

Marin County Employees' Retirement Association

Actuarial Valuation Report as of June 30, 2018

Produced by Cheiron

February 2019

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February 6, 2019

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, 2018. 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, 2019.

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.

To the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. 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

A handwritten signature in blue ink that reads "Graham Schmidt".

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

A handwritten signature in blue ink that reads "William R. Hallmark".

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

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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, and
- Employer and employee contribution rates for Plan Year 2019-2020.

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, 2019. 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 (12 years remaining as of June 30, 2018), except for the additional UAL attributable to the outstanding unfunded actuarial loss from 2009, which is being amortized over a separate closed period (currently 20 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 period 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.

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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.

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, 2017	June 30, 2018
Actuarial Liability	\$ 2,722.6	\$ 2,847.3
Market Value of Valuation Assets	<u>2,298.9</u>	<u>2,480.9</u>
Unfunded Actuarial Liability	\$ 423.7	\$ 366.4
Funded Ratio	84.4%	87.1%
Net Employer Contribution Rate		
County of Marin	25.32%	23.48%
Novato Fire Protection District	49.05%	45.40%
City of San Rafael	61.76%	57.67%
Total MCERA	31.12%	28.90%

Table I-2			
Membership Total			
Item	June 30, 2017	June 30, 2018	% Change
Actives	2,685	2,732	1.8%
Current Inactives	680	668	-1.8%
Retired Members	<u>3,141</u>	<u>3,270</u>	<u>4.1%</u>
Total Members	6,506	6,670	2.5%
Ratio of Retired Members to Active Members	117.0%	119.7%	
Active Member Payroll (FYE 2018/2019)	\$ 249,751,675	\$ 263,107,566	5.3%
Average Pay per Active	\$ 93,017	\$ 96,306	3.5%

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The key results of the June 30, 2018 actuarial valuation are as follows:

- The actuarially determined employer contribution rate for the County decreased from 25.32% to 23.48% of payroll, Novato from 49.05% to 45.40%, and San Rafael from 61.76% to 57.67%.
- The Plan's funded ratio, the ratio of assets over Actuarial Liability, increased from 84.4% last year to 87.1% as of June 30, 2018.
- The Unfunded Actuarial Liability (UAL) is the excess of the Plan's Actuarial Liability over the Market Value of Assets. The UAL decreased from \$423.7 to \$366.4 million. This decrease in UAL was primarily due to higher than expected investment returns.
- During the year ending June 30, 2018, the return on Plan assets was 9.65% 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 and the number of active members increased compared to last year. There were 245 new hires and rehires during 2017-2018 and the total active population increased from 2,685 to 2,732. The number of members in pay status and deferred status increased from 3,821 to 3,938. Total projected payroll increased from \$249.8 million to \$263.1 million.

Assets and Liabilities

Table I-3 on the following page presents the assets, liabilities, Unfunded Actuarial Liability, and funding ratios as of June 30, 2018 for each of the three main subgroups.

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION I – EXECUTIVE SUMMARY

Table I-3			
Assets & Liabilities			
(in millions)			
Item	County	Novato	San Rafael
Actuarial Liability			
Actives	\$ 693.2	\$ 65.4	\$ 141.5
Current Inactives	77.3	3.3	19.2
Retired Members	<u>1,297.6</u>	<u>126.4</u>	<u>423.4</u>
Total Actuarial Liability	\$ 2,068.1	\$ 195.1	\$ 584.1
Market Value Assets	\$ 1,856.9	\$ 174.0	\$ 450.0
Unfunded Actuarial Liability	\$ 211.2	\$ 21.1	\$ 134.1
Funded Ratio - Market Value	89.8%	89.2%	77.0%
Inactive-Only Funded Ratio	66.5%	66.5%	75.8%

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 66.5% 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 all three groups is now above the Inactive-Only Funded Ratio for the current valuation.

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SECTION I – EXECUTIVE SUMMARY

Changes in Employer Contributions

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

Table I-4				
Item	Employer Contribution Reconciliation			
	Total	County	Novato	San Rafael
FYE 2019 Net Employer Contribution Rate	31.12%	25.32%	49.05%	61.76%
Expected change in amortization from prior changes	(1.30%)	(1.17%)	(2.58%)	(1.76%)
Change due to asset gain	(0.36%)	(0.34%)	(0.37%)	(0.50%)
Change due to demographic (gains)/losses	(0.16%)	(0.10%)	(0.40%)	0.03%
Change due to PEPRA new hires	(0.18%)	(0.11%)	(0.38%)	(0.60%)
Change due to salaries	0.02%	0.00%	0.34%	0.08%
Change due to effect of payroll on amortization	(0.33%)	(0.20%)	(0.36%)	(1.59%)
Change due to audit findings	<u>0.09%</u>	<u>0.08%</u>	<u>0.10%</u>	<u>0.25%</u>
Total change from current year's changes	(0.92%)	(0.67%)	(1.07%)	(2.33%)
FYE 2020 Net Employer Contribution Rate	28.90%	23.48%	45.40%	57.67%

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 reduced the contribution rates by 1.17%, 2.58%, and 1.76% 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 decrease in the overall employer contribution rate of 0.92% of pay:

- Asset experience produced an investment gain.

The 9.65% return, compared to last year's 7.00% assumption, resulted in a gain that reduced the contribution rate by 0.36% of pay in the current year. The amortization payment for this year's investment gains will be phased-in over five years, resulting in similar decreases in the employer contribution rates in each of the next four years. The investment gain for Novato was offset by a one percent contingency reserve that was reestablished due to the Plan's reserve crediting policy.

- Demographic experience was close to what was expected 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 declined as a result of demographic changes for the County and Novato. There were losses on the Actuarial Liabilities, partly due to COLA increases larger than expected. These were offset by reductions in the normal cost rates rate in addition to those expected as a result of PEPRA, in particular for South Marin Fire and Novato, as a result of the retirement of some key highly paid individuals. The reductions in the normal cost rate will not be subject to phase-in in future years.

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- 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 hires decreased the contribution rate by 0.18%. As these changes only affect the normal cost, they are not subject to further phase-in.

- Changes in salaries and payroll reduced the contribution rates.

Liability-weighted salary increases for returning members were higher than anticipated for Novato and San Rafael, increasing the contribution rates by 0.34% for Novato and 0.08% for San Rafael. The amortization of these 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 higher than expected overall payroll growth as a result of increases in the active population meant that the UAL is being amortized over a larger than expected payroll base, which decreased the contribution rate by 0.20% for County, 0.36% for Novato, and 1.59% for San Rafael. 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 a reduction in the current year contribution rate of 0.20% for County, 0.02% for Novato, and 1.51% for San Rafael.

- Coding changes were made as a result of an actuarial audit.

Milliman performed an audit of the June 30, 2017 actuarial valuation report. Their findings led to some minor coding changes that increased the current year contribution rate by 0.08% for the County, 0.10% for Novato, and 0.25% for San Rafael. These changes mostly affected the normal cost, with 0.02% of pay subject to further phase-in for the County and San Rafael.

Changes in UAL

The Unfunded Actuarial Liability (UAL) for MCERA decreased by \$57.3 million, from \$423.7 million to \$366.4 million. Table I-5 on the next page presents the specific components of the change in the UAL.

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Table I-5				
Change in Unfunded Actuarial Liability				
(in millions)				
Experience	Total	County	Novato	San Rafael
1. Unfunded actuarial liability, 6/30/2017	\$ 423.7	\$ 261.8	\$ 20.1	\$ 141.8
2. Expected change in unfunded actuarial liability	(10.3)	(5.7)	(0.6)	(4.0)
3. Change due to unexpected contributions	(8.9)	(7.5)	(0.3)	(1.1)
4. Change due to investment gain	(59.0)	(45.8)	(2.2)	(11.0)
5. Change due to demographic (gains) / losses	15.0	6.9	2.0	6.2
6. Change due to salary (gains) / losses	3.6	(0.4)	2.1	1.8
7. Change due to audit findings	2.3	1.9	0.0	0.4
8. Total change in unfunded actuarial liability	\$ (57.3)	\$ (50.6)	\$ 1.0	\$ (7.7)
9. Unfunded actuarial liability, 6/30/2018	\$ 366.4	\$ 211.2	\$ 21.1	\$ 134.1

The overall dollar amount of contributions was slightly higher than expected, based on differences in actual versus projected payroll and the one-year delay in the implementation of contribution rates, which reduced the UAL by \$8.9 million (row 3). The return on the assets used to compute the UAL and the employer contribution rates was 9.65% during the 2017-18 plan year compared to last year's assumed rate of 7.00%, resulting in a decrease in the UAL of \$59.0 million (row 4). Salary losses compounded by other liability losses (rows 5 and 6 above) – including higher than expected COLAs – increased the UAL by \$18.6 million. Milliman performed an audit of the June 30, 2017 actuarial valuation report. Their findings led to some coding changes that increased the overall UAL by \$2.3 million as of the end of the year (row 7). All of the above combined with the expected UAL reduction (\$10.3 million) from contributions produced an overall decrease of \$57.3 million in the UAL last year.

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Plan Risk

One of the most important measures of a plan's risk is the ratio of plan assets to payroll. Table I-6 shows the ratios of assets to active member payroll for each of the three main subgroups within MCERA.

Table I-6			
Asset to Payroll Ratio as of June 30, 2018			
	County	Novato	San Rafael
Active Member Payroll	\$ 217,972,644	\$ 9,554,551	\$ 35,580,371
Assets (Market Value)	\$ 1,856,887,569	\$ 174,032,950	\$ 449,987,265
Ratio of Assets to Payroll	8.52	18.21	12.65
Ratio with 100% Funding	9.49	20.42	16.42

This ratio indicates the sensitivity of the Plan to the returns earned on assets. We note in the table that assets are currently over eight times covered payroll for the County, the ratio is over 12 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 over nine times payroll for the County, over 16 for San Rafael, and over 20 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% of their value in a year. Since they were assumed to earn 7.00%, there is an actuarial loss of 17.00% of plan assets. Based on the current ratio of assets to payroll (852%) for the County, that means the loss in assets is about 145% of active County payroll (852% of the 17.00% loss).

There is only one source of funding to make up for this loss: contributions. Consequently, barring future offsetting investment gains, the County employers would have to make up the asset loss in future contributions. In this example of a one-year loss of 10%, this shortfall will eventually require an average additional amortization payment of approximately 9.3% of payroll if amortized over a 24-year period.

As the plan matures and becomes better funded, the ratio of assets to payroll will increase. When assets are 949% of pay for the County, the 10% loss discussed above will translate to a loss of 161% of payroll, which when amortized over a 24-year period will increase the employer contribution rate by 10.4% of member pay on average. 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. A 10% loss for San Rafael would currently translate to a loss of 215% of pay, which would require an

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average of a 13.9% amortization payment. The same loss for Novato would translate to a loss of 310% of pay, requiring a 20.0% of pay average payment. If the Plan were fully funded, these losses would result in amortization payments of 18.0% and 22.4% for San Rafael and Novato, respectively.

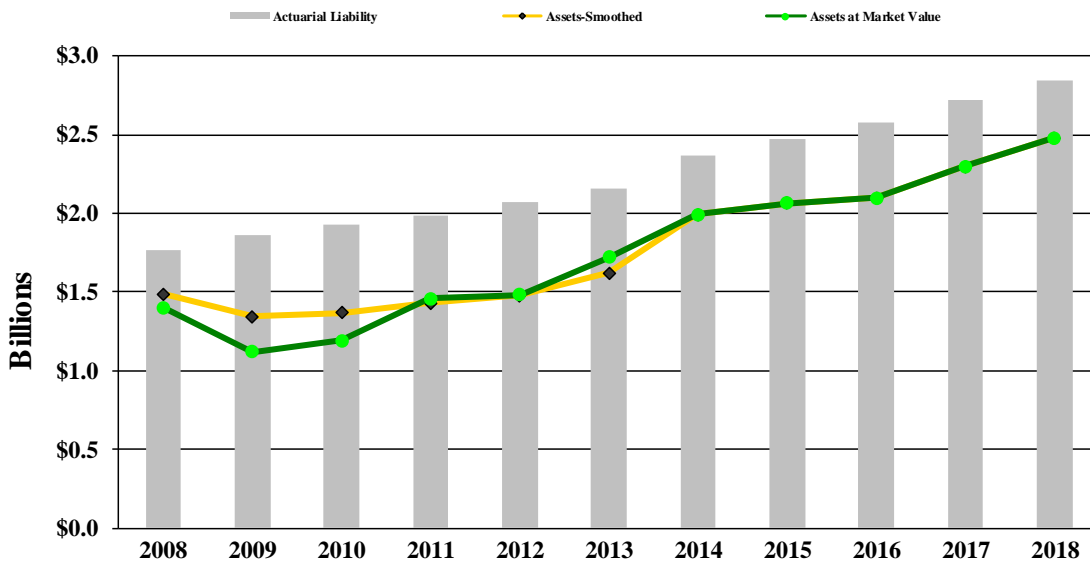
C. Historical Trends

Despite the fact that for most retirement plans the greatest attention is given to the current valuation results, 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 87.1% as of June 30, 2018, and is slightly higher than the 84.0% funded ratio in 2008.

Chart I-1: Assets and Actuarial Liabilities



Valuation Year	2008	2009	2010	2011	2012	2013	2014*	2015	2016	2017	2018
Funded Ratio	84.0%	72.1%	70.9%	72.1%	71.3%	75.1%	84.3%	83.7%	81.5%	84.4%	87.1%
UAL (Billions)	\$ 0.28	\$ 0.52	\$ 0.56	\$ 0.55	\$ 0.59	\$ 0.54	\$ 0.37	\$ 0.40	\$ 0.48	\$ 0.42	\$ 0.37

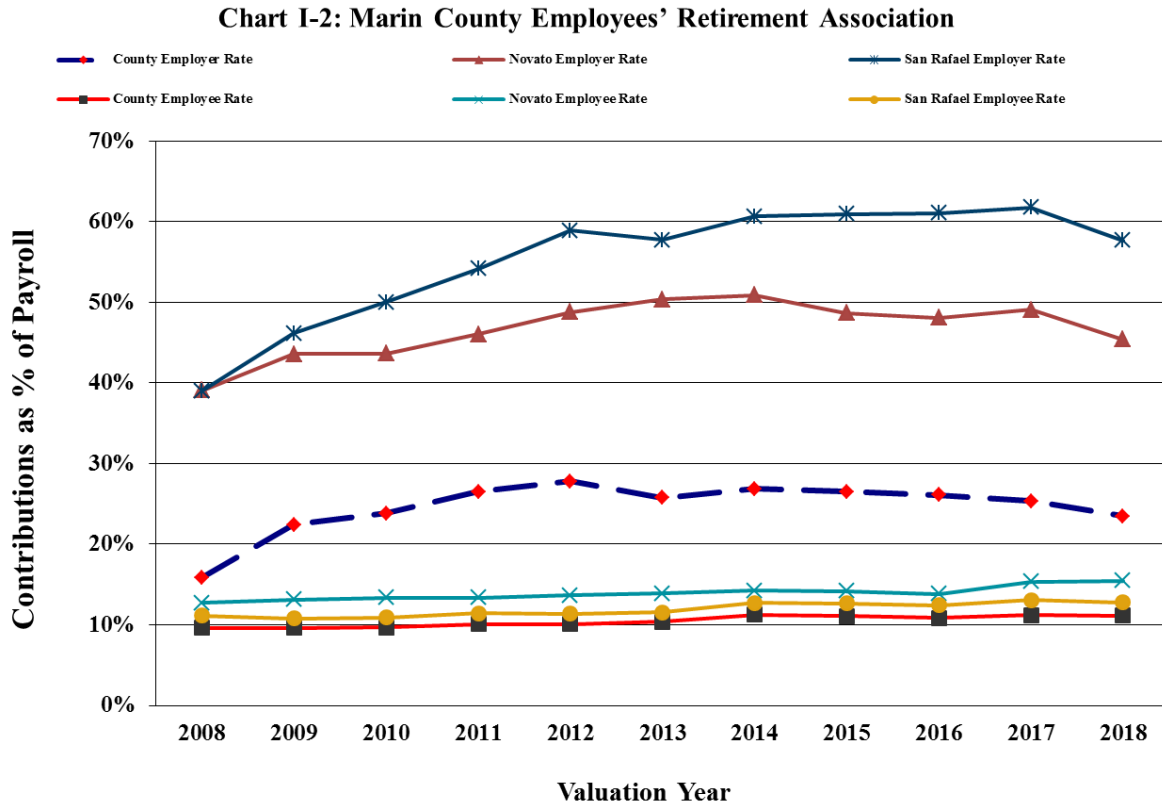
* Beginning in 2014, there is no smoothing of the asset value, thus AVA = MVA.

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Contribution Trends

Chart I-2 presents the historical trends for the MCERA contribution rates. The employer contribution rates rose steadily from 2008 through 2013, as the investment losses from 2008-2009 were recognized in the smoothed value of assets. The average employee contribution rates have stayed relatively stable, increasing slightly as the Plan's economic and mortality assumptions have changed.



Gains and Losses

The following chart for MCERA presents the pattern of annual gains and losses for the overall Plan, broken into the investment and liability components. Prior to 2014, the investment gains and losses represent the changes on a smoothed basis (i.e., based on the Actuarial Value of Assets). As of 2014, the Actuarial Value of Assets was set equal to the Market Value of Assets, and the 2013-14 and later years' investment gains and losses represent changes on a market basis. The chart does not include any changes in MCERA's assets and liabilities attributable to changes to actuarial methods, assumptions, or plan benefit changes.

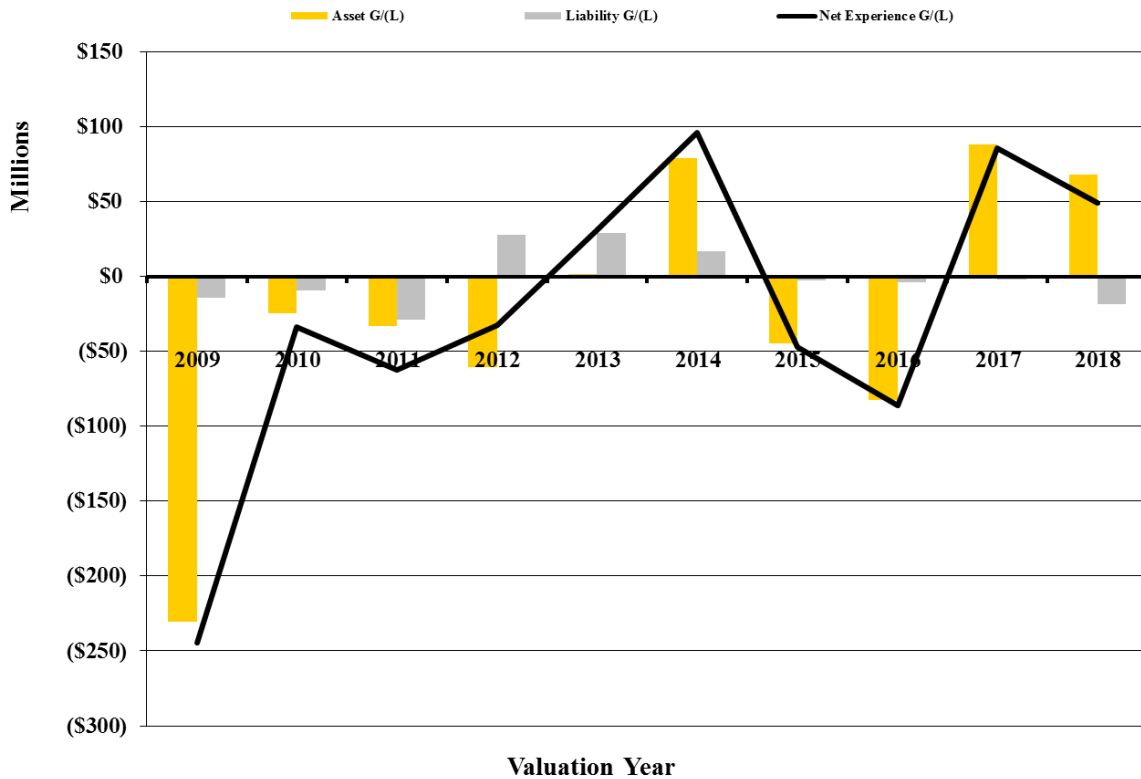
The investment loss in 2008-2009 was by far the most significant gain or loss during the last eight years. Even though the Plan was using actuarial smoothing of the assets, there was a significant loss reflected in the June 30, 2009 valuation, because the amount of smoothing was limited by the 80/120% corridor around the Market Value of Assets (the return on the smoothed value of assets for 2008-2009 was -9.2%).

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Between 2011 and 2014, there was a period of modest liability gains, as salary increases were below their expected levels. After experiencing asset losses in 2015 and 2016, there have been asset gains the past two years.

Chart I-3: Experience Gains and Losses



D. Future Expected Financial Trends

The analysis of projected financial trends is an important component of this valuation. In this section, we present our assessment of the implications of the June 30, 2018 valuation results in terms of contributions and benefit security (assets over 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. A significant reduction in contribution rates is projected in 2030.

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After an initial 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 PEPPA members becoming a larger proportion of the active member population over time.

Chart I-4: Projection of Contributions, 7.00% Return Each Year – County of Marin

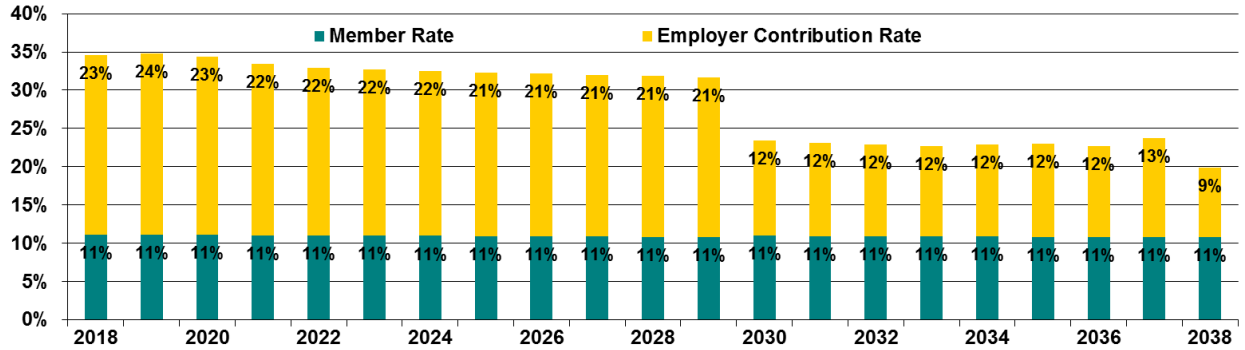
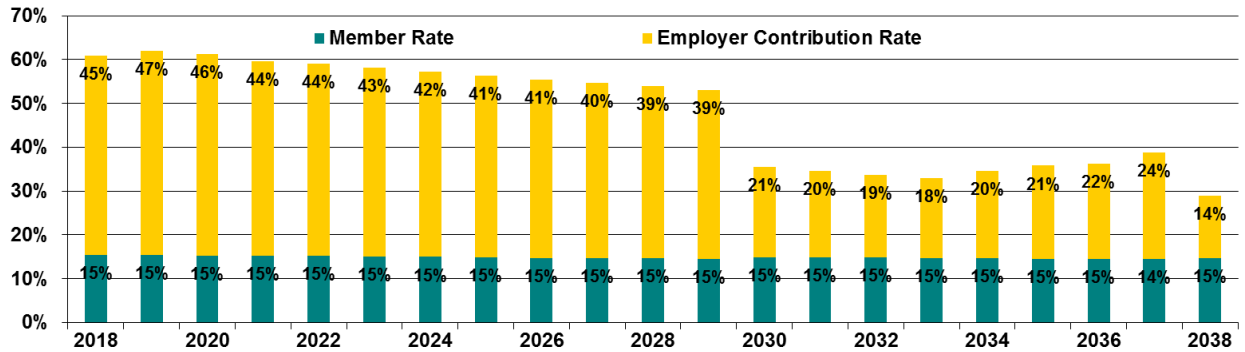


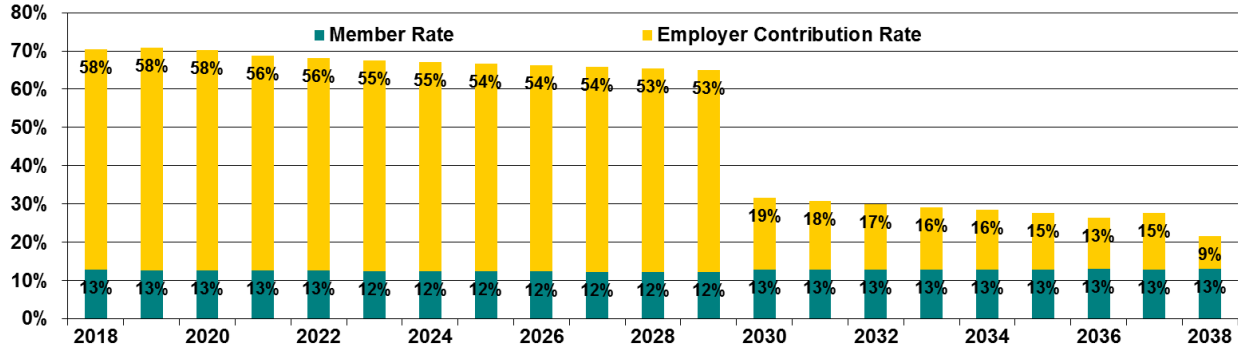
Chart I-5: Projection of Contributions, 7.00% Return Each Year – Novato FPD



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Chart I-6: Projection of Contributions, 7.00% Return Each Year – City of San Rafael



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 12 years to approach 100%, as can be expected based on the 12-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, Novato, and San Rafael currently have asset levels greater than their inactive liabilities.

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

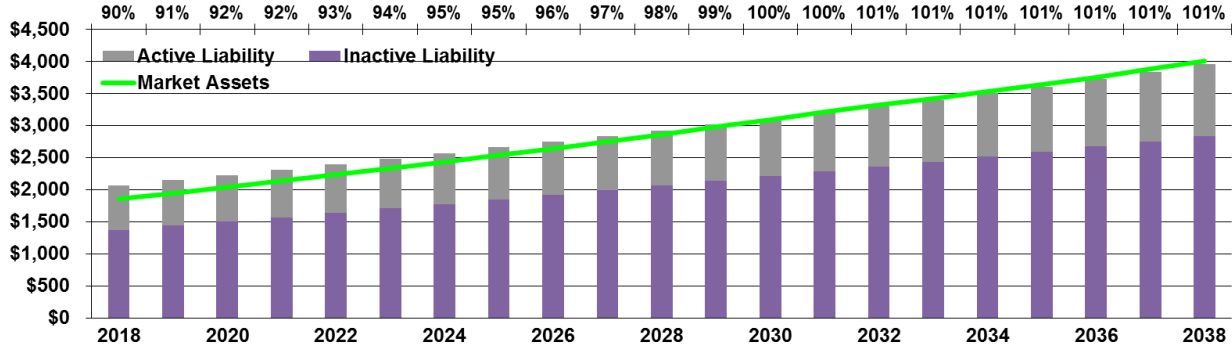


Chart I-8: Projection of Assets and Liabilities, 7.00% Return – Novato FPD
(\$ millions)

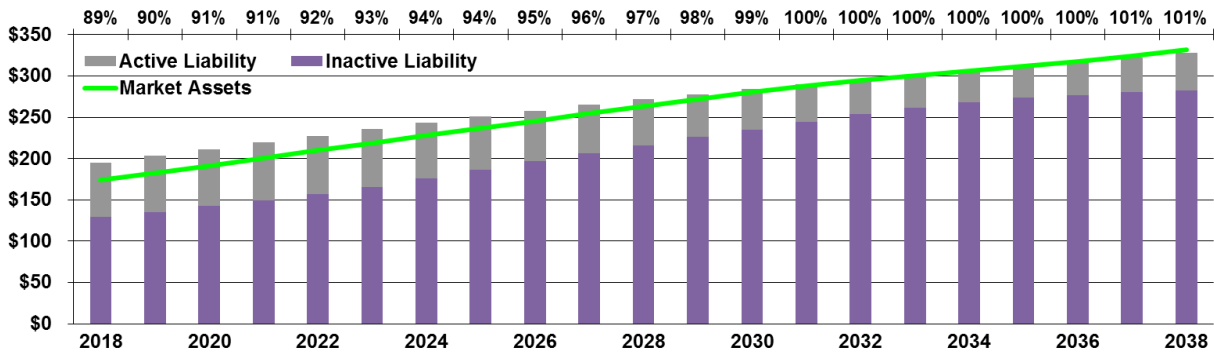
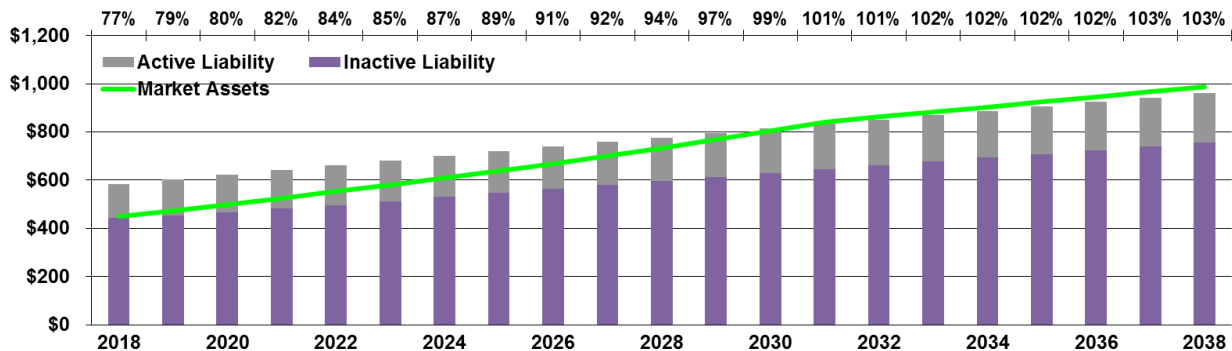


Chart I-9: Projection of Assets and Liabilities, 7.00% Return – City of San Rafael
(\$ millions)



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SECTION II – 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, 2017 and June 30, 2018,
- 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.

Table II-1 on the next page discloses asset value as of June 30, 2017 and June 30, 2018.

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

SECTION II – ASSETS

Table II-1 Statement of Assets at Market Value			
Assets:		June 30, 2017	June 30, 2018
Cash and Cash Equivalents	\$	46,809,883	\$ 31,491,712
Collateral held for Securities Loaned		<u>36,938,897</u>	<u>42,146,367</u>
Total Cash and Short Term Investments		83,748,780	73,638,079
Receivables:			
Contributions		6,141,593	3,823,704
Interest and Dividends		2,015,474	2,220,718
Due from Brokers for Securities Sold		3,147,080	1,164,332
Other Receivables		<u>513,475</u>	<u>396,149</u>
Total Receivables		11,817,622	7,604,903
Investments, at Fair Value:			
Domestic Fixed Income		339,793,320	374,675,426
International Fixed Income		62,120,201	63,128,698
Domestic Equities		740,704,272	863,910,598
International Equities		548,114,926	548,340,898
Private Equity		214,767,077	247,799,003
Real Estate		215,426,670	266,170,531
Real Assets		<u>137,628,960</u>	<u>110,306,759</u>
Total Investments		2,258,555,426	2,474,331,913
Other Assets:			
Capital Assets		5,459,603	4,986,167
Prepaid Insurance		<u>59,724</u>	<u>97,798</u>
Total Assets		2,359,641,155	2,560,658,860
Liabilities:			
Accounts Payable and Accrued Expenses		1,370,194	1,740,483
Due to Brokers for Securities Purchased		5,058,254	15,334,500
Rental Security Deposits		0	0
Retiree Payroll Payable		13,600	15,378
Obligations Under Securities Lending Program		<u>36,938,897</u>	<u>42,146,367</u>
Total Liabilities		43,380,945	59,236,728
Net Assets Held in Trust for Pension Benefits	\$	2,316,260,210	\$ 2,501,422,132

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

SECTION II – 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 II-2 below shows the components of changes in the Market Value of Assets during the fiscal years ending June 30, 2017 and June 30, 2018.

Table II-2 Changes in Market Values		
<u>Additions</u>	Fiscal Year ending <u>June 30, 2017</u>	Fiscal Year ending <u>June 30, 2018</u>
Contributions		
Employers' Contributions	\$ 77,502,945	\$ 78,754,476
Members' Contributions	28,053,775	28,628,627
Total Contributions	<u>105,556,720</u>	<u>107,383,103</u>
Investment Income		
Net Appreciation/(Depreciation) in		
Fair Value of Investments	231,386,683	202,684,595
Interest and Dividends	15,585,631	16,508,622
Real Estate Operating Income, net	11,543,744	13,921,217
Other Investment Income	<u>1,679,902</u>	<u>1,633,974</u>
Total Investment Income/(Loss)	260,195,960	234,748,408
Investment Expenses	<u>(12,035,614)</u>	<u>(13,093,197)</u>
Net Investment Income/(Loss)	248,160,346	221,655,211
Securities Lending Activities		
Securities Lending Income	436,387	909,662
Expenses from Securities Lending Activities	<u>(249,232)</u>	<u>(725,677)</u>
Net Securities Lending Income/(Loss)	187,155	183,985
Total Investment Income/(Loss)	248,347,501	221,839,196
Total Additions/(Declines)	<u>\$ 353,904,221</u>	<u>\$ 329,222,299</u>

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

SECTION II – ASSETS

Table II-2 Changes in Market Values (Continued)		
<u>Deductions</u>	<u>Fiscal Year ending June 30, 2017</u>	<u>Fiscal Year ending June 30, 2018</u>
Benefit payments	130,771,236	138,640,109
Refunds of Members' Contributions	1,165,826	1,216,563
Administrative Costs	3,555,663	3,343,486
Legal Costs & Litigation Settlement	494,196	484,563
Computer Expenses	209,075	214,827
Actuarial Expenses	145,257	160,829
Total Deductions	<u>136,341,253</u>	<u>144,060,377</u>
Net increase (Decrease)	217,562,968	185,161,922
Net Assets Held in Trust for Pension Benefits		
Beginning of Year	2,098,697,242	2,316,260,210
End of Year	2,316,260,210	2,501,422,132
Approximate Return (Net of Investment Expenses)*	11.9%	9.7%

*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 II – ASSETS

Historical Investment Performance

Table II-3 shows the historical annual asset returns on a market value basis, as well as in the increase in the Consumer Price Index (CPI) since 2002.

Table II-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*
2002	N/A	1.2%
2003	N/A	1.6%
2004	N/A	1.4%
2005	N/A	1.1%
2006	N/A	3.9%
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%
10-Year Compound Average	6.5%	2.4%
5-Year Compound Average	8.8%	3.1%

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

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

SECTION II – ASSETS

Asset Allocation by Valuation Subgroup

Table II-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 that are covered by the valuation assets. For the bottom portion, the funded ratio represents the total funded ratio for each group.

Table II-4						
Market Assets and Funding Ratios - Active Members Only						
Plan	Group	Assets 2017	Ratios 2017	Assets 2018	Ratios 2018	
County	County Misc	\$ 256,693,995	60.1%	\$ 300,652,700	69.9%	
	County Safety	114,107,363	63.8%	134,068,385	69.2%	
	Courts	16,946,631	65.6%	19,359,393	73.7%	
	South Marin Fire Misc	235,534	42.6%	258,160	100.0%	
	South Marin Fire Safety	13,547,308	62.5%	16,317,193	62.0%	
	Mosquito District	7,202,517	52.3%	8,465,225	67.5%	
	LAFCO	260,811	85.5%	167,409	100.0%	
	Tamalpais CSD	1,904,405	44.1%	2,379,443	64.5%	
	Marin City CSD	178,564	100.0%	249,214	96.4%	
Novato	Novato Misc	2,499,993	80.6%	2,805,074	81.2%	
	Novato Safety	38,309,616	66.3%	41,517,170	67.0%	
San Rafael	San Rafael Misc	(683,004)	(1.1%)	1,316,667	2.2%	
	San Rafael Safety	(4,043,527)	(5.4%)	6,015,211	7.3%	

Market Assets and Funding Ratios - Total					
County		\$ 1,719,856,571	86.8%	\$ 1,856,887,569	89.8%
Novato		163,285,073	89.1%	174,032,950	89.2%
San Rafael		415,746,275	74.6%	449,987,265	77.0%

MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018

SECTION III – 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 III-1 on the next page shows the present value of future benefits and Table III-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.

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

SECTION III – LIABILITIES

Table III-1					
Present Value of Benefits - Active Members Only					
Plan	Group	2017	2018		
County	County Misc Tier 1	\$ 12,927,246	\$ 9,227,337		
	County Misc Tier 2	19,078,936	19,008,378		
	County Misc Tier 3	457,953,542	441,740,994		
	County Misc Tier 3A	38,545,898	39,419,788		
	County Misc Tier 4	34,704,460	41,089,202		
	County Misc Tier 5 (PEPRA)	90,937,300	120,313,430		
	County Safety Tier 1A	2,953,601	3,013,364		
	County Safety Tier 2A	42,679,523	43,390,319		
	County Safety Tier 2B	212,021,157	221,509,310		
	County Safety Tier 3 (PEPRA)	32,369,301	40,475,238		
	Courts Tier 1	1,344,661	1,374,242		
	Courts Tier 2	293,143	308,997		
	Courts Tier 3	30,299,283	29,522,804		
	Courts Tier 4	1,251,743	1,818,858		
	Courts Tier 5 (PEPRA)	2,953,123	3,630,240		
	South Marin Fire Misc Tier 1	572,438	0		
	South Marin Fire Misc Tier 2 (PEPRA)	601,153	839,763		
	South Marin Fire Safety Tier 1	18,671,771	21,330,950		
	South Marin Fire Safety Tier 2	15,759,029	17,960,205		
	South Marin Fire Safety Tier 2A	1,180,848	1,300,484		
	South Marin Fire Safety Tier 3A (PEPRA)	4,318,021	4,388,012		
	Mosquito District Tier 1	19,306,958	17,713,826		
	Mosquito District Tier 2 (PEPRA)	359,817	768,644		
	LAFCO Tier 3	771,298	324,366		
	LAFCO Tier 4 (PEPRA)	123,850	0		
	Tamalpais CSD Tier 1	5,495,431	4,833,727		
	Tamalpais CSD Tier 2 (PEPRA)	440,664	869,952		
	Marin City CSD Tier 1	286,697	505,957		
	Marin City CSD Tier 2 (PEPRA)	607,505	600,857		
	Novato	Novato Misc Tier 1	4,481,494	4,701,904	
		Novato Misc Tier 2A (PEPRA)	354,332	402,477	
		Novato Safety Tier 1	72,600,892	74,685,228	
		Novato Safety Tier 2	5,568,508	6,093,380	
Novato Safety Tier 3 (PEPRA)		2,976,554	3,312,412		
Novato Safety Tier 3A (PEPRA)		0	1,270,952		
San Rafael	San Rafael Misc Tier 1	81,065,736	75,523,438		
	San Rafael Misc Tier 2	4,877,336	5,391,951		
	San Rafael Misc Tier 3 (PEPRA)	7,489,943	11,549,087		
	San Rafael Fire Tier 1	48,164,238	50,511,347		
	San Rafael Police Tier 1	53,820,718	54,642,023		
	San Rafael Fire Tier 2	9,614,749	10,753,352		
	San Rafael Police Tier 2	3,367,090	4,143,263		
	San Rafael Safety Tier 3 (PEPRA)	12,077,511	17,008,993		

Total Present Value of Benefits - Active and Inactive Members		
County	\$ 2,357,587,839	\$ 2,462,249,691
Novato	208,457,244	220,177,059
San Rafael	640,950,127	672,178,841



**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

SECTION III – LIABILITIES

Table III-2				
Actuarial Liabilities - Active Members Only				
Plan	Group	2017	2018	
County	County Misc Tier 1	\$ 12,260,710	\$ 8,762,103	
	County Misc Tier 2	16,348,263	16,520,741	
	County Misc Tier 3	353,196,835	344,558,190	
	County Misc Tier 3A	18,196,642	19,898,606	
	County Misc Tier 4	9,865,742	12,875,168	
	County Misc Tier 5 (PEPRA)	17,578,956	27,426,534	
	County Safety Tier 1A	2,953,601	3,013,364	
	County Safety Tier 2A	29,977,836	31,042,178	
	County Safety Tier 2B	141,432,387	152,407,792	
	County Safety Tier 3 (PEPRA)	4,435,561	7,181,259	
	Courts Tier 1	1,300,317	1,328,771	
	Courts Tier 2	215,905	234,974	
	Courts Tier 3	23,171,330	22,988,063	
	Courts Tier 4	782,409	997,244	
	Courts Tier 5 (PEPRA)	380,034	705,432	
	South Marin Fire Misc Tier 1	389,081	0	
	South Marin Fire Misc Tier 2 (PEPRA)	164,233	258,160	
	South Marin Fire Safety Tier 1	14,361,323	16,981,020	
	South Marin Fire Safety Tier 2	6,562,660	8,194,705	
	South Marin Fire Safety Tier 2A	136,299	216,338	
	South Marin Fire Safety Tier 3A (PEPRA)	630,788	912,088	
	Mosquito District Tier 1	13,737,678	12,471,827	
	Mosquito District Tier 2 (PEPRA)	35,559	70,067	
	LAFCO Tier 3	286,337	167,409	
	LAFCO Tier 4 (PEPRA)	18,694	0	
	Tamalpais CSD Tier 1	4,259,571	3,581,803	
	Tamalpais CSD Tier 2 (PEPRA)	61,978	105,077	
	Marin City CSD Tier 1	115,671	177,816	
	Marin City CSD Tier 2 (PEPRA)	62,893	80,751	
	Novato	Novato Misc Tier 1	3,050,208	3,369,151
		Novato Misc Tier 2A (PEPRA)	52,970	85,402
		Novato Safety Tier 1	54,883,093	58,186,033
		Novato Safety Tier 2	2,290,397	2,843,681
Novato Safety Tier 3 (PEPRA)		583,534	816,611	
Novato Safety Tier 3A (PEPRA)		0	74,274	
San Rafael	San Rafael Misc Tier 1	59,636,208	56,101,393	
	San Rafael Misc Tier 2	1,047,403	1,469,796	
	San Rafael Misc Tier 3 (PEPRA)	1,073,545	1,895,288	
	San Rafael Fire Tier 1	32,428,102	35,162,135	
	San Rafael Police Tier 1	38,231,443	40,243,671	
	San Rafael Fire Tier 2	2,155,392	2,894,816	
	San Rafael Police Tier 2	961,022	1,248,192	
	San Rafael Safety Tier 3 (PEPRA)	1,588,372	2,463,190	

Total Accrued Liabilities - Active and Inactive Members		
County	\$ 1,981,698,735	\$ 2,068,127,927
Novato	183,335,666	195,085,858
San Rafael	557,594,293	584,133,868

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

SECTION IV – CONTRIBUTIONS

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 (20 years remaining as of the current valuation, reduced from 21 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 (12 years as of June 30, 2018), 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 \$5.065 million per year as of June 30, 2018, increasing at 3% per annum. The administrative expenses are split between employees and employers based on their share of the overall contributions.

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

SECTION IV – CONTRIBUTIONS

Table IV-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 IV-1 Development of the Net Employer Contribution Rates as of June 30, 2018 for FYE 2020						
	June 30, 2017			June 30, 2018		
	County	Novato	San Rafael	County	Novato	San Rafael
1. Total Normal Cost Rate	22.91%	39.31%	29.88%	22.72%	38.53%	29.12%
2. Member Contribution Rate	<u>10.71%</u>	<u>14.65%</u>	<u>12.48%</u>	<u>10.62%</u>	<u>14.76%</u>	<u>12.19%</u>
3. Employer Normal Cost Rate (1-2)	12.20%	24.66%	17.40%	12.10%	23.77%	16.93%
4. UAL Amortization	11.95%	22.12%	41.50%	10.26%	19.46%	37.99%
5. Administrative Expense Rate	<u>1.17%</u>	<u>2.27%</u>	<u>2.86%</u>	<u>1.12%</u>	<u>2.17%</u>	<u>2.75%</u>
6. Final Employer Contribution Rate (3+4+5)	25.32%	49.05%	61.76%	23.48%	45.40%	57.67%

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

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

SECTION IV – CONTRIBUTIONS

Table IV-2 Development of Amortization Payment For the June 30, 2018 Actuarial Valuation								
Type of Base	Date Established	Initial Amount	Initial Amortization Years	June 30, 2018 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	\$ 156,463,117	20	N/A	100%	\$ 11,345,817
2. County - Initial UAL	6/30/2013	188,358,828	17	169,103,293	12	N/A	100%	17,820,467
3. County - (Gain)/Loss Base	6/30/2014	(223,502,748)	24	(253,193,240)	20	5	100%	(19,756,336)
4. County - Assumption Changes	6/30/2014	99,117,401	22	103,919,449	18	3	100%	8,433,430
5. County - (Gain)/Loss Base	6/30/2015	36,267,023	24	40,746,848	21	5	80%	2,486,441
6. County - (Gain)/Loss Base	6/30/2016	62,321,452	24	68,332,606	22	5	60%	3,106,019
7. County - (Gain)/Loss Base	6/30/2017	(56,402,352)	24	(59,438,703)	23	5	40%	(1,815,855)
8. County - Assumption Changes	6/30/2017	27,391,858	22	28,598,153	21	3	67%	1,416,210
9. County - (Gain)/Loss Base	6/30/2018	(45,161,446)	24	(45,161,446)	24	5	20%	(705,805)
10. County - Audit Changes	6/30/2018	1,870,282	24	1,870,282	24	5	20%	29,230
11. Novato - 2009 Extraordinary Loss	6/30/2009	14,765,994	30	15,798,058	20	N/A	100%	1,145,586
12. Novato - Initial UAL	6/30/2013	17,008,202	17	15,269,489	12	N/A	100%	1,609,132
13. Novato - (Gain)/Loss Base	6/30/2014	(22,114,107)	24	(25,051,783)	20	5	100%	(1,954,758)
14. Novato - Assumption Changes	6/30/2014	6,230,650	22	6,532,513	18	3	100%	530,137
15. Novato - (Gain)/Loss Base	6/30/2015	2,876,813	24	3,232,167	21	5	80%	197,232
16. Novato - (Gain)/Loss Base	6/30/2016	6,441,310	24	7,062,600	22	5	60%	321,026
17. Novato - (Gain)/Loss Base	6/30/2017	(7,837,057)	24	(8,258,955)	23	5	40%	(252,311)
18. Novato - Assumption Changes	6/30/2017	4,583,960	22	4,785,830	21	3	67%	236,999
19. Novato - (Gain)/Loss Base	6/30/2018	1,668,937	24	1,668,937	24	5	20%	26,083
20. Novato - Audit Changes	6/30/2018	14,052	24	14,052	24	5	20%	220
21. San Rafael - 2009 Extraordinary Loss	6/30/2009	34,997,031	30	37,443,138	20	N/A	100%	2,715,164
22. San Rafael - Initial UAL	6/30/2013	124,305,953	17	111,598,414	12	N/A	100%	11,760,479
23. San Rafael - (Gain)/Loss Base	6/30/2014	(54,710,285)	24	(61,978,093)	20	5	100%	(4,836,069)
24. San Rafael - Assumption Changes	6/30/2014	30,608,707	22	32,091,640	18	3	100%	2,604,350
25. San Rafael - (Gain)/Loss Base	6/30/2015	8,187,631	24	9,198,995	21	5	80%	561,338
26. San Rafael - (Gain)/Loss Base	6/30/2016	18,955,168	24	20,783,470	22	5	60%	944,700
27. San Rafael - (Gain)/Loss Base	6/30/2017	(19,744,705)	24	(20,807,637)	23	5	40%	(635,674)
28. San Rafael - Assumption Changes	6/30/2017	8,825,862	22	9,214,539	21	3	67%	456,313
29. San Rafael - (Gain)/Loss Base	6/30/2018	(3,777,871)	24	(3,777,871)	24	5	20%	(59,042)
30. San Rafael - Audit Changes	6/30/2018	380,007	24	380,007	24	5	20%	5,939
Total				\$ 366,439,869				\$ 37,736,463

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.



**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

SECTION IV – CONTRIBUTIONS

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

Table IV-3 Development of the County Misc/Safety Member Contribution Rates as of June 30, 2018 for FYE 2020							
	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	21.11%	20.35%	19.88%	21.40%	20.52%	17.65%	19.26%
B. Member Contribution Rate (Excluding Admin Expense Load)	<u>1.96%</u>	<u>8.82%</u>	<u>9.05%</u>	<u>9.64%</u>	<u>8.58%</u>	<u>8.79%</u>	8.95%
C. Employer Normal Cost Rate (A-B)	19.15%	11.53%	10.83%	11.76%	11.94%	8.86%	10.31%
D. UAL Amortization Rate	8.69%	8.69%	8.69%	8.69%	8.69%	8.69%	8.69%
E. Administrative Expense Rate	<u>1.39%</u>	<u>1.01%</u>	<u>0.98%</u>	<u>1.02%</u>	<u>1.03%</u>	<u>0.88%</u>	0.95%
F. Net June 30, 2018 Contribution Rate (C+D+E)	29.23%	21.23%	20.50%	21.47%	21.66%	18.43%	19.95%

	County Safety Tier 2A	County Safety Tier 2B	County Safety Tier 3	County Safety	County Misc / Safety
A. Total Normal Cost Rate	35.22%	36.08%	27.78%	34.04%	22.26%
B. Member Contribution Rate (Excluding Admin Expense Load)	<u>15.42%</u>	<u>18.57%</u>	<u>13.75%</u>	<u>16.93%</u>	10.56%
C. Employer Normal Cost Rate (A-B)	19.80%	17.51%	14.03%	17.11%	11.70%
D. UAL Amortization Rate	15.47%	15.47%	15.47%	15.47%	10.07%
E. Administrative Expense Rate	<u>1.77%</u>	<u>1.65%</u>	<u>1.48%</u>	<u>1.63%</u>	1.09%
F. Net June 30, 2018 Contribution Rate (C+D+E)	37.04%	34.63%	30.98%	34.21%	22.86%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION IV – CONTRIBUTIONS

**Table IV-4
Development of the County Special Districts Contribution Rates as of June 30, 2018 for FYE 2020**

	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		21.18%	25.88%	21.30%	24.69%	25.00%	25.17%	17.67%
B. Member Contribution Rate (Excluding Admin Expense Load)		<u>10.48%</u>	<u>11.17%</u>	<u>10.48%</u>	<u>11.57%</u>	<u>10.48%</u>	<u>9.98%</u>	<u>10.48%</u>
C. Employer Normal Cost Rate (A-B)		10.70%	14.71%	10.82%	13.12%	14.52%	15.19%	7.19%
D. UAL Amortization Rate		5.27%	15.69%	15.69%	3.20%	3.20%	15.22%	15.22%
E. Administrative Expense Rate		<u>0.80%</u>	<u>1.52%</u>	<u>1.33%</u>	<u>0.82%</u>	<u>0.89%</u>	<u>1.52%</u>	<u>1.12%</u>
F. Net June 30, 2018 Contribution Rate (C+D+E)		16.77%	31.92%	27.84%	17.14%	18.61%	31.93%	23.53%

	LAFCO Tier 3	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	21.89%	41.61%	43.75%	39.78%	33.14%	33.21%	22.72%
B. Member Contribution Rate (Excluding Admin Expense Load)	<u>8.12%</u>	<u>15.19%</u>	<u>14.96%</u>	<u>12.82%</u>	<u>16.57%</u>	12.89%	10.62%
C. Employer Normal Cost Rate (A-B)	13.77%	26.42%	28.79%	26.96%	16.57%	20.32%	12.10%
D. UAL Amortization Rate	7.75%	10.71%	10.71%	10.71%	10.71%	12.12%	10.26%
E. Administrative Expense Rate	<u>1.08%</u>	<u>1.86%</u>	<u>1.98%</u>	<u>1.89%</u>	<u>1.37%</u>	1.63%	1.12%
F. Net June 30, 2018 Contribution Rate (C+D+E)	22.60%	38.99%	41.48%	39.56%	28.65%	34.07%	23.48%

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

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION IV – CONTRIBUTIONS

**Table IV-5
Development of the Courts and Novato Contribution Rates as of June 30, 2018 for FYE 2020**

	Courts Tier 1	Courts Tier 2	Courts Tier 3	Courts Tier 4	Courts Tier 5	Courts Total				
A. Total Normal Cost Rate	17.51%	16.69%	19.60%	23.22%	17.91%	19.37%				
B. Member Contribution Rate (Excluding Admin Expense Load)	<u>0.00%</u>	<u>7.88%</u>	<u>8.86%</u>	<u>10.33%</u>	<u>8.79%</u>	8.83%				
C. Employer Normal Cost Rate (A-B)	17.51%	8.81%	10.74%	12.89%	9.12%	10.54%				
D. UAL Amortization Rate	12.65%	12.65%	12.65%	12.65%	12.65%	12.65%				
E. Administrative Expense Rate	<u>1.51%</u>	<u>1.08%</u>	<u>1.17%</u>	<u>1.28%</u>	<u>1.09%</u>	1.16%				
F. Net June 30, 2018 Contribution Rate (C+D+E)	31.67%	22.54%	24.56%	26.82%	22.86%	24.35%				
	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	23.07%	19.97%	22.49%	41.29%	44.14%	32.31%	27.67%	40.30%	38.53%	
B. Member Contribution Rate (Excluding Admin Expense Load)	<u>10.00%</u>	<u>8.79%</u>	<u>9.79%</u>	<u>15.26%</u>	<u>15.50%</u>	<u>16.16%</u>	<u>13.75%</u>	<u>15.32%</u>	14.76%	
C. Employer Normal Cost Rate (A-B)	13.07%	11.18%	12.70%	26.03%	28.64%	16.15%	13.92%	24.98%	23.77%	
D. UAL Amortization Rate	6.02%	6.02%	6.02%	20.94%	20.94%	20.94%	20.94%	20.94%	19.46%	
E. Administrative Expense Rate	<u>0.96%</u>	<u>0.86%</u>	<u>0.94%</u>	<u>2.35%</u>	<u>2.48%</u>	<u>1.86%</u>	<u>1.75%</u>	<u>2.30%</u>	2.17%	
F. Net June 30, 2018 Contribution Rate (C+D+E)	20.05%	18.06%	19.66%	49.32%	52.06%	38.95%	36.61%	48.22%	45.40%	

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION IV – CONTRIBUTIONS

Table IV-6 Development of the San Rafael Contribution Rates as of June 30, 2018 for FYE 2020							
	San Rafael		San Rafael		San Rafael		<i>San Rafael</i>
	Misc Tier 1	Misc Tier 2	Misc Tier 3			<i>Misc</i>	
A. Total Normal Cost Rate	27.39%	22.94%	16.72%			23.41%	
B. Member Contribution Rate (Excluding Admin Expense Load)	<u>11.76%</u>	<u>8.30%</u>	<u>8.79%</u>			10.47%	
C. Employer Normal Cost Rate (A-B)	15.63%	14.64%	7.93%			12.94%	
D. UAL Amortization Rate	32.87%	32.87%	32.87%			32.87%	
E. Administrative Expense Rate	<u>2.43%</u>	<u>2.38%</u>	<u>2.04%</u>			2.30%	
F. Net June 30, 2018 Contribution Rate (C+D+E)	50.93%	49.89%	42.84%			48.11%	
	San Rafael	San Rafael	San Rafael	San Rafael	San Rafael	<i>San Rafael</i>	<i>San Rafael</i>
	Fire Tier 1	Police Tier 1	Fire Tier 2	Police Tier 2	Safety Tier 3	<i>Safety</i>	<i>Total</i>
A. Total Normal Cost Rate	38.40%	37.16%	34.17%	36.10%	26.85%	34.87%	29.12%
B. Member Contribution Rate (Excluding Admin Expense)	<u>14.64%</u>	<u>14.08%</u>	<u>12.24%</u>	<u>13.34%</u>	<u>13.75%</u>	<u>13.86%</u>	12.19%
C. Employer Normal Cost Rate (A-B)	23.76%	23.08%	21.93%	22.76%	13.10%	21.01%	16.93%
D. UAL Amortization Rate	43.21%	43.21%	43.21%	43.21%	43.21%	43.21%	37.99%
E. Administrative Expense Rate	<u>3.36%</u>	<u>3.32%</u>	<u>3.26%</u>	<u>3.31%</u>	<u>2.82%</u>	<u>3.22%</u>	2.75%
F. Net June 30, 2018 Contribution Rate (C+D+E)	70.33%	69.61%	68.40%	69.28%	59.13%	67.44%	57.67%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION IV – CONTRIBUTIONS

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, 2018. The normal cost rates for these Tiers are based on the pooled demographic profiles of the employers with current active PEPRA members.

Table IV-7 Development of Contribution Rates for New Tiers with No Active Members as of June 30, 2018 for FYE 2020			
	LAFCO Tier 4	South Marin Fire Safety Tier 3	Novato Misc Tier 2
A. Total Normal Cost Rate	17.57%	32.31%	20.96%
B. Member Contribution Rate (Excluding Admin Expense Load)	<u>8.79%</u>	<u>16.16%</u>	<u>10.48%</u>
C. Employer Normal Cost Rate (A-B)	8.78%	16.15%	10.48%
D. UAL Amortization Rate	7.75%	10.71%	6.02%
E. Administrative Expense Rate	<u>0.83%</u>	<u>1.35%</u>	<u>0.83%</u>
F. Net June 30, 2018 Contribution Rate (C+D+E)	17.36%	28.21%	17.33%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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SECTION IV – CONTRIBUTIONS

Table IV-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, 2018.

Table IV-8				
Plan	Group	# of Active Members	2017	2018
County	County Misc Tier 1	7	30.96%	29.23%
	County Misc Tier 2	39	22.86%	21.23%
	County Misc Tier 3	758	21.93%	20.50%
	County Misc Tier 3A	99	22.92%	21.47%
	County Misc Tier 4	143	22.97%	21.66%
	County Misc Tier 5 (PEPRA)	691	20.06%	18.43%
	County Misc	1,737	21.69%	19.95%
	County Safety Tier 1A	1	18.77%	16.25%
	County Safety Tier 2A	52	39.73%	37.04%
	County Safety Tier 2B	203	37.06%	34.63%
	County Safety Tier 3 (PEPRA)	102	33.09%	30.98%
	County Safety	358	36.82%	34.21%
	County Misc/Safety	2,095	24.80%	22.86%
	Courts Tier 1	1	33.65%	31.67%
	Courts Tier 2	1	24.65%	22.54%
	Courts Tier 3	64	26.66%	24.56%
	Courts Tier 4	5	28.48%	26.82%
	Courts Tier 5 (PEPRA)	27	25.46%	22.86%
	Courts	98	26.60%	24.35%
	South Marin Fire Misc Tier 1	0	N/A	N/A
	South Marin Fire Misc Tier 2 (PEPRA)	3	18.12%	16.77%
	South Marin Fire Safety Tier 1	15	40.03%	38.99%
	South Marin Fire Safety Tier 2	24	43.43%	41.48%
	South Marin Fire Safety Tier 2A	2	39.51%	39.56%
	South Marin Fire Safety Tier 3A (PEPRA)	9	28.82%	28.65%
	Mosquito District Tier 1	28	33.22%	31.93%
	Mosquito District Tier 2 (PEPRA)	4	25.71%	23.53%
	LAFCO Tier 3	1	18.32%	22.60%
	LAFCO Tier 4 (PEPRA)	0	N/A	N/A
	Tamalpais CSD Tier 1	8	35.21%	31.92%
	Tamalpais CSD Tier 2 (PEPRA)	5	30.14%	27.84%
	Marin City CSD Tier 1	3	19.57%	17.14%
	Marin City CSD Tier 2 (PEPRA)	4	18.00%	18.61%
Special Districts	106	35.28%	34.07%	
Total County	2,299	25.32%	23.48%	
Novato	Novato Misc Tier 1	6	20.11%	20.05%
	Novato Misc Tier 2A (PEPRA)	3	18.07%	18.06%
	Novato Safety Tier 1	49	53.25%	49.32%
	Novato Safety Tier 2	7	54.99%	52.06%
	Novato Safety Tier 3 (PEPRA)	6	41.42%	38.95%
	Novato Safety Tier 3A (PEPRA)	3	39.08%	36.61%
Total Novato	74	49.05%	45.40%	
San Rafael	San Rafael Misc Tier 1	118	53.34%	50.93%
	San Rafael Misc Tier 2	17	52.40%	49.89%
	San Rafael Misc Tier 3 (PEPRA)	83	45.39%	42.84%
	San Rafael Misc	218	51.47%	48.11%
	San Rafael Fire Tier 1	37	74.94%	70.33%
	San Rafael Police Tier 1	42	74.30%	69.61%
	San Rafael Fire Tier 2	15	72.55%	68.40%
	San Rafael Police Tier 2	6	73.49%	69.28%
	San Rafael Safety Tier 3 (PEPRA)	41	63.06%	59.13%
	San Rafael Safety	141	72.43%	67.44%
Total San Rafael	359	61.76%	57.67%	

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

The data for this valuation was provided by MCERA as of June 30, 2018. Cheiron did not audit any of the data; however, it was reviewed to ensure that it complies with generally accepted actuarial standards.

Data pertaining to active and inactive Members and their beneficiaries as of the valuation date was supplied by the Plan Administrator on electronic media. As is usual in studies of this type, Member data was neither verified nor audited.

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

Participant Data as of June 30, 2018: County of Marin														
	Miscellaneous		Marin County Safety		Total		Miscellaneous		Marin Special Districts Safety		Total		Total County and Special Districts	
	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018
Active Participants														
Number	1,700	1,737	355	358	2,055	2,095	157	154	51	50	208	204	2,263	2,299
Average Age	48.51	48.09	40.51	40.80	47.13	46.84	49.93	49.86	42.14	42.85	48.02	48.14	47.21	46.96
Average Service	10.31	9.94	10.88	11.28	10.40	10.17	12.15	11.95	8.74	9.82	11.31	11.43	10.49	10.28
Average Pay*	\$86,629	\$89,573	\$106,754	\$110,577	\$90,105	\$93,162	\$77,901	\$79,112	\$104,088	\$114,215	\$84,322	\$87,716	\$89,574	\$92,679
Service Retired														
Number	1,481	1,544	251	261	1,732	1,805	123	134	24	28	147	162	1,879	1,967
Average Age	72.41	72.44	63.94	64.30	71.18	71.26	67.86	68.08	63.38	63.15	67.13	67.23	70.86	70.93
Average Total Benefit*	\$36,565	\$37,648	\$69,425	\$69,084	\$41,327	\$42,194	\$37,330	\$38,058	\$74,662	\$68,112	\$43,425	\$43,252	\$41,491	\$42,281
Beneficiaries														
Number	264	270	65	69	329	339	13	15	10	10	23	25	352	364
Average Age	74.76	74.84	69.21	69.04	73.67	73.66	65.49	66.86	65.59	66.59	65.54	66.75	73.13	73.18
Average Total Benefit*	\$23,993	\$25,134	\$39,304	\$41,203	\$27,018	\$28,404	\$14,893	\$17,215	\$41,945	\$43,240	\$26,655	\$27,625	\$26,994	\$28,351
Duty Disabled														
Number	86	85	105	104	191	189	4	4	17	17	21	21	212	210
Average Age	67.39	68.25	62.26	63.19	64.57	65.46	66.11	67.11	65.31	66.31	65.46	66.46	64.66	65.56
Average Total Benefit*	\$36,545	\$37,561	\$52,215	\$53,655	\$45,159	\$46,417	\$20,975	\$21,530	\$54,097	\$55,720	\$47,788	\$49,208	\$45,420	\$46,696
Ordinary Disabled														
Number	29	30	6	7	35	37	2	2	1	1	3	3	38	40
Average Age	70.43	70.27	56.58	57.85	68.06	67.92	62.85	63.85	57.93	58.93	61.21	62.21	67.52	67.49
Average Total Benefit*	\$21,330	\$21,220	\$51,798	\$63,339	\$26,553	\$29,188	\$24,867	\$25,364	\$71,260	\$73,398	\$40,331	\$41,375	\$27,641	\$30,102
Total In Pay														
Number	1,860	1,929	427	441	2,287	2,370	142	155	52	56	194	211	2,481	2,581
Average Age	72.48	72.56	64.23	64.68	70.94	71.09	67.53	67.88	64.33	64.65	66.67	67.02	70.60	70.76
Average Total Benefit*	\$34,542	\$35,637	\$60,360	\$60,992	\$39,362	\$40,355	\$34,639	\$35,450	\$61,582	\$60,003	\$41,861	\$41,967	\$39,558	\$40,487
Terminated Vested														
Number	194	188	18	20	212	208	20	18	2	2	22	20	234	228
Average Age	49.70	50.14	45.06	45.10	49.31	49.66	45.71	44.90	50.70	51.70	46.16	45.58	49.01	49.30
Average Service	7.64	7.65	7.50	7.37	7.63	7.62	8.65	9.16	3.10	3.10	8.14	8.55	7.68	7.70
Transfers														
Number	191	187	64	59	255	246	23	23	14	11	37	34	292	280
Average Age	49.86	49.96	45.23	45.55	48.70	48.90	50.79	50.99	46.42	45.26	49.14	49.14	48.76	48.93
Average Service	5.15	4.98	4.49	4.15	4.98	4.78	4.87	4.86	5.11	5.31	4.96	5.00	4.98	4.81
Total Inactive														
Number	385	375	82	79	467	454	43	41	16	13	59	54	526	508
Average Age	49.78	50.05	45.19	45.44	48.98	49.25	48.43	48.32	46.96	46.25	48.03	47.82	48.87	49.10
Average Service	6.40	6.32	5.15	4.97	6.18	6.08	6.63	6.75	4.86	4.97	6.15	6.32	6.18	6.11

*All payroll and benefit figures shown are annual.



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

Participant Data as of June 30, 2018: 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
	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018
Active Participants												
Number	10	7	43	39	833	758	108	99	136	143	570	691
Average Age	66.06	67.52	63.12	63.81	53.63	53.91	47.90	48.26	45.43	46.12	40.49	41.00
Average Service	34.22	37.15	19.59	20.07	16.46	17.02	7.50	8.36	3.95	4.57	2.24	2.67
Average Pay*	\$116,854	\$121,642	\$76,514	\$82,402	\$93,693	\$96,793	\$94,120	\$99,283	\$88,082	\$95,326	\$74,772	\$79,151
Service Retired												
Number	535	514	247	239	692	776	5	8	1	3	1	4
Average Age	77.68	78.21	77.68	78.25	66.54	66.97	62.14	64.36	62.47	66.19	0.00	66.23
Average Total Benefit*	\$49,403	\$51,576	\$22,568	\$23,398	\$31,888	\$33,297	\$11,075	\$14,813	\$11,253	\$12,341	\$0	\$8,105
Beneficiaries												
Number	167	161	48	50	49	59	0	0	0	0	0	0
Average Age	79.77	80.02	71.93	72.82	60.47	62.41	0.00	0.00	0.00	0.00	0.00	0.00
Average Total Benefit*	\$27,495	\$29,237	\$14,590	\$15,013	\$21,268	\$22,513	\$0	\$0	\$0	\$0	\$0	\$0
Duty Disabled												
Number	22	22	29	28	35	35	0	0	0	0	0	0
Average Age	73.89	75.03	66.62	67.86	63.94	64.29	0.00	0.00	0.00	0.00	0.00	0.00
Average Total Benefit*	\$40,021	\$41,236	\$28,619	\$29,461	\$40,927	\$41,731	\$0	\$0	\$0	\$0	\$0	\$0
Ordinary Disabled												
Number	11	10	11	11	7	8	0	1	0	0	0	0
Average Age	73.09	74.37	71.68	72.68	64.31	62.79	0.00	0.00	0.00	0.00	0.00	0.00
Average Total Benefit*	\$24,542	\$25,800	\$18,034	\$18,395	\$21,463	\$19,442	\$0	\$0	\$0	\$0	\$0	\$0
Total In Pay												
Number	735	707	335	328	783	878	5	9	1	3	1	4
Average Age	77.98	78.47	75.70	76.35	66.02	66.52	62.14	57.21	62.47	66.19	0.00	66.23
Average Total Benefit*	\$43,773	\$45,803	\$21,800	\$22,470	\$31,534	\$32,782	\$11,075	\$13,167	\$11,253	\$12,341	\$0	\$8,105
Terminated Vested												
Number	3	2	3	3	160	151	19	19	7	10	2	3
Average Age	70.63	76.35	62.50	63.50	50.12	50.85	42.06	42.87	44.70	42.45	55.63	55.39
Average Service	4.77	5.95	5.42	5.42	8.10	8.22	6.28	6.07	2.63	3.15	8.64	7.52
Transfers												
Number	1	2	7	5	158	148	12	12	5	4	8	16
Average Age	65.12	63.01	59.37	59.06	50.55	50.88	44.92	45.92	43.20	41.33	37.74	42.14
Average Service	0.25	0.46	2.41	2.97	5.68	5.64	3.76	3.76	1.75	1.53	1.86	1.88
Total Inactive												
Number	4	4	10	8	318	299	31	31	12	14	10	19
Average Age	69.26	69.68	60.31	60.73	50.33	50.87	43.16	44.05	44.07	42.13	41.32	44.23
Average Service	3.64	3.20	3.32	3.89	6.90	6.94	5.30	5.17	2.27	2.69	3.21	2.77

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2018: County of Marin										
	Tier 1A Safety		Tier 2A Safety		Tier 1B Safety		Tier 2B Safety		Tier 3 Safety	
	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018
Active Participants										
Number	1	1	55	52	0	0	208	203	91	102
Average Age	69.91	70.91	46.91	47.23	0.00	0.00	43.27	43.84	30.01	31.18
Average Service	32.31	33.31	13.67	14.34	0.00	0.00	13.81	14.58	2.24	2.95
Average Pay*	\$222,314	\$236,212	\$102,206	\$106,261	\$0	\$0	\$118,265	\$122,756	\$81,919	\$87,308
Service Retired										
Number	66	64	29	32	31	30	125	135	0	0
Average Age	73.95	74.69	65.45	65.96	63.91	65.08	58.32	58.81	0.00	0.00
Average Total Benefit*	\$78,520	\$80,920	\$44,108	\$43,402	\$99,146	\$102,031	\$63,126	\$62,239	\$0	\$0
Beneficiaries										
Number	45	45	5	6	3	4	12	14	0	0
Average Age	74.68	74.86	59.37	61.49	52.62	55.78	56.95	57.35	0.00	0.00
Average Total Benefit*	\$41,946	\$43,225	\$36,139	\$34,093	\$14,415	\$26,856	\$36,941	\$41,847	\$0	\$0
Duty Disabled										
Number	38	37	26	26	6	6	35	35	0	0
Average Age	73.09	74.16	57.91	58.91	62.01	63.01	53.77	54.80	0.00	0.00
Average Total Benefit*	\$52,591	\$54,587	\$38,510	\$39,280	\$109,567	\$112,854	\$52,156	\$53,199	\$0	\$0
Ordinary Disabled										
Number	1	1	2	2	0	0	3	4	0	0
Average Age	70.72	71.72	55.37	56.37	0.00	0.00	52.68	55.13	0.00	0.00
Average Total Benefit*	\$25,201	\$25,957	\$30,693	\$31,307	\$0	\$0	\$74,733	\$88,701	\$0	\$0
Total In Pay										
Number	150	147	62	66	40	40	175	188	0	0
Average Age	73.93	74.59	61.47	62.48	62.78	63.84	57.22	57.87	0.00	0.00
Average Total Benefit*	\$60,624	\$62,379	\$40,685	\$40,566	\$94,354	\$96,137	\$59,335	\$59,600	\$0	\$0
Terminated Vested										
Number	0	0	8	9	0	0	10	11	0	0
Average Age	0.00	0.00	44.91	45.21	0.00	0.00	45.18	45.01	0.00	0.00
Average Service	0.00	0.00	9.45	9.56	0.00	0.00	5.94	5.58	0.00	0.00
Transfers										
Number	0	0	8	7	0	0	55	50	1	2
Average Age	0.00	0.00	42.51	42.45	0.00	0.00	45.81	46.41	35.11	35.05
Average Service	0.00	0.00	4.57	4.38	0.00	0.00	4.56	4.28	0.02	0.11
Total Inactive										
Number	0	0	16	16	0	0	65	61	1	2
Average Age	0.00	0.00	43.71	44.01	0.00	0.00	45.71	46.16	35.11	35.05
Average Service	0.00	0.00	7.01	7.29	0.00	0.00	4.77	4.52	0.02	0.11



**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2018: Marin Special Districts												
	Court Tier 1 Miscellaneous		Court Tier 2 Miscellaneous		Court Tier 3 Miscellaneous		Court Tier 4 Miscellaneous		Court Tier 5 Miscellaneous		Total	
	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018
Active Participants												
Number	1	1	1	1	70	64	4	5	25	27	101	98
Average Age	60.00	61.00	49.60	50.60	52.68	52.54	51.47	51.34	40.22	40.73	49.59	49.29
Average Service	35.37	36.37	16.02	17.03	16.27	17.46	8.56	8.04	1.37	2.18	12.46	12.96
Average Pay*	\$99,801	\$100,796	\$57,077	\$57,642	\$75,055	\$75,411	\$69,538	\$84,950	\$59,711	\$63,788	\$71,105	\$72,773
Service Retired												
Number	18	18	11	11	64	70	0	0	0	0	93	99
Average Age	69.93	70.93	78.05	79.05	65.98	66.45	0.00	0.00	0.00	0.00	68.17	68.67
Average Total Benefit*	\$67,023	\$69,034	\$36,307	\$37,033	\$28,111	\$27,804	\$0	\$0	\$0	\$0	\$36,612	\$36,326
Beneficiaries												
Number	0	0	0	0	4	6	0	0	0	0	4	6
Average Age	0.00	0.00	0.00	0.00	69.44	70.04	0.00	0.00	0.00	0.00	69.44	70.04
Average Total Benefit*	\$0	\$0	\$0	\$0	\$15,870	\$20,697	\$0	\$0	\$0	\$0	\$15,870	\$20,697
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	0.00	73.93	0.00	0.00	0.00	0.00	0.00	73.93
Average Total Benefit*	\$0	\$0	\$0	\$0	\$0	\$30,253	\$0	\$0	\$0	\$0	\$0	\$30,253
Ordinary Disabled												
Number	0	0	1	1	1	1	0	0	0	0	2	2
Average Age	0.00	0.00	70.71	71.71	54.98	55.98	0.00	0.00	0.00	0.00	62.85	63.85
Average Total Benefit*	\$0	\$0	\$13,844	\$14,120	\$35,890	\$36,608	\$0	\$0	\$0	\$0	\$24,867	\$25,364
Total In Pay												
Number	18	18	12	12	70	78	0	0	0	0	100	108
Average Age	69.93	70.93	77.44	78.44	65.08	66.69	0.00	0.00	0.00	0.00	67.44	68.70
Average Total Benefit*	\$67,023	\$69,034	\$34,435	\$35,124	\$27,121	\$27,401	\$0	\$0	\$0	\$0	\$35,181	\$35,198
Terminated Vested												
Number	0	0	0	0	16	14	0	0	0	0	16	14
Average Age	0.00	0.00	0.00	0.00	45.43	44.07	0.00	0.00	0.00	0.00	45.43	44.07
Average Service	0.00	0.00	0.00	0.00	8.60	9.24	0.00	0.00	0.00	0.00	8.60	9.24
Transfers												
Number	0	0	2	2	18	17	1	1	1	2	22	22
Average Age	0.00	0.00	60.44	61.44	50.16	51.02	30.81	31.81	0.00	49.44	47.93	50.95
Average Service	0.00	0.00	3.52	3.52	4.99	5.20	2.04	2.04	0.00	1.66	4.49	4.58
Total Inactive												
Number	0	0	2	2	34	31	1	1	1	2	38	36
Average Age	0.00	0.00	60.44	61.44	47.93	47.88	30.81	31.81	0.00	49.44	46.88	48.27
Average Service	0.00	0.00	3.52	3.52	6.69	7.02	2.04	2.04	0.00	1.66	6.22	6.39



**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2018: 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	
	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018
Active Participants																
Number	1	0	2	3	3	3	15	15	24	24	2	2	10	9	51	50
Average Age	55.41	0.00	49.06	48.02	51.17	48.02	48.18	49.12	42.44	42.70	33.92	34.92	34.01	34.56	42.14	42.85
Average Service	12.92	0.00	3.75	3.28	6.81	3.28	17.43	18.45	6.56	7.40	2.11	3.12	2.25	3.37	8.74	9.82
Average Pay*	\$84,767	\$0	\$105,392	\$100,961	\$98,517	\$100,961	\$113,953	\$128,241	\$102,997	\$110,281	\$93,719	\$99,007	\$93,983	\$104,705	\$104,088	\$114,215
Service Retired																
Number	3	4	0	0	3	4	23	26	1	2	0	0	0	0	24	28
Average Age	71.17	68.23	0.00	0.00	71.17	68.23	63.43	63.39	62.32	60.07	0.00	0.00	0.00	0.00	63.38	63.15
Average Total Benefit*	\$25,326	\$27,322	\$0	\$0	\$25,326	\$27,322	\$77,700	\$72,319	\$4,788	\$13,422	\$0	\$0	\$0	\$0	\$74,662	\$68,112
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	65.59	66.59	0.00	0.00	0.00	0.00	0.00	0.00	65.59	66.59
Average Total Benefit*	\$0	\$0	\$0	\$0	\$0	\$0	\$41,945	\$43,240	\$0	\$0	\$0	\$0	\$0	\$0	\$41,945	\$43,240
Duty Disabled																
Number	1	1	0	0	1	1	16	16	1	1	0	0	0	0	17	17
Average Age	73.28	74.28	0.00	0.00	73.28	74.28	66.42	67.42	0.00	48.51	0.00	0.00	0.00	0.00	65.31	66.31
Average Total Benefit*	\$4,245	\$4,372	\$0	\$0	\$4,245	\$4,372	\$54,667	\$56,307	\$0	\$46,334	\$0	\$0	\$0	\$0	\$54,097	\$55,720
Ordinary Disabled																
Number	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1
Average Age	0.00	0.00	0.00	0.00	0.00	0.00	57.93	58.93	0.00	0.00	0.00	0.00	0.00	0.00	57.93	58.93
Average Total Benefit*	\$0	\$0	\$0	\$0	\$0	\$0	\$71,260	\$73,398	\$0	\$0	\$0	\$0	\$0	\$0	\$71,260	\$73,398
Total In Pay																
Number	4	5	0	0	4	5	50	53	2	3	0	0	0	0	52	56
Average Age	71.70	69.44	0.00	0.00	71.70	69.44	64.71	65.12	31.16	56.21	0.00	0.00	0.00	0.00	64.33	64.65
Average Total Benefit*	\$20,056	\$22,732	\$0	\$0	\$20,056	\$22,732	\$63,050	\$62,019	\$2,394	\$24,392	\$0	\$0	\$0	\$0	\$61,582	\$60,003
Terminated Vested																
Number	1	1	0	0	1	1	0	0	2	2	0	0	0	0	2	2
Average Age	73.85	74.85	0.00	0.00	73.85	74.85	0.00	0.00	50.70	51.70	0.00	0.00	0.00	0.00	50.70	51.70
Average Service	8.92	8.92	0.00	0.00	8.92	8.92	0.00	0.00	3.10	3.10	0.00	0.00	0.00	0.00	3.10	3.10
Transfers																
Number	0	0	0	0	0	0	9	6	5	5	0	0	0	0	14	11
Average Age	0.00	0.00	0.00	0.00	0.00	0.00	51.31	50.78	37.62	38.62	0.00	0.00	0.00	0.00	46.42	45.26
Average Service	0.00	0.00	0.00	0.00	0.00	0.00	5.77	6.46	3.93	3.93	0.00	0.00	0.00	0.00	5.11	5.31
Total Inactive																
Number	1	1	0	0	1	1	9	6	7	7	0	0	0	0	16	13
Average Age	73.85	74.85	0.00	0.00	73.85	74.85	51.31	50.78	41.36	42.36	0.00	0.00	0.00	0.00	46.96	46.25
Average Service	8.92	8.92	0.00	0.00	8.92	8.92	5.77	6.46	3.69	3.69	0.00	0.00	0.00	0.00	4.86	4.97



**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2018: Marin Special Districts														
	Southern Marin Fire		Marin City CSD		Marin City CSD		Total		Mosquito District		Mosquito District		Total	
	Total		Tier 1 Miscellaneous		Tier 2 Miscellaneous				Tier 1 Miscellaneous		Tier 2 Miscellaneous			
	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018
Active Participants														
Number	54	53	2	3	3	4	5	7	31	28	2	4	33	32
Average Age	42.64	43.14	55.61	53.69	43.91	51.25	48.59	52.29	51.17	51.63	34.35	35.56	50.15	49.62
Average Service	8.63	9.45	5.58	4.43	1.02	1.19	2.84	2.58	14.02	14.05	1.04	1.17	13.24	12.44
Average Pay*	\$103,778	\$113,464	\$43,930	\$51,917	\$77,709	\$58,980	\$64,197	\$55,953	\$95,513	\$98,940	\$78,162	\$87,637	\$94,462	\$97,527
Service Retired														
Number	27	32	1	1	0	0	1	1	14	17	0	0	14	17
Average Age	64.25	63.78	68.52	69.52	0.00	0.00	68.52	69.52	65.97	65.24	0.00	0.00	65.97	65.24
Average Total Benefit*	\$69,181	\$63,014	\$31,772	\$32,725	\$0	\$0	\$31,772	\$32,725	\$58,218	\$59,735	\$0	\$0	\$58,218	\$59,735
Beneficiaries														
Number	10	10	1	1	0	0	1	1	4	4	0	0	4	4
Average Age	65.59	66.59	82.31	83.31	0.00	0.00	82.31	83.31	72.45	73.45	0.00	0.00	72.45	73.45
Average Total Benefit*	\$41,945	\$43,240	\$25,683	\$26,454	\$0	\$0	\$25,683	\$26,454	\$16,193	\$16,678	\$0	\$0	\$16,193	\$16,678
Duty Disabled														
Number	18	18	0	0	0	0	0	0	1	1	0	0	1	1
Average Age	65.75	66.75	0.00	0.00	0.00	0.00	0.00	0.00	72.91	73.91	0.00	0.00	72.91	73.91
Average Total Benefit*	\$51,328	\$52,868	\$0	\$0	\$0	\$0	\$0	\$0	\$35,602	\$36,670	\$0	\$0	\$35,602	\$36,670
Ordinary Disabled														
Number	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Average Age	57.93	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
Average Total Benefit*	\$71,260	\$73,398	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total In Pay														
Number	56	61	2	2	0	0	2	2	19	22	0	0	19	22
Average Age	64.86	65.04	75.42	76.42	0.00	0.00	75.42	76.42	67.70	67.13	0.00	0.00	67.70	67.13
Average Total Benefit*	\$58,616	\$56,948	\$28,728	\$29,589	\$0	\$0	\$28,728	\$29,589	\$48,180	\$50,858	\$0	\$0	\$48,180	\$50,858
Terminated Vested														
Number	3	3	2	2	0	0	2	2	1	1	0	0	1	1
Average Age	58.41	59.41	0.00	40.27	0.00	0.00	39.27	40.27	34.97	35.97	0.00	0.00	34.97	35.97
Average Service	5.04	5.04	0.00	8.33	0.00	0.00	8.33	8.33	9.85	9.85	0.00	0.00	9.85	9.85
Transfers														
Number	14	11	0	0	0	0	0	0	1	1	0	0	1	1
Average Age	46.42	45.26	0.00	0.00	0.00	0.00	0.00	0.00	51.03	52.03	0.00	0.00	51.03	52.03
Average Service	5.11	5.31	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	17	14	2	2	0	0	2	2	2	2	0	0	2	2
Average Age	48.54	48.29	0.00	40.27	0.00	0.00	39.27	40.27	43.00	44.00	0.00	0.00	43.00	44.00
Average Service	5.10	5.25	0.00	8.33	0.00	0.00	8.33	8.33	10.43	10.43	0.00	0.00	10.43	10.43



**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30,2018: 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	
	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018
Active Participants														
Number	0	0	2	1	1	0	3	1	9	8	3	5	12	13
Average Age	0.00	0.00	44.14	48.05	27.52	0.00	38.60	48.05	59.80	60.92	41.80	42.71	55.30	53.91
Average Service	0.00	0.00	6.61	9.39	1.70	0.00	4.97	9.39	17.28	15.57	2.26	2.11	13.52	10.40
Average Pay*	\$0	\$0	\$103,847	\$73,784	\$73,154	\$0	\$93,616	\$73,784	\$93,612	\$101,087	\$63,877	\$70,715	\$86,178	\$89,405
Service Retired														
Number	2	2	2	2	0	0	4	4	8	9	0	0	8	9
Average Age	69.38	70.38	58.76	59.76	0.00	0.00	64.07	65.07	68.16	68.12	0.00	0.00	68.16	68.12
Average Total Benefit*	\$27,025	\$27,836	\$5,832	\$5,948	\$0	\$0	\$16,428	\$16,892	\$24,772	\$30,934	\$0	\$0	\$24,772	\$30,934
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	50.40	51.40	0.00	0.00	50.40	51.40
Average Total Benefit*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,919	\$10,216	\$0	\$0	\$9,919	\$10,216
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	45.31	46.31	0.00	0.00	45.31	46.31
Average Total Benefit*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,392	\$14,824	\$0	\$0	\$14,392	\$14,824
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	13	14	0	0	13	14
Average Age	69.38	70.38	58.76	59.76	0.00	0.00	64.07	65.07	60.94	61.79	0.00	0.00	60.94	61.79
Average Total Benefit*	\$27,025	\$27,836	\$5,832	\$5,948	\$0	\$0	\$16,428	\$16,892	\$19,403	\$23,864	\$0	\$0	\$19,403	\$23,864
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, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2018: Novato Fire Protection District												
	Tier 1 Miscellaneous		Tier 2A Miscellaneous		Tier 1 Safety		Tier 2 Safety		Tier 3 Safety		Tier 3A Safety	
	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018
Active Participants												
Number	7	6	3	3	51	49	7	7	6	6	0	3
Average Age	48.62	50.70	44.67	45.67	46.27	46.95	42.21	43.21	35.92	36.92	0.00	31.72
Average Service	13.44	14.67	1.39	2.06	17.22	18.02	7.24	8.35	3.21	4.21	0.00	0.71
Average Pay*	\$107,781	\$125,008	\$53,437	\$58,173	\$127,540	\$133,663	\$114,384	\$121,031	\$113,884	\$117,785	\$0	\$102,995
Service Retired												
Number	4	5	0	0	54	55	0	0	0	0	0	0
Average Age	66.03	64.77	0.00	0.00	66.66	67.46	0.00	0.00	0.00	0.00	0.00	0.00
Average Total Benefit*	\$40,632	\$34,432	\$0	\$0	\$100,551	\$104,948	\$0	\$0	\$0	\$0	\$0	\$0
Beneficiaries												
Number	1	1	0	0	14	14	0	0	0	0	0	0
Average Age	51.67	55.67	0.00	0.00	62.90	63.90	0.00	0.00	0.00	0.00	0.00	0.00
Average Total Benefit*	\$11,544	\$11,890	\$0	\$0	\$42,686	\$43,966	\$0	\$0	\$0	\$0	\$0	\$0
Duty Disabled												
Number	0	0	0	0	31	32	0	0	0	0	0	0
Average Age	0.00	0.00	0.00	0.00	69.47	69.96	0.00	0.00	0.00	0.00	0.00	0.00
Average Total Benefit*	\$0	\$0	\$0	\$0	\$67,400	\$71,412	\$0	\$0	\$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	5	6	0	0	99	101	0	0	0	0	0	0
Average Age	63.16	63.25	0.00	0.00	67.01	67.76	0.00	0.00	0.00	0.00	0.00	0.00
Average Total Benefit*	\$34,815	\$30,675	\$0	\$0	\$81,988	\$85,870	\$0	\$0	\$0	\$0	\$0	\$0
Terminated Vested												
Number	1	2	0	0	2	2	0	0	0	0	0	0
Average Age	58.56	51.34	0.00	0.00	49.21	50.21	0.00	0.00	0.00	0.00	0.00	0.00
Average Service	6.16	9.27	0.00	0.00	4.82	4.82	0.00	0.00	0.00	0.00	0.00	0.00
Transfers												
Number	1	0	0	0	10	10	0	0	0	1	0	0
Average Age	54.73	0.00	0.00	0.00	43.71	44.71	0.00	0.00	0.00	0.00	0.00	0.00
Average Service	1.25	0.00	0.00	0.00	4.04	4.04	0.00	0.00	0.00	0.00	0.00	0.00
Total Inactive												
Number	2	2	0	0	12	12	0	0	0	1	0	0
Average Age	56.65	51.34	0.00	0.00	44.63	45.63	0.00	0.00	0.00	0.00	0.00	0.00
Average Service	3.71	9.27	0.00	0.00	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2018: Novato Fire Protection District						
	Miscellaneous		Safety		Total	
	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018
Active Participants						
Number	10	9	64	65	74	74
Average Age	47.43	49.02	44.86	44.92	45.21	45.42
Average Service	9.82	10.47	14.82	14.91	14.14	14.37
Average Pay*	\$91,478	\$102,730	\$124,821	\$129,421	\$120,315	\$126,175
Service Retired						
Number	4	5	54	55	58	60
Average Age	66.03	64.77	66.66	67.46	66.62	67.23
Average Total Benefit*	\$40,632	\$34,432	\$100,551	\$104,948	\$96,419	\$99,072
Beneficiaries						
Number	1	1	14	14	15	15
Average Age	51.67	55.67	62.90	63.90	62.15	63.35
Average Total Benefit*	\$11,544	\$11,890	\$42,686	\$43,966	\$40,610	\$41,828
Duty Disabled						
Number	0	0	31	32	31	32
Average Age	0.00	0.00	69.47	69.96	69.47	69.96
Average Total Benefit*	\$0	\$0	\$67,400	\$71,412	\$67,400	\$71,412
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	5	6	99	101	104	107
Average Age	63.16	63.25	67.01	67.76	66.82	67.50
Average Total Benefit*	\$34,815	\$30,675	\$81,988	\$85,870	\$79,720	\$82,775
Terminated Vested						
Number	1	2	2	2	3	4
Average Age	58.56	51.34	49.21	50.21	52.32	50.77
Average Service	6.16	9.27	4.82	4.82	5.26	7.04
Transfers						
Number	1	0	10	11	11	11
Average Age	54.73	0.00	43.71	43.07	44.71	43.07
Average Service	1.25	0.00	4.04	3.97	3.79	3.97
Total Inactive						
Number	2	2	12	13	14	15
Average Age	56.65	51.34	44.63	44.17	46.34	45.12
Average Service	3.71	9.27	4.17	4.10	4.10	4.79

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2018: City of San Rafael										
	Miscellaneous		Police		Fire		Total Safety		Total	
	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018
Active Participants										
Number	212	218	82	89	54	52	136	141	348	359
Average Age	47.18	46.19	38.49	37.67	41.83	42.28	39.82	39.37	44.30	43.51
Average Service	10.61	9.66	9.82	9.20	11.49	12.38	10.49	10.38	10.56	9.94
Average Pay*	\$77,226	\$80,502	\$110,236	\$113,047	\$128,463	\$136,589	\$117,473	\$121,729	\$92,955	\$96,694
Service Retired										
Number	247	257	77	80	84	89	161	169	408	426
Average Age	69.62	69.92	65.99	66.22	67.33	67.63	66.69	66.96	68.46	68.75
Average Total Benefit*	\$36,851	\$38,150	\$68,784	\$68,987	\$90,679	\$89,764	\$80,208	\$79,929	\$53,960	\$54,724
Beneficiaries										
Number	31	33	16	18	22	21	38	39	69	72
Average Age	75.34	75.96	68.93	66.49	73.21	73.47	71.41	70.25	73.17	72.87
Average Total Benefit*	\$18,376	\$20,539	\$32,873	\$34,439	\$39,017	\$40,634	\$36,430	\$37,775	\$28,319	\$29,875
Duty Disabled										
Number	18	19	38	42	21	21	59	63	77	82
Average Age	65.65	65.97	61.98	61.61	67.81	68.81	64.06	64.01	64.43	64.46
Average Total Benefit*	\$28,738	\$28,228	\$54,867	\$57,310	\$83,656	\$86,166	\$65,114	\$66,928	\$56,611	\$57,961
Ordinary Disabled										
Number	2	2	0	0	0	0	0	0	2	2
Average Age	84.45	85.45	0.00	0.00	0.00	0.00	0.00	0.00	84.45	85.45
Average Total Benefit*	\$12,071	\$12,433	\$0	\$0	\$0	\$0	\$0	\$0	\$12,071	\$12,433
Total In Pay										
Number	298	311	131	140	127	131	258	271	556	582
Average Age	70.07	70.42	65.18	64.87	68.43	68.76	66.78	66.75	68.55	68.71
Average Total Benefit*	\$34,273	\$35,509	\$60,361	\$61,042	\$80,569	\$81,312	\$70,308	\$70,840	\$50,994	\$51,961
Terminated Vested										
Number	27	27	7	6	1	1	8	7	35	34
Average Age	48.29	49.54	46.36	46.81	50.84	51.84	46.92	47.53	47.97	49.13
Average Service	6.14	6.62	10.71	10.89	3.51	3.51	9.81	9.83	6.98	7.28
Transfers										
Number	69	75	18	14	6	4	24	18	93	93
Average Age	45.67	45.46	46.46	43.71	47.06	43.44	46.61	43.65	45.91	45.11
Average Service	3.30	3.14	5.36	4.20	3.21	3.88	4.82	4.13	3.69	3.33
Total Inactive										
Number	96	102	25	20	7	5	32	25	128	127
Average Age	46.41	46.54	46.43	44.64	47.60	45.12	46.69	44.74	46.48	46.19
Average Service	4.10	4.06	6.85	6.21	3.25	3.81	6.07	5.73	4.59	4.39



**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2018: City of San Rafael																
	Tier 1		Tier 2		Tier 3		Tier 1		Tier 2		Tier 3		Tier 1		Tier 2	
	Miscellaneous		Miscellaneous		Miscellaneous		Police		Police		Safety		Fire		Fire	
	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018	6/30/2017	6/30/2018
Active Participants																
Number	135	118	18	17	59	83	46	42	5	6	31	41	39	37	15	15
Average Age	52.03	52.20	45.62	47.37	36.56	37.39	44.91	45.61	37.64	37.30	29.10	29.60	44.90	45.30	33.84	34.84
Average Service	15.44	15.83	3.41	4.28	1.74	1.99	15.55	16.48	4.42	4.63	2.20	2.42	14.32	15.34	4.13	5.09
Average Pay*	\$81,202	\$84,777	\$90,205	\$99,606	\$64,169	\$70,511	\$121,945	\$131,627	\$124,245	\$123,976	\$90,602	\$92,414	\$135,213	\$143,762	\$110,915	\$118,895
Service Retired																
Number	247	257	0	0	0	0	77	80	0	0	0	0	84	89	0	0
Average Age	69.62	69.92	0.00	0.00	0.00	0.00	65.99	66.22	0.00	0.00	0.00	0.00	67.33	67.63	0.00	0.00
Average Total Benefit*	\$36,851	\$38,150	\$0	\$0	\$0	\$0	\$68,784	\$68,987	\$0	\$0	\$0	\$0	\$90,679	\$89,764	\$0	\$0
Beneficiaries																
Number	31	33	0	0	0	0	16	18	0	0	0	0	22	21	0	0
Average Age	75.34	75.96	0.00	0.00	0.00	0.00	68.93	66.49	0.00	0.00	0.00	0.00	73.21	73.47	0.00	0.00
Average Total Benefit*	\$18,376	\$20,539	\$0	\$0	\$0	\$0	\$32,873	\$34,439	\$0	\$0	\$0	\$0	\$39,017	\$40,634	\$0	\$0
Duty Disabled																
Number	18	19	0	0	0	0	38	42	0	0	0	0	21	21	0	0
Average Age	65.65	65.97	0.00	0.00	0.00	0.00	61.98	61.61	0.00	0.00	0.00	0.00	67.81	68.81	0.00	0.00
Average Total Benefit*	\$28,738	\$28,228	\$0	\$0	\$0	\$0	\$54,867	\$57,310	\$0	\$0	\$0	\$0	\$83,656	\$86,166	\$0	\$0
Ordinary Disabled																
Number	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Age	84.45	85.45	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*	\$12,071	\$12,433	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total In Pay																
Number	298	311	0	0	0	0	131	140	0	0	0	0	127	131	0	0
Average Age	70.07	70.42	0.00	0.00	0.00	0.00	65.18	64.87	0.00	0.00	0.00	0.00	68.43	68.76	0.00	0.00
Average Total Benefit*	\$34,273	\$35,509	\$0	\$0	\$0	\$0	\$60,361	\$61,042	\$0	\$0	\$0	\$0	\$80,569	\$81,312	\$0	\$0
Terminated Vested																
Number	26	26	1	1	0	0	7	6	0	0	0	0	1	1	0	0
Average Age	48.18	49.45	0.00	51.92	0.00	0.00	46.36	46.81	0.00	0.00	0.00	0.00	50.84	51.84	0.00	0.00
Average Service	6.32	6.81	0.00	1.69	0.00	0.00	10.71	10.89	0.00	0.00	0.00	0.00	3.51	3.51	0.00	0.00
Transfers																
Number	54	55	8	7	7	13	18	13	0	0	0	1	6	4	0	0
Average Age	48.23	49.59	41.37	42.81	30.85	29.41	46.46	44.69	0.00	0.00	0.00	0.00	47.06	43.44	0.00	0.00
Average Service	3.86	3.90	2.17	2.27	0.22	0.38	5.36	4.40	0.00	0.00	0.00	0.00	3.21	3.88	0.00	0.00
Total Inactive																
Number	80	81	9	8	7	13	25	19	0	0	0	1	7	5	0	0
Average Age	48.21	49.55	36.77	43.95	30.85	29.41	46.43	45.36	0.00	0.00	0.00	0.00	47.60	45.12	0.00	0.00
Average Service	4.66	4.84	1.93	2.19	0.22	0.38	6.85	6.45	0.00	0.00	0.00	0.00	3.25	3.81	0.00	0.00



**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

**MARIN COUNTY
DISTRIBUTION OF MISCELLANEOUS ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2018**

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	5	3	0	0	0	0	0	0	0	0	0	0	15
25 to 29	29	38	16	11	10	4	0	0	0	0	0	0	0	108
30 to 34	28	31	45	23	23	23	11	0	0	0	0	0	0	184
35 to 39	21	23	18	28	20	39	42	4	0	0	0	0	0	195
40 to 44	22	15	21	8	17	35	48	24	4	0	0	0	0	194
45 to 49	17	19	16	10	19	27	55	43	19	3	0	0	0	228
50 to 54	16	11	18	10	11	37	40	53	42	14	2	1	1	255
55 to 59	11	13	12	13	9	35	41	49	21	22	8	4	4	238
60 to 64	6	4	7	4	7	21	51	48	20	13	7	2	2	190
65 to 69	2	1	1	1	7	13	21	29	14	7	5	1	1	102
70 & up	0	0	0	0	0	0	6	12	2	3	2	3	3	28
Total	159	160	157	108	123	234	315	262	122	62	24	11	11	1,737

**MARIN COUNTY
DISTRIBUTION OF MISCELLANEOUS ACTIVE MEMBERS
PAYROLL BY AGE AND SERVICE AS OF JULY 1, 2018**

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	54,360	61,113	57,932	0	0	0	0	0	0	0	0	0	0	57,326
25 to 29	67,270	66,463	71,813	66,149	76,578	83,229	0	0	0	0	0	0	0	68,998
30 to 34	76,796	73,667	78,921	82,500	81,437	84,023	94,252	0	0	0	0	0	0	80,029
35 to 39	72,337	79,766	81,385	78,196	100,217	91,227	98,495	76,406	0	0	0	0	0	87,245
40 to 44	76,001	94,490	86,585	69,783	86,031	88,543	99,320	100,144	87,317	0	0	0	0	90,451
45 to 49	108,240	81,214	95,529	84,564	81,703	100,063	94,807	100,254	100,074	101,788	0	0	0	95,366
50 to 54	78,380	99,501	82,735	111,737	94,655	89,983	99,179	102,389	100,266	93,322	103,626	80,048	80,048	96,175
55 to 59	85,256	74,706	87,877	99,712	104,104	90,186	91,120	91,234	89,791	113,625	81,027	106,560	106,560	92,519
60 to 64	83,248	88,824	64,296	81,095	103,842	100,594	90,866	88,507	104,898	120,568	95,841	136,928	136,928	94,533
65 to 69	68,821	120,016	134,576	33,365	104,301	80,643	84,389	95,156	91,187	89,277	115,184	93,737	93,737	91,245
70 & up	0	0	0	0	0	0	91,080	75,395	99,934	73,515	81,042	133,983	133,983	86,988
Total	77,622	77,818	81,620	83,240	90,189	90,900	94,639	94,770	97,721	105,234	94,348	115,985	115,985	89,573

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

**MARIN COUNTY
DISTRIBUTION OF SAFETY ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2018**

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	2	7	0	1	1	0	0	0	0	0	0	0	0	11
25 to 29	5	7	9	12	5	4	0	0	0	0	0	0	0	42
30 to 34	5	6	8	6	4	27	3	0	0	0	0	0	0	59
35 to 39	1	3	4	5	1	15	22	5	0	0	0	0	0	56
40 to 44	2	0	0	1	0	10	21	26	0	0	0	0	0	60
45 to 49	1	1	0	1	0	1	15	22	19	7	0	0	0	67
50 to 54	1	0	0	2	0	1	7	14	6	7	0	0	0	38
55 to 59	0	0	0	1	1	4	2	4	2	4	1	0	0	19
60 to 64	0	0	0	0	0	1	0	2	0	0	0	0	0	3
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	17	24	21	29	12	63	71	74	27	18	2	0	0	358

**MARIN COUNTY
DISTRIBUTION OF SAFETY ACTIVE MEMBERS
PAYROLL BY AGE AND SERVICE AS OF JULY 1, 2018**

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	82,139	84,635	0	84,906	112,944	0	0	0	0	0	0	0	0	86,780
25 to 29	79,349	83,020	89,963	92,835	79,119	99,571	0	0	0	0	0	0	0	87,987
30 to 34	78,534	83,115	77,610	90,295	95,668	104,423	137,648	0	0	0	0	0	0	96,085
35 to 39	60,549	104,556	83,915	95,588	68,224	105,169	117,315	122,011	0	0	0	0	0	107,581
40 to 44	139,319	0	0	93,246	0	104,983	116,780	126,973	0	0	0	0	0	119,590
45 to 49	81,078	120,381	0	97,781	0	103,741	111,231	111,333	128,328	147,149	0	0	0	119,239
50 to 54	108,638	0	0	166,088	0	113,468	125,161	123,341	122,770	131,468	0	0	0	126,686
55 to 59	0	0	0	89,398	102,669	132,663	147,215	106,283	139,544	144,649	198,120	0	0	131,478
60 to 64	0	0	0	0	0	116,107	0	89,388	0	0	0	0	0	98,294
65 to 69	0	0	0	0	0	0	128,461	106,891	0	0	0	0	0	117,676
70 & up	0	0	0	0	0	0	0	0	0	0	236,212	0	0	236,212
Total	87,212	87,764	84,105	97,629	88,509	106,493	118,503	118,895	127,924	140,495	217,166	0	0	110,577

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

**MARIN SPECIAL DISTRICTS
DISTRIBUTION OF MISCELLANEOUS ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2018**

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	1	0	0	0	0	0	0	0	0	0	0	0	1
25 to 29	0	3	3	0	0	0	0	0	0	0	0	0	0	6
30 to 34	2	0	0	1	1	0	0	0	0	0	0	0	0	4
35 to 39	3	4	2	0	1	1	10	0	0	0	0	0	0	21
40 to 44	3	3	4	0	0	2	3	7	2	0	0	0	0	24
45 to 49	2	3	0	0	0	3	4	4	1	0	0	0	0	17
50 to 54	2	2	0	0	0	2	7	6	1	3	1	0	0	24
55 to 59	0	1	2	2	0	2	10	9	1	1	0	1	1	29
60 to 64	1	0	0	1	0	1	6	4	4	0	2	2	2	21
65 to 69	0	0	0	0	0	1	0	1	0	0	0	0	0	2
70 & up	0	0	0	0	0	1	1	1	1	1	0	0	0	5
Total	13	17	11	4	2	13	41	32	10	5	3	3	3	154

**MARIN SPECIAL DISTRICTS
DISTRIBUTION OF MISCELLANEOUS ACTIVE MEMBERS
PAYROLL BY AGE AND SERVICE AS OF JULY 1, 2018**

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	42,062	0	0	0	0	0	0	0	0	0	0	0	42,062
25 to 29	0	55,838	48,237	0	0	0	0	0	0	0	0	0	0	52,037
30 to 34	56,776	0	0	54,015	56,226	0	0	0	0	0	0	0	0	55,948
35 to 39	80,430	50,227	62,135	0	69,048	65,000	68,341	0	0	0	0	0	0	65,902
40 to 44	69,628	81,748	113,405	0	0	105,325	79,599	84,018	103,763	0	0	0	0	89,702
45 to 49	85,010	112,016	0	0	0	87,648	81,029	71,065	95,018	0	0	0	0	86,612
50 to 54	45,724	90,626	0	0	0	73,507	80,979	71,520	100,796	87,717	64,779	0	0	76,850
55 to 59	0	70,575	72,306	78,334	0	73,106	85,226	70,421	100,796	57,642	0	65,441	0	76,828
60 to 64	67,561	0	0	53,060	0	180,572	84,202	98,587	108,630	0	72,762	96,729	0	94,012
65 to 69	0	0	0	0	0	47,561	0	130,853	0	0	0	0	0	89,207
70 & up	0	0	0	0	0	45,760	91,418	80,818	80,746	72,170	0	0	0	74,182
Total	68,674	73,153	78,837	65,936	62,637	85,055	79,563	79,416	101,940	78,593	70,101	86,300	0	79,112

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

**MARIN SPECIAL DISTRICTS
DISTRIBUTION OF SAFETY ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2018**

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	2	0	1	0	0	0	0	0	0	0	0	3
30 to 34	0	0	2	1	2	3	0	0	0	0	0	0	0	8
35 to 39	0	0	1	0	2	5	2	0	0	0	0	0	0	10
40 to 44	0	0	0	0	0	1	2	2	0	0	0	0	0	5
45 to 49	0	0	0	0	1	7	2	3	1	0	0	0	0	14
50 to 54	0	0	0	0	0	1	2	3	1	1	0	0	0	8
55 to 59	0	0	0	1	0	0	0	0	0	1	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	0	0	5	2	6	17	8	8	2	2	0	0	0	50

**MARIN SPECIAL DISTRICTS
DISTRIBUTION OF SAFETY ACTIVE MEMBERS
PAYROLL BY AGE AND SERVICE AS OF JULY 1, 2018**

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	81,652	0	90,010	0	0	0	0	0	0	0	0	84,438
30 to 34	0	0	85,845	99,416	101,483	106,677	0	0	0	0	0	0	0	99,263
35 to 39	0	0	81,652	0	104,463	105,568	105,075	0	0	0	0	0	0	102,857
40 to 44	0	0	0	0	0	112,426	109,914	183,244	0	0	0	0	0	139,749
45 to 49	0	0	0	0	99,722	115,075	120,257	127,943	103,314	0	0	0	0	116,636
50 to 54	0	0	0	0	0	127,983	112,788	124,188	125,793	125,849	0	0	0	122,221
55 to 59	0	0	0	204,048	0	0	0	0	0	121,281	0	0	0	162,665
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	0	0	83,329	151,732	100,271	111,400	112,008	140,360	114,554	123,565	0	0	0	114,215

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

**NOVATO FIRE PROTECTION DISTRICT
DISTRIBUTION OF MISCELLANEOUS ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2018**

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	0	0	0	1	0	0	0	0	0	0	0	0	0	1
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	1	1	0	0	0	0	0	0	2
45 to 49	0	0	0	0	0	0	1	0	0	0	0	0	0	1
50 to 54	1	0	1	0	0	0	1	0	0	0	0	0	0	3
55 to 59	0	0	0	0	0	0	0	1	0	0	0	0	0	1
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	1	0	1	1	0	1	4	1	0	0	0	0	0	9

**NOVATO FIRE PROTECTION DISTRICT
DISTRIBUTION OF MISCELLANEOUS ACTIVE MEMBERS
PAYROLL BY AGE AND SERVICE AS OF JULY 1, 2018**

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	0	0	0	55,913	0	0	0	0	0	0	0	0	0	55,913
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	159,750	86,407	0	0	0	0	0	0	123,078
45 to 49	0	0	0	0	0	0	96,256	0	0	0	0	0	0	96,256
50 to 54	46,490	0	72,116	0	0	0	113,234	0	0	0	0	0	0	77,280
55 to 59	0	0	0	0	0	0	0	118,461	0	0	0	0	0	118,461
60 to 64	0	0	0	0	0	0	175,941	0	0	0	0	0	0	175,941
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	46,490	0	72,116	55,913	0	159,750	117,959	118,461	0	0	0	0	0	102,730

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

**NOVATO FIRE PROTECTION DISTRICT
DISTRIBUTION OF SAFETY ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2018**

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	1	0	0	1	1	0	0	0	0	0	0	0	0	3
30 to 34	2	0	0	0	1	0	0	0	0	0	0	0	0	3
35 to 39	0	0	0	0	0	2	1	1	0	0	0	0	0	4
40 to 44	0	0	0	0	2	3	11	9	1	0	0	0	0	26
45 to 49	0	0	0	0	0	0	1	10	3	2	0	0	0	16
50 to 54	0	0	2	0	0	0	0	3	2	2	0	0	0	9
55 to 59	0	0	0	0	0	0	0	3	0	0	0	0	0	3
60 to 64	0	0	0	0	0	0	0	1	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	3	0	2	1	4	5	13	27	6	4	0	0	0	65

**NOVATO FIRE PROTECTION DISTRICT
DISTRIBUTION OF SAFETY ACTIVE MEMBERS
PAYROLL BY AGE AND SERVICE AS OF JULY 1, 2018**

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	102,995	0	0	116,652	117,263	0	0	0	0	0	0	0	0	112,303
30 to 34	102,995	0	0	0	117,875	0	0	0	0	0	0	0	0	107,955
35 to 39	0	0	0	0	0	121,755	133,453	119,064	0	0	0	0	0	124,007
40 to 44	0	0	0	0	117,263	117,663	118,544	131,881	132,266	0	0	0	0	123,488
45 to 49	0	0	0	0	0	0	134,066	126,682	153,275	170,987	0	0	0	137,668
50 to 54	0	0	126,924	0	0	0	0	128,919	171,873	174,367	0	0	0	148,121
55 to 59	0	0	0	0	0	0	0	130,820	0	0	0	0	0	130,820
60 to 64	0	0	0	0	0	0	0	116,664	0	0	0	0	0	116,664
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	102,995	0	126,924	116,652	117,416	119,300	120,885	128,470	155,973	172,677	0	0	0	129,421

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

**CITY OF SAN RAFAEL
DISTRIBUTION OF MISCELLANEOUS ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2018**

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	5	2	2	0	0	0	0	0	0	0	0	0	0	9
25 to 29	5	4	5	0	4	1	0	0	0	0	0	0	0	19
30 to 34	6	3	3	1	0	3	0	0	0	0	0	0	0	16
35 to 39	5	3	2	2	2	6	2	1	0	0	0	0	0	23
40 to 44	3	2	1	1	1	7	8	5	0	0	0	0	0	28
45 to 49	0	2	3	2	2	1	10	10	1	1	0	0	0	32
50 to 54	3	1	1	1	0	3	3	10	5	2	2	0	0	31
55 to 59	4	2	0	3	0	3	2	5	3	1	3	0	0	26
60 to 64	0	1	1	0	0	5	13	3	2	0	2	0	0	27
65 to 69	0	0	0	0	1	0	3	0	0	1	0	0	0	5
70 & up	0	0	0	0	0	1	0	0	0	1	0	0	0	2
Total	31	20	18	10	10	30	41	34	11	6	7	0	0	218

**CITY OF SAN RAFAEL
DISTRIBUTION OF MISCELLANEOUS ACTIVE MEMBERS
PAYROLL BY AGE AND SERVICE AS OF JULY 1, 2018**

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	47,706	59,442	45,872	0	0	0	0	0	0	0	0	0	0	49,906
25 to 29	57,128	70,608	70,546	0	72,447	49,413	0	0	0	0	0	0	0	66,316
30 to 34	69,141	92,944	51,300	110,156	0	73,794	0	0	0	0	0	0	0	73,695
35 to 39	70,574	61,600	63,326	85,844	82,017	71,417	83,076	44,025	0	0	0	0	0	71,249
40 to 44	88,976	119,720	63,044	81,822	67,880	87,294	69,619	65,707	0	0	0	0	0	79,131
45 to 49	0	57,964	145,119	68,727	92,255	71,875	90,938	79,578	112,021	88,006	0	0	0	89,072
50 to 54	96,926	94,680	132,756	75,992	0	85,478	108,106	83,179	85,857	73,100	99,187	0	0	89,697
55 to 59	93,330	55,263	0	77,331	0	117,004	124,722	74,945	76,848	79,911	90,649	0	0	87,439
60 to 64	0	76,460	182,657	0	0	104,803	81,973	112,204	83,100	0	57,364	0	0	91,345
65 to 69	0	0	0	0	76,947	0	62,999	0	0	66,143	0	0	0	66,417
70 & up	0	0	0	0	0	28,275	0	0	0	75,744	0	0	0	52,010
Total	71,707	75,099	85,491	80,910	78,316	84,732	84,412	79,749	85,277	76,001	83,579	0	0	80,502

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

**CITY OF SAN RAFAEL
DISTRIBUTION OF POLICE ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2018**

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	5	0	1	0	0	0	0	0	0	0	0	0	0	6
25 to 29	1	4	6	1	2	1	0	0	0	0	0	0	0	15
30 to 34	5	2	3	2	3	5	2	0	0	0	0	0	0	22
35 to 39	1	1	0	0	0	2	5	0	0	0	0	0	0	9
40 to 44	0	0	0	0	0	1	8	5	0	0	0	0	0	14
45 to 49	0	0	0	0	0	0	5	5	2	2	0	0	0	14
50 to 54	0	0	0	0	0	0	0	2	1	1	1	0	0	5
55 to 59	0	0	0	0	0	1	0	1	1	0	0	0	0	3
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	12	7	10	3	5	10	21	13	4	3	1	0	0	89

**CITY OF SAN RAFAEL
DISTRIBUTION OF POLICE ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2018**

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	79,438	0	86,864	0	0	0	0	0	0	0	0	0	0	80,676
25 to 29	77,146	85,732	94,074	98,492	104,387	103,546	0	0	0	0	0	0	0	93,022
30 to 34	85,704	95,751	93,507	105,741	108,512	107,026	117,273	0	0	0	0	0	0	100,329
35 to 39	74,684	95,767	0	0	0	106,755	120,716	0	0	0	0	0	0	109,727
40 to 44	0	0	0	0	0	114,134	128,187	136,099	0	0	0	0	0	130,009
45 to 49	0	0	0	0	0	0	123,028	134,152	120,720	166,217	0	0	0	132,841
50 to 54	0	0	0	0	0	0	0	133,014	175,255	139,577	155,304	0	0	147,233
55 to 59	0	0	0	0	0	182,657	0	141,700	128,413	0	0	0	0	150,923
60 to 64	0	0	0	0	0	0	118,158	0	0	0	0	0	0	118,158
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	81,462	90,028	93,183	103,325	106,862	114,897	123,663	135,306	136,277	157,337	155,304	0	0	113,047

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

**CITY OF SAN RAFAEL
DISTRIBUTION OF FIRE ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JULY 1, 2018**

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	0	1	1	1	0	8	1	0	0	0	0	0	0	12
35 to 39	0	0	1	0	0	10	1	0	0	0	0	0	0	12
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	1	0	0	0	8
55 to 59	0	0	0	0	0	0	0	0	1	2	0	0	0	3
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	1	2	1	0	21	6	13	5	3	0	0	0	52

**CITY OF SAN RAFAEL
DISTRIBUTION OF FIRE ACTIVE MEMBERS
PAYROLL BY AGE AND SERVICE AS OF JULY 1, 2018**

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	0	85,434	99,248	106,216	0	132,080	131,630	0	0	0	0	0	0	123,264
35 to 39	0	0	102,834	0	0	134,576	129,031	0	0	0	0	0	0	131,468
40 to 44	0	0	0	0	0	125,016	143,581	173,523	0	0	0	0	0	151,109
45 to 49	0	0	0	0	0	153,473	0	136,375	143,934	0	0	0	0	139,115
50 to 54	0	0	0	0	0	0	127,129	140,729	140,281	172,476	0	0	0	142,829
55 to 59	0	0	0	0	0	0	0	0	119,961	142,226	0	0	0	134,804
60 to 64	0	0	0	0	0	0	188,969	0	0	0	0	0	0	188,969
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	85,434	101,041	106,216	0	133,614	143,987	145,953	136,948	152,309	0	0	0	136,589

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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, 2017	1,700	191	264	194	29	86	1,481	264	4,209
New Entrants	164	0	0	0	0	0	0	0	164
Rehires	8	0	(5)	(2)	0	0	0	0	1
Duty Disabilities	0	0	0	0	0	0	0	0	0
Ordinary Disabilities	0	0	0	(2)	2	0	0	0	0
Retirements	(85)	(10)	(3)	(13)	0	0	109	2	0
Retirements from Safety with Misc Service	0	0	0	0	0	0	2	1	3
Vested Terminations	(13)	(1)	0	14	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	(2)	(15)	17	0
Non-Vested Terminations and Death without beneficiary	(19)	(1)	17	0	(1)	0	(32)	0	(36)
Transfers	(3)	11	(2)	(2)	0	0	0	0	4
Beneficiary Deaths	0	0	0	0	0	0	0	(15)	(15)
Domestic Relations Orders	0	0	0	4	0	0	0	1	5
Withdrawals Paid	(14)	0	(8)	(4)	0	0	0	0	(26)
Data Corrections	(1)	(3)	0	(1)	0	1	(1)	0	(5)
June 30, 2018	1,737	187	263	188	30	85	1,544	270	4,304

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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, 2017	355	64	23	18	6	105	251	65	887
New Entrants	15	0	0	0	0	0	0	0	15
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	(10)	(5)	0	0	0	0	16	0	1
Retirements from Safety with Misc Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(1)	(1)	0	2	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	(1)	(4)	5	0
Non-Vested Terminations and Death without beneficiary	(4)	0	3	0	0	0	(1)	0	(2)
Transfers	2	2	0	0	0	0	0	0	4
Beneficiary Deaths	0	0	0	0	0	0	0	(2)	(2)
Domestic Relations Orders	0	0	0	0	0	0	0	1	1
Withdrawals Paid	0	0	0	0	0	0	0	0	0
Data Corrections	1	(1)	0	0	1	0	(1)	0	0
June 30, 2018	358	59	26	20	7	104	261	69	904

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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, 2017	157	23	34	20	2	4	123	13	376
New Entrants	11	0	0	0	0	0	0	0	11
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	(9)	(1)	0	(2)	0	0	12	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	(1)	0	0	0	0	0	0	1	0
Non-Vested Terminations and Death without beneficiary	(2)	0	2	0	0	0	(1)	0	(1)
Transfers	1	1	0	0	0	0	0	0	2
Beneficiary Deaths	0	0	0	0	0	0	0	0	0
Domestic Relations Orders	0	0	0	0	0	0	0	1	1
Withdrawals Paid	(2)	0	(1)	(1)	0	0	0	0	(4)
Data Corrections	0	0	0	0	0	0	0	0	0
June 30, 2018	154	23	35	18	2	4	134	15	385

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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, 2017	51	14	1	2	1	17	24	10	120
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	(1)	(3)	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	0	0	0
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, 2018	50	11	1	2	1	17	28	10	120

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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, 2017	2,263	292	322	234	38	212	1,879	352	5,592
New Entrants	190	0	0	0	0	0	0	0	190
Rehires	8	0	(5)	(2)	0	0	0	0	1
Duty Disabilities	0	0	0	0	0	0	0	0	0
Ordinary Disabilities	0	0	0	(2)	2	0	0	0	0
Retirements	(105)	(19)	(3)	(15)	0	0	141	2	1
Retirements from Safety with Misc Service	0	0	0	0	0	0	2	1	3
Vested Terminations	(15)	(2)	0	17	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	(1)	0	0	0	0	(3)	(19)	23	0
Non-Vested Terminations and Death without beneficiary	(25)	(1)	22	0	(1)	0	(34)	0	(39)
Transfers	0	14	(2)	(2)	0	0	0	0	10
Beneficiary Deaths	0	0	0	0	0	0	0	(17)	(17)
Domestic Relations Orders	0	0	0	4	0	0	0	3	7
Withdrawals Paid	(16)	0	(9)	(5)	0	0	0	0	(30)
Data Corrections	0	(4)	0	(1)	1	1	(2)	0	(5)
June 30, 2018	2,299	280	325	228	40	210	1,967	364	5,713

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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, 2017	10	1	0	1	0	0	4	1	17
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	0	(1)	0	0	0	0	1	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	0	0	0
Non-Vested Terminations and Death without beneficiary	0	0	0	0	0	0	0	0	0
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, 2018	9	0	0	2	0	0	5	1	17

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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, 2017	64	10	4	2	0	31	54	14	179
New Entrants	3	0	0	0	0	0	0	0	3
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	(2)	0	0	0	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	0	0	0	0	0	0	0	0	0
Transfers	0	1	(1)	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, 2018	65	11	3	2	0	32	55	14	182

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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, 2017	77	11	3	4	0	31	56	16	198
New Entrants	3	0	0	0	0	0	0	0	3
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	(2)	(1)	0	0	0	0	3	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	0	0	0
Non-Vested Terminations and Death without beneficiary	0	0	0	0	0	0	0	0	0
Transfers	0	1	(1)	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, 2018	77	11	2	5	0	32	58	16	201

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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, 2017	212	69	64	27	2	18	247	31	670
New Entrants	33	0	0	0	0	0	0	0	33
Rehires	1	0	0	(1)	0	0	0	0	0
Duty Disabilities	0	(1)	0	0	0	1	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(14)	0	(1)	0	0	0	15	0	0
Retirements from Safety with Misc Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(2)	0	0	2	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	(4)	0	3	0	0	0	(2)	0	(3)
Transfers	(5)	7	(1)	0	0	0	0	0	1
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	(3)	(1)	(5)	(1)	0	0	0	0	(10)
Data Corrections	0	1	0	0	0	0	0	0	1
June 30, 2018	218	75	60	27	2	19	257	33	691

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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, 2017	82	18	13	7	0	38	77	16	251
New Entrants	10	0	0	0	0	0	0	0	10
Rehires	0	0	0	0	0	0	0	0	0
Duty Disabilities	(3)	0	0	0	0	3	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(1)	(4)	(1)	(1)	0	0	6	1	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	(2)	2	0
Non-Vested Terminations and Death without beneficiary	(1)	0	1	0	0	0	0	0	0
Transfers	2	1	(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	0	0
Withdrawals Paid	0	0	(3)	0	0	0	0	0	(3)
Data Corrections	0	(1)	0	0	0	1	(1)	0	(1)
June 30, 2018	89	14	9	6	0	42	80	18	258

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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, 2017	54	6	5	1	0	21	84	22	193
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	(2)	(3)	0	0	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	0	0	0	0
Non-Vested Terminations and Death without beneficiary	0	0	0	0	0	0	0	0	0
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	1	0	0	0	0	0	0	1
June 30, 2018	52	4	5	1	0	21	89	21	193

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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, 2017	348	93	82	35	2	77	408	69	1,114
New Entrants	43	0	0	0	0	0	0	0	43
Rehires	1	0	0	(1)	0	0	0	0	0
Duty Disabilities	(3)	(1)	0	0	0	4	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(17)	(7)	(2)	(1)	0	0	26	1	0
Retirements from Safety with Misc Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(2)	0	0	2	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	0	(5)	5	0
Non-Vested Terminations and Death without beneficiary	(5)	0	4	0	0	0	(2)	0	(3)
Transfers	(3)	8	(2)	0	0	0	0	0	3
Beneficiary Deaths	0	0	0	0	0	0	0	(3)	(3)
Domestic Relations Orders	0	0	0	0	0	0	0	0	0
Withdrawals Paid	(3)	(1)	(8)	(1)	0	0	0	0	(13)
Data Corrections	0	1	0	0	0	1	(1)	0	1
June 30, 2018	359	93	74	34	2	82	426	72	1,142

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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	56	2	5	0	63
Option 2 - J&S 100%	71	21	11	5	108
Option 3 - J&S 50%	8	2	0	1	11
Option 4	1	0	0	0	1
Unmodified Benefit Option	1,407	236	118	22	1,783
Unmodified Option - Service Connected Disability (missing)	0	0	0	0	0
	1	0	0	0	1
Total Service Retired	1,544	261	134	28	1,967
Ordinary Disability					
Option 1 - Cash Refund Annuity	4	0	0	0	4
Option 2 - J&S 100%	2	0	0	0	2
Option 3 - J&S 50%	0	0	0	0	0
Option 4	0	0	0	0	0
Unmodified Benefit Option	24	7	2	1	34
Unmodified Option - Service Connected Disability (missing)	0	0	0	0	0
	0	0	0	0	0
Total Ordinary Disability	30	7	2	1	40
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	3	6	1	0	10
Unmodified Option - Service Connected Disability (missing)	80	94	2	16	192
	0	0	0	0	0
Total Duty Disability	85	104	4	17	210
Total	1,659	372	140	46	2,217

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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	1	1
Option 3 - J&S 50%	1	0	1
Option 4	0	0	0
Unmodified Benefit Option	4	54	58
Unmodified Option - Service Connected Disability	0	0	0
(missing)	0	0	0
Total Service Retired	5	55	60
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	2	2
Unmodified Option - Service Connected Disability	0	30	30
(missing)	0	0	0
Total Duty Disability	0	32	32
Total	5	87	92

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

Benefit Form Elections: City of San Rafael				
	Miscellaneous	Police	Fire	Total
Service Retired				
Option 1 - Cash Refund Annuity	5	1	0	6
Option 2 - J&S 100%	22	14	5	41
Option 3 - J&S 50%	2	0	1	3
Option 4	0	0	0	0
Unmodified Benefit Option	228	64	83	375
Unmodified Option - Service Connected Disability	0	0	0	0
(missing)	0	1	0	1
Total Service Retired	257	80	89	426
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	2	0	0	2
Unmodified Option - Service Connected Disability	0	0	0	0
(missing)	0	0	0	0
Total Ordinary Disability	2	0	0	2
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	1	1	0	2
Unmodified Option - Service Connected Disability	17	40	21	78
(missing)	0	0	0	0
Total Duty Disability	19	42	21	82
Total	278	122	110	510

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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	0	\$0	3	\$55,099	0	\$0	0	\$0	3	\$55,099
50 to 54	23	\$21,787	35	\$47,080	1	\$3,844	1	\$12,814	60	\$36,093
55 to 59	92	\$25,548	56	\$70,693	24	\$34,002	7	\$36,146	179	\$41,220
60 to 64	197	\$37,144	58	\$70,578	24	\$35,787	10	\$79,044	289	\$45,191
65 to 69	319	\$40,563	43	\$81,320	31	\$45,451	7	\$83,295	400	\$46,071
70 to 74	346	\$39,625	33	\$59,773	29	\$34,027	2	\$55,380	410	\$40,928
75 to 79	266	\$43,029	19	\$103,788	18	\$38,473	1	\$157,050	304	\$46,932
80 to 84	161	\$33,832	10	\$47,269	4	\$64,227	0	\$0	175	\$35,294
85 to 89	89	\$34,069	4	\$62,881	2	\$27,826	0	\$0	95	\$35,151
90 to 94	39	\$27,721	0	\$0	1	\$20,104	0	\$0	40	\$27,530
95+	12	\$25,302	0	\$0	0	\$0	0	\$0	12	\$25,302
<Total>	1,544	\$37,648	261	\$69,084	134	\$38,058	28	\$68,112	1,967	\$42,281

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	\$50,185	0	\$0	0	\$0	1	\$50,185
35 to 39	0	\$0	3	\$49,599	0	\$0	0	\$0	3	\$49,599
40 to 44	0	\$0	1	\$37,667	0	\$0	0	\$0	1	\$37,667
45 to 49	3	\$28,656	5	\$45,476	1	\$14,824	1	\$46,334	10	\$37,451
50 to 54	3	\$33,516	16	\$50,675	0	\$0	1	\$57,539	20	\$48,445
55 to 59	12	\$35,256	20	\$46,417	0	\$0	1	\$51,789	33	\$42,521
60 to 64	13	\$32,752	12	\$74,698	0	\$0	3	\$64,401	28	\$54,120
65 to 69	20	\$36,701	14	\$46,637	0	\$0	5	\$53,499	39	\$42,421
70 to 74	13	\$43,713	12	\$67,510	3	\$23,765	4	\$62,505	32	\$53,116
75 to 79	10	\$30,651	13	\$56,522	0	\$0	2	\$40,433	25	\$44,887
80 to 84	10	\$53,246	5	\$43,476	0	\$0	0	\$0	15	\$49,990
85 to 89	1	\$16,045	1	\$33,508	0	\$0	0	\$0	2	\$24,777
90 to 94	0	\$0	1	\$31,836	0	\$0	0	\$0	1	\$31,836
95+	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
<Total>	85	\$37,561	104	\$53,655	4	\$21,530	17	\$55,720	210	\$46,696

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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	0	\$0	1	\$36,511	0	\$0	0	\$0	1	\$36,511
40 to 44	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
45 to 49	1	\$2,290	0	\$0	0	\$0	0	\$0	1	\$2,290
50 to 54	1	\$24,318	0	\$0	0	\$0	0	\$0	1	\$24,318
55 to 59	1	\$21,960	4	\$61,726	1	\$36,608	1	\$73,398	7	\$54,124
60 to 64	6	\$23,563	1	\$134,002	0	\$0	0	\$0	7	\$39,340
65 to 69	1	\$32,797	0	\$0	0	\$0	0	\$0	1	\$32,797
70 to 74	12	\$19,522	1	\$25,957	1	\$14,120	0	\$0	14	\$19,596
75 to 79	6	\$19,816	0	\$0	0	\$0	0	\$0	6	\$19,816
80 to 84	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
85 to 89	1	\$2,896	0	\$0	0	\$0	0	\$0	1	\$2,896
90 to 94	1	\$57,789	0	\$0	0	\$0	0	\$0	1	\$57,789
95+	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
<Total>	30	\$21,220	7	\$63,339	2	\$25,364	1	\$73,398	40	\$30,102

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	2	\$38,735	0	\$0	0	\$0	0	\$0	2	\$38,735
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	\$32,581	1	\$29,611	0	\$0	0	\$0	2	\$31,096
40 to 44	3	\$6,451	0	\$0	1	\$14,824	0	\$0	4	\$8,544
45 to 49	4	\$26,261	1	\$11,709	1	\$8,681	1	\$45,356	7	\$24,398
50 to 54	5	\$17,745	6	\$39,784	2	\$14,183	0	\$0	13	\$27,369
55 to 59	17	\$16,697	9	\$52,760	1	\$8,681	2	\$57,819	29	\$30,449
60 to 64	24	\$24,805	10	\$30,814	1	\$35,738	2	\$53,328	37	\$28,266
65 to 69	38	\$26,052	11	\$34,737	1	\$40,341	0	\$0	50	\$28,249
70 to 74	40	\$31,813	9	\$74,192	4	\$14,353	2	\$33,866	55	\$37,553
75 to 79	36	\$21,600	9	\$30,426	1	\$15,729	2	\$44,579	48	\$24,090
80 to 84	37	\$32,739	6	\$33,803	2	\$21,884	0	\$0	45	\$32,398
85 to 89	30	\$23,135	4	\$35,689	1	\$4,678	1	\$7,858	36	\$23,593
90 to 94	22	\$20,468	2	\$39,344	0	\$0	0	\$0	24	\$22,041
95+	11	\$17,087	1	\$32,058	0	\$0	0	\$0	12	\$18,334
<Total>	270	\$25,134	69	\$41,203	15	\$17,214	10	\$43,240	364	\$28,351

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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	1	\$60,586	1	\$60,586
50 to 54	0	\$0	4	\$168,222	4	\$168,222
55 to 59	2	\$7,471	5	\$81,505	7	\$60,353
60 to 64	0	\$0	10	\$115,635	10	\$115,635
65 to 69	2	\$26,217	12	\$87,758	14	\$78,966
70 to 74	0	\$0	14	\$116,970	14	\$116,970
75 to 79	1	\$104,782	8	\$96,820	9	\$97,704
80 to 84	0	\$0	1	\$9,562	1	\$9,562
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>	5	\$34,432	55	\$104,948	60	\$99,072

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	0	\$0	0	\$0
45 to 49	0	\$0	0	\$0	0	\$0
50 to 54	0	\$0	2	\$109,562	2	\$109,562
55 to 59	0	\$0	2	\$48,235	2	\$48,235
60 to 64	0	\$0	2	\$100,087	2	\$100,087
65 to 69	0	\$0	8	\$65,815	8	\$65,815
70 to 74	0	\$0	9	\$77,845	9	\$77,845
75 to 79	0	\$0	8	\$58,376	8	\$58,376
80 to 84	0	\$0	1	\$75,298	1	\$75,298
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	32	\$71,412	32	\$71,412

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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	\$76,162	1	\$76,162
55 to 59	1	\$11,890	4	\$37,401	5	\$32,299
60 to 64	0	\$0	2	\$35,385	2	\$35,385
65 to 69	0	\$0	4	\$40,393	4	\$40,393
70 to 74	0	\$0	2	\$48,195	2	\$48,195
75 to 79	0	\$0	1	\$61,032	1	\$61,032
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	\$11,890	14	\$43,966	15	\$41,828

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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	4	\$23,308	7	\$21,291	5	\$64,034	16	\$35,153
55 to 59	25	\$46,286	13	\$59,172	16	\$76,914	54	\$58,463
60 to 64	50	\$45,788	16	\$72,054	22	\$113,747	88	\$67,553
65 to 69	63	\$40,644	17	\$81,205	13	\$114,096	93	\$58,326
70 to 74	55	\$39,685	15	\$99,827	13	\$88,252	83	\$58,161
75 to 79	24	\$32,014	8	\$40,551	8	\$48,441	40	\$37,006
80 to 84	19	\$20,018	3	\$49,661	7	\$87,595	29	\$39,396
85 to 89	7	\$36,603	1	\$96,511	4	\$61,778	12	\$49,987
90 to 94	7	\$13,939	0	\$0	0	\$0	7	\$13,939
95+	3	\$6,325	0	\$0	1	\$57,454	4	\$19,107
<Total>	257	\$38,150	80	\$68,987	89	\$89,764	426	\$54,724

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	3	\$58,044	0	\$0	3	\$58,044
40 to 44	0	\$0	4	\$61,898	0	\$0	4	\$61,898
45 to 49	2	\$19,681	5	\$52,753	1	\$50,578	8	\$44,213
50 to 54	1	\$36,913	3	\$59,486	1	\$61,133	5	\$55,301
55 to 59	2	\$25,456	2	\$44,347	0	\$0	4	\$34,902
60 to 64	2	\$15,503	4	\$65,760	2	\$90,484	8	\$59,377
65 to 69	5	\$31,090	8	\$80,965	6	\$103,339	19	\$74,906
70 to 74	4	\$31,986	6	\$48,281	9	\$84,012	19	\$61,776
75 to 79	3	\$31,582	6	\$37,830	1	\$106,263	10	\$42,799
80 to 84	0	\$0	1	\$26,939	0	\$0	1	\$26,939
85 to 89	0	\$0	0	\$0	1	\$34,389	1	\$34,389
90 to 94	0	\$0	0	\$0	0	\$0	0	\$0
95+	0	\$0	0	\$0	0	\$0	0	\$0
<Total>	19	\$28,228	42	\$57,310	21	\$86,166	82	\$57,961

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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	0	\$0	0	\$0	0	\$0	0	\$0
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	\$16,421	0	\$0	0	\$0	1	\$16,421
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	1	\$8,445	0	\$0	0	\$0	1	\$8,445
95+	0	\$0	0	\$0	0	\$0	0	\$0
<Total>	2	\$12,433	0	\$0	0	\$0	2	\$12,433

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	\$21,582	0	\$0	1	\$21,582
50 to 54	1	\$13,329	2	\$30,155	0	\$0	3	\$24,546
55 to 59	3	\$10,167	2	\$36,325	3	\$30,510	8	\$24,335
60 to 64	3	\$6,781	4	\$25,622	3	\$49,472	10	\$27,124
65 to 69	1	\$21,490	2	\$18,563	3	\$79,865	6	\$49,702
70 to 74	5	\$34,396	2	\$45,161	2	\$27,269	9	\$35,205
75 to 79	8	\$25,254	3	\$56,590	3	\$34,050	14	\$33,853
80 to 84	5	\$24,948	1	\$55,546	3	\$30,131	9	\$30,076
85 to 89	5	\$14,410	1	\$10,107	3	\$34,448	9	\$20,611
90 to 94	1	\$8,347	0	\$0	1	\$23,355	2	\$15,851
95+	1	\$12,987	0	\$0	0	\$0	1	\$12,987
<Total>	33	\$20,539	18	\$34,439	21	\$40,634	72	\$29,875

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX A – MEMBERSHIP INFORMATION

Plan	Retirement Eligibility								
	Number Reaching Service Retirement Eligibility As Defined in Section 1.1 in Year(s)								
	Current Actives	0	1	2	3	4	5	6-10	Total
County									
Miscellaneous Tier 1	7	7	0	0	0	0	0	0	7
Miscellaneous Tier 2	39	39	0	0	0	0	0	0	39
Miscellaneous Tier 3	758	490	26	23	28	26	25	87	705
Miscellaneous Tier 3A	99	4	11	9	8	7	6	12	57
Miscellaneous Tier 4	143	2	2	3	2	11	14	46	80
Miscellaneous Tier 5	691	28	26	24	39	38	55	63	273
Safety Tier 1A	1	1	0	0	0	0	0	0	1
Safety Tier 2A	52	22	4	3	6	1	1	8	45
Safety Tier 2B	203	62	15	10	6	15	11	52	171
Safety Tier 3	102	0	1	2	0	0	2	3	8
Total County	2,095	655	85	74	89	98	114	271	1,386
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	64	39	1	1	4	3	0	8	56
Courts Tier 4	5	1	1	0	0	0	0	2	4
Courts Tier 5	27	2	0	2	1	2	0	3	10
Total Courts	98	44	2	3	5	5	0	13	72
Special Districts									
South Marin Fire Miscellaneous	3	0	0	1	0	0	0	2	3
South Marin Fire Safety	50	14	5	1	2	2	1	9	34
Mosquito District	32	15	0	1	0	2	0	9	27
LAFCO	1	0	0	1	0	0	0	0	1
Tamalpais CSD	13	7	0	0	0	1	0	2	10
Marin CSD	7	1	0	0	0	1	2	1	5
Total Special Districts	106	37	5	4	2	6	3	23	80
Total County and Special Districts	2,299	736	92	81	96	109	117	307	1,538
Novato									
Miscellaneous	9	3	1	0	0	0	0	4	8
Safety	65	21	3	5	5	7	2	15	58
Total Novato	74	24	4	5	5	7	2	19	66
San Rafael									
Miscellaneous Tier 1	118	63	11	3	6	6	4	18	111
Miscellaneous Tier 2	17	2	0	0	0	2	1	5	10
Miscellaneous Tier 3	83	1	1	4	2	2	7	5	22
Fire Tier 1	37	13	1	5	2	2	1	8	32
Fire Tier 2	15	0	0	0	0	0	0	1	1
Safety Tier 1	42	17	2	2	2	6	3	10	42
Safety Tier 2	6	0	0	0	0	1	0	1	2
Safety Tier 3	41	0	0	0	0	0	0	0	0
Total San Rafael	359	96	15	14	12	19	16	48	220

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

APPENDIX B – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

The assumptions and methods used in the actuarial valuation as of June 30, 2018 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 (12 years remaining as of June 30, 2018), except for the additional UAL attributable to the extraordinary loss from 2008-2009, which is being amortized over a separate closed period (20 years as of June 30, 2018). 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 \$5.065 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, 2018**

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, 2018**

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
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APPENDIX B – STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

14. Rates of Termination (All Types)

Sample rates of termination are shown in the following tables below. Note that termination rates do not apply once a member is eligible for retirement.

Termination

Sample Rates (less than five years of service)

Service	Miscellaneous		
	Male	Female	Safety
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	Miscellaneous						Safety
	5-9 Years of Service	Male 10-14 Years of Service	15-29 Years of Service	5-9 Years of Service	Females 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, 2018**

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, 2018**

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.

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

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 (\$121,388 for 2018) 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 (\$145,666 for 2018). 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.

MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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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.

MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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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	Benefit Factor
					Age ¹	
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%

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

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

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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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%

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

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%

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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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.

MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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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
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Nonservice-Connected Disability

Eligibility

Members are eligible to 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.

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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, 2018

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
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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.

**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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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.

APPENDIX D – GLOSSARY

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.

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, 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, 2018**

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, 2018**

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
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2018**

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, 2018**

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, 2018**

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, 2018**

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, 2018**

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, 2018**

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, 2018**

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, 2018**

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, 2018**

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, 2018**

APPENDIX E – MEMBER CONTRIBUTION RATES

Marin City CSD Tier 1, LAFCO Tier 7, Tamalpais CSD Tier 1 (31676.11)			
Entry Age	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, 2018**

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, 2018**

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, 2018**

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, 2018**

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, 2018**

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, 2018**

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, 2018**

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, 2018**

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, 2018**

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, 2018**

APPENDIX E – MEMBER CONTRIBUTION RATES

PEPRA Rates					
All Ages	Basic	COLA	Total	Prior Total	
PEPRA Misc 2% COLA	7.66%	1.56%	9.22%	9.30%	
PEPRA Misc 4% COLA	8.41%	2.58%	10.99%	10.92%	
PEPRA Safety 2% COLA	11.52%	2.91%	14.43%	13.98%	
PEPRA Safety 3% COLA	12.75%	4.63%	17.38%	17.18%	
PEPRA Safety 4% COLA	12.30%	4.65%	16.95%	16.30%	



Classic Values, Innovative Advice