

**THE BOARD OF SUPERVISORS OF THE COUNTY OF STANISLAUS
BOARD ACTION SUMMARY**

DEPT: Chief Executive Office

BOARD AGENDA: 5.B.9
AGENDA DATE: June 5, 2018

SUBJECT:

Approval to Adopt County Retirement Contribution Rates for Budget Year 2018-2019 as Contained in the Stanislaus County Employees' Retirement Association Actuarial Valuation as of June 30, 2017

BOARD ACTION AS FOLLOWS:

RESOLUTION NO. 2018-0261

On motion of Supervisor Chiesa _____, Seconded by Supervisor Olsen _____
and approved by the following vote,

Ayes: Supervisors: Olsen, Chiesa, Withrow, Monteith, and Chairman DeMartini _____

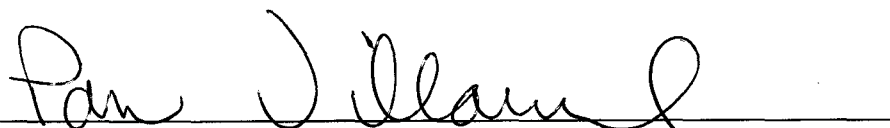
Noes: Supervisors: None _____

Excused or Absent: Supervisors: None _____

Abstaining: Supervisor: None _____

- 1) Approved as recommended
- 2) Denied
- 3) Approved as amended
- 4) Other:

MOTION:



ATTEST: **PAM VILLARREAL, Assistant Clerk of the Board of Supervisors**

File No.

**THE BOARD OF SUPERVISORS OF THE COUNTY OF STANISLAUS
AGENDA ITEM**

DEPT: Chief Executive Office

BOARD AGENDA:5.B.9
AGENDA DATE: June 5, 2018

CONSENT:

CEO CONCURRENCE: YES

4/5 Vote Required: No

SUBJECT:

Approval to Adopt County Retirement Contribution Rates for Budget Year 2018-2019 as Contained in the Stanislaus County Employees' Retirement Association Actuarial Valuation as of June 30, 2017

STAFF RECOMMENDATION:

1. Adopt the retirement contribution rates for Budget Year 2018-2019 as contained in the Stanislaus County Employees' Retirement Association Actuarial Valuation as of June 30, 2017, and as recommended by the Stanislaus County Employees' Retirement Association Board.
2. Direct the Auditor-Controller to change the employer and employee retirement contribution rates for Budget Year 2018-2019 in accordance with the Actuarial Valuation of June 30, 2017, on the payroll check date of August 1, 2018.

DISCUSSION:

On March 19, 2018, Stanislaus County received a Budget Year 2018-2019 Retirement Contribution Rates transmittal letter from the Stanislaus County Employees' Retirement Association (StanCERA) (Attachment 1). This letter served to notify Stanislaus County of the employer contribution rates that go into effect the first full pay period of the 2018-2019 Budget Year.

StanCERA administers retirement benefits for multiple employers, with Stanislaus County being the largest contributor to the plan. Each year an actuarial valuation is conducted of the Stanislaus County Employees' Retirement Association (StanCERA, the Fund, and the Plan). The report contains information on the Plan's assets and liabilities, discloses employer and employee contribution levels, and includes exhibits required for the Plan's Comprehensive Annual Financial Report (CAFR). On February 27, 2018, the StanCERA Retirement Board accepted and approved the Actuarial Valuation as of June 30, 2017.

The valuation determines the employer and employee contributions required for the employers' budget years beginning July 1, 2018. The employers include the County of Stanislaus and related employers, the City of Ceres, and other participating Special Districts. The Plan's funding policy is to collect contributions from the employers and employees equal to the sum of:

- The Normal Cost under the Entry Age Normal Cost Method;
- Amortization of the Unfunded Actuarial Liability (UAL); and
- The Fund's expected administrative expenses.

The UAL payment is determined as the amount needed to fund the outstanding UAL as of June 30, 2017, over a period of 19 years as a level percentage of pay.

While an actuarial valuation is conducted annually, actuarial experience studies are performed every three years. This valuation was performed based on the economic and demographic assumptions that were determined in the Actuarial Experience Study performed by Cheiron as of June 30, 2015, and adopted by the Retirement Board on April 20, 2016. This valuation is the third and final to use this experience study as the basis for the assumptions.

Employer Contribution Rates

The Budget Year 2018-2019 composite contribution rate of all employers contributing to the Plan increased from 29.01% of payroll to 31.65% of payroll and reflects the final year of a three-year phase-in of the changes in the economic and demographic assumptions contained in the June 30, 2015 experience study. For this valuation, the phase-in is now in its third and final year and the impact of the changes from the assumptions are now fully reflected in the rates. Without the phase-in, the actuarial cost would have been 31.95% of pay for the prior valuation. The phase-in of rate increases is consistent with practices described by the California Actuarial Advisory Panel (CAAP), as well as other actuarial organizations.

2017-2018 Employer Rate	General Member Contribution						Safety Member Contribution				Composite
	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	PEPRA (Tier 6)	Tier 2	Tier 4	Tier 5	PEPRA (Tier 6)	
Normal Cost Rate	13.20%	9.42%	4.32%	17.35%	11.06%	8.07%	16.89%	0.00%	19.93%	13.08%	11.97%
Unfunded Actuarial Liability (UAL) Rate	17.49%	17.49%	17.49%	17.49%	17.49%	17.49%	24.72%	24.72%	24.72%	24.72%	19.04%
Administrative Expense Rate	0.93%	0.81%	0.66%	1.06%	0.86%	0.77%	1.26%	0.75%	1.35%	1.14%	0.94%
Net Contribution Rate	31.62%	27.72%	22.47%	35.90%	29.41%	26.33%	42.87%	25.47%	46.00%	38.94%	31.95%
Phase-In Impact	-2.72%	-2.72%	-2.72%	-2.72%	-2.72%	-2.72%	-3.79%	-3.79%	-3.79%	-3.79%	-2.94%
Phased-In Contribution Rate	28.90%	25.00%	19.75%	33.18%	26.69%	23.61%	39.08%	21.68%	42.21%	35.15%	29.01%

Budget Year 2018-2019 County Contribution Rates

2018-2019 Employer Rate	General Member Contribution						Safety Member Contribution				Composite
	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	PEPRA (Tier 6)	Tier 2	Tier 4	Tier 5	PEPRA (Tier 6)	
Normal Cost Rate	13.19%	9.67%	2.89%	15.65%	11.08%	8.05%	17.43%	0.00%	19.93%	13.05%	11.77%
Unfunded Actuarial Liability (UAL) Rate	17.41%	17.41%	17.41%	17.41%	17.41%	17.41%	24.15%	24.15%	24.15%	24.15%	18.94%
Administrative Expense Rate	0.94%	0.83%	0.62%	1.02%	0.88%	0.78%	1.28%	0.74%	1.36%	1.14%	0.94%
Net Contribution Rate	31.54%	27.91%	20.92%	34.08%	29.37%	26.24%	42.86%	24.89%	45.44%	38.34%	31.65%
Phase-In Impact	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Net Contribution Rate	31.54%	27.91%	20.92%	34.08%	29.37%	26.24%	42.86%	24.89%	45.44%	38.34%	31.65%

Change in County Contribution Rates from 2017-2018 to 2018-2019

Fiscal Year	County General Member Contribution						County Safety Member Contribution				Composite
	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	PEPRA (Tier 6)	Tier 2	Tier 4	Tier 5	PEPRA (Tier 6)	
Fiscal Year 2017-2018	28.90%	25.00%	19.75%	33.18%	26.69%	23.61%	39.08%	21.68%	42.21%	35.15%	29.01%
Budget Year 2018-2019	31.54%	27.91%	20.92%	34.08%	29.37%	26.24%	42.86%	24.89%	45.44%	38.34%	31.65%
Rate Increase/(Decrease)	2.64%	2.91%	1.17%	0.90%	2.68%	2.63%	3.78%	3.21%	3.23%	3.19%	2.64%

During the year ending June 30, 2017, the return on Plan assets was 14.4% on a market basis net of investment expenses, as compared to the 7.25% assumption. A review of the changes in the employer contribution rate from the prior valuation reveals that Plan experience during the year, including demographic and salary changes, as well as asset experience, resulted in a net decrease in the full employer contribution rate of 0.30%. Asset experience produced an investment gain on a smoothed basis for decrease to the contribution rate of 0.57% of pay. The Plan received a smaller contribution than the actuarially determined amount. The net impact of the shortfall was an increase in the cost by 0.55% of pay.

The demographic experience of the Plan (rates of retirement, death, disability, and termination, as well as salary and COLA changes) caused a decrease in cost of 0.41% of pay. Lower than expected salary increases for returning members was the largest factor contributing to a decrease in the UAL and the associated amortization payment. New entrants and losses associated with new retirees and COLA increases offset the gains. The decrease in the amortization payment was also aided by a reduction in the employer-paid Normal Cost as a result of the continued transition of the active workforce to membership in the new PEPRA tiers, which reflect lower benefit levels for new hires.

Overall payroll was lower than expected by about \$2.4 million. As a result, the unfunded liability amortization payment and administrative expenses were spread over a smaller payroll base than expected, raising the employer contribution rate by 0.17% of pay. Finally, the impact of updates to actuarial software coding decreased the cost by 0.04% of pay.

The UAL is the excess of the Plan's Actuarial Liability over the Actuarial Value of Assets. For the year ending June 30, 2017, the Plan's UAL decreased by \$11.4 million, from \$691.3 million to \$679.9 million. The Plan's funded ratio, the ratio of Actuarial Assets over Actuarial Liability, increased from 72.8%% to 74.3%. The increase in Actuarial Liability of 4.4% was offset by investment gains as well as liability gains totaling 6.6%, which led to the accompanying increase in the funded status.

Despite the fact that for most retirement plans, the greatest attention is given to the current valuation results of the size of the current Unfunded Actuarial Liability and the employer contribution amounts, it is important to remember that each valuation is merely a snapshot in the long-term progress of a pension fund.

Employee Contribution Rates

Employee contribution rates for PEPRA members will change in Budget Year 2018-2019 in accordance with the Actuarial Valuation of June 30, 2017 on the payroll check date of August 1, 2018. Both employee and employer contribution formulas are established by law and are based on actuarial assumptions. The employee contributions are collected through automatic payroll deductions.

On September 12, 2012, the Governor of California signed into law the Public Employee Pension Reform Act (PEPRA). This change was effective for new County members hired on or after January 1, 2013. For the new PEPRA Tier 6, Government Code Section 7522.30 requires new employees to pay 50% of the normal cost of Tier 6. The employee contributions as a percent of earnings for Tiers 1, 2, 4, and 5 are based on the employee entry age into StanCERA. Tier 6 employees hired on or after January 1, 2013, feature flat-rate contribution percentages that are not affected by individual entry ages.

The table below displays the net employee contribution rates by tier for Budget Year 2018-2019, with the Fiscal Year 2017-2018 rates shown for comparison along with the change in rates. The exact employee contribution rates by age of entry for Tiers 1, 2, 4, and 5 are provided in Appendix E, beginning on page 79, of the Actuarial Valuation. Tier 6 employee contribution rates are provided on page 87 and are identical to the rates displayed in the following table.

2017-2018 Employee Rate	General Member Contribution						Safety Member Contribution				Composite
	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	PEPRA (Tier 6)	Tier 2	Tier 4	Tier 5	PEPRA (Tier 6)	
Fiscal Year 2017-2018	8.43%	7.98%	0.00%	1.08%	9.56%	8.06%	12.60%	0.00%	13.44%	13.08%	9.85%
Budget Year 2018-2019	8.44%	8.00%	0.00%	1.39%	9.38%	8.04%	12.68%	0.00%	13.43%	13.05%	9.75%
Rate Increase/(Decrease)	0.01%	0.02%	0.00%	0.31%	-0.18%	-0.02%	0.08%	0.00%	-0.01%	-0.03%	-0.10%

The following table displays the number of active members by tier as of July 1, 2016 and July 1, 2017, as reported in the Actuarial Valuation along with the increase or decrease in the number of members in each tier.

Member Count	Active General Members						Active Safety Members			Total
	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	PEPRA (Tier 6)	Tiers 1 & 4	Tiers 2 & 5	PEPRA (Tier 6)	
As of July 1, 2016	1	247	15	23	2,070	1,037	1	446	198	4,038
As of July 1, 2017	1	232	13	18	1,911	1,254	1	417	257	4,104
Membership Increase/(Decrease)	-	(15)	(2)	(5)	(159)	217	-	(29)	59	66

Of note is the significant increase in the number of Tier 6 employees since PEPRA took effect. As of July 1, 2017, there are 1,511 employees in Tier 6, an increase of 22.3% over the prior year count of 1,235. This number will continue to grow as positions turn over and new hires increase.

POLICY ISSUE:

Effective July 1, 1948, the Stanislaus County Board of Supervisors began offering retirement benefits to County employees pursuant to the County Employees Retirement Law of 1937 (Government Code Section 31450 et seq.). Retirement benefits are funded on an actuarially sound basis according to the 1937 Act.

Specifically pursuant to Government Code Section 31454:

“The Board of Supervisors shall . . . adjust the rate of interest, the rates of contributions of members, and county and district appropriations in accordance with the recommendation of the Board [of Retirement], but shall not fix them in such amounts as to reduce the individual benefits provided in this chapter [CERL].”

Government Code Section 31584 further states that:

“The Board of Supervisors shall make the appropriations and if it fails or neglects to make appropriations, the County Auditor shall transfer from any money available in any fund in the County Treasury the sums specified by this chapter [CERL], and this transfer shall have the same force and effect as it would have had if the required appropriations had been made by the Board of Supervisors.”

FISCAL IMPACT:

The Budget Year 2018-2019 combined employer contribution rate is 31.65%, an increase of 2.64% over the Fiscal Year 2017-2018 rate of 29.01%. The fiscal impact of the StanCERA rate increase is the equivalent of a 9.1% increase in actual retirement costs, or approximately \$9.9 million for Stanislaus County, of which approximately \$4.2 million is General Fund. Rates are reflective of a total projected contribution from the County.

It is important to note that the Actuarial Valuation and summary analysis focuses on combined employer experience. The actual County-specific composite rate for general members is 28.34% for Budget Year 2018-2019, an increase of 2.47% above the Fiscal Year 2017-2018 County composite rate of 25.87%. The actual County-specific composite contribution rate for safety members is 43.01% for Budget Year 2018-2019, an increase of 2.79% above the Fiscal Year 2017-2018 County composite rate of 40.22%.

The total retirement cost for Stanislaus County is estimated to be \$85.4 million in Budget Year 2018-2019. Of this amount, \$36.1 million is reflective of General Fund costs. Actual contributions will vary based on a number of factors (number of employees, salaries, etc.). These amounts are based on the employer contribution rates received in the February 2018 Actuarial Valuation with data as of June 30, 2017.

These projected retirement costs are included in the 2018-2019 Proposed Budget.

BOARD OF SUPERVISORS' PRIORITY:

The recommended actions are consistent with the Board's priority of *Delivering Efficient Public Services and Community Infrastructure* by authorizing the Auditor-Controller to implement the retirement calculation rates for Stanislaus County employees.

STAFFING IMPACT:

While the production and implementation of annual retirement contribution rates does not require additional staff, the increases or decreases in required contribution rates may have some impact on staffing service levels.

CONTACT PERSON:

Jewel Warr, Senior Management Consultant, Chief Executive Office (209) 525-6333

ATTACHMENT(S):

1. Transmittal Letter
2. StanCERA 2017 Actuarial Valuation Report



Stanislaus County Employees' Retirement Association

832 12th Street, Ste. 600, Modesto, CA 95354 • PO Box 3150, Modesto, CA 95353-3150 • www.stancera.org • 209-525-6393 • 209-558-4976 Fax

March 9, 2018

BOARD OF SUPERVISORS ✓

2018 MAR 19 P 12:00

TO: Stanislaus County, Board of Supervisors	Stanislaus County Superior Court
Jim DeMartini, Chairman	Hugh K. Swift, Court Executive Officer
1010 10 th Street, Suite 6700	800 11 th Street
Modesto, CA 95354	Modesto, CA 95354

City of Ceres	East Side Mosquito Abatement District
Chris Vierra, Mayor	Kandy Schmidt, Chairman
2720 Second Street	2000 Santa Fe Avenue
Ceres, CA 95307	Modesto, CA 95357

Stanislaus Council of Governments	Keyes Community Services District
Bill Zoslocki, Chairman	Davie Landers, Director
1111 I Street, Suite 308	PO Box 699
Modesto, CA 95354	Keyes, CA 95328

Salida Sanitary District	Hills Ferry Cemetery District
Gary Horton, President	Ken Moeller, District Manager
PO Box 445	PO Box 657
Salida, CA 95368	Newman, CA 95360

RE: Fiscal Year 2018-2019 Retirement Contribution Rates and Funded Status as of June 30, 2017

On February 27, 2018, the Board of Retirement of the Stanislaus County Employees' Retirement Association (StanCERA) accepted the June 30, 2017 Actuarial Valuation. Attached are the employer rates for Fiscal Year 2018/2019. The complete Actuarial Valuation Report can be found on StanCERA's website at www.stancera.org.

The June 30, 2017 funded status using the market value of assets for the StanCERA is 74.5 percent. This compares with 69.1 percent for the previous fiscal year. The actuarially determined net employer contribution rate increased from 29.01 percent of payroll to 31.65 percent of payroll which reflects the final year of the three-year phase in of assumption changes. The specific contribution rates per employer, plan, and tier are presented on pages 30 and 31. Employee contribution rates are presented on pages 80-87.

The Board of Retirement is pleased to submit the 2017 valuation report to the employer agencies of StanCERA. Please don't hesitate to contact Natalie Elliott or Rick Santos if you have any questions.

Respectfully,

Mike Lynch
Chair, Board of Retirement

Attachment

cc: Rick Santos, Executive Director
Natalie Elliott, Interim Fiscal Services Manager

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

SECTION IV - CONTRIBUTIONS

Tables IV-3 and IV-4 contain the calculations of the employer contribution rates for each group and tier, and reflects the third year of the three-year phase-in of the assumption change.

TABLE IV-2 Development of the General Member Contribution Rates as of June 30, 2017 for FY 2019							
County and Former County	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	ZIPRA	TOTAL
County and Former County							
A. Total Normal Cost Rate	21.63%	17.67%	2.89%	17.04%	20.46%	16.09%	18.88%
B. Member Contribution Rate	8.44%	8.00%	0.00%	1.39%	9.58%	8.04%	8.88%
C. Employer Normal Cost Rate (A-B)	13.19%	9.67%	2.89%	15.65%	11.08%	8.05%	10.08%
D. UAL Amortization Rate	17.41%	17.41%	17.41%	17.41%	17.41%	17.41%	17.41%
E. Administrative Expense Rate	0.94%	0.83%	0.62%	1.02%	0.88%	0.78%	0.85%
F. Net June 30, 2017 Contribution Rate (C+D+E)	31.54%	27.91%	20.92%	34.08%	29.37%	26.24%	28.34%
Ceres and Other Districts							
A. Total Normal Cost Rate		16.29%		0.00%	22.54%	16.94%	20.84%
B. Member Contribution Rate		7.80%		0.00%	8.77%	8.47%	8.66%
C. Employer Normal Cost Rate (A-B)		8.49%		0.00%	13.57%	8.47%	12.18%
D. UAL Amortization Rate		19.82%		19.82%	19.82%	19.82%	19.82%
E. Administrative Expense Rate		0.17%		0.61%	1.05%	0.87%	0.98%
F. Net June 30, 2017 Contribution Rate (C+D+E)		29.18%		20.43%	34.42%	29.16%	32.98%

Administrative expenses allocated based on projected Employer Normal Cost and UAL Amortization contributions. See Table IV-5.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

SECTION IV - CONTRIBUTIONS

Table IV-1
Development of the Safety Member Contribution Rates as of June 30, 2017 for FY 2019

	Fig 2	Fig 4	Fig 5	PPRA	TOTAL
County and Former County					
A. Total Normal Cost Rate	30.11%	0.00%	33.36%	26.09%	30.84%
B. Member Contribution Rate	<u>12.68%</u>	<u>0.00%</u>	<u>13.43%</u>	<u>13.04%</u>	<u>13.26%</u>
C. Employer Normal Cost Rate (A-B)	17.43%	0.00%	19.93%	13.05%	17.58%
D. UAL Amortization Rate	24.15%	24.15%	24.15%	24.15%	24.15%
E. Administrative Expense Rate	<u>1.28%</u>	<u>0.74%</u>	<u>1.36%</u>	<u>1.14%</u>	<u>1.28%</u>
F. Net June 30, 2017 Contribution Rate (C+D+E)	42.86%	24.89%	45.44%	38.34%	43.01%
Ceres and Other Districts					
A. Total Normal Cost Rate			32.89%	30.82%	32.54%
B. Member Contribution Rate			<u>12.88%</u>	<u>15.41%</u>	<u>13.31%</u>
C. Employer Normal Cost Rate (A-B)			20.01%	15.41%	19.23%
D. UAL Amortization Rate			25.24%	25.24%	25.24%
E. Administrative Expense Rate			<u>1.39%</u>	<u>1.25%</u>	<u>1.37%</u>
F. Net June 30, 2017 Contribution Rate (C+D+E)			46.64%	41.90%	45.84%

Administrative expenses allocated based on projected Employer Normal Cost and UAL Amortization contributions. See Table IV-6.



**Stanislaus County
Employees' Retirement
Association**

**Actuarial Valuation as of
June 30, 2017**

Produced by Cheiron

February 2018

TABLE OF CONTENTS

<i>Section</i>	<i>Page</i>
Letter of Transmittal	i
Foreword	ii
Section I Executive Summary	1
Section II Assets	15
Section III Liabilities	23
Section IV Contributions.....	27
Section V Required CAFR Exhibits	34
 <i>Appendices</i>	
Appendix A Membership Information	37
Appendix B Statement of Current Actuarial Assumptions and Methods	56
Appendix C Summary of Plan Provisions.....	67
Appendix D Glossary	77
Appendix E Member Contribution Rates.....	79

February 21, 2018

Board of Retirement
Stanislaus County Employees' Retirement Association
832 12th Street, Suite 600
Modesto, CA 95353

Dear Members of the Board:

At your request, we have conducted an actuarial valuation of the Stanislaus County Employees' Retirement Association (StanCERA, the Fund, the Plan) as of June 30, 2017. This report contains information on the Plan's assets and liabilities. This report also discloses employer contribution levels and required disclosures for the Plan's CAFR. Your attention is called to the Foreword in which we refer to the general approach employed in the preparation of this report.

The purpose of this report is to present the results of the annual actuarial valuation of StanCERA. This report is for the use of StanCERA and its auditors in preparing financial reports in accordance with applicable law and accounting requirements. Any other user of this report is not an intended user and is considered a third party.

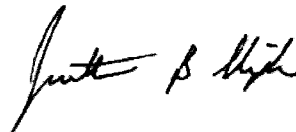
Cheiron's report was prepared solely for StanCERA for the purposes described herein, except that the Plan auditor may rely on this report solely for the purpose of completing an audit related to the matters herein. It is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

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

Sincerely,
Cheiron



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



Jonathan Chipko, FSA, FCA, EA, MAAA
Consulting Actuary

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

FOREWORD

Cheiron has performed the actuarial valuation of the Stanislaus County Employees' Retirement Association as of June 30, 2017. The valuation is organized as follows:

- In Section I, the **Executive Summary**, we describe the purpose of an actuarial valuation, summarize the key results found in this valuation, and disclose important trends;
- The **Main Body** of the report presents details on the Plan's
 - Section II - Assets
 - Section III - Liabilities
 - Section IV- Contributions
 - Section V- Required CAFR Exhibits
- In the **Appendices** we conclude our report with detailed information describing Plan membership (Appendix A), actuarial assumptions and methods employed in the valuation (Appendix B), a summary of pertinent Plan provisions (Appendix C), a glossary of key actuarial terms (Appendix D), and tables containing member contribution rates (Appendix E).

The results of this report rely on future Plan experience conforming to the underlying assumptions. To the extent that actual Plan experience deviates from the underlying assumptions, the results would vary accordingly.

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

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION I – EXECUTIVE SUMMARY

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

- The funded status of the Plan,
- Past and expected trends in the funding progress of the Plan, and
- Employer and employee contribution rates for Plan Year 2018-2019.

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

A. Valuation Basis

This valuation determines the employer contributions required for the employers' fiscal years beginning July 1, 2018. The employers include the County of Stanislaus and related employers, the City of Ceres, and other participating Special Districts.

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

- The Normal Cost under the Entry Age Normal Cost Method,
- Amortization of the Unfunded Actuarial Liability (UAL), and
- The Fund's expected administrative expenses.

The UAL payment is determined as the amount needed to fund the outstanding UAL as of June 30, 2017 over a period of 19 years as a level percentage of pay.

This valuation was prepared based on the Plan provisions shown in Appendix C.

Actuarial experience studies are performed every three years. This valuation was performed based on the economic and demographic assumptions that were determined in the Actuarial Experience Study performed by Cheiron as of June 30, 2015 and adopted by the Board on March 16, 2016. This valuation is the third and final to use the above experience study as the basis for the assumptions. A summary of the assumptions and methods used in the current valuation is shown in Appendix B.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

SECTION I – EXECUTIVE SUMMARY

B. Key Findings of this Valuation

The key results of the June 30, 2017 actuarial valuation are as follows:

- The actuarially determined employer contribution rate increased from 29.01% of payroll to 31.65% of payroll for the current valuation. The contribution rate reflects the final year of a three-year phase-in of the impact of changes to the economic and demographic assumptions first adopted for the June 30, 2015 actuarial valuation. Without the phase-in, the actuarial cost would have been 31.95% of pay for the prior valuation.
- The Plan's funded ratio, the ratio of Actuarial Assets over Actuarial Liability, increased from 72.8% to 74.3%. Likewise, the Plan's funded ratio on a market value basis increased from 69.1% to 74.5%.
- The Unfunded Actuarial Liability (UAL) is the excess of the Plan's Actuarial Liability over the Actuarial Value of Assets. The Plan experienced a decrease in the UAL from \$691.3 million to \$679.9 million as of June 30, 2017. This decrease in UAL was largely due to investment and demographic gains.
- During the year ending June 30, 2017, the return on Plan assets was 14.4% on a market value basis net of investment (but not administrative) expenses, as compared to the 7.25% assumption. The Actuarial Value of Assets recognizes 20% of the difference between the expected and actual return on the Market Value of Assets (MVA). This method of smoothing the asset gains and losses returned 8.3% on the smoothed value of assets, an actuarial asset gain of \$20.8 million. The gain in the Actuarial Value of Assets reflects the continued recognition of past investment losses, which partially offsets the higher market return this year.
- During the 2016-17 Plan Year, the actuarial liabilities of the Plan increased less than expected, largely due to salary increases lower than expected. These and other unexpected changes resulted in a liability gain of \$8.1 million.
- Overall participant membership increased compared to last year. There were 506 new hires and rehires during 2016-2017 and the total active population increased from 4,248 to 4,309, or 1.4%. Total projected payroll increased from \$263,395,718 to \$269,544,436, or 2.3%.
- The Actuarial Experience Study as of June 30, 2015 recommended changes to many of the actuarial assumptions used in this valuation. The Retirement Board adopted these changes for the June 30, 2015 valuation. The Retirement Board decided to implement a three-year phase-in of the impact of these changes on the employer contribution rates.

For this valuation, the phase-in is in its third and final year, and the impact of the changes from the assumptions are now fully reflected in the rates, which are approximately 0.5% of

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION I – EXECUTIVE SUMMARY

pay higher than they would have been without the phase-in. The phase-in of rate increases is consistent with practices described by the California Actuarial Advisory Panel (CAAP), as well as other actuarial organizations.

In Tables I-1 and I-2, we summarize the key results of the valuation with respect to assets and liabilities, contribution and membership. We also include the employer contribution rate after the impact of the final year of the three-year phase-in. The results are presented and compared for both the current and prior Plan year.

Table I-1		
Stanislaus County Employees' Retirement Association		
Summary of Key Valuation Results		
(in millions)		
Valuation Date	June 30, 2016	June 30, 2017
Fiscal Year End	2018	2019
Actuarial Liability	\$ 2,537.1	\$ 2,648.2
Actuarial Value of Assets ¹	<u>\$ 1,845.8</u>	<u>\$ 1,968.2</u>
Unfunded Actuarial Liability (Actuarial Value)	\$ 691.3	\$ 679.9
Funding Ratio (Actuarial Value)	72.8%	74.3%
Market Value of Assets ¹	<u>\$ 1,752.7</u>	<u>\$ 1,973.8</u>
Unfunded Actuarial Liability (Market Value)	\$ 784.3	\$ 674.3
Funding Ratio (Market Value)	69.1%	74.5%
Net Employer Contribution Rate ²	31.95%	31.65%
Employer Contribution Rate after Phase-In	29.01%	31.65%

¹ Net of non-valuation reserves.

² Prior to phase in of the assumption change.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

SECTION I – EXECUTIVE SUMMARY

Table I-2			
Membership Total			
Item	June 30, 2016	June 30, 2017	% Change
Actives	4,248	4,309	1.4%
Current Inactives	1,030	1,071	4.0%
Retired Members	3,651	3,746	2.6%
Total Members	8,929	9,126	2.2%
 Ratio of Retired Members to Active Members	 85.9%	 86.9%	
 Active Member Payroll (FYE 2017/2018)	 \$ 263,395,718	 \$ 269,544,436	 2.3%
Average Pay per Active	\$ 62,005	\$ 62,554	0.9%

The ratio of retired members to active members is a measure of the maturity of the plan. It shows how many retirees are supported by each active member. A higher ratio indicates a more mature plan and potentially higher risk since the retiree benefits are larger relative to the contribution base, i.e. the active member payroll. Table I-2 shows that the ratio of retired members to active members continues to increase, indicating the ongoing maturation of the Plan.

Assets and Liabilities

Table I-3 presents a comparison between the June 30, 2016 and June 30, 2017 StanCERA assets, liabilities, Unfunded Actuarial Liability, and funding ratios, both on a market and smoothed basis.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION I – EXECUTIVE SUMMARY

Table I-3			
Assets & Liabilities			
(in millions)			
Item	June 30, 2016	June 30, 2017	% Change
Actuarial Liability			
Actives	\$ 975.7	\$ 992.1	1.7%
Current Inactives	134.2	145.9	8.8%
Retired Members	<u>1,427.2</u>	<u>1,510.2</u>	<u>5.8%</u>
Total Actuarial Liability	\$ 2,537.1	\$ 2,648.2	4.4%
Market Value of Assets (MVA)	\$ 1,752.7	\$ 1,973.8	12.6%
Actuarial Value of Assets (AVA)	\$ 1,845.8	\$ 1,968.2	6.6%
Unfunded Actuarial Liability - MVA	\$ 784.4	\$ 674.3	-14.0%
Unfunded Actuarial Liability - AVA	\$ 691.3	\$ 679.9	-1.6%
Funding Ratio - MVA	69.1%	74.5%	5.4%
Funding Ratio - AVA	72.8%	74.3%	1.5%

Table I-3 indicates that the Actuarial Liability increased by 4.4% and the Actuarial Value of Assets increased by 6.6%, resulting in an increase in the funding ratio from 72.8% as of June 30, 2016 to 74.3% as of June 30, 2017. The increase in Actuarial Liability was offset by investment gains as well as liability gains, which led to the accompanying increase in the funded status. StanCERA employs a commonly used actuarial smoothing method on the market value that dampens market volatility. The Actuarial Value of Assets increased by less than the market value because of the impact of deferred investment losses from prior years. The funding ratio measured on a Market Value of Assets basis was 74.5% as of June 30, 2017.

Section II provides additional information explaining the development of the Actuarial Value of Assets.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

SECTION I – EXECUTIVE SUMMARY

Changes in UAL

The Unfunded Actuarial Liability (UAL) for StanCERA decreased by \$11.4 million, from \$691.3 million to \$679.9 million. Table I-4 below presents the specific components of the change in the UAL.

As noted above, the return on the actuarial assets used to compute the UAL and the employer contribution rate was 8.3% during the 2016-17 Plan Year. Investment returns greater than the assumed rate of 7.25% decreased the UAL by \$20.8 million.

Liability gains decreased the UAL by \$8.1 million, mainly due to salary increases lower than expected.

Changes in the valuation software programming decreased the UAL by \$0.8 million.

The UAL also increased by \$20.1 million due to contributions smaller than the actuarially determined amount. This is a result of the 12-month lag in the implementation of contribution rates and the phase-in of the impact of the assumption changes.

The expected change in the UAL due to the yearly amortization of the UAL balance – a decrease of \$1.9 million, as a result of the amortization schedule for the current year – combined with the above UAL changes to produce an overall decrease of \$11.4 million.

Experience	in millions
1. Unfunded actuarial liability, 6/30/2016	\$ 691.3
2. Expected change in unfunded actuarial liability	\$ (1.9)
3. Unfunded decrease due to investment gain	(20.8)
4. Unfunded increase due to contribution shortfall	20.1
5. Unfunded decrease due to liability gain	(8.1)
7. Unfunded change due to programming changes	(0.8)
8. Total change in unfunded actuarial liability	\$ (11.4)
9. Unfunded actuarial liability, 6/30/2017	\$ 679.9

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

SECTION I – EXECUTIVE SUMMARY

Changes in Employer Contributions

Thus far, the experience of the 2016-17 Plan year has been presented in terms of the UAL and funded ratio. Table I-5 below summarizes the impact of actuarial experience and changes in assumptions on the employer contribution rate.

Item	Total	Normal Cost	Amortization	Admin Expense
FYE 2018 Net Employer Contribution Rate with Phase-In	29.01%	11.54%	16.57%	0.91%
Impact of Phase-in	2.94%	0.43%	2.47%	0.03%
FYE 2018 Net Employer Contribution Rate - Full	31.95%	11.97%	19.04%	0.94%
Change Due to Asset Gain	-0.57%	0.00%	-0.57%	0.00%
Change Due to Contribution Shortfall	0.55%	0.00%	0.55%	0.00%
Change Due to Demographic Changes	-0.41%	-0.19%	-0.22%	0.00%
Change Due to Effect of Payroll on Amortization	0.17%	0.00%	0.17%	0.00%
Change Due to Programming Changes	-0.04%	-0.01%	-0.03%	0.00%
FYE 2019 Net Employer Contribution Rate - Full	31.65%	11.77%	18.94%	0.94%

Before adjusting for Plan experience during the year, there was an expected change in due to the phase-in of prior assumption changes from the 2012-2015 Experience Study. A review of the changes in the employer contribution rate from the prior valuation reveals that Plan experience during the year – including demographic and salary changes, as well as asset experience – resulted in a net decrease in the full employer contribution rate of 0.30%:

- Asset experience produced an investment gain on a smoothed basis, as described earlier. The smoothed loss decreased the contribution rate by 0.57% of pay.

The ratio of actuarial to Market Value of Assets is 99.7%. There are now \$5.6 million in net deferred gains as of June 30, 2017, as well as \$18 million in a non-valuation Contingency Reserve.

- The Plan received a smaller contribution than the actuarially determined amount. The net impact of the shortfall was an increase in the cost by 0.55% of pay.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION I – EXECUTIVE SUMMARY

- The demographic experience of the Plan – rates of retirement, death, disability, and termination, as well as salary and COLA changes – caused a decrease in cost of 0.41% of pay. Lower than expected salary increases for returning members was the largest factor contributing to a decrease in the Unfunded Actuarial Liability and the associated amortization payment. New entrants and losses associated with new retirees and COLA increases offset the gains. The decrease in the amortization payment was also aided by a reduction in the employer-paid Normal Cost as a result of the continued transition of the active workforce to membership in the new PEPRAs tiers, which reflect lower benefit levels for new hires.
- Overall payroll was lower than expected by about \$2.4 million. As a result, the unfunded liability amortization payment and administrative expenses were spread over a smaller payroll base than expected, and the employer contribution rate increased by 0.17% of pay.
- The impact of updates to actuarial software coding decreased the cost by 0.04% of pay.

Plan Risk

Table I-6 shows the ratio of assets to active member payroll for StanCERA.

Active Member Payroll	\$ 269,544,436
Assets (Market Value)	\$ 1,973,847,972
Ratio of Assets to Payroll	7.32
Ratio with 100% Funding	9.82

One of the most important measures of a plan's risk is the ratio of plan assets to payroll. The table above shows StanCERA's assets as a percentage of active member payroll. This ratio indicates the sensitivity of the Plan to the returns earned on Plan assets.

We note in the table that Plan assets currently are 7.3 times covered payroll for the Plan; as a point of reference, the average asset-to-payroll ratio for the '37 Act systems as a whole is currently around 7.4. As funding improves and the Plan reaches 100% funding, the ratio of asset to payroll will increase past nine times payroll, perhaps higher depending on the Plan's future demographic makeup.

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

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

SECTION I – EXECUTIVE SUMMARY

On the other hand, consider the situation for StanCERA. Suppose StanCERA's assets lose 10% of their value in a year. Since they are assumed to earn 7.25%, there is an actuarial loss of 17.25% of Plan assets. Based on the current ratio of asset to payroll (732%), that means the loss in assets is about 126% of active payroll (732% of the 17.25% loss). There is only one source of funding to make up for this loss: the employers. Consequently, barring future offsetting investment gains, the employer has to make up the asset loss in future contributions. In this example of a one-year loss of 10%, this shortfall will eventually require an additional annual amortization payment in the vicinity of 9.49% of payroll if amortized over 19 years.

As the Plan matures and becomes better funded, the ratio of asset to payroll will increase. When assets are 982% of pay, the 10% loss discussed above will translate to a loss of over 169% of payroll, which when amortized over 19 years will increase the employer contribution by 12.73% of member pay. Therefore, the Plan is likely to become significantly more sensitive to market variation in the future than it is today.

C. Historical Trends

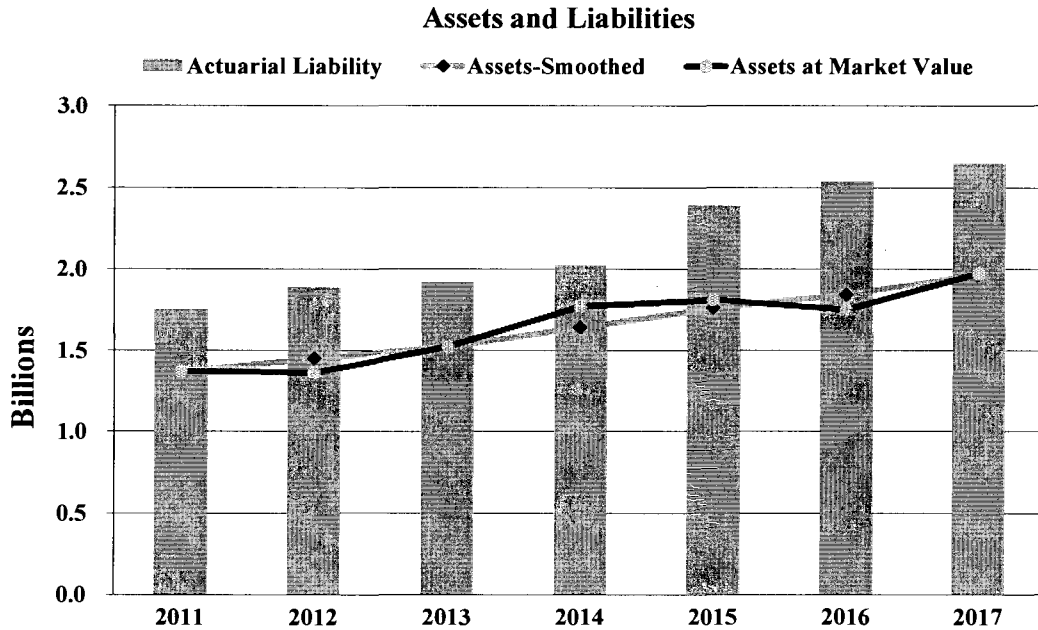
Despite the fact that for most retirement plans the greatest attention is given to the current valuation results and in particular, the size of the current Unfunded Actuarial Liability and the employer contribution, it is important to remember that each valuation is merely a snapshot in the long-term progress of a pension fund. It is more important to judge a current year's valuation result relative to historical trends, as well as trends expected into the future.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION I – EXECUTIVE SUMMARY

Assets and Liabilities

The chart compares the Market Value of Assets (MVA) and Actuarial Value of Assets (AVA) to the Actuarial Liabilities. The percentage shown in the table below the graph is the ratio of the Actuarial Value of Assets to the Actuarial Liability (the funded ratio). The funded ratio has decreased from 78.1% in 2011 to 74.3% as of June 30, 2017. The drop in the funded ratio in 2015 was primarily due to changes in assumptions. The funded ratio has increased from the 72.8% of last year because of liability and investment gains.



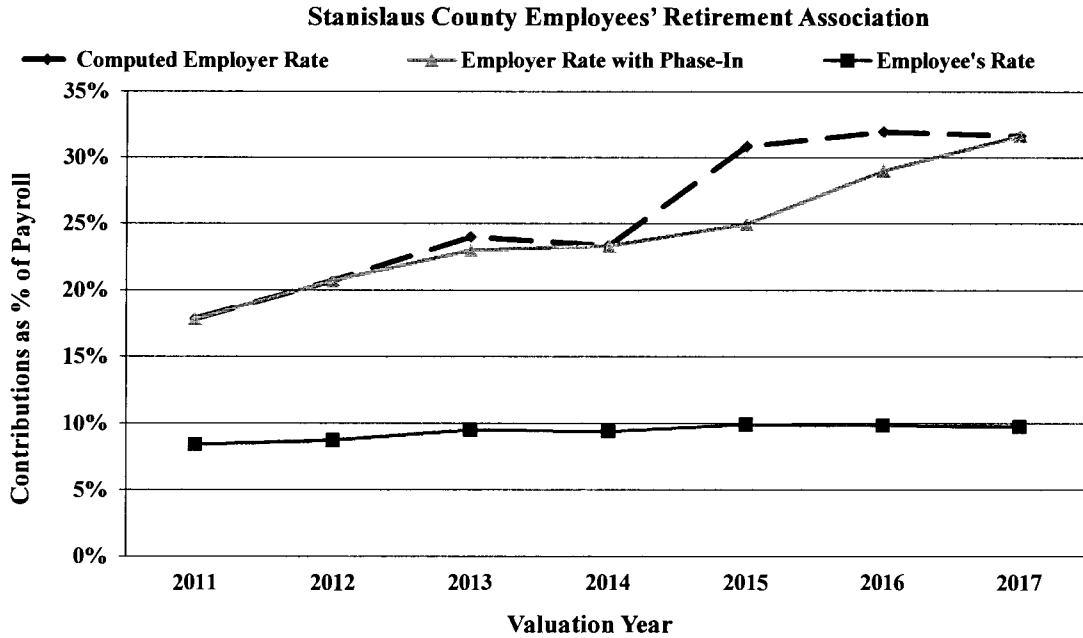
Valuation Year	2011	2012	2013	2014	2015	2016	2017
Funded Ratio	78.1%	76.9%	79.4%	81.1%	73.7%	72.8%	74.3%
UAL (Billions)	\$ 0.39	\$ 0.44	\$ 0.40	\$ 0.38	\$ 0.63	\$ 0.69	\$ 0.68

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

SECTION I – EXECUTIVE SUMMARY

Contribution Trends

In the chart, we present the historical trends for the StanCERA contribution rates. The employer contribution rates have risen since 2011 as result of the investment losses from 2008-2009, compounded by demographic losses and changes to the actuarial assumptions and methods. The average employee contribution rates have also increased as the Plan's economic and demographic assumptions have changed.



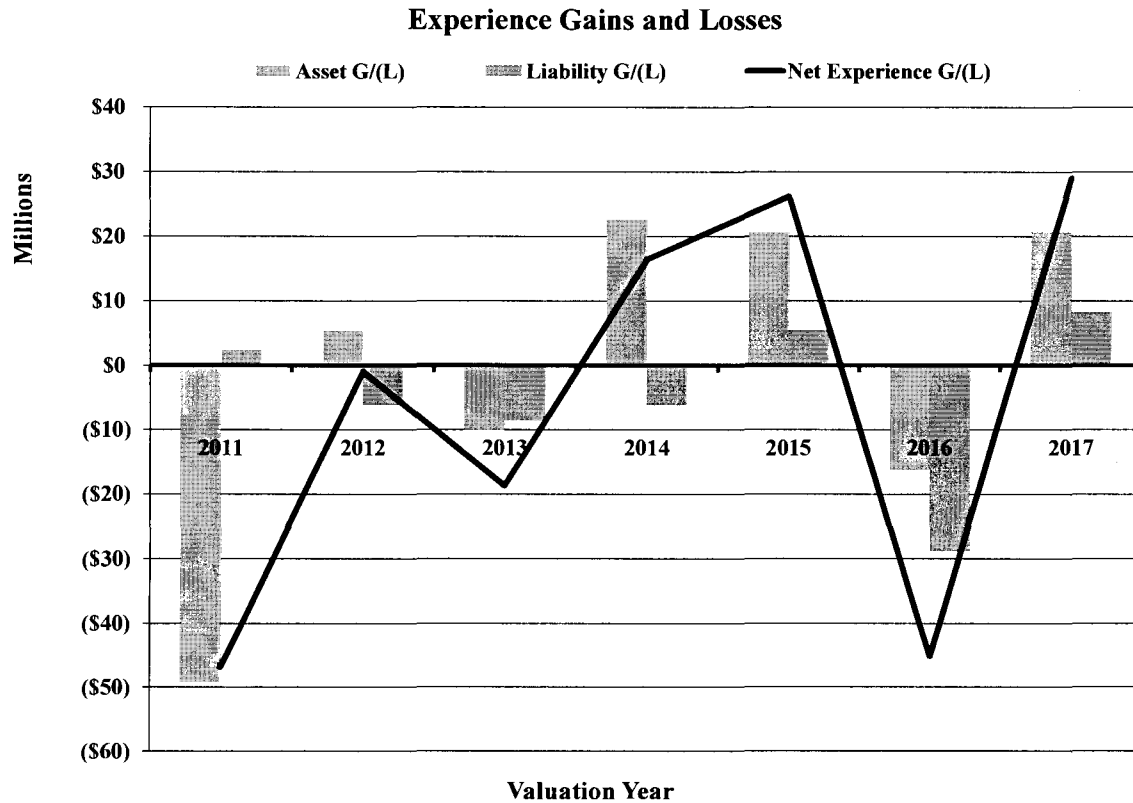
**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION I – EXECUTIVE SUMMARY

Gains and Losses

The following chart for StanCERA presents the pattern of annual gains and losses, broken into the investment and liability components. The investment gains and losses represent the changes on a smoothed basis (i.e. based on the Actuarial Value of Assets). The chart does not include any changes in StanCERA's assets and liabilities attributable to changes to actuarial methods, procedures or assumptions or Plan benefit changes.

The investment loss in 2010-2011 was the most significant gain or loss during the last seven years. The Plan experienced more modest gains and losses from 2011-2012 through 2014-2015. In 2015-2016, the Plan experienced the largest investment and liability losses in five years. This was followed by large investment and liability gains this year.



STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

SECTION I – EXECUTIVE SUMMARY

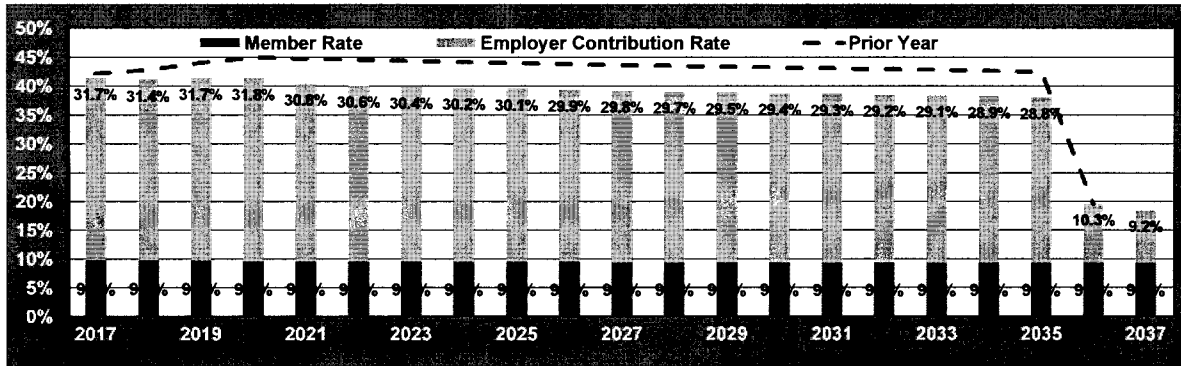
D. Future Expected Financial Trends

The analysis of projected financial trends is an important component of this valuation. In this Section, we present our assessment of the implications of the June 30, 2017 valuation results in terms of benefit security (assets over liabilities). All the projections in this section are based on the current investment return assumption of 7.25%. We have assumed future total payroll increases of 3.25% per year.

The graph shows the expected employer and employee contribution rates based on achieving the 7.25% assumption **each year** for the next 20 years. This scenario is highly unlikely: even if the Plan does achieve an **average** return of 7.25% over this time period, the returns in each given year will certainly vary. The expected total contribution rates based on the prior year valuation as of June 30, 2016 are shown (in the dashed line) for comparison.

The contribution rate graph shows that employer contribution rates are expected to stay relatively stable until current unfunded liability amortization period (19 years) ends.

Projection of Contributions, 7.25% Return Each Year



The total contribution rate (employer plus employee) is approximately 41% of member payroll for the June 30, 2017 valuation; it is expected to gradually decline to approximately 38% if all actuarial assumptions are met. The gradual decline is due to the expected hiring of new PEPRA members to replace the legacy employees as they retire, thus lowering the average normal cost of the Plan.

After 19 years, the total contribution rate is expected to drop due to the end of the current unfunded liability amortization period, to a level around 18% of pay, representing the expected Normal Cost plus administrative expenses. The end of the amortization period only impacts the employer contribution rate. It has no impact on the employee contribution rate.

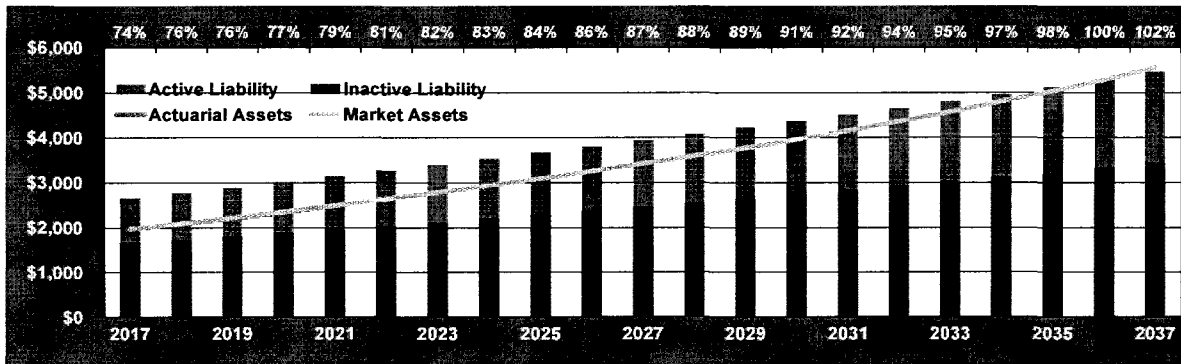
**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION I – EXECUTIVE SUMMARY

Asset and Liability Projections:

The graph shows the projection of assets and liabilities assuming that assets will earn the 7.25% assumption each year during the projection period. The funded ratio shown is based on Actuarial Value of Assets.

Projection of Assets And Liabilities, 7.25% Return Each Year
(\$ millions)



The graph above shows that the projected funded status increases over the next 20 years to gradually exceed 100%, as can be expected based on the amortization policy, assuming the actuarial assumptions are achieved.

However, as above, it is the **actual** return on Plan assets that will determine the future funding status and contribution rate to the Fund. The Actuarial Value of Assets is less than the Market Value of Assets as of June 30, 2017, and the two are assumed to be equal past 2021.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

SECTION II – ASSETS

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

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

- **Disclosure** of Plan assets as of June 30, 2016 and June 30, 2017,
- Statement of the **changes** in market values during the year,
- Development of the **Actuarial Value of Assets**,
- An assessment of historical **investment performance versus inflation**, and
- An allocation of the unfunded liability between the **valuation subgroups**.

Disclosure

There are two types of asset values disclosed in the valuation, the Market Value of Assets, and the Actuarial Value of Assets. The market value represents “snap-shot” or “cash-out” values, which provide the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with corresponding swings in the marketplace. As a result, market values are usually not as suitable for long-range planning as are the Actuarial Value of Assets which reflects smoothing of annual investment returns.

Table II-1 on the next page discloses and compares each asset class as of June 30, 2016 and June 30, 2017.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION II – ASSETS

Table II-1 Statement of Assets at Market Value		
	Fiscal Year ending	Fiscal Year ending
Assets	June 30, 2016	June 30, 2017
Cash and Cash Equivalents	\$ 55,503,333	\$ 92,153,518
Total Cash and Cash Equivalents	\$ 55,503,333	\$ 92,153,518
Receivables		
Interest and Dividends	\$ 7,165,933	\$ 6,443,406
Contributions	4,516,013	5,039,247
Securities Transactions	47,333,635	63,078,011
Total Receivables	\$ 59,015,581	\$ 74,560,664
Fixed Assets		
Capitalized Software	\$ 97,028	\$ 64,686
Real Estate Occupied	1,688,922	1,669,945
Real Estate Leased	1,126,171	1,113,517
Other	446,502	1,062,537
Total Fixed Assets	\$ 3,358,623	\$ 3,910,685
Investments at Market Value		
Fixed Income	\$ 523,222,780	\$ 460,780,851
Equities	1,068,159,217	1,294,693,635
Collateral on Loaned Securities	196,552,545	140,584,293
Other	144,572,623	166,288,705
Total Investments	\$ 1,932,507,165	\$ 2,062,347,484
Liabilities		
Accounts Payable	\$ (10,429,303)	\$ (11,953,339)
Security Transactions Payable	(69,993,618)	(85,803,403)
Collateral Held for Loaned Securities	(196,552,545)	(140,584,293)
Other	(495,523)	(408,005)
Total Liabilities	\$ (277,470,989)	\$ (238,749,040)
Market Value of Assets	\$ 1,772,913,713	\$ 1,994,223,311

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

SECTION II – ASSETS

Changes in Market Value

The components of asset change are:

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

Table II-2 on the next page shows the components of change in the Market Value of Assets during the fiscal years ending June 30, 2016 and June 30, 2017.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

SECTION II – ASSETS

Table II-2		
Changes in Market Values		
<u>Additions</u>	Fiscal Year ending <u>June 30, 2016</u>	Fiscal Year ending <u>June 30, 2017</u>
Contributions		
Employer's Contribution	\$ 58,196,310	\$ 63,024,560
Members' Contributions	23,916,508	25,463,745
Total Contributions	\$ 82,112,818	\$ 88,488,305
Net Investment Income		
Net Appreciation/(Depreciation) in		
Fair Value of Investments	\$ (70,114,702)	\$ 216,142,516
Interest and Dividends	47,206,807	45,117,367
Commission Recapture	46,825	20,827
Other Investment Income	197,502	159,696
Total Investment Income	\$ (22,663,568)	\$ 261,440,406
Investment Expense	(9,440,764)	(9,985,798)
Net Investment Income	\$ (32,104,332)	\$ 251,454,608
Securities Lending Activities		
Securities Lending Income	\$ 1,116,644	\$ 1,221,133
Expenses from Securities Lending Activities	(334,588)	(366,036)
Net Securities Lending Income	782,056	855,097
Total Net Investment Income	\$ (31,322,276)	\$ 252,309,705
Total Additions	\$ 50,790,542	\$ 340,798,010
<u>Deductions</u>		
Benefits	\$ 106,946,768	\$ 114,290,758
Refunds	1,219,042	2,553,100
Administrative Costs	2,315,223	2,644,554
Total Deductions	\$ 110,481,033	\$ 119,488,412
Net Increase/(Decrease)	\$ (59,690,491)	\$ 221,309,598
Net Assets Beginning of Year	\$ 1,832,604,204	\$ 1,772,913,713
Net Assets End of Year	\$ 1,772,913,713	\$ 1,994,223,311
Approximate Return	-1.72%	14.36%

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

SECTION II – ASSETS

Actuarial Value of Assets (AVA)

The Actuarial Value of Assets represents a “smoothed” value developed by the actuary to reduce the volatile results which could develop due to short-term fluctuations in the Market Value of Assets. For this Plan, the Actuarial Value of Assets is calculated on a modified market-related value. The Market Value of Assets is adjusted to recognize, over a five-year period, investment earnings which are greater than (or less than) the assumed investment return. However, in no event will the Actuarial Value of Assets be less than 80% or more than 120% of market value on the valuation date.

The Valuation Assets are the portion of the Actuarial Assets dedicated to funding the basic pension benefits. The Valuation Assets exclude the value of any non-valuation reserves, such as reserves established for legal contingencies. The Valuation Assets also exclude the value of any non-valuation contingency reserves, which have been established according to the Board’s funding policy. In valuations prior to the June 30, 2014 valuation, a reserve associated with the Burial Allowance was excluded from the Valuation Assets; both the assets and liabilities associated with this benefit are included in this valuation.

The table on the following page shows the development of the Actuarial Asset and Valuation Assets values.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION II – ASSETS

Table II-3 Development of Actuarial Value of Assets for 6/30/2017	
Item	Total
1. Market Value as of 6/30/2016	\$ 1,772,913,713
2. Non-Investment Cash Flow for 2016-2017	(31,000,107)
3. Expected Return in 2016-2017	127,432,152
4. Expected Market Value as of 6/30/2017: (1 + 2 + 3)	\$ 1,869,345,758
5. Actual Return in 2016-2017	252,309,705
6. Actual Return Above Expected in 2016-2017: (5 - 3)	124,877,553
7. Market Value as of 6/30/2017	\$ 1,994,223,311
8. Deferred Recognition of Returns Above Expected	
A. 2016-2017 (80% of \$124,877,553)	99,902,042
B. 2015-2016 (60% of -\$163,175,725)	(97,905,435)
C. 2014-2015 (40% of -\$69,060,690)	(27,624,276)
D. 2013-2014 (20% of \$156,253,060)	31,250,612
E. Total	\$ 5,622,943
9. Preliminary Actuarial Value of Assets: (7 - 8e)	\$ 1,988,600,368
10. Corridor Limit	
A. 80% of Net Market Value	1,595,378,649
B. 120% of Net Market Value	2,393,067,973
11. Actuarial Value after Corridor as of 6/30/2017	\$ 1,988,600,368
12. Rate of Return on Actuarial Value of Assets	8.30%
13. Ratio of Actuarial Value to Market Value: (11 ÷ 7)	99.7%
14. Special (Non Valuation) Reserves:	
A. Health Insurance Reserves	0
B. Special COL Reserve	0
C. Legal Contingency Reserve	2,202,759
D. Tier 3 Disability Reserve	1,560
E. Contingency Reserve	18,171,020
F. Total Special Reserves (Market Value)	\$ 20,375,339
15. Adjusted Total Special Reserves (99.7% of Market, Except Contingency)	\$ 20,369,124
16. Pension Reserves at Actuarial Value (Valuation Assets): (11 - 15)	\$ 1,968,231,244

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION II – ASSETS

Historical Investment Performance

The table shows the historical annual asset returns on a Market Value, Actuarial Value, and Valuation Asset basis, as well in the increase in the Consumer Price Index (CPI) since 1997. Note that the returns prior to 2013 are expressed net of investment and administrative expenses; the returns for 2013 (and future years) are expressed net of investment expenses only.

Table II-4 Net Return on Assets vs. Increase in Consumer Price Index				
Year Ended June 30	Net Return at Market Value	Net Return at Actuarial Value	Net Return at Valuation Assets	Increase in Consumer Price Index¹
1997	20.4%			2.3%
1998	13.4%			1.7%
1999	10.6%			2.0%
2000	6.3%			3.7%
2001	7.0%			3.2%
2002	-4.5%			1.1%
2003	5.2%		4.9%	2.1%
2004	6.1%		6.3%	3.3%
2005	8.2%		5.5%	2.5%
2006	9.9%		10.8%	4.3%
2007	16.0%	10.8%	0.6%	2.7%
2008	-8.5%	8.0%	16.7%	5.0%
2009	-17.2%	-9.6%	-9.4%	-1.4%
2010	15.6%	13.0%	14.7%	1.1%
2011	22.1%	3.5%	4.2%	3.6%
2012	0.1%	6.4%	6.5%	1.7%
2013	13.9%	7.0%	7.2%	1.8%
2014	18.0%	9.4%	9.5%	2.1%
2015	3.9%	9.1%	9.0%	0.1%
2016	-1.7%	6.3%	6.3%	1.0%
2017	14.4%	8.3%	8.4%	1.6%
20-Year Compound Average	6.5%	N/A	N/A	2.1%
15-Year Compound Average	6.5%	N/A	6.6%	2.1%
10-Year Compound Average	5.3%	6.0%	7.1%	1.6%
5-Year Compound Average	9.4%	8.0%	8.1%	1.3%

¹ Based on All Urban Consumers - U.S. City Average, June indices.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION II – ASSETS

Allocation of Unfunded Actuarial Liability by Valuation Subgroup

The following table shows the allocation of the Unfunded Actuarial Liability between the two valuation subgroups (County / Former County Members and City of Ceres / Special District Members). The Valuation Assets are reduced by the liability associated with the inactive members and the refundable contribution balances for active members, and the remaining assets are allocated to each subgroup based on their share of the active liability. These UAL balances are used to calculate each subgroup's amortization payment.

Table II-5				
Allocation of 6/30/2017 Unfunded Liability				
(in thousands)				
	County and Former County	Ceres and Other Districts	Total	
1. Actuarial Value of Assets			\$	1,968,231
2. Accumulated Employee Contributions	193,027	13,359		206,386
3. Inactive Actuarial Liability	1,590,718	65,367		1,656,085
4. Net Assets for Distribution [1 - 2 - 3]			\$	105,760
5. Active Actuarial Liability	\$ 927,353	\$ 64,724	\$	992,077
6. Allocation of Remaining Assets	93.48%	6.52%		100.00%
7. Remaining Assets	98,860	6,900		105,760
8. Total Assets for Actives [2 + 7]	291,888	20,259		312,146
9. Active Funded Ratio [8 ÷ 5]	31.5%	31.3%		31.5%
10. Actuarial Value of Assets [3 + 8]	\$ 1,882,606	\$ 85,626	\$	1,968,231
11. AVA Funded Ratio [10 ÷ (3 + 5)]	74.76380%	65.81990%		74.3%
12. Unfunded Actuarial Liability [5 - 8]	\$ 635,465	\$ 44,465	\$	679,930

Within the two valuation subgroups (County / Former County Members and City of Ceres / Special District Members), the Actuarial Value of Assets and the Unfunded Actuarial Liability are allocated between Safety and General based on Actuarial Liability. See Table III-1.



STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

SECTION III – LIABILITIES

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

- **Disclosure** of Plan liabilities at June 30, 2016 and June 30, 2017,
- Statement of **changes** in these liabilities during the year.

Disclosure

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the people ultimately using the figures and the purpose for which they are using them. Note that these liabilities are not applicable for settlement purposes, including the purchase of annuities and the payment of lump sums.

- **Present Value of Future Benefits:** Used for measuring all future Plan obligations, represents the amount of money needed today to fully fund all benefits of the Plan both earned as of the valuation date and those to be earned in the future by current Plan participants, under the current Plan provisions.
- **Actuarial Liability:** Used for funding calculations, this liability is calculated taking the Present Value of Future Benefits and subtracting the present value of future Member Contributions and future Employer Normal Costs under an acceptable actuarial funding method. The method used for this Plan is called the **Entry Age Normal** (EAN) funding method.
- **Unfunded Actuarial Liability:** The excess of the Actuarial Liability over the Valuation Assets.

Table III-1 on the following page discloses each of these liabilities for the current and prior valuations. With respect to each disclosure, a subtraction of the appropriate value of Plan assets yields, for each respective type, a **net surplus**, or an **Unfunded Actuarial Liability**.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION III – LIABILITIES

Table III-1 Present Value of Future Benefits and Actuarial Liability (in thousands)						
	General		Safety		June 30, 2017	June 30, 2016
	County and Former County	Ceres and Other Districts	County and Former County	Ceres and Other Districts	Total	Total
	Present Value of Future Benefits					
Actives	\$ 982,880	\$ 38,220	\$ 334,131	\$ 53,482	\$ 1,408,712	\$ 1,386,514
Terminated Vested	100,819	5,204	31,071	8,840	145,934	134,179
Retirees	967,120	24,802	284,511	17,830	1,294,262	1,210,208
Disabled	48,978	2,599	75,443	5,145	132,166	127,435
Beneficiaries	54,622	373	28,154	573	83,723	89,524
Total StanCERA	\$ 2,154,418	\$ 71,198	\$ 753,311	\$ 85,870	\$ 3,064,797	\$ 2,947,860
Actuarial Liability						
Total Present Value of Benefits	\$ 2,154,418	\$ 71,198	\$ 753,311	\$ 85,870	\$ 3,064,797	\$ 2,947,860
Present Value of Future Normal Costs						
Employer Portion	150,955	6,126	63,302	9,592	229,976	228,047
Employee Portion	126,523	4,634	48,878	6,624	186,659	182,745
Actuarial Liability	\$ 1,876,940	\$ 60,437	\$ 641,131	\$ 69,654	\$ 2,648,162	\$ 2,537,067
Actuarial Value of Assets	\$ 1,403,272	\$ 39,780	\$ 479,334	\$ 45,846	\$ 1,968,231	\$ 1,845,764
Funded Ratio	74.8%	65.8%	74.8%	65.8%	74.3%	72.8%
Unfunded Actuarial Liability/(Surplus)	\$ 473,668	\$ 20,658	\$ 161,797	\$ 23,808	\$ 679,930	\$ 691,302



**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION III – LIABILITIES

The table shows the Actuarial Liabilities for each of the valuation subgroups (General and Safety), split by members' status.

	General		Safety		Total
	County and Former County	Ceres and Other Districts	County and Former County	Ceres and Other Districts	
Actuarial Liability					
Actives	\$ 705,402	\$ 27,459	\$ 221,951	\$ 37,265	\$ 992,077
Terminated Vested	100,819	5,204	31,071	8,840	145,934
Retirees	967,120	24,802	284,511	17,830	1,294,262
Disabled	48,978	2,599	75,443	5,145	132,166
Beneficiaries	54,622	373	28,154	573	83,723
Total	\$ 1,876,940	\$ 60,437	\$ 641,131	\$ 69,654	\$ 2,648,162

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION III – LIABILITIES

Changes in Liabilities

Each of the Liabilities disclosed in the prior tables are expected to change at each valuation. The components of that change, depending upon which liability is analyzed, can include:

- New hires since the last valuation
- Benefits accrued since the last valuation
- Plan amendments increasing benefits
- Passage of time which adds interest to the prior liability
- Benefits paid to retirees since the last valuation
- Participants retiring, terminating, or dying at rates different than expected
- A change in actuarial or investment assumptions
- A change in the actuarial funding method

Unfunded liabilities will change because of all of the above, and also due to changes in Plan assets resulting from:

- Employer contributions different than expected
- Investment earnings different than expected
- A change in the method used to measure Plan assets

**Table III-3
Development of 2017 Experience Gain/(Loss)
(in millions)**

Item	Cost
1. Unfunded Actuarial Liability at June 30, 2016	\$ 691.3
2. Middle of year actuarial liability payment	(50.2)
3. Interest to end of year on 1 and 2	<u>48.3</u>
4. Expected Unfunded Actuarial Liability at June 30, 2017 (1+2+3)	\$ 689.4
5. Actual Unfunded Liability at June 30, 2017	<u>679.9</u>
6. Difference: (4 - 5)	\$ 9.5
7. Portion of difference due to:	
A. Investment experience	\$ 20.8
B. Contribution (shortfall)/excess	(20.1)
C. Programming changes	0.8
D. New entrant loss	(2.3)
E. Other experience	<u>10.4</u>
F. Total	9.5

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

SECTION IV – CONTRIBUTIONS

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level of contributions is needed to properly maintain the funding status of the Plan. Typically, the actuarial process will use a funding technique that will result in a pattern of contributions that are both stable and predictable.

For this Plan, the actuarial funding method used to determine the Normal Cost and the Unfunded Actuarial Liability is the **Entry Age Normal (EAN)** cost method. There are three components to the total contribution: the **Normal Cost rate** (employee and employer), the **Unfunded Actuarial Liability rate** (UAL rate), and the **Administrative Expense** contribution.

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

The total Normal Cost is computed by adding the expected dollar amount of each active member's Normal Cost for the current year – known as the Individual Entry Age Method. The total Normal Cost is adjusted with interest to the middle of the year, to reflect the fact that the Normal Cost contributions are paid throughout the year as member payroll payments are made. Finally, the total Normal Cost rate is reduced by the member contribution rate to produce the employer Normal Cost rate. The member contribution rate for each subgroup is determined by adding the expected contributions for each member and dividing by the projected pay for each subgroup.

The EAN Actuarial Liability is calculated by subtracting the present value of future total Normal Cost from the Present Value of Future Benefits (as described on page 23).

The Unfunded Actuarial Liability (UAL) is the difference between the EAN Actuarial Liability and the Actuarial Value of Assets. The UAL payment is determined as the amount needed to fund the UAL over a closed 19-year period as a level percentage of payroll.

Beginning with the June 30, 2012 actuarial valuation, the Board adopted a policy of adding an amount equal to the expected annual administrative expense to the employer's required contribution. Prior to the June 30, 2012 actuarial valuation, the administrative expenses were included as an offset to the assumed earnings rate, and were shared between the employees and employers. For the June 30, 2017 valuation, this amount is estimated to be \$2.546 million.

Beginning with the June 30, 2015 actuarial valuation, the Board adopted a three-year phase-in of the impact of the assumption changes on the employer contribution rate. For this valuation, the phase-in is in its third and final year.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION IV – CONTRIBUTIONS

The table presents the calculation of the contribution rates for the Plan for this valuation and compares the total contribution rate with the prior year rate. The tables on the following pages contain more details on the calculation of the UAL amortization payments, as well as details on the calculation of the contribution rates for each group and tier. This includes the third year of phase-in of the assumption change.

Table IV-1 Development of the Net Employer Contribution Rate as of June 30, 2017 for FYE 2019						
	General		June 30, 2017 Safety		COMPOSITE	June 30, 2016 COMPOSITE
	County and Former County	Ceres and Other Districts	County and Former County	Ceres and Other Districts		
1. Total Normal Cost Rate	18.88%	20.84%	30.84%	32.54%	21.52%	21.82%
2. Member Contribution Rate	<u>8.80%</u>	<u>8.66%</u>	<u>13.26%</u>	<u>13.31%</u>	9.75%	9.85%
3. Employer Normal Cost Rate (1-2)	10.08%	12.18%	17.58%	19.23%	11.77%	11.97%
4. UAL Amortization	17.41%	19.82%	24.15%	25.24%	18.94%	19.04%
5. Administrative Expense Rate	<u>0.85%</u>	<u>0.98%</u>	<u>1.28%</u>	<u>1.37%</u>	0.94%	0.94%
6. Net Employer Contribution Rate (3+4+5)	28.34%	32.98%	43.01%	45.84%	31.65%	31.95%
7. Phase-In of Assumption Changes	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	0.00%	-2.94%
8. Final Employer Contribution Rate (6+7)	28.34%	32.98%	43.01%	45.84%	31.65%	29.01%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION IV – CONTRIBUTIONS

Table IV-2 contains the details of the calculations of the UAL rates for the Plan.

Table IV-2 Development of UAL Amortization Rates					
	General		Safety		TOTAL
	County and Former County	Ceres and Other Districts	County and Former County	Ceres and Other Districts	
Salary Scale:					
2018+	3.25%	3.25%	3.25%	3.25%	N/A
Amortization Factor	13.3156	13.3156	13.3156	13.3156	N/A
Payroll	\$ 204,314,978	\$ 7,828,729	\$ 50,316,812	\$ 7,083,917	\$ 269,544,436
Unfunded Actuarial Liability (actuarial value)	\$ 473,668,316	\$ 20,657,516	\$ 161,796,965	\$ 23,807,676	\$ 679,930,473
UAL Amortization	\$ 35,572,451	\$ 1,551,378	\$ 12,150,939	\$ 1,787,954	\$ 51,062,722
UAL Amortization Rate	17.41%	19.82%	24.15%	25.24%	18.94%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION IV – CONTRIBUTIONS

Tables IV-3 and IV-4 contain the calculations of the employer contribution rates for each group and tier, and reflects the third year of the three-year phase-in of the assumption change.

Table IV-3 Development of the General Member Contribution Rate as of June 30, 2017 for FYE 2019							
County and Former County	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	PEPRA	TOTAL
A. Total Normal Cost Rate	21.63%	17.67%	2.89%	17.04%	20.46%	16.09%	18.88%
B. Member Contribution Rate	<u>8.44%</u>	<u>8.00%</u>	<u>0.00%</u>	<u>1.39%</u>	<u>9.38%</u>	<u>8.04%</u>	8.80%
C. Employer Normal Cost Rate (A-B)	13.19%	9.67%	2.89%	15.65%	11.08%	8.05%	10.08%
D. UAL Amortization Rate	17.41%	17.41%	17.41%	17.41%	17.41%	17.41%	17.41%
E. Administrative Expense Rate	<u>0.94%</u>	<u>0.83%</u>	<u>0.62%</u>	<u>1.02%</u>	<u>0.88%</u>	<u>0.78%</u>	0.85%
F. Net June 30, 2017 Contribution Rate (C+D+E)	31.54%	27.91%	20.92%	34.08%	29.37%	26.24%	28.34%
Ceres and Other Districts							
A. Total Normal Cost Rate		16.29%		0.00%	22.34%	16.94%	20.84%
B. Member Contribution Rate		<u>7.80%</u>		<u>0.00%</u>	<u>8.77%</u>	<u>8.47%</u>	8.66%
C. Employer Normal Cost Rate (A-B)		8.49%		0.00%	13.57%	8.47%	12.18%
D. UAL Amortization Rate		19.82%		19.82%	19.82%	19.82%	19.82%
E. Administrative Expense Rate		<u>0.87%</u>		<u>0.61%</u>	<u>1.03%</u>	<u>0.87%</u>	0.98%
F. Net June 30, 2017 Contribution Rate (C+D+E)		29.18%		20.43%	34.42%	29.16%	32.98%

Administrative expenses allocated based on projected Employer Normal Cost and UAL Amortization contributions. See Table IV-5.



STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

SECTION IV – CONTRIBUTIONS

Table IV-4					
Development of the Safety Member Contribution Rate as of June 30, 2017 for FYE 2019					
	Tier 2	Tier 4	Tier 5	PEPRA	TOTAL
<u>County and Former County</u>					
A. Total Normal Cost Rate	30.11%	0.00%	33.36%	26.09%	30.84%
B. Member Contribution Rate	<u>12.68%</u>	<u>0.00%</u>	<u>13.43%</u>	<u>13.04%</u>	13.26%
C. Employer Normal Cost Rate (A-B)	17.43%	0.00%	19.93%	13.05%	17.58%
D. UAL Amortization Rate	24.15%	24.15%	24.15%	24.15%	24.15%
E. Administrative Expense Rate	<u>1.28%</u>	<u>0.74%</u>	<u>1.36%</u>	<u>1.14%</u>	1.28%
F. Net June 30, 2017 Contribution Rate (C+D+E)	42.86%	24.89%	45.44%	38.34%	43.01%
<u>Ceres and Other Districts</u>					
A. Total Normal Cost Rate			32.89%	30.82%	32.54%
B. Member Contribution Rate			<u>12.88%</u>	<u>15.41%</u>	13.31%
C. Employer Normal Cost Rate (A-B)			20.01%	15.41%	19.23%
D. UAL Amortization Rate			25.24%	25.24%	25.24%
E. Administrative Expense Rate			<u>1.39%</u>	<u>1.25%</u>	1.37%
F. Net June 30, 2017 Contribution Rate (C+D+E)			46.64%	41.90%	45.84%

Administrative expenses allocated based on projected Employer Normal Cost and UAL Amortization contributions. See Table IV-6.



**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION IV – CONTRIBUTIONS

Tables IV-5 and IV-6 show the allocation of the administrative expense for each group and tier. The administrative expense is allocated to each group and tier based on their share of the projected employer contributions prior to inclusion of the administrative expense.

Table IV-5 Development of the General Member Administrative Expense Rate as of June 30, 2017 for FYE 2019							
County and Former County	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	PEPRA	TOTAL
A. Projected Payroll for FYE 2019	\$ 45,148	\$ 14,066,507	\$ 684,934	\$ 1,583,136	\$ 126,498,634	\$ 61,436,619	\$ 204,314,978
B. Employer Normal Cost Rate	13.19%	9.67%	2.89%	15.65%	11.08%	8.05%	
C. UAL Amortization Rate	17.41%	17.41%	17.41%	17.41%	17.41%	17.41%	
D. Employer Contribution Rate Prior to Administrative Expense (B+C)	30.60%	27.08%	20.30%	33.06%	28.49%	25.46%	
E. Projected Employer Contribution for FYE 2019 Prior to Administrative Expense							
1. Normal Cost (A*B)	\$ 5,955	\$ 1,360,231	\$ 19,795	\$ 247,761	\$ 14,016,049	\$ 4,945,648	\$ 20,595,439
2. UAL Amortization (A*C)	7,860	2,448,979	119,247	275,624	22,023,412	10,696,115	35,571,237
3. Total Prior to Administrative Expense (A*D)	\$ 13,815	\$ 3,809,210	\$ 139,042	\$ 523,385	\$ 36,039,461	\$ 15,641,763	\$ 56,166,676
F. Allocated Administrative Expense	\$ 425	\$ 117,131	\$ 4,275	\$ 16,094	\$ 1,108,196	\$ 480,977	\$ 1,727,099
G. Administrative Expense Rate (F÷A)	0.94%	0.83%	0.62%	1.02%	0.88%	0.78%	
H. Projected Employer Contribution for FYE 2019 Due to Administrative Expense (A*G)	\$ 424	\$ 116,752	\$ 4,247	\$ 16,148	\$ 1,113,188	\$ 479,206	\$ 1,729,965
Ceres and Other Districts							
A. Projected Payroll for FYE 2019		\$ 229,955		\$ 57,753	\$ 5,630,406	\$ 1,910,615	\$ 7,828,729
B. Employer Normal Cost Rate		8.49%		0.00%	13.57%	8.47%	
C. UAL Amortization Rate		19.82%		19.82%	19.82%	19.82%	
D. Employer Contribution Rate Prior to Administrative Expense (B+C)		28.31%		19.82%	33.39%	28.29%	
E. Projected Employer Contribution for FYE 2019 Prior to Administrative Expense							
1. Normal Cost (A*B)		\$ 19,523		\$ 0	\$ 764,047	\$ 161,829	\$ 945,399
2. UAL Amortization (A*C)		45,577		11,447	1,115,946	378,684	1,551,654
3. Total Prior to Administrative Expense (A*D)		\$ 65,100		\$ 11,447	\$ 1,879,993	\$ 540,513	\$ 2,497,053
F. Allocated Administrative Expense		\$ 2,002		\$ 352	\$ 57,809	\$ 16,621	\$ 76,783
G. Administrative Expense Rate (F÷A)		0.87%		0.61%	1.03%	0.87%	
H. Projected Employer Contribution for FYE 2019 Due to Administrative Expense (A*G)		\$ 2,001		\$ 352	\$ 57,993	\$ 16,622	\$ 76,968



**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION IV – CONTRIBUTIONS

Table IV-6 Development of the Safety Member Administrative Expense Rate as of June 30, 2017 for FYE 2019					
	Tier 2	Tier 4	Tier 5	PEPRA	TOTAL
County and Former County					
A. Projected Payroll for FYE 2019	\$ 3,476,625	\$ 85,389	\$ 30,955,689	\$ 15,799,109	\$ 50,316,812
B. Employer Normal Cost Rate	17.43%	0.00%	19.93%	13.05%	
C. UAL Amortization Rate	24.15%	24.15%	24.15%	24.15%	
D. Employer Contribution Rate					
Prior to Administrative Expense (B+C)	41.58%	24.15%	44.08%	37.20%	
E. Projected Employer Contribution for FYE 2019					
Prior to Administrative Expense					
1. Normal Cost (A*B)	\$ 605,976	\$ 0	\$ 6,169,469	\$ 2,061,784	\$ 8,837,229
2. UAL Amortization (A*C)	839,605	20,621	7,475,799	3,815,485	12,151,510
3. Total Prior to Administrative Expense (A*D)	\$ 1,445,581	\$ 20,621	\$ 13,645,268	\$ 5,877,269	\$ 20,988,739
F. Allocated Administrative Expense	\$ 44,451	\$ 634	\$ 419,586	\$ 180,723	\$ 645,394
G. Administrative Expense Rate (F÷A)	1.28%	0.74%	1.36%	1.14%	
H. Projected Employer Contribution for FYE 2019					
Due to Administrative Expense (A*G)	\$ 44,501	\$ 632	\$ 420,997	\$ 180,110	\$ 646,240
Ceres and Other Districts					
A. Projected Payroll for FYE 2019			\$ 5,894,478	\$ 1,189,439	\$ 7,083,917
B. Employer Normal Cost Rate			20.01%	15.41%	
C. UAL Amortization Rate			25.24%	25.24%	
D. Employer Contribution Rate					
Prior to Administrative Expense (B+C)			45.25%	40.65%	
E. Projected Employer Contribution for FYE 2019					
Prior to Administrative Expense					
1. Normal Cost (A*B)			\$ 1,179,485	\$ 183,293	\$ 1,362,778
2. UAL Amortization (A*C)			1,487,766	300,214	1,787,980
3. Total Prior to Administrative Expense (A*D)			\$ 2,667,251	\$ 483,507	\$ 3,150,758
F. Allocated Administrative Expense			\$ 82,017	\$ 14,868	\$ 96,884
G. Administrative Expense Rate (F÷A)			1.39%	1.25%	
H. Projected Employer Contribution for FYE 2019					
Due to Administrative Expense (A*G)			\$ 81,933	\$ 14,868	\$ 96,801



**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION V – REQUIRED CAFR EXHIBITS

The GASB adopted Statement Nos. 67 and 68 which replaced GASB Statement Nos. 25 and 27. GASB 67 is effective for periods beginning after June 15, 2013 (first effective June 30, 2014 for the Plan) and GASB 68 is effective for fiscal years beginning after June 15, 2014 (first effective for the fiscal year July 1, 2014 to June 30, 2015 for the Employers). The disclosures needed to satisfy the new GASB requirements can be found in the StanCERA GASB 67/68 Report as of June 30, 2017.

In accordance with Government Finance Officers Association (GFOA) and their recommended checklist for Comprehensive Annual Financial Reports (CAFRs), we continue to prepare the Solvency Test disclosure and Actuarial Gain/Loss exhibit.

Solvency Test

The solvency test shows the portion of actuarial liabilities for active member contributions, inactive members, and the employer financed portion of the active members that are covered by the Actuarial Value of Assets.

The Actuarial Accrued Liability under GASB 25 is determined assuming that the Plan is ongoing and participants continue to terminate employment, retire, etc., in accordance with the actuarial assumptions. Beginning June 30, 2015, liabilities are discounted at the assumed valuation interest rate of 7.25%.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION V – REQUIRED CAFR EXHIBITS

Table V-1 SOLVENCY TEST									
(dollars in thousands)									
Valuation Date June 30,	(1)	(2)	(3)	Actuarial Accrued Liabilities	Valuation Assets	Portion of Actuarial Liabilities Covered by Reported Assets			
	Active Member Contributions	Retirees And Beneficiaries	Active And Terminated Members			(1)	(2)	(3)	
2003	\$ 176,622	\$ 455,784	\$ 325,689	\$ 958,095	\$ 928,022	100%	100%	91%	
2004	166,806	518,922	349,617	1,035,345	993,180	100%	100%	88%	
2005	205,556	551,810	358,994	1,116,310	1,049,691	100%	100%	81%	
2006 ¹	219,907	619,109	355,888	1,194,904	1,154,048	100%	100%	89%	
2008 ²	272,657	739,838	536,329	1,548,824	1,317,167	100%	100%	57%	
2009	298,342	781,082	574,292	1,653,716	1,171,767	100%	100%	16%	
2010	323,940	829,323	584,561	1,737,824	1,325,801	100%	100%	30%	
2011	337,201	897,384	523,133	1,757,718	1,372,046	100%	100%	26%	
2012	351,569	987,546	549,598	1,888,713	1,451,764	100%	100%	20%	
2013 ³	191,968	1,065,792	661,466	1,919,227	1,524,076	100%	100%	40%	
2014	193,301	1,144,734	688,335	2,026,371	1,644,077	100%	100%	44%	
2015	196,074	1,337,781	857,667	2,391,522	1,763,629	100%	100%	27%	
2016	200,960	1,427,166	908,941	2,537,067	1,845,764	100%	100%	24%	
2017	206,386	1,510,151	931,625	2,648,162	1,968,231	100%	100%	27%	

¹ Results recalculated, reflecting Level 1 assumption changes (new retirement, termination and withdrawal decrements) & new EFI EAN methodology.

² Reflects transfer as of June 30, 2008 of \$50 million from Non-Valuation to Valuation Reserves.

³ Reflects change to include only refundable contribution balance.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

SECTION V – REQUIRED CAFR EXHIBITS

Table V-2 displays the historical experience of gains and losses for the Plan. Each year there will be a gain or loss due to both assets and liabilities. In addition, there can be gains or losses due to changes in plan provisions or due to the adoption of new assumptions and methods. This year there is a large gain due to high investment returns and due to plan experience.

Plan Year Ending	Asset Sources	Liability Sources	Total	Changes in Plan Provisions	Changes in Assumptions/Methods
6/30/2004	\$ 8,536,049	\$ 12,492,070	\$ 21,028,119	\$ 0	\$ (2,088,246)
6/30/2005	26,573,640	11,238,430	37,812,070	0	0
6/30/2006	(27,756,878)	21,366,204	(6,390,674)	0	(14,845,293)
6/30/2007 ¹	86,178,774	0	86,178,774	0	134,470,779
6/30/2008	(50,709,169)	67,324,195	16,615,026	0	0
6/30/2009	228,905,354	12,996,828	241,902,182	0	0
6/30/2010	(76,507,113)	37,492,978	(39,014,135)	0	(51,743,766)
6/30/2011	49,205,018	(2,387,353)	46,817,665	0	(72,085,966)
6/30/2012	(5,283,786)	6,191,029	907,243	0	52,606,350
6/30/2013	10,200,000	8,500,000	18,700,000	0	(63,400,000)
6/30/2014	(22,600,000)	6,100,000	(16,500,000)	0	400,000
6/30/2015	(20,600,000)	(5,600,000)	(26,200,000)	0	269,800,000
6/30/2016 ²	16,300,000	28,900,000	45,200,000	0	0
6/30/2017	(20,800,000)	(8,900,000)	(29,700,000)	0	0

¹ Actuarial valuation was not performed for fiscal year ending June 30, 2007.

² Changes due to Actuarial Audit included as Liability Loss of \$700,000.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX A – MEMBERSHIP INFORMATION

The data for this valuation was provided by the StanCERA as of June 30, 2017. Cheiron did not audit any of the data. However, we performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

	<u>General Members</u>		<u>Safety Members</u>		<u>Total</u>	
	<u>7/1/2016</u>	<u>7/1/2017</u>	<u>7/1/2016</u>	<u>7/1/2017</u>	<u>7/1/2016</u>	<u>7/1/2017</u>
Active Participants						
Number	3,521	3,552	727	757	4,248	4,309
Average Age	45.15	45.02	38.11	37.73	43.94	43.74
Average Service	10.62	10.59	10.29	10.06	10.56	10.50
Average Pay (does not reflect impact of furloughs)	\$ 56,364	\$ 56,801	\$ 71,555	\$ 71,843	\$ 58,964	\$ 59,444
Service Retired						
Number	2,552	2,614	367	390	2,919	3,004
Average Age	69.64	69.90	64.76	64.84	69.02	69.24
Average Annual Total Benefit	\$ 29,368	\$ 30,139	\$ 53,226	\$ 55,279	\$ 32,368	\$ 33,403
Beneficiaries						
Number	334	338	94	93	428	431
Average Age	73.11	72.84	66.90	66.26	71.75	71.42
Average Annual Total Benefit	\$ 16,980	\$ 17,694	\$ 27,902	\$ 29,212	\$ 19,379	\$ 20,179
Duty Disabled						
Number	102	101	123	125	225	226
Average Age	68.02	68.86	57.58	58.33	62.31	63.04
Average Annual Total Benefit	\$ 24,834	\$ 25,421	\$ 37,475	\$ 38,340	\$ 31,744	\$ 32,566
Ordinary Disabled						
Number	72	78	7	7	79	85
Average Age	64.57	64.04	58.00	59.00	63.99	63.62
Average Annual Total Benefit	\$ 16,412	\$ 17,127	\$ 23,013	\$ 23,703	\$ 16,996	\$ 17,669
Total In Pay						
Number	3,060	3,131	591	615	3,651	3,746
Average Age	69.84	70.04	63.52	63.66	68.82	68.99
Average Annual Total Benefit	\$ 27,560	\$ 28,319	\$ 45,562	\$ 47,535	\$ 30,474	\$ 31,474
Terminated Vested						
Number	399	416	80	80	479	496
Average Age	49.88	49.75	42.48	43.19	48.64	48.69
Average Service	10.23	10.46	9.27	9.71	10.07	10.34
Transfers						
Number	398	424	153	151	551	575
Average Age	46.51	46.42	41.22	41.76	45.04	45.20
Average Service	6.80	6.96	7.32	7.22	6.95	7.03
Total Inactives						
Number	797	840	233	231	1,030	1,071
Average Age	48.20	48.07	41.65	42.26	46.72	46.81
Average Service	8.52	8.69	7.99	8.08	8.40	8.56

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX A – MEMBERSHIP INFORMATION

Data pertaining to active and inactive Members and their beneficiaries as of the valuation date was supplied by the Plan Administrator on electronic media. As is usual in studies of this type, Member data was neither verified nor audited. Cheiron did perform an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Plan Year Ending	Added During Year	Allowance Added	Removed During Year	Allowance Removed	At End of Year	Annual Allowance	% Increase in Retiree Allowance	Average Annual Allowance
2008	369	\$ 9,084,777	(148)	\$ (1,731,738)	2,666	\$ 63,296,000	19.18%	\$ 23,742
2009	156	\$ 2,168,425	(71)	\$ (647,870)	2,751	\$ 66,720,003	5.41%	\$ 24,253
2010	159	\$ 3,349,900	(80)	\$ (751,427)	2,830	\$ 71,464,735	7.11%	\$ 25,334
2011	263	\$ 4,724,416	(78)	\$ (1,194,042)	3,015	\$ 74,826,404	4.70%	\$ 25,732
2012	226	\$ 3,565,634	(99)	\$ (978,729)	3,142	\$ 80,157,222	7.12%	\$ 26,737
2013	198	\$ 6,036,138	(91)	\$ (1,144,584)	3,249	\$ 89,975,736	12.25%	\$ 27,694
2014	222	\$ 6,703,273	(86)	\$ (1,725,066)	3,385	\$ 96,405,454	7.15%	\$ 28,480
2015	237	\$ 7,778,716	(83)	\$ (2,043,313)	3,539	\$ 104,052,097	7.93%	\$ 29,402
2016	211	\$ 7,066,750	(99)	\$ (2,160,689)	3,651	\$ 111,260,240	6.93%	\$ 30,474
2017	202	\$ 6,749,973	(107)	\$ (2,471,229)	3,746	\$ 117,901,627	5.97%	\$ 31,474

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX A – MEMBERSHIP INFORMATION

	County and Former County						Ceres and Other Districts						Total County and Former County, Ceres and Other Districts	
	General Members		Safety Members		Total		General Members		Safety Members		Total		7/1/2016	7/1/2017
	7/1/2016	7/1/2017	7/1/2016	7/1/2017	7/1/2016	7/1/2017	7/1/2016	7/1/2017	7/1/2016	7/1/2017	7/1/2016	7/1/2017		
Active Participants														
Number	3,393	3,429	645	675	4,038	4,104	128	123	82	82	210	205	4,248	4,309
Average Age	45.13	44.97	38.09	37.58	44.01	43.76	45.55	46.33	38.27	38.95	42.70	43.38	43.94	43.74
Average Service	10.58	10.54	10.21	9.92	10.52	10.44	11.73	12.08	10.87	11.26	11.40	11.75	10.56	10.50
Average Pay ¹	\$ 56,134	\$ 56,662	\$ 70,051	\$ 70,581	\$ 58,357	\$ 58,952	\$ 62,462	\$ 60,674	\$ 83,383	\$ 82,237	\$ 70,632	\$ 69,299	\$ 58,964	\$ 59,444
Terminated Vested														
Number	384	399	71	69	455	468	15	17	9	11	24	28	479	496
Average Age	49.84	49.79	42.58	43.41	48.71	48.85	50.93	48.59	41.67	41.82	47.46	45.93	48.64	48.69
Average Service	10.22	10.41	9.28	9.69	10.07	10.31	10.59	11.46	9.17	9.84	10.06	10.82	10.07	10.34
Transfers														
Number	370	395	125	121	495	516	28	29	28	30	56	59	551	575
Average Age	46.83	46.75	40.92	41.36	45.34	45.49	42.21	41.86	42.57	43.40	42.39	42.64	45.04	45.20
Average Service	6.75	6.86	6.98	6.80	6.81	6.85	7.56	8.28	8.85	8.92	8.21	8.61	6.95	7.03
Total Inactives														
Number	754	794	196	190	950	984	43	46	37	41	80	87	1,030	1,071
Average Age	48.36	48.28	41.52	42.10	46.95	47.09	45.26	44.35	42.35	42.98	43.91	43.70	46.72	46.81
Average Service	8.52	8.65	7.82	7.85	8.37	8.49	8.62	9.46	8.93	9.16	8.76	9.32	8.40	8.56

¹ All payroll figures shown are annual.



**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX A – MEMBERSHIP INFORMATION

County and Former County Members

	General Members												Safety Members					
	Tier 1		Tier 2		Tier 3		Tier 4		Tier 5		PEPRA		Tiers 1 & 4		Tiers 2 & 5		PEPRA	
	7/1/2016	7/1/2017	7/1/2016	7/1/2017	7/1/2016	7/1/2017	7/1/2016	7/1/2017	7/1/2016	7/1/2017	7/1/2016	7/1/2017	7/1/2016	7/1/2017	7/1/2016	7/1/2017	7/1/2016	7/1/2017
Active Participants																		
Number	1	1	247	232	15	13	23	18	2,070	1,911	1,037	1,254	1	1	446	417	198	257
Average Age	57.00	58.00	39.66	40.70	53.40	53.85	61.22	61.56	49.59	50.22	37.05	37.43	62.00	63.00	42.09	42.72	28.93	29.14
Average Service	17.76	18.76	5.25	6.39	18.05	19.11	35.00	35.92	15.40	16.31	1.58	2.05	21.63	22.69	13.96	14.69	1.72	2.12
Average Pay ¹	\$ 41,745	\$ 43,509	\$ 54,911	\$ 57,684	\$ 51,118	\$ 50,775	\$ 86,099	\$ 84,760	\$ 62,361	\$ 63,781	\$ 43,416	\$ 45,293	\$ 81,949	\$ 82,290	\$ 76,864	\$ 79,332	\$ 54,645	\$ 56,335
Terminated Vested																		
Number	11	8	58	56	21	20	1	2	293	311	0	2	0	0	70	69	1	0
Average Age	62.55	63.75	55.86	53.93	56.05	57.10	67.00	67.00	47.67	48.23	0.00	31.50	0.00	0.00	42.83	43.41	25.00	0.00
Average Service	10.20	10.17	8.77	7.83	12.74	12.70	5.55	18.28	10.34	10.72	0.00	4.99	0.00	0.00	9.41	9.69	0.24	0.00
Transfers																		
Number	5	6	119	125	13	13	2	1	207	212	24	38	1	1	115	110	9	10
Average Age	61.80	63.00	48.18	48.08	50.08	51.08	59.00	58.00	46.71	47.16	35.33	35.79	68.00	69.00	41.29	41.81	33.22	33.60
Average Service	11.59	11.57	2.89	3.21	14.61	15.21	14.33	3.27	8.92	9.33	1.25	1.63	6.08	6.08	7.41	7.27	1.67	1.62
Total Inactives																		
Number	16	14	177	181	34	33	3	3	500	523	24	40	1	1	185	179	10	10
Average Age	62.31	63.43	50.69	49.89	53.76	54.73	61.67	64.00	47.27	47.80	35.33	35.58	68.00	69.00	41.87	42.42	32.40	33.60
Average Service	10.63	10.77	4.81	4.64	13.46	13.69	11.41	13.28	9.75	10.16	1.25	1.80	6.08	6.08	8.16	8.21	1.52	1.62

¹ All payroll figures shown are annual.

CERES and Other District Members

	General Members												Safety Members					
	Tier 1		Tier 2		Tier 3		Tier 4		Tier 5		PEPRA		Tiers 1 & 4		Tiers 2 & 5		PEPRA	
	7/1/2016	7/1/2017	7/1/2016	7/1/2017	7/1/2016	7/1/2017	7/1/2016	7/1/2017	7/1/2016	7/1/2017	7/1/2016	7/1/2017	7/1/2016	7/1/2017	7/1/2016	7/1/2017	7/1/2016	7/1/2017
Active Participants																		
Number	0	0	4	4	0	0	2	1	86	78	36	40	0	0	68	62	14	20
Average Age	0.00	0.00	45.00	46.00	0.00	0.00	62.00	70.00	48.77	50.21	37.00	38.20	0.00	0.00	39.54	40.65	32.07	33.70
Average Service	0.00	0.00	10.56	11.54	0.00	0.00	42.13	48.83	15.31	16.42	1.64	2.75	0.00	0.00	12.91	14.14	0.97	2.32
Average Pay ¹	\$ 0	\$ 0	\$ 52,363	\$ 55,402	\$ 0	\$ 0	\$ 65,243	\$ 55,657	\$ 70,998	\$ 69,374	\$ 43,040	\$ 44,360	\$ 0	\$ 0	\$ 89,555	\$ 91,204	\$ 53,405	\$ 54,440
Terminated Vested																		
Number	1	1	4	4	0	0	0	0	9	11	1	1	0	0	9	11	0	0
Average Age	62.00	63.00	56.25	57.25	0.00	0.00	0.00	0.00	48.33	44.64	42.00	43.00	0.00	0.00	41.67	41.82	0.00	0.00
Average Service	5.32	5.32	7.59	7.59	0.00	0.00	0.00	0.00	12.21	13.26	13.29	13.29	0.00	0.00	9.17	9.84	0.00	0.00
Transfers																		
Number	0	0	5	4	0	0	0	0	21	23	2	2	0	0	27	29	1	1
Average Age	0.00	0.00	51.00	48.25	0.00	0.00	0.00	0.00	41.38	41.78	29.00	30.00	0.00	0.00	43.07	43.86	29.00	30.00
Average Service	0.00	0.00	2.19	1.99	0.00	0.00	0.00	0.00	9.39	9.90	1.75	2.25	0.00	0.00	9.12	9.16	1.73	1.73
Inactives																		
Number	1	1	9	8	0	0	0	0	30	34	3	3	0	0	36	40	1	1
Average Age	62.00	63.00	53.33	52.75	0.00	0.00	0.00	0.00	43.47	42.71	33.33	34.33	0.00	0.00	42.72	43.30	29.00	30.00
Average Service	5.32	5.32	4.59	4.79	0.00	0.00	0.00	0.00	10.24	10.99	5.59	5.93	0.00	0.00	9.13	9.35	1.73	1.73

¹ All payroll figures shown are annual.



**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX A – MEMBERSHIP INFORMATION

Valuation Date	Plan Type	Number	Annual Payroll	Average Annual Salary	Increase in Average Pay
June 30, 2003	General	3,626	\$163,505,000	\$45,092	6.76%
	Safety	637	\$34,159,000	\$53,625	3.98%
	Total	4,263	\$197,664,000	\$46,367	5.23%
June 30, 2004	General	3,618	\$164,462,000	\$45,457	0.81%
	Safety	630	\$35,501,000	\$56,351	5.08%
	Total	4,248	\$199,963,000	\$47,072	1.52%
June 30, 2005	General	3,651	\$173,399,000	\$47,494	4.48%
	Safety	687	\$38,282,000	\$55,723	-1.11%
	Total	4,338	\$211,681,000	\$48,797	3.66%
June 30, 2006	General	3,702	\$179,767,000	\$48,559	2.24%
	Safety	689	\$40,001,000	\$58,057	4.19%
	Total	4,391	\$219,768,000	\$50,050	2.57%
June 30, 2008	General	3,719	\$230,942,000	\$62,098	27.88%
	Safety	731	\$44,638,000	\$61,064	5.18%
	Total	4,450	\$275,580,000	\$61,928	23.73%
June 30, 2009	General	3,627	\$201,144,000	\$55,457	-10.69%
	Safety	739	\$47,172,000	\$63,832	4.53%
	Total	4,366	\$248,316,000	\$56,875	-8.16%
June 30, 2010	General	3,464	\$202,200,198	\$58,372	5.26%
	Safety	685	\$46,630,275	\$68,073	6.64%
	Total	4,149	\$248,830,473	\$59,974	5.45%
June 30, 2011	General	3,232	\$184,906,498	\$57,211	-1.99%
	Safety	637	\$41,800,298	\$65,621	-3.60%
	Total	3,869	\$226,706,796	\$58,596	-2.30%
June 30, 2012	General	3,233	\$179,260,736	\$55,447	-3.08%
	Safety	661	\$41,657,273	\$63,022	-3.96%
	Total	3,894	\$220,918,009	\$56,733	-3.18%
June 30, 2013	General	3,230	\$176,437,755	\$54,625	-1.48%
	Safety	694	\$42,590,563	\$61,370	-2.62%
	Total	3,924	\$219,028,318	\$55,818	-1.61%
June 30, 2014	General	3,303	\$179,606,090	\$54,377	-0.45%
	Safety	689	\$43,422,198	\$63,022	2.69%
	Total	3,992	\$223,028,288	\$55,869	0.09%
June 30, 2015	General	3,421	\$188,550,804	\$55,116	1.36%
	Safety	723	\$49,166,923	\$68,004	7.91%
	Total	4,144	\$237,717,727	\$57,364	2.68%
June 30, 2016	General	3,521	\$198,457,059	\$56,364	2.26%
	Safety	727	\$52,020,521	\$71,555	5.22%
	Total	4,248	\$250,477,580	\$58,964	2.79%
June 30, 2017	General	3,552	\$201,758,423	\$56,801	0.78%
	Safety	757	\$54,385,261	\$71,843	0.40%
	Total	4,309	\$256,143,684	\$59,444	0.81%

Actuarial valuation was not performed for fiscal year ending June 30, 2007.



**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX A – MEMBERSHIP INFORMATION

StanCERA Membership – Retired Members as of June 30, 2017

Age	County and Former County				Ceres and Other Districts				Total	
	General Members		Safety Members		General Members		Safety Members		Number	Annual Average
	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit		
35-39	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
40-44	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
45-49	0	\$ 0	3	\$ 62,963	0	\$ 0	0	\$ 0	3	\$ 62,963
50-54	44	\$ 19,450	56	\$ 61,505	0	\$ 0	5	\$ 29,966	105	\$ 42,380
55-59	191	\$ 26,469	54	\$ 50,727	7	\$ 22,487	4	\$ 101,080	256	\$ 32,643
60-64	452	\$ 33,444	72	\$ 50,295	15	\$ 36,515	4	\$ 109,338	543	\$ 36,322
65-69	683	\$ 32,621	68	\$ 55,818	20	\$ 25,594	2	\$ 69,636	773	\$ 34,576
70-74	526	\$ 32,670	58	\$ 59,939	11	\$ 30,967	0	\$ 0	595	\$ 35,297
75-79	310	\$ 27,074	39	\$ 50,780	6	\$ 37,898	0	\$ 0	355	\$ 29,861
80-84	148	\$ 23,998	15	\$ 61,621	3	\$ 43,901	0	\$ 0	166	\$ 27,758
85-89	116	\$ 24,260	4	\$ 21,379	0	\$ 0	0	\$ 0	120	\$ 24,164
90-94	62	\$ 20,487	6	\$ 28,694	0	\$ 0	0	\$ 0	68	\$ 21,211
95+	20	\$ 17,262	0	\$ 0	0	\$ 0	0	\$ 0	20	\$ 17,262
All Ages	2,552	\$ 30,120	375	\$ 54,475	62	\$ 30,915	15	\$ 75,385	3,004	\$ 33,403

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
 ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

APPENDIX A – MEMBERSHIP INFORMATION

StanCERA Membership – Service-Connected Disabled Members as of June 30, 2017

Age	County and Former County				Ceres and Other Districts				Total	
	General Members		Safety Members		General Members		Safety Members		Number	Annual Average Benefit
	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit		
	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit
25-29	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
30-34	0	\$ 0	2	\$ 18,051	0	\$ 0	0	\$ 0	2	\$ 18,051
35-39	0	\$ 0	4	\$ 34,644	0	\$ 0	0	\$ 0	4	\$ 34,644
40-44	1	\$ 15,458	7	\$ 31,939	0	\$ 0	1	\$ 51,751	9	\$ 32,309
45-49	2	\$ 23,256	14	\$ 38,350	0	\$ 0	1	\$ 30,609	17	\$ 36,119
50-54	1	\$ 30,648	18	\$ 35,247	1	\$ 30,270	0	\$ 0	20	\$ 34,768
55-59	6	\$ 25,336	16	\$ 31,815	0	\$ 0	0	\$ 0	22	\$ 30,048
60-64	21	\$ 24,558	22	\$ 42,428	1	\$ 23,712	1	\$ 40,309	45	\$ 33,626
65-69	20	\$ 25,311	17	\$ 46,173	1	\$ 28,647	2	\$ 40,733	40	\$ 35,032
70-74	18	\$ 25,090	12	\$ 37,176	3	\$ 21,669	1	\$ 81,961	34	\$ 30,726
75-79	15	\$ 27,971	5	\$ 37,719	0	\$ 0	0	\$ 0	20	\$ 30,408
80-84	5	\$ 24,244	2	\$ 37,343	0	\$ 0	0	\$ 0	7	\$ 27,987
85-89	5	\$ 28,562	0	\$ 0	0	\$ 0	0	\$ 0	5	\$ 28,562
90-94	1	\$ 18,085	0	\$ 0	0	\$ 0	0	\$ 0	1	\$ 18,085
95+	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
All Ages	95	\$ 25,472	119	\$ 37,869	6	\$ 24,606	6	\$ 47,683	226	\$ 32,566

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX A – MEMBERSHIP INFORMATION

StanCERA Membership – Nonservice-Connected Disabled Members as of June 30, 2017

Age	County and Former County				Ceres and Other Districts				Total	
	General Members		Safety Members		General Members		Safety Members		Number	Annual Average
	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit		
35-39	0	\$ 0	0	\$ 0	1	\$ 22,254	0	\$ 0	1	\$ 22,254
40-44	3	\$ 15,821	0	\$ 0	0	\$ 0	0	\$ 0	3	\$ 15,821
45-49	4	\$ 19,871	1	\$ 22,924	0	\$ 0	1	\$ 36,023	6	\$ 23,071
50-54	11	\$ 15,505	0	\$ 0	0	\$ 0	0	\$ 0	11	\$ 15,505
55-59	8	\$ 20,484	1	\$ 26,149	0	\$ 0	0	\$ 0	9	\$ 21,114
60-64	9	\$ 17,640	2	\$ 22,742	0	\$ 0	0	\$ 0	11	\$ 18,567
65-69	17	\$ 15,764	1	\$ 14,639	0	\$ 0	0	\$ 0	18	\$ 15,701
70-74	13	\$ 20,714	1	\$ 20,703	0	\$ 0	0	\$ 0	14	\$ 20,714
75-79	8	\$ 13,585	0	\$ 0	0	\$ 0	0	\$ 0	8	\$ 13,585
80-84	1	\$ 12,195	0	\$ 0	0	\$ 0	0	\$ 0	1	\$ 12,195
85-89	2	\$ 14,096	0	\$ 0	0	\$ 0	0	\$ 0	2	\$ 14,096
90-94	1	\$ 7,187	0	\$ 0	0	\$ 0	0	\$ 0	1	\$ 7,187
95+	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
All Ages	77	\$ 17,061	6	\$ 21,650	1	\$ 22,254	1	\$ 36,023	85	\$ 17,669

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX A – MEMBERSHIP INFORMATION

StanCERA Membership – Beneficiaries as of June 30, 2017

Age	County and Former County				Ceres and Other Districts				Total	
	General Members		Safety Members		General Members		Safety Members		Number	Annual Average Benefit
	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit		
0-24	1	\$ 31,150	2	\$ 18,318	0	\$ 0	0	\$ 0	3	\$ 22,595
25-29	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
30-34	1	\$ 37,656	0	\$ 0	0	\$ 0	0	\$ 0	1	\$ 37,656
35-39	1	\$ 7,690	0	\$ 0	0	\$ 0	0	\$ 0	1	\$ 7,690
40-44	5	\$ 9,961	1	\$ 10,835	0	\$ 0	0	\$ 0	6	\$ 10,107
45-49	9	\$ 13,064	5	\$ 24,148	0	\$ 0	0	\$ 0	14	\$ 17,023
50-54	17	\$ 13,237	6	\$ 35,838	0	\$ 0	0	\$ 0	23	\$ 19,133
55-59	16	\$ 14,181	11	\$ 19,279	0	\$ 0	2	\$ 31,757	29	\$ 17,327
60-64	31	\$ 16,546	11	\$ 25,997	0	\$ 0	0	\$ 0	42	\$ 19,021
65-69	47	\$ 18,724	14	\$ 28,764	1	\$ 11,516	0	\$ 0	62	\$ 20,874
70-74	62	\$ 19,625	11	\$ 39,123	0	\$ 0	0	\$ 0	73	\$ 22,563
75-79	36	\$ 18,182	18	\$ 31,199	2	\$ 20,373	0	\$ 0	56	\$ 22,444
80-84	37	\$ 17,682	5	\$ 33,614	0	\$ 0	0	\$ 0	42	\$ 19,578
85-89	33	\$ 20,614	7	\$ 29,894	0	\$ 0	0	\$ 0	40	\$ 22,238
90-94	26	\$ 17,405	0	\$ 0	0	\$ 0	0	\$ 0	26	\$ 17,405
95+	13	\$ 13,941	0	\$ 0	0	\$ 0	0	\$ 0	13	\$ 13,941
All Ages	335	\$ 17,696	91	\$ 29,156	3	\$ 17,420	2	\$ 31,757	431	\$ 20,179

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX A – MEMBERSHIP INFORMATION

StanCERA Membership – Benefit Form Elections as of June 30, 2017

	County and Former County		Ceres and Other Districts		Total
	General	Safety	General	Safety	
Service Retired					
Option #0 (Unmodified 60% to Spouse)	2,108	331	47	12	2,498
Option #1 (Cash Refund)	209	10	6	0	225
Option #2 (100% Continuance)	203	30	9	2	244
Option #3 (50% Continuance)	28	3	0	1	32
Option #4 (Other)	4	1	0	0	5
Total Service Retired	2,552	375	62	15	3,004
Ordinary Disability					
Option #0 (Unmodified 60% to Spouse)	68	4	1	1	74
Option #1 (Cash Refund)	5	2	0	0	7
Option #2 (100% Continuance)	4	0	0	0	4
Option #3 (50% Continuance)	0	0	0	0	0
Total Ordinary Disability	77	6	1	1	85
Duty Disability					
Option #0 (Unmodified 60% to Spouse)	85	107	5	5	202
Option #1 (Cash Refund)	1	1	1	0	3
Option #2 (100% Continuance)	6	10	0	1	17
Option #3 (50% Continuance)	3	1	0	0	4
Total Duty Disability	95	119	6	6	226
Total	2,724	500	69	22	3,315

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX A – MEMBERSHIP INFORMATION

**Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2017
General Members (County and Former County)**

Count													
Age	Years of Service												Total Count
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
Under 20	1	0	0	0	0	0	0	0	0	0	0	0	1
20-24	29	2	3	0	0	0	0	0	0	0	0	0	34
25-29	104	89	71	28	6	6	0	0	0	0	0	0	304
30-34	67	74	49	64	43	76	22	0	0	0	0	0	395
35-39	56	50	69	48	30	91	94	28	0	0	0	0	466
40-44	37	28	35	27	24	70	129	113	10	0	0	0	473
45-49	23	26	25	30	8	53	109	116	55	10	0	0	455
50-54	24	23	24	18	10	48	91	110	77	48	11	0	484
55-59	23	17	15	14	10	39	74	112	64	63	14	8	453
60-64	7	9	5	4	3	25	57	77	28	39	10	7	271
65-69	0	1	0	4	1	14	12	19	9	10	2	4	76
70 & Over	0	1	0	0	0	1	5	8	1	1	0	0	17
Total Count	371	320	296	237	135	423	593	583	244	171	37	19	3,429

Compensation (\$)													
Age	Years of Service												Avg. Comp.
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
Under 20	46,847	0	0	0	0	0	0	0	0	0	0	0	46,847
20-24	36,026	33,467	36,833	0	0	0	0	0	0	0	0	0	35,947
25-29	41,670	40,572	41,503	44,853	46,936	49,027	0	0	0	0	0	0	41,852
30-34	42,751	43,454	50,248	48,724	58,837	53,903	51,295	0	0	0	0	0	49,153
35-39	43,198	46,847	46,571	47,184	49,449	59,661	57,018	57,009	0	0	0	0	51,734
40-44	47,132	47,079	46,440	52,805	51,158	61,996	57,812	63,802	64,674	0	0	0	57,071
45-49	42,004	41,453	44,489	48,505	61,958	57,869	61,843	66,837	68,724	70,585	0	0	59,678
50-54	59,361	43,837	50,558	52,310	56,673	59,206	63,103	66,022	69,870	72,327	60,712	0	63,060
55-59	55,536	54,028	46,634	47,992	55,460	60,718	65,521	61,820	67,372	73,249	89,283	66,399	63,951
60-64	39,509	47,605	40,346	79,992	54,001	50,713	58,528	59,307	61,921	85,109	69,097	89,346	62,468
65-69	0	56,844	0	59,267	42,502	66,816	65,520	66,154	75,487	57,246	47,787	50,061	63,983
70 & Over	0	176,206	0	0	0	265,000	83,579	48,250	42,349	61,953	0	0	79,376
Average	44,197	44,437	45,895	49,327	54,403	58,877	60,401	63,387	67,926	74,538	73,090	71,413	56,662



**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX A – MEMBERSHIP INFORMATION

**Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2017
General Members (Ceres and Other Districts)**

Count														
Age	Years of Service												Total Count	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over		
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	1	2	1	0	0	0	0	0	0	0	0	0	0	4
25-29	3	1	2	3	0	0	0	0	0	0	0	0	0	9
30-34	1	3	0	1	1	1	0	0	0	0	0	0	0	7
35-39	1	2	2	0	3	4	4	2	0	0	0	0	0	18
40-44	0	2	2	1	0	2	4	5	1	0	0	0	0	17
45-49	1	1	1	0	0	3	6	1	0	0	1	0	0	14
50-54	0	0	2	0	1	0	5	7	0	2	1	0	0	18
55-59	1	0	1	1	0	4	1	6	2	3	0	0	0	19
60-64	0	0	0	0	2	0	3	2	2	1	1	0	0	11
65-69	0	0	0	1	0	2	1	0	0	0	0	0	0	4
70 & Over	0	0	0	0	0	1	0	0	0	0	0	1	0	2
Total Count	8	11	11	7	7	17	24	23	5	6	3	1	0	123

Compensation (\$)														
Age	Years of Service												Avg. Comp.	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over		
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	31,056	36,936	40,244	0	0	0	0	0	0	0	0	0	0	36,293
25-29	32,133	30,312	37,396	41,563	0	0	0	0	0	0	0	0	0	36,244
30-34	36,959	40,316	0	41,198	48,503	66,629	0	0	0	0	0	0	0	44,891
35-39	50,700	45,118	46,055	0	43,010	68,950	58,273	66,041	0	0	0	0	0	55,725
40-44	0	55,486	35,160	41,283	0	55,614	62,541	72,247	66,643	0	0	0	0	59,520
45-49	99,382	85,269	47,362	0	0	121,886	55,729	44,290	0	0	83,885	0	0	75,730
50-54	0	0	85,618	0	42,025	0	53,125	73,224	0	64,383	58,358	0	0	65,477
55-59	73,584	0	49,628	37,764	0	73,779	60,084	65,291	65,967	67,711	0	0	0	65,420
60-64	0	0	0	0	43,192	0	58,924	53,391	89,987	55,679	50,175	0	0	59,615
65-69	0	0	0	37,579	0	127,690	55,028	0	0	0	0	0	0	86,997
70 & Over	0	0	0	0	0	121,175	0	0	0	0	0	55,657	0	88,416
Average	48,510	46,510	49,608	40,359	43,706	87,705	57,298	67,335	75,710	64,596	64,139	55,657	0	60,674



**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX A – MEMBERSHIP INFORMATION

**Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2017
Safety Members (County and Former County)**

Count													
Age	Years of Service												Total Count
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	23	11	2	0	0	0	0	0	0	0	0	0	36
25-29	29	34	37	26	17	2	0	0	0	0	0	0	145
30-34	9	12	17	8	12	29	16	0	0	0	0	0	103
35-39	4	2	7	5	6	14	61	14	0	0	0	0	113
40-44	0	2	2	2	3	5	37	44	9	0	0	0	104
45-49	2	0	2	0	1	6	11	31	31	8	0	0	92
50-54	1	1	1	1	0	2	10	18	9	8	0	0	51
55-59	0	1	1	0	4	0	4	5	2	0	1	0	18
60-64	0	0	0	0	0	0	2	4	1	2	0	0	9
65-69	0	0	0	0	1	1	1	0	1	0	0	0	4
70 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Count	68	63	69	42	44	59	142	116	53	18	1	0	675

Compensation (\$)													
Age	Years of Service												Avg. Comp.
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	52,238	54,752	57,053	0	0	0	0	0	0	0	0	0	53,274
25-29	48,510	51,245	56,570	59,991	66,027	69,109	0	0	0	0	0	0	55,605
30-34	54,948	58,460	62,334	59,029	65,037	71,136	76,108	0	0	0	0	0	65,914
35-39	40,228	52,094	65,108	59,192	67,172	66,630	76,659	80,505	0	0	0	0	72,176
40-44	0	58,551	63,045	69,919	62,543	72,087	76,103	81,786	91,266	0	0	0	78,528
45-49	68,268	0	73,692	0	48,089	74,788	78,857	82,202	90,181	80,977	0	0	83,042
50-54	72,134	81,144	81,008	155,335	0	68,633	77,939	83,668	92,847	92,718	0	0	86,072
55-59	0	71,211	60,101	0	81,863	0	70,424	82,794	83,848	0	68,765	0	77,272
60-64	0	0	0	0	0	0	80,069	78,991	82,290	76,458	0	0	79,034
65-69	0	0	0	0	90,630	81,141	151,491	0	94,428	0	0	0	104,423
70 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	51,065	54,282	59,959	62,456	67,267	70,535	77,112	81,982	90,510	85,693	68,765	0	70,581



**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX A – MEMBERSHIP INFORMATION

**Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2017
General Members (Ceres and Other Districts)**

Count													
Age	Years of Service												Total Count
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	1	1	0	0	0	0	0	0	0	0	0	0	2
25-29	3	3	2	1	1	0	0	0	0	0	0	0	10
30-34	1	4	1	0	5	5	4	0	0	0	0	0	20
35-39	0	0	0	0	0	4	5	2	0	0	0	0	11
40-44	2	0	1	0	0	1	6	6	1	0	0	0	17
45-49	0	1	0	0	0	1	0	7	3	2	0	0	14
50-54	1	0	1	0	0	0	0	1	1	0	0	0	4
55-59	0	0	0	0	0	0	0	0	1	0	1	0	2
60-64	0	0	0	0	0	1	0	0	0	0	1	0	2
65-69	0	0	0	0	0	0	0	0	0	0	0	0	0
70 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Count	8	9	5	1	6	12	15	16	6	2	2	0	82

Compensation (\$)													
Age	Years of Service												Avg. Comp.
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	38,059	47,352	0	0	0	0	0	0	0	0	0	0	42,706
25-29	44,250	54,673	61,094	67,257	69,886	0	0	0	0	0	0	0	55,610
30-34	65,692	56,617	86,448	0	72,762	84,774	80,250	0	0	0	0	0	74,364
35-39	0	0	0	0	0	86,406	86,635	88,055	0	0	0	0	86,810
40-44	49,356	0	71,314	0	0	73,554	90,818	95,711	136,796	0	0	0	88,209
45-49	0	63,923	0	0	0	70,936	0	99,237	116,342	96,333	0	0	97,944
50-54	65,107	0	64,673	0	0	0	0	92,799	120,795	0	0	0	85,843
55-59	0	0	0	0	0	0	0	0	85,167	0	104,059	0	94,613
60-64	0	0	0	0	0	94,036	0	0	0	0	162,318	0	128,177
65-69	0	0	0	0	0	0	0	0	0	0	0	0	0
70 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	50,040	55,751	68,925	67,257	72,283	84,002	86,605	96,115	115,298	96,333	133,188	0	82,237



**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX A – MEMBERSHIP INFORMATION

**Reconciliation of Plan Membership Since Prior Valuation
All Members**

	Actives	Transfers	Non Vested Terminations due Refunds	Vested Terminations	Ordinary Disabled	Duty Disabled	Retired	Beneficiaries	Total
July 1, 2016	4,248	551	327	479	79	225	2,919	428	9,256
New Entrants	483	0	0	0	0	0	0	0	483
Rehires	23	(4)	(5)	(10)	0	0	0	0	4
Duty Disabilities	0	(1)	0	(1)	0	2	0	0	0
Ordinary Disabilities	(5)	(1)	0	(1)	7	0	0	0	0
Retirements	(117)	(16)	(1)	(28)	0	0	162	0	0
Retirements from General with Safety Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(76)	(2)	0	77	0	0	0	0	(1)
Died, With Beneficiaries' Benefit Payable	(4)	0	0	0	(1)	0	(21)	26	0
Died, Without Beneficiary, and Other Terminations	(109)	0	104	(1)	0	(1)	(54)	0	(61)
Transfers	(26)	51	(5)	(12)	0	0	0	0	8
Beneficiary Deaths	0	0	0	0	0	0	0	(28)	(28)
Domestic Relations Orders	0	0	0	0	0	0	0	5	5
Withdrawals Paid	(108)	(2)	(40)	(7)	0	0	0	0	(157)
Member Reclassifications	0	(1)	1	0	0	0	(2)	0	(2)
July 1, 2017	4,309	575	381	496	85	226	3,004	431	9,507

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX A – MEMBERSHIP INFORMATION

**Reconciliation of Plan Membership Since Prior Valuation
General Members (County and Former County)**

	Actives	Transfers	Non Vested Terminations due Refunds	Vested Terminations	Ordinary Disabled	Duty Disabled	Retired	Beneficiaries	Total
July 1, 2016	3,393	370	277	384	72	96	2,495	332	7,419
New Entrants	390	0	0	0	0	0	0	0	390
Rehires	19	(3)	(3)	(9)	0	0	0	0	4
Duty Disabilities	0	0	0	0	0	0	0	0	0
Ordinary Disabilities	(5)	0	0	(1)	6	0	0	0	0
Retirements	(92)	(11)	(1)	(26)	0	0	130	0	0
Retirements from General with Safety Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(63)	(1)	0	63	0	0	0	0	(1)
Died, With Beneficiaries' Benefit Payable	(3)	0	0	0	(1)	0	(19)	23	0
Died, Without Beneficiary, and Other Terminations	(92)	0	89	(1)	0	(1)	(52)	0	(57)
Transfers	(28)	41	(5)	(7)	0	0	0	0	1
Beneficiary Deaths	0	0	0	0	0	0	0	(23)	(23)
Domestic Relations Orders	0	0	0	0	0	0	0	3	3
Withdrawals Paid	(90)	0	(31)	(6)	0	0	0	0	(127)
Member Reclassifications	0	(1)	(1)	2	0	0	(2)	0	(2)
July 1, 2017	3,429	395	325	399	77	95	2,552	335	7,607



**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX A – MEMBERSHIP INFORMATION

**Reconciliation of Plan Membership Since Prior Valuation
Safety Members (County and Former County)**

	Actives	Transfers	Non Vested Terminations due Refunds	Vested Terminations	Ordinary Disabled	Duty Disabled	Retired	Beneficiaries	Total
July 1, 2016	645	125	37	71	6	117	353	92	1,446
New Entrants	78	0	0	0	0	0	0	0	78
Rehires	3	(1)	(1)	(1)	0	0	0	0	0
Duty Disabilities	0	(1)	0	(1)	0	2	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(20)	(4)	0	(1)	0	0	25	0	0
Retirements from General with Safety Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(6)	(1)	0	7	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	(1)	0	0	0	0	0	(1)	2	0
Died, Without Beneficiary, and Other Terminations	(12)	0	10	0	0	0	(2)	0	(4)
Transfers	2	5	0	(3)	0	0	0	0	4
Beneficiary Deaths	0	0	0	0	0	0	0	(5)	(5)
Domestic Relations Orders	0	0	0	0	0	0	0	2	2
Withdrawals Paid	(14)	(2)	(6)	(1)	0	0	0	0	(23)
Member Reclassifications	0	0	2	(2)	0	0	0	0	0
July 1, 2017	675	121	42	69	6	119	375	91	1,498

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX A – MEMBERSHIP INFORMATION

**Reconciliation of Plan Membership Since Prior Valuation
General Members (Ceres and Other Districts)**

	Actives	Transfers	Non Vested Terminations due Refunds	Vested Terminations	Ordinary Disabled	Duty Disabled	Retired	Beneficiaries	Total
July 1, 2016	128	28	7	15	0	6	57	2	243
New Entrants	7	0	0	0	0	0	0	0	7
Rehires	1	0	(1)	0	0	0	0	0	0
Duty Disabilities	0	0	0	0	0	0	0	0	0
Ordinary Disabilities	0	(1)	0	0	1	0	0	0	0
Retirements	(4)	(1)	0	(1)	0	0	6	0	0
Retirements from General with Safety Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(4)	0	0	4	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	0	(1)	1	0
Died, Without Beneficiary, and Other Terminations	(1)	0	1	0	0	0	0	0	0
Transfers	(1)	3	0	(1)	0	0	0	0	1
Beneficiary Deaths	0	0	0	0	0	0	0	0	0
Domestic Relations Orders	0	0	0	0	0	0	0	0	0
Withdrawals Paid	(3)	0	(2)	0	0	0	0	0	(5)
Member Reclassifications	0	0	0	0	0	0	0	0	0
July 1, 2017	123	29	5	17	1	6	62	3	246



**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX A – MEMBERSHIP INFORMATION

**Reconciliation of Plan Membership Since Prior Valuation
Safety Members (Ceres and Other Districts)**

	Actives	Transfers	Non Vested Terminations due Refunds	Vested Terminations	Ordinary Disabled	Duty Disabled	Retired	Beneficiaries	Total
July 1, 2016	82	28	6	9	1	6	14	2	148
New Entrants	8	0	0	0	0	0	0	0	8
Rehires	0	0	0	0	0	0	0	0	0
Duty Disabilities	0	0	0	0	0	0	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(1)	0	0	0	0	0	1	0	0
Retirements from General with Safety Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(3)	0	0	3	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	0	0	0	0
Died, Without Beneficiary, and Other Terminations	(4)	0	4	0	0	0	0	0	0
Transfers	1	2	0	(1)	0	0	0	0	2
Beneficiary Deaths	0	0	0	0	0	0	0	0	0
Domestic Relations Orders	0	0	0	0	0	0	0	0	0
Withdrawals Paid	(1)	0	(1)	0	0	0	0	0	(2)
Member Reclassifications	0	0	0	0	0	0	0	0	0
July 1, 2017	82	30	9	11	1	6	15	2	156

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS

The assumptions and methods used in the actuarial valuation as of July 1, 2017 are:

Actuarial Methods

1. Actuarial Cost Method

Annual contributions to the Stanislaus County Employees' Retirement Association (the Plan) are computed under the Entry Age Normal Actuarial Cost Method, computed to the final decrement.

Under this Cost Method, the Normal Cost is calculated as the amount necessary to fund Members' benefits as a level percentage of total payroll over their projected working lives. At each valuation date, the Actuarial Liability is equal to the difference between the liability for the Members' total projected benefit and the present value of future Normal Cost contributions.

The excess of the Actuarial Liability over Plan assets is the Unfunded Actuarial Liability, and the liability for each valuation group is amortized as a level percentage of payroll over a closed period (19 years as of the current valuation).

Amounts may be added to or subtracted from the Unfunded Actuarial Liability due to Plan amendments or changes in actuarial assumptions.

The total Plan cost is the sum of the Normal Cost (computed on an Individual basis), the amortization of the Unfunded Actuarial Liability, and the expected Administrative Expenses.

The increase in Plan cost due to the change in assumptions as a result of the Actuarial Experience Study Report for the period covering July 1, 2012 through June 30, 2015 is phased-in over three years, beginning with the cost calculated in the June 30, 2015 actuarial valuation. For this valuation, the phase-in is in its third and final year.

2. Actuarial Value of Plan Assets

The Actuarial Value of Plan assets is a modified market-related value. The Market Value of Assets is adjusted to recognize, over a five-year period, differences between actual investment earnings and the assumed investment return. The Actuarial Value of Assets is limited to no less than 80% and no more than 120% of the market value.

The detailed calculations of the Actuarial Value of Plan assets are shown in Section II.

3. Changes in Actuarial Methods

None

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS

Actuarial Assumptions

All actuarial assumptions are based on the Actuarial Experience Study Report for the period covering July 1, 2012 through June 30, 2015 report. The assumptions were adopted at the March 16, 2016 Board meeting.

4. Rate of Return

The annual rate of return on all Plan assets is assumed to be 7.25%, net of investment expenses.

5. Cost of Living

The cost of living as measured by the Consumer Price Index (CPI) will increase at the rate of 3.00% per year.

6. Administrative Expenses

An allowance of \$2,546,160 for Plan administrative expenses has been included in the annual cost calculated.

7. Interest Credited to Employee Accounts

The employee accounts are credited with 0.25% interest annually.

8. Increases in Pay

Base salary increase: 3.25%

Assumed pay increases for active Members consist of increases due to base salary adjustments (as noted above), plus service-based increases due to longevity and promotion, as shown below.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

Longevity & Promotion Increases		
Service	General	Safety
0	6.00%	7.00%
1	5.00%	6.00%
2	4.00%	5.00%
3	3.00%	4.00%
4	2.00%	3.00%
5	1.50%	2.00%
6	1.00%	1.75%
7	0.75%	1.50%
8	0.50%	1.25%
9	0.50%	1.00%
10	0.50%	0.75%
11+	0.50%	0.50%

9. PEPRA Compensation Limit

The assumption used for increasing the compensation limit that applies to PEPRA members is 3.0%

10. Post Retirement COLA

100% of CPI up to 3% annually with banking, 2.7% annual increases assumed. Increases are assumed to occur on April 1.

11. Social Security Wage Base

General Plan 3 members have their benefits offset by an assumed Social Security Benefit. For projecting the Social Security Benefit, the annual Social Security Wage Base increase is assumed to be 3.25% per year.

12. Internal Revenue Code Section 415 Limit

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

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

The Internal Revenue Code Section 401(a)(17) maximum compensation limitation is not reflected in the valuation for funding purposes. Any limitation is reflected in a member's benefit after retirement.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS

14. Family Composition

Percentage married for all active members who retire, become disabled, or die during active service is shown in the following table.

Percentage Married	
Gender	Percentage
Males	80%
Females	50%

Spouses of male members are assumed to be three years younger than the member and spouses of female members are assumed to be two years older than the member.

15. Accumulated Vacation Time Load

Active members' service retirement and related benefits are loaded by 3.0% for Safety Members and 3.5% for General Members for conversion of vacation time. No other adjustment is made to the liabilities for anticipated future service purchases.

16. Rates of Separation

Rates of termination apply to all active Members who terminate their employment.

Separate rates of termination are assumed among Safety and General Members.

Termination Rates		
Years of Service	General All	Safety All
0	18.0%	18.0%
1	14.0%	12.0%
2	11.7%	9.0%
3	9.4%	7.0%
4	7.1%	6.0%
5	5.0%	5.0%
10	3.5%	5.0%
15	2.9%	3.4%
20	1.5%	0.0%
25	1.3%	0.0%
30+	0.0%	0.0%

Termination rates do not apply once a member is eligible for retirement.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

17. Withdrawal

Rates of withdrawal apply to active Members who terminate their employment and withdraw their member contributions, forfeiting entitlement to future Plan benefits. Separate rates of withdrawal are assumed among Safety and General Members, and are based on service. The rates do not overlap with the service retirement rates.

50% of all General Member terminations with less than 10 years of service are assumed to take a refund of contributions, as well as 20% of those with 10 or more years of service.

35% of all Safety Member terminations with less than 10 years of service are assumed to take a refund of contributions, and 10% of those with 10 or more years are assumed to take a refund.

18. Vested Termination and Reciprocal Transfers

Rates of vested termination apply to active Members who terminate their employment after five years of service and leave their member contributions on deposit with the Plan. Alternatively, those who terminate their employment with less than five years of service can leave their member contributions with the Plan and transfer to a reciprocal employer, therefore retaining entitlement to future Plan benefits.

Vested terminated Tier 3 General Members are assumed to begin receiving benefits at age 65 while all other General Members are assumed to begin at age 58; terminated Safety Members are assumed to begin receiving benefits at age 53. 25% of vested terminated General Members are assumed to be reciprocal; 50% of vested terminated Safety Members are assumed to be reciprocal.

Reciprocal members are assumed to receive 4% annual pay increases from the date of transfer to the assumed retirement date.

19. Form of Benefit

Upon retirement, all married members are assumed to elect the normal payment form (joint & 50% survivor annuity for Tier 3 and joint & 60% survivor annuity for all other tiers). Non-married members are assumed to elect a single life annuity. Actual form elections are not anticipated to materially affect results due to the actuarially equivalent optional form factors.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

20. Rates of Service-Connected Disability

Separate rates of duty disability are assumed among Safety and General Members; rates for both sexes for Safety Members are combined. On the next page are sample rates:

Rates of Service-Connected Disability			
Age	General		Safety
	Male	Female	All
20	0.0043%	0.0002%	0.0759%
25	0.0102%	0.0004%	0.1932%
30	0.0211%	0.0008%	0.3457%
35	0.0284%	0.0024%	0.5309%
40	0.0401%	0.0056%	0.7426%
45	0.0613%	0.0101%	1.1297%
50	0.0897%	0.0162%	1.5092%
55	0.1227%	0.0249%	1.7230%
60	0.1637%	0.0349%	0.0000%
65	0.0000%	0.0000%	0.0000%

21. Rates of Nonservice-Connected Disability

Separate rates of ordinary disability are assumed among Safety and General Members. Rates of ordinary disability for Safety Members are assumed to follow the CalPERS Public Agency Police Non-Industrial Disability table; rates of ordinary disability for General Members are assumed to follow the CalPERS Public Agency Miscellaneous Non-Industrial Disability table. The rates shown are applied after five Years of Service. On the next page are sample rates:

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

Rates of Non Service-Connected Disability			
Age	General		Safety
	Male	Female	All
20	0.0170%	0.0100%	0.0100%
25	0.0170%	0.0100%	0.0100%
30	0.0190%	0.0240%	0.0200%
35	0.0490%	0.0810%	0.0300%
40	0.1220%	0.1550%	0.0400%
45	0.1910%	0.2180%	0.0500%
50	0.2130%	0.2290%	0.0800%
55	0.2210%	0.1790%	0.1300%
60	0.2220%	0.1350%	0.2000%
65	0.2100%	0.1180%	0.2000%
70	0.1800%	0.1140%	0.2000%
75	0.1420%	0.1180%	0.2000%
80	0.1420%	0.1180%	0.2000%
81+	0.0000%	0.0000%	0.0000%

22. Rates of Mortality for Non-Annuitants

Rates of ordinary death for active Members are specified by the CalPERS Pre-Retirement Non-Industrial Mortality table, adjusted by 100.3% for males and 98.8% for females, with generational mortality improvements projected from 2009 using Scale MP-2015. Duty related mortality rates are only applicable for Safety Active Members, and are based on the CalPERS Pre-Retirement Individual Death table without adjustment or projection.

The table on the following page provides a sample of the base mortality rates including adjustments but prior to any projections for mortality improvements.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

Non-Annuitant Mortality Rates			
Age	Ordinary Death - General and Safety		Duty Death
	Male	Female	Safety All
20	0.0330%	0.0209%	0.0030%
25	0.0426%	0.0241%	0.0070%
30	0.0522%	0.0262%	0.0100%
35	0.0607%	0.0368%	0.0120%
40	0.0798%	0.0525%	0.0130%
45	0.1129%	0.0745%	0.0140%
50	0.1651%	0.1049%	0.0150%
55	0.2428%	0.1508%	0.0160%
60	0.3556%	0.2198%	0.0170%
65	0.5107%	0.3233%	0.0180%
70	0.7110%	0.4616%	0.0190%

23. Rates of Mortality for Nonservice-Connected Disabled Retirees

Rates of mortality for current nonservice-connected disabled Members are specified by the CalPERS Non-Industrially Disabled Annuitant Mortality table, adjusted by 96.4% for males and 110.4% for females, with generational mortality improvements projected from 2009 using Scale MP-2015.

The table provides a sample of the base mortality rates including adjustments but prior to any projections for mortality improvements.

Nonservice-Connected Disabled Mortality Rates		
Age	Male	Female
45	1.250%	0.943%
50	1.720%	1.358%
55	2.020%	1.402%
60	2.539%	1.667%
65	3.008%	2.259%
70	3.750%	3.107%
75	5.204%	4.269%
80	7.934%	6.642%
85	12.692%	10.910%
90	17.804%	17.755%

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS

24. Rates of Mortality for Service-Connected Disabled Retirees

Rates of mortality for current service-connected disabled Members are specified by the CalPERS Industrially Disabled Annuitant Mortality table, adjusted by 100.2% for males and 100.1% for females, with generational mortality improvements projected from 2009 using Scale MP-2015.

The table provides a sample of the base mortality rates including adjustments but prior to any projections for mortality improvements.

Service-Connected Disabled Mortality Rates		
Age	Male	Female
45	0.339%	0.298%
50	0.533%	0.496%
55	0.637%	0.460%
60	0.869%	0.634%
65	1.431%	1.068%
70	2.216%	1.777%
75	3.842%	2.955%
80	6.642%	4.983%
85	10.410%	7.967%
90	16.218%	12.347%

25. Rates of Mortality for Emerging Disabled Retirees

Rates of mortality for future disabled retirees, both nonservice- and service-connected, are specified by mortality tables consisting of blends of the mortality assumptions for current nonservice- and service-connected disabled retirees. The blend for future disabled Safety retirees is 5% and 95%, respectively. The blend for future disabled General retirees is 75% and 25%, respectively. The proportions reflect the expected splits in future disabled retirees between nonservice- and service-connected disablements.

26. Rates of Mortality for Healthy Annuitants

Rates of mortality for retired Members and their beneficiaries are specified by the CalPERS Healthy Annuitant table, adjusted by 93.4% for males and 107.9% for females, with generational mortality improvements projected from 2009 using Scale MP-2015.

The table on the following page provides a sample of the base mortality rates including adjustments but prior to any projections for mortality improvements.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS

Healthy Annuitant Mortality Rates		
Age	Male	Female
45	0.225%	0.229%
50	0.497%	0.534%
55	0.594%	0.496%
60	0.763%	0.576%
65	0.986%	0.807%
70	1.649%	1.365%
75	2.786%	2.366%
80	4.928%	3.987%
85	8.807%	7.202%
90	15.118%	13.310%

27. Mortality Improvement

As mentioned above, the mortality assumptions employ a fully generational mortality improvement projection from base year 2009 using Scale MP-2015.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

28. Rates of Retirement

Retirement is assumed to occur among eligible members in accordance with the table below:

Rates of Retirement General				Rates of Retirement Safety			
Age	Years of Service			Age	Years of Service		
	0-9	10-29	30+		0-9	10-19	20+
40-44	0.00%	0.00%	0.00%	40-48	0.00%	0.00%	5.00%
45-49	0.00%	0.00%	10.00%	49	0.00%	0.00%	20.00%
50-54	0.00%	5.00%	10.00%	50	0.00%	10.00%	30.00%
55	0.00%	10.00%	25.00%	51	0.00%	10.00%	20.00%
56	0.00%	10.00%	25.00%	52	0.00%	10.00%	20.00%
57	0.00%	10.00%	25.00%	53	0.00%	10.00%	20.00%
58	0.00%	15.00%	25.00%	54	0.00%	10.00%	20.00%
59	0.00%	15.00%	25.00%	55	0.00%	10.00%	30.00%
60	0.00%	15.00%	25.00%	56	0.00%	10.00%	30.00%
61	0.00%	20.00%	25.00%	57	0.00%	10.00%	30.00%
62	0.00%	25.00%	40.00%	58	0.00%	10.00%	30.00%
63	0.00%	20.00%	25.00%	59	0.00%	10.00%	30.00%
64	0.00%	25.00%	25.00%	60	0.00%	25.00%	100.00%
65	0.00%	35.00%	35.00%	61	0.00%	25.00%	100.00%
66	0.00%	45.00%	45.00%	62	0.00%	25.00%	100.00%
67	0.00%	20.00%	25.00%	63	0.00%	25.00%	100.00%
68	0.00%	20.00%	25.00%	64	0.00%	25.00%	100.00%
69	0.00%	20.00%	25.00%	65	0.00%	100.00%	100.00%
70	50.00%	50.00%	100.00%	66	0.00%	100.00%	100.00%
71	50.00%	50.00%	100.00%	67	0.00%	100.00%	100.00%
72	50.00%	50.00%	100.00%	68	0.00%	100.00%	100.00%
73	50.00%	50.00%	100.00%	69	0.00%	100.00%	100.00%
74	50.00%	50.00%	100.00%	70+	100.00%	100.00%	100.00%
75+	100.00%	100.00%	100.00%				

29. Changes in Actuarial Assumptions

The administrative expenses assumption increased by 3.00% from \$2,472,000 to \$2,546,160, per the procedure established in the Actuarial Experience Study Report for the period covering July 1, 2012 through June 30, 2015.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

APPENDIX C – SUMMARY OF PLAN PROVISIONS

All actuarial calculations are based on our understanding of the statutes governing the StanCERA as contained in the County Employees Retirement Law (CERL) of 1937, with provisions adopted by the County Board of Supervisors, a district Board of Directors, or the StanCERA Board, effective through June 30, 2017. The benefit and contribution provisions of this law are summarized briefly below, along with corresponding references to the State Code. This summary does not attempt to cover all the detailed provisions of the law.

A. Definitions

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

For Tier 6 (PEPRA) members, only pensionable compensation up to the PEPRA Compensation Limit will count for computing Plan benefits and employee contributions and employer contributions. For those participating in Social Security, the compensation cap is \$118,775 for calendar year 2017. For those not participating in Social Security, the compensation cap is \$142,530 for calendar year 2017. In addition, it is possible that some sources of compensation, such as any payments deemed to be terminal or special pays, may be excluded from the benefit and contribution computations for PEPRA members.

Credited Service: In general, Credited Service is earned for the period during which Member Contributions are paid. Since Tier 3 Members participate in a non-contributory Plan, their Credited Service is calculated based on their date of Membership only.

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

- **Prior Part-time Service:** If a Member worked for an employer within the Association on a part-time or 'extra help' basis before his membership in the Retirement Association, the Member may buyback this service.
- **Intermittent Part-time Service**

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

APPENDIX C – SUMMARY OF PLAN PROVISIONS

- **Prior full time Service:** Member may buyback full time service that may have been cashed out upon termination.
- **Leave of Absence (Including absence with State Disability or Worker's Compensation):** No unpaid leave of absence can be bought back except for absence due to medical reasons of up to one year.
- **Public Service:** Only Tier 1 and 4 Members may buy back this service.
- **Military Time:** Only Tier 1 and 4 Members may buy back this service.
- **Enhance Prior Tier Service:** Applies to certain active and deferred Members with Tier 1, 2 or 3 service.
- **Military "call up"**
- **AB 2766:** Only Safety Employees can buy back this service.

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

Final

Compensation: For Members belonging to Tier 2, Tier 3, and Tier 6, Final Compensation means the highest Compensation earned during any 36 consecutive months of the Member's employment. For all others, it is the highest Compensation earned during any twelve months of employment.

General Member: Any Member who is not a Safety Member is a General Member.

Safety Member: Any sworn Member engaged in law enforcement, probation, or fire suppression is a Safety Member.

B. Membership

Eligibility: All full-time, permanent employees of Stanislaus County, City of Ceres, Stanislaus County Superior Court, Salida Sanitary District, East Side Mosquito Abatement, Keyes Community Services, Hills Ferry Cemetery, and StanCOG hired on or after October 1, 1988 become Members on their date of appointment. All others hired before October 1, 1988 became Members on the first day of the calendar month following their date of appointment.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Detailed membership eligibility according to Tier and membership date is shown in Table 1 on the following page.

C. Service Retirement

Eligibility: New members who meet the requirements to enter a legacy tier under PEPRA will enter Tier 2; all other new members will enter Tier 6.

Tier 3 General Members are eligible to retire at age 55 if they have earned 10 years of Credited Service. Tier 6 (PEPRA) General Members are eligible to retire at age 52 if they have earned five years of Credited Service. All other General Members are eligible to retire at age 50 if they have earned five years of Credited Service and have been an Association member for at least 10 years. Alternatively, General non-PEPRA Members are eligible to retire at any age after having earned 30 years of Credited Service, or upon reaching age 70 with no service requirement.

Safety Members are eligible to retire at age 50 if they have earned five years of Credited Service and have been an Association member for at least 10 years. Alternatively, Safety Members are eligible to retire at any age after having earned 20 years of Credited Service, or upon reaching age 70 with no service requirement. The 20-year Credited Service retirement eligibility is not applicable to Tier 6 (PEPRA) Safety Members, nor is the 10-year Association membership requirement.

Benefit Amount: The Service Retirement Benefit payable to the Member is equal to the Member's Final Compensation multiplied by credited service, the benefit factor from Table 1 and the age factor from Table 2 corresponding to the Member's code section. The appropriate code sections for each group are listed in Table 1. For Tier 3 members, the age factors are applied *after* the benefit amount as determined under Table 1 has been offset by the designated fraction of the member's projected age 65 Social Security benefit.

For Tier 3 Members with Credited Service up to 35 years, the percentage of Final Compensation may not exceed 70% and for those with more than 35 years, it may not exceed 80%. For all other non-PEPRA Members, the percentage of Final Compensation may not exceed 100%. For those members integrated with Social Security (other than Tiers 3 and 6), Retirement Benefits based on the first \$350 of monthly Final Average Compensation are reduced by one-third.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Table 1: Member Group Descriptions

Group	Open or Closed	FAP	Max Cola	Code Section	Description	Top Retirement Factor Age	Benefit Factor
General Tier I	Closed	1	3	31676.12	2% at 57	62	2.00%
General Tier II	Open	3	3	31676.1	2% at 62	65	1.67%
General Tier III	Closed	3	0	31499.14	Non-Contributory	65	First 35 Years: 2.0% of FAS less 1/35 th of Social Security benefit at age 65. Next 10 Years: 1% of FAS
General Tier IV	Closed	1	3	31676.14	2% at 55	65	1.67%
General Tier V	Closed	1	3	31676.14	2% at 55	65	1.67%
General Tier VI	Open	3	3	7522.2	PEPRA	67	1.00%
Safety Tier II	Open	3	3	31664	2% at 50	50	2.00%
Safety Tier IV	Closed	1	3	31664.1	3% at 50	50	3.00%
Safety Tier V	Closed	1	3	31664.1	3% at 50	50	3.00%
Safety Tier VI	Open	3	3	7522.25 (2)	PEPRA	57	1.00%

Table 2: Age Factors

Age	Safety 2% at Age 50 CERL §: 31664	Safety 3% at Age 50 CERL §: 31664.1	Safety PEPRA GC §: 7522.25 Opt2	General 2% at Age 62 CERL §: 31676.1	General 2% at Age 57 CERL §: 31676.12	General 2% at Age 55 CERL §: 31676.14	General 2% at Age 65 CERL §: 31499.14	General PEPRA GC §: 7522.20
41	0.6258	0.6258	N/A	N/A	N/A	N/A	N/A	N/A
42	0.6625	0.6625	N/A	N/A	N/A	N/A	N/A	N/A
43	0.7004	0.7004	N/A	N/A	N/A	N/A	N/A	N/A
44	0.7397	0.7397	N/A	N/A	N/A	N/A	N/A	N/A
45	0.7805	0.7805	N/A	N/A	N/A	N/A	N/A	N/A
46	0.8226	0.8226	N/A	N/A	N/A	N/A	N/A	N/A
47	0.8678	0.8678	N/A	N/A	N/A	N/A	N/A	N/A
48	0.9085	0.9085	N/A	N/A	N/A	N/A	N/A	N/A
49	0.9522	0.9522	N/A	N/A	N/A	N/A	N/A	N/A
50	1.0000	1.0000	2.0000	0.7091	0.6681	0.8850	N/A	N/A
51	1.0516	1.0000	2.1000	0.7457	0.7056	0.9399	N/A	N/A
52	1.1078	1.0000	2.2000	0.7816	0.7454	1.0000	N/A	1.0000
53	1.1692	1.0000	2.3000	0.8181	0.7882	1.0447	N/A	1.1000
54	1.2366	1.0000	2.4000	0.8556	0.8346	1.1048	N/A	1.2000
55	1.3099	1.0000	2.5000	0.8954	0.8850	1.1686	0.3900	1.3000
56	1.3099	1.0000	2.6000	0.9382	0.9399	1.2365	0.4300	1.4000
57	1.3099	1.0000	2.7000	0.9846	1.0000	1.3093	0.4700	1.5000
58	1.3099	1.0000	2.7000	1.0350	1.0447	1.3608	0.5100	1.6000
59	1.3099	1.0000	2.7000	1.0899	1.1048	1.4123	0.5600	1.7000
60	1.3099	1.0000	2.7000	1.1500	1.1686	1.4638	0.6100	1.8000
61	1.3099	1.0000	2.7000	1.1947	1.2365	1.5153	0.6700	1.9000
62	1.3099	1.0000	2.7000	1.2548	1.3093	1.5668	0.7400	2.0000
63	1.3099	1.0000	2.7000	1.3186	1.3093	1.5668	0.8200	2.1000
64	1.3099	1.0000	2.7000	1.3865	1.3093	1.5668	0.9000	2.2000
65	1.3099	1.0000	2.7000	1.4593	1.3093	1.5668	1.0000	2.3000
66	1.3099	1.0000	2.7000	1.4593	1.3093	1.5668	1.0000	2.4000
67	1.3099	1.0000	2.7000	1.4593	1.3093	1.5668	1.0000	2.5000

Form of Benefit: The Service Retirement Benefit will be paid monthly beginning at retirement and for the life of the Member. If the member selects the unmodified benefit form, in the event of the Member's death 60% of the



STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

APPENDIX C – SUMMARY OF PLAN PROVISIONS

benefit will continue for the life of the Member's spouse or to the age of majority of dependent minor children if there is no spouse. For Tier 3 Members, the benefit payable to beneficiary is limited to 50%. In the event there is no surviving spouse or minor children, any unpaid remainder of the Member's accumulated contributions will be paid to the Member's designated beneficiary.

Actuarially equivalent optional benefit forms are also available.

Annually on April 1, benefits for all retired members other than those in Tier 3 are adjusted to reflect changes in the CPI for the San Francisco Bay Area since the prior year. Benefits may be increased or decreased, but the cumulative changes shall never reduce the benefit below the original monthly allowance. Annual increases may not exceed the COLA figures shown in Table 1, but CPI increases above this figure are "banked" and used for future increases when the CPI increases by less than the figures shown.

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

A lump sum benefit of \$5,000 will be payable upon the death of a retired member. No death benefit is payable for Tier 3 retired members.

D. Service-Connected Disability

Eligibility: All non-Tier 3 Members are eligible for Service-Connected Disability Retirement benefits at any age if they are permanently disabled as a result of injuries or illness sustained in the line of duty. Tier 3 Members are not eligible to receive disability benefits.

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

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

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

APPENDIX C – SUMMARY OF PLAN PROVISIONS

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

E. Nonservice-Connected Disability

Eligibility: Tier 3 Members are not eligible to receive disability benefits. All other Members are eligible for Nonservice-Connected Disability Retirement benefits if they are permanently disabled at any age after earning five years of Credited Service.

Benefit Amount: The Nonservice-Connected Disability Retirement Benefit payable to Tier 1 General Members is equal to the greatest of:

- 1.8% of Final Compensation at disability multiplied by years of Credited Service at disability;
- 1.8% of Final Compensation at disability multiplied by years of Credited Service projected to age 62, but not to exceed one-third of Final Compensation; or
- If the Member is eligible at disability for a Service Retirement Benefit, the Service Retirement Benefit accrued on the date of disability.

The Nonservice-Connected Disability Retirement Benefit payable to Tiers 2, 4, 5, and 6 General Members is equal to the greatest of:

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

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

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

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

APPENDIX C – SUMMARY OF PLAN PROVISIONS

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

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

F. Death Benefit

Eligibility: A Tier 3 Member's survivors are not eligible to receive death benefits. All other Members' survivors are eligible to receive different Death benefits dependent on the Member's cause of death and retirement eligibility.

Benefit Amount: In the event the Member's death resulted from injury or illness sustained in connection with the Member's duties, the Death Benefit payable to a surviving spouse, domestic partner, or eligible dependent children will be the greater of 50% of the Member's Final Compensation at the time of death or the Service Retirement Benefit.

In the event the Member's death did not result from injury or illness sustained in connection with the Member's duties and at the time of death, the Member was eligible for Service Retirement or Non-Service Connected Disability (i.e. the employee was employed at least five years), the Death Benefit payable to the spouse, partner or children will be 60% of the survivor benefit based on benefit due on Member's date of death.

In all other cases, the designated beneficiary (not necessarily a spouse/partner/child) will receive a refund of the Member's contributions with interest plus one month of Final Compensation for each year of service to a maximum of six years.

Form of Benefit: Annuity death benefits will be paid monthly beginning at the Member's death and for the life of the surviving spouse/partner or to the age of majority of dependent minor children if there is no spouse/partner. Lump sum benefits will be paid as described above.

COLA adjustments (as described for the annuity benefits) are also available.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

APPENDIX C – SUMMARY OF PLAN PROVISIONS

G. Withdrawal Benefits

Eligibility: Tier 3 Members are not eligible to receive withdrawal benefits. All other Members are eligible for a Withdrawal Benefit upon termination of employment, if not eligible to receive or electing to waive a monthly benefit.

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

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

H. Deferred Vested Benefit

Eligibility: A Member is eligible for a Deferred Vested Benefit upon termination of employment after earning five years of Credited Service, including reciprocity service from another system. For Tier 3 Members, the vesting requirement is 10 years of Credited Service.

The Member must leave his or her Member Contributions with interest on deposit with the Plan. This requirement does not apply to Tier 3 Members since they participate in a non-contributory Plan.

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

Form of Benefit: The Deferred Vested Benefit will be paid monthly beginning at retirement and for the life of the Member; in the event of the Member's death, 60% of the benefit will continue for the life of the Member's spouse or to the age of majority of dependent minor children if there is no spouse. For Tier 3 Members, the benefit payable to beneficiary is limited to 50%. In the event there is no surviving spouse or minor children, any unpaid remainder of the Member's accumulated contributions will be paid to the Member's designated beneficiary.

Actuarially equivalent optional benefit forms and COLA adjustments (as described for the Service Retirement benefit) are also available. A lump sum benefit of \$5,000 will be payable upon the death of the member. No death benefit is payable for Tier 3 retired members.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

APPENDIX C – SUMMARY OF PLAN PROVISIONS

I. Reciprocal Benefit

Eligibility: A Member is eligible for a Reciprocal Benefit upon termination of employment after earning five years of Credited Service and entry, within a specified period of time, into another retirement system recognized as a reciprocal system by the Plan. For Tier 3 Members, the vesting requirement is 10 years of Credited Service.

The Member must leave his or her Member Contributions with interest on deposit with the Plan. This requirement does not apply to Tier 3 Members since they participate in a non-contributory Plan.

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

Form of Benefit: The Reciprocal Benefit will be paid monthly beginning at retirement and for the life of the Member; in the event of the Member's death, 60% of the benefit will continue for the life of the Member's spouse or to the age of majority of dependent minor children if there is no spouse. For Tier 3 Members, the benefit payable to beneficiary is limited to 50%. In the event there is no surviving spouse or minor children, any unpaid remainder of the Member's accumulated contributions will be paid to the Member's designated beneficiary.

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

A lump sum benefit of \$5,000 will be payable upon the death of the member. No death benefit is payable for Tier 3 retired members.

J. Optional Benefit Forms

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

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

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

APPENDIX C – SUMMARY OF PLAN PROVISIONS

for life to the beneficiary designated by him at the time of his retirement; or

3. A reduced retirement allowance payable during his life with the provision that after his death an allowance of one-half of his reduced allowance will be continued for life to the beneficiary designated by him at the time of his retirement.

In addition, a member participating in Social Security may elect to receive an increased monthly allowance before age 62 (earliest possible receipt of Social Security benefits) and then take a reduced monthly allowance at age 62 and after. This option will not affect any monthly payments payable to a beneficiary. This option is not available to those receiving a disability benefit.

K. Member Contributions

Other than Tiers 3 and 6, all Members contribute a percentage of Compensation to the Plan through payroll deduction. The percentage contributed depends on the Member's nearest age upon joining the Plan. Members do not contribute after earning 30 years of Credited Service.

Tier 6 (PEPRA) Members must contribute half of the Normal Cost of the Plan. Contributions for these members will be based on the Normal Cost associated with their benefits, including COLA; General and Safety members will pay different rates. Members will continue to contribute after earnings 30 years of service.

City of Ceres members in Tiers 1 and 4 pay the Tier 2 and 5 rates ("Full" rates), rather than the rates for their respective Tiers ("Half" rates).

Interest is credited semiannually to each Member's accumulated contributions. The crediting rate is set by the Board; the current annual rate is 0.25%.

The employee contribution rates are shown in the Appendix E.

L. Changes in Plan Provisions

No change

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017

APPENDIX D – GLOSSARY

1. Actuarial Assumptions

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

2. Actuarial Cost Method

A procedure for determining the Actuarial Present Value of pension plan benefits and expenses and for developing an allocation of such value to each year of service, usually in the form of a Normal Cost and an Actuarial Liability.

3. Actuarial Gain (Loss)

The difference between actual experience and that expected based upon a set of Actuarial Assumptions during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

4. Actuarial Liability

The portion of the Actuarial Present Value of Projected Benefits that will not be paid by future Normal Costs. It represents the value of the past Normal Costs with interest to the valuation date.

5. Actuarial Present Value (Present Value)

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

6. Actuarial Valuation

The determination, as of a specified date, of the Normal Cost, Actuarial Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

7. Actuarial Value of Assets

The value of cash, investments, and other property belonging to a pension plan as used by the actuary for the purpose of an Actuarial Valuation. The purpose of an Actuarial Value of Assets is to smooth out fluctuations in market values.

APPENDIX D – GLOSSARY

8. Actuarially Equivalent

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

9. Amortization Payment

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

10. Entry Age Normal Actuarial Cost Method

A method under which the Actuarial Present Value of the Projected Benefits of each individual included in an Actuarial Valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages.

11. Funded Ratio

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

12. Normal Cost

That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.

13. Projected Benefits

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

14. Unfunded Actuarial Liability

The excess of the Actuarial Liability over the Actuarial Value of Assets. The Unfunded Actuarial Liability is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling StanCERA's benefit obligation in the event of a plan termination or other similar action. However, it is an appropriate measure for assessing the need for or the amount of future contributions.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX E – MEMBER CONTRIBUTION RATES

Employee Normal contribution rates vary by benefit formula as defined in the CERL and described in the table below, with the exception that City of Ceres members in Tiers 1 and 4 pay the Tier 2 and 5 rates (“Full” rates), rather than the rates for their respective Tiers (“Half” rates).

Plan/Tier	Code Section	Member Contribution Provides Average Annuity
General Tier 1	31621.5	1/200th of Final Average Salary (FAS) at age 60
General Tier 2	31621	1/120th of Final Average Salary (FAS) at age 60
General Tier 3	NA	NA
General Tier 4	31621.3	1/240th of Final Average Salary (FAS) at age 55
General Tier 5	31621.9	1/120th of Final Average Salary (FAS) at age 55
Safety Tier 2	31639.25	1/100th of Final Average Salary (FAS) at age 50
Safety Tier 4	31639.5	1/200th of Final Average Salary (FAS) at age 50
Safety Tier 5	31639.25	1/100th of Final Average Salary (FAS) at age 50

Employee COLA contribution rates are determined based on 50% of the normal cost associated with the expected COLA benefits, including all forms of decrement and the value of any assumed joint and survivor benefits, determined for each individual entry age.

Similar to the benefit formulas, for those members integrated with Social Security (other than Tiers 3 and 6), contributions based on the first \$350 of monthly compensation are reduced by one-third.

The rates were changed following the Experience Study covering the period June 30, 2012 through June 30, 2015. The current employee contribution rates are shown in the following tables, and were determined based on the assumptions used in the current actuarial valuation. These assumptions include an interest rate of 7.25% per annum, an average salary increase of 3.25% per year (plus longevity and promotion increases), and the CalPERS mortality tables with adjustment as specified in the Appendix B and projected using Scale MP-2015 from 2009 to 2037 for General members and to 2039 for Safety members. The projection periods are based upon the duration of liabilities for the respective groups as of June 30, 2015. The rates are blended using a male/female weighting of 25% male / 75% female for General members, and 80% male / 20% female for Safety members. Basic and COLA rates were determined based on an assumption that members would cease making contributions after 30 years of service.

Employee contribution rates for Tier 6 (PEPRA) members are determined based on half the Normal Cost (including COLA) for the PEPRA members, computed separately for General and Safety members, and for County and Ceres / Other District members. Due to the passage of SB13, contribution rates for PEPRA members are not rounded, and are recomputed each year.

The member contribution rates shown in this appendix apply only to pensionable compensation (up to the PEPRA Compensation Limits for PEPRA members).

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX E – MEMBER CONTRIBUTION RATES

Entry Age	General Tier 1			
	Basic First \$350	Basic Over \$350	COL First \$350	COL Over \$350
16	2.26%	3.40%	1.12%	1.68%
17	2.26%	3.40%	1.12%	1.68%
18	2.26%	3.40%	1.12%	1.68%
19	2.26%	3.40%	1.12%	1.68%
20	2.26%	3.40%	1.12%	1.68%
21	2.28%	3.42%	1.15%	1.73%
22	2.30%	3.45%	1.18%	1.77%
23	2.31%	3.47%	1.21%	1.81%
24	2.33%	3.49%	1.23%	1.85%
25	2.34%	3.51%	1.27%	1.90%
26	2.35%	3.52%	1.29%	1.94%
27	2.35%	3.53%	1.33%	1.99%
28	2.36%	3.54%	1.36%	2.04%
29	2.36%	3.54%	1.39%	2.08%
30	2.36%	3.54%	1.42%	2.13%
31	2.41%	3.61%	1.45%	2.18%
32	2.46%	3.69%	1.49%	2.23%
33	2.51%	3.76%	1.52%	2.28%
34	2.56%	3.83%	1.56%	2.34%
35	2.61%	3.91%	1.60%	2.40%
36	2.66%	3.99%	1.65%	2.47%
37	2.71%	4.06%	1.69%	2.54%
38	2.76%	4.14%	1.74%	2.61%
39	2.82%	4.22%	1.79%	2.68%
40	2.87%	4.31%	1.83%	2.75%
41	2.93%	4.39%	1.87%	2.80%
42	2.99%	4.48%	1.90%	2.85%
43	3.05%	4.57%	1.93%	2.90%
44	3.11%	4.66%	1.97%	2.95%
45	3.17%	4.75%	1.99%	2.99%
46	3.23%	4.85%	2.03%	3.04%
47	3.30%	4.95%	2.05%	3.08%
48	3.37%	5.05%	2.08%	3.12%
49	3.44%	5.16%	2.09%	3.14%
50	3.52%	5.28%	2.11%	3.16%
51	3.60%	5.40%	2.11%	3.17%
52	3.68%	5.52%	2.09%	3.13%
53	3.75%	5.63%	2.05%	3.07%
54	3.82%	5.73%	2.01%	3.02%
55	3.88%	5.82%	1.97%	2.96%
56	3.92%	5.88%	1.91%	2.86%
57	3.93%	5.89%	1.78%	2.67%
58	3.78%	5.67%	1.75%	2.62%
59+	3.74%	5.61%	1.71%	2.57%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX E – MEMBER CONTRIBUTION RATES

General Tier 2				
Entry Age	Basic First \$350	Basic Over \$350	COL First \$350	COL Over \$350
16	3.56%	5.33%	0.91%	1.36%
17	3.56%	5.33%	0.91%	1.36%
18	3.56%	5.33%	0.91%	1.36%
19	3.56%	5.33%	0.91%	1.36%
20	3.56%	5.33%	0.91%	1.36%
21	3.58%	5.38%	0.93%	1.39%
22	3.61%	5.41%	0.95%	1.42%
23	3.63%	5.45%	0.97%	1.45%
24	3.65%	5.48%	0.99%	1.48%
25	3.67%	5.51%	1.01%	1.51%
26	3.69%	5.53%	1.03%	1.55%
27	3.70%	5.55%	1.06%	1.59%
28	3.71%	5.56%	1.09%	1.63%
29	3.71%	5.56%	1.11%	1.66%
30	3.71%	5.57%	1.13%	1.70%
31	3.78%	5.68%	1.16%	1.74%
32	3.86%	5.79%	1.19%	1.79%
33	3.94%	5.90%	1.23%	1.84%
34	4.01%	6.02%	1.25%	1.88%
35	4.09%	6.14%	1.29%	1.93%
36	4.17%	6.26%	1.33%	1.99%
37	4.25%	6.38%	1.36%	2.04%
38	4.34%	6.51%	1.40%	2.10%
39	4.42%	6.64%	1.43%	2.15%
40	4.51%	6.77%	1.47%	2.21%
41	4.60%	6.90%	1.50%	2.25%
42	4.69%	7.04%	1.53%	2.29%
43	4.78%	7.17%	1.55%	2.33%
44	4.88%	7.32%	1.57%	2.36%
45	4.98%	7.46%	1.60%	2.40%
46	5.08%	7.62%	1.62%	2.43%
47	5.18%	7.77%	1.65%	2.47%
48	5.29%	7.94%	1.67%	2.51%
49	5.40%	8.11%	1.69%	2.54%
50	5.52%	8.28%	1.71%	2.57%
51	5.63%	8.45%	1.73%	2.59%
52	5.74%	8.61%	1.73%	2.60%
53	5.83%	8.75%	1.73%	2.60%
54	5.90%	8.85%	1.73%	2.59%
55	5.94%	8.91%	1.70%	2.55%
56	5.94%	8.90%	1.64%	2.46%
57	5.90%	8.85%	1.54%	2.31%
58	6.03%	9.04%	1.51%	2.26%
59+	6.24%	9.36%	1.48%	2.22%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX E – MEMBER CONTRIBUTION RATES

Entry Age	General Tier 4			
	Basic First \$350	Basic Over \$350	COL First \$350	COL Over \$350
16	2.05%	3.07%	1.21%	1.81%
17	2.05%	3.07%	1.21%	1.81%
18	2.05%	3.07%	1.21%	1.81%
19	2.05%	3.07%	1.21%	1.81%
20	2.05%	3.07%	1.21%	1.81%
21	2.05%	3.08%	1.24%	1.86%
22	2.06%	3.09%	1.27%	1.90%
23	2.06%	3.10%	1.30%	1.95%
24	2.07%	3.10%	1.33%	1.99%
25	2.07%	3.10%	1.35%	2.03%
26	2.11%	3.16%	1.39%	2.08%
27	2.15%	3.23%	1.41%	2.12%
28	2.19%	3.29%	1.44%	2.16%
29	2.24%	3.35%	1.47%	2.20%
30	2.28%	3.42%	1.50%	2.25%
31	2.33%	3.49%	1.53%	2.30%
32	2.37%	3.56%	1.57%	2.35%
33	2.42%	3.63%	1.61%	2.41%
34	2.47%	3.70%	1.65%	2.47%
35	2.51%	3.77%	1.69%	2.53%
36	2.56%	3.84%	1.73%	2.60%
37	2.61%	3.92%	1.78%	2.67%
38	2.67%	4.00%	1.83%	2.74%
39	2.72%	4.08%	1.87%	2.81%
40	2.77%	4.16%	1.93%	2.89%
41	2.83%	4.24%	1.96%	2.94%
42	2.89%	4.33%	1.99%	2.98%
43	2.95%	4.42%	2.02%	3.03%
44	3.01%	4.52%	2.05%	3.07%
45	3.08%	4.62%	2.07%	3.11%
46	3.15%	4.72%	2.10%	3.15%
47	3.22%	4.83%	2.11%	3.17%
48	3.29%	4.93%	2.13%	3.20%
49	3.35%	5.02%	2.14%	3.21%
50	3.40%	5.10%	2.14%	3.21%
51	3.43%	5.14%	2.13%	3.20%
52	3.44%	5.16%	2.11%	3.16%
53	3.31%	4.96%	2.06%	3.09%
54+	3.28%	4.91%	2.03%	3.05%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX E – MEMBER CONTRIBUTION RATES

Entry Age	General Tier 5			
	Basic First \$350	Basic Over \$350	COL First \$350	COL Over \$350
16	4.09%	6.14%	1.21%	1.81%
17	4.09%	6.14%	1.21%	1.81%
18	4.09%	6.14%	1.21%	1.81%
19	4.09%	6.14%	1.21%	1.81%
20	4.09%	6.14%	1.21%	1.81%
21	4.11%	6.16%	1.24%	1.86%
22	4.12%	6.18%	1.27%	1.90%
23	4.13%	6.19%	1.30%	1.95%
24	4.13%	6.20%	1.33%	1.99%
25	4.14%	6.20%	1.35%	2.03%
26	4.22%	6.33%	1.39%	2.08%
27	4.30%	6.45%	1.41%	2.12%
28	4.39%	6.58%	1.44%	2.16%
29	4.47%	6.71%	1.47%	2.20%
30	4.56%	6.84%	1.50%	2.25%
31	4.65%	6.98%	1.53%	2.30%
32	4.74%	7.11%	1.57%	2.35%
33	4.84%	7.25%	1.61%	2.41%
34	4.93%	7.40%	1.65%	2.47%
35	5.03%	7.54%	1.69%	2.53%
36	5.13%	7.69%	1.73%	2.60%
37	5.23%	7.84%	1.78%	2.67%
38	5.33%	8.00%	1.83%	2.74%
39	5.44%	8.16%	1.87%	2.81%
40	5.55%	8.32%	1.93%	2.89%
41	5.66%	8.49%	1.96%	2.94%
42	5.78%	8.66%	1.99%	2.98%
43	5.90%	8.84%	2.02%	3.03%
44	6.02%	9.03%	2.05%	3.07%
45	6.16%	9.23%	2.07%	3.11%
46	6.30%	9.45%	2.10%	3.15%
47	6.44%	9.65%	2.11%	3.17%
48	6.57%	9.86%	2.13%	3.20%
49	6.69%	10.04%	2.14%	3.21%
50	6.80%	10.19%	2.14%	3.21%
51	6.86%	10.29%	2.13%	3.20%
52	6.88%	10.31%	2.11%	3.16%
53	6.62%	9.93%	2.06%	3.09%
54+	6.55%	9.83%	2.03%	3.05%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX E – MEMBER CONTRIBUTION RATES

Entry Age	Safety Tier 2			
	Basic First \$350	Basic Over \$350	COL First \$350	COL Over \$350
20	4.90%	7.35%	1.83%	2.75%
21	5.00%	7.50%	1.91%	2.87%
22	5.10%	7.65%	1.97%	2.96%
23	5.21%	7.81%	2.04%	3.06%
24	5.31%	7.97%	2.10%	3.15%
25	5.42%	8.13%	2.17%	3.25%
26	5.53%	8.29%	2.23%	3.35%
27	5.64%	8.46%	2.30%	3.45%
28	5.75%	8.63%	2.37%	3.55%
29	5.87%	8.81%	2.44%	3.66%
30	5.99%	8.99%	2.52%	3.78%
31	6.12%	9.18%	2.60%	3.90%
32	6.24%	9.37%	2.68%	4.02%
33	6.38%	9.56%	2.77%	4.15%
34	6.51%	9.77%	2.84%	4.26%
35	6.65%	9.98%	2.92%	4.38%
36	6.80%	10.20%	2.99%	4.48%
37	6.95%	10.42%	3.05%	4.58%
38	7.10%	10.64%	3.13%	4.69%
39	7.23%	10.85%	3.21%	4.81%
40	7.36%	11.05%	3.30%	4.95%
41	7.49%	11.23%	3.34%	5.01%
42	7.61%	11.41%	3.37%	5.06%
43	7.70%	11.55%	3.41%	5.11%
44	7.76%	11.64%	3.43%	5.14%
45	7.77%	11.66%	3.43%	5.15%
46	7.74%	11.60%	3.46%	5.19%
47	7.65%	11.48%	3.48%	5.22%
48	7.83%	11.75%	3.50%	5.25%
49+	8.10%	12.15%	3.52%	5.28%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX E – MEMBER CONTRIBUTION RATES

Entry Age	Safety Tier 4			
	Basic First \$350	Basic Over \$350	COL First \$350	COL Over \$350
20	2.59%	3.89%	2.49%	3.74%
21	2.64%	3.97%	2.60%	3.90%
22	2.70%	4.05%	2.68%	4.02%
23	2.75%	4.13%	2.75%	4.13%
24	2.81%	4.21%	2.83%	4.24%
25	2.87%	4.30%	2.90%	4.35%
26	2.92%	4.39%	2.97%	4.46%
27	2.98%	4.47%	3.05%	4.57%
28	3.04%	4.57%	3.12%	4.68%
29	3.11%	4.66%	3.19%	4.79%
30	3.17%	4.75%	3.23%	4.85%
31	3.24%	4.85%	3.28%	4.92%
32	3.30%	4.95%	3.35%	5.03%
33	3.37%	5.06%	3.43%	5.14%
34	3.44%	5.17%	3.51%	5.26%
35	3.52%	5.28%	3.59%	5.39%
36	3.60%	5.39%	3.66%	5.49%
37	3.68%	5.52%	3.74%	5.61%
38	3.76%	5.65%	3.83%	5.74%
39	3.85%	5.77%	3.92%	5.88%
40	3.93%	5.89%	4.03%	6.04%
41	4.00%	6.00%	4.02%	6.03%
42	4.07%	6.11%	4.01%	6.02%
43	4.15%	6.22%	4.02%	6.03%
44	4.22%	6.33%	4.02%	6.03%
45	4.26%	6.39%	4.02%	6.03%
46	4.28%	6.42%	4.05%	6.07%
47	4.27%	6.41%	4.07%	6.10%
48	4.11%	6.17%	4.09%	6.13%
49+	4.05%	6.08%	4.11%	6.16%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX E – MEMBER CONTRIBUTION RATES

Entry Age	Safety Tier 5			
	Basic First \$350	Basic Over \$350	COL First \$350	COL Over \$350
20	5.18%	7.78%	2.49%	3.74%
21	5.29%	7.93%	2.60%	3.90%
22	5.40%	8.10%	2.68%	4.02%
23	5.51%	8.26%	2.75%	4.13%
24	5.62%	8.43%	2.83%	4.24%
25	5.73%	8.60%	2.90%	4.35%
26	5.85%	8.77%	2.97%	4.46%
27	5.97%	8.95%	3.05%	4.57%
28	6.09%	9.13%	3.12%	4.68%
29	6.21%	9.32%	3.19%	4.79%
30	6.34%	9.51%	3.23%	4.85%
31	6.47%	9.71%	3.28%	4.92%
32	6.60%	9.91%	3.35%	5.03%
33	6.74%	10.12%	3.43%	5.14%
34	6.89%	10.33%	3.51%	5.26%
35	7.04%	10.56%	3.59%	5.39%
36	7.19%	10.79%	3.66%	5.49%
37	7.36%	11.03%	3.74%	5.61%
38	7.53%	11.29%	3.83%	5.74%
39	7.69%	11.54%	3.92%	5.88%
40	7.85%	11.78%	4.03%	6.04%
41	8.00%	12.00%	4.02%	6.03%
42	8.15%	12.22%	4.01%	6.02%
43	8.29%	12.44%	4.02%	6.03%
44	8.43%	12.65%	4.02%	6.03%
45	8.52%	12.78%	4.02%	6.03%
46	8.56%	12.84%	4.05%	6.07%
47	8.54%	12.81%	4.07%	6.10%
48	8.22%	12.33%	4.09%	6.13%
49+	8.10%	12.15%	4.11%	6.16%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2017**

APPENDIX E – MEMBER CONTRIBUTION RATES

PEPRA Rates				
	General		Safety	
	County and Former County	Ceres and Other Districts	County and Former County	Ceres and Other Districts
	8.04%	8.47%	13.04%	15.41%
Assumptions:				
Interest:	7.25%			
Salary:	2017 Valuation Scale (Service based, includes wage inflation at 3.25%)			
Mortality:	Because the PEPRA contributions rates are based on 50% of the actual Normal Cost, the mortality rates are the same as those used in the Actuarial Valuation (CalPERS mortality tables with adjustments based on StanCERA experience projected generationally from 2009 using Scale MP-2015)			



Classic Values, Innovative Advice