Marin County Employees' Retirement Association

GASB 67/68 Report as of June 30, 2018

Produced by Cheiron

November 2018

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November 19, 2018

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

Dear Members of the Board:

The purpose of this report is to provide accounting and financial reporting information under GASB 67 for the Marin County Employees' Retirement Association (MCERA) and under GASB 68 for the County of Marin and the other participating employers. This information includes:

- Determination of the discount rate as of June 30, 2018,
- Projection of MCERA's Total Pension Liability from the valuation date to the measurement date,
- Note disclosures and required supplementary information under GASB 67 for MCERA,
- Determination of collective amounts under GASB 68, and
- Schedules for the financial reporting of participating employers under GASB 68.

If you have any questions about the report or would like additional information, please let us know.

Sincerely,
Cheiron

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

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

SECTION I – BOARD SUMMARY

The purpose of this report is to provide accounting and financial disclosure information under the Governmental Accounting Standards Board Statements 67 and 68 for the Marin County Employees' Retirement Association (MCERA) and participating employers. This information includes:

- Determination of the discount rate as of June 30, 2018,
- Projection of MCERA's Total Pension Liability from the valuation date to the measurement date,
- Note disclosures and required supplementary information under GASB 67 for MCERA,
- Determination of collective amounts under GASB 68, and
- Schedules for the financial reporting of participating employers under GASB 68.

Highlights

The measurement date for the Marin County Employees' Retirement Association is June 30, 2018. Measurements are based on the fair value of assets as of June 30, 2018, and the Total Pension Liability as of the valuation date, June 30, 2017, updated to June 30, 2018. To the best of our knowledge, there were no significant events between the valuation date and the measurement date so the update procedures only included the addition of service cost and interest cost offset by actual benefit payments.

The table below provides a summary of the key collective results during this measurement period.

Table I-1
Summary of Collective Results

	Measurement Date	
	6/30/2018	6/30/2017
Net Pension Liability	$ 330,297,827	$ 368,756,305
Deferred Outflows	(30,601,258)	(36,188,412)
Deferred Inflows	57,455,965	38,436,190
Net Impact on Statement of Net Position	$ 357,152,533	$ 371,004,083
Pension Expense ($ Amount)	$ 64,902,926	$ 70,400,085
Pension Expense (% of Payroll)	26.11%	29.09%

The Net Pension Liability (NPL) decreased approximately $38 million since the prior measurement date, primarily due to the return on investments being greater than expected. The combination of the investment income plus the employer and employee contributions less administrative expenses exceeded the increase in the Total Pension Liability (TPL) due to

SECTION I – BOARD SUMMARY

interest, service cost, and assumption changes. In addition, gains on liability experience further contributed to the reduction in NPL.

The gains due to investment earnings being greater than expected are recognized over five years. The losses due to assumption changes and small gains due to liability experience are recognized over the average remaining service life, which is four years. Unrecognized amounts are reported as deferred inflows and deferred outflows.

As of the end of the reporting year, MCERA and its participating employers would report a Net Pension Liability of $330,297,827, Collective Deferred Inflows of $57,455,965, and Collective Deferred Outflows of $30,601,258. Consequently, the net impact on the aggregate of participating employers' Statements of Net Position due to MCERA would be $357,152,533 ($330,297,827 + $57,455,965 – $30,601,258) at the end of the measurement year. In addition, any contributions between the measurement date and each individual employer's reporting date would be reported as deferred outflows to offset the cash outflow reported.

For the measurement year ending June 30, 2018, the collective annual pension expense is $64,902,926 or 26.11% of covered payroll. This amount is not related to participating employers' contributions to MCERA ($78,754,476), but instead represents the change in the net impact on participating employer's Statements of Net Position plus employer contributions ($356,152,533 – $371,004,083 + $78,754,476). The collective pension expense is smaller than the collective expense for the prior year. Volatility in pension expense from year to year is to be expected. For the measurement year ending June 30, 2018, the impact of positive investment returns was largely offset by the recognition of assumption changes. A breakdown of the components of the collective net pension expense is shown in Section VI of the report.

SECTION II – CERTIFICATION

The purpose of this report is to provide accounting and financial reporting information under GASB 67 for the Marin County Employees' Retirement Association (MCERA) and under GASB 68 for the employers that participate in MCERA. This report is for the use of MCERA, the participating employers, and their auditors in preparing financial reports in accordance with applicable law and accounting requirements. This report is not appropriate for other purposes, including the measurement of funding requirements for MCERA.

In preparing our report, we relied on information (some oral and some written) supplied by MCERA. This information includes, but is not limited to, the 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 actuarial measurements may differ significantly from the current measurements due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic 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 that 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.

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 any other user.

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

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

SECTION III – DETERMINATION OF DISCOUNT RATE

The discount rate used to measure the Total Pension Liability was 7.00%.

We have assumed that the employees will continue to contribute to MCERA at the current rates and the employers will continue the historical and legally required practice of contributing to the Plan based on an Actuarially Determined Contribution, reflecting a payment equal to annual normal cost, a portion of the expected administrative expenses, and an amount necessary to amortize the remaining Unfunded Actuarial Liability (UAL) as a level percent of payroll over a closed period.

Effective with the June 30, 2013 valuation, the UAL as of June 30, 2013 is amortized over a closed 17-year period (13 years remaining as of June 30, 2017), except for the additional UAL attributable to the outstanding unfunded actuarial loss from 2009, which is being amortized over a separate closed period (21 years remaining as of June 30, 2017).

At a Board meeting held on December 10, 2014, the Board of Retirement adopted a new funding policy for any subsequent unexpected change in the UAL after June 30, 2013. 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 level payments as a percentage of payroll between the ramping periods. This new amortization method for gains and losses is similar to a 20-year amortization period with level payments as a percentage of payroll, in conjunction with traditional five-year asset smoothing.

Assumption changes will be amortized over a closed 22-year period, with a 3-year ramp up period, 2-year ramp down period, and 17 years of level payments as a percentage of payroll.

We have not performed a formal cash flow projection as described under Paragraph 41 of GASB Statement 67. However, Paragraph 43 allows for alternative methods to confirm the sufficiency of the Net Position if the evaluations "can be made with sufficient reliability without a separate projection of cash flows into and out of the pension plan…" In our professional judgment, adherence to the actuarial funding policy described above will result in the pension plan's projected Fiduciary Net Position being greater than or equal to the benefit payments projected for each future period.

Therefore, the long-term expected rate of return on MCERA investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

SECTION IV – PROJECTION OF TOTAL PENSION LIABILITY

The Total Pension Liability (TPL) at the end of the measurement year, June 30, 2018, is measured as of a valuation date of June 30, 2017 and projected to June 30, 2018. There were no significant events during the projection period of which we are aware. Because the TPL shown in the prior report was measured as of June 30, 2016 and projected to June 30, 2017, and because the 2016 and 2017 actuarial valuation reports were based on different assumptions, the TPL from the prior report will not match the amounts measured as of June 30, 2017 that are shown in this exhibit.

The table below shows the projection of the TPL at discount rates equal to the rate used for disclosure and plus and minus one percent from the rate used for disclosure.

Table IV-1
Projection of Collective Total Pension Liability from Valuation to Measurement Date

Discount Rate	6.00%	7.00%	8.00%
Valuation Collective Total Pension Liability, 6/30/2017			
Actives	$ 1,027,187,837	$ 870,900,982	$ 744,712,858
Deferred Vested	121,366,037	101,155,469	85,555,581
Retirees	1,934,718,540	1,750,572,242	1,595,596,676
Total	**$ 3,083,272,414**	**$ 2,722,628,693**	**$ 2,425,865,115**
Service Cost	77,439,239	61,074,664	48,723,850
Benefit Payments	139,856,672	139,856,672	139,856,672
Interest	183,151,097	187,873,274	190,494,024
Collective Total Pension Liability, 6/30/2018	**$ 3,204,006,079**	**$ 2,831,719,959**	**$ 2,525,226,318**

SECTION V – GASB 67 REPORTING INFORMATION

Note Disclosures

The table below shows the changes in the Total Pension Liability, the Plan Fiduciary Net Position (i.e., fair value of System assets), and the Net Pension Liability during the measurement year.

Table V-1
Change in Collective Net Pension Liability

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at 6/30/2017	$ 2,685,016,515	$ 2,316,260,210	$ 368,756,305
Changes for the year:			
Service cost	61,074,664		61,074,664
Interest	188,096,539		188,096,539
Changes of benefits	0		0
Differences between expected and actual experience	(3,412,765)		(3,412,765)
Changes of assumptions	40,801,678		40,801,678
Contributions - employer		78,754,476	(78,754,476)
Contributions - member		28,628,627	(28,628,627)
Net investment income		221,839,196	(221,839,196)
Benefit payments	(139,856,672)	(139,856,672)	0
Administrative expense		(4,203,705)	4,203,705
Net changes	146,703,444	185,161,922	(38,458,478)
Balances at 6/30/2018	$ 2,831,719,959	$ 2,501,422,132	$ 330,297,827

During the measurement year, the collective NPL decreased by approximately $38 million. The service cost and interest cost increased the collective NPL by approximately $249 million while contributions and investment earnings offset by administrative expenses decreased the collective NPL by approximately $325 million.

There were no changes in benefits during the year. Changes in assumptions increased the collective NPL by $41 million. There were actuarial experience gains during the year that reduced the collective NPL by approximately $3.4 million.

Changes in the discount rate affect the measurement of the TPL. Lower discount rates produce a higher TPL and higher discount rates produce a lower TPL. Because the discount rate does not affect the measurement of assets, the percentage change in the NPL can be very significant for a relatively small change in the discount rate. The table on the following page shows the sensitivity of the collective NPL to the discount rate.

SECTION V – GASB 67 REPORTING INFORMATION

Table V-2
Sensitivity of Collective Net Pension Liability to Changes in Discount Rate

	1% Decrease 6.00%	Discount Rate 7.00%	1% Increase 8.00%
Total Pension Liability	$ 3,204,006,079	$ 2,831,719,959	$ 2,525,226,318
Plan Fiduciary Net Position	2,501,422,132	2,501,422,132	2,501,422,132
Collective Net Pension Liability	$ 702,583,947	$ 330,297,827	$ 23,804,186
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	78.1%	88.3%	99.1%

A one percent decrease in the discount rate increases the TPL by approximately 13% and increases the collective NPL by approximately 113%. A one percent increase in the discount rate decreases the TPL by approximately 11% and decreases the collective NPL by approximately 93%.

Required Supplementary Information

The schedules of Required Supplementary Information generally start with information as of the implementation of GASB 67, and eventually will build up to 10 years of information. The schedule on the next page shows the changes in collective NPL and related ratios required by GASB for the five years since implementation.

SECTION V – GASB 67 REPORTING INFORMATION

Table V-3
Schedule of Changes in Collective Net Pension Liability and Related Ratios

	FYE 2018	FYE 2017	FYE 2016	FYE 2015	FYE 2014
Total Pension Liability					
Service cost (MOY)	$ 61,074,664	$ 57,090,773	$ 55,208,834	$ 49,064,492	$ 49,014,858
Interest (includes interest on service cost)	188,096,539	184,139,800	176,564,792	166,718,783	159,521,975
Changes of benefit terms	0	0	0	0	0
Differences between expected and actual experience	(3,412,765)	(904,678)	(212,631)	(31,054,299)	0
Changes of assumptions	40,801,678	0	0	144,753,646	0
Benefit payments, including refunds of member contributions	(139,856,672)	(131,937,062)	(124,203,519)	(115,984,752)	(109,342,861)
Net change in total pension liability	**$ 146,703,444**	**$ 108,388,833**	**$ 107,357,476**	**$ 213,497,871**	**$ 99,193,972**
Total pension liability - beginning	**2,685,016,515**	**2,576,627,682**	**2,469,270,206**	**2,255,772,335**	**2,156,578,363**
Total pension liability - ending	**$ 2,831,719,959**	**$ 2,685,016,515**	**$ 2,576,627,682**	**$ 2,469,270,206**	**$ 2,255,772,335**
Plan fiduciary net position					
Contributions - employer	$ 78,754,476	$ 77,502,945	$ 75,260,980	$ 68,915,072	$ 69,980,201
Contributions - member	28,628,627	28,053,775	27,207,157	24,920,493	22,952,689
Net investment income	221,839,196	248,347,501	42,927,728	100,055,573	309,002,468
Benefit payments, including refunds of member contributions	(139,856,672)	(131,937,062)	(124,203,519)	(115,984,752)	(109,342,861)
Administrative expense	(4,203,705)	(4,404,191)	(4,379,760)	(4,654,623)	(4,503,845)
Net change in plan fiduciary net position	**$ 185,161,922**	**$ 217,562,968**	**$ 16,812,586**	**$ 73,251,763**	**$ 288,088,652**
Plan fiduciary net position - beginning	**2,316,260,210**	**2,098,697,242**	**2,081,884,656**	**2,008,632,893**	**1,720,544,241**
Plan fiduciary net position - ending	**$ 2,501,422,132**	**$ 2,316,260,210**	**$ 2,098,697,242**	**$ 2,081,884,656**	**$ 2,008,632,893**
Net pension liability - ending	**$ 330,297,827**	**$ 368,756,305**	**$ 477,930,440**	**$ 387,385,550**	**$ 247,139,442**
Plan fiduciary net position as a percentage of the total pension liability	88.34%	86.27%	81.45%	84.31%	89.04%
Covered payroll	$ 248,532,086	$ 242,045,311	$ 238,185,040	$ 223,825,880	$ 218,340,721
Net pension liability as a percentage of covered payroll	132.90%	152.35%	200.66%	173.07%	113.19%

SECTION V – GASB 67 REPORTING INFORMATION

Because an Actuarially Determined Contribution (ADC) has been calculated historically, the full 10 years of information in the following schedule is required.

Table V-4
Schedule of Collective Employer Contributions

	FYE 2018	FYE 2017	FYE 2016	FYE 2015	FYE 2014	FYE 2013	FYE 2012	FYE 2011	FYE 2010	FYE 2009
Actuarially Determined Contribution	$ 78,754,476	$ 77,502,945	$ 75,260,980	$ 68,915,072	$ 69,660,201	$ 69,853,000	$ 64,690,000	$ 64,757,000	$ 56,271,000	$ 54,555,000
Contributions in Relation to the Actuarially Determined Contribution	78,754,476	77,502,945	75,260,980	68,915,072	69,660,201	69,853,000	64,690,000	64,757,000	56,271,000	54,555,000
Contribution Deficiency/(Excess)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Covered Payroll	$248,532,086	$242,045,311	$238,185,040	$223,825,880	$218,340,721	$211,001,594	$216,515,000	$215,969,000	$219,556,000	$214,449,000
Contributions as a Percentage of Covered Payroll	31.69%	32.02%	31.60%	30.79%	31.90%	33.11%	29.88%	29.98%	25.63%	25.44%

The notes below summarize the key methods and assumptions used to determine the ADC for FYE 2018.

Notes to Schedule

Valuation Date	6/30/2016 (to determine FY2017-18 contribution)
Timing	Actuarially determined contribution rates are calculated based on the actuarial valuation one year prior to the beginning of the plan year.

Key Methods and Assumptions Used to Determine Contribution Rates (for FY 2017-18):

Actuarial cost method	Entry Age
Asset valuation method	Market value
Amortization method	Level percentage of payroll with separate periods for Extraordinary Actuarial Gains or Losses (22 years remaining as of 6/30/16), the remaining UAL as of June 30, 2013 (14 years as of 6/30/16), and additional layers for unexpected changes in UAL after 6/30/13 (24 years for gains and losses with a 5-year phase-in/out and 22 years for assumption changes with a 3-year phase-in/out).
Discount rate	7.25%
Amortization growth rate	3.00%
Price inflation	2.75%
Salary increases	3.00% plus merit component based on employee classification and years of service.
Healthy Mortality	Sex distinct CalPERS 2014 Pre-Retirement Non-Industrial Death rates (plus Duty-Related death rates for Safety members), with generational improvements from a base year of 2009 using Scale MP-2014 for active Members. Sex distinct CalPERS 2014 Post-Retirement Healthy Mortality rates, adjusted by 110% for Safety Males and 95% for Miscellaneous and Safety Females, with generational improvements from a base year of 2009 using Scale MP-2014 for retired Members and their beneficiaries.
Disabled Mortality	Sex distinct CalPERS 2014 Disability Death rates (Non-Industrial rates for Miscellaneous members and Industrial rates for Safety members), adjusted by 90% for Males and Females (Miscellaneous and Safety), with generational improvements from a base year of 2009 using Scale MP-2014.

A complete description of the methods and assumptions used to determine contribution rates for the year ending June 30, 2018 can be found in the June 30, 2016 actuarial valuation report.

SECTION VI – GASB 68 COLLECTIVE AMOUNTS

We understand that MCERA's participating employers elected to use the 2014 measurement date for their initial reporting under GASB 68 on their June 30, 2015 reporting date. As a result, the schedules in this section will be used by the employers for their FYE 2019 reporting, and the schedules from our prior report will be used for the employers' FYE 2018 financial reporting.

Because MCERA is a cost-sharing multiple-employer pension plan, each employer participating in MCERA must reflect a portion of the collective Net Pension Liability, Pension Expense, and Deferred Outflows and Inflows in their financial statements. This section develops the collective amounts that are allocated to participating employers.

The impact of experience gains or losses and assumption changes on the TPL are recognized in expense over the average expected remaining service life of all active and inactive members of MCERA. As of the measurement date, this recognition period was four years.

During the year, there was an experience gain of approximately $3.4 million. Approximately $0.9 million of that gain was recognized as a decrease in collective pension expense in the current year and an identical amount will be recognized in each of the next three years. Unrecognized experience gains from prior experience were approximately $8.5 million, of which $8.0 million was recognized as a decrease in collective pension expense in the current year. The combination of unrecognized experience gains this year and unrecognized experience gains from prior periods resulted in a collective deferred inflow of resources as of June 30, 2018 of approximately $3.1 million.

Assumption changes since the last measurement date increased the TPL approximately $40.8 million. Approximately $10.2 million of that increase was recognized as an increase in pension expense in the current year and an identical amount will be recognized in each of the next three years. Unrecognized increases in the TPL due to assumption changes from prior periods were approximately $36.2 million, all of which was recognized as an increase in collective pension expense in the current year. The resulting collective deferred outflow of resources as of June 30, 2018 is approximately $30.6 million.

The impact of investment gains or losses is recognized over a period of five years. During the measurement year, there was an investment gain of approximately $61.0 million. Approximately $12.2 million of that gain was recognized as a decrease in collective pension expense in the current year and an identical amount will be recognized in each of the next four years. Unrecognized net investment gains from prior periods were approximately $29.9 million of which $24.3 million was recognized as a reduction in collective pension expense in the current year. The combination of unrecognized investment gains this year and unrecognized net investment gains from prior periods results in a collective deferred inflow of resources as of June 30, 2018 of approximately $54.4 million.

The table on the following page summarizes the current balances of collective deferred outflows and deferred inflows of resources along with the net recognition over the next five years.

SECTION VI – GASB 68 COLLECTIVE AMOUNTS

Table VI-1
Schedule of Collective Deferred Inflows and Outflows of Resources

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 0	$ 3,065,069
Changes in assumptions	30,601,258	0
Net difference between projected and actual earnings on pension plan investments	0	54,390,896
Total	**$ 30,601,258**	**$ 57,455,964**

Amounts reported as deferred outflows and deferred inflows of resources will be recognized in pension expense as follows:

Measurement year ended June 30:	
2019	8,754,379
2020	(1,113,448)
2021	(22,303,042)
2022	(12,192,595)
2023	0
Thereafter	$ 0

The collective annual pension expense recognized by the participating employers can be calculated two different ways. First, it is the change in the amounts reported on the participating employers' Statements of Net Position that relate to MCERA and are not attributable to employer contributions. That is, it is the change in collective NPL plus the changes in collective deferred outflows and inflows plus participating employer contributions.

Alternatively, annual pension expense can be calculated by its individual components. While GASB does not require or suggest the organization of the individual components shown in the table on the next page, we believe it helps to understand the level and volatility of the collective pension expense.

SECTION VI – GASB 68 COLLECTIVE AMOUNTS

Table VI-2
Calculation of Collective Pension Expense

	Measurement Year Ending 2018	2017
Change in Net Pension Liability	$ (38,458,478)	$ (109,174,135)
Change in Deferred Outflows	5,587,154	79,321,708
Change in Deferred Inflows	19,019,775	22,749,568
Employer Contributions	78,754,476	77,502,945
Pension Expense	**$ 64,902,926**	**$ 70,400,085**
Pension Expense as % of Payroll	**26.11%**	**29.09%**
Operating Expenses		
Service cost	$ 61,074,664	$ 57,090,773
Employee contributions	(28,628,627)	(28,053,775)
Administrative expenses	4,203,705	4,404,191
Total	$ 36,649,742	$ 33,441,189
Financing Expenses		
Interest cost	$ 188,096,539	$ 184,139,800
Expected return on assets	(160,876,221)	(151,059,136)
Total	$ 27,220,318	$ 33,080,664
Changes		
Benefit changes	$ 0	$ 0
Recognition of assumption changes	46,388,832	36,188,412
Recognition of liability gains and losses	(8,896,094)	(8,042,903)
Recognition of investment gains and losses	(36,459,872)	(24,267,277)
Total	$ 1,032,866	$ 3,878,232
Pension Expense	**$ 64,902,926**	**$ 70,400,085**

First, there are components referred to as operating expenses. These are items directly attributable to the operation of the plan during the measurement year. Service cost less employee contributions represents the increase in employer-provided benefits attributable to the year, and administrative expenses are the cost of operating MCERA for the year.

Second, there are the financing expenses: the interest on the Total Pension Liability and other items, less the expected return on assets. Since the discount rate is equal to the long-term expected return on assets, the financing expense is approximately the interest on the Net Pension Liability, adjusted for cash flows.

SECTION VI – GASB 68 COLLECTIVE AMOUNTS

The final category is changes. This category will drive most of the volatility in pension expense from year to year. It includes any changes in benefits made during the year and the recognized amounts due to assumption changes, gains or losses on the TPL, and investment gains or losses.

The total collective pension expense decreased from the prior year by approximately $5.5 million. In the current year pension expense, the recognition of changes decreased by approximately $2.8 million and financing expenses decreased by approximately $5.9 million compared to last year, which was offset by increases in the operating expenses of $3.2 million, compared to the prior year.

SECTION VII – GASB 68 REPORTING INFORMATION FOR PARTICIPATING EMPLOYERS

Proportionate Shares

Because MCERA is a cost-sharing multiple-employer pension plan, each employer participating in MCERA must report a portion of the collective Net Pension Liability, Pension Expense, and Deferred Outflows and Inflows in their financial statements. GASB 68 requires that the proportionate share for each employer be determined based on the "employer's projected long-term contribution effort to the pension … as compared to the total projected long-term contribution effort of all employers …." Although not required as part of MCERA's GASB 67 reporting requirements, MCERA is following the advice of the AICPA[1] and making a determination of each employer's proportionate share, which we understand will be reviewed by MCERA's auditor.

Proportionate shares for each employer are determined based on the employer's share of the Unfunded Actuarial Liability (UAL) determined in the most recent actuarial valuation. In Table VII-1, the determination is shown based on the June 30, 2016 and June 30, 2017 actuarial valuations.

Table VII-1
Determination of Employers' Proportionate Share

Employer	June 30, 2018 UAL (from the June 30, 2017 Actuarial Valuation)*	June 30, 2018 Proportionate Share	June 30, 2017 UAL (from the June 30, 2016 Actuarial Valuation)*	June 30, 2017 Proportionate Share
County	$ 235,445,174	55.5636%	$ 268,899,150	56.3628%
LAFCO	44,220	0.0104%	41,850	0.0088%
Marin City	0	0.0000%	40,021	0.0084%
Mosquito District	6,570,720	1.5506%	5,849,282	1.2260%
South Marin Fire	8,461,541	1.9969%	8,190,306	1.7167%
Tamalpais CSD	2,417,144	0.5704%	2,646,063	0.5546%
Courts	8,903,364	2.1011%	11,454,376	2.4009%
City of San Rafael	141,848,018	33.4752%	156,093,325	32.7180%
Novato Fire	20,050,593	4.7318%	23,872,550	5.0038%
Total	**$ 423,740,775**	**100.0000%**	**$ 477,086,922**	**100.0000%**

* Numbers may not sum to total due to rounding

[1] http://www.aicpa.org/interestareas/governmentalauditquality/resources/gasbmatters/downloadabledocuments/aicpaslgep_cs_er_reporting_whitepaper.pdf

SECTION VII – GASB 68 REPORTING INFORMATION FOR PARTICIPATING EMPLOYERS

The table below shows the proportionate share of the collective NPL (under three discount rates), the collective deferred outflows, the collective deferred inflows, and the collective pension expense allocated to each participating employer as of June 30, 2018.

Table VII-2
Schedule of Employers' Proportionate Share of Collective Amounts at June 30, 2018*

Employer	Proportionate Share	Share of NPL @ 6.00%	Share of NPL @ 7.00%	Share of NPL @ 8.00%	Share of Deferred Outflows	Share of Deferred Inflows	Pension Expense
County	55.5636%	$ 390,380,934	$ 183,525,363	$ 13,226,463	$ 17,003,161	$ 31,924,602	$ 36,062,402
LAFCO	0.0104%	73,069	34,351	2,476	3,183	5,975	6,750
Marin City	0.0000%	0	0	0	0	0	0
Mosquito District	1.5506%	10,894,267	5,121,598	369,108	474,503	890,912	1,006,385
South Marin Fire	1.9969%	14,029,899	6,595,717	475,346	611,077	1,147,338	1,296,047
Tamalpais CSD	0.5704%	4,007,539	1,884,019	135,779	174,550	327,729	370,206
Courts	2.1011%	14,761,991	6,939,888	500,150	642,963	1,207,207	1,363,675
City of San Rafael	33.4752%	235,191,381	110,567,858	7,968,499	10,243,832	19,233,499	21,726,384
Novato Fire	4.7318%	33,244,867	15,629,033	1,126,366	1,447,990	2,718,701	3,071,077
Total	**100.0000%**	**$ 702,583,947**	**$ 330,297,827**	**$ 23,804,186**	**$ 30,601,258**	**$ 57,455,964**	**$ 64,902,926**

* Numbers may not sum to total due to rounding

The proportionate share allocated to each individual employer will change on each measurement date. The net effect of the change in proportion on the share of the collective NPL, collective deferred outflows, and collective deferred inflows allocated to each employer becomes a deferred outflow or inflow for that employer and is recognized over the average future working life of MCERA's active and inactive members (four years).

Similarly, the difference between each employer's actual contributions and the employer's proportionate share of collective employer contributions becomes a deferred outflow or inflow for that employer and is recognized over the average future working life of MCERA's active and inactive members (four years).

SECTION VII – GASB 68 REPORTING INFORMATION FOR PARTICIPATING EMPLOYERS

The table below shows the change in proportion and the impact of that change in proportion on the proportionate share of the collective NPL, collective deferred outflows, and collective deferred inflows. It also shows any contribution differences.

Table VII-3

Schedule of Employers' Changes in Proportion and Contribution Differences*

	Proportionate Shares		Impact of Change in Proportion				Contributions		
Employer	6/30/2017	6/30/2018	Net Pension Liability	Deferred Outflows	Deferred Inflows	Net Effect	Actual	Proportionate Share	Difference
County	56.3628%	55.5636%	$ (2,947,100)	$ (289,218)	$ 307,182	$ (2,965,065)	$ 48,436,632	$ 43,758,822	$ 4,677,810
LAFCO	0.0088%	0.0104%	5,900	579	(615)	5,936	14,430	8,190	6,240
Marin City	0.0084%	0.0000%	(30,976)	(3,040)	3,229	(31,164)	75,023	0	75,023
Mosquito District	1.2260%	1.5506%	1,196,983	117,468	(124,764)	1,204,279	1,041,782	1,221,167	(179,385)
South Marin Fire	1.7167%	1.9969%	1,033,255	101,400	(107,698)	1,039,553	2,217,637	1,572,648	644,989
Tamalpais CSD	0.5546%	0.5704%	58,263	5,718	(6,073)	58,619	394,512	449,216	(54,703)
Courts	2.4009%	2.1011%	(1,105,531)	(108,493)	115,232	(1,112,270)	2,004,856	1,654,710	350,146
City of San Rafael	32.7180%	33.4752%	2,792,223	274,019	(291,039)	2,809,243	20,167,138	26,363,218	(6,196,080)
Novato Fire	5.0038%	4.7318%	(1,003,017)	(98,432)	104,546	(1,009,131)	4,402,464	3,726,504	675,960
Total	**100.0000%**	**100.0000%**	**$ 0**	**$ 0**	**$ 0**	**$ 0**	**$ 78,754,476**	**$ 78,754,476**	**$ 0**

* Numbers may not sum to total due to rounding

SECTION VII – GASB 68 REPORTING INFORMATION FOR PARTICIPATING EMPLOYERS

The table below shows the reconciliation of deferred outflows and inflows due to proportion changes for each participating employer from the prior measurement date to the current measurement date.

Table VII-4
Reconciliation of Deferred Outflows and Inflows Due to Proportion Change*

	Deferred Outflows				Deferred Inflows			
Employer	**6/30/2017**	**Current Year Net Effect**	**Recognition**	**6/30/2018**	**6/30/2017**	**Current Year Net Effect**	**Recognition**	**6/30/2018**
County	$ 8,930,132	$ 0	$ 3,542,344	$ 5,387,789	$ (4,781,589)	$ (2,965,065)	$ (5,522,855)	$ (2,223,798)
LAFCO	22,894	5,936	9,764	19,066	(73,448)	0	(73,448)	0
Marin City	28,444	0	14,908	13,537	(193,402)	(31,164)	(72,258)	(152,308)
Mosquito District	346,715	1,204,279	448,999	1,101,994	(293,304)	0	(293,304)	0
South Marin Fire	712,972	1,039,553	498,525	1,254,000	(169,857)	0	(84,928)	(84,928)
Tamalpais CSD	247,851	58,619	145,455	161,014	0	0	0	0
Courts	96,462	0	96,462	0	(1,601,116)	(1,112,270)	(878,560)	(1,834,826)
City of San Rafael	6,555,613	2,809,243	7,257,924	2,106,932	(9,651,379)	0	(3,768,975)	(5,882,404)
Novato Fire	1,366,212	0	475,431	890,781	(1,543,200)	(1,009,131)	(1,795,483)	(756,848)
Total	**$ 18,307,295**	**$ 5,117,630**	**$ 12,489,812**	**$ 10,935,113**	**$ (18,307,295)**	**$ (5,117,630)**	**$ (12,489,812)**	**$ (10,935,113)**

* Numbers may not sum to total due to rounding

SECTION VII – GASB 68 REPORTING INFORMATION FOR PARTICIPATING EMPLOYERS

The table below shows the reconciliation of deferred outflows and inflows due to contribution differences for each participating employer from the prior measurement date to the current measurement date.

Table VII-5
Reconciliation of Deferred Outflows and Inflows Due to Contribution Differences*

	Deferred Outflows				Deferred Inflows			
Employer	6/30/2017	Current Year Difference	Recognition	6/30/2018	6/30/2017	Current Year Difference	Recognition	6/30/2018
County	$ 6,723,130	$ 4,677,810	$ 4,752,726	$ 6,648,214	$ 0	$ 0	$ 0	$ 0
LAFCO	73,398	6,240	39,053	40,584	0	0	0	0
Marin City	61,063	75,023	44,090	91,997	0	0	0	0
Mosquito District	66,989	0	43,016	23,973	0	(179,385)	(44,846)	(134,538)
South Marin Fire	1,332,818	644,989	830,953	1,146,854	0	0	0	0
Tamalpais CSD	0	0	0	0	(111,658)	(54,703)	(58,715)	(107,647)
Courts	96,251	350,146	119,620	326,777	(183,907)	0	(125,453)	(58,454)
City of San Rafael	0	0	0	0	(9,380,643)	(6,196,080)	(6,510,940)	(9,065,783)
Novato Fire	1,322,558	675,960	910,496	1,088,022	0	0	0	0
Total	**$ 9,676,208**	**$ 6,430,168**	**$ 6,739,954**	**$ 9,366,422**	**$ (9,676,208)**	**$ (6,430,168)**	**$ (6,739,954)**	**$ (9,366,422)**

* Numbers may not sum to total due to rounding.

SECTION VII – GASB 68 REPORTING INFORMATION FOR PARTICIPATING EMPLOYERS

The table below summarizes the deferred outflows allocated to each employer for experience, assumption changes, investment returns, proportion changes, and contribution differences.

Table VII-6
Schedule of Employers' Deferred Outflows at June 30, 2018*

Employer	Proportionate Shares	Experience	Assumption Changes	Investment Return	Proportion Change	Contribution Difference
County	55.5636%	$ 0	$ 17,003,161	$ 0	$ 5,387,789	$ 6,648,214
LAFCO	0.0104%	0	3,183	0	19,066	40,584
Marin City	0.0000%	0	0	0	13,537	91,997
Mosquito District	1.5506%	0	474,503	0	1,101,994	23,973
South Marin Fire	1.9969%	0	611,077	0	1,254,000	1,146,854
Tamalpais CSD	0.5704%	0	174,550	0	161,014	0
Courts	2.1011%	0	642,963	0	0	326,777
City of San Rafael	33.4752%	0	10,243,832	0	2,106,932	0
Novato Fire	4.7318%	0	1,447,990	0	890,781	1,088,022
Total	**100.0000%**	**$ 0**	**$ 30,601,258**	**$ 0**	**$ 10,935,113**	**$ 9,366,422**

* Numbers may not sum to total due to rounding

SECTION VII – GASB 68 REPORTING INFORMATION FOR PARTICIPATING EMPLOYERS

The table below summarizes the deferred inflows allocated to each employer for experience, assumption changes, investment returns, proportion changes, and contribution differences.

Table VII-7

Schedule of Employers' Deferred Inflows at June 30, 2018*

Employer	Proportionate Shares	Experience	Assumption Changes	Investment Return	Proportion Change	Contribution Difference
County	55.5636%	$ 1,703,063	$ 0	$ 30,221,540	$ 2,223,798	$ 0
LAFCO	0.0104%	319	0	5,657	0	0
Marin City	0.0000%	0	0	0	152,308	0
Mosquito District	1.5506%	47,527	0	843,385	0	134,538
South Marin Fire	1.9969%	61,206	0	1,086,132	84,928	0
Tamalpais CSD	0.5704%	17,483	0	310,246	0	107,647
Courts	2.1011%	64,400	0	1,142,807	1,834,826	58,454
City of San Rafael	33.4752%	1,026,038	0	18,207,461	5,882,404	9,065,783
Novato Fire	4.7318%	145,033	0	2,573,668	756,848	0
Total	**100.0000%**	**$ 3,065,069**	**$ 0**	**$ 54,390,896**	**$ 10,935,113**	**$ 9,366,422**

* Numbers may not sum to total due to rounding

SECTION VII – GASB 68 REPORTING INFORMATION FOR PARTICIPATING EMPLOYERS

The table below shows the net amount of deferred outflows and inflows to be recognized by each participating employer in each of the next five years and the total thereafter.

Table VII-8

Schedule of Employers' Recognition of Deferred Outflows and Inflows at June 30, 2018*

	Recognition for Measurement Year Ending					
Employer	**2019**	**2020**	**2021**	**2022**	**2023**	**Thereafter**
County	$ 11,023,941	$ 2,605,654	$ (11,964,187)	$ (6,774,645)	$ 0	$ 0
LAFCO	38,095	19,306	724	(1,268)	0	0
Marin City	(17,069)	(40,670)	10,965	0	0	0
Mosquito District	552,686	300,999	(89,607)	(189,058)	0	0
South Marin Fire	1,210,835	836,537	(24,234)	(243,474)	0	0
Tamalpais CSD	100,606	(4,634)	(126,238)	(69,547)	0	0
Courts	(633,455)	(581,974)	(659,140)	(256,179)	0	0
City of San Rafael	(4,765,259)	(4,671,470)	(8,312,697)	(4,081,496)	0	0
Novato Fire	1,243,998	422,803	(1,138,628)	(576,929)	0	0
Total	**$ 8,754,379**	**$ (1,113,448)**	**$ (22,303,042)**	**$ (12,192,595)**	**$ 0**	**$ 0**

* Numbers may not sum to total due to rounding

SECTION VII – GASB 68 REPORTING INFORMATION FOR PARTICIPATING EMPLOYERS

The table below shows the calculation of the pension expense for each participating employer. The calculation is shown first as the sum of the proportionate share of the collective pension expense and the amounts recognized for proportion changes and contribution differences. The right side of the table shows the calculation as the sum of the changes in NPL and deferred amounts not attributable to contributions.

Employers that are using a June 30, 2018 measurement date for their June 30, 2019 financial statements can use this schedule for their annual pension expense.

Table VII-9
Schedule of Employers' Pension Expense for the Measurement Year Ending June 30, 2018*

Employer	Collective Pension Expense	Change in Proportion	Contribution Difference	Employer Pension Expense	Change in Employer Net Pension Liability	Change in Employer Deferred Outflows	Change in Employer Deferred Inflows	Employer Contributions	Employer Pension Expense
County	$ 36,062,402	$ (1,980,512)	$ 4,752,726	$ 38,834,616	$ (24,316,015)	$ 7,010,901	$ 7,703,099	$ 48,436,632	$ 38,834,617
LAFCO	6,750	(63,684)	39,053	(17,881)	1,900	36,644	(70,855)	14,430	(17,881)
Marin City	0	(57,351)	44,090	(13,261)	(30,976)	(12,986)	(44,323)	75,023	(13,261)
Mosquito District	1,006,385	155,695	(1,830)	1,160,250	600,646	(743,097)	260,919	1,041,782	1,160,250
South Marin Fire	1,296,047	413,597	830,953	2,540,596	265,278	(344,895)	402,576	2,217,637	2,540,596
Tamalpais CSD	370,206	145,455	(58,715)	456,947	(161,104)	112,988	110,550	394,512	456,947
Courts	1,363,675	(782,097)	(5,833)	575,745	(1,913,582)	91,821	392,650	2,004,856	575,745
City of San Rafael	21,726,384	3,488,949	(6,510,940)	18,704,393	(10,081,830)	6,044,973	2,574,111	20,167,138	18,704,393
Novato Fire	3,071,077	(1,320,052)	910,496	2,661,521	(2,822,795)	1,072,773	9,080	4,402,464	2,661,521
Total	**$ 64,902,926**	**$ 0**	**$ 0**	**$ 64,902,926**	**$ (38,458,478)**	**$ 13,269,121**	**$ 11,337,807**	**$ 78,754,476**	**$ 64,902,926**

* Numbers may not sum to total due to rounding.

SECTION VII – GASB 68 REPORTING INFORMATION FOR PARTICIPATING EMPLOYERS

The table below summarizes the information needed for each employer's schedules of required supplementary information.

Table VII-10
Schedule of Employers' RSI Information at June 30, 2018*

Employer	Proportionate Shares	Proportionate Share of NPL	Covered Payroll	Share of NPL as a % of Payroll	Plan Fiduciary Net Position as % of TPL	Contractually Required Contribution	Actual Contributions	Contribution Deficiency	Contributions as a % of Payroll
County	55.5636%	$ 183,525,363	$ 188,385,322	97.4%	88.3%	$ 48,436,632	$ 48,436,632	$ 0	25.7%
LAFCO	0.0104%	34,351	123,490	27.8%	88.3%	14,430	14,430	0	11.7%
Marin City	0.0000%	0	426,109	0.0%	88.3%	75,023	75,023	0	17.6%
Mosquito District	1.5506%	5,121,598	3,051,566	167.8%	88.3%	1,041,782	1,041,782	0	34.1%
South Marin Fire	1.9969%	6,595,717	6,009,660	109.8%	88.3%	2,217,637	2,217,637	0	36.9%
Tamalpais CSD	0.5704%	1,884,019	1,111,036	169.6%	88.3%	394,512	394,512	0	35.5%
Courts	2.1011%	6,939,888	7,051,557	98.4%	88.3%	2,004,856	2,004,856	0	28.4%
City of San Rafael	33.4752%	110,567,858	33,186,664	333.2%	88.3%	20,167,138	20,167,138	0	60.8%
Novato Fire	4.7318%	15,629,033	9,186,682	170.1%	88.3%	4,402,464	4,402,464	0	47.9%
Total	**100.0000%**	**$ 330,297,827**	**$ 248,532,086**	**132.9%**	**88.3%**	**$ 78,754,476**	**$ 78,754,476**	**$ 0**	**31.7%**

* Numbers may not sum to total due to rounding

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2017: County of Marin	Marin County						Marin Special Districts						Total County and Special Districts	
	Miscellaneous		Safety		Total		Miscellaneous		Safety		Total			
	6/30/2016	6/30/2017	6/30/2016	6/30/2017	6/30/2016	6/30/2017	6/30/2016	6/30/2017	6/30/2016	6/30/2017	6/30/2016	6/30/2017	6/30/2016	6/30/2017
Active Participants														
Number	1,682	1,700	357	355	2,039	2,055	153	157	51	51	204	208	2,243	2,263
Average Age	48.81	48.51	40.83	40.51	47.41	47.13	50.07	49.93	41.11	42.14	47.83	48.02	47.45	47.21
Average Service	10.44	10.31	10.85	10.88	10.52	10.40	12.48	12.15	7.73	8.74	11.29	11.31	10.59	10.49
Average Pay*	$84,391	$86,629	$103,649	$106,754	$87,763	$90,105	$77,440	$77,901	$103,297	$104,088	$83,904	$84,322	$87,412	$89,574
Service Retired														
Number	1,447	1,481	234	251	1,681	1,732	120	123	24	24	144	147	1,825	1,879
Average Age	72.35	72.41	63.78	63.94	71.16	71.18	67.17	67.86	62.25	63.38	66.35	67.13	70.78	70.86
Average Total Benefit*	$35,394	$36,565	$68,116	$69,425	$39,949	$41,327	$36,118	$37,330	$74,360	$74,662	$42,491	$43,425	$40,150	$41,491
Beneficiaries														
Number	254	264	63	65	317	329	12	13	9	10	21	23	338	352
Average Age	74.65	74.76	69.37	69.21	73.60	73.67	66.38	65.49	65.86	65.59	66.15	65.54	73.14	73.13
Average Total Benefit*	$23,174	$23,993	$38,674	$39,304	$26,254	$27,018	$14,550	$14,893	$41,502	$41,945	$26,101	$26,655	$26,245	$26,994
Duty Disabled														
Number	85	86	101	105	186	191	3	4	16	17	19	21	205	212
Average Age	66.81	67.39	62.30	62.26	64.36	64.57	62.83	66.11	65.42	65.31	65.01	65.46	64.42	64.66
Average Total Benefit*	$36,358	$36,545	$50,937	$52,215	$44,275	$45,159	$22,211	$20,975	$53,075	$54,097	$48,201	$47,788	$44,639	$45,420
Ordinary Disabled														
Number	31	29	7	6	38	35	3	2	1	1	4	3	42	38
Average Age	68.50	70.43	54.38	56.58	65.90	68.06	65.21	62.85	56.21	57.93	62.96	61.21	65.62	67.52
Average Total Benefit*	$20,490	$21,330	$46,360	$51,798	$25,256	$26,553	$25,946	$24,867	$55,617	$71,260	$33,363	$40,331	$26,028	$27,641
Total In Pay														
Number	1,817	1,860	405	427	2,222	2,287	138	142	50	52	188	194	2,410	2,481
Average Age	72.35	72.48	64.12	64.23	70.85	70.94	66.96	67.53	63.79	64.33	66.12	66.67	70.48	70.60
Average Total Benefit*	$33,477	$34,542	$58,876	$60,360	$38,106	$39,362	$33,719	$34,639	$61,259	$61,582	$41,043	$41,861	$38,335	$39,558
Terminated Vested														
Number	175	194	21	18	196	212	16	20	4	2	20	22	216	234
Average Age	49.55	49.70	45.72	45.06	49.14	49.31	45.85	45.71	50.11	50.70	46.70	46.16	48.91	49.01
Average Service	7.57	7.64	7.13	7.50	7.53	7.63	8.52	8.65	2.58	3.10	7.33	8.14	7.51	7.68
Transfers														
Number	195	191	68	64	263	255	24	23	16	14	40	37	303	292
Average Age	49.61	49.86	45.01	45.23	48.42	48.70	49.36	50.79	46.53	46.42	48.23	49.14	48.40	48.76
Average Service	5.03	5.15	4.86	4.49	4.99	4.98	5.29	4.87	4.95	5.11	5.15	4.96	5.01	4.98
Total Inactive														
Number	370	385	89	82	459	467	40	43	20	16	60	59	519	526
Average Age	49.58	49.78	45.18	45.19	48.73	48.98	47.96	48.43	47.24	46.96	47.72	48.03	48.61	48.87
Average Service	6.23	6.40	5.39	5.15	6.07	6.18	6.58	6.63	4.47	4.86	5.88	6.15	6.05	6.18

*All payroll and benefit figures shown are annual.

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2017: City of San Rafael	Miscellaneous		Police		Fire		Total Safety		Total	
	6/30/2016	6/30/2017	6/30/2016	6/30/2017	6/30/2016	6/30/2017	6/30/2016	6/30/2017	6/30/2016	6/30/2017
Active Participants										
Number	221	212	83	82	53	54	136	136	357	348
Average Age	47.06	47.18	38.19	38.49	41.00	41.83	39.29	39.82	44.10	44.30
Average Service	10.73	10.61	9.56	9.82	10.71	11.49	10.01	10.49	10.46	10.56
Average Pay*	$76,730	$77,226	$112,370	$110,236	$129,572	$128,463	$119,073	$117,473	$92,861	$92,955
Service Retired										
Number	234	247	77	77	82	84	159	161	393	408
Average Age	69.12	69.62	65.15	65.99	67.01	67.33	66.11	66.69	67.90	68.46
Average Total Benefit*	$35,033	$36,851	$65,623	$68,784	$89,573	$90,679	$77,974	$80,208	$52,406	$53,960
Beneficiaries										
Number	35	31	15	16	22	22	37	38	72	69
Average Age	75.77	75.34	67.82	68.93	72.15	73.21	70.39	71.41	73.01	73.17
Average Total Benefit*	$16,655	$18,376	$31,590	$32,873	$37,646	$39,017	$35,191	$36,430	$26,180	$28,319
Duty Disabled										
Number	17	18	39	38	21	21	60	59	77	77
Average Age	65.40	65.65	61.13	61.98	66.71	67.81	63.09	64.06	63.60	64.43
Average Total Benefit*	$27,310	$28,738	$53,191	$54,867	$81,219	$83,656	$63,001	$65,114	$55,121	$56,611
Ordinary Disabled										
Number	2	2	0	0	0	0	0	0	2	2
Average Age	83.45	84.45	0.00	0.00	0.00	0.00	0.00	0.00	83.45	84.45
Average Total Benefit*	$11,719	$12,071	$0	$0	$0	$0	$0	$0	$11,719	$12,071
Total In Pay										
Number	288	298	131	131	125	127	256	258	544	556
Average Age	69.81	70.07	64.26	65.18	67.86	68.43	66.02	66.78	68.03	68.55
Average Total Benefit*	$32,181	$34,273	$58,025	$60,361	$79,030	$80,569	$68,281	$70,308	$49,170	$50,994
Terminated Vested										
Number	24	27	5	7	2	1	7	8	31	35
Average Age	50.24	48.29	48.08	46.36	53.33	50.84	49.58	46.92	50.09	47.97
Average Service	5.95	6.14	8.82	10.71	4.99	3.51	7.72	9.81	6.35	6.98
Transfers										
Number	66	69	20	18	7	6	27	24	93	93
Average Age	45.94	45.67	46.08	46.46	46.97	47.06	46.31	46.61	46.05	45.91
Average Service	3.03	3.30	5.06	5.36	5.06	3.21	5.06	4.82	3.62	3.69
Total Inactive										
Number	90	96	25	25	9	7	34	32	124	128
Average Age	47.09	46.41	46.48	46.43	48.38	47.60	46.98	46.69	47.06	46.48
Average Service	3.81	4.10	5.81	6.85	5.04	3.25	5.61	6.07	4.30	4.59

APPENDIX A – MEMBERSHIP INFORMATION

Participant Data as of June 30, 2017: Novato Fire Protection District	Miscellaneous		Safety		Total	
	6/30/2016	6/30/2017	6/30/2016	6/30/2017	6/30/2016	6/30/2017
Active Participants						
Number	10	10	67	64	77	74
Average Age	46.43	47.43	43.78	44.86	44.12	45.21
Average Service	8.92	9.82	14.07	14.82	13.40	14.14
Average Pay*	$87,532	$91,478	$124,345	$124,821	$119,564	$120,315
Service Retired						
Number	4	4	52	54	56	58
Average Age	65.03	66.03	66.24	66.66	66.15	66.62
Average Total Benefit*	$39,449	$40,632	$95,282	$100,551	$91,294	$96,419
Beneficiaries						
Number	1	1	15	14	16	15
Average Age	52.67	53.67	63.66	62.90	62.91	62.15
Average Total Benefit*	$11,207	$11,544	$41,648	$42,686	$39,745	$40,610
Duty Disabled						
Number	0	0	31	31	31	31
Average Age	0.00	0.00	68.47	69.47	68.47	69.47
Average Total Benefit*	$0	$0	$65,437	$67,400	$65,437	$67,400
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	5	98	99	103	104
Average Age	62.56	63.56	66.55	67.01	66.35	66.82
Average Total Benefit*	$33,800	$34,815	$77,632	$81,988	$75,504	$79,720
Terminated Vested						
Number	1	1	3	2	4	3
Average Age	57.56	58.56	44.50	49.21	47.77	52.32
Average Service	6.16	6.16	7.18	4.82	6.93	5.26
Transfers						
Number	1	1	10	10	11	11
Average Age	53.73	54.73	42.71	43.71	43.71	44.71
Average Service	1.25	1.25	4.04	4.04	3.79	3.79
Total Inactive						
Number	2	2	13	12	15	14
Average Age	55.65	56.65	43.12	44.63	44.79	46.34
Average Service	3.71	3.71	4.76	4.17	4.62	4.10

Please refer to the June 30, 2017 actuarial valuation report for a more complete summary of the data.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

A summary of the actuarial assumptions and methods used to calculate the Total Pension Liability as of June 30, 2018 is provided below, including any assumptions that differ from those used in the June 30, 2017 actuarial valuation. Please refer to the June 30, 2017 actuarial valuation report for a complete description of all other assumptions. The economic and demographic assumptions were adopted by the Board, based on an Experience Study performed by Cheiron covering the period from July 1, 2014 through June 30, 2017. The Experience Study report contains the rationale for all recommended assumptions.

Key Actuarial Assumptions

Expected Return on Assets	7.00 percent per year, net of investment expenses
Discount Rate	7.00 percent per year
Price Inflation	2.75% per year
Salary Increases	3.00% per year plus merit component based on employee classification and years of service.
Administrative Expenses	Administrative expenses in the actuarial valuation are assumed to be \$4.917 million for FY2017-18, to be split between employees and employers based on their share of the overall contributions. Administrative expenses shown in this report are based on the actual FY2017-18 amounts.
Postretirement 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.
Mortality Rates for Active Members	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 20-year static projection used by CalPERS replaced by generational improvements from a base year of 2014 using Scale MP-2017.
Mortality Rates for Retired Healthy Members	Rates of mortality for retired members and their beneficiaries are given by CalPERS 2017 Post-Retirement Healthy Mortality rates, multiplied by 90% for Males (Miscellaneous and Safety), with the 20-year static projection used by CalPERS replaced by generational improvements from a base year of 2014 using Scale MP-2017.
Mortality Rates for Retired Disabled Members	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), multiplied by 90% for Males (Miscellaneous and Safety) and 90% for Miscellaneous Females, with the 20-year static projection used by CalPERS replaced by generational improvements from a base year of 2014 using Scale MP-2017.

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 (13 years remaining as of June 30, 2017), except for the additional UAL attributable to the extraordinary loss from 2008-2009, which is being amortized over a separate closed period (21 years as of June 30, 2017).

   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/out (three 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. The assets for each employer are allocated 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. 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.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

The plan provisions are the same as those summarized in the June 30, 2017 actuarial valuation report.

APPENDIX D – GLOSSARY OF TERMS

1. **Actuarially Determined Contribution**

   A target or recommended contribution for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

2. **Actuarial Valuation Date**

   The date as of which an actuarial valuation is performed. This date may be up to 24 months prior to the measurement date and up to 30 months prior to the employer's reporting date.

3. **Deferred Inflow of Resources**

   An acquisition of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience gains on the Total Pension Liability, assumption changes reducing the Total Pension Liability, or investment gains that are recognized in future reporting periods.

4. **Deferred Outflow of Resources**

   A consumption of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience losses on the Total Pension Liability, assumption changes increasing the Total Pension Liability, or investment losses that are recognized in future reporting periods.

5. **Entry Age Actuarial Cost Method**

   The actuarial cost method required for GASB 67 and 68 calculations. Under this method, 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. The portion of this actuarial present value allocated to a valuation year is called the service cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future service costs is called the Total Pension Liability.

6. **Measurement Date**

   The date as of which the Total Pension Liability and Plan Fiduciary Net Position are measured. The Total Pension Liability may be projected from the actuarial valuation date to the measurement date. The measurement date must be the same as the reporting date for the plan.

APPENDIX D – GLOSSARY OF TERMS

7. Net Pension Liability

The liability of employers and nonemployer contributing entities to employees for benefits provided through a defined benefit pension plan. It is calculated as the Total Pension Liability less the Plan Fiduciary Net Position. The Net Pension Liability is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling MCERA's benefit obligations in the event of a plan termination or other similar action. However, it is an appropriate measure for assessing the need for or the amount of future contributions.

8. Plan Fiduciary Net Position

The fair or Market Value of Assets.

9. Reporting Date

The last day of the plan or employer's fiscal year.

10. Service Cost

The portion of the actuarial present value of projected benefit payments that is attributed to the current period of employee service in conformity with the requirements of GASB 67 and 68. The service cost is the normal cost calculated under the entry age actuarial cost method.

11. Total Pension Liability

The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of GASB 67 and 68. The Total Pension Liability is the Actuarial Liability calculated under the entry age actuarial cost method.

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