



Mendocino County Employees' Retirement Association

**Governmental Accounting Standards (GAS) 67
Actuarial Valuation as of June 30, 2017**

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, 2017

*Board of Retirement
Mendocino County Employees' Retirement Association
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Dear Board Members:

We are pleased to submit this Governmental Accounting Standards (GAS) 67 Actuarial Valuation as of June 30, 2017. It contains various information that will need to be disclosed in order to comply with GAS 67.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Association. The census and financial information on which our calculations were based was 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; 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 the 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 expectations for the Association.


We look forward to reviewing this report with you and to answering any questions.

Sincerely,

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

By: 

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



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Vice President and Actuary*

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SECTION 1

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

Purpose

This report has been prepared by Segal Consulting (“Segal”) to present certain disclosure information required by Statement No. 67 of the Governmental Accounting Standards Board as of June 30, 2017. This valuation is 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, and retired members and beneficiaries as of June 30, 2017, provided by the Retirement Association;
- The assets of the Plan as of June 30, 2017, provided by the Retirement Association;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

General Observations on GAS 67 Actuarial Valuation

The following points should be considered when reviewing this GAS 67 report:

- The Governmental Accounting Standards Board (GASB) rules only define pension liability and expense for financial reporting purposes, and do not apply to contribution amounts for pension funding purposes. Employers and plans still develop and adopt funding policies under current practices.
- When measuring pension liability, GASB uses the same actuarial cost method (Entry Age) and the same type of discount rate (expected return on assets) as MCERA uses for funding. This means that the Total Pension Liability (TPL) measure for financial reporting shown in this report is determined on the same basis as MCERA’s Actuarial Accrued Liability (AAL) measure for funding. We note that the same is generally true for the Normal Cost component of the annual plan cost for funding and financial reporting.
- The Net Pension Liability (NPL) is equal to the difference between the TPL and the Plan’s Fiduciary Net Position. The Plan’s Fiduciary Net Position is equal to the market value of assets and therefore, the NPL measure is very similar to an Unfunded Actuarial Accrued Liability (UAAL) calculated on a market value basis. The NPL reflects all investment gains and losses as of the measurement date. This is different from the UAAL calculated on an actuarial value of assets basis in the funding valuation that reflects investment gains and losses over a five-year period.

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

- The NPLs measured as of June 30, 2017 and 2016 have been determined from the actuarial valuations as of June 30, 2017 and June 30, 2016, respectively.

Significant Issues in Valuation Year

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

- The NPL decreased from \$205.7 million as of June 30, 2016 to \$195.5 million as of June 30, 2017, mainly as a result of the return on the market value of assets of 15.80% during 2016/2017 that was more than the assumption of 7.25% used in the June 30, 2016 valuation (that gain was about \$36.1 million), offset somewhat by the change in the actuarial assumptions (that change was about \$28.2 million). Changes in these values during the last two fiscal years ending June 30, 2016 and June 30, 2017 can be found in Exhibit 3.
- The discount rates used to determine the TPL and NPL as of June 30, 2017 and 2016 were 7.00% and 7.25%, respectively, following the same assumption used by the Association in the pension funding valuations as of the same dates. The detailed calculations used in the derivation of the discount rate of 7.00% used in the calculation of the TPL and NPL as of June 30, 2017 can be found in Exhibit 5 of Section 2. Various other information that is required to be disclosed can be found throughout Exhibits 1 through 4 in Section 2.

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

Summary of Key Valuation Results

	2017	2016
Disclosure elements for fiscal year ending June 30:		
Service cost ⁽¹⁾	\$12,356,900	\$12,125,153
Total Pension Liability	679,565,362	632,057,539
Plan Fiduciary Net Position	484,026,717	426,338,011
Net Pension Liability	195,538,645	205,719,528
Schedule of contributions for fiscal year ending June 30:		
Actuarially determined contributions	\$19,116,426	\$19,129,191
Actual contributions	19,116,426	19,129,191
Contribution deficiency / (excess)	0	0
Demographic data for plan year ending June 30:		
Number of retired members and beneficiaries	1,462	1,416
Number of vested terminated members ⁽²⁾	479	428
Number of active members	1,123	1,123
Key assumptions as of June 30:		
Investment rate of return	7.00%	7.25%
Inflation rate	3.00%	3.25%
Projected salary increases ⁽³⁾	Ranges from 8.50% to 4.00%, based on years of service	Ranges from 8.75% to 4.25%, based on years of service

⁽¹⁾ The service cost is based on the previous year's valuation, meaning the 2017 and 2016 values are based on the valuations as of June 30, 2016 and June 30, 2015, respectively. Both of the service costs have been calculated using the assumptions shown in the 2016 column as there had been no changes in the actuarial assumptions between the June 30, 2015 and 2016 valuations.

⁽²⁾ Includes terminated members due a refund of employee contributions.

⁽³⁾ Includes inflation at 3.00% (3.25% for the June 30, 2016 valuation) plus real across the board salary increase of 0.50% plus merit and promotional increases.

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

Important Information about Actuarial Valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – 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.

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

- **Plan of benefits** 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. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary in this report (as well as the plan summary included in our funding valuation report) to confirm that Segal has correctly interpreted the plan of benefits.
- **Participant data** 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. The Association uses an “actuarial value of assets” that differs from market value to gradually reflect year-to-year changes in the market value of assets in determining contribution requirements.
- **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.

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

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

SECTION 2: GAS 67 Information for the Mendocino County Employees' Retirement Association

EXHIBIT 1

General Information – “Financial Statements”, Note Disclosures and Required Supplementary Information for a Cost-Sharing Pension Plan

Plan Description

Plan administration. The Mendocino County Employees' Retirement Association (MCERA) was established by the County of Mendocino on January 1, 1948. MCERA is administered by the Board of Retirement (Board) and governed by the County Employees' Retirement Law of 1937 (California Government Code Section 31450 et. seq.). MCERA is a cost-sharing multiple employer public employee retirement system whose main function is to provide service retirement, disability, death and survivor benefits to the General and Safety (Law Enforcement or Probation) members employed by the County of Mendocino. MCERA also provides retirement benefits to the employee members of the Mendocino County Courts and the Russian River Cemetery District.

The management of MCERA is vested with the Mendocino County Board of Retirement. The Board consists of nine members and one alternate. The County Treasurer is a member of the Board of Retirement by law. Four members are appointed by the Board of Supervisors, one of whom may be a County Supervisor. Two members are elected by the General membership, one member is elected by the Safety membership, and one member is elected by the retired members of the Association. All members of the Board of Retirement serve terms of three years except for the County Treasurer whose term runs concurrent with her term as County Treasurer.

Plan membership. At June 30, 2017, pension plan membership consisted of the following:

Retired members or beneficiaries currently receiving benefits	1,462
Vested terminated members entitled to, but not yet receiving benefits ⁽¹⁾	479
Active members	<u>1,123</u>
Total	3,064

⁽¹⁾ Includes terminated members due a refund of employee contributions

Benefits provided. MCERA provides service retirement, disability, death and survivor benefits to eligible employees. All permanent employees of the County of Mendocino or contracting districts who work at least 32 hours per week become members of MCERA effective on the first day of the pay period following employment (although, employees who are age 60 or older at their date of hire may waive MCERA membership). There are separate retirement plans for General, Safety, and

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Probation member employees. Any new employees who become members on or after January 1, 2013 are subject to the provisions of California Public Employees' Pension Reform Act of 2013 (PEPRA), California Government Code 7522 et seq. and Assembly Bill (AB) 197.

General members hired prior to January 1, 2013 are eligible to retire once they attain the age of 50 and have acquired 5 or more years of retirement service credit and 10 years of membership. A member with 30 years of service is eligible to retire regardless of age. A vested member who is age 70 or older is eligible to retire. General members who are first hired on or after January 1, 2013 are eligible to retire once they have attained the age of 52, and have acquired 5 years of retirement service credit, or age 70 and vested.

Safety and Probation members hired prior to January 1 2013 are eligible to retire once they attain the age of 50 and have acquired 5 or more years of retirement service credit and 10 years of membership. A member with 20 years of service is eligible to retire regardless of age. A vested member who is age 70 or older is eligible to retire. Safety and Probation members who are first hired on or after January 1, 2013 are eligible to retire once they have attained the age of 50, and have acquired 5 years of retirement service credit, or age 70 and vested.

The retirement benefit the member will receive is based upon age at retirement, final average compensation, years of retirement service credit and retirement plan and tier.

General member benefits are calculated pursuant to the provisions of Section 31676.12¹. The monthly allowance is equal to 1/50th of final compensation times years of accrued retirement service credit times the age factor from Section 31676.12. General member benefits for those who are first hired on or after January 1, 2013 are calculated pursuant to the provision of California Government Code Section 7522.20(a). The monthly allowance is equal to the final compensation² multiplied by years of accrued retirement credit multiplied by the age factor from Section 7522.20(a).

Safety member benefits are calculated pursuant to the provisions of Section 31664.2. The monthly allowance is equal to 3% of final compensation times years of accrued retirement service credit times the age factor from Section 31664.2. Safety member benefits for those who are first hired on or after January 1, 2013 are calculated pursuant to the provision of California

¹ 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 Tier 2 and Section 31676.1 for Tier 3. For all other Bargaining Groups, the prior service date is January 1, 2002 (instead of October 1, 2003).

² California Government Code Section 7522.32(a) states that "Final compensation shall mean the highest average annual pensionable compensation earned by the member during a period of at least 36 consecutive months, or at least three consecutive school years if applicable, immediately preceding his or her retirement or last separation from service if earlier, or during any other period of at least 36 consecutive months, or at least three consecutive school years if applicable, during the member's applicable service that the member designates on the application for retirement."

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Government Code Section 7522.25(d). The monthly allowance is equal to the final compensation multiplied by years of accrued retirement credit multiplied by the age factor from Section 7522.25(d).

Probation member benefits are calculated pursuant to the provisions of Section 31664. The monthly allowance is equal to 1/50th of final compensation times years of accrued retirement service credit times the age factor from Section 31664. Probation member benefits for those who are first hired on or after January 1, 2013 are calculated pursuant to the provision of California Government Code Section 7522.25(d). The monthly allowance is equal to the final compensation multiplied by years of accrued retirement credit multiplied by the age factor from Section 7522.25(d).

For members with membership dates before January 1, 2013, the maximum monthly retirement allowance is 100% of final compensation.

Final average compensation consists of the highest 12 consecutive months of pay for a General Tier 1, Safety Tier 1, or Probation Tier 1 member, and the highest 36 consecutive months for all other members.

The member may elect an unmodified retirement allowance, or choose an optional retirement allowance. The unmodified retirement allowance provides the highest monthly benefit and a 60% continuance to an eligible surviving spouse or domestic partner. An eligible surviving spouse or domestic partner is someone who is married to or registered with the member one year prior to the effective retirement date. There are two optional retirement allowances the member may choose, that is, Option 1 (cash refund) and Option 2 (100% continuance). Each of the optional retirement allowances requires a reduction in the unmodified retirement allowance in order to allow the member the ability to provide certain benefits to a surviving spouse, domestic partner, or named beneficiary having an insurable interest in the life of the member.

MCERA provides an annual cost-of-living benefit to all non-PEPRA retirees. The cost-of-living adjustment, based upon the Consumer Price Index prepared by the Bureau of Labor Statistics that applies to the West Region, is capped at 3.0%.

The County of Mendocino and contracting districts contribute to the retirement plan based upon actuarially determined contribution rates adopted by the Board of Retirement. Employer contribution rates are adopted annually based upon recommendations received from MCERA's actuary after the completion of the annual actuarial valuation. The average employer contribution rate as of June 30, 2017 for 2016-2017 (based on the June 30, 2015 valuation) was 31.97% of compensation.

All members are required to make contributions to MCERA regardless of the retirement plan or tier in which they are included; however, non-PEPRA members with 30 or more years of service are exempt from paying member contributions. The average member contribution rate as of June 30, 2017 for 2016-2017 (based on the June 30, 2015 valuation) was 9.62% of compensation.

SECTION 2: GAS 67 Information for the Mendocino County Employees' Retirement Association

EXHIBIT 2

Net Pension Liability

The components of the Net Pension Liability of MCERA are as follows:

	June 30, 2017	June 30, 2016
Total Pension Liability	\$679,565,362	\$632,057,539
Plan Fiduciary Net Position	<u>484,026,717</u>	<u>426,338,011</u>
Association's Net Pension Liability	\$195,538,645	\$205,719,528
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	71.2%	67.5%

The Net Pension Liability (NPL) was measured as of June 30, 2017 and 2016. The Plan's Fiduciary Net Position (plan assets) was valued as of the measurement date while the Total Pension Liability (TPL) was determined based upon the results of the actuarial valuations as of June 30, 2017 and 2016, respectively.

Plan Provisions. The plan provisions used in the measurement of the NPL as of June 30, 2017 and 2016 are the same as those used in the MCERA funding valuations as of June 30, 2017 and 2016, respectively.

Actuarial assumptions. The TPL as of June 30, 2017 was determined by an actuarial valuation as of June 30, 2017. The actuarial assumptions used in the June 30, 2017 valuation were based on the results of an experience study for the period from July 1, 2013 through June 30, 2016. They are the same as the assumptions used in the June 30, 2017 funding actuarial valuation for MCERA. In particular, the following actuarial assumptions were applied to all periods included in the measurement:

Inflation	3.00%
Salary increases	Ranges from 8.50% to 4.00%, based on years of service, including inflation
Investment rate of return	7.00%, net of pension plan investment expense, including inflation
Other Assumptions	Same as those used in the June 30, 2017 actuarial valuation

The TPL as of June 30, 2016 was determined by an actuarial valuation as of June 30, 2016. The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an experience study for the period from July 1, 2011 through June 30, 2014. They are the same as the assumptions used in the June 30, 2016 funding actuarial valuation for MCERA. In particular, the following actuarial assumptions were applied to all periods included in the measurement:

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Inflation	3.25%
Salary increases	Ranges from 8.75% to 4.25%, based on years of service, including inflation
Investment rate of return	7.25%, net of pension plan investment expense, including inflation
Other Assumptions	Same as those used in the June 30, 2016 actuarial valuation

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before deducting investment expenses, used in the derivation of the long-term expected investment rate of return assumption for the June 30, 2017 valuation are summarized in the following table:

Asset Class	Target Allocation	Long-Term (Arithmetic) Expected Real Rate of Return
U.S. Large Cap Equity	25.3%	5.64%
U.S. Small Cap Equity	12.7%	6.24%
Global ex-US Equity	29.0%	6.70%
Broad US Fixed Income	22.0%	1.06%
Real Estate	<u>11.0%</u>	4.37%
Total	100.0%	

Discount rate: The discount rate used to measure the TPL was 7.00% as of June 30, 2017 and 7.25% as of June 30, 2016. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employee and employer contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs of future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the TPL as of both June 30, 2017 and June 30, 2016.

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Sensitivity of the Net Pension Liability to changes in the discount rate. The following presents the NPL of MCERA as of June 30, 2017, calculated using the discount rate of 7.00%, as well as what MCERA's NPL would be if it were calculated using a discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%) than the current rate:

	1% Decrease (6.00%)	Current Discount (7.00%)	1% Increase (8.00%)
MCERA's Net Pension Liability as of June 30, 2017	\$284,720,480	\$195,538,645	\$122,096,468

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EXHIBIT 3

Schedule of Changes in Net Pension Liability – Last Two Fiscal Years

	2017	2016
Total Pension Liability		
Service cost ⁽¹⁾	\$12,356,900	\$12,125,153
Interest	45,532,301	44,005,882
Change of benefit terms	0	0
Differences between expected and actual experience	-5,836,962	-3,396,702
Changes of assumptions	28,220,986	0
Benefit payments, including refunds of employee contributions	<u>-32,765,402</u>	<u>-31,058,643</u>
Net change in Total Pension Liability	\$47,507,823	\$21,675,690
Total Pension Liability – beginning	<u>632,057,539</u>	<u>610,381,849</u>
Total Pension Liability – ending (a)	<u>\$679,565,362</u>	<u>\$632,057,539</u>
Plan Fiduciary Net Position		
Contributions – employer	\$19,116,426	\$19,129,191
Contributions – employee	5,753,907	5,544,925
Net investment income	66,669,864	-10,352,325
Benefit payments, including refunds of employee contributions	-32,765,402	-31,058,643
Administrative expense	-1,086,089	-1,142,493
Other	<u>0</u>	<u>0</u>
Net change in Plan Fiduciary Net Position	\$57,688,706	-\$17,879,345
Plan Fiduciary Net Position – beginning	<u>426,338,011</u>	<u>444,217,356</u>
Plan Fiduciary Net Position – ending (b)	<u>484,026,717</u>	<u>426,338,011</u>
Net Pension Liability – ending (a) – (b) = (c)	<u>\$195,538,645</u>	<u>\$205,719,528</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	71.2%	67.5%
Covered-employee payroll⁽²⁾ (d)	\$59,801,480	\$57,407,928
Plan Net Pension Liability as percentage of covered-employee payroll (c) / (d)	327.0%	358.3%

⁽¹⁾ The service cost is based on the previous year's valuation, meaning the 2017 and 2016 values are based on the valuations as of June 30, 2016 and June 30, 2015, respectively. Both of the service costs have been calculated using the assumptions shown in the 2016 column on page iii as there had been no changes in the actuarial assumptions between the June 30, 2015 and 2016 valuations.

⁽²⁾ Covered-employee payroll shown represents Compensation Earnable and Pensionable Compensation. Only Compensation Earnable and Pensionable Compensation that would go into the determination of retirement benefits are included.

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EXHIBIT 4

Schedule of MCERA's Contributions – Last Ten Fiscal Years

Year Ended June 30	Actuarially Determined Contributions^{(1),(2)}	Contributions in Relation to the Actuarially Determined Contributions	Contribution Deficiency / (Excess)	Covered-Employee Payroll⁽³⁾	Contributions as a Percentage of Covered-Employee Payroll
2008	\$7,232,000	Not Disclosed in Prior Funding Valuation Reports	N/A	\$68,447,683	N/A
2009	6,046,000		N/A	72,565,457	N/A
2010	9,571,000		N/A	70,384,677	N/A
2011	9,553,955	\$9,553,955	\$0	64,252,118	14.87%
2012	11,811,076	11,811,076	0	56,291,191	20.98%
2013	14,260,473	14,260,473	0	53,254,876	26.78%
2014	14,324,752	14,324,752	0	53,813,882	26.62%
2015	15,164,044	15,164,044	0	54,891,785	27.63%
2016	19,129,191	19,129,191	0	57,407,928	33.32%
2017	19,116,426	19,116,426	0	59,801,480	31.97%

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

⁽²⁾ Prior to year ended June 30, 2014, this amount was the Annual Required Contribution (ARC).

⁽³⁾ Covered-employee payroll shown represents Compensation Earnable and Pensionable Compensation. Only Compensation Earnable and Pensionable Compensation that would go into the determination of retirement benefits are included.

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Notes to Exhibit 4

Methods and assumptions used to establish "actuarially determined contribution" (ADC) rates:

Valuation date	Actuarially determined contribution rates are calculated as of June 30, two years prior to the end of the fiscal year in which contributions are reported
Actuarial cost method	Entry Age Cost Method (individual basis)
Amortization method	Level percent of payroll for total unfunded liability
Remaining amortization period	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 22 years remaining as of June 30, 2017). 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.
Asset valuation method	Market Value of Assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a five-year period, further adjusted, if necessary, to be within 25% of the market value. The Valuation Value of Assets is the Actuarial Value of Assets reduced by the value of the non-valuation reserves.
Actuarial assumptions:	<u>June 30, 2015 (for the year ended June 30, 2017 ADC)</u>
Investment rate of return	7.25%
Inflation rate	3.25%
Real across-the-board salary increase	0.50%
Projected salary increases*	Ranges from 8.75% to 4.25%, based on years of service
Cost of living adjustments	3.00% of retirement income for General Tiers 1, 2, and 3, Safety Tiers 1 and 2, and Probation Tiers 1 and 2
Mortality	Healthy: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set back one year for males and with no setback for females
Other assumptions	Same as those used in the June 30, 2015 funding actuarial valuation

* Includes inflation at 3.25% plus across the board salary increases of 0.50% plus merit and promotional increases.

SECTION 2: GAS 67 Information for the Mendocino County Employees' Retirement Association

EXHIBIT 5

Projection of Pension Plan's Fiduciary Net Position for Use in Calculation of Discount Rate as of June 30, 2017

(\$ in millions)

Year Beginning July 1,	Projected Beginning Plan Fiduciary Net Position (a)	Projected Total Contributions (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Plan Fiduciary Net Position (f) = (a) + (b) - (c) - (d) + (e)
2016	\$426	\$25	\$33	\$1	\$67	\$484
2017	484	26	36	1	33	505
2018	505	25	38	1	35	526
2019	526	25	40	1	36	546
2020	546	25	42	1	37	565
2021	565	24	44	1	39	583
2022	583	24	46	1	40	600
2023	600	24	48	2	41	616
2024	616	25	50	2	42	631
2025	631	25	52	2	43	645
2041	702	4 *	68	2	47	683
2042	683	4 *	67	2	45	663
2043	663	4 *	66	2	44	643
2044	643	4 *	66	2	43	623
2045	623	4 *	65	2	41	602
2090	666	2 *	1	2	47	712
2091	712	2 *	1	2	50	761
2092	761	2 *	0 **	2	53	814
2093	814	2 *	0 **	2	57	871
2094	871	2 *	0 **	2	61	931
2119	4,723	12 *	0 **	12	331	5,053
2120	5,053					
2120	Discounted Value: 5 ***					

* Mainly attributable to employer contributions to fund each year's annual administrative expenses.

** Less than \$1 million, when rounded.

*** \$5,053 million when discounted with interest at the rate of 7.00% per annum has a value of \$5 million (or 0.98% of the Plan's Fiduciary Net Position) as of June 30, 2017.

Note that in preparing the above projections, we have not taken into consideration the one-year delay between the date of the contribution rate calculation and the implementation.

SECTION 2: GAS 67 Information for the Mendocino County Employees' Retirement Association

EXHIBIT 5

Projection of Pension Plan's Fiduciary Net Position for Use in Calculation of Discount Rate as of June 30, 2017

(\$ in millions) - continued

Notes:

- (1) Amounts may not total exactly due to rounding.
- (2) Amounts shown for the year beginning July 1, 2016 row are actual amounts, based on the unaudited financial statements provided by MCERA.
- (3) Years 2026-2040, 2046-2089, and 2095-2118 have been omitted from this table.
- (4) Column (a): Except for the "discounted value" shown for 2120, none of the projected beginning Plan Fiduciary Net Position amounts shown have been adjusted for the time value of money.
- (5) Column (b): Projected total contributions include employee and employer normal cost contributions based on closed group projections (based on covered active members as of June 30, 2017); plus employer contributions to the unfunded actuarial accrued liability; plus contributions to fund each year's annual administrative expenses reflecting an 18-year amortization schedule. Contributions are assumed to occur halfway through the year, on average.
- (6) Column (c): Projected benefit payments have been determined in accordance with paragraph 39 of GAS Statement No. 67, and are based on the closed group of active, inactive vested, retired members, and beneficiaries as of June 30, 2017. The projected benefit payments reflect the cost of living increase assumptions used in the June 30, 2017 report. In accordance with paragraph 31.b.(1)(e) of GASB Statement No. 67, the long-term expected rate of return on Plan investments of 7.00% was applied to all periods of projected benefit payments to determine the discount rate.
- (7) Column (d): Projected administrative expenses are calculated as approximately 0.25% of the projected beginning Plan Fiduciary Net Position amount. The 0.25% portion was based on the actual fiscal year 2016 - 2017 administrative expenses as a percentage of the beginning Plan Fiduciary Net Position amount as of July 1, 2016. Administrative expenses are assumed to occur halfway through the year, on average.
- (8) Column (e): Projected investment earnings are based on the assumed investment rate of return of 7.00% per annum.
- (9) As illustrated in this Exhibit, the Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current Plan members. In other words, there is no projected 'cross-over date' when projected benefits are not covered by projected assets. Therefore, the long-term expected rate of return on Plan investments of 7.00% per annum was applied to all periods of projected benefit payments to determine the Total Pension Liability as of June 30, 2017 shown earlier in this report, pursuant to paragraph 44 of GASB Statement No. 67.