



Stanislaus County Employees' Retirement Association

Actuarial Valuation as of June 30, 2016

Produced by Cheiron

March 2017

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March 20, 2017

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

Dear Members of the Board:

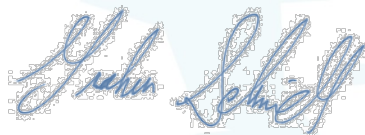
At your request, we have conducted an actuarial valuation of the Stanislaus County Employees' Retirement Association (StanCERA, the Fund, the Plan) as of June 30, 2016. This report contains information on the Plan's assets and liabilities. This report also discloses employer contribution levels and required 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, 2016**

FOREWORD

Cheiron has performed the actuarial valuation of the Stanislaus County Employees' Retirement Association as of June 30, 2016. 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 #23.

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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 2017-2018.

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, 2017. 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, 2016 over a period of 20 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 second to use the assumptions determined in the above experience study. A summary of the assumptions and methods used in the current valuation is shown in Appendix B.

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SECTION I – EXECUTIVE SUMMARY

B. Key Findings of this Valuation

The key results of the June 30, 2016 actuarial valuation are as follows:

- The actuarially determined employer contribution rate increased from 24.99% of payroll to 29.01% of payroll for the current valuation, reflecting the second 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 employer contribution rate would have increased to 31.95% of payroll for the current valuation.
- The Plan's funded ratio, the ratio of Actuarial Assets over Actuarial Liability, decreased from 73.7% to 72.8%. Likewise, the Plan's funded ratio on a market value basis decreased from 75.8% to 69.1%.
- The Unfunded Actuarial Liability (UAL) is the excess of the Plan's Actuarial Liability over the Actuarial Value of Assets. The Plan experienced an increase in the UAL from \$627.9 million to \$691.3 million as of June 30, 2016. This increase in UAL was due to liability and investment losses along with a contribution shortfall.
- During the year ending June 30, 2016, the return on Plan assets was -1.7% 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 6.3% on the smoothed value of assets, an actuarial asset loss of \$16.3 million. The relatively small loss in the Actuarial Value of Assets reflected the continued recognition of past investment gains which partially offset the lower market return this year.
- During the 2015-16 Plan Year, the actuarial liabilities of the Plan increased more than expected, largely due to salary and COLA increases higher than expected. These and other unexpected changes resulted in a liability loss of \$28.2 million.
- Changes to the valuation software programming due to recommendations from the Actuarial Audit increased liabilities by \$0.7 million.
- Overall participant membership increased compared to last year. There were 519 new hires and rehires during 2015-2016 and the total active population increased from 4,144 to 4,248, or 2.5%. Total projected payroll increased from \$249,704,758 to \$263,395,718, or 5.5%.
- 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

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SECTION I – EXECUTIVE SUMMARY

phase-in is in its second year. The schedule of required employer contributions with and without the phase-in is shown in Table I-1.

Table I-1		
Development of Phased Employer Contributions		
Plan Year	Full Contribution	Phased Contribution
2016-17	30.9%	25.0%
2017-18	31.9%	29.0%
2018-19	31.9%	32.4%
2019-20	32.3%	33.0%

The net impact of the phase-in is to reduce the employer contribution rate by about 5.9% and 2.9% from what it would have been without phase-in for 2016-17 and 2017-18, respectively. The employer contribution rate is fully phased-in by the 2018-19 plan year, when the rate is 0.5% higher than it would have been without the phase-in. This is followed by contributions higher than they would have been without phase-in by approximately 0.7% of pay in the years 2019-20 and later. 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-2 and I-3, 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 second year of the three-year phase-in. The results are presented and compared for both the current and prior Plan year.

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SECTION I – EXECUTIVE SUMMARY

Table I-2			
Stanislaus County Employees' Retirement Association			
Summary of Key Valuation Results			
(in millions)			
Valuation Date	June 30, 2015	June 30, 2016	
Fiscal Year End	2017	2018	
Actuarial Liability	\$ 2,391.5	\$ 2,537.1	
Actuarial Value of Assets ¹	\$ 1,763.6	\$ 1,845.8	
Unfunded Actuarial Liability (Actuarial Value)	\$ 627.9	\$ 691.3	
Funding Ratio (Actuarial Value)	73.7%	72.8%	
Market Value of Assets ¹	\$ 1,812.6	\$ 1,752.7	
Unfunded Actuarial Liability (Market Value)	\$ 578.9	\$ 784.3	
Funding Ratio (Market Value)	75.8%	69.1%	
Net Employer Contribution Rate ²	30.86%	31.95%	
Employer Contribution Rate after Phase-In	24.99%	29.01%	

¹ Net of non-valuation reserves.

² Prior to phase in of the assumption change.

Table I-3			
Membership Total			
Item	June 30, 2015	June 30, 2016	% Change
Actives	4,144	4,248	2.5%
Current Inactives	979	1,030	5.2%
Retired Members	3,539	3,651	3.2%
Total Members	8,662	8,929	3.1%
Ratio of Retired Members to Active Members	85.4%	85.9%	
Active Member Payroll (FYE 2016/2017)	\$ 249,704,758	\$ 263,395,718	5.5%
Average Pay per Active	\$ 60,257	\$ 62,005	2.9%

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-3 shows that the ratio of retired members to active members continues to increase, indicating the ongoing maturation of the Plan.

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Assets and Liabilities

Table I-4 presents a comparison between the June 30, 2015 and June 30, 2016 StanCERA assets, liabilities, Unfunded Actuarial Liability, and funding ratios, both on a market and smoothed basis.

Table I-4				
Assets & Liabilities				
(in millions)				
Item	June 30, 2015	June 30, 2016	% Change	
Actuarial Liability				
Actives	\$ 939.3	\$ 975.7	3.9%	
Current Inactives	114.4	134.2	17.3%	
Retired Members	<u>1,337.8</u>	<u>1,427.2</u>	<u>6.7%</u>	
Total Actuarial Liability	\$ 2,391.5	\$ 2,537.1	6.1%	
Market Value of Assets (MVA)	\$ 1,812.6	\$ 1,752.7	-3.3%	
Actuarial Value of Assets (AVA)	\$ 1,763.6	\$ 1,845.8	4.7%	
Unfunded Actuarial Liability - MVA	\$ 578.9	\$ 784.4	35.5%	
Unfunded Actuarial Liability - AVA	\$ 627.9	\$ 691.3	10.1%	
Funding Ratio - MVA	75.8%	69.1%	-6.7%	
Funding Ratio - AVA	73.7%	72.8%	-0.9%	

Table I-4 indicates that the Actuarial Liability increased by 6.1% and the Actuarial Value of Assets increased by 4.7%, resulting in a decrease in the funding ratio from 73.7% as of June 30, 2015 to 72.8% as of June 30, 2016. The increase in Actuarial Liability and accompanying decrease in the funded status is primarily due to the investment and liability losses, along with a contribution shortfall. StanCERA employs a commonly used actuarial smoothing method on the market value that dampens market volatility. The Actuarial Value of Assets increased while the market value decreased because of the impact of deferred investment gains from prior years. The funding ratio measured on a Market Value of Assets basis was 69.1% as of June 30, 2016.

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

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SECTION I – EXECUTIVE SUMMARY

Changes in UAL

The Unfunded Actuarial Liability (UAL) for StanCERA increased by \$63.4 million, from \$627.9 million to \$691.3 million. Table I-5 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 6.3% during the 2015-16 Plan Year. Investment returns lower than the assumed rate of 7.25% increased the UAL by \$16.3 million.

Liability losses increased the UAL by \$28.2 million, mainly due to salary and COLA increases higher than expected.

Changes in the valuation software programming related to recommendations from the actuarial audit conducted by Bartel Associates increased the UAL by \$0.7 million.

The UAL also increased by \$18.3 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.

The expected change in the UAL due to the yearly amortization of the UAL balance – a decrease of \$0.1 million, as a result of the amortization schedule for the current year – combined with the above UAL changes to produce an overall increase of \$63.4 million.

Table I-5	
Increase in Unfunded Actuarial Liability	
Experience	in millions
1. Unfunded actuarial liability, 6/30/2015	\$ 627.9
2. Expected change in unfunded actuarial liability	\$ (0.1)
3. Unfunded increase due to investment loss	16.3
4. Unfunded increase due to contribution shortfall	18.3
5. Unfunded increase due to liability loss	28.2
7. Unfunded change due to audit update	0.7
8. Total change in unfunded actuarial liability	\$ 63.4
9. Unfunded actuarial liability, 6/30/2016	\$ 691.3

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SECTION I – EXECUTIVE SUMMARY

Changes in Employer Contributions

Thus far, the experience of the 2015-16 Plan year has been presented in terms of the UAL and funded ratio. Table I-6 below summarizes the impact of actuarial experience and changes in assumptions on the employer contribution rate.

Table I-6 Employer Contribution Reconciliation				
Item	Total	Normal Cost	Amortization	Admin Expense
FYE 2017 Net Employer Contribution Rate	30.86%	12.24%	17.66%	0.96%
Change Due to Asset Loss	0.46%	0.00%	0.46%	0.00%
Change Due to Contribution Shortfall	0.52%	0.00%	0.52%	0.00%
Change Due to Demographic Losses	0.50%	-0.29%	0.79%	0.00%
Change Due to Effect of Payroll on Amortization	-0.43%	0.00%	-0.41%	-0.02%
Change Due to Audit Updates	0.04%	0.02%	0.02%	0.00%
FYE 2018 Net Employer Contribution Rate - Full	31.95%	11.97%	19.04%	0.94%
<i>Impact of Phase-in</i>	-2.94%	-0.43%	-2.47%	-0.03%
FYE 2018 Net Employer Contribution Rate - Phased	29.01%	11.54%	16.57%	0.91%

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 increase in the employer contribution rate of 1.09% of pay before phase-in of the past changes in the actuarial assumptions are taken into account:

- Asset experience produced an investment loss on a smoothed basis, as described earlier. The smoothed loss increased the contribution rate by 0.46% of pay.

The ratio of actuarial to Market Value of Assets is 105.3%. There are now \$93 million in net deferred losses as of June 30, 2016, as well as nearly \$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 0.52% of pay.
- The demographic experience of the Plan – rates of retirement, death, disability, and termination, as well as salary and COLA changes – caused an increase in cost. Higher than expected Cost of Living Adjustments (COLAs) for current retirees contributed to an increase in the Unfunded Actuarial Liability and the associated amortization payment, as well as salary experience, new entrants and losses associated with new retirees. The

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increase in the amortization payment was partially offset 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 greater than expected by about \$5.6 million. As a result, the unfunded liability amortization payment and administrative expenses were spread over a larger payroll base than expected, and the employer contribution rate decreased by 0.43% of pay.
- The impact of updates to actuarial software coding following the actuarial audit performed by Bartel Associates increased the cost by 0.04% of pay.
- The impact of the change in assumptions due to the experience study performed last year is to be phased-in over three years, as indicated by table I-1. For this valuation, the phase-in is in its second year and reduces the contribution rate by 2.94%.

Plan Risk

Table I-7 shows the ratio of assets to active member payroll for StanCERA.

Table I-7 Asset to Payroll Ratio as of June 30, 2016	
Active Member Payroll	\$ 263,395,718
Assets (Market Value)	\$ 1,752,728,030
Ratio of Assets to Payroll	6.65
Ratio with 100% Funding	9.63

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 6.7 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 7.0. 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.

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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 (665%), that means the loss in assets is about 115% of active payroll (665% 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 8.33% of payroll if amortized over 20 years.

As the Plan matures and becomes better funded, the ratio of asset to payroll will increase. When assets are 963% of pay, the 10% loss discussed above will translate to a loss of over 166% of payroll, which when amortized over 20 years will increase the employer contribution by 12.05% 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

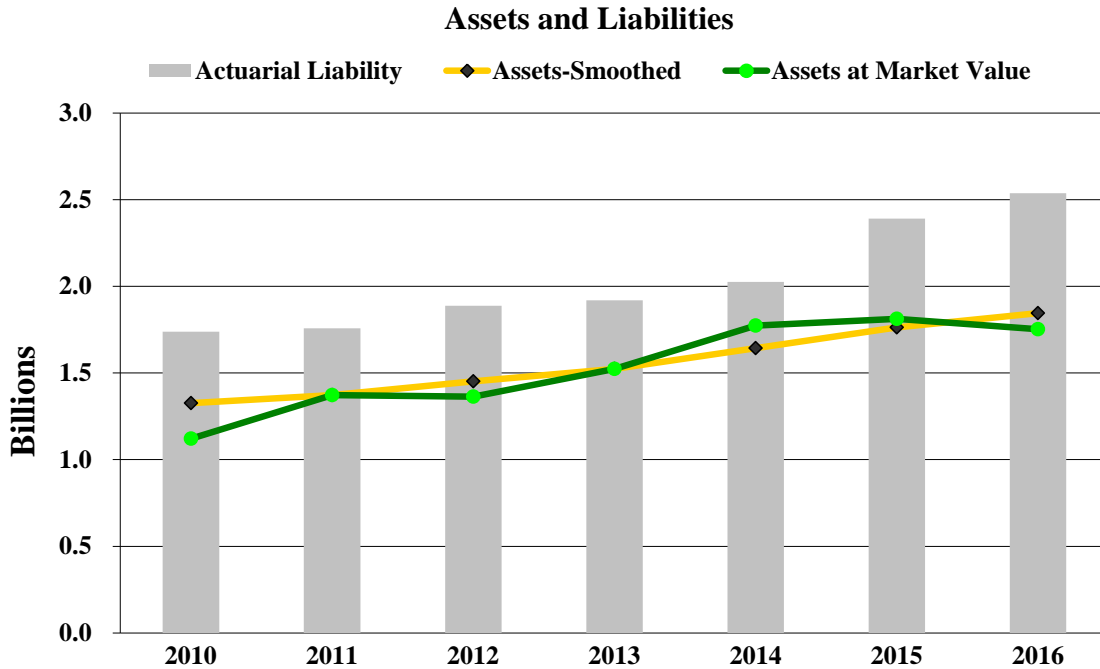
Despite the fact that for most retirement plans the greatest attention is given to the current valuation results and in particular, the size of the current Unfunded Actuarial Liability and the employer contribution, it is important to remember that each valuation is merely a snapshot in the long-term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

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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 76.3% in 2010 to 72.8% as of June 30, 2016. The drop in the funded ratio in 2015 was primarily due to changes in assumptions. The funded ratio has decreased from the 73.7% of last year because of liability and investment losses along with a contribution shortfall.



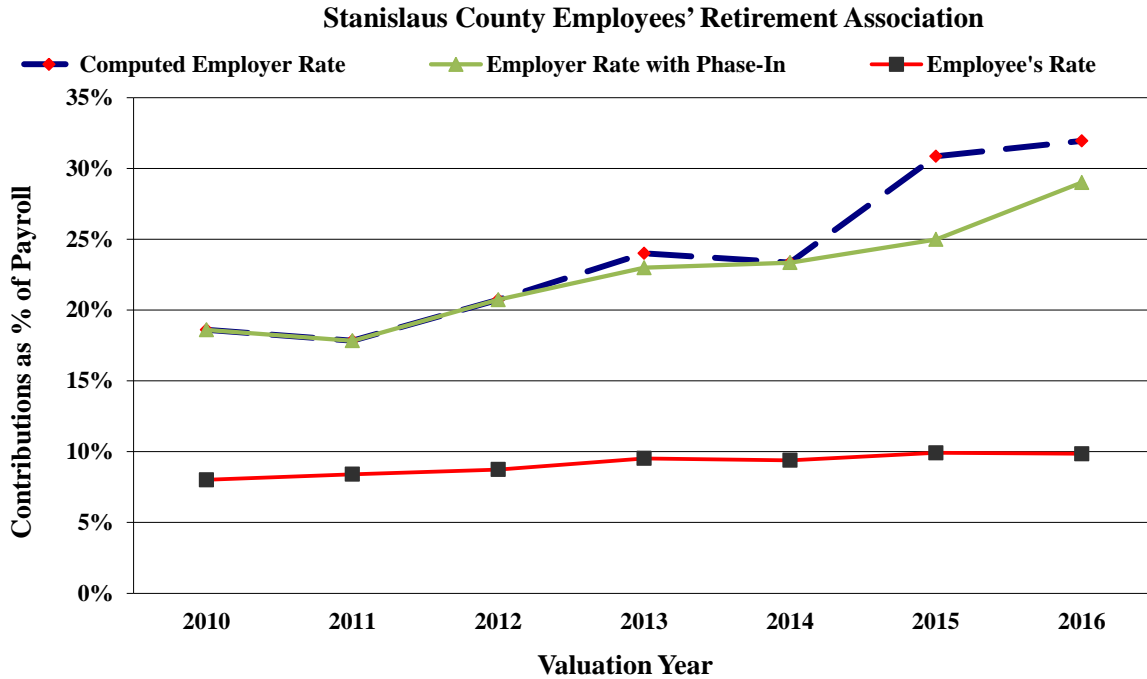
Valuation Year	2010	2011	2012	2013	2014	2015	2016
Funded Ratio	76.3%	78.1%	76.9%	79.4%	81.1%	73.7%	72.8%
UAL (Billions)	\$ 0.41	\$ 0.39	\$ 0.44	\$ 0.40	\$ 0.38	\$ 0.63	\$ 0.69

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Contribution Trends

In the chart, we present the historical trends for the StanCERA contribution rates. The employer contribution rates have risen since 2010 as result of the investment losses from 2008-2009, compounded by demographic losses and changes to the actuarial assumptions and methods. The impact of these changes was offset to some extent by an extension to the amortization period. The average employee contribution rates have also increased as the Plan's economic and demographic assumptions have changed.



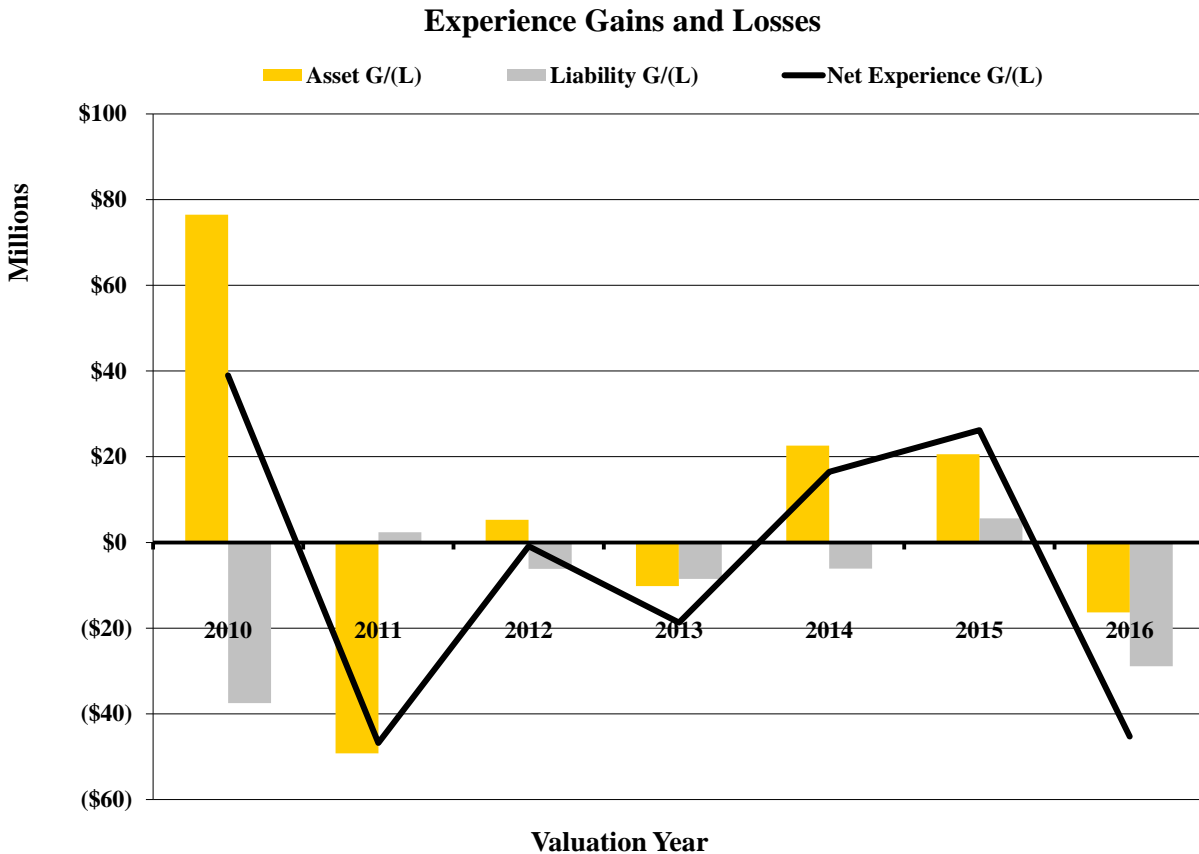
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SECTION I – EXECUTIVE SUMMARY

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 gain in 2009-2010 was by far the most significant gain or loss during the last seven years, although a substantial loss also occurred in 2010-2011. The Plan experienced a substantial liability loss in 2010. The Plan experienced more modest gains and losses from the 2011-2012 through 2014-2015. In 2015-2016, the Plan experienced the largest investment and liability losses in five years.



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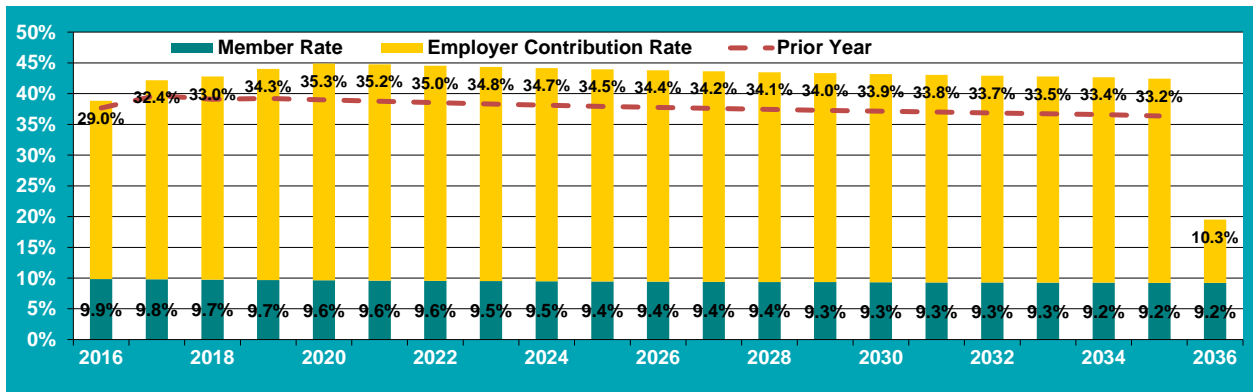
D. Future Expected Financial Trends

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, 2016 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 graph reflects the phase-in of the impact of the assumption change. The expected total contribution rates based on the prior year valuation as of June 30, 2015 are shown (in the dashed line) for comparison.

The contribution rate graph shows that employer contribution rates are expected to increase for the next four years, as the impact of assumption changes are phased-in and this year's market value investment losses are recognized. After 2020, the expected rates stay relatively stable until current unfunded liability amortization period (20 years) ends.

Projection of Contributions, 7.25% Return Each Year



The total contribution rate (employer plus employee) is approximately 39% of member payroll for the June 30, 2016 valuation; it is expected to increase over the next four years to approximately 45% and then decline to approximately 42% if all actuarial assumptions are met. The gradual decline is due to the expected hiring of new PEPRAs members to replace the legacy employees as they retire, thus lowering the average normal cost of the Plan.

After 20 years, the employer contribution rate is expected to drop due to the end of the current unfunded liability amortization period, to a level around 10% of pay, representing the expected Normal Cost plus administrative expenses.

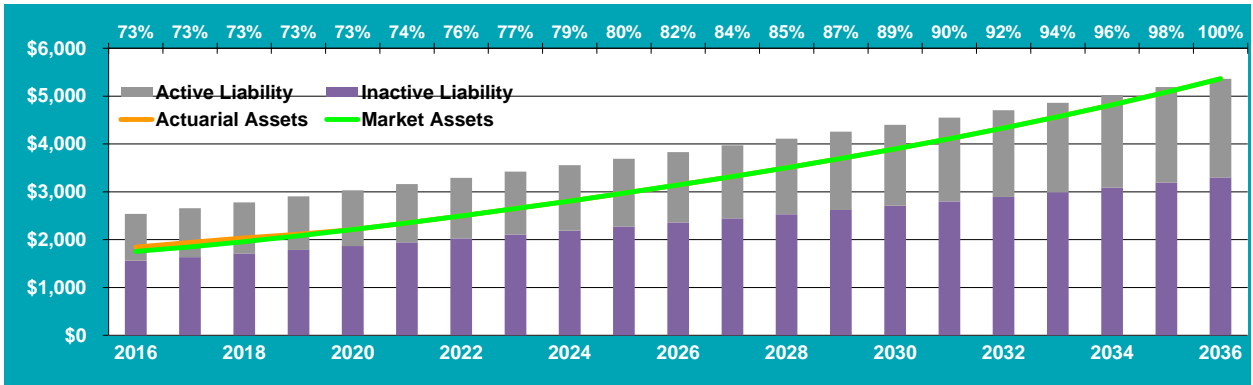
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Asset and Liability Projections:

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 approach 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 greater than the Market Value of Assets as of June 30, 2016, and the two are assumed to be equal past 2020.

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SECTION II — ASSETS

Pension Plan assets play a key role in the financial operation of the Plan and in the decisions the Board may make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact 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, 2015 and June 30, 2016,
- 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 reflect smoothing of annual investment returns.

Table II-1 on the next page discloses and compares each asset class as of June 30, 2015 and June 30, 2016.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

SECTION II — ASSETS

Table II-1 Statement of Assets at Market Value		
	Fiscal Year ending	Fiscal Year ending
	June 30, 2015	June 30, 2016
Assets		
Cash and Cash Equivalents	\$ 71,553,166	\$ 55,503,333
Total Cash and Cash Equivalents	\$ 71,553,166	\$ 55,503,333
Receivables		
Interest and Dividends	\$ 6,057,937	\$ 7,165,933
Contributions	3,703,589	4,516,013
Securities Transactions	34,794,799	47,333,635
Total Receivables	\$ 44,556,325	\$ 59,015,581
Fixed Assets		
Capitalized Software	\$ 222,653	\$ 97,028
Real Estate Occupied	1,707,899	1,688,922
Real Estate Leased	1,138,825	1,126,171
Other	438,357	446,502
Total Fixed Assets	\$ 3,507,734	\$ 3,358,623
Investments at Market Value		
Fixed Income	\$ 453,889,853	\$ 523,222,780
Equities	1,194,717,298	1,068,159,217
Collateral on Loaned Securities	194,948,321	196,552,545
Other	127,745,699	144,572,623
Total Investments	\$ 1,971,301,171	\$ 1,932,507,165
Liabilities		
Accounts Payable	\$ (9,951,045)	\$ (10,429,303)
Security Transactions Payable	(52,845,683)	(69,993,618)
Collateral Held for Loaned Securities	(194,948,321)	(196,552,545)
Other	(569,143)	(495,523)
Total Liabilities	\$ (258,314,192)	\$ (277,470,989)
Market Value of Assets	\$ 1,832,604,204	\$ 1,772,913,713

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

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, 2015 and June 30, 2016.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

SECTION II — ASSETS

Table II-2		
Changes in Market Values		
<u>Additions</u>	Fiscal Year ending <u>June 30, 2015</u>	Fiscal Year ending <u>June 30, 2016</u>
Contributions		
Employer's Contribution	\$ 53,849,031	\$ 58,196,310
Members' Contributions	22,960,235	23,916,508
Total Contributions	\$ <u>76,809,266</u>	\$ <u>82,112,818</u>
Net Investment Income		
Net Appreciation/(Depreciation) in		
Fair Value of Investments	\$ 32,674,635	\$ (70,114,702)
Interest and Dividends	43,216,684	47,206,807
Commission Recapture	45,354	46,825
Other Investment Income	141,801	197,502
Total Investment Income	\$ <u>76,078,474</u>	\$ <u>(22,663,568)</u>
Investment Expense	(7,856,505)	(9,440,764)
Net Investment Income	\$ <u>68,221,969</u>	\$ <u>(32,104,332)</u>
Securities Lending Activities		
Securities Lending Income	\$ 714,891	\$ 1,116,644
Expenses from Securities Lending Activities	(214,079)	(334,588)
Net Securities Lending Income	<u>500,812</u>	<u>782,056</u>
Total Net Investment Income	\$ <u>68,722,781</u>	\$ <u>(31,322,276)</u>
Total Additions	\$ <u>145,532,047</u>	\$ <u>50,790,542</u>
<u>Deductions</u>		
Benefits	\$ 100,099,055	\$ 106,946,768
Refunds	1,759,101	1,219,042
Administrative Costs	2,378,966	2,315,223
Total Deductions	\$ <u>104,237,122</u>	\$ <u>110,481,033</u>
Net Increase/(Decrease)	\$ <u>41,294,925</u>	\$ <u>(59,690,491)</u>
Net Assets Beginning of Year	\$ 1,791,309,279	\$ 1,832,604,204
Net Assets End of Year	\$ 1,832,604,204	\$ 1,772,913,713
Approximate Return	3.87%	-1.72%

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016

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, 2016**

SECTION II — ASSETS

Table II-3	
Development of Actuarial Value of Assets for 6/30/2016	
Item	Total
1. Market Value as of 6/30/2015	\$ 1,832,604,204
2. Non-Investment Cash Flow for 2015-2016	(28,368,215)
3. Expected Return in 2015-2016	131,853,449
4. Expected Market Value as of 6/30/2016: (1 + 2 + 3)	\$ 1,936,089,438
5. Actual Return in 2015-2016	(31,322,276)
6. Actual Return Above Expected in 2015-2016: (5 - 3)	(163,175,725)
7. Market Value as of 6/30/2016	\$ 1,772,913,713
8. Deferred Recognition of Returns Above Expected	
a. 2015-2016 (80% of -\$163,175,725)	(130,540,580)
b. 2014-2015 (60% of -\$69,060,690)	(41,436,414)
c. 2013-2014 (40% of \$156,253,060)	62,501,224
d. 2012-2013 (20% of \$81,607,988)	16,321,598
e. Total	\$ (93,154,172)
9. Preliminary Actuarial Value of Assets: (7 - 8e)	\$ 1,866,067,885
10. Corridor Limit	
a. 80% of Net Market Value	1,418,330,970
b. 120% of Net Market Value	2,127,496,456
11. Actuarial Value after Corridor as of 6/30/2016	\$ 1,866,067,885
12. Rate of Return on Actuarial Value of Assets	6.27%
13. Ratio of Actuarial Value to Market Value: (11 ÷ 7)	105.3%
14. Special (Non Valuation) Reserves:	
a. Health Insurance Reserves	0
b. Special COL Reserve	0
c. Legal Contingency Reserve	2,238,799
d. Tier 3 Disability Reserve	1,560
e. Contingency Reserve	17,945,324
f. Total Special Reserves (Market Value)	\$ 20,185,683
15. Adjusted Total Special Reserves (105.3% of Market, Except Contingency)	\$ 20,303,398
16. Pension Reserves at Actuarial Value (Valuation Assets): (11 - 15)	\$ 1,845,764,487

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

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%
20-Year Compound Average	6.8%	N/A	N/A	2.2%
15-Year Compound Average	5.3%	N/A	N/A	2.1%
10-Year Compound Average	5.5%	6.2%	6.3%	1.8%
5-Year Compound Average	6.5%	7.6%	7.7%	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, 2016**

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 6/30/2016 Unfunded Liability				
(in thousands)				
	County and Former County	Ceres and Other Districts	Total	
1. Actuarial Value of Assets			\$	1,845,764
2. Accumulated Employee Contributions	188,048	12,911		200,960
3. Inactive Actuarial Liability	1,503,330	58,016		1,561,346
4. Net Assets for Distribution [1 - 2 - 3]			\$	83,459
5. Active Actuarial Liability	\$ 911,064	\$ 64,657	\$	975,721
6. Allocation of Remaining Assets	93.37%	6.63%		100.00%
7. Remaining Assets	77,928	5,530		83,459
8. Total Assets for Actives [2 + 7]	265,977	18,442		284,419
9. Active Funded Ratio [8 ÷ 5]	29.2%	28.5%		29.1%
10. Actuarial Value of Assets [3 + 8]	\$ 1,769,307	\$ 76,458	\$	1,845,764
11. AVA Funded Ratio [10 ÷ (3 + 5)]	73.3%	62.3%		72.8%
12. Unfunded Actuarial Liability [5 - 8]	\$ 645,088	\$ 46,215	\$	691,302

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, 2016

SECTION III – LIABILITIES

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

- **Disclosure** of Plan liabilities at June 30, 2015 and June 30, 2016,
- 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, 2016**

SECTION III – LIABILITIES

**Table III-1
Present Value of Future Benefits and Actuarial Liability
(in thousands)**

					June 30, 2016	June 30, 2015
	General		Safety		Total	Total
	County and Former County	Ceres and Other Districts	County and Former County	Ceres and Other Districts		
Present Value of Future Benefits						
Actives	\$ 969,160	\$ 41,124	\$ 323,848	\$ 52,382	\$ 1,386,514	\$ 1,333,777
Terminated Vested	90,902	4,502	31,028	7,747	134,179	114,433
Retirees	917,122	21,443	255,781	15,863	1,210,208	1,128,934
Disabled	46,999	2,186	73,301	4,949	127,435	124,026
Beneficiaries	57,625	327	30,572	1,000	89,524	84,821
Total StanCERA	\$ 2,081,809	\$ 69,581	\$ 714,529	\$ 81,941	\$ 2,947,860	\$ 2,785,991
Actuarial Liability						
Total Present Value of Benefits	\$ 2,081,809	\$ 69,581	\$ 714,529	\$ 81,941	\$ 2,947,860	\$ 2,785,991
Present Value of Future Normal Costs						
Employer Portion	150,172	6,650	60,898	10,327	228,047	257,941
Employee Portion	<u>125,151</u>	<u>5,027</u>	<u>45,723</u>	<u>6,845</u>	<u>182,745</u>	<u>136,529</u>
Actuarial Liability	\$ 1,806,485	\$ 57,903	\$ 607,909	\$ 64,769	\$ 2,537,067	\$ 2,391,522
Actuarial Value of Assets	\$ 1,323,821	\$ 36,089	\$ 445,485	\$ 40,368	\$ 1,845,764	\$ 1,763,629
Funded Ratio	73.3%	62.3%	73.3%	62.3%	72.8%	73.7%
Unfunded Actuarial Liability/(Surplus)	\$ 482,664	\$ 21,814	\$ 162,424	\$ 24,401	\$ 691,302	\$ 627,893

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

SECTION III – LIABILITIES

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

Table III-2					
Liabilities by Group as of June 30, 2016					
(in thousands)					
	General		Safety		Total
	County and Former County	Ceres and Other Districts	County and Former County	Ceres and Other Districts	
Actuarial Liability					
Actives	\$ 693,836	\$ 29,446	\$ 217,228	\$ 35,210	\$ 975,721
Terminated Vested	90,902	4,502	31,028	7,747	134,179
Retirees	917,122	21,443	255,781	15,863	1,210,208
Disabled	46,999	2,186	73,301	4,949	127,435
Beneficiaries	57,625	327	30,572	1,000	89,524
Total	\$ 1,806,485	\$ 57,903	\$ 607,909	\$ 64,769	\$ 2,537,067

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

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 2016 Experience Gain/(Loss)	
(in millions)	
Item	Cost
1. Unfunded Actuarial Liability at June 30, 2015	\$ 627.9
2. Middle of year actuarial liability payment	(44.1)
3. Interest to end of year on 1 and 2	<u>44.0</u>
4. Expected Unfunded Actuarial Liability at June 30, 2016 (1+2+3)	\$ 627.8
5. Actual Unfunded Liability at June 30, 2016	<u>691.3</u>
6. Difference: (4 - 5)	\$ (63.5)
7. Portion of difference due to:	
A. Investment experience	\$ (16.3)
B. Contribution (shortfall)/excess	(18.3)
C. Audit changes	(0.7)
D. New entrant loss	(2.0)
E. Other experience	<u>(26.2)</u>
F. Total	(63.5)

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

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 20-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, 2016 valuation, this amount is estimated to be \$2.472 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 second year.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

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 second year of phase-in of the assumption change.

**Table IV-1
Development of the Net Employer Contribution Rate as of June 30, 2016 for FYE 2018**

	General		June 30, 2016 Safety		COMPOSITE	June 30, 2015 COMPOSITE
	County and Former County	Ceres and Other Districts	County and Former County	Ceres and Other Districts		
1. Total Normal Cost Rate	19.23%	20.45%	31.29%	32.96%	21.82%	22.17%
2. Member Contribution Rate	<u>8.97%</u>	<u>8.62%</u>	<u>13.29%</u>	<u>13.18%</u>	9.85%	9.92%
3. Employer Normal Cost Rate (1-2)	10.26%	11.83%	18.00%	19.78%	11.97%	12.24%
4. UAL Amortization	17.49%	18.87%	24.72%	24.63%	19.04%	17.66%
5. Administrative Expense Rate	<u>0.84%</u>	<u>0.93%</u>	<u>1.29%</u>	<u>1.34%</u>	0.94%	0.96%
6. Net Employer Contribution Rate (3+4+5)	28.59%	31.63%	44.01%	45.75%	31.95%	30.86%
7. Phase-In of Assumption Changes	<u>-2.72%</u>	<u>-2.72%</u>	<u>-3.79%</u>	<u>-3.79%</u>	-2.94%	-5.87%
8. Final Employer Contribution Rate (6+7)	25.87%	28.91%	40.22%	41.96%	29.01%	24.99%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

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:					
2017+	3.25%	3.25%	3.25%	3.25%	N/A
Amortization Factor	13.7846	13.7846	13.7846	13.7846	N/A
Payroll	\$ 200,152,777	\$ 8,386,593	\$ 47,670,176	\$ 7,186,172	\$ 263,395,718
Unfunded Actuarial Liability (actuarial value)	\$ 482,664,057	\$ 21,814,152	\$ 162,423,585	\$ 24,400,661	\$ 691,302,455
UAL Amortization	\$ 35,014,771	\$ 1,582,503	\$ 11,782,988	\$ 1,770,141	\$ 50,150,403
UAL Amortization Rate	17.49%	18.87%	24.72%	24.63%	19.04%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

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 second 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, 2016 for FYE 2018							
	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	PEPRA	TOTAL
<u>County and Former County</u>							
A. Total Normal Cost Rate	21.63%	17.40%	4.32%	18.43%	20.62%	16.13%	19.23%
B. Member Contribution Rate	<u>8.43%</u>	<u>7.98%</u>	<u>0.00%</u>	<u>1.08%</u>	<u>9.56%</u>	<u>8.06%</u>	8.97%
C. Employer Normal Cost Rate (A-B)	13.20%	9.42%	4.32%	17.35%	11.06%	8.07%	10.26%
D. UAL Amortization Rate	17.49%	17.49%	17.49%	17.49%	17.49%	17.49%	17.49%
E. Administrative Expense Rate	<u>0.93%</u>	<u>0.81%</u>	<u>0.66%</u>	<u>1.06%</u>	<u>0.86%</u>	<u>0.77%</u>	0.84%
F. Net June 30, 2016 Contribution Rate (C+D+E)	31.62%	27.72%	22.47%	35.90%	29.41%	26.33%	28.59%
G. Impact of Phase-In of Assumption Changes	-2.72%	-2.72%	-2.72%	-2.72%	-2.72%	-2.72%	-2.72%
H. Phase-In June 30, 2016 Contribution Rate (F+G)	28.90%	25.00%	19.75%	33.18%	26.69%	23.61%	25.87%
<u>Ceres and Other Districts</u>							
A. Total Normal Cost Rate		16.25%		13.70%	21.80%	16.24%	20.45%
B. Member Contribution Rate		<u>7.78%</u>		<u>0.00%</u>	<u>8.95%</u>	<u>8.12%</u>	8.62%
C. Employer Normal Cost Rate (A-B)		8.47%		13.70%	12.85%	8.12%	11.83%
D. UAL Amortization Rate		18.87%		18.87%	18.87%	18.87%	18.87%
E. Administrative Expense Rate		<u>0.83%</u>		<u>0.99%</u>	<u>0.96%</u>	<u>0.82%</u>	0.93%
F. Net June 30, 2016 Contribution Rate (C+D+E)		28.17%		33.56%	32.68%	27.81%	31.63%
G. Impact of Phase-In of Assumption Changes		-2.72%		-2.72%	-2.72%	-2.72%	-2.72%
H. Phase-In June 30, 2016 Contribution Rate (F+G)		25.45%		30.84%	29.96%	25.09%	28.91%

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, 2016**

SECTION IV – CONTRIBUTIONS

Table IV-4					
Development of the Safety Member Contribution Rate as of June 30, 2016 for FYE 2018					
	Tier 2	Tier 4	Tier 5	PEPRA	TOTAL
<u>County and Former County</u>					
A. Total Normal Cost Rate	29.49%	0.00%	33.37%	26.16%	31.29%
B. Member Contribution Rate	<u>12.60%</u>	<u>0.00%</u>	<u>13.44%</u>	<u>13.08%</u>	13.29%
C. Employer Normal Cost Rate (A-B)	16.89%	0.00%	19.93%	13.08%	18.00%
D. UAL Amortization Rate	24.72%	24.72%	24.72%	24.72%	24.72%
E. Administrative Expense Rate	<u>1.26%</u>	<u>0.75%</u>	<u>1.35%</u>	<u>1.14%</u>	1.29%
F. Net June 30, 2016 Contribution Rate (C+D+E)	42.87%	25.47%	46.00%	38.94%	44.01%
G. Impact of Phase-In of Assumption Changes	-3.79%	-3.79%	-3.79%	-3.79%	-3.79%
H. Phase-In June 30, 2016 Contribution Rate (F+G)	39.08%	21.68%	42.21%	35.15%	40.22%
<u>Ceres and Other Districts</u>					
A. Total Normal Cost Rate			33.35%	29.87%	32.96%
B. Member Contribution Rate			<u>12.96%</u>	<u>14.93%</u>	13.18%
C. Employer Normal Cost Rate (A-B)			20.39%	14.94%	19.78%
D. UAL Amortization Rate			24.63%	24.63%	24.63%
E. Administrative Expense Rate			<u>1.36%</u>	<u>1.20%</u>	1.34%
F. Net June 30, 2016 Contribution Rate (C+D+E)			46.38%	40.77%	45.75%
G. Impact of Phase-In of Assumption Changes			-3.79%	-3.79%	-3.79%
H. Phase-In June 30, 2016 Contribution Rate (F+G)			42.59%	36.98%	41.96%

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, 2016**

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, 2016 for FYE 2018							
	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	PEPRA	TOTAL
<u>County and Former County</u>							
A. Projected Payroll	\$ 43,318	\$ 14,334,167	\$ 795,643	\$ 2,054,851	\$ 134,002,854	\$ 48,921,944	\$ 200,152,777
B. Employer Normal Cost Rate	13.20%	9.42%	4.32%	17.35%	11.06%	8.06%	
C. UAL Amortization Rate	<u>17.49%</u>	<u>17.49%</u>	<u>17.49%</u>	<u>17.49%</u>	<u>17.49%</u>	<u>17.49%</u>	
D. Employer Contribution Rate							
Prior to Administrative Expense (B-C)	30.69%	26.91%	21.81%	34.84%	28.55%	25.55%	
E. Projected Employer Contribution							
Prior to Administrative Expense (A*D)	\$ 13,294	\$ 3,857,324	\$ 173,530	\$ 715,910	\$ 38,257,815	\$ 12,499,557	\$ 55,517,430
F. Allocated Administrative Expense	\$ 403	\$ 116,811	\$ 5,255	\$ 21,680	\$ 1,158,556	\$ 378,522	\$ 1,681,226
G. Administrative Expense Rate (F÷A)	0.93%	0.81%	0.66%	1.06%	0.86%	0.77%	0.84%
<u>Ceres and Other Districts</u>							
A. Projected Payroll		\$ 217,340		\$ 135,400	\$ 6,351,117	\$ 1,682,736	\$ 8,386,593
B. Employer Normal Cost Rate		8.47%		13.70%	12.85%	8.12%	
C. UAL Amortization Rate		<u>18.87%</u>		<u>18.87%</u>	<u>18.87%</u>	<u>18.87%</u>	
D. Employer Contribution Rate							
Prior to Administrative Expense (B-C)		27.34%		32.57%	31.72%	26.99%	
E. Projected Employer Contribution							
Prior to Administrative Expense (A*D)		\$ 59,421		\$ 44,100	\$ 2,014,574	\$ 454,170	\$ 2,572,265
F. Allocated Administrative Expense		\$ 1,799		\$ 1,335	\$ 61,007	\$ 13,754	\$ 77,896
G. Administrative Expense Rate (F÷A)		0.83%		0.99%	0.96%	0.82%	0.93%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

SECTION IV – CONTRIBUTIONS

Table IV-6					
Development of the Safety Member Administrative Expense Rate as of June 30, 2016 for FYE 2018					
	Tier 2	Tier 4	Tier 5	PEPRA	TOTAL
<u>County and Former County</u>					
A. Projected Payroll	\$ 3,472,407	\$ 85,035	\$ 32,259,312	\$ 11,853,422	\$ 47,670,176
B. Employer Normal Cost Rate	16.89%	0.00%	19.93%	13.08%	
C. UAL Amortization Rate	<u>24.72%</u>	<u>24.72%</u>	<u>24.72%</u>	<u>24.72%</u>	
D. Employer Contribution Rate					
Prior to Administrative Expense (B-C)	41.61%	24.72%	44.65%	37.80%	
E. Projected Employer Contribution					
Prior to Administrative Expense (A*D)	\$ 1,444,869	\$ 21,021	\$ 14,403,783	\$ 4,480,594	\$ 20,350,266
F. Allocated Administrative Expense	\$ 43,755	\$ 637	\$ 436,188	\$ 135,685	\$ 616,264
G. Administrative Expense Rate (F÷A)	1.26%	0.75%	1.35%	1.14%	1.29%
<u>Ceres and Other Districts</u>					
A. Projected Payroll			\$ 6,363,557	\$ 822,615	\$ 7,186,172
B. Employer Normal Cost Rate			20.39%	14.94%	
C. UAL Amortization Rate			<u>24.63%</u>	<u>24.63%</u>	
D. Employer Contribution Rate					
Prior to Administrative Expense (B-C)			45.02%	39.57%	
E. Projected Employer Contribution					
Prior to Administrative Expense (A*D)			\$ 2,864,873	\$ 325,509	\$ 3,190,382
F. Allocated Administrative Expense			\$ 86,757	\$ 9,857	\$ 96,614
G. Administrative Expense Rate (F÷A)			1.36%	1.20%	1.34%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

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, 2016.

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, 2016**

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%	

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, 2016**

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 loss due to low investment returns and due to plan experience.

Table V-2						
Actuarial (Gains)/Losses						
(Change in UAAL beyond expected)						
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	

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, 2016**

APPENDIX A – MEMBERSHIP INFORMATION

The data for this valuation was provided by the StanCERA as of June 30, 2016. 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 #23.

	<u>General Members</u>		<u>Safety Members</u>		<u>Total</u>	
	<u>7/1/2015</u>	<u>7/1/2016</u>	<u>7/1/2015</u>	<u>7/1/2016</u>	<u>7/1/2015</u>	<u>7/1/2016</u>
Active Participants						
Number	3,421	3,521	723	727	4,144	4,248
Average Age	45.45	45.15	38.08	38.11	44.17	43.94
Average Service	10.94	10.62	10.25	10.29	10.82	10.56
Average Pay (does not reflect impact of furloughs)	\$ 55,116	\$ 56,364	\$ 68,004	\$ 71,555	\$ 57,364	\$ 58,964
Service Retired						
Number	2,472	2,552	349	367	2,821	2,919
Average Age	69.46	69.64	64.57	64.76	68.85	69.02
Average Annual Total Benefit	\$ 28,315	\$ 29,368	\$ 51,627	\$ 53,226	\$ 31,199	\$ 32,368
Beneficiaries						
Number	323	334	87	94	410	428
Average Age	72.70	73.11	66.66	66.90	71.42	71.75
Average Annual Total Benefit	\$ 16,700	\$ 16,980	\$ 27,721	\$ 27,902	\$ 19,039	\$ 19,379
Duty Disabled						
Number	108	102	118	123	226	225
Average Age	67.01	68.02	57.88	57.58	62.24	62.31
Average Annual Total Benefit	\$ 23,941	\$ 24,834	\$ 36,607	\$ 37,475	\$ 30,554	\$ 31,744
Ordinary Disabled						
Number	75	72	7	7	82	79
Average Age	64.36	64.57	57.00	58.00	63.73	63.99
Average Annual Total Benefit	\$ 15,637	\$ 16,412	\$ 22,342	\$ 23,013	\$ 16,210	\$ 16,996
Total In Pay						
Number	2,978	3,060	561	591	3,539	3,651
Average Age	69.59	69.84	63.39	63.52	68.61	68.82
Average Annual Total Benefit	\$ 26,577	\$ 27,560	\$ 44,395	\$ 45,562	\$ 29,402	\$ 30,474
Terminated Vested						
Number	393	399	80	80	473	479
Average Age	50.07	49.88	43.33	42.48	48.93	48.64
Average Service	10.00	10.23	10.01	9.27	10.00	10.07
Transfers						
Number	367	398	139	153	506	551
Average Age	46.41	46.51	40.61	41.22	44.82	45.04
Average Service	6.30	6.80	6.81	7.32	6.44	6.95
Total Inactives						
Number	760	797	219	233	979	1,030
Average Age	48.31	48.20	41.60	41.65	46.81	46.72
Average Service	8.21	8.52	7.98	7.99	8.16	8.40

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

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 #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

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

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		7/1/2015	7/1/2016
	7/1/2015	7/1/2016	7/1/2015	7/1/2016	7/1/2015	7/1/2016	7/1/2015	7/1/2016	7/1/2015	7/1/2016	7/1/2015	7/1/2016		
Active Participants														
Number	3,297	3,393	643	645	3,940	4,038	124	128	80	82	204	210	4,144	4,248
Average Age	45.43	45.13	38.09	38.09	44.24	44.01	45.96	45.55	38.03	38.27	42.85	42.70	44.17	43.94
Average Service	10.91	10.58	10.18	10.21	10.79	10.52	11.87	11.73	10.83	10.87	11.46	11.40	10.82	10.56
Average Pay ¹	\$ 54,846	\$ 56,134	\$ 66,311	\$ 70,051	\$ 56,717	\$ 58,357	\$ 62,276	\$ 62,462	\$ 81,614	\$ 83,383	\$ 69,859	\$ 70,632	\$ 57,364	\$ 58,964
Terminated Vested														
Number	380	384	68	71	448	455	13	15	12	9	25	24	473	479
Average Age	49.99	49.84	43.25	42.58	48.97	48.71	52.38	50.93	43.75	41.67	48.24	47.46	48.93	48.64
Average Service	10.00	10.22	9.96	9.28	10.00	10.07	9.98	10.59	10.28	9.17	10.12	10.06	10.00	10.07
Transfers														
Number	342	370	121	125	463	495	25	28	18	28	43	56	506	551
Average Age	46.66	46.83	40.21	40.92	44.97	45.34	43.08	42.21	43.28	42.57	43.16	42.39	44.82	45.04
Average Service	6.16	6.75	6.67	6.98	6.29	6.81	8.18	7.56	7.70	8.85	7.98	8.21	6.44	6.95
Total Inactives														
Number	722	754	189	196	911	950	38	43	30	37	68	80	979	1,030
Average Age	48.41	48.36	41.31	41.52	46.94	46.95	46.26	45.26	43.47	42.35	45.03	43.91	46.81	46.72
Average Service	8.18	8.52	7.86	7.82	8.11	8.37	8.80	8.62	8.73	8.93	8.77	8.76	8.16	8.40

¹ All payroll figures shown are annual.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

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	
	7/1/2015	7/1/2016	7/1/2015	7/1/2016	7/1/2015	7/1/2016	7/1/2015	7/1/2016	7/1/2015	7/1/2016	7/1/2015	7/1/2016	7/1/2015	7/1/2016	7/1/2015	7/1/2016	7/1/2015	7/1/2016
Active Participants																		
Number	1	1	247	247	17	15	36	23	2,227	2,070	769	1,037	2	1	480	446	161	198
Average Age	56.00	57.00	38.73	39.66	53.24	53.40	61.00	61.22	48.95	49.59	36.49	37.05	59.50	62.00	41.27	42.09	28.32	28.93
Average Service	16.76	17.76	4.09	5.25	17.75	18.05	34.73	35.00	14.61	15.40	1.12	1.58	26.57	21.63	13.16	13.96	1.08	1.72
Average Pay ¹	\$ 37,398	\$ 41,745	\$ 50,552	\$ 54,911	\$ 49,340	\$ 51,118	\$ 74,329	\$ 86,099	\$ 59,919	\$ 62,361	\$ 40,768	\$ 43,416	\$ 83,543	\$ 81,949	\$ 71,433	\$ 76,864	\$ 50,826	\$ 54,645
Terminated Vested																		
Number	17	11	66	58	22	21	1	1	274	293	0	0	0	0	68	70	0	1
Average Age	62.24	62.55	55.95	55.86	54.77	56.05	66.00	67.00	47.35	47.67	0.00	0.00	0.00	0.00	43.25	42.83	0.00	25.00
Average Service	10.47	10.20	8.85	8.77	12.15	12.74	5.55	5.55	10.09	10.34	0.00	0.00	0.00	0.00	9.96	9.41	0.00	0.24
Transfers																		
Number	4	5	118	119	13	13	2	2	193	207	12	24	1	1	114	115	6	9
Average Age	61.75	61.80	48.61	48.18	50.54	50.08	58.00	59.00	45.49	46.71	35.08	35.33	67.00	68.00	40.27	41.29	34.67	33.22
Average Service	10.81	11.59	2.49	2.89	15.86	14.61	14.33	14.33	7.89	8.92	1.04	1.25	6.08	6.08	6.97	7.41	1.17	1.67
Total Inactives																		
Number	21	16	184	177	35	34	3	3	467	500	12	24	1	1	182	185	6	10
Average Age	62.14	62.31	51.24	50.69	53.20	53.76	60.67	61.67	46.58	47.27	35.08	35.33	67.00	68.00	41.38	41.87	34.67	32.40
Average Service	10.53	10.63	4.77	4.81	13.53	13.46	11.41	11.41	9.18	9.75	1.04	1.25	6.08	6.08	8.09	8.16	1.17	1.52

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	
	7/1/2015	7/1/2016	7/1/2015	7/1/2016	7/1/2015	7/1/2016	7/1/2015	7/1/2016	7/1/2015	7/1/2016	7/1/2015	7/1/2016	7/1/2015	7/1/2016	7/1/2015	7/1/2016	7/1/2015	7/1/2016
Active Participants																		
Number	0	0	4	4	0	0	2	2	90	86	28	36	0	0	72	68	8	14
Average Age	0.00	0.00	44.00	45.00	0.00	0.00	61.00	62.00	48.40	48.77	37.32	37.00	0.00	0.00	38.89	39.54	30.25	32.07
Average Service	0.00	0.00	9.56	10.56	0.00	0.00	41.13	42.13	14.66	15.31	1.14	1.64	0.00	0.00	11.96	12.91	0.68	0.97
Average Pay ¹	\$ 0	\$ 0	\$ 48,436	\$ 52,363	\$ 0	\$ 0	\$ 62,454	\$ 65,243	\$ 68,978	\$ 70,998	\$ 42,695	\$ 43,040	\$ 0	\$ 0	\$ 84,047	\$ 89,555	\$ 59,711	\$ 53,405
Terminated Vested																		
Number	1	1	4	4	0	0	0	0	8	9	0	1	0	0	12	9	0	0
Average Age	61.00	62.00	55.25	56.25	0.00	0.00	0.00	0.00	49.88	48.33	0.00	42	0.00	0.00	43.75	41.67	0.00	0.00
Average Service	5.32	5.32	7.59	7.59	0.00	0.00	0.00	0.00	11.75	12.21	0.00	13	0.00	0.00	10.28	9.17	0.00	0.00
Transfers																		
Number	0	0	5	5	0	0	0	0	19	21	1	2	0	0	18	27	0	1
Average Age	0.00	0.00	50.00	51.00	0.00	0.00	0.00	0.00	41.79	41.38	33.00	29.00	0.00	0.00	43.28	43.07	0.00	29.00
Average Service	0.00	0.00	2.19	2.19	0.00	0.00	0.00	0.00	10.16	9.39	0.55	1.75	0.00	0.00	7.70	9.12	0.00	1.73
Inactives																		
Number	1	1	9	9	0	0	0	0	27	30	1	3	0	0	30	36	0	1
Average Age	61.00	62.00	52.33	53.33	0.00	0.00	0.00	0.00	44.19	43.47	33.00	33.33	0.00	0.00	43.47	42.72	0.00	29.00
Average Service	5.32	5.32	4.59	4.59	0.00	0.00	0.00	0.00	10.63	10.24	0.55	5.59	0.00	0.00	8.73	9.13	0.00	1.73

¹ All payroll figures shown are annual.



**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

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%

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

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

APPENDIX A – MEMBERSHIP INFORMATION

StanCERA Membership – Retired Members as of June 30, 2016

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		
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	4	\$ 53,013	0	\$ 0	0	\$ 0	4	\$ 53,013
50-54	52	\$ 19,387	45	\$ 60,831	0	\$ 0	5	\$ 29,581	102	\$ 38,171
55-59	207	\$ 28,060	54	\$ 49,246	7	\$ 23,244	3	\$ 102,382	271	\$ 32,980
60-64	472	\$ 33,209	72	\$ 46,820	15	\$ 28,677	4	\$ 106,153	563	\$ 35,347
65-69	671	\$ 32,944	71	\$ 56,106	17	\$ 28,821	2	\$ 67,608	761	\$ 35,104
70-74	467	\$ 29,980	57	\$ 57,453	10	\$ 30,569	0	\$ 0	534	\$ 32,924
75-79	279	\$ 24,108	27	\$ 49,897	5	\$ 35,817	0	\$ 0	311	\$ 26,536
80-84	145	\$ 23,639	13	\$ 51,045	3	\$ 51,130	0	\$ 0	161	\$ 26,364
85-89	126	\$ 23,970	4	\$ 25,147	0	\$ 0	0	\$ 0	130	\$ 24,006
90-94	54	\$ 20,968	6	\$ 28,289	0	\$ 0	0	\$ 0	60	\$ 21,700
95+	22	\$ 14,661	0	\$ 0	0	\$ 0	0	\$ 0	22	\$ 14,661
All Ages	2,495	\$ 29,349	353	\$ 52,462	57	\$ 30,193	14	\$ 72,491	2,919	\$ 32,368

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

APPENDIX A – MEMBERSHIP INFORMATION

StanCERA Membership – Service-Connected Disabled Members as of June 30, 2016

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		
25-29	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
30-34	0	\$ 0	4	\$ 25,317	0	\$ 0	0	\$ 0	4	\$ 25,317
35-39	0	\$ 0	3	\$ 34,751	0	\$ 0	1	\$ 50,244	4	\$ 38,624
40-44	1	\$ 15,007	5	\$ 33,558	0	\$ 0	0	\$ 0	6	\$ 30,466
45-49	2	\$ 22,579	17	\$ 37,770	0	\$ 0	1	\$ 29,717	20	\$ 35,848
50-54	2	\$ 27,382	14	\$ 33,604	1	\$ 29,388	0	\$ 0	17	\$ 32,624
55-59	7	\$ 22,301	20	\$ 31,443	0	\$ 0	0	\$ 0	27	\$ 29,073
60-64	24	\$ 23,716	22	\$ 42,386	1	\$ 23,022	3	\$ 39,409	50	\$ 32,859
65-69	23	\$ 27,238	15	\$ 44,566	2	\$ 24,357	0	\$ 0	40	\$ 33,592
70-74	12	\$ 21,663	12	\$ 36,388	2	\$ 21,107	1	\$ 79,574	27	\$ 30,311
75-79	14	\$ 27,598	3	\$ 35,584	0	\$ 0	0	\$ 0	17	\$ 29,007
80-84	6	\$ 22,957	2	\$ 36,255	0	\$ 0	0	\$ 0	8	\$ 26,282
85-89	5	\$ 27,789	0	\$ 0	0	\$ 0	0	\$ 0	5	\$ 27,789
90-94	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
95+	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
All Ages	96	\$ 24,893	117	\$ 37,022	6	\$ 23,889	6	\$ 46,294	225	\$ 31,744

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

APPENDIX A – MEMBERSHIP INFORMATION

StanCERA Membership – Nonservice-Connected Disabled Members as of June 30, 2016

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		
35-39	1	\$ 13,974	0	\$ 0	0	\$ 0	0	\$ 0	1	\$ 13,974
40-44	2	\$ 15,824	0	\$ 0	0	\$ 0	0	\$ 0	2	\$ 15,824
45-49	3	\$ 17,844	1	\$ 22,256	0	\$ 0	1	\$ 34,973	5	\$ 22,152
50-54	7	\$ 16,225	0	\$ 0	0	\$ 0	0	\$ 0	7	\$ 16,225
55-59	9	\$ 17,567	1	\$ 25,388	0	\$ 0	0	\$ 0	10	\$ 18,349
60-64	10	\$ 18,028	2	\$ 22,080	0	\$ 0	0	\$ 0	12	\$ 18,704
65-69	18	\$ 16,167	1	\$ 14,213	0	\$ 0	0	\$ 0	19	\$ 16,064
70-74	10	\$ 18,781	1	\$ 20,100	0	\$ 0	0	\$ 0	11	\$ 18,901
75-79	8	\$ 13,190	0	\$ 0	0	\$ 0	0	\$ 0	8	\$ 13,190
80-84	1	\$ 11,840	0	\$ 0	0	\$ 0	0	\$ 0	1	\$ 11,840
85-89	2	\$ 13,685	0	\$ 0	0	\$ 0	0	\$ 0	2	\$ 13,685
90-94	1	\$ 6,978	0	\$ 0	0	\$ 0	0	\$ 0	1	\$ 6,978
95+	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
All Ages	72	\$ 16,412	6	\$ 21,019	0	\$ 0	1	\$ 34,973	79	\$ 16,996

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

APPENDIX A – MEMBERSHIP INFORMATION

StanCERA Membership – Beneficiaries as of June 30, 2016

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	\$ 30,243	2	\$ 17,784	0	\$ 0	0	\$ 0	3	\$ 21,937
25-29	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
30-34	1	\$ 36,559	0	\$ 0	0	\$ 0	0	\$ 0	1	\$ 36,559
35-39	3	\$ 9,148	0	\$ 0	0	\$ 0	0	\$ 0	3	\$ 9,148
40-44	1	\$ 5,846	2	\$ 24,632	0	\$ 0	0	\$ 0	3	\$ 18,370
45-49	15	\$ 12,061	3	\$ 22,409	0	\$ 0	0	\$ 0	18	\$ 13,786
50-54	12	\$ 11,881	5	\$ 34,295	0	\$ 0	0	\$ 0	17	\$ 18,474
55-59	12	\$ 14,320	11	\$ 16,959	0	\$ 0	2	\$ 30,832	25	\$ 16,802
60-64	35	\$ 15,023	13	\$ 22,498	0	\$ 0	0	\$ 0	48	\$ 17,047
65-69	49	\$ 19,727	13	\$ 33,379	1	\$ 11,180	0	\$ 0	63	\$ 22,409
70-74	50	\$ 17,915	9	\$ 34,163	0	\$ 0	0	\$ 0	59	\$ 20,394
75-79	38	\$ 20,916	19	\$ 32,820	1	\$ 17,401	0	\$ 0	58	\$ 24,755
80-84	40	\$ 16,782	8	\$ 33,357	0	\$ 0	0	\$ 0	48	\$ 19,545
85-89	37	\$ 17,664	6	\$ 20,959	0	\$ 0	0	\$ 0	43	\$ 18,124
90-94	24	\$ 16,040	1	\$ 964	0	\$ 0	0	\$ 0	25	\$ 15,437
95+	14	\$ 11,036	0	\$ 0	0	\$ 0	0	\$ 0	14	\$ 11,036
All Ages	332	\$ 16,996	92	\$ 27,838	2	\$ 14,291	2	\$ 30,832	428	\$ 19,379

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

APPENDIX A – MEMBERSHIP INFORMATION

StanCERA Membership – Benefit Form Elections as of June 30, 2016

	County and Former County		Ceres and Other Districts		Total
	General	Safety	General	Safety	
Service Retired					
Option #0 (Unmodified 60% to Spouse)	2,054	313	43	11	2,421
Option #1 (Cash Refund)	208	9	6	0	223
Option #2 (100% Continuance)	201	29	8	2	240
Option #3 (50% Continuance)	30	1	0	1	32
Option #4 (Other)	2	1	0	0	3
Total Service Retired	2,495	353	57	14	2,919
Ordinary Disability					
Option #0 (Unmodified 60% to Spouse)	62	4	0	1	67
Option #1 (Cash Refund)	5	2	0	0	7
Option #2 (100% Continuance)	5	0	0	0	5
Option #3 (50% Continuance)	0	0	0	0	0
Total Ordinary Disability	72	6	0	1	79
Duty Disability					
Option #0 (Unmodified 60% to Spouse)	86	105	5	5	201
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	96	117	6	6	225
Total	2,663	476	63	21	3,223

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

APPENDIX A – MEMBERSHIP INFORMATION

**Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2016
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	17	11	2	0	0	0	0	0	0	0	0	0	0	30
25-29	108	88	47	11	14	8	0	0	0	0	0	0	0	276
30-34	89	72	69	49	37	65	22	0	0	0	0	0	0	403
35-39	57	67	47	30	28	108	102	27	1	0	0	0	0	467
40-44	30	37	29	19	20	88	116	98	9	0	0	0	0	446
45-49	31	26	25	9	17	86	91	118	50	11	0	0	0	464
50-54	27	27	20	13	5	57	94	129	72	46	8	0	0	498
55-59	18	16	10	8	11	57	83	111	47	60	20	7	0	448
60-64	9	2	6	3	7	39	58	62	36	30	6	10	0	268
65-69	2	1	2	1	1	15	16	17	13	7	1	1	0	77
70 & Over	1	0	0	0	0	1	6	7	0	0	0	1	0	16
Total Count	389	347	257	143	140	524	588	569	228	154	35	19	0	3,393

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	34,927	33,242	33,606	0	0	0	0	0	0	0	0	0	0	34,221
25-29	40,653	38,393	41,490	47,536	46,234	46,908	0	0	0	0	0	0	0	40,814
30-34	42,337	45,531	45,928	53,697	49,943	54,876	50,362	0	0	0	0	0	0	48,063
35-39	45,121	42,374	46,101	48,077	51,510	55,274	59,057	58,120	39,115	0	0	0	0	51,529
40-44	43,099	41,921	45,317	49,107	58,781	58,426	54,736	65,453	76,556	0	0	0	0	55,742
45-49	43,533	43,500	45,190	53,011	52,812	59,959	57,509	68,539	68,144	68,933	0	0	0	59,543
50-54	42,705	48,828	51,065	55,118	44,953	58,378	65,119	63,274	64,767	71,526	71,349	0	0	61,384
55-59	46,961	45,518	52,599	46,527	63,240	59,877	62,729	60,504	72,233	70,252	78,575	62,530	0	62,773
60-64	49,224	36,418	74,121	52,496	62,175	48,869	62,533	63,264	70,935	77,462	50,372	80,804	0	63,419
65-69	93,127	34,867	82,858	40,352	35,661	71,283	64,412	58,606	75,065	64,217	42,199	47,357	0	65,895
70 & Over	219,835	0	0	0	0	265,000	99,845	51,163	0	0	0	44,565	0	92,913
Average	43,224	42,357	46,517	51,000	52,873	57,615	60,032	63,667	68,961	71,668	71,049	70,404	0	56,134

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

APPENDIX A – MEMBERSHIP INFORMATION

**Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2016
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	2	2	0	0	0	0	0	0	0	0	0	0	0	4
25-29	1	3	3	1	0	0	0	0	0	0	0	0	0	8
30-34	3	1	2	2	3	0	1	0	0	0	0	0	0	12
35-39	3	3	0	1	0	3	8	2	0	0	0	0	0	20
40-44	2	1	1	0	1	3	4	3	1	0	0	0	0	16
45-49	2	1	0	0	1	4	4	1	1	1	1	0	0	16
50-54	0	2	0	1	0	4	4	4	1	3	0	0	0	19
55-59	0	1	1	0	0	3	2	6	3	3	0	1	0	20
60-64	0	0	1	1	0	0	2	0	2	0	1	0	0	7
65-69	0	0	0	0	0	3	0	1	0	0	0	1	0	5
70 & Over	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total Count	13	14	8	6	5	21	25	17	8	7	2	2	128	

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	35,688	37,752	0	0	0	0	0	0	0	0	0	0	0	36,720
25-29	31,217	36,374	39,943	53,508	0	0	0	0	0	0	0	0	0	39,210
30-34	36,563	64,273	52,558	40,086	66,813	0	47,523	0	0	0	0	0	0	50,601
35-39	47,964	40,784	0	40,929	0	69,055	64,164	66,583	0	0	0	0	0	58,041
40-44	53,038	31,907	39,321	0	55,384	56,588	66,086	78,178	68,565	0	0	0	0	60,618
45-49	54,847	55,718	0	0	171,672	74,645	74,367	88,104	82,549	68,144	84,914	0	0	78,553
50-54	0	86,178	0	39,064	0	80,764	58,752	62,891	57,480	63,835	0	0	0	66,844
55-59	0	47,288	36,663	0	0	53,270	73,652	61,835	85,544	66,192	0	74,632	0	64,596
60-64	0	0	35,856	38,106	0	0	54,673	0	80,523	0	52,527	0	0	56,697
65-69	0	0	0	0	0	102,601	0	92,112	0	0	0	55,853	0	91,153
70 & Over	0	0	0	0	0	125,258	0	0	0	0	0	0	0	125,258
Average	43,996	48,466	42,098	41,963	85,499	75,783	64,572	68,852	78,284	65,461	68,720	65,243	62,462	

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

APPENDIX A – MEMBERSHIP INFORMATION

**Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2016
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	0
20-24	12	11	3	0	0	0	0	0	0	0	0	0	0	26
25-29	29	36	29	22	4	1	0	0	0	0	0	0	0	121
30-34	8	17	7	9	15	43	14	0	0	0	0	0	0	113
35-39	4	8	6	8	3	20	56	11	0	0	0	0	0	116
40-44	0	1	1	0	1	12	33	46	6	0	0	0	0	100
45-49	0	2	0	1	0	6	12	30	27	6	0	0	0	84
50-54	1	1	1	1	0	6	11	10	13	10	1	0	0	55
55-59	0	1	0	3	0	3	1	5	3	0	0	0	0	16
60-64	0	0	0	0	0	0	3	3	1	2	0	0	0	9
65-69	0	0	0	1	0	3	0	0	1	0	0	0	0	5
70 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Count	54	77	47	45	23	94	130	105	51	18	1	0	0	645

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	48,682	51,632	52,091	0	0	0	0	0	0	0	0	0	0	50,323
25-29	50,135	52,159	56,984	61,112	65,614	73,164	0	0	0	0	0	0	0	55,077
30-34	54,787	55,451	53,903	59,598	63,313	70,572	70,750	0	0	0	0	0	0	64,332
35-39	54,022	60,129	60,403	63,154	66,819	72,882	75,664	81,172	0	0	0	0	0	72,008
40-44	0	60,088	70,587	0	71,920	74,064	72,554	82,215	76,727	0	0	0	0	77,279
45-49	0	75,154	0	45,451	0	71,521	75,416	82,659	85,365	80,747	0	0	0	80,940
50-54	79,150	76,144	154,710	84,761	0	67,625	76,101	93,439	82,643	90,213	118,670	0	0	84,858
55-59	0	57,685	0	74,194	0	76,940	72,671	90,549	73,563	0	0	0	0	78,575
60-64	0	0	0	0	0	0	64,408	82,334	81,949	75,969	0	0	0	74,901
65-69	0	0	0	85,117	0	95,125	0	0	92,143	0	0	0	0	92,527
70 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	51,326	54,722	59,018	62,755	64,545	72,396	74,077	83,702	83,027	85,475	118,670	0	0	70,051

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

APPENDIX A – MEMBERSHIP INFORMATION

**Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2016
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	0	1	0	0	0	0	0	0	0	0	0	0	0	1
25-29	5	2	1	3	1	1	0	0	0	0	0	0	0	13
30-34	4	1	0	2	2	9	2	0	0	0	0	0	0	20
35-39	0	0	1	0	0	3	5	2	0	0	0	0	0	11
40-44	0	1	0	0	1	1	7	7	1	0	0	0	0	18
45-49	1	1	0	0	0	1	1	4	2	2	0	0	0	12
50-54	0	1	0	0	0	0	0	0	2	0	0	0	0	3
55-59	0	0	0	0	0	0	0	0	1	0	1	0	0	2
60-64	0	0	0	0	0	1	0	0	0	0	1	0	0	2
65-69	0	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	0
Total Count	10	7	2	5	4	16	15	13	6	2	2	0	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	0
20-24	0	56,363	0	0	0	0	0	0	0	0	0	0	0	56,363
25-29	44,519	57,076	62,639	74,253	81,550	72,445	0	0	0	0	0	0	0	59,703
30-34	49,019	84,469	0	80,274	64,799	82,945	86,064	0	0	0	0	0	0	74,466
35-39	0	0	87,652	0	0	80,704	88,248	89,794	0	0	0	0	0	86,418
40-44	0	89,634	0	0	73,997	102,637	90,408	101,336	108,983	0	0	0	0	95,415
45-49	74,885	83,650	0	0	0	67,506	92,861	97,876	116,729	97,612	0	0	0	94,924
50-54	0	60,463	0	0	0	0	0	0	112,763	0	0	0	0	95,330
55-59	0	0	0	0	0	0	0	0	90,044	0	101,182	0	0	95,613
60-64	0	0	0	0	0	99,990	0	0	0	0	131,265	0	0	115,628
65-69	0	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	0
Average	49,356	69,819	75,146	76,661	71,287	83,199	89,273	98,496	109,668	97,612	116,224	0	0	83,383

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

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, 2015	4,144	506	283	473	82	226	2,821	410	8,945
New Entrants	506	0	0	0	0	0	0	0	506
Rehires	13	(1)	(7)	(3)	0	0	0	0	2
Duty Disabilities	(5)	(1)	0	0	0	6	0	0	0
Ordinary Disabilities	(1)	0	0	0	1	0	0	0	0
Retirements	(126)	(13)	(1)	(29)	0	0	169	0	0
Retirements from General with Safety Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(56)	(7)	0	63	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	(1)	0	0	0	(5)	(3)	(21)	30	0
Died, Without Beneficiary, and Other Terminations	(102)	(2)	102	(1)	0	(3)	(50)	0	(56)
Transfers	(36)	75	(14)	(22)	0	0	0	0	3
Beneficiary Deaths	0	0	0	0	0	0	0	(17)	(17)
Domestic Relations Orders	0	0	0	0	0	0	0	4	4
Withdrawals Paid	(88)	(5)	(36)	(2)	0	0	0	0	(131)
Member Reclassifications	0	(1)	0	0	1	(1)	0	1	0
July 1, 2016	4,248	551	327	479	79	225	2,919	428	9,256

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

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, 2015	3,297	342	234	380	75	102	2,420	322	7,172
New Entrants	424	0	0	0	0	0	0	0	424
Rehires	11	(1)	(6)	(3)	0	0	0	0	1
Duty Disabilities	0	0	0	0	0	0	0	0	0
Ordinary Disabilities	(1)	0	0	0	1	0	0	0	0
Retirements	(107)	(10)	(1)	(22)	0	0	140	0	0
Retirements from General with Safety Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(41)	(4)	0	45	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	(5)	(2)	(18)	25	0
Died, Without Beneficiary, and Other Terminations	(87)	(2)	87	(1)	0	(3)	(47)	0	(53)
Transfers	(31)	50	(6)	(11)	0	0	0	0	2
Beneficiary Deaths	0	0	0	0	0	0	0	(17)	(17)
Domestic Relations Orders	0	0	0	0	0	0	0	1	1
Withdrawals Paid	(72)	(4)	(32)	(2)	0	0	0	0	(110)
Member Reclassifications	0	(1)	1	(2)	1	(1)	0	1	(1)
July 1, 2016	3,393	370	277	384	72	96	2,495	332	7,419

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

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, 2015	643	121	33	68	6	113	337	86	1,407
New Entrants	56	0	0	0	0	0	0	0	56
Rehires	2	0	(1)	0	0	0	0	0	1
Duty Disabilities	(4)	(1)	0	0	0	5	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(15)	(2)	0	(4)	0	0	21	0	0
Retirements from General with Safety Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(11)	(2)	0	13	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	(1)	0	0	0	0	(1)	(2)	4	0
Died, Without Beneficiary, and Other Terminations	(10)	0	10	0	0	0	(3)	0	(3)
Transfers	(2)	11	(2)	(6)	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	2	2
Withdrawals Paid	(13)	(1)	(3)	0	0	0	0	0	(17)
Member Reclassifications	0	(1)	0	0	0	0	0	0	(1)
July 1, 2016	645	125	37	71	6	117	353	92	1,446

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

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, 2015	124	25	9	13	0	6	52	1	230
New Entrants	14	0	0	0	0	0	0	0	14
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	(4)	0	0	(2)	0	0	6	0	0
Retirements from General with Safety Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(1)	(1)	0	2	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	0	(1)	1	0
Died, Without Beneficiary, and Other Terminations	(3)	0	3	0	0	0	0	0	0
Transfers	(1)	4	(3)	0	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0	0	0
Domestic Relations Orders	0	0	0	0	0	0	0	0	0
Withdrawals Paid	(1)	0	(1)	0	0	0	0	0	(2)
Member Reclassifications	0	0	(1)	2	0	0	0	0	1
July 1, 2016	128	28	7	15	0	6	57	2	243

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

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, 2015	80	18	7	12	1	5	12	1	136
New Entrants	12	0	0	0	0	0	0	0	12
Rehires	0	0	0	0	0	0	0	0	0
Duty Disabilities	(1)	0	0	0	0	1	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	0	(1)	0	(1)	0	0	2	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	(2)	0	2	0	0	0	0	0	0
Transfers	(2)	10	(3)	(5)	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0	0	0
Domestic Relations Orders	0	0	0	0	0	0	0	1	1
Withdrawals Paid	(2)	0	0	0	0	0	0	0	(2)
Member Reclassifications	0	1	0	0	0	0	0	0	1
July 1, 2016	82	28	6	9	1	6	14	2	148

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2016**

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

The assumptions and methods used in the actuarial valuation as of July 1, 2016 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 (20 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 second 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, 2016**

**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 \$2,472,000 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, 2016**

**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, 2016**

**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.

Years of Service	Termination Rates	
	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, 2016

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, 2016**

**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, 2016**

**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.

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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%

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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 disablement.

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.

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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.

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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 \$2,400,000 to \$2,472,000, per the procedure established in the Actuarial Experience Study Report for the period covering July 1, 2012 through June 30, 2015.

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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, 2016. 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 \$117,020 for calendar year 2016. For those not participating in Social Security, the compensation cap is \$140,424 for calendar year 2016. 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**

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- **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.

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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.

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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

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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.

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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.

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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.

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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.

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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, 2016**

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

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, 2016**

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, 2016**

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, 2016**

APPENDIX E – MEMBER CONTRIBUTION RATES

Entry Age	General Tier 2			
	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, 2016**

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, 2016**

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, 2016**

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, 2016**

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, 2016**

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, 2016**

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
Assumptions:		8.06%	8.55%	13.07%	14.29%
Interest:	7.25%				
Salary:	2015 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