

Mendocino County Employees' Retirement Association

Actuarial Valuation and Review as of June 30, 2016

This report has been prepared at the request of the Board of Retirement to assist in administering the Fund. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Board of Retirement and may only be provided to other parties in its entirety. The measurements shown in this actuarial valuation may not be applicable for other purposes.

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October 24, 2016

Board of Retirement Mendocino County Employees' Retirement Association 625-B Kings Court Ukiah, CA 95482-5027

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of June 30, 2016. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2017/2018 and analyzes the preceding year's experience.

This report was prepared in accordance with generally accepted actuarial principles and practices, at the request of the Board to assist in administering the Plan. The census and financial information on which our calculations were based were prepared by MCERA. That assistance is gratefully acknowledged.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report 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; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in plan provisions or applicable law.

The actuarial calculations were completed under the supervision of Andy Yeung, ASA, MAAA, FCA, Enrolled Actuary. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Plan.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

Segal Consulting, a Member of the Segal Group, Inc.

Bv:

Paul Angelo, FSA, MAAA, FCA, EA Senior Vice President and Actuary

Vice President and Actuary

Andy Yeung, ASA, MAAA, FCA.

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Purpose

This report has been prepared by Segal Consulting to present a valuation of the Mendocino County Employees' Retirement Association as of June 30, 2016. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- The benefit provisions of the Retirement Association, as administered by the Board of Retirement;
- > The characteristics of covered active members, inactive vested members, retired members and beneficiaries as of June 30, 2016, provided by the Retirement Association;
- > The assets of the Plan as of June 30, 2016, provided by the Retirement Association;
- > Economic assumptions* regarding future salary increases and investment earnings; and
- > Other actuarial assumptions*, regarding employee terminations, retirement, death, etc. that the Board has adopted for the June 30, 2016 valuation.
 - * Under the Board's practice, these assumptions have been carried over unchanged from the June 30, 2015 valuation. MCERA will conduct a full review of all the assumptions in the 2017 experience study as part of the June 30, 2017 valuation.

One of the general goals of an actuarial valuation is to establish contributions that fully fund the Association's liabilities, and that, as a percentage of payroll, remain as level as possible for each generation of active members. Annual actuarial valuations measure the progress toward this goal, as well as test the adequacy of the contribution rates.

In preparing this valuation, we have employed generally accepted actuarial methods and assumptions to evaluate the Association's assets, liabilities and future contribution requirements. Our calculations are based upon member data and financial information provided to us by the Association's staff. This information has not been audited by us, but it has been reviewed and found to be consistent, both internally and with prior year's information.

Ref: Pg. 47

The contribution requirements are determined as a percentage of payroll. The Association's employer rates provide for both normal cost and a payment or credit to amortize any unfunded or overfunded actuarial accrued liabilities. In this valuation, we have applied the Board's funding policy to amortize the outstanding balance of the Association's unfunded actuarial accrued liability (UAAL) from the June 30, 2012 valuation over a declining period, with 23 years remaining as of June 30, 2016. In addition, any new UAAL established after June 30, 2012 has been amortized over separate layers with different amortization periods depending on the source of the layer (gains and losses are amortized over 18 years, as are assumption and method changes). The rates calculated in this report may be adopted by the Board for the fiscal year that extends from July 1, 2017 through June 30, 2018.



Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

Ref: Pgs. 21, 22

> In the June 30, 2015 valuation, the ratio of the valuation value of assets to actuarial accrued liabilities was 70.2%. In this June 30, 2016 valuation, this funding ratio has increased to 70.7%. On a market value basis, the funded ratio decreased from 72.8% to 67.5%.

Ref: Pg. 46

The Association's unfunded actuarial accrued liability (UAAL) as of June 30, 2015 was \$182.2 million. In this year's valuation, the UAAL has increased to \$185.3 million. A reconciliation of the Association's UAAL is provided in Section 3, Exhibit I.

Ref: Pg. 19

The aggregate employer rate calculated in this valuation has decreased from 32.14% of payroll to 32.05% of payroll. The reasons for the change include gains from: (a) change in membership demographics, (b) amortizing the prior year's UAAL over a larger than expected projected total payroll, and (c) other actuarial gains. These gains were partially offset by losses from: (a) lower than expected return on investments (after smoothing) and (b) larger than expected salary increases for continuing General and Probation active members. A reconciliation of the Association's aggregate employer rate is provided in Section 2, Subsection D (see Chart 14).

Ref: Pg. 20

> The aggregate member rate calculated in this valuation has increased slightly from 9.64% of payroll to 9.65% of payroll. The reason for the increase is due to a change in the membership demographics for new General members enrolled in Tier 4 (CalPEPRA Tier). A reconciliation of the Association's aggregate member rate is provided in Section 2, Subsection D (see Chart 15).

The individual member rates have been updated to reflect the valuation as of June 30, 2016. These rates are provided in Appendix A of this report.

Ref: Pg. 5

As indicated in Section 2, Subsection B (see Chart 7), the total unrecognized investment <u>loss</u> as of June 30, 2016 is \$24.7 million (note that in the previous valuation, this amount was a deferred <u>gain</u> of \$11.5 million). This investment loss will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years. This implies that if the Association earns the assumed net rate of investment return of 7.25% per year on a **market value** basis, there will be investment losses on the actuarial value of assets after June 30, 2016.

The deferred losses of \$24.7 million represent 5.8% of the market value of assets as of June 30, 2016. Unless offset by future investment gains or other favorable experience, the recognition of the \$24.7 million deferred market loss is expected



to have an impact on the Association's future funded percentage and contribution rate requirements. This potential impact may be illustrated as follows:

- If the deferred losses were recognized immediately, and assuming further that the balance in the Contingency Reserve would be included as valuation value of assets, the funded percentage would decrease from 70.7% to 67.5%.
- If the deferred losses were recognized immediately, and assuming further that the balance in the Contingency Reserve would be included as valuation value of assets, the aggregate employer rate would increase from 32.05% to about 34.8% of payroll.
- > The actuarial valuation report as of June 30, 2016 is based on financial information as of that date. Changes in the value of assets subsequent to that date are not reflected. Declines in asset values will increase the actuarial cost of the plan, while increases will decrease the actuarial cost of the plan.

Impact of Future Experience on Contribution Rates

Future contribution requirements may differ from those determined in the valuation because of:

- 1) difference between actual experience and anticipated experience;
- 2) changes in actuarial assumptions or methods;
- 3) changes in statutory provisions; and
- 4) difference between the contribution rates determined by the valuation and those adopted by the Board.



Valuation Summary for the Mendocino County Employees' Retirement Association **SECTION 1:**

	June	30, 2016	June	30, 2015	
Employer Contribution Rates:		Estimated	Estimated		
1 0	Total Rate	Annual Amount(1)	Total Rate	Annual Amount(1)	
General Tier 1	31.53%	\$285,000	32.22%	\$292,000	
General Tier 2/Tier 3	28.86%	9,188,000	29.12%	9,271,000	
General Tier 4	25.53%	4,222,000	25.51%	4,219,000	
Safety Tier 1		Not Calcu	lated ⁽²⁾		
Safety Tier 2	57.04%	4,166,000	56.73%	4,143,000	
Safety Tier 3	47.69%	899,000	47.03%	887,000	
Probation Tier 1		Not Calcu	lated ⁽²⁾		
Probation Tier 2	32.48%	764,000	32.44%	763,000	
Probation Tier 3	24.65%	97,000	24.82%	98,000	
All Categories Combined	32.05%	\$19,621,000	32.14%	\$19,673,000	
Average Member Contribution Rates:		Estimated		Estimated	
	Total Rate	Annual Amount(1)	Total Rate	Annual Amount(1)	
General Tier 1	0.98%	\$9,000	0.98%	\$9,000	
General Tier 2/Tier 3	10.40%	3,311,000	10.42%	3,317,000	
General Tier 4	7.46%	1,234,000	7.34%	1,214,000	
Safety Tier 1	Not Calculated ⁽²⁾				
Safety Tier 2	11.02%	805,000	11.03%	806,000	
Safety Tier 3	10.58%	199,000	10.79%	203,000	
Probation Tier 1	Not Calculated ⁽²⁾				
Probation Tier 2	13.40%	315,000	13.46%	317,000	
Probation Tier 3	9.40%	37,000	9.56%	38,000	
All Categories Combined	9.65%	\$5,910,000	9.64%	\$5,904,000	
Funded Status:					
Actuarial Accrued Liability (AAL) ⁽³⁾	\$632	,057,539	\$610),381,849	
Valuation Value of Assets (VVA) ⁽⁴⁾	446,773,272		428,228,929		
Market Value of Assets (MVA)	426,338,011		444,217,356		
Funded Percentage on VVA Basis	70.7%		70.2%		
Funded Percentage on MVA Basis	67.5%		72.8%		
Unfunded Actuarial Accrued Liability (UAAL) on VVA Basis	\$185,284,267		\$182,152,920		
Unfunded Actuarial Accrued Liability (UAAL) on MVA Basis	205,719,528		166,164,493		
Key Economic Assumptions:					
Interest Rate	7.25%		7.25%		
Inflation Rate	3.25%		3.25%		
Across-the-Board Salary Increase		0.50%	0.50%		

⁽⁴⁾ Excludes Contingency Reserve.



Based on June 30, 2016 projected annual compensation.

There were no Safety Tier 1 or Probation Tier 1 active members reported for the June 30, 2016 valuation.

⁽³⁾ Does not include an additional liability held for the Contingency Reserve.

SECTION 1: Valuation Summary for the Mendocino County Employees' Retirement Association

	June 30, 2016	June 30, 2015	Percentage Change
Active Members:			
Number of Members	1,123	1,107	1.4%
Average Age	47.0	47.2	N/A
Average Service	9.1	9.4	N/A
Projected Total Compensation	\$61,214,954	\$58,106,396	5.3%
Average Projected Compensation	\$54,510	\$52,490	3.8%
Retired Members and Beneficiaries:			
Number of Members:			
Service Retired	1,090	1,057	3.1%
Disability Retired	172	170	1.2%
Beneficiaries	154	152	1.3%
Total	1,416	1,379	2.7%
Average Age	68.8	68.6	N/A
Average Monthly Benefit	\$1,822	\$1,768	3.1%
Vested Terminated Members:			
Number of Vested Terminated Members	428	414	3.4%
Average Age	47.2	47.6	N/A
Summary of Financial Data:			
Market Value of Assets	\$426,338,011	\$444,217,356	-4.0%
Return on Market Value of Assets*	-2.35%	3.02%	N/A
Actuarial Value of Assets	\$451,044,882	\$432,679,307	4.2%
Return on Actuarial Value of Assets	6.04%	8.59%	N/A
Valuation Value of Assets	\$446,773,272	\$428,228,929	4.3%
Return on Valuation Value of Assets	6.14%	8.68%	N/A

^{*} The rates of return have been calculated on a dollar-weighted basis. It is our understanding that MCERA's investment consultant calculates rates of return on a time-weighted basis, which can produce different results. The rates of return determined by the investment consultant were -2.19% as of June 30, 2016 and 3.11% as of June 30, 2015.



Important Information about Actuarial Valuations

In order to prepare an actuarial valuation, Segal Consulting ("Segal") relies on a number of input items. These include:

- > <u>Plan of benefits</u> Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan description in this report to confirm that Segal has correctly interpreted the plan of benefits.
- > <u>Participant data</u> An actuarial valuation for a plan is based on data provided to the actuary by the Association. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
- **Assets** This valuation is based on the market value of assets as of the valuation date, as provided by the Association.
- Actuarial assumptions In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, termination, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan's assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- > The valuation is prepared at the request of the Board to assist the sponsors of the Fund in preparing items related to the pension plan in their financial reports. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- > An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.
- > If the Association is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.



> Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Board should look to their other advisors for expertise in these areas.

As Segal Consulting has no discretionary authority with respect to the management or assets of the Retirement Association, it is not a fiduciary in its capacity as actuaries and consultants with respect to the Retirement Association.

A. MEMBER DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, vested terminated members, retired members and beneficiaries. This section presents a summary of significant statistical data on these member groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A-E.

A historical perspective of how the member population has changed over the past ten valuations can be seen in this chart.

CHART 1
Member Population: 2007– 2016⁽¹⁾

Year Ended June 30	Active Members	Vested Terminated Members ⁽²⁾	Retired Members and Beneficiaries	Ratio of Non-Actives to Actives
2007	1,395	407	907	0.94
2008	1,410	411	962	0.97
2009	1,369	412	1,008	1.04
2010	1,254	395	1,083	1.18
2011	1,129	389	1,129	1.34
2012	1,069	356	1,217	1.47
2013	1,072	345	1,287	1.52
2014	1,081	394	1,328	1.59
2015	1,107	414	1,379	1.62
2016	1,123	428	1,416	1.64

⁽¹⁾ Information prior to 2011 has been extracted from the previous actuary's past valuation reports.

Includes pending withdrawals and pending disabilities prior to 2011.



Active Members

Plan costs are affected by the age, years of service and compensation of active members. In this year's valuation, there were 1,123 active members with an average age of 47.0 years, average years of service of 9.1, and average compensation of \$54,510. The 1,107 active members in the prior valuation had an average age of 47.2 years, average service of 9.4 years, and average compensation of \$52,490.

Inactive Members

In this year's valuation, there were 428 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their member contributions versus 414 in the prior valuation.

These graphs show a distribution of active members by age and by years of service.

CHART 2
Distribution of Active Members by Age as of June 30, 2016

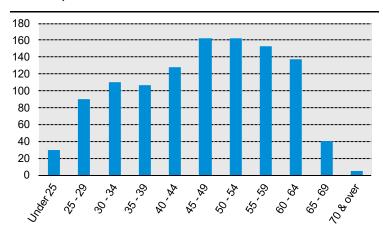
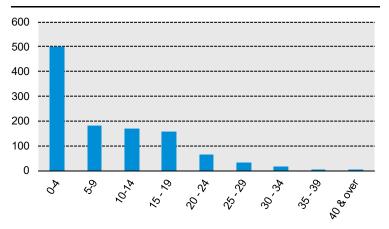


CHART 3
Distribution of Active Members by Years of Service as of June 30, 2016





Retired Members and Beneficiaries

As of June 30, 2016, 1,262 retired members and 154 beneficiaries were receiving total monthly benefits of \$2,580,294. For comparison, in the previous valuation, there were 1,227 retired members and 152 beneficiaries receiving monthly benefits of \$2,437,570.

These graphs show a distribution of the current retired members based on their monthly amount and age, by type of pension.

■ Disability
■ Service

CHART 4

Distribution of Retired Members (Excl. Beneficiaries) by Type and by Monthly Amount as of June 30, 2016

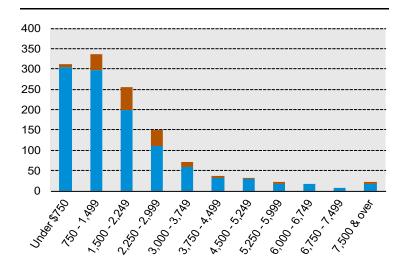
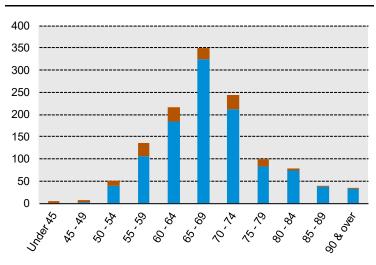


CHART 5

Distribution of Retired Members (Excl. Beneficiaries) by Type and by Age as of June 30, 2016





B. FINANCIAL INFORMATION

Retirement plan funding anticipates that, over the long term, both contributions and net investment earnings (less investment fees and administrative expenses) will be needed to cover benefit payments. Retirement plan assets change as a result of the net impact of these income and expense components. The adjustment toward market value shown in the chart is the "non-cash" earnings on investments implicitly included in the actuarial value of assets. Additional financial information, including a summary of these transactions for the valuation year, is presented in Section 3, Exhibits F and G.

The chart depicts the components of changes in the actuarial value of assets over the last eight years. Note: The first bar represents increases in assets during each year while the second bar details the decreases.

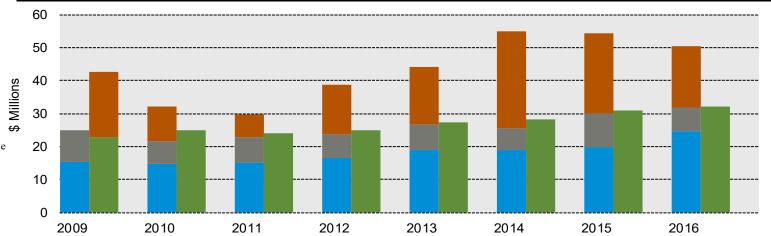
■Adjustment toward market value

■Benefits Paid

■ Net interest and dividends

Contributions

CHART 6 Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended June 30, 2009 through 2016





It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board of Retirement has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale

of assets has no immediate effect on the actuarial value.

The chart shows the determination of the actuarial value of assets as of the valuation date.

CHART 7 Determination of Actuarial Value of Assets for Year Ended June 30, 2016

1. Market value of assets:					\$426,338,011
	Actual Market	Expected Market	Investment	Deferred	Deferred
2. Calculation of deferred return:	Return (net)	Return (net)	Gain / (Loss)	<u>Factor</u>	<u>Return</u>
(a) Year ended June 30, 2012	\$(4,078,489)	\$27,196,991	\$(31,275,480)	0%	\$0
(b) Year ended June 30, 2013	48,890,492	26,235,422	22,655,070	20%	4,531,014
(c) Year ended June 30, 2014	68,494,950	29,334,150	39,160,800	40%	15,664,320
(d) Year ended June 30, 2015	13,201,309	31,658,013	(18,456,704)	60%	(11,074,022)
(e) Year ended June 30, 2016	(10,352,325)	31,932,904	(42,285,229)	80%	(33,828,183)
(f) Total unrecognized return*					\$(24,706,871)
3. Preliminary actuarial value of assets: (1) - (2f)					\$451,044,882
4. Adjustment to be within 25% corridor of market value					\$0
5. Final actuarial value of assets: (3) + (4)					\$451,044,882
6. Actuarial value as a percentage of market value: $(5) \div (1)$					105.8%
7. Non-valuation reserves:					
Contingency reserve					\$4,271,610
8. Valuation value of assets**: (5) - (7)					\$446,773,272

^{*} The amount of deferred return that will be recognized in each subsequent valuation is as follows (note: amounts may not total exactly due to rounding):

6/30/2017 \$214,787 6/30/2019 (12,148,387) 6/30/2018 (4,316,227) 6/30/2020 (8,457,046) Total \$(24,706,871)

^{**} Note that the valuation value of assets for each of the General, Safety, and Probation membership groups has generally been calculated in proportion to the book value reserves maintained by MCERA for those three membership groups.

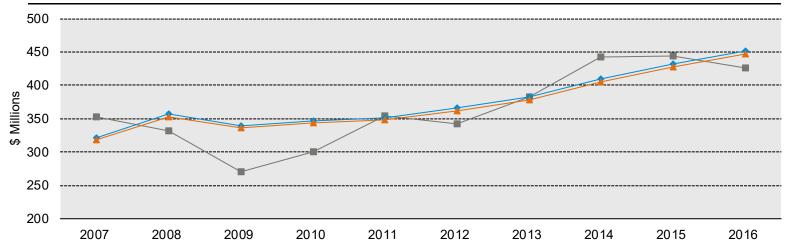


The market value, actuarial value, and valuation value of assets are representations of MCERA's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets, but with less volatility. The valuation value of assets is the actuarial value, excluding any non-valuation reserves. The valuation asset value is significant because MCERA's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

This chart shows the change in market value, actuarial value and valuation value over the past ten years.

CHART 8

Market Value, Actuarial Value and Valuation Value of Assets as of June 30, 2007 – 2016





Market Value→ Actuarial Value→ Valuation Value

C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution

requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total experience loss was \$2.4 million, a net loss of \$4.7 million from investments and a gain of \$2.3 million from all other sources. The net experience variation from individual sources other than investments was 0.4% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

This chart provides a summary of the actuarial experience during the past year.

CHART 9 Actuarial Experience for Year Ended June 30, 2016

1.	Net gain/(loss) from investments (1)	\$(4,702,380)
2.	Net gain/(loss) from other experience (2)	<u>2,282,412</u>
3.	Net experience gain/(loss): (1) + (2)	\$(2,419,968)

⁽¹⁾ Details in Chart 10.



⁽²⁾ See Section 3, Exhibit I.

Investment Rate of Return

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on MCERA's investment policy. For valuation purposes, the assumed rate of return on the valuation value of assets was 7.25% for the June 30, 2015 valuation. The actual rate of return on a valuation basis for the 2016 plan year was 6.14%.

Since the actual return for the year was less than the assumed return, MCERA experienced an actuarial loss during the year ended June 30, 2016 with regard to its investments.

This chart shows the gain/(loss) due to investment experience.

CHART 10

Investment Experience for Year Ended June 30, 2016 Valuation Value, Actuarial Value, and Market Value of Assets

Valuation Value	Actuarial Value	Market Value
valuation value	Actuariai value	Widiket Value
\$26,071,363	\$25,892,595	\$(10,352,325)
\$424,465,419	\$428,915,797	\$440,453,846
6.14%	6.04%	(2.35)%
7.25%	7.25%	7.25%
\$30,773,743	\$31,096,395	\$31,932,904
<u>\$(4,702,380)</u>	<u>\$(5,203,800)</u>	<u>\$(42,285,229)</u>
	\$424,465,419 6.14% 7.25% \$30,773,743	\$26,071,363 \$25,892,595 \$424,465,419 \$428,915,797 6.14% 6.04% 7.25% 7.25% \$30,773,743 \$31,096,395



Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on a valuation, actuarial, and market value basis for the last ten years. Based on recommendations adopted by the Board on October 15, 2014, we have maintained the assumed long-term rate of return of 7.25% for the June 30, 2016 valuation.

CHART 11
Investment Return – Valuation Value, Actuarial Value and Market Value: 2007 – 2016*

	Valuatio Investme	n Value nt Return	Actuarial Value Investment Return		Market Value Investment Return**	
Year Ended June 30	Amount	Percent	Amount	Percent	Amount	Percent
2007	N/A	N/A	N/A	9.90%	\$50,991,137	16.80%
2008	N/A	N/A	N/A	6.60%	(28,174,415)	(7.90)%
2009	N/A	N/A	N/A	4.90%	(53,511,078)	(16.30)%
2010	N/A	N/A	N/A	3.30%	44,658,046	17.00%
2011	\$11,895,661	3.50%	\$14,809,915	4.33%	64,075,101	21.68%
2012	22,982,960	6.69%	22,205,173	6.38%	(4,078,489)	(1.16)%
2013	24,720,166	6.90%	25,124,178	6.95%	48,890,492	14.44%
2014	35,462,137	9.48%	36,055,066	9.54%	68,494,950	18.10%
2015	34,665,488	8.68%	34,687,586	8.59%	13,201,309	3.02%
2016	26,071,363	6.14%	25,892,595	6.04%	(10,352,325)	(2.35)%
Five-Year Average Return		7.57%		7.49%		6.09%
Ten-Year Average Return		N/A		6.63%		5.59%

^{*} Information prior to 2011 has been extracted from the previous actuary's past valuation reports.

^{**} The rates of return have been calculated on a dollar-weighted basis. It is our understanding that MCERA's investment consultant calculates rates of return on a time-weighted basis, which can produce different results.



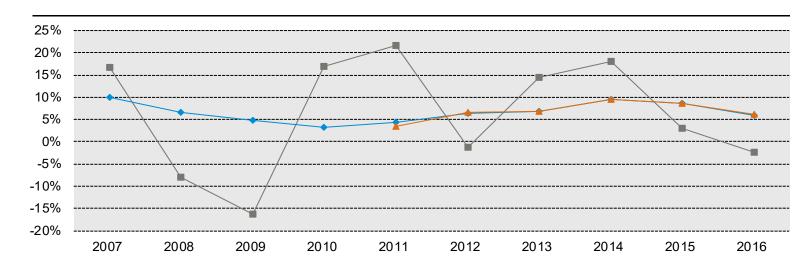
Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.

This chart illustrates how this leveling effect has actually worked over the years 2007 - 2016.

Market Value→ Actuarial Value→ Valuation Value

CHART 12

Market, Actuarial and Valuation Value Rates of Return for Years Ended June 30, 2007 – 2016



Other Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- > actual turnover among the participants,
- > retirement experience (earlier or later than expected),
- > mortality (more or fewer deaths than expected),

- > the number of disability retirements, and
- > salary increases different than assumed.

The net gain from this other experience for the year ended June 30, 2016 amounted to \$2.3 million which is 0.4% of the actuarial accrued liability. See Exhibit I for a detailed development of the Unfunded Actuarial Accrued Liability.

D. EMPLOYER AND MEMBER CONTRIBUTIONS

Employer contributions consist of two components:

Normal Cost

The annual contribution rate that, if paid annually from a member's first year of membership through the year of retirement, would accumulate to the amount necessary to fully fund the member's retirement-related benefits. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution rate is expressed as a level percentage of the member's compensation.

Contribution to the Unfunded Actuarial Accrued Liability (UAAL)

The annual contribution rate that, if paid annually over the UAAL amortization period, would accumulate to the amount necessary to fully fund the UAAL. Accumulation includes annual crediting of interest at the assumed investment earnings rate. The contribution (or rate credit in the case of a negative UAAL) is calculated to remain as a level percentage of future active member payroll (including payroll for new members as they enter the Association) assuming a constant number of active members. In order to remain as a level percentage of payroll, amortization payments (credits) are scheduled to increase at the annual rate of 3.75% (i.e., 3.25% inflation plus 0.50% across-the-board salary increase).

Prior to July 1, 2012, the total UAAL was being amortized on a 30-year decreasing period, with 27 years remaining as of June 30, 2012 (and 23 years remaining as of June 30, 2016). On or after July 1, 2012, any new UAAL resulting from plan amendments are amortized over separate decreasing 15-year periods; early retirement incentive programs (ERIPs) are amortized over separate decreasing 5-year periods; assumption and method changes are amortized over separate decreasing 18-year periods; and experience gains/losses are also amortized over separate decreasing 18-year periods.

Also, under the Board's funding policy adopted on April 17, 2013, in addition to the UAAL contribution rate, an amortization amount equal to the UAAL contribution rate times the covered payroll (as estimated in the actuarial valuation that establishes such UAAL contribution rate) will be calculated for each employer. The final UAAL payment by each employer will be equal to the UAAL contribution rate times the actual covered payroll or the above amortization amount, if greater. This means that



UAAL contribution amounts will be equal to the greater of the UAAL contribution rates developed in Section 2, Chart 13A of this valuation times the actual fiscal year 2017/2018 payroll, or the estimated UAAL annual contribution amounts provided in Section 2, Chart 13B of this valuation. To facilitate the calculation of the minimum UAAL dollar contribution amount, we have provided in Chart 13B a breakdown of the estimated UAAL annual contribution amounts by employer (i.e., County of Mendocino, Mendocino County Superior Court, and Russian River Cemetery District).

On June 19, 2013 the Board adopted an additional change to the actuarial funding policy to anticipate the contribution rate impact that would result from the lag between the date of the actuarial valuation and the date of the contribution rate implementation. In general, the contribution rates determined in an actuarial valuation will apply to the fiscal year beginning 12 months after the valuation date. In compliance with the change in the funding policy, the employer contribution rates developed in this valuation have been adjusted to anticipate the delay in implementing the change in the employer contribution rates determined as of June 30, 2016 for the fiscal year 2017/2018. This adjustment is reflected in the UAAL portion of the June 30, 2016 employer rates.

The recommended employer contribution rates are provided on Chart 13A. The minimum amounts required from each employer to amortize their UAAL are provided in Chart 13B.

Member Contributions:

General Tiers 1, 2, and 3, Safety Tiers 1 and 2, and Probation Tiers 1 and 2

Articles 6 and 6.8 of the 1937 Act define the methodology to be used in the calculation of member basic contribution rates for General Tier 1-3 members and for Safety and Probation Tier 1-2 members, respectively. The basic contribution rate is determined so that the accumulation of a member's basic contributions made in a given year until a certain age will be sufficient to fund an annuity at that age that is equal to 1/100 of Final Average Salary. That age is 60 for General members and 50 for Safety and Probation members. It is assumed that contributions are made annually at the same rate, starting at entry age. In addition to the basic contributions, members



General Tier 4, Safety Tier 3, and Probation Tier 3 pay one-half of the total normal cost necessary to fund cost-of-living benefits. Following practices established by the Association's previous actuary prior to the June 30, 2011 valuation, we have also included a 1.63% of pay offset to the Safety member rates, which is picked up by the County. **No** other subsidies have been reflected in the member contribution rates.

Pursuant to Section 7522.30(a) of the Government Code, General Tier 4, Safety Tier 3, and Probation Tier 3 members are required to contribute at least 50% of the Normal Cost rate. In addition, there are certain additional requirements that would have to be met such as requiring the new employees to pay the contribution rate of "similarly situated employees", if it is greater (reference: Section 7522.30(c)). We further understand that different rules may have to be applied for collectively bargained employees, non-represented, managerial or other supervisory employees (reference: Section 7522.30(e)). In preparing the Normal Cost rates in this report, we have assumed that exactly 50% of the Normal Cost would be paid by the new members and we have taken into account in this valuation only the requirements of Section 7522.30(e), but not requirements of Section 7522.30(e).

Accumulation for all members includes semi-annual crediting of interest at the assumed investment earnings rate.

The member contribution rates are provided in Appendix A.



SECTION 2: Valuation Results for the Mendocino County Employees' Retirement Association

CHART 13A

Recommended Employer Contribution Rates (Estimated Annual Amounts in \$000's)

	June 30, 2016					June	30, 2015	
	BASIC		C	DLA	то	TOTAL		AND COLA IBINED
	<u>Rate</u>	Estimated Annual <u>Amount⁽¹⁾</u>	<u>Rate</u>	Estimated Annual <u>Amount⁽¹⁾</u>	<u>Rate</u>	Estimated Annual <u>Amount</u> ⁽¹⁾	<u>Rate</u>	Estimated Annual <u>Amount⁽¹⁾</u>
General Tier 1 Members								
Normal Cost	10.18%	\$92	3.28%	\$30	13.46%	\$122	14.05%	\$127
UAAL	14.60%	<u>132</u>	3.47%	<u>31</u>	<u>18.07%</u>	<u>163</u>	<u>18.17%</u>	<u>165</u>
Total Contribution	24.78%	\$224	6.75%	\$61	31.53%	\$285	32.22%	\$292
General Tier 2 / Tier 3 Members								
Normal Cost	8.20%	\$2,611	2.59%	\$824	10.79%	\$3,435	10.95%	\$3,486
UAAL	14.60%	<u>4,648</u>	<u>3.47%</u>	<u>1,105</u>	<u>18.07%</u>	<u>5,753</u>	<u>18.17%</u>	<u>5,785</u>
Total Contribution	22.80%	\$7,259	6.06%	\$1,929	28.86%	\$9,188	29.12%	\$9,271
General Tier 4 Members								
Normal Cost	7.46%	\$1,234	0.00%	\$0	7.46%	\$1,234	7.34%	\$1,214
UAAL	<u>14.60%</u>	<u>2,414</u>	<u>3.47%</u>	<u>574</u>	<u>18.07%</u>	<u>2,988</u>	<u>18.17%</u>	<u>3,005</u>
Total Contribution	22.06%	\$3,648	3.47%	\$574	25.53%	\$4,222	25.51%	\$4,219
Safety Tier 1 Members								
Normal Cost								
UAAL				Not Calcu	ılated*			
Total Contribution								
Safety Tier 2 Members								
Normal Cost	13.81%	\$1,009	6.12%	\$446	19.93%	\$1,455	20.49%	\$1,496
UAAL	<u>23.63%</u>	<u>1,725</u>	13.48%	<u>986</u>	<u>37.11%</u>	<u>2,711</u>	<u>36.24%</u>	<u>2,647</u>
Total Contribution	37.44%	\$2,734	19.60%	\$1,432	57.04%	\$4,166	56.73%	\$4,143

^{*} There were no Safety Tier 1 active members reported for the June 30, 2016 valuation.



SECTION 2: Valuation Results for the Mendocino County Employees' Retirement Association

CHART 13A

Recommended Employer Contribution Rates (Estimated Annual Amounts in \$000's) – continued

			June	30, 2016			June	30, 2015
	В	ASIC	C	DLA	то	TAL		AND COLA IBINED
	<u>Rate</u>	Estimated Annual <u>Amount⁽¹⁾</u>	<u>Rate</u>	Estimated Annual <u>Amount⁽¹⁾</u>	<u>Rate</u>	Estimated Annual <u>Amount⁽¹⁾</u>	<u>Rate</u>	Estimated Annual <u>Amount⁽¹⁾</u>
Safety Tier 3 Members								
Normal Cost	10.58%	\$199	0.00%	\$0	10.58%	\$199	10.79%	\$203
UAAL	23.63%	<u>446</u>	13.48%	<u>254</u>	<u>37.11%</u>	<u>700</u>	36.24%	<u>684</u>
Total Contribution	34.21%	\$645	13.48%	\$254	47.69%	\$899	47.03%	\$887
Probation Tier 1 Members								
Normal Cost								
UAAL				Not Calc	ulated*			
Total Contribution								
Probation Tier 2 Members								
Normal Cost	12.70%	\$299	4.53%	\$106	17.23%	\$405	17.18%	\$404
UAAL	12.83%	<u>302</u>	2.42%	<u>57</u>	<u>15.25%</u>	<u>359</u>	<u>15.26%</u>	<u>359</u>
Total Contribution	25.53%	\$601	6.95%	\$163	32.48%	\$764	32.44%	\$763
Probation Tier 3 Members								
Normal Cost	9.40%	\$37	0.00%	\$0	9.40%	\$37	9.56%	\$38
UAAL	12.83%	<u>50</u>	2.42%	<u>10</u>	<u>15.25%</u>	<u>60</u>	<u>15.26%</u>	<u>60</u>
Total Contribution	22.23%	\$87	2.42%	\$10	24.65%	\$97	24.82%	\$98



^{*} There were no Probation Tier 1 active members reported for the June 30, 2016 valuation.

CHART 13A

Recommended Employer Contribution Rates (Estimated Annual Amounts in \$000's) – continued

			June 3	30, 2016			June 30), 2015
	В	ASIC	CC	DLA	то	TAL	BASIC AN COMB	
	<u>Rate</u>	Estimated Annual <u>Amount</u> ⁽¹⁾	<u>Rate</u>	Estimated Annual <u>Amount</u> ⁽¹⁾	<u>Rate</u>	Estimated Annual <u>Amount⁽¹⁾</u>	<u>Rate</u>	Estimated Annual <u>Amount⁽¹⁾</u>
All Members Combined								
Normal Cost	8.95%	\$5,481	2.30%	\$1,406	11.25%	\$6,887	11.38%	\$6,968
UAAL	<u>15.88%</u>	<u>9,717</u>	4.92%	<u>3,017</u>	20.80%	12,734	20.76%	<u>12,705</u>
Total Contribution	24.83%	\$15,198	7.22%	\$4,423	32.05%	\$19,621	32.14%	\$19,673

(1) Amounts are based on the following June 30, 2016 projected annual compensation:

General Tier 1	\$905,180
General Tier 2 / Tier 3	31,837,751
General Tier 4	16,537,110
Safety Tier 1	0
Safety Tier 2	7,302,962
Safety Tier 3	1,885,570
Probation Tier 1	0
Probation Tier 2	2,353,257
Probation Tier 3	393,124
Total	\$61,214,954

Note that a breakdown of the employer minimum dollar contribution to amortize the UAAL by membership group (General/Safety/Probation) and employer (County of Mendocino/Mendocino County Superior Court/Russian River Cemetery District) is provided on the next page.



CHART 13B

Recommended Minimum Dollar Employer Contribution To Amortize the UAAL (Estimated Annual Amounts in \$000's)

		June 30, 2016	
	Est	imated UAAL Annual Amour	nt ⁽¹⁾
	BASIC	COLA	TOTAL
General Members			
County	\$6,740	\$1,603	\$8,343
Courts	421	100	521
Cemetery District	<u>33</u>	<u>7</u>	<u>40</u>
Total	\$7,194	\$1,710	\$8,904
Safety Members			
County	<u>\$2,171</u>	<u>\$1,240</u>	<u>\$3,411</u>
Total	\$2,171	\$1,240	\$3,411
Probation Members			
County	<u>\$352</u>	<u>\$67</u>	<u>\$419</u>
Total	\$352	\$67	\$419
All Members Combined			
County	\$9,263	\$2,910	\$12,173
Courts	421	100	521
Cemetery District	<u>33</u>	7	<u>40</u>
Total	\$9,717	\$3,017	\$12,734

⁽¹⁾ Amounts are based on the following June 30, 2016 projected annual compensation:

General County	\$46,174,911
General Courts	2,882,128
General Cemetery District	223,002
Safety County	9,188,532
Probation County	2,746,381
Total	\$61,214,954



The employer contribution rates as of June 30, 2016 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

Reconciliation of Recommended Employer Contribution

The chart below details the changes in the recommended employer contribution from the prior valuation to the current year's valuation.

The chart reconciles the employer contribution from the prior valuation to the amount determined in this valuation.

CHART 14
Reconciliation of Recommended Employer Contribution from June 30, 2015 to June 30, 2016

	Contribution Rate	Estimated Amount ⁽¹⁾
Recommended Contribution Rate as of June 30, 2015	32.14%	\$19,673,000
Effect of actuarial experience during fiscal year 2016:		
1. Effect of change in membership demographics	(0.13)%	\$(81,000)
2. Effect of anticipated one-year delay in implementing the lower aggregate employer contribution rate developed in the June 30, 2016 valuation until fiscal year 2017/2018	$0.00\%^{(2)}$	0
3. Effect of investment loss	0.58%	355,000
4. Effect of higher than expected salary increases for continuing General and Probation active members	0.29%	178,000
5. Effect of amortizing prior year's UAAL over a larger than expected projected total payroll	(0.31)%	(190,000)
6. Effect of other experience gains ⁽³⁾	(0.52)%	(314,000)
Subtotal	(0.09)%	\$(52,000)
Recommended Contribution Rate as of June 30, 2016	32.05%	\$19,621,000

⁽¹⁾ Based on June 30, 2016 projected compensation.

⁽³⁾ Roughly one-half of the experience gains is due to changes in continuance eligibility for beneficiaries of continuing retired members. The remainder is due to more than expected deaths and other net experience gains.



⁽²⁾ The effect is less than 0.01%.

The member contribution rates as of June 30, 2016 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

Reconciliation of Recommended Member Contribution Rate

The chart below details the changes in the recommended member contribution rate from the prior valuation to the current year's valuation.

The chart reconciles the member contribution from the prior valuation to the amount determined in this valuation.

CHART 15
Reconciliation of Recommended Member Contribution from June 30, 2015 to June 30, 2016

	Contribution Rate	Estimated Amount*
Average Contribution Rate as of June 30, 2015	9.64%	\$5,904,000
Effect of actuarial experience during fiscal year 2016:		
1. Effect of change in membership demographics for new General members enrolled in Tier 4 (CalPEPRA Tier)	0.01%	\$6,000
Subtotal	0.01%	\$6,000
Average Contribution Rate as of June 30, 2016	9.65%	\$5,910,000

^{*} Based on June 30, 2016 projected compensation.



E. FUNDED RATIO

A critical piece of information regarding the Plan's financial status is the funded ratio. This ratio compares the actuarial value of assets to the actuarial accrued liabilities of the Plan as calculated. High ratios indicate a well-funded plan with assets sufficient to cover the plan's actuarial accrued liabilities. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other factors. The chart below depicts a history of the funded ratios for this plan.

The funded status measures shown in this valuation are appropriate for assessing the need for or amount of future contributions. However, they are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of setting the Plan's benefit obligations. As the chart below shows, the measures are different depending on whether the valuation value or market value of assets is used.

CHART 16
Funded Ratio for Plan Years Ending June 30, 2007 – 2016

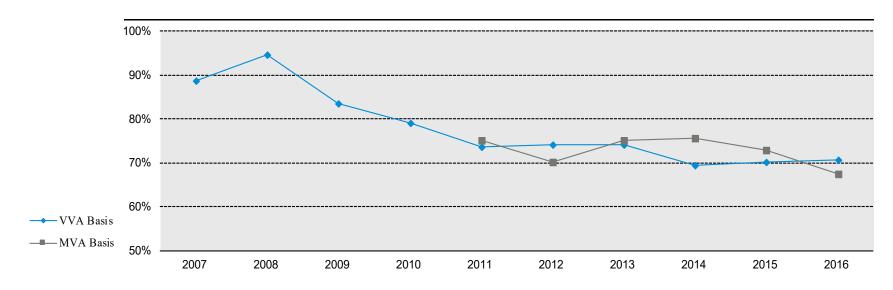




CHART 17 Schedule of Funding Progress⁽¹⁾

Actuarial Valuation Date	Valuation Value of Assets ⁽²⁾ (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (%) (a) / (b)	Covered Payroll ⁽³⁾ (c)	UAAL as a Percentage of Covered Payroll (%) [(b) - (a)] / (c)
6/30/2007	\$317,936,703	\$358,259,082	\$40,322,379	88.7%	\$65,899,000(4)	61.2%
6/30/2008	353,420,714	373,832,395	20,411,681	94.5	70,880,333	28.8
6/30/2009	336,262,500	403,195,980	66,933,480	83.4	72,235,097	92.7
6/30/2010	343,201,920	434,986,533	91,784,613	78.9	69,004,002	133.0
6/30/2011	347,731,607	472,644,283	124,912,676	73.6	64,143,765	194.7
6/30/2012	362,487,345	489,014,364	126,527,019	74.1	56,596,088	223.6
6/30/2013	378,777,024	510,461,279	131,684,255	74.2	56,463,983	233.2
6/30/2014	404,855,842	584,428,884	179,573,042	69.3	55,876,248	321.4
6/30/2015	428,228,929	610,381,849	182,152,920	70.2	58,106,396	313.5
6/30/2016	446,773,272	632,057,539	185,284,267	70.7	61,214,954	302.7

⁽¹⁾ Information prior to 2011 has been extracted from the previous actuary's past valuation reports.



⁽²⁾ Excludes assets for non-valuation reserves.

⁽³⁾ Beginning 6/30/2011, payroll includes a projection for expected salary increases during the year following the valuation date under the actuarial assumptions used in the valuation.

⁽⁴⁾ Revised to reflect the information in MCERA's 2015-2014 Comprehensive Annual Financial Report for the fiscal years ended June 30, 2015 and 2014. Note that the previous actuary has conflicting payroll amounts in their June 30, 2007 valuation report. This revision does not affect the UAAL as a percentage of covered payroll percentage.

F. VOLATILITY RATIO

Retirement plans are subject to volatility in the level of required contributions. This volatility tends to increase as retirement plans become more mature.

The Asset Volatility Ratio (AVR), which is equal to the market value of assets divided by total payroll, provides an indication of the potential contribution volatility for any given level of investment volatility. A higher AVR indicates that the plan is subject to a greater level of contribution volatility. This is a current measure since it is based on the current level of assets.

For MCERA, the current AVR is about 7.0. This means that a 1% asset gain/(loss) (relative to the assumed investment return) translates to about 7.0% of one-year's payroll. Since MCERA amortizes actuarial gains and losses over an 18-year period, there would be a 0.5% of payroll decrease/(increase) in the required contribution for each 1% asset gain/(loss).

The Liability Volatility Ratio (LVR), which is equal to the Actuarial Accrued Liability divided by payroll, provides an indication of the longer-term potential for contribution volatility for any given level of investment volatility. This is because, over an extended period of time, the plan's assets should track the plan's liabilities. For example, if a plan is 50% funded on a market value basis, the liability volatility ratio would be double the asset volatility ratio and the plan sponsor should expect contribution volatility to increase over time as the plan becomes better funded.

The LVR also indicates how volatile contributions will be in response to changes in the Actuarial Accrued Liability due to actual experience or to changes in actuarial assumptions.

For MCERA, the current LVR is about 10.3. This is about 47% higher than the AVR. Therefore, we would expect that contribution volatility will increase over the long-term.

This chart shows how the asset and liability volatility ratios have varied over time.

CHART 18
Volatility Ratios for Years Ended June 30, 2010 – 2016*

	Asset Volatility Ratios			<u>i</u>	<u>Lia</u>	ability Vo	latility Ratio	<u>s</u>
Year Ended June 30	General	Safety	Probation	Total	General	Safety	Probation	Total
2010	4.1	5.8	5.3	4.3	5.7	10.0	6.1	6.3
2011	5.0	8.7	5.9	5.5	6.7	11.6	7.7	7.4
2012	5.6	8.7	5.6	6.1	8.1	12.3	7.8	8.6
2013	6.3	9.6	6.4	6.8	8.4	12.9	7.8	9.0
2014	7.4	10.6	7.9	7.9	9.7	14.6	9.6	10.5
2015	7.1	10.4	8.2	7.6	9.6	15.2	10.3	10.5
2016	6.4	9.8	7.8	7.0	9.4	15.4	10.5	10.3



^{*} Information for year ended June 30, 2010 has been derived based on information from the previous actuary's past valuation report.

SECTION 3: Supplemental Information for the Mendocino County Employees' Retirement Association

EXHIBIT A

Table of Plan Coverage
i. General Tier 1

	Year Ende	Year Ended June 30			
Category	2016	2015	Change Fror Prior Year		
Active members in valuation					
Number	12	11	9.1%		
Average age	60.6	60.8	N/A		
Average service	34.2	34.4	N/A		
Projected total compensation	\$905,180	\$757,752	19.5%		
Projected average compensation	\$75,432	\$68,887	9.5%		
Member account balances	\$2,552,593	\$2,404,466	6.2%		
Total active vested members	12	11	9.1%		
Vested terminated members					
Number	4	6	-33.3%		
Average age	59.9	60.1	N/A		
Retired members					
Number in pay status	316	331	-4.5%		
Average age	75.2	74.9	N/A		
Average monthly benefit	\$2,432	\$2,300	5.7%		
Disabled members					
Number in pay status	31	31	0.0%		
Average age	71.9	70.9	N/A		
Average monthly benefit	\$1,943	\$1,886	3.0%		
Beneficiaries					
Number in pay status	76	81	-6.2%		
Average age	79.8	80.2	N/A		
Average monthly benefit	\$1,242	\$1,261	-1.5%		



SECTION 3: Supplemental Information for the Mendocino County Employees' Retirement Association

EXHIBIT A

Table of Plan Coverage
ii. General Tiers 2 and 3

	Year Endo	Year Ended June 30			
Category	2016	2015	Change Fror Prior Year		
Active members in valuation					
Number	562	634	-11.4%		
Average age	51.4	50.8	N/A		
Average service	12.9	12.1	N/A		
Projected total compensation	\$31,837,751	\$33,648,551	-5.4%		
Projected average compensation	\$56,651	\$53,073	6.7%		
Member account balances	\$35,514,902	\$37,740,834	-5.9%		
Total active vested members	488	539	-9.5%		
Vested terminated members					
Number	303	308	-1.6%		
Average age	49.5	49.4	N/A		
Retired members					
Number in pay status	659	613	7.5%		
Average age	66.3	65.9	N/A		
Average monthly benefit	\$1,336	\$1,291	3.5%		
Disabled members					
Number in pay status	80	80	0.0%		
Average age	62.7	61.7	N/A		
Average monthly benefit	\$1,607	\$1,561	2.9%		
Beneficiaries					
Number in pay status	41	38	7.9%		
Average age	65.8	63.4	N/A		
Average monthly benefit	\$966	\$890	8.5%		



SECTION 3: Supplemental Information for the Mendocino County Employees' Retirement Association

EXHIBIT A

Table of Plan Coverage
iii. General Tier 4

	Year Ende		
			Change From
Category	2016	2015	Prior Year
Active members in valuation			
Number	369	285	29.5%
Average age	42.2	41.3	N/A
Average service	1.5	1.1	N/A
Projected total compensation	\$16,537,110	\$12,181,432	35.8%
Projected average compensation	\$44,816	\$42,742	4.9%
Member account balances	\$1,573,875	\$869,019	81.1%
Total active vested members	1*	0	N/A
Vested terminated members			
Number	67	48	39.6%
Average age	40.2	40.4	N/A
Retired members			
Number in pay status	N/A	N/A	N/A
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Disabled members			
Number in pay status	N/A	N/A	N/A
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Beneficiaries			
Number in pay status	N/A	N/A	N/A
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A

^{*} Member purchased additional years of service.



SECTION 3: Supplemental Information for the Mendocino County Employees' Retirement Association

EXHIBIT A

Table of Plan Coverage
iv. Safety Tiers 1 and 2

	Year Ende	ed June 30	
Category	2016	2015	Change From Prior Year
Active members in valuation			
Number	94	104	-9.6%
Average age	46.4	46.0	N/A
Average service	16.2	15.0	N/A
Projected total compensation	\$7,302,962	\$7,776,909	-6.1%
Projected average compensation	\$77,691	\$74,778	3.9%
Member account balances	\$6,697,673	\$6,701,085	-0.1%
Total active vested members	87	97	-10.3%
Vested terminated members			
Number	39	39	0.0%
Average age	44.1	43.5	N/A
Retired members			
Number in pay status	85	82	3.7%
Average age	65.4	65.1	N/A
Average monthly benefit	\$2,938	\$2,904	1.2%
Disabled members			
Number in pay status	58	56	3.6%
Average age	65.4	65.8	N/A
Average monthly benefit	\$3,479	\$3,241	7.3%
Beneficiaries			
Number in pay status	35	31	12.9%
Average age	67.2	66.9	N/A
Average monthly benefit	\$1,752	\$1,626	7.8%



SECTION 3: Supplemental Information for the Mendocino County Employees' Retirement Association

EXHIBIT A

Table of Plan Coverage
v. Safety Tier 3

	Year Ende	ed June 30	
Category	2016	2015	Change From Prior Year
Active members in valuation	2010	2013	i iidi i eai
Number	36	21	71.4%
Average age	31.0	30.5	N/A
Average service	1.6	1.4	N/A
Projected total compensation	\$1,885,570	\$1,085,912	73.6%
Projected average compensation	\$52,377	\$51,710	1.3%
Member account balances	\$307,127	\$160,172	91.7%
Total active vested members	0	0	N/A
Vested terminated members			
Number	1	2	-50.0%
Average age	32.0	33.2	N/A
Retired members			
Number in pay status	N/A	N/A	N/A
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Disabled members			
Number in pay status	N/A	N/A	N/A
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Beneficiaries			
Number in pay status	N/A	N/A	N/A
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A



SECTION 3: Supplemental Information for the Mendocino County Employees' Retirement Association

EXHIBIT A

Table of Plan Coverage
vi. Probation Tiers 1 and 2

	Year Ende	d June 30	
Category	2016	2015	Change From Prior Year
Active members in valuation			
Number	41	45	-8.9%
Average age	45.3	43.5	N/A
Average service	12.1	10.9	N/A
Projected total compensation	\$2,353,257	\$2,367,098	-0.6%
Projected average compensation	\$57,397	\$52,602	9.1%
Member account balances	\$3,319,086	\$3,211,304	3.4%
Total active vested members	36	37	-2.7%
Vested terminated members			
Number	12	10	20.0%
Average age	39.0	39.8	N/A
Retired members			
Number in pay status	30	31	-3.2%
Average age	64.5	64.1	N/A
Average monthly benefit	\$2,926	\$2,833	3.3%
Disabled members			
Number in pay status	3	3	0.0%
Average age	56.8	55.8	N/A
Average monthly benefit	\$2,012	\$1,954	3.0%
Beneficiaries			
Number in pay status	2	2	0.0%
Average age	71.4	70.4	N/A
Average monthly benefit	\$1,027	\$997	3.0%



SECTION 3: Supplemental Information for the Mendocino County Employees' Retirement Association

EXHIBIT A

Table of Plan Coverage
vii. Probation Tier 3

	Year Ende	d June 30	
Category	2016	2015	Change From Prior Year
Active members in valuation			
Number	9	7	28.6%
Average age	29.3	29.6	N/A
Average service	1.7	1.5	N/A
Projected total compensation	\$393,124	\$288,742	36.2%
Projected average compensation	\$43,680	\$41,249	5.9%
Member account balances	\$53,636	\$41,463	29.4%
Total active vested members	0	0	N/A
Vested terminated members			
Number	2	1	100.0%
Average age	29.9	25.7	N/A
Retired members			
Number in pay status	N/A	N/A	N/A
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Disabled members			
Number in pay status	N/A	N/A	N/A
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Beneficiaries			
Number in pay status	N/A	N/A	N/A
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A



EXHIBIT B

Members in Active Service and Projected Average Compensation By Age, Years of Service as of June 30, 2016

i. General Tier 1

	Years of Service										
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & over		
Under 25											
25 - 29											
30 - 34											
35 - 39											
40 - 44											
45 - 49											
50 - 54	1								1*		
	\$111,231								\$111,231		
55 - 59	3			1			1	1*			
	44,770			\$43,318			\$42,312	\$48,680			
60 - 64	8							3	5		
	82,455							96,406	74,084		
65 - 69											
70 & over											
Total	12			1			1	4			
	\$75,432			\$43,318			\$42,312	\$84,474	\$80,276		

^{*} Members previously enrolled in Tier 3 but have since been updated to reflect their participation in Tier 1 as a result of redepositing their withdrawn contributions.



EXHIBIT B

Members in Active Service and Projected Average Compensation
By Age, Years of Service as of June 30, 2016

ii. General Tiers 2 and 3

		Years of Service											
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & over				
Under 25	1	1											
	\$45,715	\$45,715											
25 - 29	9	7	2										
	47,423	47,379	\$47,574										
30 - 34	29	16	9	4									
	55,952	58,721	53,391	\$50,643									
35 - 39	54	8	20	18	8								
	56,635	56,359	54,177	59,021	\$57,684								
40 - 44	57	11	11	16	18	1							
	55,977	53,022	65,776	53,729	53,580	\$59,789							
45 - 49	90	10	21	24	18	12	5						
	55,703	68,091	48,306	55,604	54,812	55,632	\$65,840						
50 - 54	96	9	22	22	26	10	4	3					
	55,078	58,870	49,823	53,256	62,328	49,079	52,933	\$55,645					
55 - 59	92	5	22	24	25	8	5	3					
	63,035	64,146	68,984	53,030	65,439	60,006	62,641	86,291					
60 - 64	95	5	27	24	15	13	10	1					
	55,352	70,929	50,836	54,393	50,349	59,180	63,835	62,884					
65 - 69	35	1	15	11	7	1							
	54,142	50,632	51,041	58,663	54,783	49,940							
70 & over	4	1	1	1		1							
	60,071	59,117	45,573	66,516		69,079							
Total	562	74	150	144	117	46	24	7					
10.01	\$56,651	\$58,742	\$54,631	\$55,005	\$58,186	\$56,230	\$62,187	\$69,813					



EXHIBIT B

Members in Active Service and Projected Average Compensation By Age, Years of Service as of June 30, 2016

iii. General Tier 4

		Years of Service											
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & over				
Under 25	22	22											
	\$34,903	\$34,903											
25 - 29	58	58											
	42,082	42,082											
30 - 34	54	54											
	41,939	41,939					-, -						
35 - 39	34	34											
	44,306	44,306											
40 - 44	44	44											
	42,912	42,912											
45 - 49	42	42											
	45,117	45,117											
50 - 54	40	40											
	49,139	49,139											
55 - 59	44	44											
	50,298	50,298											
60 - 64	27	26		1*									
00 0.	50,051	50,643		\$34,660									
65 - 69	3	3											
	54,136	54,136											
70 & over	1	1											
, 0 22 0 7 01	81,852	81.852											
Total	369	368		1									
10141	\$44,816	\$44,844		\$34,660									

^{*} Member purchased additional years of service.



EXHIBIT B

Members in Active Service and Projected Average Compensation

By Age, Years of Service as of June 30, 2016

iv. Safety Tiers 1 and 2

	Years of Service												
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30 & over					
Under 25													
25 - 29	3	1	1	1									
	\$70,390	\$68,583	\$70,214	\$72,373									
30 - 34	8	5	3										
	66,310	65,283	68,021										
35 - 39	8		5	1	2								
	69,428		67,430	64,288	\$76,993								
40 - 44	18	1	2	5	9	1							
	82,126	69,364	73,686	72,544	92,204	\$68,978							
45 - 49	25		3		12	8	2						
	76,053		64,624		68,813	89,117	\$84,387						
50 - 54	20		1	6	5	3	3						
50 51	85,374		78,982	78,066	79,468	90,418	91,492	\$108,512					
55 - 59	7		1	2		1	2						
33 37	80,961		57,464	59,373		87,171	106,200	_					
60 - 64	5		1	1	1	1		,					
00 - 04	70,417		72,123	64,290	75,223	58,548		81,902					
65 - 69	70,417		72,123	04,250	73,223	50,540		01,702					
03 - 09													
70.0													
70 & over													
Total	94	7	17	16	29	14	7	•					
	\$77,691	\$66,338	\$68,308	\$71,926	\$78,695	\$85,635	\$93,664	\$97,468					



EXHIBIT B

Members in Active Service and Projected Average Compensation By Age, Years of Service as of June 30, 2016

v. Safety Tier 3

		Years of Service												
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30 & over						
Under 25	6	6					-							
	\$48,209	\$48,209					-							
25 - 29	14	14					-							
	50,117	50,117					-							
30 - 34	10	10					-							
	52,370	52,370					-							
35 - 39	2	2					-							
	53,735	53,735	-, -				-							
40 - 44	1	1					-							
	50,892	50,892					-							
45 - 49	1	1					-							
	49,357	49,357					-							
50 - 54	2	2					-							
	81,630	81,630					-							
55 - 59							-							
							_							
60 - 64							_							
							_							
65 - 69							_							
							_							
70 & over							_							
							_							
Total	36	36					-							
10141	\$52,377	\$52,377					_							



EXHIBIT B

Members in Active Service and Projected Average Compensation By Age, Years of Service as of June 30, 2016

vi. Probation Tiers 1 and 2

	Years of Service											
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30 & over				
Under 25												
25 - 29	1	1										
	\$47,030	\$47,030										
30 - 34	7	1	6									
	52,530	45,009	\$53,783									
35 - 39	8	1	3	3	1							
	52,629	49,616	46,577	\$57,998	\$57,689							
40 - 44	7	1		3	3							
	58,377	53,120		52,087	66,420							
45 - 49	4		1		2	1						
	58,011		62,828		56,272	\$56,670						
50 - 54	3				1	1	1					
	66,708				55,349	58,845	\$85,929					
55 - 59	7		3	1	3							
	56,981		58,941	56,058	55,328							
60 - 64	2	1	1									
	50,834	55,554	46,114									
65 - 69	2	´	1			1						
05 07	88,075		55,882			120,266						
70 & over						-,						
, , , & , , , ,												
Total	41	5	15	7	10	3	1					
Total	\$57,397	\$50,066	\$53,605	\$55,188	\$59,082	\$78,594	\$85,929					



EXHIBIT B

Members in Active Service and Projected Average Compensation By Age, Years of Service as of June 30, 2016

vii. Probation Tier 3

	Years of Service												
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30 & over					
Under 25	. 1	. 1					-						
	\$40,159	\$40,159					-						
25 - 29	5	5					-						
	44,817	44,817					-						
30 - 34	2	2					-						
	43,487	43,487					-						
35 - 39							-						
							-						
40 - 44	1	1					-						
	41,908	41,908					-						
45 - 49							-						
							-						
50 - 54							-						
							-						
55 - 59							_						
							_						
60 - 64							_						
							_						
65 - 69							_						
00 0)							_						
70 & over							_						
, 5 22 5 7 61							_						
Total	9	9											
10141	\$43,680	\$43,680											



EXHIBIT C
Schedule of Average Benefit Payment Amounts

		Nu	mber of Ye	ears Since F	Retirement		
	0-4	5-9	10-14	15-19	20-24	25-29	30 & Over
Valuation date: 6/30/2011							
Average Monthly Benefit of Retirees	\$1,872	\$1,637	\$1,454	\$1,502	\$1,433	\$1,501	\$981
Number of Retirees	351	236	137	111	74	51	33
Average Monthly Benefit of Beneficiaries	\$1,043	\$1,172	\$864	\$1,380	\$1,402	\$1,069	\$947
Number of Beneficiaries	45	35	20	15	9	5	7
Valuation date: 6/30/2012							
Average Monthly Benefit of Retirees	\$1,841	\$1,752	\$1,420	\$1,462	\$1,640	\$1,336	\$1,356
Number of Retirees	382	277	132	99	85	62	38
Average Monthly Benefit of Beneficiaries	\$1,167	\$1,230	\$806	\$1,385	\$1,324	\$1,150	\$975
Number of Beneficiaries	44	42	19	14	8	8	7
Valuation date: 6/30/2013							
Average Monthly Benefit of Retirees	\$1,874	\$1,870	\$1,391	\$1,480	\$1,706	\$1,377	\$1,458
Number of Retirees	407	300	148	106	86	52	44
Average Monthly Benefit of Beneficiaries	\$1,207	\$1,236	\$882	\$1,248	\$1,442	\$1,177	\$871
Number of Beneficiaries	46	38	19	20	7	8	6
Valuation date: 6/30/2014							
Average Monthly Benefit of Retirees	\$1,928	\$1,916	\$1,433	\$1,575	\$1,668	\$1,517	\$1,481
Number of Retirees	411	318	155	112	90	50	48
Average Monthly Benefit of Beneficiaries	\$1,265	\$1,228	\$1,064	\$954	\$1,786	\$1,300	\$699
Number of Beneficiaries	41	39	22	19	8	9	6
Valuation date: 6/30/2015							
Average Monthly Benefit of Retirees	\$1,986	\$2,006	\$1,587	\$1,570	\$1,753	\$1,457	\$1,610
Number of Retirees	391	329	200	110	94	51	52
Average Monthly Benefit of Beneficiaries	\$1,308	\$1,208	\$1,184	\$961	\$1,654	\$1,226	\$1,091
Number of Beneficiaries	46	40	23	16	12	8	7
Valuation date: 6/30/2016							
Average Monthly Benefit of Retirees	\$1,987	\$2,057	\$1,831	\$1,596	\$1,553	\$1,742	\$1,711
Number of Retirees	388	337	222	118	92	53	52
Average Monthly Benefit of Beneficiaries	\$1,484	\$1,181	\$1,134	\$843	\$1,484	\$1,576	\$1,136
Number of Beneficiaries	50	41	23	14	11	8	7

Note: Final Average Salary is not available.



EXHIBIT D

Average Annual Benefit of Retired Members and Beneficiaries
By Age, Years in Retirement as of June 30, 2016

i. General

	Years in Retirement									
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30 & over		
Under 45	1		1							
	\$935		\$935							
45 - 49	3	2		1						
	14,753	\$10,889		\$22,483						
50 - 54	47	37	6	2		2				
	10,965	9,871	12,665	16,518		\$20,565				
55 - 59	126	67	47	8		3		1		
	16,842	19,185	13,537	15,950		18,910		\$16,092		
60 - 64	217	100	65	41	6	3	2			
	20,985	25,222	19,458	13,625	\$20,769	19,877	\$11,963			
65 - 69	337	123	112	68	28	3	2	1		
	22,079	23,361	26,687	17,336	9,256	20,369	26,715	25,643		
70 - 74	197	33	62	55	25	14	3	5		
	20,169	19,671	21,671	23,080	13,811	14,595	22,825	18,618		
75 - 79	92	6	19	19	25	15	6	2		
	18,976	17,602	18,121	26,001	20,054	14,175	9,081	16,716		
80 - 84	87	4	7	10	14	30	16	6		
	17,837	17,630	16,932	17,480	20,672	20,494	13,696	10,767		
85 & over	96	8	8	3	10	19	16	32		
	17,824	19,475	11,393	5,181	16,892	15,623	25,485	17,972		
Total	1,203	380	327	207	108	89	45	47		
	\$19,667	\$21,182	\$20,992	\$18,717	\$15,636	\$17,385	\$18,382	\$17,191		



EXHIBIT D

Average Annual Benefit of Retired Members and Beneficiaries
By Age, Years in Retirement as of June 30, 2016

ii. Safety

	Years in Retirement									
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30 & over		
Under 45	7	5	2							
	\$25,083	\$26,647	\$21,173							
45 - 49	5	3	2							
	32,433	31,303	34,127							
50 - 54	17	13	1		2	1				
	26,632	27,702	12,503		\$27,952	\$24,220				
55 - 59	23	14	6	2	1					
	42,813	50,506	34,466	\$27,796	15,222					
60 - 64	21	4	12	1	1	2		1		
	50,752	27,900	73,293	4,961	11,405	23,912		\$10,489		
65 - 69	37	5	7	9	9	3	2	2		
	33,063	44,974	57,011	22,192	24,058	25,333	\$24,659	28,916		
70 - 74	36	1	4	10	9	3	7	2		
	30,798	8,327	17,443	35,643	38,564	23,503	27,427	32,318		
75 - 79	16		3	5	1	2	3	2		
	33,019		24,317	46,788	30,484	25,841	26,860	29,337		
80 - 84	13	1		1		3	4	4		
	29,241	24,044		17,331		30,908	27,562	33,946		
85 & over	3		1		1			1		
	24,199		9,548		35,486			27,562		
Total	178	46	38	28	24	14	16	12		
	\$34,574	\$36,156	\$46,336	\$30,999	\$29,671	\$25,926	\$27,008	\$29,581		



EXHIBIT D

Average Annual Benefit of Retired Members and Beneficiaries By Age, Years in Retirement as of June 30, 2016

iii. Probation

	Years in Retirement									
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30 & over		
Under 45	1			1						
	\$27,576			\$27,576						
45 - 49										
50 - 54										
55 - 59	8	4	4							
	30,318	\$46,153	\$14,483							
60 - 64	10	3	6	1						
	32,780	49,457	27,375	15,183						
65 - 69	10	4	2	4						
	26,822	19,329	6,568	44,441						
70 - 74	5		1	4						
	53,178		37,406	57,121						
75 - 79	1	1								
	18,382	18,382								
80 - 84										
85 & over										
Total	35	12	13	10						
	\$32,869	\$35,724	\$20,978	\$44,901						



EXHIBIT E

Reconciliation of Member Data – June 30, 2015 to June 30, 2016

	Active Members	Vested Terminated Members	Pensioners	Disableds	Beneficiaries	Total
Number as of June 30, 2015	1,107	414	1,057	170	152	2,900
New members	164	0	0	0	13	177
Terminations – with vested rights	-68	68	0	0	0	0
Contributions refunds	-40	-24	0	0	0	-64
Retirements	-41	-24	65	0	0	0
New disabilities	-3	0	-3	6	0	0
Return to work	4	-3	-1	0	0	0
Died with or without beneficiary	0	-1	-28	-4	-10	-43
Data adjustments	0	-2	0	0	-1	-3
Number as of June 30, 2016	1,123	428	1,090	172	154	2,967



EXHIBIT F
Summary Statement of Income and Expenses - Actuarial Value Basis

		Year Ended	June 30,	
	201	2016		5
Contribution Income:				
Employer Contributions	\$19,129,191		\$15,164,044	
Employee Contributions	<u>5,544,925</u>		<u>4,651,960</u>	
Contribution Income		\$24,674,116		\$19,816,004
Investment Income:				
Interest, Dividends and Other Income	\$7,735,536		\$10,758,646	
Adjustment Toward Market Value	18,646,924		24,494,040	
Less Investment Expenses	(489,865)		(565,100)	
Net Investment Income		<u>\$25,892,595</u>		\$34,687,586
Total Income Available for Benefits		\$50,566,711		\$54,503,590
Less Benefit Payments:				
Benefit Payments and Refunds	\$(31,058,643)		\$(30,049,133)	
Administrative Expenses	(1,142,493)		(1,059,272)	
Net Benefit Payments		\$(32,201,136)		\$(31,108,405)
Change in Reserve for Future Benefits		\$18,365,575		\$23,395,185



EXHIBIT G
Summary Statement of Assets

	Year Ended June 30,						
ASSETS	201	6	2015				
Cash and Cash Equivalents		\$0		\$1,398,150			
Accounts Receivable:							
Employer Contributions	\$614,064		\$545,830				
Member Contributions	<u>175,359</u>		113,026				
Total Accounts Receivable		\$789,423		\$658,856			
Other Assets		149,019		146,739			
Equipment		1,294,316		0			
Investments:							
Public Equity Securities	\$52,226,173		\$53,190,622				
Real Estate and Real Estate Partnerships	46,044,183		41,634,670				
Mutual Funds	328,200,751		347,937,529				
Total Investments at Market Value		\$426,471,107		\$442,762,821			
Total Assets		\$428,703,865		\$444,966,566			
Less Liabilities:							
Accounts Payable	\$(288,422)		\$(365,017)				
Cash Overdraft	(248,482)		0				
Accrued Expenses and Other Liabilities	(1,828,950)		(384,193)				
Total Liabilities		\$(2,365,854)		\$(749,210)			
NET ASSETS							
Net Assets at Market Value		<u>\$426,338,011</u>		<u>\$444,217,356</u>			
Net Assets at Actuarial Value		<u>\$451,044,882</u>		<u>\$432,679,307</u>			
Net Assets at Valuation Value		<u>\$446,773,272</u>		<u>\$428,228,929</u>			

Note: Results may not total properly due to rounding.



EXHIBIT H

Actuarial Balance Sheet

An overview of the Plan's funding is given by an Actuarial Balance Sheet. In this approach, we first determine the amount and timing of all future payments that will be made by the Plan for current participants. We then discount these payments at the valuation interest rate to the date of the valuation, thereby determining their present value. We refer to this present value as the "liability" of the Plan.

Second, we determine how this liability will be met. These actuarial "assets" include the net amount of assets already accumulated by the Plan, the present value of future member contributions, the present value of future employer normal cost contributions, and the present value of future employer amortization payments.

Actuarial Balance Sheet

Assets	<u>Basic</u>	COLA	<u>Total</u>	
1. Total valuation assets	\$270,895,553	\$175,877,719	\$446,773,272	
2. Present value of future contributions by members	26,705,838	5,838,330	32,544,168	
3. Present value of future employer contributions for:				
a. entry age normal cost	29,617,256	7,606,022	37,223,278	
b. unfunded actuarial accrued liability	138,251,048	47,033,219	185,284,267	
4. Total current and future assets	\$465,469,695	\$236,355,290	\$701,824,985	
Liabilities				
Present value of benefits already granted to present retirees and beneficiaries	\$243,819,329	\$164,958,044	\$408,777,373	
6. Present value of benefits to be granted to present non-retired members	221,650,366	71,397,246	293,047,612	
7. Total liabilities	\$465,469,695	\$236,355,290	\$701,824,985	_



EXHIBIT I Development of Unfunded Actuarial Accrued Liability as of June 30, 2016

1.	Unfunded actuarial accrued liability at beginning of year:	\$182,152,920
2.	Total normal cost at middle of year	12,557,000
3.	Expected employer and member contributions	(24,656,688)
4.	Interest (whole year on (1) plus half year on (2) + (3))	12,811,067
5.	Expected unfunded actuarial accrued liability at end of year	\$182,864,299
6.	Actuarial (gain)/loss due to all changes:*	
	a. (Gain)/loss from investments as recognized on June 30, 2016	\$4,702,380
	b. (Gain)/loss from higher than expected salary increases for continuing General and Probations active members	2,341,542
	 c. (Gain)/loss due to one-year delay in implementing employer contribution rates in June 30, 2015 valuation (with interest to end of year)** 	(264,082)
	d. Other experience (gains)/losses***	(4,359,872)
	e. Subtotal	\$2,419,968
7.	Actual unfunded actuarial accrued liability at end of year (5) + (6e)	\$185,284,267

^{*} The "net gain/(loss) from other experience" of \$2,282,412 from Chart 9 is equal to the sum of items 6b, 6c, and 6d.



^{**} The reduction in employer contribution rate attributable to this gain was included in the employer rate determined in the 2015 valuation.

^{***} Roughly one-half of the experience gains is due to changes in continuance eligibility for beneficiaries of continuing retired members. The remainder is due to more than expected deaths and other net experience gains.

EXHIBIT J

Table of Amortization Bases

Туре	Date Established	Initial Years	Initial Amount	Outstanding Balance	Years Remaining	Annual Payment*
General						
Combined Base	6/30/2012	27	\$96,509,955	\$101,519,906	23	\$6,446,188
Experience Loss	6/30/2013	18	1,308,206	1,278,047	15	110,487
Experience Gain	6/30/2014	18	(10,922,004)	(10,769,309)	16	(886,165)
Change in Assumptions/Method	6/30/2014	18	41,158,191	40,582,778	16	3,339,401
Experience Gain	6/30/2015	18	(2,476,999)	(2,463,778)	17	(193,709)
Experience Loss	6/30/2016	18	1,249,423	1,249,423	18	94,177
Total				\$131,397,067		\$8,910,379
Safety						
Combined Base	6/30/2012	27	\$24,941,466	\$26,236,208	23	\$1,665,915
Experience Loss	6/30/2013	18	2,713,369	2,650,817	15	229,164
Experience Gain	6/30/2014	18	(489,900)	(483,051)	16	(39,748)
Change in Assumptions/Method	6/30/2014	18	13,983,439	13,787,943	16	1,134,557
Experience Loss	6/30/2015	18	4,163,162	4,140,942	17	325,572
Experience Loss	6/30/2016	18	1,209,820	1,209,820	18	91,192
Total				\$47,542,679		\$3,406,652
Probation						
Combined Base	6/30/2012	27	\$5,075,598	\$5,339,078	23	\$339,014
Experience Gain	6/30/2013	18	(964,299)	(942,069)	15	(81,442)
Experience Gain	6/30/2014	18	(834,449)	(822,783)	16	(67,704)
Change in Assumptions/Method	6/30/2014	18	3,045,283	3,002,708	16	247,081
Experience Gain	6/30/2015	18	(194,174)	(193,138)	17	(15,185)
Experience Gain	6/30/2016	18	(39,275)	(39,275)	18	(2,960)
Total			·	\$6,344,521		\$418,804

^{*} Level percentage of payroll.



EXHIBIT J (continued)

Table of Amortization Bases

Туре	Date Established	Initial Years	Initial Amount	Outstanding Balance	Years Remaining	Annual Payment*
Total						-
Combined Base	6/30/2012	27	\$126,527,019	\$133,095,192	23	\$8,451,117
Experience Loss	6/30/2013	18	3,057,276	2,986,795	15	258,209
Experience Gain	6/30/2014	18	(12,246,353)	(12,075,143)	16	(993,617)
Change in Assumptions/Method	6/30/2014	18	58,186,913	57,373,429	16	4,721,039
Experience Loss	6/30/2015	18	1,491,989	1,484,026	17	116,678
Experience Loss	6/30/2016	18	2,419,968	2,419,968	18	182,409
Total				\$185,284,267		\$12,735,835

^{*} Level percentage of payroll.

Note: The equivalent single amortization period is about 22 years.



EXHIBIT K

Section 415 Limitations

Section 415 of the Internal Revenue Code (IRC) specifies the maximum benefits that may be paid to an individual from a defined benefit plan and the maximum amounts that may be allocated each year to an individual's account in a defined contribution plan.

A qualified pension plan may not pay benefits in excess of the Section 415 limits. The ultimate penalty for noncompliance is disqualification: active participants could be taxed on their vested benefits and the IRS may seek to tax the income earned on the plan's assets.

In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar limit of \$160,000 indexed for inflation. That limit is \$210,000 for 2016. Normal Retirement Age for these purposes is age 62. These are the limits in simplified terms. They must generally be adjusted based on each participant's circumstances, for such things as age at retirement, form of benefits chosen and after tax contributions.

Benefits for members in non-CalPEPRA tiers in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m).

Legal Counsel's review and interpretation of the law and regulations should be sought on any questions in this regard.

Contributions rates determined in this valuation have not been reduced for the Section 415 limitations. Actual limitations will result in gains as they occur.



EXHIBIT L

Definitions of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Assumptions or Actuarial Assumptions:

The estimates on which the cost of the Plan is calculated including:

- Investment return the rate of investment yield that the Plan will earn over (a) the long-term future;
- Mortality rates the death rates of employees and pensioners; life (b) expectancy is based on these rates;
- Retirement rates the rate or probability of retirement at a given age; and (c)
- Turnover rates the rates at which employees of various ages are expected (d) to leave employment for reasons other than death, disability, or retirement.

Normal Cost:

The amount of contributions required to fund the level cost allocated to the current year of service.

Actuarial Accrued Liability

For Actives:

The equivalent of the accumulated normal costs allocated to the years before the valuation date.

Actuarial Accrued Liability

For Pensioners:

The single sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

Unfunded (Overfunded) Actuarial Accrued Liability:

The extent to which the actuarial accrued liability of the Plan exceeds (or is exceeded by) the assets of the Plan. There are many approaches to paying off the unfunded or overfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.



Amortization of the Unfunded (Overfunded) Actuarial Accrued Liability:

Payments made over a period of years equal in value to the Plan's unfunded or

overfunded actuarial accrued liability.

Investment Return: The rate of earnings of the Plan from its investments, including interest, dividends and

capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one

year to the next.



EXHIBIT I			
Summary of	f Actuarial Valuation Results		
The valuation	n was made with respect to the following data supplied t	o us:	
1. Retired me	embers as of the valuation date (including 154 beneficiaries in pay sta	itus)	1,416
2. Members i	nactive during year ended June 30, 2016 with vested rights		428
3. Members a	active during the year ended June 30, 2016		1,123
The actuarial	I factors as of the valuation date are as follows:		
1. Normal co	st		\$12,797,000
2. Present val	lue of future benefits		701,824,985
3. Present val	lue of future normal costs		69,767,446
4. Actuarial a	accrued liability*		632,057,539
Retire	ed members and beneficiaries	\$408,777,373	
Inacti	ve members with vested rights	33,545,287	
Active	e members	189,734,879	
5. Valuation	value of assets* (\$426,338,011 at market value as reported by Retire	ment Association)	446,773,272
6. Unfunded	actuarial accrued liability		\$185,284,267

^{*} Excludes non-pension reserves.



EXHIBIT I (continued)

Summary of Actuarial Valuation Results

The determination of the recommended average employer contribution is as follows:

		Dollar Amount	% of Payroll
1.	Total normal cost	\$12,797,000	20.90%
2.	Expected employee contributions	<u>-5,910,000</u>	<u>-9.65%</u>
3.	Employer normal cost: $(1) + (2)$	\$6,887,000	11.25%
4.	Amortization of unfunded actuarial accrued liability	12,734,000*	<u>20.80%</u>
5.	Total recommended average employer contribution: (3) + (4)	\$19,621,000	32.05%
6.	Projected compensation	\$61,214,954	

^{*} Based on the total annual payment in Section 3, Exhibit J plus an amount associated with the anticipated contribution rate impact resulting from the 12-month lag between the date of the valuation and the date of the contribution rate implementation.



EXHIBIT II

Actuarial Assumptions and Actuarial Cost Method

Rationale for Assumptions:

The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the July 1, 2011 through June 30, 2014 Actuarial Experience Study dated October 7, 2014. Unless otherwise noted, all actuarial assumptions and methods shown below apply to all membership groups (i.e., General, Safety, and Probation) and tiers. These assumptions were adopted by the Board.

Economic Assumptions:

Net Investment Return: 7.25% per annum.

Employee Contribution

Crediting Rate:

7.25% per annum.

Consumer Price Index:

Increase of 3.25% per year; retiree COLA increases due to CPI for General Tiers 1, 2, and 3, Safety Tiers 1 and 2, and Probation Tiers 1 and 2 subject to a 3% maximum change per year (no COLA increases for General Tier 4, Safety Tier 3, or Probation Tier 3).

Salary Increases:

Annual Rate of Compensation Increase (%)

Inflation: 3.25%; plus additional 0.50% "across the board" salary increases (other than inflation); plus the following Merit and Promotional increases based on years of service.

Years of Service	General	Safety and Probation
0-1	5.00%	5.00%
1-2	3.75%	3.75%
2-3	3.50%	3.00%
3-4	2.75%	2.25%
4-5	2.25%	1.00%
5+	0.50%	0.50%



Demographic Assumptions:

Post-Retirement Mortality Rates

Healthy Members and

All Beneficiaries: For all members and all beneficiaries: RP-2000 Combined Healthy Mortality Table

projected with Scale BB to 2020, set back one year for males and with no setback for

females.

Disabled Members: For all members: RP-2000 Combined Healthy Mortality Table projected with Scale

BB to 2020, set forward four years for both males and females.

The above mortality tables contain a margin in excess of 10%, based on actual to expected deaths, as a provision appropriate to reasonably reflect future mortality improvement, based on a review of mortality experience as of the measurement date.

Employee Contribution Rates: For General members: RP-2000 Combined Healthy Mortality Table projected with

Scale BB to 2020, set back one year for males and with no setback for females,

weighted 30% male and 70% female.

For Safety and Probation members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set back one year for males and with no setback for

females, weighted 80% male and 20% female.



Termination Rates Before Retirement:

Rate (%)
Death

	General ⁽¹⁾		Safety and	Probation ⁽²⁾		
Age	Male	Female	Male	Female		
25	0.04	0.02	0.04	0.02		
30	0.04	0.02	0.04	0.02		
35	0.07	0.04	0.07	0.04		
40	0.10	0.07	0.10	0.07		
45	0.13	0.11	0.13	0.11		
50	0.19	0.16	0.19	0.16		
55	0.30	0.25	0.30	0.25		
60	0.53	0.41	0.53	0.41		
65	0.90	0.76	0.90	0.76		

^{(1) 10%} of General deaths are assumed to be service connected deaths. The other 90% are assumed to be non-service connected deaths.

⁽²⁾ 50% of Safety and Probation deaths are assumed to be service connected deaths. The other 50% are assumed to be non-service connected deaths.

Termination Rates Before Retirement (continued):

Rate (%)
Disability

		-	
Age	General ⁽¹⁾	Safety ⁽²⁾	Probation ⁽²⁾
20	0.01	0.10	0.10
25	0.01	0.13	0.13
30	0.01	0.18	0.18
35	0.02	0.53	0.53
40	0.13	1.05	1.05
45	0.38	1.40	1.40
50	0.53	2.25	2.25
55	0.58	2.75	2.75
60	0.63	0.00	0.00

^{(1) 40%} of General disabilities are assumed to be service connected disabilities. The other 60% are assumed to be non-service connected disabilities.

^{(2) 90%} of Safety and Probation disabilities are assumed to be service connected disabilities. The other 10% are assumed to be non-service connected disabilities.

Termination Rates Before Retirement (continued):

Rate (%)
Termination (Less Than 5 Years of Service)⁽¹⁾

Years of Service	General	Safety	Probation
0	18.00	13.50	13.50
1	16.00	11.50	11.50
2	14.00	9.50	9.50
3	12.00	7.50	7.50
4	10.00	5.50	5.50

Rate (%)
Termination (5+ Years of Service)⁽²⁾

Age	General	Safety	Probation
20	6.50	5.00	5.00
25	6.50	4.70	4.70
30	6.50	4.20	4.20
35	6.50	3.70	3.70
40	6.50	3.20	3.20
45	6.50	2.70	2.70
50	6.50	1.30	1.30
55	5.90	0.20	0.20
60	4.90	0.00	0.00

^{(1) 85%} of all terminated members will choose a refund of contributions and 15% will choose a deferred vested benefit. No termination is assumed after a member is eligible for retirement.



⁽²⁾ 25% of all terminated members will choose a refund of contributions and 75% will choose a deferred vested benefit. No termination is assumed after a member is eligible for retirement.

SECTION 4: Reporting Information for the Mendocino County Employees' Retirement Association

Retirement Rates:

Rate (%)

Age	General Tiers 1, 2, & 3	General Tier 4	Safety Tiers 1 & 2	Safety Tier 3	Probation Tiers 1 & 2	Probation Tier 3
50	6.00	0.00	8.00	3.00	5.00	4.00
51	6.00	0.00	8.00	3.00	5.00	4.00
52	6.00	6.00	8.00	3.00	5.00	4.00
53	6.00	3.00	8.00	3.00	5.00	4.00
54	6.00	3.00	8.00	3.00	5.00	4.00
55	10.00	5.00	9.00	4.00	24.00	14.00
56	10.00	5.00	9.00	6.00	24.00	25.00
57	10.00	5.00	10.00	7.00	24.00	25.00
58	10.00	5.00	20.00	9.00	24.00	25.00
59	10.00	5.00	30.00	30.00	24.00	25.00
60	12.00	6.00	100.00	100.00	100.00	100.00
61	20.00	9.00	100.00	100.00	100.00	100.00
62	26.00	12.00	100.00	100.00	100.00	100.00
63	20.00	14.00	100.00	100.00	100.00	100.00
64	20.00	12.00	100.00	100.00	100.00	100.00
65	45.00	32.00	100.00	100.00	100.00	100.00
66	45.00	32.00	100.00	100.00	100.00	100.00
67	45.00	32.00	100.00	100.00	100.00	100.00
68	45.00	32.00	100.00	100.00	100.00	100.00
69	45.00	32.00	100.00	100.00	100.00	100.00
70	100.00	100.00	100.00	100.00	100.00	100.00



Retirement Age and Benefit for Deferred Vested Members:	For deferred vested members, retirement age assumptions are as follows:		
	General Age: 60 Safety and Probation Age: 55		
	For deferred vested members who terminate with less than five years of service and are not vested, it is assumed they will retire at age 70 if they decide to leave their contributions on deposit.		
	It is assumed that 60% of future deferred vested members will continue to work for a reciprocal employer. For reciprocals, 4.25% compensation increases per annum are assumed.		
Future Benefit Accruals:	1.0 year of service per year of employment plus 0.019 years of additional service to anticipate conversion of unused sick leave for each year of employment, for members expected to retire directly from active employment and to receive a service retirement benefit.		
Unknown Data for Members:	Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.		
Inclusion of Deferred Vested Members:	All deferred vested members are included in the valuation.		
Percent Married:	75% of male members; 50% of female members.		
Age of Spouse:	Female (or male) spouses are 3 years younger (or older) than their spouse.		
Actuarial Value of Assets:	The market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual and expected returns on a market value basis and is recognized over a five-year period. The actuarial value of assets cannot be less than 75% or greater than 125% of the market value of assets.		
Valuation Value of Assets:	The Actuarial Value of Assets reduced by the value of the non-valuation reserves.		
Actuarial Cost Method:	Entry Age Cost Method. Entry Age is the age at the member's hire date. The Normal Cost is calculated on an individual basis where the Entry Age Normal Cost for each membership tier is calculated as the sum of the individual Normal Costs for members		



Actuarial Cost Method (continued):

in the membership tier. Actuarial Accrued Liability is calculated on an individual basis and is based on costs allocated as a level percentage of compensation.

Prior to July 1, 2012, the total UAAL was being amortized on a 30-year decreasing period, with 27 years remaining as of June 30, 2012 (and 23 years remaining as of June 30, 2016). On or after July 1, 2012, any new UAAL resulting from plan amendments are amortized over separate decreasing 15-year periods; early retirement incentive programs (ERIPs) are amortized over separate decreasing 5-year periods; assumption and method changes are amortized over separate decreasing 18-year periods; and experience gains/losses are also amortized over separate decreasing 18-year periods.

EXHIBIT III

Summary of Plan Provisions

This exhibit summarizes the major provisions of MCERA included in the valuation as of June 30, 2016. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Membership Eligibility:	Membership with MCERA usually begins with the first day of the pay period following the date of entrance into service.
General Tier 1	All General members appointed to a permanent position of four-fifths time, or more, in service of the County of Mendocino or in the service of a participating District, who were hired prior to July 1, 1984.
General Tier 2	General Tier 2 has been replaced by General Tier 3.
General Tier 3	All General members appointed to a permanent position of four-fifths time, or more, in service of the County of Mendocino or in the service of a participating District, who were hired on or after July 1, 1984 and prior to January 1, 2013.
General Tier 4	All General members appointed to a permanent position of four-fifths time, or more, in service of the County of Mendocino or in the service of a participating District, who were hired on or after January 1, 2013.
Safety Tier I	All employees appointed to a position in active law enforcement who were hired prior to June 1, 1982.
Safety Tier 2	All employees appointed to a position in active law enforcement who were hired on or after June 1, 1982 and prior to January 1, 2013.
Safety Tier 3	All employees appointed to a position in active law enforcement who were hired on or after January 1, 2013.
Probation Tier 1	All employees appointed to positions with specific job classifications within the Departments of Probation, Juvenile Hall, and Social Services who were hired prior to July 1, 1984.



Membership Eligibility (continued):					
Probation Tier 2	All employees appointed to positions with specific job classifications within the Departments of Probation, Juvenile Hall, and Social Services who were hired on or after July 1, 1984 and prior to January 1, 2013.				
Probation Tier 3	All employees appointed to positions with specific job classifications within the Departments of Probation, Juvenile Hall, and Social Services who were hired on or after January 1, 2013.				
Final Compensation for Benefit Determination:					
General Tier 1, Safety Tier 1, and Probation Tier 1	Highest consecutive twelve months of compensation earnable (§31462.1) (FAS1).				
General Tiers 2 and 3, Safety Tier 2, and Probation Tier 2	Highest consecutive thirty-six months of compensation earnable (§31462) (FAS3).				
General Tier 4, Safety Tier 3, and Probation Tier 3	Highest consecutive thirty-six months of pensionable compensation (§7522.10(c), §7522.32, §7522.34) (FAS3).				
Service:	Years of service (Yrs).				
Service Retirement Eligibility:					
General Tiers 1, 2, and 3	Age 50 with 5 years of service and 10 years of membership, or age 70 and vested, or after 30 years of service regardless of age (§31672).				
General Tier 4	Age 52 with 5 years of service, or age 70 and vested (§7522.20(a)).				
Safety and Probation Tiers 1 and 2	Age 50 with 5 years of service and 10 years of membership, or age 70 and vested, or after 20 years of service regardless of age (§31663.25).				
Safety and Probation Tier 3	Age 50 with 5 years of service, or age 70 and vested (§7522.25(d)).				



Benefit Formula:

	Retirement Age	Benefit Formula
General Tier 1 (§31676.12)*	50	(1.34% x FAS1 – 1/3 x 1.34% x \$350 x 12) x Yrs
	55	(1.77% x FAS1 - 1/3 x 1.77% x \$350 x 12) x Yrs
	60	(2.34% x FAS1 – 1/3 x 2.34% x \$350 x 12) x Yrs
	62 or later	(2.62% x FAS1 – 1/3 x 2.62% x \$350 x 12) x Yrs
General Tier 2 and		
General Tier 3 (§31676.12)*	50	(1.34% x FAS3 – 1/3 x 1.34% x \$350 x 12) x Yrs
	55	(1.77% x FAS3 – 1/3 x 1.77% x \$350 x 12) x Yrs
	60	(2.34% x FAS3 – 1/3 x 2.34% x \$350 x 12) x Yrs
	62 or later	(2.62% x FAS3 – 1/3 x 2.62% x \$350 x 12) x Yrs
General Tier 4 (§7522.20(a))	52	1.00% x FAS3 x Yrs
	55	1.30% x FAS3 x Yrs
	60	1.80% x FAS3 x Yrs
	62	2.00% x FAS3 x Yrs
	65	2.30% x FAS3 x Yrs
	67 or later	2.50% x FAS3 x Yrs

^{*} For members in Bargaining Groups 01 and 101 who have service prior to October 1, 2003 and who have not purchased this service to be covered under Section 31676.12, their prior service will be covered under Section 31676.11 for Tier 1 and 31676.1 for Tier 2 and Tier 3. For all other Bargaining Groups, the prior service date is January 1, 2002 (instead of October 1, 2003).

	Retirement Age	Benefit Formula
Safety Tier 1 (§31664.2)	50	(2.29% x FAS1 – 1/3 x 2.29% x \$350 x 12) x Yrs
	55 or later	(3.00% x FAS1 – 1/3 x 3.00% x \$350 x 12) x Yrs
Safety Tier 2 (§31664.2)	50	(2.29% x FAS3 – 1/3 x 2.29% x \$350 x 12) x Yrs
	55 or later	(3.00% x FAS3 – 1/3 x 3.00% x \$350 x 12) x Yrs



SECTION 4: Reporting Information for the Mendocino County Employees' Retirement Association

	Retirement Age	Benefit Formula
Safety Tier 3 (§7522.25(d))	50	2.00% x FAS3 x Yrs
	55	2.50% x FAS3 x Yrs
	57 or later	2.70% x FAS3 x Yrs
Probation Tier 1 (§31664)	50	(2.00% x FAS1 – 1/3 x 2.00% x \$350 x 12) x Yrs
	55 or later	(2.62% x FAS1 – 1/3 x 2.62% x \$350 x 12) x Yrs
Probation Tier 2 (§31664)	50	(2.00% x FAS3 – 1/3 x 2.00% x \$350 x 12) x Yrs
	55 or later	(2.62% x FAS3 – 1/3 x 2.62% x \$350 x 12) x Yrs
Probation Tier 3 (§7522.25(d))	50	2.00% x FAS3 x Yrs
	55	2.50% x FAS3 x Yrs
	57 or later	2.70% x FAS3 x Yrs

Maximum Benefit:

General Tiers 1, 2, and 3, Safety Tiers 1 and 2,

and Probation Tiers 1 and 2 100% of Highest Average Compensation (§31676.12, §31664.2, and §31664).

General Tier 4, Safety Tier 3, and Probation Tier 3

None (§7522.20(a) and §7522.25(d)).

Non-Service Connected Disability:

Eligibility Five years of service (§31720).

Benefit Formula

1.8% of Final Compensation per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 62 for General members and to 55 for Safety and Probation members, but the total benefit cannot be more than one-third of Final Compensation (§31727.1 and §31727.2).



Service Connected Disability:

All Members

Eligibility No age or service requirements (§31720).

Benefit Formula 50% of the Final Compensation or 100% of Service Retirement benefit, if greater

(§31727.4).

Pre-Retirement Death:

All Members

Eligibility None.

Basic lump sum benefit Refund of employee contributions with interest, plus one month's compensation for

each year of service, to a maximum of six month's compensation (§31781).

Death in line-of-duty 50% of Final Compensation or 100% of Service Retirement benefit, if greater,

payable to spouse* or minor children (§31787).

OR

Vested Members

Eligibility Five years of service.

Basic benefit 60% of the greater of Service Retirement or Non-Service Connected Disability

Retirement benefit payable to surviving eligible spouse (§31765.1, §31781.1), in lieu

of the basic lump sum benefit above.

Death in line-of-duty 50% of Final compensation or 100% of Service Retirement benefit, if greater, payable

to spouse or minor children (§31787).



^{*} In this summary, continuance benefit payable to spouse is also available to eligible domestic partner.

Death After Retirement:	
All Members	
Service or Non-Service Connected Disability Retirement	60% of member's unmodified allowance continued to eligible spouse (§31760.1).* An eligible spouse is a surviving spouse who was married to the member at least one year prior to the date of retirement (§31760.1).
Service Connected Disability	100% of member's allowance continued to eligible spouse (§31786).
Withdrawal Benefits:	
Less than Five Years of Service	Refund of accumulated employee contributions with interest (§31628).
Five or More Years of Service	If contributions left on deposit, entitled to earned benefits commencing at any time after eligible to retire (§31700).
Post-retirement Cost-of-Living Benefits:	
General Tiers 1, 2, and 3, Safety Tiers 1 and 2, and Probation Tiers 1 and 2	Future changes based on Consumer Price Index to a maximum of 3% per year; excess "banked" (§31870.1)
General Tier 4, Safety Tier 3, and Probation Tier 3	None.
Member Contributions:	Please refer to Appendix A for specific rates.
General Tier 1	
Basic	Provide for an average annuity at age 60 equal to 1/100 of FAS1 (§31621.2).
Cost-of-Living	Provide for one-half of future Cost-of-Living costs.

^{* 100%} of the COLA benefit is continued to the survivor upon the member's death for a member who retired prior to September 17, 2014 for service or non-service connected disability and chose the unmodified option at retirement.



Member Contributions (continued):

General Tier 2 and General Tier 3

Basic Provide for an average annuity at age 60 equal to 1/100 of FAS3 (§31621.2).

Cost-of-Living Provide for one-half of future Cost-of-Living costs.

General Tier 4 50% of the total Normal Cost rate.

Safety Tier 1 and Probation Tier 1

Basic Provide for an average annuity at age 50 equal to 1/100 of FAS1 (§31639.25).

Cost-of-Living Provide for one-half of future Cost-of-Living costs. Safety Tier 1 cost-of-living

member rates are offset by 1.63% of pay, which is picked up by the County.

Safety Tier 2 and Probation Tier 2

Basic Provide for an average annuity at age 50 equal to 1/100 of FAS3 (§31639.25).

Cost-of-Living Provide for one-half of future Cost-of-Living costs. Safety Tier 2 cost-of-living

member rates are offset by 1.63% of pay, which is picked up by the County.

Safety Tier 3 and Probation Tier 3 50% of the total Normal Cost rate.

Other Information: All non-CalPEPRA members with 30 or more years of service are exempt from

paying member contributions.

Plan Amendment: None during July 1, 2015 to June 30, 2016.

NOTE: The summary of major plan provisions is designed to outline principal plan benefits as interpreted for purposes of the actuarial valuation. If the Association should find the plan summary not in accordance with the actual provisions, the Association should alert the actuary so that both parties can be sure the proper provisions are valued.



Appendix A

Member Contribution Rates

General Tier 1 Members' Contribution Rates - Based on the June 30, 2016 Actuarial Valuation (as a percentage of payroll)

	Basic	c Only	COLA	Only	T	otal
Entry Age	First \$161.54	Over \$161.54	First \$161.54	Over \$161.54	First \$161.54	Over \$161.54
15	3.77%	5.65%	1.29%	1.94%	5.06%	7.59%
16	3.77%	5.65%	1.29%	1.94%	5.06%	7.59%
17	3.83%	5.74%	1.32%	1.98%	5.15%	7.72%
18	3.89%	5.84%	1.34%	2.01%	5.23%	7.85%
19	3.96%	5.94%	1.36%	2.04%	5.32%	7.98%
20	4.03%	6.05%	1.39%	2.08%	5.42%	8.13%
21	4.10%	6.15%	1.41%	2.12%	5.51%	8.27%
22	4.17%	6.25%	1.43%	2.15%	5.60%	8.40%
23	4.24%	6.36%	1.46%	2.19%	5.70%	8.55%
24	4.31%	6.47%	1.49%	2.23%	5.80%	8.70%
25	4.39%	6.58%	1.51%	2.26%	5.90%	8.84%
26	4.46%	6.69%	1.53%	2.30%	5.99%	8.99%
27	4.53%	6.80%	1.56%	2.34%	6.09%	9.14%
28	4.61%	6.92%	1.59%	2.38%	6.20%	9.30%
29	4.69%	7.03%	1.61%	2.42%	6.30%	9.45%
30	4.77%	7.15%	1.64%	2.46%	6.41%	9.61%
31	4.85%	7.27%	1.67%	2.50%	6.52%	9.77%
32	4.93%	7.39%	1.69%	2.54%	6.62%	9.93%
33	5.01%	7.51%	1.72%	2.58%	6.73%	10.09%
34	5.09%	7.63%	1.75%	2.63%	6.84%	10.26%
35	5.17%	7.76%	1.78%	2.67%	6.95%	10.43%
36	5.26%	7.89%	1.81%	2.72%	7.07%	10.61%
37	5.35%	8.02%	1.84%	2.76%	7.19%	10.78%
38	5.43%	8.15%	1.87%	2.81%	7.30%	10.96%
39	5.52%	8.28%	1.90%	2.85%	7.42%	11.13%



Appendix A

Member Contribution Rates (Continued)

General Tier 1 Members' Contribution Rates - Based on the June 30, 2016 Actuarial Valuation (continued) (as a percentage of payroll)

	Basic	e Only	COLA	Only	T	otal
Entry Age	First \$161.54	Over \$161.54	First \$161.54	Over \$161.54	First \$161.54	Over \$161.54
40	5.61%	8.42%	1.93%	2.90%	7.54%	11.32%
41	5.71%	8.56%	1.97%	2.95%	7.68%	11.51%
42	5.80%	8.70%	1.99%	2.99%	7.79%	11.69%
43	5.89%	8.84%	2.03%	3.04%	7.92%	11.88%
44	5.99%	8.99%	2.06%	3.09%	8.05%	12.08%
45	6.09%	9.14%	2.10%	3.15%	8.19%	12.29%
46	6.20%	9.30%	2.13%	3.20%	8.33%	12.50%
47	6.30%	9.45%	2.17%	3.25%	8.47%	12.70%
48	6.41%	9.62%	2.21%	3.31%	8.62%	12.93%
49	6.53%	9.79%	2.25%	3.37%	8.78%	13.16%
50	6.64%	9.96%	2.29%	3.43%	8.93%	13.39%
51	6.77%	10.15%	2.33%	3.49%	9.10%	13.64%
52	6.90%	10.35%	2.37%	3.56%	9.27%	13.91%
53	7.05%	10.57%	2.43%	3.64%	9.48%	14.21%
54	7.21%	10.81%	2.48%	3.72%	9.69%	14.53%
55	7.27%	10.91%	2.51%	3.76%	9.78%	14.67%
56	7.33%	10.99%	2.52%	3.78%	9.85%	14.77%
57	7.33%	11.00%	2.53%	3.79%	9.86%	14.79%
58	7.34%	11.01%	2.53%	3.79%	9.87%	14.80%
59 & Over	7.29%	10.93%	2.51%	3.76%	9.80%	14.69%

Interest: 7.25% per annum

COLA: 3.00%

Mortality: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set back 1 year for

males and with no setback for females, weighted 30% male and 70% female

Salary Increase: Inflation (3.25%) + Across-the-Board Increases (0.50%) + Merit/Promotion (see Exhibit II)

COLA Loading Factor: 34.42%



Appendix A
Member Contribution Rates (Continued)

General Tier 2 and Tier 3 Members' Contribution Rates - Based on the June 30, 2016 Actuarial Valuation (as a percentage of payroll)

Ba		c Only	COLA	A Only	Total	
Entry Age	First \$161.54	Over \$161.54	First \$161.54	Over \$161.54	First \$161.54	Over \$161.54
15	3.61%	5.42%	1.25%	1.87%	4.86%	7.29%
16	3.61%	5.42%	1.25%	1.87%	4.86%	7.29%
17	3.67%	5.51%	1.27%	1.90%	4.94%	7.41%
18	3.74%	5.61%	1.29%	1.93%	5.03%	7.54%
19	3.80%	5.70%	1.31%	1.96%	5.11%	7.66%
20	3.87%	5.80%	1.33%	2.00%	5.20%	7.80%
21	3.93%	5.90%	1.35%	2.03%	5.28%	7.93%
22	4.00%	6.00%	1.38%	2.07%	5.38%	8.07%
23	4.07%	6.10%	1.40%	2.10%	5.47%	8.20%
24	4.14%	6.21%	1.43%	2.14%	5.57%	8.35%
25	4.21%	6.31%	1.45%	2.17%	5.66%	8.48%
26	4.28%	6.42%	1.47%	2.21%	5.75%	8.63%
27	4.35%	6.53%	1.50%	2.25%	5.85%	8.78%
28	4.43%	6.64%	1.53%	2.29%	5.96%	8.93%
29	4.50%	6.75%	1.55%	2.32%	6.05%	9.07%
30	4.57%	6.86%	1.57%	2.36%	6.14%	9.22%
31	4.65%	6.97%	1.60%	2.40%	6.25%	9.37%
32	4.73%	7.09%	1.63%	2.44%	6.36%	9.53%
33	4.81%	7.21%	1.65%	2.48%	6.46%	9.69%
34	4.89%	7.33%	1.68%	2.52%	6.57%	9.85%
35	4.97%	7.45%	1.71%	2.56%	6.68%	10.01%
36	5.05%	7.57%	1.74%	2.61%	6.79%	10.18%
37	5.13%	7.70%	1.77%	2.65%	6.90%	10.35%
38	5.21%	7.82%	1.79%	2.69%	7.00%	10.51%
39	5.30%	7.95%	1.83%	2.74%	7.13%	10.69%



Appendix A
Member Contribution Rates (Continued)

General Tier 2 and Tier 3 Members' Contribution Rates - Based on the June 30, 2016 Actuarial Valuation (continued) (as a percentage of payroll)

	Basic	e Only	COLA	A Only	To	tal
Entry Age	First \$161.54	Over \$161.54	First \$161.54	Over \$161.54	First \$161.54	Over \$161.54
40	5.39%	8.08%	1.85%	2.78%	7.24%	10.86%
41	5.47%	8.21%	1.89%	2.83%	7.36%	11.04%
42	5.57%	8.35%	1.91%	2.87%	7.48%	11.22%
43	5.66%	8.49%	1.95%	2.92%	7.61%	11.41%
44	5.75%	8.63%	1.98%	2.97%	7.73%	11.60%
45	5.85%	8.77%	2.01%	3.02%	7.86%	11.79%
46	5.95%	8.92%	2.05%	3.07%	8.00%	11.99%
47	6.05%	9.07%	2.08%	3.12%	8.13%	12.19%
48	6.15%	9.23%	2.12%	3.18%	8.27%	12.41%
49	6.26%	9.39%	2.15%	3.23%	8.41%	12.62%
50	6.37%	9.56%	2.19%	3.29%	8.56%	12.85%
51	6.49%	9.74%	2.23%	3.35%	8.72%	13.09%
52	6.62%	9.93%	2.28%	3.42%	8.90%	13.35%
53	6.73%	10.09%	2.31%	3.47%	9.04%	13.56%
54	6.80%	10.20%	2.34%	3.51%	9.14%	13.71%
55	6.83%	10.24%	2.35%	3.52%	9.18%	13.76%
56	6.83%	10.25%	2.35%	3.53%	9.18%	13.78%
57	6.81%	10.22%	2.35%	3.52%	9.16%	13.74%
58	7.05%	10.57%	2.43%	3.64%	9.48%	14.21%
59 & Over	7.29%	10.93%	2.51%	3.76%	9.80%	14.69%

Interest: 7.25% per annum

COLA: 3.00%

Mortality: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set back 1 year for males

and with no setback for females, weighted 30% male and 70% female

Salary Increase: Inflation (3.25%) + Across-the-Board Increases (0.50%) + Merit/Promotion (see Exhibit II)

COLA Loading Factor: 34.42%



Appendix A

Member Contribution Rates (Continued)

General Tier 4 Members' Contribution Rates - Based on the June 30, 2016 Actuarial Valuation (as a percentage of eligible payroll)*

	Basic Only	
	Eligible Pay	Eligible Pay
All General Tier 4 Members	7.46%	7.46%

Interest: 7.25% per annum

COLA: 0%

Mortality: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set back 1 year for

males and with no setback for females, weighted 30% male and 70% female

Salary Increase: Inflation (3.25%) + Across-the-Board Increases (0.50%) + Merit/Promotion (see Exhibit II)

COLA Loading Factor: 0%



^{*} It is our understanding that in the determination of pension benefits under the CalPEPRA formulas, the compensation that can be taken into account for 2016 is equal to \$117,020. For an employer that is not enrolled in Social Security, the maximum amount is 120% of \$117,020, or \$140,424 (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2016. (reference: Section 7522.10(d).)

Appendix A

Member Contribution Rates (Continued)

Safety Tier 2 Members' Contribution Rates - Based on the June 30, 2016 Actuarial Valuation (as a percentage of payroll)

	Basi	Basic Only		COLA Only*		otal
Entry Age	First \$161.54	Over \$161.54	First \$161.54	Over \$161.54	First \$161.54	Over \$161.54
15	4.72%	7.08%	0.90%	2.17%	5.62%	9.25%
16	4.72%	7.08%	0.90%	2.17%	5.62%	9.25%
17	4.80%	7.20%	0.94%	2.23%	5.74%	9.43%
18	4.88%	7.32%	0.99%	2.29%	5.87%	9.61%
19	4.96%	7.44%	1.03%	2.36%	5.99%	9.80%
20	5.04%	7.56%	1.07%	2.42%	6.11%	9.98%
21	5.13%	7.69%	1.12%	2.49%	6.25%	10.18%
22	5.21%	7.82%	1.16%	2.56%	6.37%	10.38%
23	5.30%	7.95%	1.21%	2.63%	6.51%	10.58%
24	5.39%	8.08%	1.26%	2.70%	6.65%	10.78%
25	5.47%	8.21%	1.30%	2.77%	6.77%	10.98%
26	5.56%	8.34%	1.35%	2.84%	6.91%	11.18%
27	5.65%	8.48%	1.40%	2.92%	7.05%	11.40%
28	5.75%	8.62%	1.45%	2.99%	7.20%	11.61%
29	5.84%	8.76%	1.50%	3.07%	7.34%	11.83%
30	5.93%	8.90%	1.55%	3.14%	7.48%	12.04%
31	6.03%	9.04%	1.60%	3.22%	7.63%	12.26%
32	6.13%	9.19%	1.66%	3.30%	7.79%	12.49%
33	6.23%	9.34%	1.71%	3.38%	7.94%	12.72%
34	6.33%	9.49%	1.76%	3.46%	8.09%	12.95%
35	6.43%	9.65%	1.82%	3.54%	8.25%	13.19%
36	6.54%	9.81%	1.88%	3.63%	8.42%	13.44%
37	6.65%	9.97%	1.94%	3.71%	8.59%	13.68%
38	6.76%	10.14%	1.99%	3.81%	8.75%	13.95%
39	6.87%	10.31%	2.05%	3.90%	8.92%	14.21%



Appendix A

Member Contribution Rates (Continued)

Safety Tier 2 Members' Contribution Rates - Based on the June 30, 2016 Actuarial Valuation (continued) (as a percentage of payroll)

	Basic	c Only	COLA	Only*	То	tal
Entry Age	First \$161.54	Over \$161.54	First \$161.54	Over \$161.54	First \$161.54	Over \$161.54
40	6.99%	10.49%	2.12%	3.99%	9.11%	14.48%
41	7.11%	10.67%	2.18%	4.09%	9.29%	14.76%
42	7.25%	10.87%	2.26%	4.20%	9.51%	15.07%
43	7.37%	11.06%	2.32%	4.30%	9.69%	15.36%
44	7.48%	11.22%	2.38%	4.39%	9.86%	15.61%
45	7.54%	11.31%	2.41%	4.43%	9.95%	15.74%
46	7.56%	11.34%	2.42%	4.45%	9.98%	15.79%
47	7.54%	11.31%	2.41%	4.43%	9.95%	15.74%
48	7.80%	11.70%	2.55%	4.64%	10.35%	16.34%
49 & over	8.07%	12.11%	2.70%	4.86%	10.77%	16.97%

Interest: 7.25% per annum

COLA: 3.00%

Mortality: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set back 1 year for

males and with no setback for females, weighted 80% male and 20% female

Salary Increase: Inflation (3.25%) + Across-the-Board Increases (0.50%) + Merit/Promotion (see Exhibit II)

COLA Loading Factor: 53.61%



^{*} COLA rate is offset by 1.63%, which is picked up by the County.

Appendix A

Member Contribution Rates (Continued)

Safety Tier 3 Members' Contribution Rates - Based on the June 30, 2016 Actuarial Valuation (as a percentage of eligible payroll)*

	Basic Only	Total
	Eligible Pay	Eligible Pay
All Safety Tier 3 Members	10.58%	10.58%

Interest: 7.25% per annum

COLA: 0%

Mortality: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set back 1 year for

males and with no setback for females, weighted 80% male and 20% female

Salary Increase: Inflation (3.25%) + Across-the-Board Increases (0.50%) + Merit/Promotion (see Exhibit II)

COLA Loading Factor: 0%



^{*} It is our understanding that in the determination of pension benefits under the CalPEPRA formulas, the compensation that can be taken into account for 2016 is equal to \$117,020. For an employer that is not enrolled in Social Security, the maximum amount is 120% of \$117,020, or \$140,424 (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2016. (reference: Section 7522.10(d).)

Appendix A
Member Contribution Rates (Continued)

Probation Tier 2 Members' Contribution Rates - Based on the June 30, 2016 Actuarial Valuation (as a percentage of payroll)

	Basi	c Only	COLA Only		Total	
Entry Age	First \$161.54	Over \$161.54	First \$161.54	Over \$161.54	First \$161.54	Over \$161.54
15	4.72%	7.08%	2.11%	3.16%	6.83%	10.24%
16	4.72%	7.08%	2.11%	3.16%	6.83%	10.24%
17	4.80%	7.20%	2.15%	3.22%	6.95%	10.42%
18	4.88%	7.32%	2.18%	3.27%	7.06%	10.59%
19	4.96%	7.44%	2.21%	3.32%	7.17%	10.76%
20	5.04%	7.56%	2.25%	3.38%	7.29%	10.94%
21	5.13%	7.69%	2.29%	3.43%	7.42%	11.12%
22	5.21%	7.82%	2.33%	3.49%	7.54%	11.31%
23	5.30%	7.95%	2.37%	3.55%	7.67%	11.50%
24	5.39%	8.08%	2.41%	3.61%	7.80%	11.69%
25	5.47%	8.21%	2.45%	3.67%	7.92%	11.88%
26	5.56%	8.34%	2.48%	3.72%	8.04%	12.06%
27	5.65%	8.48%	2.53%	3.79%	8.18%	12.27%
28	5.75%	8.62%	2.57%	3.85%	8.32%	12.47%
29	5.84%	8.76%	2.61%	3.91%	8.45%	12.67%
30	5.93%	8.90%	2.65%	3.97%	8.58%	12.87%
31	6.03%	9.04%	2.69%	4.04%	8.72%	13.08%
32	6.13%	9.19%	2.73%	4.10%	8.86%	13.29%
33	6.23%	9.34%	2.78%	4.17%	9.01%	13.51%
34	6.33%	9.49%	2.83%	4.24%	9.16%	13.73%
35	6.43%	9.65%	2.87%	4.31%	9.30%	13.96%
36	6.54%	9.81%	2.92%	4.38%	9.46%	14.19%
37	6.65%	9.97%	2.97%	4.45%	9.62%	14.42%
38	6.76%	10.14%	3.02%	4.53%	9.78%	14.67%
39	6.87%	10.31%	3.07%	4.60%	9.94%	14.91%



Appendix A

Member Contribution Rates (Continued)

Probation Tier 2 Members' Contribution Rates - Based on the June 30, 2016 Actuarial Valuation (continued) (as a percentage of payroll)

	Basic	c Only	COLA	A Only	То	tal
Entry Age	First \$161.54	Over \$161.54	First \$161.54	Over \$161.54	First \$161.54	Over \$161.54
40	6.99%	10.49%	3.12%	4.68%	10.11%	15.17%
41	7.11%	10.67%	3.18%	4.77%	10.29%	15.44%
42	7.25%	10.87%	3.23%	4.85%	10.48%	15.72%
43	7.37%	11.06%	3.29%	4.94%	10.66%	16.00%
44	7.48%	11.22%	3.34%	5.01%	10.82%	16.23%
45	7.54%	11.31%	3.37%	5.05%	10.91%	16.36%
46	7.56%	11.34%	3.37%	5.06%	10.93%	16.40%
47	7.54%	11.31%	3.37%	5.05%	10.91%	16.36%
48	7.80%	11.70%	3.49%	5.23%	11.29%	16.93%
49 & over	8.07%	12.11%	3.61%	5.41%	11.68%	17.52%

Interest: 7.25% per annum

COLA: 3.00%

Mortality: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set back 1 year for

males and with no setback for females, weighted 80% male and 20% female

Salary Increase: Inflation (3.25%) + Across-the-Board Increases (0.50%) + Merit/Promotion (see Exhibit II)

COLA Loading Factor: 44.66%



Appendix A

Member Contribution Rates (Continued)

Probation Tier 3 Members' Contribution Rates - Based on the June 30, 2016 Actuarial Valuation (as a percentage of eligible payroll)*

	Basic Only	Total
	Eligible Pay	Eligible Pay
All Probation Tier 3 Members	9.40%	9.40%

Interest: 7.25% per annum

COLA: 0%

Mortality: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set back 1 year for

males and with no setback for females, weighted 80% male and 20% female

Salary Increase: Inflation (3.25%) + Across-the-Board Increases (0.50%) + Merit/Promotion (see Exhibit II)

COLA Loading Factor: 0%



^{*} It is our understanding that in the determination of pension benefits under the CalPEPRA formulas, the compensation that can be taken into account for 2016 is equal to \$117,020. For an employer that is not enrolled in Social Security, the maximum amount is 120% of \$117,020, or \$140,424 (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2016. (reference: Section 7522.10(d).)