. Increases in Pay

Wage inflation component: 3.00%

Additional longevity and promotion component:

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%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX B – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

14. Rates of Termination (All Types)

Rates of termination are shown in the following tables below, with sample rates shown for those with at least five years of service. Note that termination rates do not apply once a member is eligible for retirement.

**Termination
Rates (less than five years of service)**

Service	Miscellaneous		Safety
	Male	Female	
0	15.00%	15.00%	8.00%
1	9.00%	10.00%	5.00%
2	7.00%	8.00%	4.00%
3	7.00%	8.00%	4.00%
4	7.00%	8.00%	4.00%

Age	5-9 Years of Service	Miscellaneous			Safety		
		Male 10-14 Years of Service	15-29 Years of Service	Females 5-9 Years of Service	10-14 Years of Service	15-29 Years of Service	5-19 Years of Service
20	7.00%	5.30%	3.00%	7.80%	5.30%	3.00%	2.06%
25	7.00%	5.30%	3.00%	7.80%	5.30%	3.00%	2.24%
30	7.00%	5.30%	3.00%	7.80%	5.30%	3.00%	3.53%
35	6.80%	4.50%	2.50%	7.80%	4.50%	2.50%	3.41%
40	4.80%	3.20%	2.00%	5.80%	3.20%	2.00%	1.14%
45	3.80%	2.50%	1.70%	4.80%	2.50%	1.70%	1.70%
50	2.10%	0.00%	0.00%	3.10%	0.00%	0.00%	0.27%
55	1.20%	0.00%	0.00%	2.20%	0.00%	0.00%	0.09%
60	1.20%	0.00%	0.00%	2.20%	0.00%	0.00%	0.00%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX B – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

15. Withdrawal, Reciprocal Transfers, and Vested Termination

The following rates apply to active members who terminate their employment. Members, who withdraw their member contributions, forfeit entitlement to future Plan benefits.

Service	Miscellaneous			Safety		
	Withdrawal	Reciprocal	Vested Term	Withdrawal	Reciprocal	Vested Term
0	50.00%	15.00%	35.00%	25.00%	45.00%	30.00%
1	40.00%	18.00%	42.00%	25.00%	45.00%	30.00%
2	20.00%	24.00%	56.00%	25.00%	45.00%	30.00%
3	20.00%	24.00%	56.00%	25.00%	45.00%	30.00%
4	20.00%	24.00%	56.00%	25.00%	45.00%	30.00%
5	10.00%	27.00%	63.00%	25.00%	45.00%	30.00%
6	10.00%	27.00%	63.00%	25.00%	45.00%	30.00%
7	10.00%	27.00%	63.00%	25.00%	45.00%	30.00%
8	10.00%	27.00%	63.00%	25.00%	45.00%	30.00%
9	10.00%	27.00%	63.00%	25.00%	45.00%	30.00%
10+	10.00%	27.00%	63.00%	15.00%	51.00%	34.00%

16. Reciprocal Transfers and Vested Termination Deferral Age

Miscellaneous members who terminate employment and do not withdraw their member contributions are assumed to retire at age 58. Safety members who terminate employment and do not withdraw their member contributions are assumed to retire at age 50 if their benefits are calculated under CERL section 31664.1 and age 55 otherwise.

17. Projected Pay for Reciprocal Transfers

Members who terminate and transfer to a reciprocal employer are expected to have their wages increase from their date of termination to their assumed retirement age by 3.00% wage inflation and either 0.75% for Miscellaneous members or 1.25% for Safety members.

Members who have terminated and transferred to a reciprocal employer or have transferred within MCERA are assumed to have the same salary increases, and are exposed to the same rates of mortality and retirement as if they were active. No other decrements are assumed.

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX B – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

18. Rates of Disability

The rates of disability for Miscellaneous members are based on the 2017 CalPERS Public Agency Miscellaneous Ordinary Disability rates for males and females without adjustment.

The rates of disability for Safety members are based on adjusted 2017 CalPERS Public Agency Police Unisex Industrial and Ordinary Disability rates (multiplied by 0.6, and with a maximum rate of 1.25%).

50% of all Miscellaneous and 95% of all Safety disabilities are assumed to be service-connected. Sample *service-connected* disability rates of active participants are shown below.

Age	Miscellaneous		Safety
	Male	Female	
20	0.0085%	0.0050%	0.0057%
25	0.0085%	0.0050%	0.0998%
30	0.0095%	0.0120%	0.3186%
35	0.0195%	0.0355%	0.5022%
40	0.0510%	0.0675%	0.6857%
45	0.0755%	0.0940%	0.8750%
50	0.0790%	0.0995%	1.1875%
55	0.0790%	0.0745%	1.1875%
60	0.0765%	0.0525%	1.1875%
65	0.0640%	0.0440%	1.1875%

Sample *non service-connected* disability rates of active participants are shown below.

Age	Miscellaneous		Safety
	Male	Female	
20	0.0085%	0.0050%	0.0003%
25	0.0085%	0.0050%	0.0053%
30	0.0095%	0.0120%	0.0168%
35	0.0195%	0.0355%	0.0264%
40	0.0510%	0.0675%	0.0361%
45	0.0755%	0.0940%	0.0461%
50	0.0790%	0.0995%	0.0625%
55	0.0790%	0.0745%	0.0625%
60	0.0765%	0.0525%	0.0625%
65	0.0640%	0.0440%	0.0625%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX B – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

19. Rates of Mortality for Active Lives

Rates of mortality for active members are specified by CalPERS 2017 Pre-Retirement Non-Industrial Death rates (plus Duty-Related Death rates for Safety members), with the 15-year static projection used by CalPERS replaced by generational improvements from a base year of 2014 using Scale MP-2017. 0% of all Miscellaneous and 95% of all Safety pre-retirement deaths are assumed to be service-connected.

20. Rates of Mortality for Retired Healthy Lives

Rates of mortality for retired members and their beneficiaries are given by CalPERS 2017 Post-Retirement Healthy Mortality rates, adjusted by 90% for Males (Miscellaneous and Safety), with the 15-year static projection used by CalPERS replaced by generational improvements from a base year of 2014 using Scale MP-2017.*

21. Rates of Mortality for Retired Disabled Lives

Rates of mortality among disabled members are given by CalPERS 2017 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, with the 15-year static projection used by CalPERS replaced by generational improvements from a base year of 2014 using Scale MP-2017.*

22. Mortality Improvement

Mortality is assumed to improve in future years in accordance with the MP-2017 generational improvement tables.

* Rates of mortality for annuitants younger than age 50 are from the CalPERS 2014 Experience Study.

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23. Rates of Retirement

Rates of retirement are based on age according to the following tables below.

PEPRA: For New Members we assume that the current retirement rates will apply, but that no Non-Safety members will retire before age 52.

Miscellaneous Rates

Age	<20 Years of Service	20-29 Years of Service	30+ Years of Service
50-52	3.00%	3.00%	3.00%
53	5.00%	5.00%	10.00%
54	5.00%	5.00%	15.00%
55-59	5.00%	10.00%	15.00%
60	5.00%	10.00%	30.00%
61	10.00%	10.00%	30.00%
62-63	10.00%	20.00%	30.00%
64-65	15.00%	20.00%	30.00%
66-67	15.00%	30.00%	30.00%
68-79	20.00%	30.00%	30.00%
80	100.00%	100.00%	100.00%

Safety Rates

Age	3% @ 50 <20 Years of Service	3% @ 50 20-29 Years of Service	3% @ 50 30+ Years of Service	3% @ 55 <20 Years of Service	3% @ 55 20-29 Years of Service	3% @ 55 30+ Years of Service
40-44	0.00%	3.00%	3.00%	0.00%	1.00%	1.00%
45-48	0.00%	3.00%	3.00%	0.00%	5.00%	5.00%
49	0.00%	15.00%	3.00%	0.00%	5.00%	5.00%
50	5.00%	15.00%	50.00%	5.00%	10.00%	30.00%
51-52	5.00%	10.00%	20.00%	5.00%	10.00%	30.00%
53-54	10.00%	10.00%	20.00%	5.00%	10.00%	30.00%
55	10.00%	25.00%	50.00%	20.00%	30.00%	30.00%
56	10.00%	30.00%	50.00%	10.00%	30.00%	30.00%
57	10.00%	35.00%	50.00%	10.00%	20.00%	30.00%
58	10.00%	40.00%	50.00%	10.00%	20.00%	30.00%
59	10.00%	45.00%	50.00%	10.00%	20.00%	30.00%
60-64	50.00%	50.00%	50.00%	20.00%	20.00%	50.00%
65	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

24. Changes Since Last Valuation

No changes have been made to the actuarial assumptions.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Brief Outline of Plan Provisions

Definitions

Compensation

Compensation means the cash remuneration for services paid by the employer. It includes base pay and certain differential, incentive, and special pay allowances defined by the Board of Retirement. Overtime is excluded, with the exception of overtime paid under the Fair Labor Standards Act that is regular and recurring.

PEPRA: For non-reciprocal members joining the Plan on and after January 1, 2013 (New Members), only base compensation or normal monthly rate of pay, as defined, up to the PEPRA wage cap (\$124,180 for 2019) will count for computing Plan benefits and employee contributions and employer contributions for those participating in Social Security. For those not participating in Social Security, the compensation cap is 120% of the cap above (\$149,016 for 2019). In addition, some sources of compensation, such as leave cashouts, allowances, and some types of special pays, will be excluded from benefit and contribution computations for New Members.

Credited Service

In general, Credited Service is earned for the period during which Member Contributions are paid.

Temporary service for which the Member was not credited, or service for which the Member withdrew his or her Member Contributions, may be purchased by paying or repaying the Member Contributions with interest. The categories of services that credit may be purchased for are listed below:

- Leave without Pay (Member's illness): Member may purchase only up to twelve months of service per incident.
- Re-deposits: Member may only purchase the amount of service previously withdrawn.
- Service Prior to Membership: Member must pay employee portion and applicable interest.
- Military Leave without Pay: Member, who has taken a leave without pay in order to serve in the military, will be given an option to buy the service time.
- Service In-Between: Member may purchase service per incident.
- Public Service: Member must have been employed by the date as indicated below and cannot be receiving a benefit from the other entity.

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APPENDIX C – SUMMARY OF PLAN PROVISIONS

April 16, 1979:

Novato Fire Protection District

May 1, 1979:

County of Marin
Marin County Courts
Marin City Community Service District
Tamalpais Community Service District
Southern Marin Fire Protection District
Marin/Sonoma Mosquito and Vector Control District
Local Agency Formation Commission (LAFCO)

May 7, 1979:

City of San Rafael

In all cases of service buybacks, repayment terms for most payment plans may not exceed the length of the period of service being purchased, with a maximum of five years. Payment for public service purchases may also not exceed five years. In the event of an active Member's death, the beneficiary is given the opportunity to pay off any service purchase agreements at the time of death.

A percentage of credited sick leave may be credited according to the Member's applicable bargaining unit.

Final Compensation

For County employees hired after June 30, 1980, and Bargaining Units 10 and 13, LAFCO Tier 3 members and San Rafael employees hired after July 1, 2011, Final Compensation means the highest Compensation earned during any thirty-six consecutive months of the Member's employment. For all others, it is the highest Compensation earned during any twelve months of employment.

PEPRA: For all New Members, highest average Compensation will be based on the highest thirty-six consecutive months, rather than 12 months.

Miscellaneous Member

Any Member who is not a Safety Member is a Miscellaneous Member. Miscellaneous Members are called "Nonsafety Members" Under PEPRA.

Safety Member

Any sworn Member engaged in law enforcement or fire suppression, and most probation officers are Safety Members.

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APPENDIX C – SUMMARY OF PLAN PROVISIONS

Membership

Eligibility

All full-time, permanent employees of the City of San Rafael, Novato Fire Protection Districts, Marin County, and other participating special districts become Members on their date of appointment.

PEPRA: A New Member is any Member joining the Plan for the first time on or after January 1, 2013, or who was a member of the Plan previously but withdrew MCERA contributions and did not redeposit them with interest upon reentry. Employees who transfer from and are eligible for reciprocity with another public employer will not be New Members if their service in the reciprocal system was under a pre-PEPRA tier.

Member Contributions

Each Member contributes a percentage of Compensation to the Plan through payroll deduction. The percentage contributed depends on the Member's age upon joining the Plan, and is determined in accordance with the requirements of the '37 Act. Members do not contribute after earning 30 years of Credited Service.

Interest is credited semiannually to each Member's accumulated contributions. The crediting rate is set by the Board; the current annual rate is 7.00%.

PEPRA: New Members must contribute half of the normal cost of the Plan. Contributions for these Members will be based on the Normal Cost associated with their benefits; General and Safety members will pay different rates, as will those with different COLA caps.

New Members will pay a single contribution rate, not a rate based on entry age. All New Members are expected to continue contributing after earning 30 years of service.

Service Retirement

Eligibility

Miscellaneous County Members hired after July 1, 2008, Courts Members hired after January 1, 2009, and San Rafael Miscellaneous Members hired after July 1, 2011 are eligible to retire at age 55 if they have earned 10 years of Credited Service. All other Miscellaneous Members are eligible to retire at age 50 if they have earned 10 years of Credited Service. Alternatively, Miscellaneous Members are eligible to retire at any age after having earned 30 years of Credited Service, or upon reaching age 70 with no service requirement.

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX C – SUMMARY OF PLAN PROVISIONS

Safety Members are eligible to retire at age 50 if they have earned 10 years of Credited Service. Alternatively, Safety Members are eligible to retire at any age after having earned 20 years of Credited Service, or upon reaching age 70 with no service requirement.

PEPRA: New Nonsafety Members are eligible to retire upon attaining age 52 and completing five or more years of service, or upon reaching age 70 with no service requirement. New Safety Members are eligible to retire upon attaining age 50 and completing five or more years of service, or upon reaching age 70 with no service requirement. New Members must reach PEPRA-specified ages, regardless of their years of service, to retire for service.

Benefit Amount

The Service Retirement Benefit payable to the Member is equal to the Member's Final Compensation multiplied by credited service, the benefit factor from Table 1 and the age factor from Table 2 corresponding to the Member's code section. The age factor multiplied by the benefit factor for each code section is also shown in Table 2, other than the PEPRA factors. The appropriate code sections for each group are listed in Table 1 on the next page.

The percentage of Final Compensation for Non-PEPRA Members may not exceed 100%.

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX C – SUMMARY OF PLAN PROVISIONS

Table 1: Member Group Descriptions

Description	Class	FAP	COLA	Code Section	Formula	
					Retirement Age ¹	Benefit Factor
Special Districts Courts Tier 1	Miscellaneous	1	4	31676.14	55.50	2.00%
Special Districts Courts Tier 2	Miscellaneous	3	2	31676.1	61.25	2.00%
Special Districts Courts Tier 3	Miscellaneous	3	2	31676.16	55.00	2.00%
Special Districts Courts Tier 4 ²	Miscellaneous	3	2	31676.16	55.00	2.00%
Special Districts Courts Tier 5	Miscellaneous	3	2	7522.20	62.00	2.00%
Special Districts LAFCO Tier 7 (also referred to as Tier 2)	Miscellaneous	1	4	31676.11	58.50	2.00%
Special Districts LAFCO Tier 3	Miscellaneous	3	2	31676.16	55.00	2.00%
Special Districts LAFCO Tier 4	Miscellaneous	3	2	7522.20	62.00	2.00%
Special Districts Marin City CSD Tier 1	Miscellaneous	1	4	31676.11	58.50	2.00%
Special Districts Marin City CSD Tier 2	Miscellaneous	3	4	7522.20	62.00	2.00%
Special Districts Mosquito District Tier 1	Miscellaneous	1	4	31676.14	55.50	2.00%
Special Districts Mosquito District Tier 2	Miscellaneous	3	4	7522.20	62.00	2.00%
Special Districts Tamalpais CSD Tier 1	Miscellaneous	1	4	31676.11	58.50	2.00%
Special Districts Tamalpais CSD Tier 2	Miscellaneous	3	4	7522.20	62.00	2.00%
Special Districts South Marin Fire Miscellaneous Tier 1	Miscellaneous	1	4	31676.19	55.00	2.70%
Special Districts South Marin Fire Miscellaneous Tier 2	Miscellaneous	3	4	7522.20	62.00	2.00%
Special Districts South Marin Fire Safety Tier 1	Safety	1	4	31664.1	50.00	3.00%
Special Districts South Marin Fire Safety Tier 2	Safety	1	4	31664.2	55.00	3.00%
Special Districts South Marin Fire Safety Tier 2A	Safety	3	3	31664.2	55.00	3.00%
Special Districts South Marin Fire Safety Tier 3	Safety	3	4	7522.25(d)	57.00	2.70%
Special Districts South Marin Fire Safety Tier 3A	Safety	3	3	7522.25(d)	57.00	2.70%
County Miscellaneous Tier 1	Miscellaneous	1	4	31676.14	55.50	2.00%
County Miscellaneous Tier 2	Miscellaneous	3	2	31676.1	61.25	2.00%
County Miscellaneous Tier 3	Miscellaneous	3	2	31676.16	55.00	2.00%
County Miscellaneous Tier 3A ²	Miscellaneous	3	2	31676.16	55.00	2.00%
County Miscellaneous Tier 4 ²	Miscellaneous	3	2	31676.1	61.25	2.00%
County Miscellaneous Tier 5	Miscellaneous	3	2	7522.20	62.00	2.00%
County Safety Tier 1A	Safety	1	4	31664.2	55.00	3.00%
County Safety Tier 1B	Safety	1	4	31664.1	50.00	3.00%
County Safety Tier 2A	Safety	3	2	31664.2	55.00	3.00%
County Safety Tier 2B	Safety	3	2	31664.1	50.00	3.00%
County Safety Tier 3	Safety	3	2	7522.25(d)	57.00	2.70%
Novato Miscellaneous Tier 1	Miscellaneous	1	4	31676.16	55.00	2.00%
Novato Miscellaneous Tier 2	Miscellaneous	3	4	7522.20	62.00	2.00%
Novato Miscellaneous Tier 2A	Miscellaneous	3	2	7522.20	62.00	2.00%
Novato Safety Tier 1	Safety	1	4	31664.1	50.00	3.00%
Novato Safety Tier 2	Safety	1	4	31664.2	55.00	3.00%
Novato Safety Tier 3	Safety	3	4	7522.25(d)	57.00	2.70%
Novato Safety Tier 3A	Safety	3	2	7522.25(d)	57.00	2.70%
San Rafael Miscellaneous Tier 1	Miscellaneous	1	3	31676.19	55.00	2.70%
San Rafael Miscellaneous Tier 2 ²	Miscellaneous	3	2	31676.16	55.00	2.00%
San Rafael Miscellaneous Tier 3	Miscellaneous	3	2	7522.20	62.00	2.00%
San Rafael Fire Tier 1	Safety	1	3	31664.2	55.00	3.00%
San Rafael Fire Tier 2	Safety	3	2	31664.2	55.00	3.00%
San Rafael Fire Tier 3	Safety	3	2	7522.25(d)	57.00	2.70%
San Rafael Safety Tier 1	Safety	1	3	31664.2	55.00	3.00%
San Rafael Safety Tier 2	Safety	3	2	31664.2	55.00	3.00%
San Rafael Safety Tier 3	Safety	3	2	7522.25(d)	57.00	2.70%

¹This represents the age at which a retiring member would receive the benefit factor shown in the final column.

²Members of these Tiers must be age 55 with 10 years of service to receive a service retirement benefit.

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APPENDIX C – SUMMARY OF PLAN PROVISIONS

Table 2: Age & Service Factors

Miscellaneous

Age	Misc 2% at Age 61.25 CERL §: 31676.1		Misc 2% at Age 58.5 CERL §: 31676.11		Misc 2% at Age 55.5 CERL §: 31676.14		Misc 2% at Age 55 CERL §: 31676.16		Misc 2.7% at Age 55 CERL §: 31676.19		Misc 2.7% at Age 67 GC §: 7522.20	
	Age Factor	Age x Benefit	Age Factor	Age x Benefit	Age Factor	Age x Benefit	Age Factor	Age x Benefit	Age Factor	Age x Benefit	Age Factor	Age x Benefit
	50	0.7091	1.18%	0.7454	1.24%	0.8850	1.48%	0.7130	1.43%	1.0000	2.00%	1.0000
51	0.7457	1.24%	0.7882	1.31%	0.9399	1.57%	0.7610	1.52%	1.0700	2.14%	1.0000	1.00%
52	0.7816	1.30%	0.8346	1.39%	1.0000	1.67%	0.8140	1.63%	1.1400	2.28%	1.0000	1.00%
53	0.8181	1.36%	0.8850	1.48%	1.0447	1.74%	0.8710	1.74%	1.2100	2.42%	1.1000	1.10%
54	0.8556	1.43%	0.9399	1.57%	1.1048	1.84%	0.9330	1.87%	1.2800	2.56%	1.2000	1.20%
55	0.8954	1.49%	1.0000	1.67%	1.1686	1.95%	1.0000	2.00%	1.3500	2.70%	1.3000	1.30%
56	0.9382	1.56%	1.0447	1.74%	1.2365	2.06%	1.0260	2.05%	1.3500	2.70%	1.4000	1.40%
57	0.9846	1.64%	1.1048	1.84%	1.3093	2.18%	1.0520	2.10%	1.3500	2.70%	1.5000	1.50%
58	1.0350	1.73%	1.1686	1.95%	1.3608	2.27%	1.0780	2.16%	1.3500	2.70%	1.6000	1.60%
59	1.0899	1.82%	1.2365	2.06%	1.4123	2.35%	1.1050	2.21%	1.3500	2.70%	1.7000	1.70%
60	1.1500	1.92%	1.3093	2.18%	1.4638	2.44%	1.1310	2.26%	1.3500	2.70%	1.8000	1.80%
61	1.1947	1.99%	1.3608	2.27%	1.5153	2.53%	1.1570	2.31%	1.3500	2.70%	1.9000	1.90%
62	1.2548	2.09%	1.4123	2.35%	1.5668	2.61%	1.1830	2.37%	1.3500	2.70%	2.0000	2.00%
63	1.3186	2.20%	1.4638	2.44%	1.5668	2.61%	1.2090	2.42%	1.3500	2.70%	2.1000	2.10%
64	1.3865	2.31%	1.5153	2.53%	1.5668	2.61%	1.2090	2.42%	1.3500	2.70%	2.2000	2.20%
65	1.4593	2.43%	1.5668	2.61%	1.5668	2.61%	1.2090	2.42%	1.3500	2.70%	2.3000	2.30%
66	1.4593	2.43%	1.5668	2.61%	1.5668	2.61%	1.2090	2.42%	1.3500	2.70%	2.4000	2.40%
67+	1.4593	2.43%	1.5668	2.61%	1.5668	2.61%	1.2090	2.42%	1.3500	2.70%	2.5000	2.50%

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Safety

Age	Safety 2% at Age 50 CERL §: 31664		Safety 3% at Age 50 CERL §: 31664.1		Safety 3% at Age 55 CERL §: 31664.2		Safety 2.7% at Age 57 GC §: 7522.25(d)	
	Age Factor	Age x Benefit	Age Factor	Age x Benefit	Age Factor	Age x Benefit	Age Factor	Age x Benefit
41	0.6258	1.25%	0.6258	1.88%	0.4777	1.43%	2.0000	2.00%
42	0.6625	1.33%	0.6625	1.99%	0.5058	1.52%	2.0000	2.00%
43	0.7004	1.40%	0.7004	2.10%	0.5347	1.60%	2.0000	2.00%
44	0.7397	1.48%	0.7397	2.22%	0.5647	1.69%	2.0000	2.00%
45	0.7805	1.56%	0.7805	2.34%	0.5958	1.79%	2.0000	2.00%
46	0.8226	1.65%	0.8226	2.47%	0.6280	1.88%	2.0000	2.00%
47	0.8678	1.74%	0.8678	2.60%	0.6625	1.99%	2.0000	2.00%
48	0.9085	1.82%	0.9085	2.73%	0.6936	2.08%	2.0000	2.00%
49	0.9522	1.90%	0.9522	2.86%	0.7269	2.18%	2.0000	2.00%
50	1.0000	2.00%	1.0000	3.00%	0.7634	2.29%	2.0000	2.00%
51	1.0516	2.10%	1.0000	3.00%	0.8028	2.41%	2.1000	2.10%
52	1.1078	2.22%	1.0000	3.00%	0.8457	2.54%	2.2000	2.20%
53	1.1692	2.34%	1.0000	3.00%	0.8926	2.68%	2.3000	2.30%
54	1.2366	2.47%	1.0000	3.00%	0.9418	2.83%	2.4000	2.40%
55	1.3099	2.62%	1.0000	3.00%	1.0000	3.00%	2.5000	2.50%
56	1.3099	2.62%	1.0000	3.00%	1.0000	3.00%	2.6000	2.60%
57+	1.3099	2.62%	1.0000	3.00%	1.0000	3.00%	2.7000	2.70%

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APPENDIX C – SUMMARY OF PLAN PROVISIONS

PEPRA: For New Nonsafety Members, the benefit multiplier will be 1% at age 52, increasing by 0.1% for each year of age to 2.5% at 67. For New Safety Members, the benefit multiplier will be 2% at age 50, increasing by 0.1% for each year of age to 2.7% at age 57. In between exact ages, the multiplier will increase by 0.025% for each quarter year increase in age.

New Members are subject to the PEPRA caps and other restrictions on pensionable compensation described in other parts of the valuation.

Form of Benefit

The Service Retirement Benefit will be paid monthly beginning at retirement and for the life of the Member. If the member selects the unmodified benefit form, in the event of the Member's death 60% of the benefit will continue for the life of the Member's spouse or to the age of majority of dependent minor children if there is no spouse. In the event there is no surviving spouse or minor children, any unpaid remainder of the Member's accumulated contributions will be paid to the Member's designated beneficiary.

Actuarially equivalent optional benefit forms are also available.

Annually on April 1, benefits are increased or decreased to reflect changes in the CPI for the San Francisco Bay Area. Annual increases may not exceed the COLA figures shown in Table 1, but CPI increases above this figure are "banked" and used for future increases when the CPI increases by less than the figures shown.

In addition, ad hoc cost-of-living adjustments have been granted in the past and may be granted in the future.

A lump sum benefit of \$5,000 will be payable upon the death of a retired member.

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APPENDIX C – SUMMARY OF PLAN PROVISIONS

Service-Connected Disability

Eligibility

Members are eligible for Service-Connected Disability Retirement benefits at any age if they are permanently disabled as a result of injuries or illness sustained in the line of duty.

Benefit Amount

The Service-Connected Disability Retirement Benefit payable to Members is equal to the greater of 50% of their Final Compensation or – if the Member is eligible at disability for a Service Retirement Benefit – the Service Retirement Benefit accrued on the date of disability.

PEPRA: The Service-Connected Disability Retirement Benefit for New Members will be based on the new definitions of Pensionable Compensation and Final Compensation applicable to New Members.

Form of Benefit

The Service-Connected Disability Retirement Benefit will be paid monthly beginning at the effective date of disability retirement and for the life of the Member; in the event of the Member's death, 100% of the benefit will continue for the life of the Member's spouse or to the age of majority of dependent minor children if there is no spouse. In the event there is no surviving spouse or minor children, any unpaid remainder of the Member's accumulated contributions will be paid to the Member's designated beneficiary.

Actuarially equivalent optional benefit forms and COLA adjustments (as described for the Service Retirement benefit) are also available. A lump sum benefit of \$5,000 will be payable upon the death of the member.

MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX C – SUMMARY OF PLAN PROVISIONS

Nonservice-Connected Disability

Eligibility

Members are eligible for Nonservice-Connected Disability Retirement benefits if they are permanently disabled at any age after earning five years of Credited Service.

Benefit Amount

The Nonservice-Connected Disability Retirement Benefit payable to Miscellaneous Members is equal to the greatest of:

- 1.5% of Final Compensation at disability multiplied by years of Credited Service at disability,
- 1.5% of Final Compensation at disability multiplied by years of Credited Service projected to age 65, but not to exceed one-third of Final Compensation, or
- If the Member is eligible at disability for a Service Retirement Benefit, the Service Retirement Benefit accrued on the date of disability.

The Nonservice-Connected Disability Retirement Benefit payable to Safety Members is equal to the greatest of:

- 1.8% of Final Compensation at disability multiplied by years of Credited Service at disability,
- 1.8% of Final Compensation at disability multiplied by years of Credited Service projected to age 55, but not to exceed one-third of Final Compensation, or
- If the Member is eligible at disability for a Service Retirement Benefit, the Service Retirement Benefit accrued on the date of disability.

PEPRA: The Nonservice-Connected Disability Retirement Benefit for New Members will be based on the new definitions of Pensionable Compensation and Final Compensation applicable to New Members.

Form of Benefit

The Nonservice-Connected Disability Retirement Benefit will be paid monthly beginning at the effective date of disability retirement, and for the life of the Member; in the event of the Member's death, 60% of the benefit will continue for the life of the Member's spouse or to the age of majority of dependent minor children if there is no spouse. In the event there is no surviving spouse or minor children, any unpaid remainder of the Member's accumulated contributions will be paid to the Member's designated beneficiary.

Actuarially equivalent optional benefit forms and COLA adjustments (as described for the Service Retirement benefit) are also available. A lump sum benefit of \$5,000 will be payable upon the death of the member.

MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Pre-Retirement Death

Eligibility

A Member's survivors are eligible to receive different Death benefits dependent on the Member's cause of death and retirement eligibility.

Benefit Amount

In the event the Member's death resulted from injury or illness sustained in connection with the Member's duties, the Death Benefit payable to a surviving spouse or domestic partner will be 50% of the Member's Final Compensation.

In the event the Member was eligible for Service Retirement or Non-Service Connected Disability, the Death Benefit payable to the survivor will be 60% of the Nonservice-Connected Disability Retirement Benefit based on benefit due on Member's date of death.

In all other cases, the eligible survivor will receive a refund of the Member's contributions with interest plus one month of Final Compensation for each year of service to a maximum of six years.

PEPRA: The Death Benefits for New Members related to Final Compensation will be based on the new definitions of Pensionable Compensation and Final Compensation applicable to New Members.

Form of Benefit

The Service-Connected Death Benefit will be paid monthly beginning at the Member's death and for the life of the surviving spouse or to the age of majority of dependent minor children if there is no spouse.

COLA adjustments (as described for the Service Retirement benefit) are also available.

Withdrawal Benefit

Eligibility

A Member is eligible for a Withdrawal Benefit upon termination of employment.

Benefit Amount

The Withdrawal Benefit is a refund of the Member's accumulated Contributions with interest. Upon receipt of the Withdrawal Benefit the Member forfeits all Credited

MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX C – SUMMARY OF PLAN PROVISIONS

Service. Alternatively, the Member can leave contributions on deposit and retire at the date first eligible (age 70 for those not vested).

Form of Benefit

The Withdrawal Benefit is paid in a lump sum upon election by the Member.

Deferred Vested Benefit

Eligibility

A Member is eligible for a Deferred Vested Benefit upon termination of employment after earning five years of Credited Service, including reciprocity service from another system. The Member must leave his or her Member Contributions with interest on deposit with the Plan.

Benefit Amount

The Deferred Vested Benefit is computed in the same manner as the Service Retirement Benefit, but it is based on Credited Service and Final Compensation on the date of termination.

PEPRA: For New Members, the Deferred Vested Benefit will be based on the new benefit formulas, and will be based on the new definitions of Pensionable Compensation and Final Compensation applicable to New Members.

Form of Benefit

The Deferred Vested Benefit will be paid monthly beginning at retirement and for the life of the Member; in the event of the Member's death, 60% of the benefit will continue for the life of the Member's spouse or to the age of majority of dependent minor children if there is no spouse. In the event there is no surviving spouse or minor children, any unpaid remainder of the Member's accumulated contributions will be paid to the Member's designated beneficiary.

Actuarially equivalent optional benefit forms and COLA adjustments (as described for the Service Retirement benefit) are also available. A lump sum benefit of \$ 5,000 will be payable upon the death of the member.

PEPRA: For New Members, the Deferred Vested Benefit may commence at the new service retirement eligibility criteria (age 52 for Nonsafety, age 50 for Safety.)

MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Reciprocal Benefit

Eligibility

A Member is eligible for a Reciprocal Benefit upon termination of employment and entry, within a specified period of time, into another retirement system recognized as a reciprocal system by the Plan. In addition, the Member must leave his or her Member Contributions with interest on deposit with the Plan.

Benefit Amount

The Reciprocal Benefit is computed in the same manner as the Service Retirement Benefit, but it is based on Credited Service on the date of termination and Final Compensation on the date of retirement; Final Compensation is based on the highest of the Compensation earned under this Plan or the reciprocal plan.

PEPRA: For New Members, the Reciprocal Benefit will be based on the new benefit formulas, and will be based on the new definitions of Pensionable Compensation and Final Compensation applicable to New Members.

Form of Benefit

The Reciprocal Benefit will be paid monthly beginning at retirement and for the life of the Member; in the event of the Member's death, 60% of the benefit will continue for the life of the Member's spouse or to the age of majority of dependent minor children if there is no spouse. In the event there is no surviving spouse or minor children, any unpaid remainder of the Member's accumulated contributions will be paid to the Member's designated beneficiary.

Actuarially equivalent optional benefit forms and COLA adjustments (as described for the Service Retirement benefit) are also available.

A lump sum benefit may be payable upon the death of a retired Member by the last system the Member worked under.

PEPRA: For New Members, the Reciprocal Benefit may commence at the new service retirement eligibility criteria (age 52 for Nonsafety, age 50 for Safety.)

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Optional Benefit Forms

Prior to retirement, a member may elect to convert his retirement allowance into a benefit of equivalent actuarial value in accordance with one of the optional forms described below.

1. A reduced retirement allowance payable during his life with the provision that on his death the excess, if any, of his accumulated deductions at the time of retirement over the annuity payments made to him will be paid to his designated beneficiary or estate, or
2. A reduced retirement allowance payable during his life with the provision that after his death the reduced allowance will be continued for life to the beneficiary designated by him at the time of his retirement, or
3. A reduced retirement allowance payable during his life with the provision that after his death an allowance of one-half of his reduced allowance will be continued for life to the beneficiary designated by him at the time of his retirement.

PEPRA: No change.

APPENDIX D – GLOSSARY

1. Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs such as mortality, withdrawal, disability, retirement, changes in compensation, and rates of investment return.

2. Actuarial Cost Method

A procedure for determining the actuarial present value of pension plan benefits and expenses and for developing an allocation of such value to each year of service, usually in the form of a normal cost and an Actuarial Liability.

3. Actuarial Gain (Loss)

The difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

4. Actuarial Liability

The portion of the actuarial present value of projected benefits which will not be paid by future normal costs. It represents the value of the past normal costs with interest to the valuation date.

5. Actuarial Present Value (Present Value)

The value as of a given date of a future amount or series of payments. The actuarial present value discounts the payments to the given date at the assumed investment return and includes the probability of the payment being made.

6. Actuarial Valuation

The determination, as of a specified date, of the normal cost, Actuarial Liability, Actuarial Value of Assets, and related actuarial present values for a pension plan.

7. Actuarial Value of Assets

The value of cash, investments, and other property belonging to a pension plan as used by the actuary for the purpose of an actuarial valuation. The purpose of an Actuarial Value of Assets is generally to smooth out fluctuations in market values. As of the June 30, 2014 valuation, no smoothing of the assets is applied, and the actuarial value equals the market value.

APPENDIX D – GLOSSARY

8. Actuarially Equivalent

Of equal actuarial present value, determined as of a given date, with each value based on the same set of actuarial assumptions.

9. Amortization Payment

The portion of the pension plan contribution, which is designed to pay interest and principal on the Unfunded Actuarial Liability in order to pay for that liability in a given number of years.

10. Entry Age Normal Actuarial Cost Method

A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages.

11. Funded Ratio

The ratio of the Actuarial Value of Assets to the Actuarial Liability.

12. Normal Cost

That portion of the actuarial present value of pension plan benefits and expenses which is allocated to a valuation year by the actuarial cost method.

13. Projected Benefits

Those pension plan benefit amounts which are expected to be paid in the future under a particular set of actuarial assumptions, taking into account such items as increases in future compensation and service credits.

14. Unfunded Actuarial Liability

The excess of the Actuarial Liability over the Actuarial Value of Assets.

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX E – MEMBER CONTRIBUTION RATES

Employee contribution rates vary by member Group and Tier. The basic rates are determined based on Government Code Section 31621 for General members (31621.1 for members under benefit section 31676.11 and 31621.8 for members under benefit 31676.19) and Section 31639.25 for Safety members. The COLA rates for members are determined based on 50% of the normal cost associated with the expected COLA benefits, determined for each individual entry age. A cap on the employee COLA contribution rate is applied to the County and Courts members. Some County Safety groups are paying additional employee contributions as a result of bargaining agreements.

The current rates were determined based on an interest rate of 7.00% per annum, an average salary increase of 3.00% per year (plus service-based increases for merit/longevity), and the CalPERS 2017 Post-Retirement Healthy Mortality rates, adjusted by 90% for Males (Miscellaneous and Safety) with the static projection used by CalPERS replaced by generational improvements from a base year of 2014 to the year 2037 using Scale MP-2017.

The rates are blended based on a male/female weighting of 40% male/60% female for General members, and 85% male/15% female for Safety members. Basic and COLA rates were determined based on an assumption that members would cease making contributions after 30 years of service.

Employee contribution rates for PEPRA members are determined based on half the normal cost for the PEPRA members (computed separately for General and Safety members, and those with 2%, 3%, or 4% capped COLAs). Due to the passage of SB13, contribution rates for PEPRA members are not rounded, and are recomputed each year.

A load is added to the employee contributions to cover their share of the expected administrative expenses. For the current valuation, the load is 4.8% of the total unadjusted contribution rate.

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX E – MEMBER CONTRIBUTION RATES

County Miscellaneous and Courts: Tier 1 (31676.14)				
Entry Age	Basic	COL	COL Limited to 1.58%	Total
20	6.43%	1.97%	1.58%	8.01%
21	6.46%	2.04%	1.58%	8.04%
22	6.49%	2.12%	1.58%	8.07%
23	6.51%	2.20%	1.58%	8.09%
24	6.53%	2.27%	1.58%	8.11%
25	6.55%	2.35%	1.58%	8.13%
26	6.56%	2.43%	1.58%	8.14%
27	6.56%	2.50%	1.58%	8.14%
28	6.56%	2.59%	1.58%	8.14%
29	6.55%	2.66%	1.58%	8.13%
30	6.54%	2.75%	1.58%	8.12%
31	6.66%	2.81%	1.58%	8.24%
32	6.78%	2.86%	1.58%	8.36%
33	6.91%	2.93%	1.58%	8.49%
34	7.04%	3.01%	1.58%	8.62%
35	7.16%	3.09%	1.58%	8.74%
36	7.30%	3.14%	1.58%	8.88%
37	7.42%	3.22%	1.58%	9.00%
38	7.57%	3.28%	1.58%	9.15%
39	7.71%	3.34%	1.58%	9.29%
40	7.85%	3.41%	1.58%	9.43%
41	7.99%	3.45%	1.58%	9.57%
42	8.15%	3.51%	1.58%	9.73%
43	8.30%	3.52%	1.58%	9.88%
44	8.46%	3.52%	1.58%	10.04%
45	8.63%	3.54%	1.58%	10.21%
46	8.80%	3.56%	1.58%	10.38%
47	8.97%	3.55%	1.58%	10.55%
48	9.16%	3.53%	1.58%	10.74%
49	9.35%	3.53%	1.58%	10.93%
50	9.54%	3.53%	1.58%	11.12%
51	9.73%	3.53%	1.58%	11.31%
52	9.92%	3.48%	1.58%	11.50%
53	10.09%	3.43%	1.58%	11.67%
54	10.24%	3.37%	1.58%	11.82%
55	10.35%	3.27%	1.58%	11.93%
56	10.38%	3.17%	1.58%	11.96%
57	10.36%	3.07%	1.58%	11.94%
58	10.25%	2.98%	1.58%	11.83%
59+	10.15%	2.83%	1.58%	11.73%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

County Miscellaneous and Courts: Tier 2 (31676.1)				
Entry Age	Basic	COL	COL Limited to 1.58%	Total
20	6.12%	0.99%	0.99%	7.11%
21	6.15%	1.03%	1.03%	7.18%
22	6.18%	1.06%	1.06%	7.24%
23	6.21%	1.10%	1.10%	7.31%
24	6.23%	1.13%	1.13%	7.36%
25	6.24%	1.17%	1.17%	7.41%
26	6.24%	1.22%	1.22%	7.46%
27	6.25%	1.26%	1.26%	7.51%
28	6.26%	1.30%	1.30%	7.56%
29	6.25%	1.34%	1.34%	7.59%
30	6.24%	1.38%	1.38%	7.62%
31	6.35%	1.43%	1.43%	7.78%
32	6.46%	1.47%	1.47%	7.93%
33	6.58%	1.51%	1.51%	8.09%
34	6.71%	1.55%	1.55%	8.26%
35	6.85%	1.59%	1.58%	8.43%
36	7.01%	1.64%	1.58%	8.59%
37	7.16%	1.68%	1.58%	8.74%
38	7.30%	1.72%	1.58%	8.88%
39	7.43%	1.76%	1.58%	9.01%
40	7.57%	1.79%	1.58%	9.15%
41	7.71%	1.83%	1.58%	9.29%
42	7.85%	1.87%	1.58%	9.43%
43	8.00%	1.89%	1.58%	9.58%
44	8.16%	1.91%	1.58%	9.74%
45	8.31%	1.93%	1.58%	9.89%
46	8.48%	1.95%	1.58%	10.06%
47	8.65%	1.95%	1.58%	10.23%
48	8.83%	1.96%	1.58%	10.41%
49	9.00%	1.96%	1.58%	10.58%
50	9.16%	1.97%	1.58%	10.74%
51	9.32%	1.98%	1.58%	10.90%
52	9.46%	1.97%	1.58%	11.04%
53	9.57%	1.96%	1.58%	11.15%
54	9.63%	1.95%	1.58%	11.21%
55	9.65%	1.90%	1.58%	11.23%
56	9.60%	1.84%	1.58%	11.18%
57	9.51%	1.79%	1.58%	11.09%
58	9.82%	1.74%	1.58%	11.40%
59+	10.15%	1.67%	1.58%	11.73%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

County Miscellaneous Tiers 3 and 3A, Courts Tiers 3 and 4 (31676.16)					
Entry Age	Basic	COL	COL Limited to 1.58%	Additional Cost Sharing	Total
20	6.17%	1.21%	1.21%	1.14%	8.52%
21	6.20%	1.25%	1.25%	1.14%	8.59%
22	6.24%	1.29%	1.29%	1.14%	8.67%
23	6.26%	1.34%	1.34%	1.14%	8.74%
24	6.28%	1.38%	1.38%	1.14%	8.80%
25	6.30%	1.41%	1.41%	1.14%	8.85%
26	6.30%	1.46%	1.46%	1.14%	8.90%
27	6.31%	1.51%	1.51%	1.14%	8.96%
28	6.31%	1.55%	1.55%	1.14%	9.00%
29	6.31%	1.59%	1.58%	1.14%	9.03%
30	6.35%	1.64%	1.58%	1.14%	9.07%
31	6.48%	1.68%	1.58%	1.14%	9.20%
32	6.60%	1.72%	1.58%	1.14%	9.32%
33	6.71%	1.76%	1.58%	1.14%	9.43%
34	6.84%	1.80%	1.58%	1.14%	9.56%
35	6.96%	1.86%	1.58%	1.14%	9.68%
36	7.09%	1.89%	1.58%	1.14%	9.81%
37	7.22%	1.92%	1.58%	1.14%	9.94%
38	7.35%	1.96%	1.58%	1.14%	10.07%
39	7.49%	1.99%	1.58%	1.14%	10.21%
40	7.62%	2.02%	1.58%	1.14%	10.34%
41	7.76%	2.05%	1.58%	1.14%	10.48%
42	7.91%	2.09%	1.58%	1.14%	10.63%
43	8.05%	2.10%	1.58%	1.14%	10.77%
44	8.21%	2.10%	1.58%	1.14%	10.93%
45	8.37%	2.10%	1.58%	1.14%	11.09%
46	8.54%	2.11%	1.58%	1.14%	11.26%
47	8.70%	2.10%	1.58%	1.14%	11.42%
48	8.88%	2.09%	1.58%	1.14%	11.60%
49	9.05%	2.08%	1.58%	1.14%	11.77%
50	9.22%	2.08%	1.58%	1.14%	11.94%
51	9.38%	2.08%	1.58%	1.14%	12.10%
52	9.51%	2.05%	1.58%	1.14%	12.23%
53	9.63%	2.02%	1.58%	1.14%	12.35%
54	9.69%	1.99%	1.58%	1.14%	12.41%
55	9.70%	1.94%	1.58%	1.14%	12.42%
56	9.66%	1.88%	1.58%	1.14%	12.38%
57	9.56%	1.81%	1.58%	1.14%	12.28%
58	9.88%	1.76%	1.58%	1.14%	12.60%
59+	10.20%	1.68%	1.58%	1.14%	12.92%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX E – MEMBER CONTRIBUTION RATES

County Miscellaneous Tier 4 (31676.1)				
Entry Age	Basic	COL	COL Limited to 1.58%	Total
20	6.12%	1.00%	1.00%	7.12%
21	6.15%	1.03%	1.03%	7.18%
22	6.18%	1.06%	1.06%	7.24%
23	6.21%	1.10%	1.10%	7.31%
24	6.23%	1.14%	1.14%	7.37%
25	6.24%	1.17%	1.17%	7.41%
26	6.24%	1.22%	1.22%	7.46%
27	6.25%	1.26%	1.26%	7.51%
28	6.26%	1.30%	1.30%	7.56%
29	6.25%	1.34%	1.34%	7.59%
30	6.24%	1.38%	1.38%	7.62%
31	6.35%	1.43%	1.43%	7.78%
32	6.46%	1.47%	1.47%	7.93%
33	6.58%	1.51%	1.51%	8.09%
34	6.71%	1.55%	1.55%	8.26%
35	6.85%	1.59%	1.58%	8.43%
36	7.00%	1.62%	1.58%	8.58%
37	7.16%	1.68%	1.58%	8.74%
38	7.30%	1.72%	1.58%	8.88%
39	7.43%	1.75%	1.58%	9.01%
40	7.57%	1.79%	1.58%	9.15%
41	7.71%	1.82%	1.58%	9.29%
42	7.85%	1.87%	1.58%	9.43%
43	8.00%	1.89%	1.58%	9.58%
44	8.16%	1.91%	1.58%	9.74%
45	8.31%	1.93%	1.58%	9.89%
46	8.48%	1.95%	1.58%	10.06%
47	8.65%	1.95%	1.58%	10.23%
48	8.83%	1.96%	1.58%	10.41%
49	9.00%	1.96%	1.58%	10.58%
50	9.16%	1.97%	1.58%	10.74%
51	9.32%	1.98%	1.58%	10.90%
52	9.46%	1.97%	1.58%	11.04%
53	9.57%	1.96%	1.58%	11.15%
54	9.63%	1.95%	1.58%	11.21%
55	9.65%	1.90%	1.58%	11.23%
56	9.60%	1.84%	1.58%	11.18%
57	9.51%	1.79%	1.58%	11.09%
58	9.82%	1.74%	1.58%	11.40%
59+	10.15%	1.67%	1.58%	11.73%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

County Safety: Tier 1A (31664.2)					
Entry Age	Basic	COL	COL Limited to 3.10%	Additional Cost Sharing	Total
20	9.47%	4.23%	3.10%	3.64%	16.21%
21	9.61%	4.36%	3.10%	3.64%	16.35%
22	9.76%	4.50%	3.10%	3.64%	16.50%
23	9.90%	4.63%	3.10%	3.64%	16.64%
24	10.05%	4.76%	3.10%	3.64%	16.79%
25	10.20%	4.86%	3.10%	3.64%	16.94%
26	10.35%	5.03%	3.10%	3.64%	17.09%
27	10.51%	5.19%	3.10%	3.64%	17.25%
28	10.67%	5.33%	3.10%	3.64%	17.41%
29	10.84%	5.48%	3.10%	3.64%	17.58%
30	11.00%	5.62%	3.10%	3.64%	17.74%
31	11.17%	5.74%	3.10%	3.64%	17.91%
32	11.35%	5.87%	3.10%	3.64%	18.09%
33	11.53%	5.98%	3.10%	3.64%	18.27%
34	11.72%	6.09%	3.10%	3.64%	18.46%
35	11.91%	6.19%	3.10%	3.64%	18.65%
36	12.10%	6.26%	3.10%	3.64%	18.84%
37	12.31%	6.26%	3.10%	3.64%	19.05%
38	12.52%	6.32%	3.10%	3.64%	19.26%
39	12.72%	6.39%	3.10%	3.64%	19.46%
40	12.92%	6.48%	3.10%	3.64%	19.66%
41	13.11%	6.56%	3.10%	3.64%	19.85%
42	13.28%	6.66%	3.10%	3.64%	20.02%
43	13.43%	6.73%	3.10%	3.64%	20.17%
44	13.53%	6.80%	3.10%	3.64%	20.27%
45	13.60%	6.85%	3.10%	3.64%	20.34%
46	13.62%	6.70%	3.10%	3.64%	20.36%
47	13.59%	6.70%	3.10%	3.64%	20.33%
48	13.53%	6.71%	3.10%	3.64%	20.27%
49+	13.46%	6.73%	3.10%	3.64%	20.20%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

County Safety: Tier 1B (31664.1)					
Entry Age	Basic	COL	COL Limited to 3.10%	Additional Cost Sharing	Total
20	9.47%	5.20%	3.10%	3.64%	16.21%
21	9.61%	5.19%	3.10%	3.64%	16.35%
22	9.76%	5.32%	3.10%	3.64%	16.50%
23	9.90%	5.46%	3.10%	3.64%	16.64%
24	10.05%	5.61%	3.10%	3.64%	16.79%
25	10.20%	5.74%	3.10%	3.64%	16.94%
26	10.35%	5.85%	3.10%	3.64%	17.09%
27	10.51%	5.96%	3.10%	3.64%	17.25%
28	10.67%	6.09%	3.10%	3.64%	17.41%
29	10.84%	6.22%	3.10%	3.64%	17.58%
30	11.00%	6.23%	3.10%	3.64%	17.74%
31	11.17%	6.27%	3.10%	3.64%	17.91%
32	11.35%	6.36%	3.10%	3.64%	18.09%
33	11.53%	6.46%	3.10%	3.64%	18.27%
34	11.72%	6.58%	3.10%	3.64%	18.46%
35	11.91%	6.71%	3.10%	3.64%	18.65%
36	12.10%	6.77%	3.10%	3.64%	18.84%
37	12.31%	6.81%	3.10%	3.64%	19.05%
38	12.52%	6.85%	3.10%	3.64%	19.26%
39	12.72%	6.90%	3.10%	3.64%	19.46%
40	12.92%	6.94%	3.10%	3.64%	19.66%
41	13.11%	6.99%	3.10%	3.64%	19.85%
42	13.28%	7.04%	3.10%	3.64%	20.02%
43	13.43%	7.11%	3.10%	3.64%	20.17%
44	13.53%	7.11%	3.10%	3.64%	20.27%
45	13.60%	7.12%	3.10%	3.64%	20.34%
46	13.62%	7.14%	3.10%	3.64%	20.36%
47	13.59%	7.17%	3.10%	3.64%	20.33%
48	13.53%	7.21%	3.10%	3.64%	20.27%
49+	13.46%	7.26%	3.10%	3.64%	20.20%

Some members who are receiving enhanced benefits under 31664.1 are paying an additional 2.60%, 3.530% or 3.885%, depending on their bargaining agreement.

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

County Safety: Tier 2A (31664.2)					
Entry Age	Basic	COL	COL Limited to 3.10%	Additional Cost Sharing	Total
20	8.96%	2.61%	2.61%	3.64%	15.21%
21	9.09%	2.68%	2.68%	3.64%	15.41%
22	9.23%	2.77%	2.77%	3.64%	15.64%
23	9.37%	2.85%	2.85%	3.64%	15.86%
24	9.51%	2.93%	2.93%	3.64%	16.08%
25	9.65%	3.00%	3.00%	3.64%	16.29%
26	9.80%	3.10%	3.10%	3.64%	16.54%
27	10.04%	3.20%	3.10%	3.64%	16.78%
28	10.25%	3.29%	3.10%	3.64%	16.99%
29	10.41%	3.39%	3.10%	3.64%	17.15%
30	10.56%	3.47%	3.10%	3.64%	17.30%
31	10.73%	3.55%	3.10%	3.64%	17.47%
32	10.90%	3.64%	3.10%	3.64%	17.64%
33	11.08%	3.71%	3.10%	3.64%	17.82%
34	11.26%	3.77%	3.10%	3.64%	18.00%
35	11.43%	3.84%	3.10%	3.64%	18.17%
36	11.62%	3.88%	3.10%	3.64%	18.36%
37	11.81%	3.88%	3.10%	3.64%	18.55%
38	11.99%	3.92%	3.10%	3.64%	18.73%
39	12.17%	3.97%	3.10%	3.64%	18.91%
40	12.32%	4.02%	3.10%	3.64%	19.06%
41	12.47%	4.08%	3.10%	3.64%	19.21%
42	12.59%	4.14%	3.10%	3.64%	19.33%
43	12.67%	4.18%	3.10%	3.64%	19.41%
44	12.71%	4.23%	3.10%	3.64%	19.45%
45	12.72%	4.27%	3.10%	3.64%	19.46%
46	12.68%	4.18%	3.10%	3.64%	19.42%
47	12.62%	4.18%	3.10%	3.64%	19.36%
48	13.03%	4.19%	3.10%	3.64%	19.77%
49+	13.46%	4.20%	3.10%	3.64%	20.20%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

County Safety: Tier 2B (31664.1)					
Entry Age	Basic	COL	COL Limited to 3.10%	Additional Cost Sharing	Total
20	9.05%	3.20%	3.10%	3.64%	15.79%
21	9.18%	3.20%	3.10%	3.64%	15.92%
22	9.38%	3.27%	3.10%	3.64%	16.12%
23	9.52%	3.36%	3.10%	3.64%	16.26%
24	9.65%	3.45%	3.10%	3.64%	16.39%
25	9.80%	3.53%	3.10%	3.64%	16.54%
26	9.95%	3.61%	3.10%	3.64%	16.69%
27	10.09%	3.68%	3.10%	3.64%	16.83%
28	10.25%	3.75%	3.10%	3.64%	16.99%
29	10.41%	3.84%	3.10%	3.64%	17.15%
30	10.56%	3.85%	3.10%	3.64%	17.30%
31	10.73%	3.88%	3.10%	3.64%	17.47%
32	10.90%	3.94%	3.10%	3.64%	17.64%
33	11.08%	3.99%	3.10%	3.64%	17.82%
34	11.26%	4.08%	3.10%	3.64%	18.00%
35	11.43%	4.15%	3.10%	3.64%	18.17%
36	11.62%	4.19%	3.10%	3.64%	18.36%
37	11.81%	4.22%	3.10%	3.64%	18.55%
38	11.99%	4.24%	3.10%	3.64%	18.73%
39	12.17%	4.28%	3.10%	3.64%	18.91%
40	12.32%	4.30%	3.10%	3.64%	19.06%
41	12.47%	4.34%	3.10%	3.64%	19.21%
42	12.59%	4.37%	3.10%	3.64%	19.33%
43	12.67%	4.41%	3.10%	3.64%	19.41%
44	12.71%	4.41%	3.10%	3.64%	19.45%
45	12.72%	4.42%	3.10%	3.64%	19.46%
46	12.68%	4.44%	3.10%	3.64%	19.42%
47	12.62%	4.46%	3.10%	3.64%	19.36%
48	13.03%	4.50%	3.10%	3.64%	19.77%
49+	13.46%	4.53%	3.10%	3.64%	20.20%

Some members who are receiving enhanced benefits under 31664.1 are paying an additional 2.60%, 3.530% or 3.885%, depending on their bargaining agreement.

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

South Marin Fire: Miscellaneous Tier 1 (31676.19)			
Entry			
Age	Basic	COL	Total
20	8.18%	2.34%	10.52%
21	8.20%	2.44%	10.64%
22	8.20%	2.54%	10.74%
23	8.21%	2.64%	10.85%
24	8.19%	2.73%	10.92%
25	8.17%	2.78%	10.95%
26	8.32%	2.86%	11.18%
27	8.47%	2.95%	11.42%
28	8.64%	3.03%	11.67%
29	8.80%	3.11%	11.91%
30	8.96%	3.20%	12.16%
31	9.13%	3.26%	12.39%
32	9.30%	3.32%	12.62%
33	9.46%	3.41%	12.87%
34	9.64%	3.49%	13.13%
35	9.83%	3.58%	13.41%
36	10.01%	3.62%	13.63%
37	10.20%	3.67%	13.87%
38	10.40%	3.72%	14.12%
39	10.60%	3.77%	14.37%
40	10.80%	3.83%	14.63%
41	11.02%	3.85%	14.87%
42	11.25%	3.90%	15.15%
43	11.49%	3.90%	15.39%
44	11.73%	3.87%	15.60%
45	11.97%	3.85%	15.82%
46	12.21%	3.83%	16.04%
47	12.44%	3.78%	16.22%
48	12.66%	3.75%	16.41%
49	12.85%	3.73%	16.58%
50	12.99%	3.72%	16.71%
51	13.03%	3.71%	16.74%
52	12.99%	3.65%	16.64%
53	12.87%	3.59%	16.46%
54+	12.74%	3.53%	16.27%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

South Marin Fire Safety: Tier 1 (31664.1)			
Entry Age	Basic	COL	Total
20	9.15%	5.20%	14.35%
21	9.28%	5.19%	14.47%
22	9.44%	5.32%	14.76%
23	9.58%	5.46%	15.04%
24	9.72%	5.61%	15.33%
25	9.88%	5.74%	15.62%
26	10.03%	5.85%	15.88%
27	10.19%	5.96%	16.15%
28	10.34%	6.09%	16.43%
29	10.51%	6.22%	16.73%
30	10.68%	6.23%	16.91%
31	10.85%	6.27%	17.12%
32	11.03%	6.36%	17.39%
33	11.20%	6.46%	17.66%
34	11.39%	6.58%	17.97%
35	11.58%	6.71%	18.29%
36	11.78%	6.77%	18.55%
37	11.99%	6.81%	18.80%
38	12.20%	6.85%	19.05%
39	12.40%	6.90%	19.30%
40	12.60%	6.94%	19.54%
41	12.79%	6.99%	19.78%
42	12.96%	7.04%	20.00%
43	13.10%	7.11%	20.21%
44	13.20%	7.11%	20.31%
45	13.28%	7.12%	20.40%
46	13.30%	7.14%	20.44%
47	13.27%	7.17%	20.44%
48	13.21%	7.21%	20.42%
49+	13.14%	7.26%	20.40%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

South Marin Fire Safety: Tier 2 (31664.2)			
Entry Age	Basic	COL	Total
20	9.15%	4.23%	13.38%
21	9.29%	4.36%	13.65%
22	9.43%	4.50%	13.93%
23	9.58%	4.63%	14.21%
24	9.72%	4.76%	14.48%
25	9.88%	4.86%	14.74%
26	10.03%	5.03%	15.06%
27	10.19%	5.19%	15.38%
28	10.35%	5.33%	15.68%
29	10.51%	5.48%	15.99%
30	10.68%	5.62%	16.30%
31	10.85%	5.74%	16.59%
32	11.03%	5.87%	16.90%
33	11.21%	5.98%	17.19%
34	11.39%	6.09%	17.48%
35	11.59%	6.19%	17.78%
36	11.78%	6.26%	18.04%
37	11.99%	6.26%	18.25%
38	12.20%	6.32%	18.52%
39	12.40%	6.39%	18.79%
40	12.60%	6.48%	19.08%
41	12.79%	6.56%	19.35%
42	12.95%	6.66%	19.61%
43	13.10%	6.73%	19.83%
44	13.21%	6.80%	20.01%
45	13.28%	6.85%	20.13%
46	13.30%	6.70%	20.00%
47	13.27%	6.70%	19.97%
48	13.20%	6.71%	19.91%
49+	13.13%	6.73%	19.86%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

South Marin Fire Safety: Tier 2A (31664.2)			
Entry			
Age	Basic	COL	Total
20	8.78%	3.87%	12.65%
21	8.91%	3.98%	12.89%
22	9.05%	4.10%	13.15%
23	9.20%	4.22%	13.42%
24	9.33%	4.34%	13.67%
25	9.48%	4.43%	13.91%
26	9.62%	4.58%	14.20%
27	9.77%	4.73%	14.50%
28	9.93%	4.86%	14.79%
29	10.08%	5.00%	15.08%
30	10.24%	5.13%	15.37%
31	10.41%	5.24%	15.65%
32	10.57%	5.36%	15.93%
33	10.75%	5.46%	16.21%
34	10.93%	5.57%	16.50%
35	11.11%	5.66%	16.77%
36	11.30%	5.71%	17.01%
37	11.49%	5.71%	17.20%
38	11.67%	5.76%	17.43%
39	11.84%	5.84%	17.68%
40	12.00%	5.90%	17.90%
41	12.15%	5.98%	18.13%
42	12.26%	6.07%	18.33%
43	12.35%	6.14%	18.49%
44	12.39%	6.19%	18.58%
45	12.40%	6.25%	18.65%
46	12.36%	6.11%	18.47%
47	12.29%	6.11%	18.40%
48	12.70%	6.12%	18.82%
49+	13.13%	6.14%	19.27%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

Entry Age	Marin City CSD Tier 1, LAFCO Tier 7, Tamalpais CSD Tier 1 (31676.11)		
	Basic	COL	Total
20	6.82%	1.74%	8.56%
21	6.84%	1.80%	8.64%
22	6.83%	1.87%	8.70%
23	6.83%	1.94%	8.77%
24	6.83%	2.00%	8.83%
25	6.82%	2.06%	8.88%
26	6.94%	2.14%	9.08%
27	7.07%	2.21%	9.28%
28	7.21%	2.28%	9.49%
29	7.32%	2.36%	9.68%
30	7.46%	2.43%	9.89%
31	7.61%	2.50%	10.11%
32	7.74%	2.57%	10.31%
33	7.89%	2.64%	10.53%
34	8.04%	2.71%	10.75%
35	8.18%	2.79%	10.97%
36	8.34%	2.85%	11.19%
37	8.50%	2.92%	11.42%
38	8.67%	3.00%	11.67%
39	8.84%	3.06%	11.90%
40	9.01%	3.12%	12.13%
41	9.18%	3.18%	12.36%
42	9.37%	3.25%	12.62%
43	9.57%	3.28%	12.85%
44	9.78%	3.30%	13.08%
45	9.98%	3.34%	13.32%
46	10.17%	3.36%	13.53%
47	10.37%	3.36%	13.73%
48	10.56%	3.36%	13.92%
49	10.72%	3.37%	14.09%
50	10.81%	3.39%	14.20%
51	10.85%	3.40%	14.25%
52	10.83%	3.36%	14.19%
53	10.73%	3.34%	14.07%
54	10.62%	3.30%	13.92%
55	10.51%	3.22%	13.73%
56	10.42%	3.12%	13.54%
57	10.30%	3.03%	13.33%
58	10.19%	2.93%	13.12%
59+	10.07%	2.81%	12.88%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

Mosquito District Tier 1 (31676.14)			
Entry Age	Basic	COL	Total
20	6.35%	1.97%	8.32%
21	6.39%	2.04%	8.43%
22	6.41%	2.12%	8.53%
23	6.44%	2.20%	8.64%
24	6.46%	2.27%	8.73%
25	6.48%	2.35%	8.83%
26	6.49%	2.43%	8.92%
27	6.49%	2.50%	8.99%
28	6.49%	2.59%	9.08%
29	6.48%	2.66%	9.14%
30	6.46%	2.75%	9.21%
31	6.58%	2.81%	9.39%
32	6.71%	2.86%	9.57%
33	6.84%	2.93%	9.77%
34	6.96%	3.01%	9.97%
35	7.09%	3.09%	10.18%
36	7.23%	3.14%	10.37%
37	7.34%	3.22%	10.56%
38	7.49%	3.28%	10.77%
39	7.63%	3.34%	10.97%
40	7.77%	3.41%	11.18%
41	7.91%	3.45%	11.36%
42	8.07%	3.51%	11.58%
43	8.23%	3.52%	11.75%
44	8.39%	3.52%	11.91%
45	8.56%	3.54%	12.10%
46	8.72%	3.56%	12.28%
47	8.90%	3.55%	12.45%
48	9.09%	3.53%	12.62%
49	9.28%	3.53%	12.81%
50	9.47%	3.53%	13.00%
51	9.66%	3.53%	13.19%
52	9.84%	3.48%	13.32%
53	10.01%	3.43%	13.44%
54	10.17%	3.37%	13.54%
55	10.27%	3.27%	13.54%
56	10.30%	3.17%	13.47%
57	10.28%	3.07%	13.35%
58	10.17%	2.98%	13.15%
59+	10.07%	2.83%	12.90%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

LAFCO Tier 3 (31676.16)			
Entry Age	Basic	COL	Total
20	6.12%	1.21%	7.33%
21	6.15%	1.25%	7.40%
22	6.18%	1.29%	7.47%
23	6.21%	1.34%	7.55%
24	6.23%	1.38%	7.61%
25	6.24%	1.41%	7.65%
26	6.24%	1.46%	7.70%
27	6.26%	1.51%	7.77%
28	6.26%	1.55%	7.81%
29	6.25%	1.59%	7.84%
30	6.23%	1.64%	7.87%
31	6.35%	1.68%	8.03%
32	6.47%	1.72%	8.19%
33	6.58%	1.76%	8.34%
34	6.71%	1.80%	8.51%
35	6.83%	1.86%	8.69%
36	6.96%	1.89%	8.85%
37	7.08%	1.92%	9.00%
38	7.22%	1.96%	9.18%
39	7.36%	1.99%	9.35%
40	7.50%	2.02%	9.52%
41	7.63%	2.05%	9.68%
42	7.77%	2.09%	9.86%
43	7.92%	2.10%	10.02%
44	8.08%	2.10%	10.18%
45	8.23%	2.10%	10.33%
46	8.40%	2.11%	10.51%
47	8.57%	2.10%	10.67%
48	8.75%	2.09%	10.84%
49	8.91%	2.08%	10.99%
50	9.08%	2.08%	11.16%
51	9.24%	2.08%	11.32%
52	9.38%	2.05%	11.43%
53	9.50%	2.02%	11.52%
54	9.56%	1.99%	11.55%
55	9.57%	1.94%	11.51%
56	9.52%	1.88%	11.40%
57	9.44%	1.81%	11.25%
58	9.75%	1.76%	11.51%
59+	10.07%	1.68%	11.75%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

Novato Miscellaneous Tier 1 (31676.16)			
Entry			
Age	Basic	COL	Total
20	6.35%	1.94%	8.29%
21	6.39%	2.01%	8.40%
22	6.41%	2.09%	8.50%
23	6.43%	2.16%	8.59%
24	6.46%	2.23%	8.69%
25	6.48%	2.28%	8.76%
26	6.49%	2.35%	8.84%
27	6.49%	2.42%	8.91%
28	6.49%	2.49%	8.98%
29	6.48%	2.57%	9.05%
30	6.47%	2.64%	9.11%
31	6.59%	2.69%	9.28%
32	6.70%	2.76%	9.46%
33	6.83%	2.83%	9.66%
34	6.96%	2.90%	9.86%
35	7.08%	2.98%	10.06%
36	7.22%	3.02%	10.24%
37	7.35%	3.08%	10.43%
38	7.50%	3.13%	10.63%
39	7.63%	3.19%	10.82%
40	7.78%	3.25%	11.03%
41	7.91%	3.28%	11.19%
42	8.07%	3.34%	11.41%
43	8.23%	3.35%	11.58%
44	8.39%	3.34%	11.73%
45	8.56%	3.35%	11.91%
46	8.72%	3.35%	12.07%
47	8.90%	3.33%	12.23%
48	9.09%	3.32%	12.41%
49	9.28%	3.31%	12.59%
50	9.47%	3.31%	12.78%
51	9.65%	3.31%	12.96%
52	9.84%	3.26%	13.10%
53	10.01%	3.22%	13.23%
54	10.16%	3.17%	13.33%
55	10.27%	3.07%	13.34%
56	10.30%	2.97%	13.27%
57	10.28%	2.87%	13.15%
58	10.17%	2.78%	12.95%
59+	10.07%	2.65%	12.72%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

Novato Safety: Tier 1 (31664.1)			
Entry			
Age	Basic	COL	Total
20	9.15%	5.24%	14.39%
21	9.29%	5.23%	14.52%
22	9.43%	5.37%	14.80%
23	9.58%	5.50%	15.08%
24	9.73%	5.65%	15.38%
25	9.87%	5.80%	15.67%
26	10.03%	5.90%	15.93%
27	10.18%	6.02%	16.20%
28	10.35%	6.15%	16.50%
29	10.51%	6.28%	16.79%
30	10.68%	6.29%	16.97%
31	10.85%	6.33%	17.18%
32	11.03%	6.42%	17.45%
33	11.20%	6.52%	17.72%
34	11.40%	6.64%	18.04%
35	11.58%	6.78%	18.36%
36	11.78%	6.83%	18.61%
37	11.99%	6.89%	18.88%
38	12.20%	6.93%	19.13%
39	12.40%	6.97%	19.37%
40	12.60%	7.00%	19.60%
41	12.79%	7.05%	19.84%
42	12.95%	7.12%	20.07%
43	13.10%	7.17%	20.27%
44	13.21%	7.17%	20.38%
45	13.28%	7.18%	20.46%
46	13.30%	7.21%	20.51%
47	13.27%	7.24%	20.51%
48	13.21%	7.28%	20.49%
49+	13.13%	7.34%	20.47%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

Novato Safety: Tier 2 (31664.2)			
Entry			
Age	Basic	COL	Total
20	9.15%	4.28%	13.43%
21	9.29%	4.40%	13.69%
22	9.43%	4.53%	13.96%
23	9.58%	4.67%	14.25%
24	9.73%	4.80%	14.53%
25	9.87%	4.91%	14.78%
26	10.03%	5.07%	15.10%
27	10.19%	5.23%	15.42%
28	10.34%	5.38%	15.72%
29	10.52%	5.53%	16.05%
30	10.68%	5.67%	16.35%
31	10.84%	5.81%	16.65%
32	11.03%	5.93%	16.96%
33	11.20%	6.05%	17.25%
34	11.40%	6.15%	17.55%
35	11.58%	6.26%	17.84%
36	11.78%	6.32%	18.10%
37	11.99%	6.32%	18.31%
38	12.20%	6.38%	18.58%
39	12.40%	6.46%	18.86%
40	12.60%	6.54%	19.14%
41	12.79%	6.62%	19.41%
42	12.95%	6.72%	19.67%
43	13.10%	6.79%	19.89%
44	13.20%	6.87%	20.07%
45	13.28%	6.93%	20.21%
46	13.30%	6.77%	20.07%
47	13.27%	6.76%	20.03%
48	13.21%	6.77%	19.98%
49+	13.13%	6.79%	19.92%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

San Rafael Miscellaneous Tier 1 (31676.19)			
Entry			
Age	Basic	COL	Total
20	8.19%	2.23%	10.42%
21	8.19%	2.33%	10.52%
22	8.21%	2.43%	10.64%
23	8.20%	2.53%	10.73%
24	8.20%	2.61%	10.81%
25	8.18%	2.66%	10.84%
26	8.32%	2.74%	11.06%
27	8.48%	2.82%	11.30%
28	8.64%	2.89%	11.53%
29	8.79%	2.98%	11.77%
30	8.96%	3.06%	12.02%
31	9.13%	3.12%	12.25%
32	9.29%	3.19%	12.48%
33	9.46%	3.27%	12.73%
34	9.65%	3.34%	12.99%
35	9.82%	3.43%	13.25%
36	10.01%	3.47%	13.48%
37	10.20%	3.52%	13.72%
38	10.40%	3.57%	13.97%
39	10.59%	3.62%	14.21%
40	10.80%	3.67%	14.47%
41	11.03%	3.69%	14.72%
42	11.25%	3.74%	14.99%
43	11.49%	3.73%	15.22%
44	11.73%	3.71%	15.44%
45	11.97%	3.69%	15.66%
46	12.21%	3.68%	15.89%
47	12.44%	3.64%	16.08%
48	12.67%	3.59%	16.26%
49	12.85%	3.58%	16.43%
50	12.99%	3.57%	16.56%
51	13.03%	3.56%	16.59%
52	13.00%	3.50%	16.50%
53	12.86%	3.45%	16.31%
54+	12.73%	3.40%	16.13%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

San Rafael Miscellaneous Tier 2 (31676.16)			
Entry			
Age	Basic	COL	Total
20	6.12%	1.22%	7.34%
21	6.15%	1.26%	7.41%
22	6.18%	1.30%	7.48%
23	6.21%	1.35%	7.56%
24	6.23%	1.39%	7.62%
25	6.24%	1.41%	7.65%
26	6.24%	1.46%	7.70%
27	6.26%	1.50%	7.76%
28	6.26%	1.54%	7.80%
29	6.25%	1.59%	7.84%
30	6.23%	1.64%	7.87%
31	6.35%	1.67%	8.02%
32	6.46%	1.70%	8.16%
33	6.58%	1.74%	8.32%
34	6.71%	1.79%	8.50%
35	6.84%	1.83%	8.67%
36	6.95%	1.86%	8.81%
37	7.08%	1.90%	8.98%
38	7.22%	1.93%	9.15%
39	7.36%	1.96%	9.32%
40	7.50%	1.99%	9.49%
41	7.63%	2.01%	9.64%
42	7.78%	2.05%	9.83%
43	7.92%	2.08%	10.00%
44	8.08%	2.09%	10.17%
45	8.23%	2.11%	10.34%
46	8.40%	2.12%	10.52%
47	8.57%	2.11%	10.68%
48	8.75%	2.10%	10.85%
49	8.92%	2.09%	11.01%
50	9.08%	2.09%	11.17%
51	9.24%	2.09%	11.33%
52	9.39%	2.06%	11.45%
53	9.50%	2.03%	11.53%
54	9.56%	2.00%	11.56%
55	9.57%	1.94%	11.51%
56	9.52%	1.89%	11.41%
57	9.44%	1.82%	11.26%
58	9.75%	1.77%	11.52%
59+	10.07%	1.69%	11.76%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

San Rafael Safety Tier 1 (31664.2)			
Entry			
Age	Basic	COL	Total
20	9.15%	4.06%	13.21%
21	9.29%	4.17%	13.46%
22	9.43%	4.30%	13.73%
23	9.58%	4.42%	14.00%
24	9.73%	4.55%	14.28%
25	9.88%	4.65%	14.53%
26	10.03%	4.81%	14.84%
27	10.19%	4.96%	15.15%
28	10.35%	5.10%	15.45%
29	10.51%	5.24%	15.75%
30	10.68%	5.38%	16.06%
31	10.85%	5.50%	16.35%
32	11.02%	5.62%	16.64%
33	11.21%	5.73%	16.94%
34	11.39%	5.84%	17.23%
35	11.58%	5.93%	17.51%
36	11.79%	5.98%	17.77%
37	11.99%	6.00%	17.99%
38	12.20%	6.06%	18.26%
39	12.40%	6.12%	18.52%
40	12.60%	6.20%	18.80%
41	12.79%	6.29%	19.08%
42	12.96%	6.37%	19.33%
43	13.10%	6.45%	19.55%
44	13.20%	6.51%	19.71%
45	13.28%	6.57%	19.85%
46	13.31%	6.42%	19.73%
47	13.27%	6.41%	19.68%
48	13.21%	6.42%	19.63%
49+	13.13%	6.46%	19.59%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

San Rafael Safety Tier 2 (31664.2)			
Entry			
Age	Basic	COL	Total
20	8.78%	2.62%	11.40%
21	8.91%	2.70%	11.61%
22	9.05%	2.78%	11.83%
23	9.19%	2.87%	12.06%
24	9.32%	2.95%	12.27%
25	9.47%	3.02%	12.49%
26	9.62%	3.11%	12.73%
27	9.77%	3.22%	12.99%
28	9.93%	3.31%	13.24%
29	10.08%	3.41%	13.49%
30	10.24%	3.49%	13.73%
31	10.41%	3.57%	13.98%
32	10.57%	3.65%	14.22%
33	10.75%	3.72%	14.47%
34	10.94%	3.79%	14.73%
35	11.11%	3.86%	14.97%
36	11.30%	3.90%	15.20%
37	11.49%	3.90%	15.39%
38	11.67%	3.94%	15.61%
39	11.85%	3.99%	15.84%
40	12.00%	4.04%	16.04%
41	12.15%	4.10%	16.25%
42	12.26%	4.16%	16.42%
43	12.35%	4.20%	16.55%
44	12.38%	4.26%	16.64%
45	12.40%	4.29%	16.69%
46	12.36%	4.20%	16.56%
47	12.30%	4.20%	16.50%
48	12.71%	4.21%	16.92%
49+	13.14%	4.22%	17.36%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2019**

APPENDIX E – MEMBER CONTRIBUTION RATES

PEPRA Rates					
All Ages	Basic	COLA	Total	Prior Total	
PEPRA Misc 2% COLA	7.66%	1.56%	9.22%	9.22%	
PEPRA Misc 4% COLA	7.80%	2.45%	10.25%	10.99%	
PEPRA Safety 2% COLA	11.50%	2.90%	14.40%	14.43%	
PEPRA Safety 3% COLA	12.30%	4.52%	16.82%	17.38%	
PEPRA Safety 4% COLA	12.58%	4.74%	17.32%	16.95%	



Classic Values, Innovative Advice