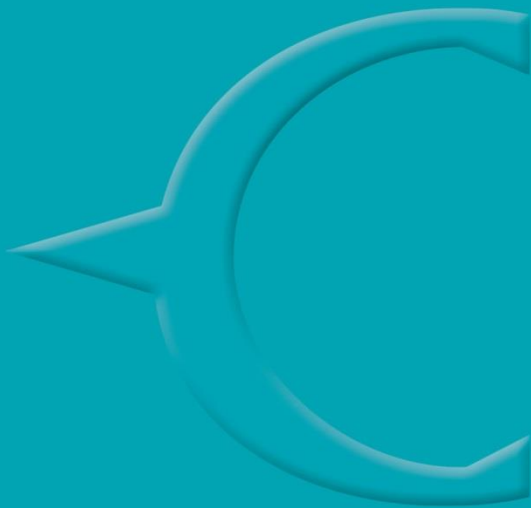




San Joaquin County Employees' Retirement Association

**Actuarial Valuation
as of January 1, 2015**

Produced by Cheiron

September 2015

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September 17, 2015

Retirement Board of San Joaquin
County Employees' Retirement Association
6 South El Dorado Street, Suite 400
Stockton, CA 95202

Dear Members of the Board:

At your request, we have conducted an actuarial valuation of the San Joaquin County Employees' Retirement Association (SJCERA, the System, the Fund, the Plan) as of January 1, 2015. This report contains information on the System's assets and liabilities and discloses employer and employee contribution levels. It also contains schedules for inclusion in the Actuarial Section of the Comprehensive Annual Financial Report (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 SJCERA. This report is for the use of the Retirement Board of San Joaquin 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 the Retirement Board of San Joaquin 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



Robert T. McCrory, FSA, FCA, EA, MAAA
Principal Consulting Actuary



Graham Schmidt, ASA, MAAA
Consulting Actuary

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015

FOREWORD

Cheiron has performed the actuarial valuation of the San Joaquin County Employees' Retirement Association as of January 1, 2015. 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 System's
 - Section II - Assets
 - Section III - Liabilities
 - Section IV- Contributions
 - Section V- Additional CAFR Schedules
- 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 401(h) repayment schedule (Appendix D), a glossary of key actuarial terms (Appendix E), a summary of General and Safety Employer contribution rates (Appendix F), and tables containing member contribution rates (Appendix G).

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

In preparing our report, we relied on information supplied by the SJCERA 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.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**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 financial condition of the System,
- Past and expected trends in the financial progress of the System, and
- Employer and employee contribution rates for Plan Year 2016.

In previous years, the valuation report included information required by the Government Accounting Standards Board (GASB). The information required under the new GASB standards (Nos. 67 and 68) is now included in a separate report, with the report for the Plan's Fiscal Year Ending December 31, 2014 provided to SJCERA in September 2015.

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 financial results, (C) an examination of the historical trends, and (D) the projected financial outlook for the System.

A. Valuation Basis

This valuation determines the employer contributions for the plan year.

The System's funding policy is to contribute an amount equal to the sum of:

- The normal cost under the Entry Age Normal Cost Method;
- Amortization of the unfunded actuarial liability; and
- A portion of the Fund's expected administrative expenses.

For the prior valuation, the unfunded actuarial liability payment was determined as the amount needed to fund the outstanding extraordinary actuarial loss from 2008 at January 1, 2014 over 25 years as a level percent of pay, and the remaining unfunded actuarial liability (UAL) as of January 1, 2014 amortized over a closed period of 19 years as a level percentage of member payroll. At the July 24, 2015 board meeting, the SJCERA Board of Retirement made a change to the funding policy, choosing to amortize any new unexpected changes in the UAL over a period of 15 years as a level percent of pay, with new amortization layers each year. The single equivalent amortization period for these streams of payments is 20 years. The amortization period for each layer of the remaining UAL will decrease each year.

This valuation was prepared based on the plan provisions shown in Appendix C. There have been no changes in plan provisions since the prior valuation.

A summary of the assumptions and methods used in the current valuation is shown in Appendix B.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**SECTION I
EXECUTIVE SUMMARY**

B. Key Findings of this Valuation

The key results of the January 1, 2015 actuarial valuation are as follows:

- The actuarially determined employer contribution rate decreased from 41.93% of payroll last year – prior to the phase-in of the impact from assumption changes - to 41.35% of payroll for 2015.
- The System's funded ratio, the ratio of assets over actuarial liability, increased from 64.2% last year to 66.2% as of January 1, 2015 on an Actuarial Value of Assets (AVA) basis, and from 65.3% to 65.6% on a Market Value of Assets (MVA) basis.
- The unfunded actuarial liability (UAL) is the excess of the System's actuarial liability over the Actuarial Value of Assets. The System experienced a decrease in the UAL from \$1,276,693,084 to \$1,260,343,325 as of January 1, 2015.
- During the year ending December 31, 2014, the return on Plan assets was 4.69% on a market value basis, as compared to the 7.50% assumption. This resulted in a market value loss on investments of \$66,167,008. The Actuarial Value of Assets recognizes 20% of the difference between the expected actuarial value of assets and the Market Value of Assets. The market value losses from this year will be recognized over the next five years. This method of smoothing the asset gains and losses returned 7.47% on the smoothed value of assets, an actuarial asset loss of \$653,120 for the year.

The System experienced a gain on the actuarial liability of \$11,929,425. Combining the liability gain and the asset loss, the System experienced a total gain of \$11,276,305.

- Overall participant membership increased compared to last year. There were 644 new hires and rehires during 2014 and the total active population increased from 5,553 active members to 5,706. Total projected payroll increased 2.30% from \$388,691,431 to \$397,636,401.

On the following page we present Table I-1, which summarizes all the key results of the valuation with respect to membership, assets and liabilities, and contributions. The results are presented and compared for both the current and prior plan year.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**SECTION I
EXECUTIVE SUMMARY**

**TABLE I-1
Summary of Principal Plan Results**

	January 1, 2014	January 1, 2015	% Change
<u>Participant Counts</u>			
Active Participants	5,553	5,706	2.76%
Participants Receiving a Benefit	5,041	5,249	4.13%
Terminated Vested Participants	904	900	-0.44%
Terminated Non-Vested Participants	<u>507</u>	<u>536</u>	5.72%
Total	12,005	12,391	3.22%
Annual Pay of Active Members	\$ 382,525,098	\$ 391,328,162	2.30%
Calendar Year Projected Pay	\$ 388,691,431	\$ 397,636,401	2.30%
<u>Assets and Liabilities</u>			
Actuarial Liability (AL)	\$ 3,561,859,056	\$ 3,731,634,372	4.77%
Actuarial Value of Assets (AVA)	<u>2,285,165,972</u>	<u>2,471,291,047</u>	8.14%
Unfunded Actuarial Liability (UAL)	\$ 1,276,693,084	\$ 1,260,343,325	-1.28%
Funded Ratio (AVA)	64.2%	66.2%	3.22%
Funded Ratio (MVA)	65.3%	65.6%	0.37%
Inactive Funded Ratio	57.5%	59.4%	3.17%
<u>Contributions as a Percentage of Payroll</u>			
Normal Cost Rate	17.28%	16.86%	-0.42%
Unfunded Actuarial Liability Rate	23.74%	23.58%	-0.16%
Administrative Expense	<u>0.91%</u>	<u>0.91%</u>	0.00%
Total Contribution Rate	41.93%	41.35%	-0.58%

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015

SECTION I
EXECUTIVE SUMMARY

C. Changes in Plan Cost

Table I-2 below summarizes the impact of actuarial experience and changes in benefits on Plan cost.

TABLE I-2 Summary of Changes in Plan Cost from Prior Review		
	Employer Cost	Employer Contribution Rate (% Payroll)
<u>January 1, 2014</u>	\$ 157,994,939	41.93%
Change in Cost Due to:		
Demographic Experience	2,418,484	0.43%
Salary Experience	(4,251,863)	(0.79%)
New Entrants to the Plan	3,406,150	(0.43%)
Payroll Amortization	2,842	0.23%
Phase-In of Assumption Changes	1,769,048	0.44%
Asset Experience	27,526	0.01%
Healthcare Reserve	(1,685,659)	(0.42%)
Funding Policy	(179,552)	(0.05%)
<u>Total Cost as of January 1, 2015</u>	\$ 159,501,915	41.35%

An analysis of the cost changes from the prior valuation reveals the following:

- Demographic experience was somewhat unfavorable.

The demographic experience of the Plan – rates of retirement, death, disability, and termination – was slightly worse than predicted by the actuarial assumptions in aggregate, causing a 0.43% increase in cost.

- Pay increases were below expectations.

Increases in pay among active members during 2014 were below those anticipated by the actuarial assumptions. As a result, actuarial liabilities increased less than expected, resulting in an actuarial gain, decreasing the employer contribution rate by 0.79% of payroll. This is partially offset by the fact that the payroll used to amortize the unfunded liability was lower than expected, which increased the employer contribution rate by 0.23% of pay.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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**SECTION I
EXECUTIVE SUMMARY**

- New members entered the Plan.

During 2014, there were 644 newly hired or rehired members entering the Plan to replace departing members. Recent new hires have a smaller Plan normal cost as a percentage of payroll when compared to current members, but they increase the payroll on which contributions are based. Due to these new hires, the employer contribution rate decreased by 0.43% of payroll. The addition of these new members increased member payroll by \$28 million, and increased the Plan cost by about \$3.4 million.

Overall, the combined demographic and salary experience resulted in gains, for a net decrease in cost of about 0.56% of pay.

- Asset experience produced an investment loss on a market basis.

The assets of the Plan returned 4.7% on a market basis, lower than the assumed rate of 7.50%, resulting in a loss of approximately \$66 million for 2014. Under the actuarial asset smoothing policy, 20% of this loss is recognized in the current year, in addition to 20% of the gains and losses from each of the prior three years. The overall return on the smoothed assets was 7.47%, increasing the contribution rate by 0.01% of pay.

- The phase-in of assumption changes increased the contribution rate.

As part of the 2013 actuarial valuation, the Board agreed to phase-in (over three years) the impact of several significant assumption changes on the employer contribution rates. For the 2014 calendar year, the total required employer contribution rate was 36.64% of pay, compared to the full actuarial contribution rate of 42.15%. This difference in the required contribution versus actuarial cost increased the contribution rates by about 0.44% of pay.

The actuarial cost computed for the current valuation is the full actuarial cost – no phase-in will be applied to the rates applicable to the 2016 Plan Year.

- Assets were transferred from the healthcare reserve.

Approximately \$20 million was transferred from the healthcare reserve to the pension fund. These additional assets decreased Plan costs by about 0.42% of pay.

- A change was made to the Plan's funding policy.

The board changed the funding policy during their July 25, 2015 board meeting. The new policy amortizes unexpected future changes in the UAL over a period of 15 years as a level percent of payroll. This change decreased Plan costs by about 0.05% of pay.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**SECTION I
EXECUTIVE SUMMARY**

Table I-3 below shows the ratio of assets to active member payroll for SJCERA.

TABLE I-3 Asset to Payroll Ratio as of December 31, 2014	
Projected Active Member Payroll	397,636,401
Assets (Market Value Net of Non-Valuation Reserves)	2,446,553,095
Ratio of Assets to Payroll	6.15
Ratio with 100% Funding	9.38

The table above shows SJCERA's assets as a percentage of projected 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 over 6 times covered payroll for the Plan; as funding improves and the Plan reaches 100% funding, the ratio of asset to payroll will increase to over 9 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.

On the other hand, consider the situation for SJCERA. Suppose SJCERA's assets lose 10% of their value in a year. Since they were assumed to earn 7.50%, there is an actuarial loss of 17.50% of plan assets. Based on the current ratio of assets to payroll (615%), that means the loss in assets is about 108% of active payroll (615% of the 17.50% 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 amortization payment in the vicinity of 9.7% of payroll if amortized over 15 years.

Furthermore, consider the impact of a one-year asset loss of 10% if the Plan is 100% funded. Based on the ratio of asset to payroll at 100% funding (938%), the asset loss would be about 164% of active payroll (938% of the 17.50% loss). Again, there is only one source of funding to make up for this loss: the employers. In this example, the shortfall could require an additional amortization payment of approximately 14.8% of payroll, amortized over 15 years.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

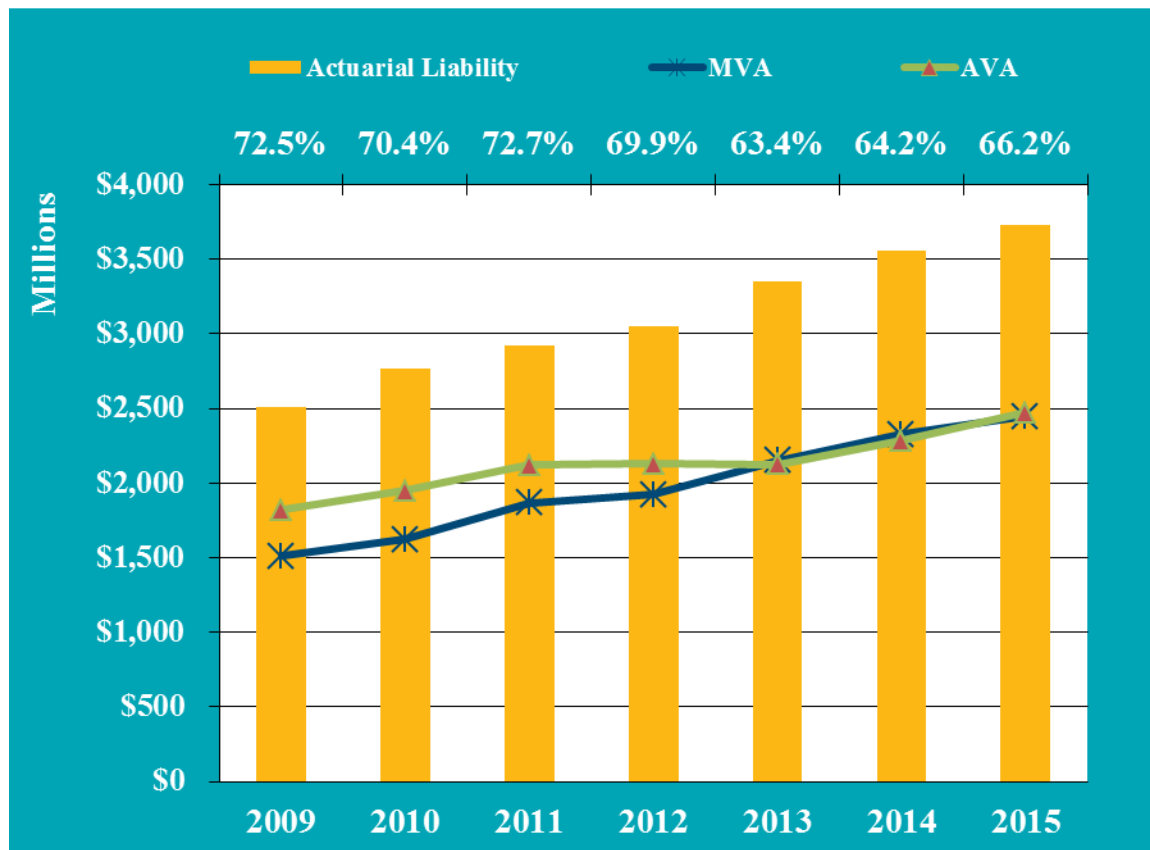
**SECTION I
EXECUTIVE SUMMARY**

D. 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.

Assets and Liabilities

The chart on this page compares the Market Value of Assets (MVA) and Actuarial Value of Assets (AVA) to the Actuarial Liabilities. The percentage shown at the top of each bar is the ratio of the Actuarial Value of Assets to the Actuarial Liability (the funded ratio).

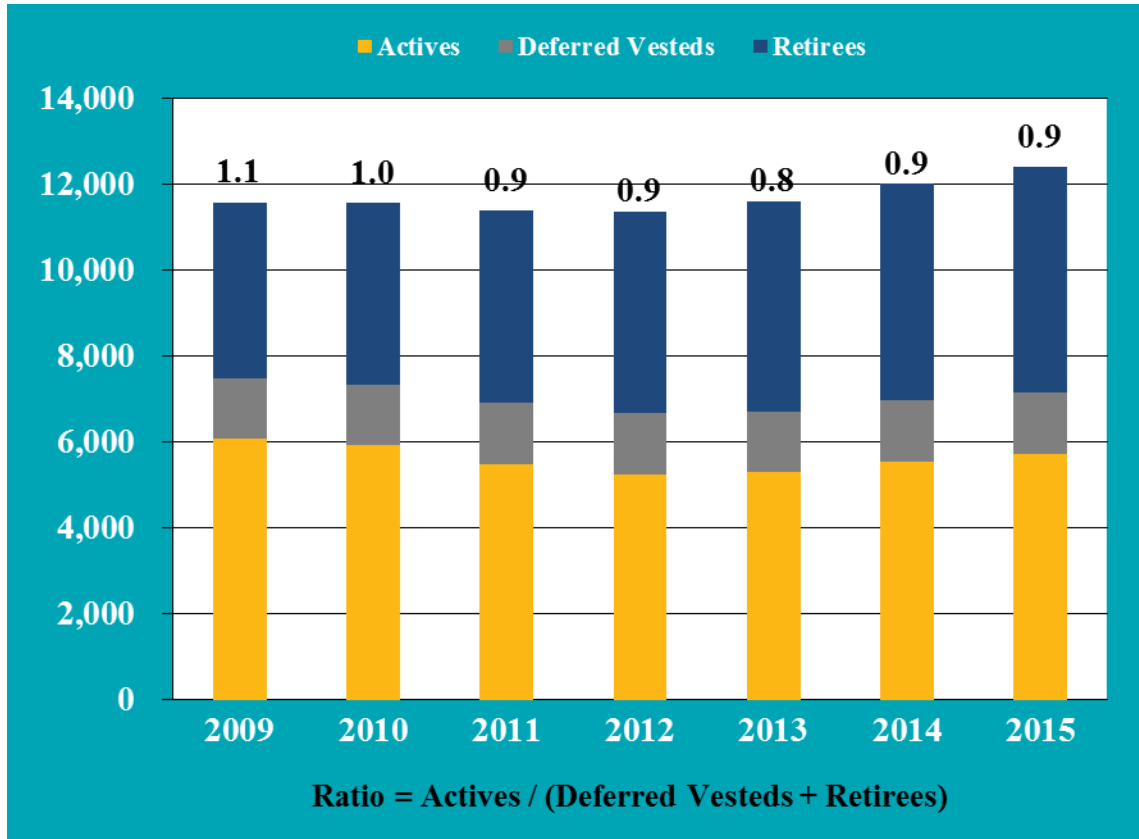


The funded ratio has declined from 72.5% in 2009 to 63.4% in 2013, and has since increased to 66.2% as of January 1, 2015. The extraordinary asset loss of 2008 adversely affected the funded ratio from 2009 to 2013. In addition, for the January 1, 2013 valuation assumption changes were made that reflect lower expected future returns on assets and improved mortality, lessening the impact of recent asset gains on the funded ratio.

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015

SECTION I
EXECUTIVE SUMMARY

Participant Trends



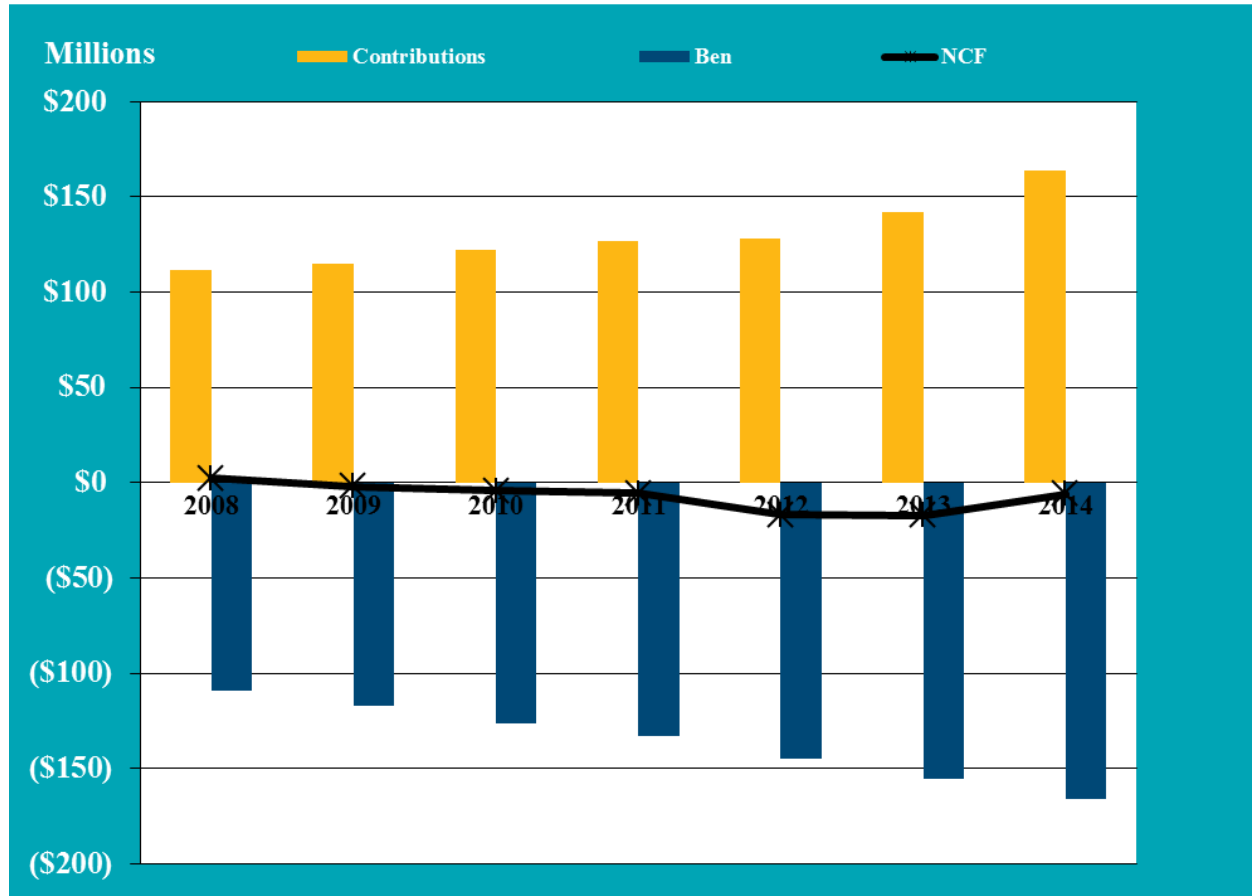
The chart above provides a measure for the maturity in the Plan by comparing the ratio of active members to inactive members (retirees and deferred vested participants). These ratios are given at the top of each bar. As the Plan matures, this ratio is expected to decrease as more employees leave the active workforce and receive benefits. The increase in inactive liabilities relative to active liabilities may result in a larger burden on the employers should assets perform poorly. The active-to-inactive ratio has decreased significantly from 2008 to 2013, but increased slightly in 2014, indicating an influx of new members to the Plan.

Cash Flows

The chart on the next page shows the Plan's cash flow (contributions less benefit payments and administrative expenses). This is a critical measure, as it reflects the ability to have funds available to meet benefit payments without having to make difficult investment decisions, especially during volatile markets.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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**SECTION I
EXECUTIVE SUMMARY**



The contributions, benefit payments and the Plan's net cash flow (NCF) are represented by the chart above. The NCF - shown as the black line in the chart - has slowly decreased during the period shown, but shows a slight increase the past two years, with a -\$5.9 million net cash flow this year. A negative net cash flow could magnify the losses during a market decline hindering the Plan in its ability to absorb market fluctuations. The implications of a plan in negative net cash flow are that the impact of market fluctuations can be more severe: As assets are being depleted to pay benefits in down markets, there is less principal available to be reinvested during favorable return periods.

E. Future Expected Financial Trends

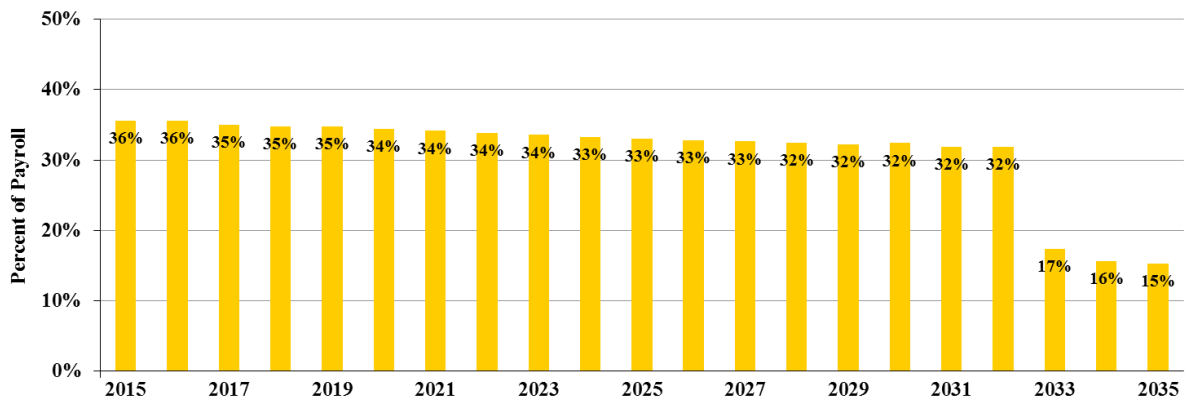
The analysis of projected financial trends is perhaps the most important component of this valuation. In this Section, we present our assessment of the implications of the January 1, 2015 valuation results in terms of benefit security (assets over liabilities). All the projections in this section are based on the current interest rate assumption of 7.50%. We have assumed future salary increases of 3.25% per year.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

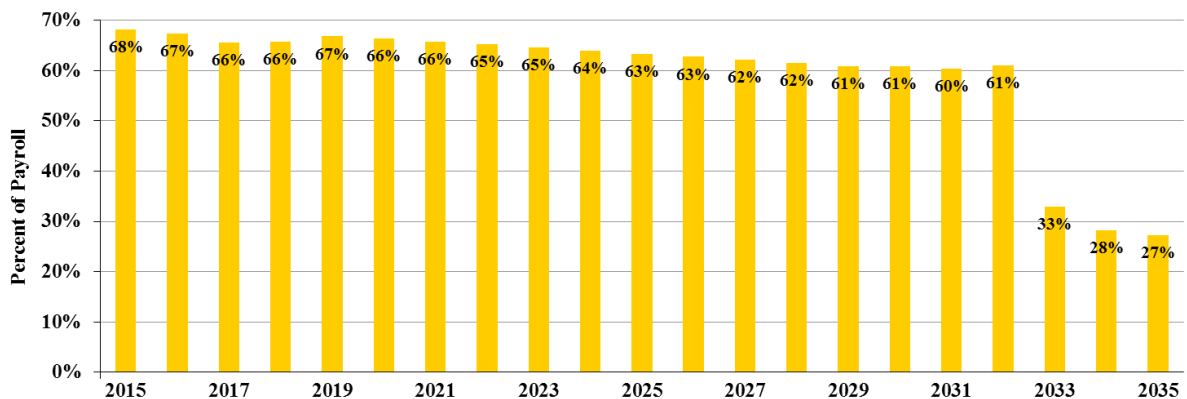
**SECTION I
EXECUTIVE SUMMARY**

The following graphs show the expected employer contribution rates for General and Safety members based on actually achieving the 7.50% assumption each year for the next 20 years, which is clearly an impossibility.

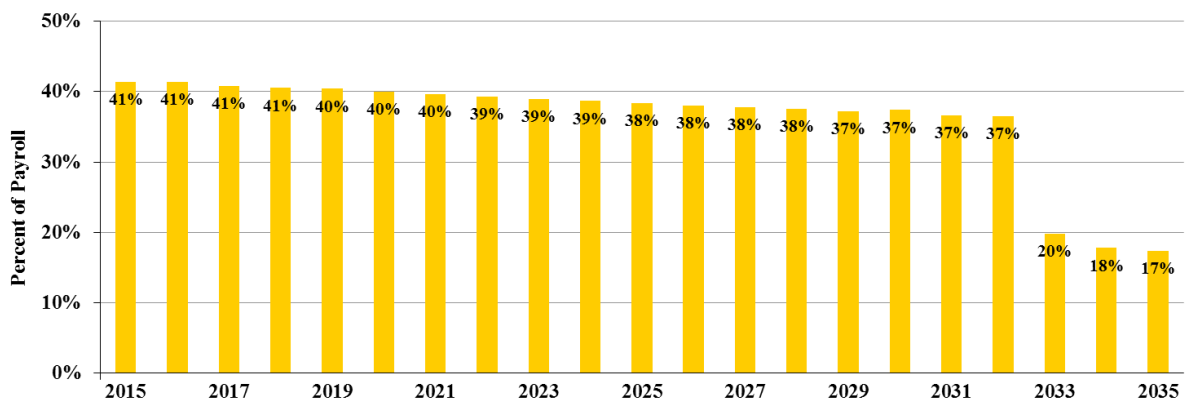
Projection of General Employer Contributions, 7.50% return each year



Projection of Safety Employer Contributions, 7.50% return each year



Projection of Total Employer Contributions, 7.50% return each year



**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**SECTION I
EXECUTIVE SUMMARY**

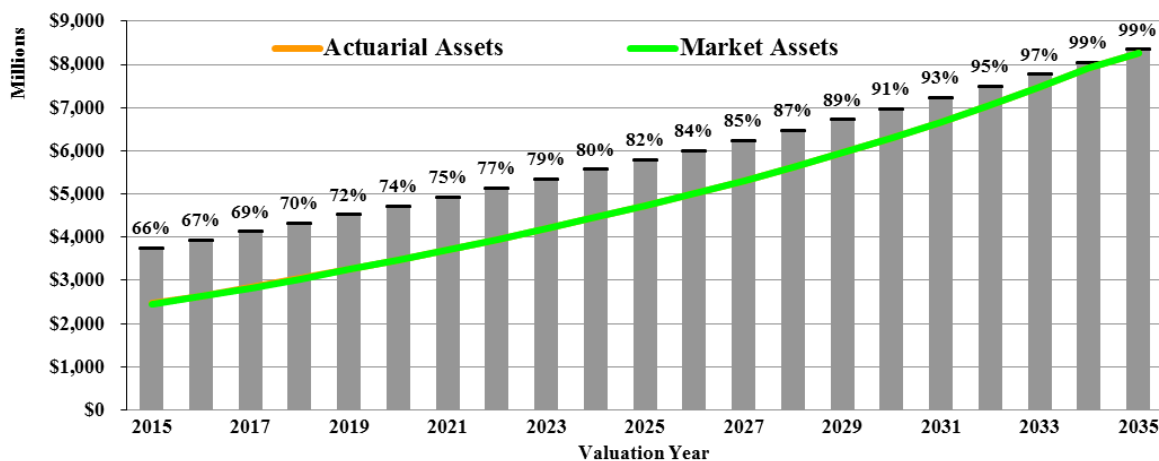
The contribution rate graphs on the previous page show that General, Safety and Total County contributions are expected to decline slowly as the unfunded actuarial liability is amortized. The dollar contribution will be approximately \$113 million for General and \$46 million for Safety in 2015, growing to around \$134 million for General and \$55 million for Safety in five years.

Note that the graphs above do not forecast any actuarial gains or losses. Even relatively modest losses relative to the 7.5% assumed return could push the employer contribution rates higher in the next few years.

Asset and Liability Projections:

The graph below shows the projection of SJCERA's assets and liabilities assuming that assets will earn the 7.50% assumption each year during the projection period.

Projection of Assets and Liabilities, 7.50% return each year



The graph shows that the projected funded status increases over the next 20 years to 99%, assuming the actuarial assumption is achieved. However, as above, it is the actual return on System assets that will determine the future funding status and contribution rate to the Fund.

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015

**SECTION II
ASSETS**

Pension Plan assets play a key role in the financial operation of the System 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 System assets including:

- **Disclosure** of System assets as of December 31, 2013 and December 31, 2014;
- Statement of the **changes** in market values during the year;
- Development of the **Actuarial Value of Assets**;
- An assessment of **investment performance**; and
- Determination of **reserve balances** as of January 1, 2015.

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 the fair value of assets that 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 value as of December 31, 2013 and December 31, 2014.

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015

**SECTION II
ASSETS**

**TABLE II-1
Statement of Assets at Market Value
December 31,**

Assets	2013	2014
Cash and Cash Equivalents	\$ 62,574,166	\$ 86,304,586
Cash Collateral-Securities Lending	<u>107,126,504</u>	<u>164,195,271</u>
Total Cash and Cash Equivalents	169,700,670	250,499,857
Receivables:		
Investment Income Receivables	2,774,881	2,664,983
Contributions Receivable	7,537,892	8,960,303
Securities Sold, Not Received - Domestic	18,162,236	420,303
Other Investment Income Receivable	536	637
Miscellaneous Receivables	<u>15,822</u>	<u>34,606</u>
Total Receivables	28,491,367	12,080,832
Investments, at Market Value:		
Fixed Income	484,341,760	527,386,250
U.S. and Non U.S. Equities	891,888,949	891,844,719
Global Equity	59,253,441	57,668,488
Real Estate	258,866,921	253,709,478
Real Asset	155,406,359	108,824,107
Global Opportunistic Strategy	178,452,433	278,197,288
Risk Parity	<u>228,698,438</u>	<u>253,749,953</u>
Total Investments	2,256,908,301	2,371,380,283
Other Assets:		
Prepaid Expenses	81,357	86,318
Equipment and Fixtures, Net	<u>427,463</u>	<u>314,644</u>
Total Assets	2,455,609,158	2,634,361,934
Liabilities:		
Securities Lending-Cash Collateral	107,126,504	164,195,271
Securities Purchased, Not Paid	5,432,718	1,671,227
Accrued Expenses and Other Payables	1,537,573	2,137,604
Security Lending Interest and Other Expense	0	8,303
Total Liabilities	<u>114,096,795</u>	<u>168,012,405</u>
Market Value of Assets	\$ 2,341,512,363	\$ 2,466,349,529

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**SECTION II
ASSETS**

Changes in Market Value

The components of asset change are:

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

Table II-2 below shows the components of change in the market value of assets during 2013 and 2014.

TABLE II-2 Changes in Market Values		
<u>Additions</u>	<u>2013</u>	<u>2014</u>
Contributions		
Employer's Contribution	119,494,319	136,686,133
Members' Contributions	22,689,882	27,367,908
Total Contributions	<u>142,184,201</u>	<u>164,054,041</u>
Net Investment Income		
Net Appreciation/(Depreciation) in		
Fair Value of Investments	178,161,110	94,708,384
Interest	24,829,363	20,784,139
Dividends	4,796,804	2,680,448
Real Estate Income, net	7,105,263	10,112,793
Investment Expenses	(17,141,459)	(18,119,634)
Miscellaneous Investment Income	<u>7,804</u>	<u>7,293</u>
Net Investment Income,		
Before Securities Lending Income	<u>197,758,885</u>	<u>110,173,423</u>
Securities Lending Income		
Earnings	374,904	450,412
Rebates	176,043	184,507
Fees	<u>(137,436)</u>	<u>(157,231)</u>
Net Securities Lending Income	<u>413,511</u>	<u>477,688</u>
Net Investment Income	<u>198,172,396</u>	<u>110,651,111</u>
Miscellaneous Income	<u>72,467</u>	<u>77,192</u>
Total Additions	<u>340,429,064</u>	<u>274,782,344</u>

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**SECTION II
ASSETS**

**TABLE II-2
Changes in Market Values (Continued)**

<u>Deductions</u>		
Benefit payments	153,620,152	163,711,716
Death Benefits	612,733	623,557
Refunds of Members' Contributions	<u>1,168,934</u>	<u>1,535,698</u>
Total Benefit Payments	155,401,819	165,870,971
Administrative & Other Expenses		
General Administrative Expenses	3,672,857	3,636,863
Actuary Fees	217,819	161,342
Fund Legal Fees	<u>244,040</u>	<u>244,781</u>
Total Administrative & Other Expenses	4,134,716	4,042,986
Transfer Between Plans	<u>(204,375)</u>	<u>(19,968,779)</u>
Total Deductions	159,332,160	149,945,178
Net increase (Decrease)	181,096,904	124,837,166
Net Assets Held in Trust for Pension Benefits:		
Beginning of Year	<u>2,160,415,459</u>	<u>2,341,512,363</u>
End of Year	<u><u>2,341,512,363</u></u>	<u><u>2,466,349,529</u></u>
Approximate Return	9.22%	4.69%

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**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 System, the actuarial value of assets is calculated by recognizing the deviation of actual investment returns compared to the expected return over a five-year period. The dollar amount of the expected return on the market value of assets is determined using the actual contributions, administrative expense (beginning in 2013), and benefit payments during the year. Any difference between this amount and the actual investment earnings is considered a gain or loss. 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 following table shows the development of the actuarial asset value.

**TABLE II-3
Development of Actuarial Value of Assets
as of January 1, 2015**

	(a)	(b)	(c)	(d)	(e)	(f)	(g) = (f) – (e)	(h)	(i) = (g) x (h)
	Contributions	Benefits	Administrative Expense	Healthcare Fund Transfer	Expected Return	Actual Return	Additional Earnings	Not Recognized	Unrecognized Earnings
Year									
2011	126,932,474	132,709,273	0	0	150,952,879	25,735,622	(125,217,257)	20%	(25,043,451)
2012	127,962,598	144,978,040	0	0	150,473,721	227,485,527	77,011,806	40%	30,804,722
2013	142,184,201	155,401,819	4,134,716	0	161,392,211	198,449,237	37,057,026	60%	22,234,216
2014	164,054,041	165,870,971	4,042,986	19,968,779	176,895,311	110,728,303	(66,167,008)	80%	(52,933,607)
1. Total Unrecognized Dollars									(24,938,120)
2. Market Value of Assets as of December 31, 2014									2,466,349,529
3. Preliminary Actuarial Value of Assets as of December 31, 2014: [(2) - (1)]									2,491,287,649
4. Corridor Limits									
a. 80% of Net Market Value									1,973,079,623
b. 120% of Net Market Value									2,959,619,434
5. Actuarial Value of Assets after Corridor									2,491,287,649
6. Ratio of Actuarial Value to Market Value [(5) ÷ (2)]									101.01%
7. Market Stabilization Designation [(2) – (5)]									(24,938,120)
8. Special (Non Valuation) Reserves:									
Class Action Settlement – Post 4/1/1982									6,338,007
Contingency									13,458,426
Undistributed Earnings Reserve									0
Total Special Reserves									19,796,433
9. Pension Reserves at Actuarial Value (Valuation Assets): [(5) - (8)*(6)]									\$2,471,291,047

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**SECTION II
ASSETS**

Investment Performance

The following table calculates the investment related gain/loss for the plan year on both a Market Value and an Actuarial Value basis. The Market Value gain/loss is a useful measure for comparing the actual asset performance to the previous valuations.

TABLE II-4 Asset Gain/(Loss)		
	Market Value	Actuarial Value
January 1, 2014 value	\$ 2,341,512,363	\$ 2,285,165,972
County Contributions	136,686,133	136,686,133
Employee Contributions	27,367,908	27,367,908
Healthcare Transfer	19,968,779	19,968,779
Benefit Payments	(165,870,971)	(165,870,971)
Administrative Expenses	(4,042,986)	(4,042,986)
Expected Investment Earnings (7.50%)	<u>176,895,311</u>	<u>172,669,332</u>
Expected Value December 31, 2014	\$ 2,532,516,537	\$ 2,471,944,167
Investment Gain / (Loss)	<u>(66,167,008)</u>	<u>(653,120)</u>
January 1, 2015 value	2,466,349,529	\$ 2,471,291,047
Return	4.69%	7.47%

Note that the return on market value shown above is not the dollar-weighted return on assets required for purposes of GASB Statements 67 and 68.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**SECTION II
ASSETS**

The following table shows the historical annual asset returns on a market value and actuarial value basis, as well in the increase in the Consumer Price Index (CPI) since 1995.

TABLE II-5 Historical Asset Returns			
Year Ended December 31	Return on Market Value	Return on Actuarial Value	Increase in CPI*
1996	13.5%	12.2%	3.3%
1997	17.3%	13.9%	1.7%
1998	9.9%	13.3%	1.6%
1999	13.7%	15.1%	2.7%
2000	3.2%	11.5%	3.4%
2001	(0.1%)	8.8%	1.6%
2002	(5.5%)	4.7%	2.4%
2003	25.5%	6.8%	1.9%
2004	11.8%	6.6%	3.3%
2005	6.9%	7.2%	3.4%
2006	12.7%	9.6%	2.5%
2007	6.9%	11.2%	4.1%
2008	(30.1%)	(14.3%)	(0.5%)
2009	11.4%	11.6%	2.5%
2010	12.4%	6.4%	1.5%
2011	1.3%	(1.8%)	3.0%
2012	11.7%	(0.2%)	1.7%
2013	9.2%	8.5%	1.5%
2014	4.7%	7.5%	0.8%
Compounded 15 Year Average	4.7%	5.4%	2.2%
Compounded 10 Year Average	3.9%	4.3%	2.0%
Compounded 5 Year Average	7.8%	4.0%	1.7%

* Based on All Urban Consumers - U.S. City Average, December Indices.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**SECTION II
ASSETS**

Reserve Balances

The following table shows the Post-1982 Settlement Reserve balances as of January 1, 2015.

TABLE II-6				
Post-1982 Settlement Reserve				
Valuation Date January 1	Number of Recipients	Benefits Payable	Reserve	Estimated Years of Payments
2008	1,896	3,683,939	25,872,222	13
2009	1,856	3,602,904	22,015,055	10
2010	1,800	3,484,762	20,090,654	9
2011	1,738	3,370,636	18,108,660	6
2012	1,679	3,243,068	14,556,866	5
2013	1,709	3,244,009	11,063,855	4
2014	1,662	3,197,416	8,765,004	3
2015	1,617	3,046,233	6,338,007	2

As of January 1, 2015, the total projected liability associated with paying the Post-82 Settlement allowances for the lifetime of the members and beneficiaries is estimated to be \$29,240,663.

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015

**SECTION III
LIABILITIES**

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

- **Disclosure** of System liabilities at January 1, 2014 and January 1, 2015;
- 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.

- **Present Value of Future Benefits:** Used for measuring all future System obligations, represents the amount of money needed today to fully pay off all benefits of the System both earned as of the valuation date and those to be earned in the future by current plan participants, under the current System 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 System is called the **Entry Age Normal** (EAN) funding method.
- **Unfunded Actuarial Liability:** The excess of the Actuarial Liability over the Actuarial Value of 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**.

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015

**SECTION III
LIABILITIES**

TABLE III-1		
Liabilities/Net (Surplus)/Unfunded		
	January 1, 2014	January 1, 2015
<u>Present Value of Future Benefits</u>		
Active Participant Benefits	\$ 2,252,362,516	\$ 2,269,045,331
Retiree and Inactive Benefits	<u>2,049,548,704</u>	<u>2,215,349,763</u>
Present Value of Future Benefits (PVB)	\$ 4,301,911,220	\$ 4,484,395,094
<u>Actuarial Liability</u>		
Present Value of Future Benefits (PVB)	\$ 4,301,911,220	\$ 4,484,395,094
Present Value of Future Normal Costs (PVFNC)	<u>740,052,164</u>	<u>752,760,722</u>
Actuarial Liability (AL = PVB – PVFNC)	\$ 3,561,859,056	\$ 3,731,634,372
Actuarial Value of Assets (AVA)	<u>2,285,165,972</u>	<u>2,471,291,047</u>
Net (Surplus)/Unfunded (AL – AVA)	\$ 1,276,693,084	\$ 1,260,343,325

Changes in Liabilities

Each of the Liabilities disclosed in the prior table 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
- 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 due to changes in System assets resulting from:

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

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**SECTION III
LIABILITIES**

**TABLE III-2
Changes in Actuarial Liability**

Actuarial Liability at January 1, 2014	\$	3,561,859,056
Actuarial Liability at January 1, 2015	\$	3,731,634,372
Liability Increase (Decrease)		169,775,316
Change due to:		
Accrual of Benefits	\$	83,470,441
Actual Benefit Payments		(165,870,971)
Interest		264,105,271
Actuarial Liability (Gain)/Loss		(11,929,425)

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**SECTION III
LIABILITIES**

**TABLE III-3
Development of Actuarial Gain / (Loss)**

1. Unfunded Actuarial Liability at Start of Year (not less than zero)	\$ 1,276,693,084
2. Employer Normal Cost at Middle of Year	83,470,441
3. Administrative Expense	4,042,986
4. Interest on 1. 2. and 3. to End of Year	98,974,406
5. Contributions for Prior Year	164,054,041
6. Healthcare Fund Transfer	19,968,779
7. Interest on 5. and 6. to End of Year	7,538,467
8. Expected Unfunded Actuarial Liability at End of Year [1. + 2. + 3. + 4. - 5. - 6. + 7.]	\$ 1,271,619,630
9. Actual Unfunded Actuarial Liability at End of Year (not less than zero)	1,260,343,325
10. Unfunded Actuarial Liability Gain / (Loss) [8. - 9.]	\$ 11,276,305
11. Actuarial Liability Gain / (Loss)	\$ 11,929,425
12. Actuarial Asset Gain / (Loss) [10. - 11.]	\$ (653,120)

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015

**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 (if any) of contributions is needed to properly maintain the funding status of the System. 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 System, 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 primary 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 System, 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 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 unfunded actuarial liability is the difference between the EAN actuarial liability and the actuarial value of assets. For the prior valuation, the UAL rate was based on a 25-year amortization of half of the extraordinary investment loss from 2008 and a 19-year amortization of the remainder of the unfunded actuarial liability as of January 1, 2014, again assuming mid-year payment to reflect the fact that employer contributions are made throughout the year.

At the July 24, 2015 board meeting, the SJCERA Board of Retirement chose to make a change to their funding policy, opting to amortize any unexpected changes in the UAL over a period of 15 years as a level percent of pay, with new amortization layers each year. The result is a set of three amortization bases as of January 1, 2015: The 2008 loss being amortized over 24 years, the remaining UAL as of December 31, 2014 being amortized over 18 years, and new additions to the UAL on and after January 1, 2015 amortized over 15 years. The single amortization period for these streams of payments is 20 years as of January 1, 2015. The amortization period for each unfunded actuarial liability layer will decrease each year.

The administrative expenses are assumed to be \$4,243,600 per year.

The tables on the following pages present the employer contributions for the System for this valuation.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**SECTION IV
CONTRIBUTIONS**

TABLE IV-1 Employer Contribution Rate		
	January 1, 2014	January 1, 2015
Contributions as a Percentage of Payroll		
Gross Entry Age Normal Cost Rate	24.05%	23.76%
Employee Contribution Rate	<u>6.77%</u>	<u>6.89%</u>
Employer Entry Age Normal Cost Rate	17.28%	16.86%
Employer Normal Cost Rate	17.28%	16.86%
Administrative Expense	0.91%	0.91%
Amortization Payment	<u>23.74%</u>	<u>23.58%</u>
Employer Contribution Rate	41.93%	41.35%
Annual Required Contribution (Employer)	\$ 157,994,939	\$ 159,501,915

TABLE IV-2 Development of Employer Contribution Amount		
	January 1, 2015	% of pay
1. Normal Cost at Middle of Year	\$ 62,096,642	16.86%
2. Amortization of Unfunded Liability		
a. Actuarial Liability	\$ 3,731,634,372	
b. Actuarial Value of Assets	<u>2,471,291,047</u>	
c. Unfunded Liability (a) – (b)	\$ 1,260,343,325	
d. Amortization of Unfunded Liability	93,779,720	23.58%
3. Administrative Expense	\$ 3,625,553	0.91%
4. Annual Required Contribution (1c) + (2d) + (3)	\$ 159,501,915	41.35%

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**SECTION IV
CONTRIBUTIONS**

**TABLE IV-3
Development of Amortization Payment
For Fiscal Year 2015**

Type of Base	Date Established	Initial Amount	Initial Amortization Years	1/1/2015 Outstanding Balance	Remaining Amortization Years	Amortization Amount
Charges/(Credits)						
1. 2008 Extraordinary Actuarial Loss	1/1/2009	\$ 424,264,899	30	\$ 459,885,419	24	\$ 30,395,173
2. Remaining 1/1/2014 UAL	1/1/2014	820,499,756	19	816,896,789	18	64,868,906
3. 1/1/2015 Gain	1/1/2015	(16,438,883)	15	(16,438,883)	15	(1,484,359)
				\$ 1,260,343,325		\$ 93,779,720

The January 1, 2015 gain shown in Table IV-3 does not match the UAL gain shown in Table III-3 due to the phase-in of the contribution rate and the \$20 million transfer from the healthcare reserve to the pension fund.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**SECTION V
ADDITIONAL CAFR SCHEDULES**

This section of the report provides schedules for the Actuarial Section of the CAFR for SJCERA that are not provided in the GASB 67 and 68 reports.

We have prepared the following schedule:

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 Liability is determined assuming that the System is ongoing and participants continue to terminate employment, retire, etc., in accordance with the actuarial assumptions. Liabilities for 2013 through 2015 are discounted at the assumed valuation interest rate of 7.5%.

Table V-1 Solvency Test Aggregate Actuarial Liabilities for							
Valuation Date January 1,	Active Member Contributions (1)	Retirees & Beneficiaries (2)	Active Members* (3)	Actuarial Value of Assets	Portion of Actuarial Liabilities Covered by		
					(1)	(2)	(3)
2015	\$ 276,818,405	\$ 2,117,009,658	\$ 1,337,806,309	\$ 2,471,291,047	100%	100%	6%
2014	258,198,240	1,956,930,619	1,346,730,197	2,285,165,972	100%	100%	5%
2013	209,987,230	1,810,775,897	1,332,531,085	2,125,700,227	100%	100%	8%
2012	202,924,928	1,627,338,404	1,218,058,024	2,130,052,649	100%	100%	25%
2011	193,612,757	1,495,665,075	1,228,410,127	2,120,384,183	100%	100%	35%
2010	187,986,706	1,373,256,766	1,208,368,072	1,949,011,498	100%	100%	32%
2009	176,235,961	1,231,647,623	1,103,041,755	1,821,357,079	100%	100%	37%
2008	166,804,000	1,119,690,000	1,048,027,000	2,029,949,000	100%	100%	71%
2007	159,100,000	1,023,296,000	967,542,000	1,869,717,000	100%	100%	71%
2006	147,953,000	904,208,000	883,657,000	1,727,033,000	100%	100%	76%
2005	140,800,000	805,878,000	822,829,000	1,614,979,000	100%	100%	81%
2004	129,606,000	726,382,000	739,749,000	1,531,288,000	100%	100%	91%
2003	137,209,000	643,984,000	637,016,000	1,448,905,000	100%	100%	100%

* Includes terminated vested members.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**APPENDIX A
MEMBERSHIP INFORMATION**

The data for this valuation was provided by the San Joaquin County staff as of January 1, 2015.

Summary of Participant Data as of January 1, 2015			
	General	Safety	Total
Active Participants			
Number	4,879	827	5,706
Average Age	46.91	41.76	46.16
Average Benefit Service	11.01	12.42	11.22
Average Vesting Service	11.08	12.60	11.30
Average Pay	\$66,169	\$82,819	\$68,582
Service Retired			
Number	3,385	524	3,909
Average Age	70.07	65.54	69.46
Average Annual Base Benefit	\$19,730	\$42,838	\$22,827
Average Annual Total Benefit	\$30,336	\$59,611	\$34,260
Beneficiaries			
Number	580	162	742
Average Age	72.79	67.45	71.63
Average Annual Base Benefit	\$8,480	\$15,555	\$10,025
Average Annual Total Benefit	\$15,856	\$25,829	\$18,034
Duty Disabled			
Number	232	192	424
Average Age	62.93	59.79	61.51
Average Annual Base Benefit	\$16,338	\$33,241	\$23,992
Average Annual Total Benefit	\$23,910	\$48,206	\$34,912
Non-Duty Disabled			
Number	161	13	174
Average Age	63.35	66.77	63.61
Average Annual Base Benefit	\$10,628	\$15,069	\$10,960
Average Annual Total Benefit	\$15,698	\$24,864	\$16,383
Total Receiving Benefits			
Number	4,358	891	5,249
Average Age	69.81	64.67	68.93
Average Annual Base Benefit	\$17,716	\$35,404	\$20,718
Average Annual Total Benefit	\$27,526	\$50,504	\$31,427

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**APPENDIX A
MEMBERSHIP INFORMATION**

Summary of Participant Data as of January 1, 2015			
	General	Safety	Total
Deferred Vested			
Number	381	28	409
Average Age	49.31	45.71	49.07
Average Service	9.22	7.68	9.12
Transfers and DROs			
Number	387	103	490
Average Age	49.33	44.07	48.22
Average Service	5.50	4.19	5.23
Funds on Account			
Number	507	29	536
Average Age	44.90	37.83	44.52
Average Service	1.33	1.20	1.32
Total Inactive			
Number	1,275	160	1,435
Average Age	47.56	43.23	47.08
Average Service	4.95	4.26	4.88

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**APPENDIX A
MEMBERSHIP INFORMATION**

Changes in Plan Membership: General

	Actives	Transfers/ DROS	Non-Vested Terminations	Vested Terminations	Non-Duty Disabled	Duty Disabled	Retired Beneficiaries	Total	
January 1, 2014	4,748	354	480	425	161	227	3,227	557	10,179
New Entrants	579	0	0	0	0	0	0	0	579
Rehires	34	(3)	(5)	(6)	0	0	0	0	20
Duty Disabilities	(2)	0	0	0	0	2	0	0	0
Non-Duty Disabilities	(4)	0	0	(1)	5	0	0	0	0
Retirements	(195)	(19)	(1)	(20)	0	0	234	1	0
Vested Terminations	(42)	0	0	42	0	0	0	0	0
Retirements from Safety with General Service	0	0	0	0	0	4	3	2	9
Died, With Beneficiaries' Benefit Payable	(3)	0	0	0	(4)	(4)	(26)	37	0
Died, Without Beneficiary, and Other Terminations	(49)	(1)	45	(5)	(3)	(1)	(46)	0	(60)
Transfers	(48)	56	(11)	(27)	0	0	0	0	(30)
Redeposits – AB 2766	0	0	0	1	0	0	0	0	1
Withdrawals Paid	(139)	(5)	(20)	(10)	0	0	0	0	(174)
Beneficiary Deaths	0	0	0	0	0	0	0	(28)	(28)
Domestic Relations Orders	0	6	0	0	0	0	0	5	11
Data Corrections	0	0	19	(18)	2	4	(7)	6	6
January 1, 2015	4,879	388	507	381	161	232	3,385	580	10,513

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**APPENDIX A
MEMBERSHIP INFORMATION**

Changes in Plan Membership: Safety

	Actives	Transfers/ DROS	Non-Vested Terminations	Vested Terminations	Non-Duty Disabled	Duty Disabled	Retired	Beneficiaries	Total
January 1, 2014	805	86	27	39	13	186	516	154	1,826
New Entrants	30	0	0	0	0	0	0	0	30
Rehires	1	0	0	0	0	0	0	0	1
Duty Disabilities	(8)	0	0	0	0	8	0	0	0
Non-Duty Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(18)	(2)	0	(1)	0	0	20	1	0
Vested Terminations	0	0	0	0	0	0	0	0	0
Retirements from Safety with General Service	0	0	0	0	0	0	1	0	1
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	(4)	(6)	10	0
Died, Without Beneficiary, and Other Terminations	(3)	0	3	0	0	0	(5)	0	(5)
Transfers	27	14	0	(11)	0	0	0	0	30
Redeposits – AB 2766	0	1	0	1	0	0	0	0	2
Withdrawals Paid	(7)	(1)	(1)	0	0	0	0	0	(9)
Beneficiary Deaths	0	0	0	0	0	0	0	(6)	(6)
Domestic Relations Orders	0	5	0	0	0	0	0	3	8
Data Corrections	0	0	0	0	0	2	(2)	0	0
January 1, 2015	827	103	29	28	13	192	524	162	1,878

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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**APPENDIX A
MEMBERSHIP INFORMATION**

Changes in Plan Membership: All Groups

	Actives	Transfers/ DROS	Non-Vested Terminations	Vested Terminations	Non-Duty Disabled	Duty Disabled	Retired	Beneficiaries	Total
January 1, 2014	5,553	440	507	464	174	413	3,743	711	12,005
New Entrants	609	0	0	0	0	0	0	0	609
Rehires	35	(3)	(5)	(6)	0	0	0	0	21
Duty Disabilities	(10)	0	0	0	0	10	0	0	0
Non-Duty Disabilities	(4)	0	0	(1)	5	0	0	0	0
Retirements	(213)	(21)	(1)	(21)	0	0	254	2	0
Vested Terminations	(42)	0	0	42	0	0	0	0	0
Retirements from Safety with General Service	0	0	0	0	0	4	4	2	10
Died, With Beneficiaries' Benefit Payable	(3)	0	0	0	(4)	(8)	(32)	47	0
Died, Without Beneficiary, and Other Terminations	(52)	(1)	48	(5)	(3)	(1)	(51)	0	(65)
Transfers	(21)	70	(11)	(38)	0	0	0	0	0
Redeposits – AB 2766	0	1	0	2	0	0	0	0	3
Withdrawals Paid	(146)	(6)	(21)	(10)	0	0	0	0	(183)
Beneficiary Deaths	0	0	0	0	0	0	0	(34)	(34)
Domestic Relations Orders	0	11	0	0	0	0	0	8	19
Data Corrections	0	0	19	(18)	2	6	(9)	6	6
January 1, 2015	5,706	491	536	409	174	424	3,909	742	12,391

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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APPENDIX A
MEMBERSHIP INFORMATION

Active Member Data by Plan

Valuation at Year End	Plan Type	Member Count	Annual Payroll	Average Annual Salary	Average Salary Increase
2006	General	5,234	\$288,178,806	\$55,059	18.22%
	Safety	820	\$56,293,820	\$68,651	15.52%
	Total	6,054	\$344,472,626	\$56,900	17.68%
2007	General	5,353	\$308,773,122	\$57,682	4.76%
	Safety	871	\$62,988,014	\$72,317	5.34%
	Total	6,224	\$371,761,136	\$59,730	4.97%
2008	General	5,180	\$315,202,954	\$60,850	5.49%
	Safety	900	\$67,127,759	\$74,586	3.14%
	Total	6,080	\$382,330,713	\$62,883	5.28%
2009	General	4,990	\$320,526,792	\$64,234	5.56%
	Safety	925	\$70,801,157	\$76,542	2.62%
	Total	5,915	\$391,327,949	\$66,159	5.21%
2010	General	4,643	\$308,183,424	\$66,376	3.33%
	Safety	830	\$64,817,396	\$78,093	2.03%
	Total	5,473	\$373,000,820	\$68,153	3.01%
2011	General	4,441	\$298,308,687	\$67,172	1.20%
	Safety	813	\$64,041,814	\$78,772	0.87%
	Total	5,254	\$362,350,501	\$68,967	1.19%
2012	General	4,492	\$301,505,122	\$67,120	-0.08%
	Safety	803	\$64,386,900	\$80,183	1.79%
	Total	5,295	\$365,892,023	\$69,101	0.19%
2013	General	4,748	\$316,885,044	\$66,741	-0.57%
	Safety	805	\$65,640,055	\$81,540	1.69%
	Total	5,553	\$382,525,098	\$68,886	-0.31%
2014	General	4,879	\$322,836,680	\$66,169	-0.86%
	Safety	827	\$68,491,483	\$82,819	1.57%
	Total	5,706	\$391,328,162	\$68,582	-0.44%

Payroll figures represent active member's annualized pay rates on December 31.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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**APPENDIX A
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Schedule of Retirees and Beneficiaries Valuation Data

Valuation at Year End	Plan Type	Member Retirements	Beneficiary Continuance	Members and Beneficiaries Removed	Total Retirees on Payroll	Annual Retirement Payroll	Average Annual Allowance	Average Allowance Increase
2006	General	190	41	102	3,107	58,634,478	18,872	3.96%
	Safety	31	8	11	632	25,003,422	39,562	2.14%
	Total	221	49	113	3,739	83,637,900	22,369	3.45%
2007	General	199	31	99	3,238	65,213,731	20,140	6.72%
	Safety	38	6	8	668	27,396,329	41,012	3.67%
	Total	237	37	107	3,906	92,610,060	23,710	5.99%
2008	General	203	30	83	3,388	71,488,335	21,100	4.77%
	Safety	50	10	18	710	30,575,540	43,064	5.00%
	Total	253	40	101	4,098	102,063,875	24,906	5.04%
2009	General	207	31	104	3,522	78,988,070	22,427	6.29%
	Safety	24	7	11	730	32,575,964	44,625	3.62%
	Total	231	38	115	4,252	111,564,034	26,238	5.35%
2010	General	242	35	102	3,697	85,931,078	23,243	3.64%
	Safety	65	5	8	792	36,354,738	45,902	2.86%
	Total	307	40	110	4,489	122,285,816	27,241	3.82%
2011	General	240	42	108	3,871	92,938,361	24,009	3.30%
	Safety	32	4	14	814	38,098,866	46,805	1.97%
	Total	272	46	122	4,685	131,037,227	27,970	2.68%
2012	General	278	27	135	4,041	102,025,575	25,248	5.16%
	Safety	52	12	20	856	42,008,598	49,075	4.85%
	Total	330	39	155	4,897	144,034,172	29,413	5.16%
2013	General	213	52	134	4,172	109,869,721	26,335	4.31%
	Safety	22	11	20	869	43,548,028	50,113	2.11%
	Total	235	63	154	5,041	153,411,632	30,433	3.47%
2014	General	247	51	112	4,358	120,722,240	27,701	9.72%
	Safety	29	14	21	891	45,889,472	51,503	4.95%
	Total	276	65	133	5,249	166,611,711	31,742	7.92%

Payroll figures represent year end monthly retirement benefits annualized and exclude Post-Employment Healthcare benefit and benefits under the Class Action Settlement.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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**APPENDIX A
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Retirees and Beneficiaries Added to and Removed from Retiree Payroll

Fiscal Year	Beginning of Year	Added During Year	Allowances Added (in 000s)¹	Removed During Year	Allowances Removed	End of Year	Annual Retirement Payroll (in 000s)	Average Allowance Percentage Increase	Average Annual Allowance
2010	4,252	353	12,918	116	2,196	4,489	122,286	3.82%	27,241
2011	4,489	318	11,544	122	2,793	4,685	131,037	2.67%	27,969
2012	4,685	361	16,400	149	3,403	4,897	144,034	5.16%	29,413
2013	4,897	297	12,908	153	3,530	5,041	153,412	3.47%	30,433
2014	5,041	340	12,522	132	3,030	5,249	166,612	4.30%	31,742

[1] Includes COLA amounts not included in previous year's Annual Allowance totals.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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Schedule of Average Monthly Benefit Payments

Retirement Effective Date	Number of Years of Service Credit						
	0-4	5-9	10-14	15-19	20-24	25-29	30 & Over
1/2/11 to 1/1/12							
Retirees							
General Members							
Average Benefits	\$470	\$1,205	\$1,464	\$2,615	\$3,302	\$3,968	\$4,670
Average Final Compensation	\$5,518	\$5,903	\$4,928	\$6,463	\$6,110	\$5,541	\$5,570
Count	12	26	56	27	41	16	39
Safety Members							
Average Benefits	\$922	\$1,112	\$2,551	\$3,970	\$7,499	\$7,790	\$10,586
Average Final Compensation	\$9,746	\$4,483	\$5,290	\$7,767	\$10,430	\$9,162	\$10,797
Count	2	6	3	3	4	5	3
Survivors/QDROs							
General Members							
Average Benefits	\$622	\$890	\$773	\$1,367	\$1,838	\$2,039	\$3,281
Average Final Compensation	\$9,807	\$4,816	\$3,578	\$4,371	\$4,108	\$3,364	\$5,366
Count	5	9	11	10	5	5	5
Safety Members							
Average Benefits	\$825	\$859	\$1,591	\$3,334	\$0	\$0	\$3,829
Average Final Compensation	\$9,779	\$4,960	\$2,795	\$9,010	\$0	\$0	\$5,257
Count	1	1	2	1	0	0	1
1/2/12 to 1/1/13							
Retirees							
General Members							
Average Benefits	\$517	\$1,077	\$1,481	\$2,129	\$2,729	\$4,198	\$6,317
Average Final Compensation	\$7,532	\$5,925	\$5,233	\$4,900	\$5,338	\$6,449	\$7,295
Count	19	31	56	36	42	30	44
Safety Members							
Average Benefits	\$429	\$2,194	\$3,026	\$4,186	\$5,302	\$9,183	\$13,206
Average Final Compensation	\$6,793	\$5,812	\$6,636	\$8,124	\$7,306	\$13,360	\$13,606
Count	4	5	7	3	14	11	5
Survivors/QDROs							
General Members							
Average Benefits	\$331	\$1,189	\$1,017	\$1,525	\$1,274	\$3,105	\$2,783
Average Final Compensation	\$4,482	\$3,558	\$2,664	\$2,604	\$3,639	\$4,794	\$3,940
Count	4	4	8	3	1	2	4
Safety Members							
Average Benefits	\$0	\$1,039	\$2,423	\$3,450	\$3,573	\$3,206	\$4,887
Average Final Compensation	\$0	\$6,972	\$7,561	\$1,358	\$1,776	\$3,836	\$6,169
Count	0	2	2	2	1	3	2

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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Schedule of Average Monthly Benefit Payments

Retirement Effective Date	Number of Years of Service Credit						
	0-4	5-9	10-14	15-19	20-24	25-29	30 & Over
1/2/13 to 1/1/14							
Retirees							
General Members							
Average Benefits	\$433	\$1,410	\$1,589	\$2,556	\$3,149	\$4,241	\$5,837
Average Final Compensation	\$7,695	\$7,279	\$5,787	\$6,125	\$6,132	\$6,467	\$6,718
Count	10	25	40	35	35	26	29
Safety Members							
Average Benefits	\$1,165	\$1,435	\$2,621	\$3,501	\$4,260	\$11,134	\$9,279
Average Final Compensation	\$9,478	\$7,434	\$6,316	\$7,044	\$5,599	\$13,945	\$9,670
Count	3	2	7	4	1	2	2
Survivors/QDROs							
General Members							
Average Benefits	\$687	\$1,000	\$883	\$1,182	\$2,063	\$1,572	\$2,985
Average Final Compensation	\$3,804	\$4,531	\$3,953	\$3,163	\$3,722	\$1,821	\$3,681
Count	6	9	15	7	5	2	5
Safety Members							
Average Benefits	\$650	\$3,101	\$1,385	\$2,012	\$1,918	\$3,745	\$4,936
Average Final Compensation	\$4,955	\$10,868	\$2,506	\$3,966	\$2,525	\$6,184	\$5,381
Count	3	1	2	1	2	1	1
1/2/14 to 1/1/15							
Retirees							
General Members							
Average Benefits	\$618	\$1,120	\$1,601	\$2,635	\$4,409	\$4,672	\$6,283
Average Final Compensation	\$9,300	\$6,612	\$5,529	\$6,454	\$8,122	\$6,944	\$7,635
Count	9	25	49	46	23	45	41
Safety Members							
Average Benefits	\$380	\$1,190	\$3,433	\$4,546	\$3,993	\$7,412	\$11,302
Average Final Compensation	\$8,910	\$6,591	\$7,642	\$8,863	\$6,031	\$9,013	\$11,761
Count	1	1	3	5	4	6	1
Survivors/QDROs							
General Members							
Average Benefits	\$475	\$654	\$1,087	\$814	\$2,160	\$1,680	\$2,941
Average Final Compensation	\$5,928	\$4,152	\$2,879	\$2,457	\$4,998	\$3,887	\$8,068
Count	11	6	11	6	5	3	5
Safety Members							
Average Benefits	\$2,030	\$2,464	\$2,890	\$3,326	\$2,002	\$3,569	\$3,499
Average Final Compensation	\$9,251	\$8,581	\$5,515	\$4,817	\$4,850	\$5,955	\$2,018
Count	2	3	4	1	1	1	2

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**APPENDIX A
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DISTRIBUTION OF GENERAL ACTIVE MEMBERS BY AGE AND SERVICE AS OF JANUARY 1, 2015											
COUNTS BY AGE/SERVICE											
Age	Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	17	21	0	0	0	0	0	0	0	0	38
25 to 29	59	172	20	0	0	0	0	0	0	0	251
30 to 34	75	206	160	36	1	0	0	0	0	0	478
35 to 39	39	201	201	151	32	0	0	0	0	0	624
40 to 44	38	155	161	203	108	18	1	0	0	0	684
45 to 49	19	124	143	168	124	56	26	0	0	0	660
50 to 54	19	100	119	164	123	106	88	27	0	0	746
55 to 59	17	88	103	128	124	82	97	57	31	1	728
60 to 64	3	54	73	82	83	57	55	45	20	3	475
65 to 69	2	15	36	37	38	13	16	4	3	2	166
70 & up	0	4	6	7	8	1	2	0	1	0	29
Total	288	1,140	1,022	976	641	333	285	133	55	6	4,879

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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DISTRIBUTION OF SAFETY ACTIVE MEMBERS BY AGE AND SERVICE AS OF JANUARY 1, 2015											
COUNTS BY AGE/SERVICE											
Age	Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	1	15	0	0	0	0	0	0	0	0	16
25 to 29	6	31	20	0	0	0	0	0	0	0	57
30 to 34	2	19	97	22	1	0	0	0	0	0	141
35 to 39	0	18	43	68	16	0	0	0	0	0	145
40 to 44	2	6	28	63	61	2	0	0	0	0	162
45 to 49	0	0	12	31	37	17	20	1	0	0	118
50 to 54	1	7	11	14	19	14	29	8	0	0	103
55 to 59	0	3	4	9	9	4	22	3	0	0	54
60 to 64	1	0	4	3	2	4	8	1	1	0	24
65 to 69	0	0	0	3	3	1	0	0	0	0	7
70 & up	0	0	0	0	0	0	0	0	0	0	0
Total	13	99	219	213	148	42	79	13	1	0	827

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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PAYROLL DISTRIBUTION OF GENERAL ACTIVE PARTICIPANTS BY AGE AND SERVICE AS OF JANUARY 1, 2015											
COUNTS BY AGE/SERVICE											
Age	Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	44,180	40,169	0	0	0	0	0	0	0	0	41,964
25 to 29	51,544	54,806	59,425	0	0	0	0	0	0	0	54,408
30 to 34	49,278	57,277	58,401	56,188	49,459	0	0	0	0	0	56,299
35 to 39	44,693	60,443	68,562	67,052	58,607	0	0	0	0	0	63,579
40 to 44	50,866	71,328	69,256	66,857	68,672	64,533	65,187	0	0	0	67,770
45 to 49	43,765	58,814	65,884	70,170	69,245	65,681	75,368	0	0	0	65,998
50 to 54	53,228	64,994	64,596	65,521	70,135	73,871	78,598	76,320	0	0	68,870
55 to 59	49,772	70,260	70,434	66,289	62,192	74,020	83,339	83,580	68,388	63,103	70,853
60 to 64	57,242	73,908	63,688	70,462	65,435	65,235	78,648	82,737	89,767	57,995	71,068
65 to 69	105,654	114,307	68,815	70,370	65,136	70,139	61,248	101,480	140,084	52,691	74,129
70 & up	0	151,000	71,958	65,417	47,783	56,453	40,323	0	53,846	0	71,271
Total	49,431	62,771	65,935	67,191	66,388	70,349	78,637	82,359	79,809	57,078	66,169

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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PAYROLL DISTRIBUTION OF SAFETY ACTIVE PARTICIPANTS BY AGE AND SERVICE AS OF JANUARY 1, 2015											
COUNTS BY AGE/SERVICE											
Age	Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	39,574	61,576	0	0	0	0	0	0	0	0	60,201
25 to 29	49,844	58,742	87,104	0	0	0	0	0	0	0	67,757
30 to 34	44,275	61,562	78,544	76,954	96,022	0	0	0	0	0	75,645
35 to 39	0	62,724	75,604	77,886	83,018	0	0	0	0	0	75,893
40 to 44	51,226	63,194	78,313	80,514	83,810	87,622	0	0	0	0	80,460
45 to 49	0	0	73,165	78,690	82,881	110,522	121,501	176,281	0	0	92,111
50 to 54	69,326	89,400	71,269	73,798	80,186	99,227	120,830	133,185	0	0	97,034
55 to 59	0	85,096	74,852	75,128	75,714	79,740	116,924	100,036	0	0	94,512
60 to 64	69,326	0	96,363	71,478	109,636	86,608	105,679	71,626	289,788	0	101,740
65 to 69	0	0	0	77,888	83,140	68,994	0	0	0	0	78,868
70 & up	0	0	0	0	0	0	0	0	0	0	0
Total	51,407	63,673	78,317	78,209	82,953	99,469	118,378	124,115	289,788	0	82,819

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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Service Retired Benefits

Current Age	General		Safety		Total	
	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit
0-24	0	\$0	0	\$0	0	\$0
25-29	0	\$0	0	\$0	0	\$0
30-34	0	\$0	0	\$0	0	\$0
35-39	0	\$0	0	\$0	0	\$0
40-44	0	\$0	0	\$0	0	\$0
45-49	0	\$0	3	\$48,581	3	\$48,581
50-54	80	\$16,049	46	\$52,225	126	\$29,257
55-59	269	\$23,190	89	\$67,869	358	\$34,297
60-64	606	\$36,313	99	\$64,168	705	\$40,225
65-69	865	\$35,277	128	\$66,814	993	\$39,342
70-74	621	\$31,281	88	\$50,588	709	\$33,677
75-79	415	\$26,442	41	\$41,413	456	\$27,788
80-84	256	\$24,778	20	\$46,725	276	\$26,368
85-89	143	\$24,638	9	\$67,823	152	\$27,195
90-94	104	\$17,959	1	\$48,467	105	\$18,250
95+	26	\$19,709	0	\$0	26	\$19,709
All Ages	3,385	\$30,336	524	\$59,611	3,909	\$34,260

Non-Duty Disabled Benefits

Current Age	General		Safety		Total	
	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit
0-24	0	\$0	0	\$0	0	\$0
25-29	0	\$0	0	\$0	0	\$0
30-34	0	\$0	0	\$0	0	\$0
35-39	2	\$18,802	0	\$0	2	\$18,802
40-44	2	\$16,359	0	\$0	2	\$16,359
45-49	5	\$18,154	0	\$0	5	\$18,154
50-54	15	\$19,060	0	\$0	15	\$19,060
55-59	32	\$16,581	3	\$25,118	35	\$17,313
60-64	36	\$15,099	3	\$18,598	39	\$15,368
65-69	34	\$13,242	2	\$18,443	36	\$13,531
70-74	18	\$17,130	2	\$48,550	20	\$20,272
75-79	12	\$15,343	2	\$19,129	14	\$15,884
80-84	2	\$15,569	1	\$19,842	3	\$16,993
85-89	1	\$6,999	0	\$0	1	\$6,999
90-94	2	\$12,724	0	\$0	2	\$12,724
95+	0	\$0	0	\$0	0	\$0
All Ages	161	\$15,698	13	\$24,864	174	\$16,383

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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**APPENDIX A
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Duty Disabled Benefits

Current Age	General		Safety		Total	
	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit
0-24	0	\$0	0	\$0	0	\$0
25-29	0	\$0	0	\$0	0	\$0
30-34	0	\$0	1	\$27,717	1	\$27,717
35-39	0	\$0	4	\$32,099	4	\$32,099
40-44	13	\$10,009	15	\$34,335	28	\$23,041
45-49	6	\$10,305	9	\$39,758	15	\$27,977
50-54	17	\$19,916	33	\$43,497	50	\$35,480
55-59	40	\$21,355	30	\$50,953	70	\$34,040
60-64	50	\$22,588	32	\$52,940	82	\$34,432
65-69	55	\$27,955	34	\$53,582	89	\$37,745
70-74	31	\$31,159	19	\$50,158	50	\$38,378
75-79	11	\$27,389	9	\$47,031	20	\$36,228
80-84	7	\$23,613	1	\$56,275	8	\$27,696
85-89	0	\$0	5	\$62,838	5	\$62,838
90-94	2	\$31,451	0	\$0	2	\$31,451
95+	0	\$0	0	\$0	0	\$0
All Ages	232	\$23,910	192	\$48,206	424	\$34,912

Surviving Beneficiary Benefits (all benefit types)

Current Age	General		Safety		Total	
	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit
0-24	8	\$9,229	0	\$0	8	\$9,229
25-29	2	\$18,221	0	\$0	2	\$18,221
30-34	2	\$9,899	0	\$0	2	\$9,899
35-39	0	\$0	0	\$0	0	\$0
40-44	7	\$13,699	1	\$43,080	8	\$17,372
45-49	6	\$10,345	7	\$21,696	13	\$16,457
50-54	19	\$9,372	20	\$15,890	39	\$12,714
55-59	37	\$16,130	23	\$24,875	60	\$19,482
60-64	70	\$14,413	19	\$39,993	89	\$19,874
65-69	77	\$18,582	19	\$35,774	96	\$21,984
70-74	84	\$19,767	25	\$35,246	109	\$23,317
75-79	66	\$15,619	15	\$33,637	81	\$18,956
80-84	72	\$18,083	17	\$33,917	89	\$21,108
85-89	63	\$17,807	14	\$38,396	77	\$21,551
90-94	43	\$21,754	2	\$25,015	45	\$21,899
95+	24	\$16,953	0	\$0	24	\$16,953
All Ages	580	\$17,173	162	\$31,323	742	\$20,262

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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**APPENDIX A
MEMBERSHIP INFORMATION**

Assumed Probabilities of Separation from Active Membership

Age	Non-Duty Death	Ordinary Disability	Service Retirement ¹	Duty Death	Duty Disability
General Members – Male					
20	0.0003	0.000	0.000	0.000	0.001
25	0.0003	0.001	0.000	0.000	0.001
30	0.0004	0.001	0.000	0.000	0.001
35	0.0007	0.001	0.000	0.000	0.001
40	0.0010	0.001	0.000	0.000	0.004
45	0.0014	0.002	0.000	0.000	0.004
50	0.0019	0.002	0.050	0.000	0.002
55	0.0033	0.003	0.050	0.000	0.002
60	0.0052	0.003	0.150	0.000	0.002
65	0.0082	0.004	0.300	0.000	0.002
General Members – Female					
20	0.0002	0.000	0.000	0.000	0.000
25	0.0002	0.001	0.000	0.000	0.000
30	0.0002	0.001	0.000	0.000	0.000
35	0.0004	0.001	0.000	0.000	0.001
40	0.0006	0.001	0.000	0.000	0.001
45	0.0010	0.002	0.000	0.000	0.001
50	0.0015	0.002	0.020	0.000	0.001
55	0.0023	0.003	0.040	0.000	0.002
60	0.0035	0.004	0.100	0.000	0.002
65	0.0063	0.005	0.250	0.000	0.003

¹ Lower rates assumed for members with less than 10 years of service, and higher rates assumed for members with at least 30 years of service.

The probabilities for each cause of separation represent the likelihood that a given member will separate at a particular age for the indicated reason. As an example, if the probability of separation of a male general member at age 20 is 0.036, that indicates that 3.6% of active general members are expected to separate from service during the year.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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**APPENDIX A
MEMBERSHIP INFORMATION**

Assumed Probabilities of Separation from Active Membership

Age	Non-Duty Death	Ordinary Disability	Service Retirement¹	Duty Death	Duty Disability
Safety Members – Male					
20	0.0002	0.000	0.000	0.0002	0.000
25	0.0002	0.000	0.000	0.0002	0.001
30	0.0002	0.000	0.000	0.0002	0.001
35	0.0004	0.000	0.000	0.0002	0.002
40	0.0006	0.000	0.000	0.0003	0.004
45	0.0009	0.001	0.050	0.0004	0.008
50	0.0014	0.001	0.150	0.0005	0.014
55	0.0026	0.002	0.300	0.0007	0.023
Safety Members – Female					
20	0.0001	0.000	0.000	0.0001	0.000
25	0.0001	0.000	0.000	0.0001	0.001
30	0.0001	0.000	0.000	0.0001	0.001
35	0.0002	0.000	0.000	0.0002	0.002
40	0.0003	0.000	0.000	0.0003	0.004
45	0.0006	0.001	0.050	0.0004	0.008
50	0.0010	0.003	0.150	0.0005	0.014
55	0.0017	0.005	0.300	0.0006	0.023

¹ Lower rates assumed for members with less than 20 years of service.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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**APPENDIX A
MEMBERSHIP INFORMATION**

Salary Increase, Termination and Withdrawal Assumptions

Years of Service	Salary Increase: General	Salary Increase: Safety	Withdrawal: General	Withdrawal: Safety	Termination: General	Termination: Safety
0	0.0724	0.0824	0.064	0.018	0.064	0.070
1	0.0724	0.0824	0.050	0.016	0.050	0.062
2	0.0724	0.0824	0.050	0.012	0.050	0.046
3	0.0724	0.0824	0.039	0.006	0.039	0.022
4	0.0724	0.0824	0.024	0.006	0.024	0.022
5	0.0424	0.0524	0.016	0.002	0.029	0.018
6	0.0424	0.0524	0.016	0.002	0.029	0.018
7	0.0424	0.0524	0.016	0.002	0.029	0.018
8	0.0424	0.0524	0.013	0.002	0.024	0.018
9	0.0424	0.0524	0.011	0.002	0.020	0.018
10	0.0424	0.0524	0.007	0.001	0.013	0.009
11	0.0424	0.0524	0.007	0.001	0.013	0.009
12	0.0424	0.0524	0.007	0.001	0.013	0.009
13	0.0424	0.0524	0.007	0.001	0.013	0.009
14	0.0424	0.0524	0.007	0.001	0.013	0.009
15	0.0424	0.0524	0.000	0.000	0.020	0.010
16	0.0424	0.0524	0.000	0.000	0.020	0.010
17	0.0424	0.0524	0.000	0.000	0.020	0.010
18	0.0424	0.0524	0.000	0.000	0.020	0.010
19	0.0424	0.0524	0.000	0.000	0.020	0.010
20	0.0424	0.0524	0.000	0.000	0.010	0.000
21	0.0424	0.0524	0.000	0.000	0.010	0.000
22	0.0424	0.0524	0.000	0.000	0.010	0.000
23	0.0424	0.0524	0.000	0.000	0.010	0.000
24	0.0424	0.0524	0.000	0.000	0.010	0.000
25	0.0424	0.0524	0.000	0.000	0.010	0.000
26	0.0424	0.0524	0.000	0.000	0.010	0.000
27	0.0424	0.0524	0.000	0.000	0.010	0.000
28	0.0424	0.0524	0.000	0.000	0.010	0.000
29	0.0424	0.0524	0.000	0.000	0.010	0.000
30+	0.0325	0.0524	0.000	0.000	0.000	0.000

APPENDIX B
STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS

The assumptions and methods used in the actuarial valuation as of January 1, 2015 are:

Actuarial Methods

1. Actuarial Cost Method

The actuarial valuation is prepared using the entry age actuarial cost method (CERL 31453.5). Under the principles of this method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated as a level percentage of the individual's projected compensation between entry age and assumed exit (until maximum retirement age). For members who transferred from outside of SJCERA, entry age is based on entry into the system. The normal cost for the Plan is based on the sum of the individual normal costs for each member (Individual Entry Age Method).

The UAL (or Surplus Funding) is amortized as a percentage of the projected salaries of present and future members of SJCERA. Effective with the January 1, 2015 valuation, the UAL as of January 1, 2014 is amortized over a closed 19-year period (18 years remaining as of January 1, 2015), except for the additional UAL attributable to the extraordinary loss from 2008, which is being amortized over a separate closed period (24 years as of January 1, 2015).

Any subsequent unexpected change in the unfunded actuarial liability after January 1, 2014 is amortized over 15 years.

2. Valuation of Assets

The assets are valued using a five-year smoothed method based on the difference between the expected market value and the actual market value of the assets as of the valuation date. The expected market value is the prior year's market value increased with the net increase in the cash flow of funds, all increased with interest during the past fiscal year at the expected investment return rate assumption.

An asset corridor limit is applied such that the smoothed market value of assets stays within 20% of the market value of assets.

Actuarial Assumptions

The actuarial assumptions have been adopted by the Board based on recommendations included in an Experience Study performed by Cheiron covering the period from 2010 through 2012.

3. Rate of Return

Assets are assumed to earn 7.50% net of investment expenses.

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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4. Administrative Expenses

Administrative expenses are assumed to be \$4,243,600 for the next year, to be split between employees and employers based on their share of the overall contributions. Expenses are expected to grow with the cost of living (by 3.00% per year.)

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. Post Retirement COLA

Benefits are assumed to increase after retirement at the rate of 2.6% per year.

7. Increases in Pay

Assumed pay increases for active Members consist of increases due to base salary adjustments plus service-based increase due to longevity and promotion, as shown below:

Pay Increases			
	Years of Service		
	<5	5-29	30+
Base Increase	3.25%	3.25%	3.25%
Longevity & Promotion			
General	3.86%	0.96%	0.00%
Safety	4.83%	1.93%	1.93%
Total (Compound)			
General	7.24%	4.24%	3.25%
Safety	8.24%	5.24%	5.24%

8. Family Composition

Percentage married for all active members who retire, become disabled, or die during active service is shown in the following table. Women are assumed to be three years younger than men.

Percentage Married	
Gender	Percentage
Males	70%
Females	50%

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

9. Rates of Termination

Sample rates of termination are shown in the following table.

Rates of Termination*		
Years of Service	General	Safety
0	12.75%	8.75%
1	10.00%	7.75%
2	10.00%	5.75%
3	7.75%	2.75%
4	4.75%	2.75%
5	4.50%	2.00%
6	4.50%	2.00%
7	4.50%	2.00%
8	3.75%	2.00%
9	3.00%	2.00%
10-19	2.00%	1.00%
20-29	1.00%	0.00%
30+	0.00%	0.00%

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

10. Withdrawal

Rates of withdrawal apply to active Members who terminate their employment and withdraw their member contributions, forfeiting entitlement to future Plan benefits.

50% of all General Member terminations with less than five years of service are assumed to take a refund of contributions, as well as 35% of those with five to fourteen years of service.

20% of all Safety Member terminations with less than five years of service are assumed to take a refund of contributions and 10% of those between five and fourteen years are assumed to take a refund.

11. Vested Termination and Reciprocal Transfers

Rates of vested termination apply to active Members who terminate their employment and leave their member contributions on deposit with the Plan.

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50% of all General Member terminations with less than five years of service are assumed to leave their contributions on deposit, as well as 65% of those with five to fourteen years of service, and 100% of those with fifteen or more years of service.

80% of all Safety Member terminations with less than five years of service are assumed to leave their contributions on deposit, as well as 90% of those between five and fourteen years of service and 100% of those with fifteen or more years of service.

Vested terminated General Members are assumed to begin receiving benefits at age 58; terminated Safety Members are assumed to begin receiving benefits at age 53.

25% of vested terminated General Members and 50% of vested terminated Safety Members are assumed to be reciprocal.

Final average pay for General Members who terminate with reciprocity is assumed to increase by 4.25% per year until their assumed retirement date. Final average pay for Safety Members who terminate with reciprocity is assumed to increase by 5.25% per year until their assumed retirement date.

12. Rates of Service-Connected Disability

Sample service-connected disability rates of active participants are provided in the table below.

Rates of Svc Disability			
	General General		
Age	Male	Female	Safety
22	0.066%	0.022%	0.050%
27	0.066%	0.030%	0.088%
32	0.066%	0.051%	0.165%
37	0.066%	0.073%	0.302%
42	0.380%	0.094%	0.566%
47	0.380%	0.123%	0.995%
52	0.226%	0.159%	1.713%
57	0.226%	0.204%	2.633%
62	0.226%	0.249%	0.000%

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STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS**

13. Rates of Nonservice-Connected Disability

Sample nonservice-connected disability rates of active participants are provided in the table below.

Rates of Non-Svc Disability				
Age	General Male	General Female	Safety Male	Safety Female
22	0.051%	0.053%	0.000%	0.000%
27	0.068%	0.067%	0.003%	0.006%
32	0.086%	0.081%	0.005%	0.010%
37	0.108%	0.102%	0.009%	0.019%
42	0.138%	0.138%	0.028%	0.057%
47	0.178%	0.197%	0.082%	0.164%
52	0.225%	0.267%	0.167%	0.334%
57	0.286%	0.337%	0.265%	0.529%
62	0.362%	0.408%	0.000%	0.000%

14. Rates of Mortality for Healthy Lives

Mortality rates for active members, retirees, beneficiaries, terminated vested, and reciprocal members are based on the sex distinct Retired Pensioner (RP) 2000 Combined Healthy Tables, published by the Society of Actuaries, with Generational Projection using Projection Scale BB.

15. Rates of Mortality for Disabled Retirees

Mortality rates for active members, retirees, beneficiaries, terminated vested, and reciprocal members are based on the sex distinct Retired Pensioner (RP) 2000 Combined Healthy Tables, published by the Society of Actuaries, with Generational Projection using Projection Scale BB, set-forward eight years for males and females.

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STATEMENT OF CURRENT ACTUARIAL ASSUMPTIONS AND METHODS**

16. Rates of Retirement

Rates of retirement are based on age according to the following table.

Rates of Retirement								
Age	General Male Years of Service			General Female Years of Service			Safety Years of Service	
	5-9	10-29	30+	5-9	10-29	30+	10-29	20+
45	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%
46	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%
47	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%
48	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%
49	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%
50	5.00%	5.00%	5.00%	5.00%	2.00%	7.00%	10.00%	15.00%
51	5.00%	5.00%	5.00%	5.00%	2.00%	7.00%	5.00%	10.00%
52	5.00%	5.00%	5.00%	5.00%	2.00%	7.00%	5.00%	10.00%
53	5.00%	5.00%	5.00%	5.00%	2.00%	7.00%	5.00%	20.00%
54	5.00%	5.00%	5.00%	5.00%	3.00%	7.00%	5.00%	20.00%
55	5.00%	5.00%	15.00%	5.00%	4.00%	15.00%	5.00%	30.00%
56	5.00%	5.00%	15.00%	5.00%	7.00%	15.00%	5.00%	20.00%
57	5.00%	5.00%	15.00%	5.00%	7.00%	15.00%	5.00%	20.00%
58	5.00%	7.50%	20.00%	5.00%	10.00%	20.00%	5.00%	20.00%
59	5.00%	7.50%	25.00%	5.00%	10.00%	25.00%	5.00%	20.00%
60	7.50%	15.00%	25.00%	7.50%	10.00%	25.00%	5.00%	20.00%
61	7.50%	20.00%	35.00%	7.50%	15.00%	35.00%	25.00%	25.00%
62	7.50%	25.00%	40.00%	7.50%	25.00%	35.00%	25.00%	50.00%
63	7.50%	25.00%	35.00%	7.50%	25.00%	35.00%	25.00%	50.00%
64	7.50%	25.00%	35.00%	7.50%	25.00%	35.00%	25.00%	50.00%
65	15.00%	30.00%	50.00%	15.00%	25.00%	50.00%	100.00%	100.00%
66	15.00%	30.00%	50.00%	15.00%	25.00%	50.00%	100.00%	100.00%
67	15.00%	30.00%	40.00%	15.00%	35.00%	40.00%	100.00%	100.00%
68	15.00%	30.00%	30.00%	15.00%	35.00%	30.00%	100.00%	100.00%
69	15.00%	30.00%	30.00%	15.00%	35.00%	30.00%	100.00%	100.00%
70	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

17. Changes in Assumptions

There have been no changes in assumptions since the prior valuation.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
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**APPENDIX C
SUMMARY OF PLAN PROVISIONS**

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 members joining the Plan on and after January 1, 2013 (Tier II Members), only pensionable compensation up to the Social Security Taxable Wage Base (\$117,020 for 2015) will count for computing Plan benefits and employee contributions and employer contributions for those participating in Social Security. For those not participating in Social Security, the compensation cap is 120% of the Taxable Wage Base (\$140,424 for 2015.) 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 benefit and contribution computations for Tier II Members.

Credited Service: In general, Credited Service is earned for the period during which Member Contributions are paid.

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. Credit for up to 12 months of a medical leave of absence and all military leaves of absence may also be purchased.

Public Service (see below) is part of Credited Service for the computation of benefits only, not for eligibility for benefits or for vesting.

Final

Compensation: For Tier I Members, Final Compensation means the highest average Compensation earned during any 12 consecutive months of the Member's employment.

For Tier II Members, highest average Compensation will be based on the highest 36 consecutive months, rather than 12 months.

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

Public Service: The Member may elect to purchase Public Service for time spent while employed in another recognized public agency. The public agency must

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**APPENDIX C
SUMMARY OF PLAN PROVISIONS**

have a reciprocal agreement with the Plan or be one of several specified municipalities, counties, special districts, or State or Federal agencies.

Public Service cannot be purchased if it is used for eligibility for another pension.

The cost to purchase Public Service is twice the Member Contributions and interest applicable for the period of time purchased. Public Service is used to compute benefits, but does not count toward eligibility for benefits or vesting.

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 San Joaquin County and other participating special districts become Members on their date of appointment. Membership is mandatory; only elected officials and members who are age 60 or older at the time of employment in a position requiring membership in SJCERA may choose not to participate.

A Tier II Member is any Member joining the Plan for the first time on or after January 1, 2013. Employees who transfer from and are eligible for reciprocity with another public employer will not be Tier II Members if their service in the reciprocal system was under a previous tier. Employees who were Members of SJCERA prior to January 1, 2013 and experienced a break in service of more than six months and then were reemployed by a *different* SJCERA-participating employer on or after January 1, 2013 will be considered Tier II Members for all subsequent service.

Member

Contributions: Each Member contributes a percentage of Compensation to the Plan through payroll deduction. For Tier I members, the percentage contributed depends on the Member's age upon joining the Plan. Representative rates are shown in Table 1 on the next page (complete rate tables in appendix).

Tier I members covered by Social Security have their contributions reduced by one-third on the first \$161.54 of biweekly Compensation. General Members who joined the Plan prior to March 7, 1973 and who have earned 30 years of Credited Service do not contribute; Safety Members do not contribute after earning 30 years of Credited Service.

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**APPENDIX C
SUMMARY OF PLAN PROVISIONS**

Table 1: Tier I Member Contribution Rates (Basic Rates)

Entry Age	General Member Rate		Safety Member Rate	
	1 st \$350/month	Over \$350	1 st \$350/month	Over \$350
20	1.83%	2.74%	3.00%	4.50%
25	2.07%	3.11%	3.19%	4.78%
30	2.27%	3.40%	3.39%	5.08%
35	2.48%	3.72%	3.61%	5.41%
40	2.71%	4.07%	3.86%	5.79%
45	2.99%	4.48%	4.13%	6.20%
50	3.27%	4.91%	4.07%	6.11%

Tier II Members contribute half of the normal cost of the Plan. Contributions for these Members will be based on the Normal Cost associated with their benefits; General and Safety members will pay different rates.

Tier II Members pay a single contribution rate, not a rate based on entry age. All Tier II Members continue contributing after earning 30 years of service.

Table 2: Tier II Member Contribution Rates

General Member Rate	Safety Member Rate
9.15%	15.22%

Interest is credited semiannually to each Member's accumulated contributions. The crediting rate is set by the Board; the semi-annual rate is 3.68%, for an effective annual rate of 7.50%.

C. Service Retirement:

Eligibility: Tier I General Members are eligible to retire at age 50 if they have earned five years of Credited Service and have passed the tenth anniversary of their membership in the Plan. Alternatively, General 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.

Tier I Safety Members are eligible to retire at age 50 if they have earned five years of Credited Service and have passed the tenth anniversary of their membership in the Plan. Alternatively, Safety Members are eligible to retire at any age after having earned 20 years of Credited Service.

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Tier II General Members are eligible to retire upon attaining age 52 and completing five or more years of service. Tier II Safety Members are eligible to retire upon attaining age 50 and completing five or more years of service. Tier II Members are eligible to retire, regardless of service, after attaining age 70.

Benefit Amount: The Service Retirement Benefit payable to Tier I General Members is equal to the percentage in Table 3 on the next page multiplied by the Member's Final Compensation. The Service Retirement Benefit payable to Tier I Safety Members is equal to the percentage in Table 4 on page 57 multiplied by the Member's Final Compensation. The percentage of Final Compensation may not exceed 100%.

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Table 3: Tier I General Members (CERL Section 31676.14)

Service	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
10					14.75	15.67	16.67	17.41	18.41	19.48	20.61	21.82	22.68	23.54	24.40	25.26	26.11	26.11	26.11	26.11
11					16.23	17.23	18.33	19.15	20.25	21.42	22.67	24.00	24.95	25.89	26.84	27.78	28.72	28.72	28.72	28.72
12					17.70	18.80	20.00	20.89	22.10	23.37	24.73	26.19	27.22	28.25	29.28	30.31	31.34	31.34	31.34	31.34
13					19.18	20.36	21.67	22.64	23.94	25.32	26.79	28.37	29.48	30.60	31.72	32.83	33.95	33.95	33.95	33.95
14					20.65	21.93	23.33	24.38	25.78	27.27	28.85	30.55	31.75	32.95	34.16	35.36	36.56	36.56	36.56	36.56
15					22.13	23.50	25.00	26.12	27.62	29.22	30.91	32.73	34.02	35.31	36.60	37.88	39.17	39.17	39.17	39.17
16					23.60	25.06	26.67	27.86	29.46	31.16	32.97	34.92	36.29	37.66	39.04	40.41	41.78	41.78	41.78	41.78
17					25.08	26.63	28.33	29.60	31.30	33.11	35.03	37.10	38.56	40.01	41.47	42.93	44.39	44.39	44.39	44.39
18					26.55	28.20	30.00	31.34	33.14	35.06	37.09	39.28	40.82	42.37	43.91	45.46	47.00	47.00	47.00	47.00
19					28.03	29.76	31.67	33.08	34.98	37.01	39.16	41.46	43.09	44.72	46.35	47.98	49.61	49.61	49.61	49.61
20					29.50	31.33	33.33	34.82	36.83	38.95	41.22	43.64	45.36	47.08	48.79	50.51	52.23	52.23	52.23	52.23
21					30.98	32.90	35.00	36.57	38.67	40.90	43.28	45.83	47.63	49.43	51.23	53.04	54.84	54.84	54.84	54.84
22					32.45	34.46	36.67	38.31	40.51	42.85	45.34	48.01	49.90	51.78	53.67	55.56	57.45	57.45	57.45	57.45
23					33.93	36.03	38.33	40.05	42.35	44.80	47.40	50.19	52.16	54.14	56.11	58.09	60.06	60.06	60.06	60.06
24					35.40	37.60	40.00	41.79	44.19	46.74	49.46	52.37	54.43	56.49	58.55	60.61	62.67	62.67	62.67	62.67
25					36.88	39.16	41.67	43.53	46.03	48.69	51.52	54.56	56.70	58.85	60.99	63.14	65.28	65.28	65.28	65.28
26					38.35	40.73	43.33	45.27	47.87	50.64	53.58	56.74	58.97	61.20	63.43	65.66	67.89	67.89	67.89	67.89
27					39.83	42.30	45.00	47.01	49.72	52.59	55.64	58.92	61.24	63.55	65.87	68.19	70.51	70.51	70.51	70.51
28					41.30	43.86	46.67	48.75	51.56	54.54	57.70	61.10	63.50	65.91	68.31	70.71	73.12	73.12	73.12	73.12
29					42.78	45.43	48.33	50.49	53.40	56.48	59.76	63.28	65.77	68.26	70.75	73.24	75.73	75.73	75.73	75.73
30	35.28	37.27	39.41	41.73	44.25	47.00	50.00	52.24	55.24	58.43	61.82	65.47	68.04	70.61	73.19	75.77	78.34	78.34	78.34	78.34
31		38.51	40.72	43.12	45.73	48.56	51.67	53.98	57.08	60.38	63.88	67.65	70.31	72.97	75.63	78.29	80.95	80.95	80.95	80.95
32			42.04	44.51	47.20	50.13	53.33	55.72	58.92	62.33	65.95	69.83	72.58	75.32	78.07	80.82	83.56	83.56	83.56	83.56
33				45.90	48.68	51.69	55.00	57.46	60.76	64.27	68.01	72.01	74.84	77.68	80.51	83.34	86.17	86.17	86.17	86.17
34					50.15	53.26	56.67	59.20	62.60	66.22	70.07	74.19	77.11	80.03	82.95	85.87	88.78	88.78	88.78	88.78
35						54.83	58.33	60.94	64.45	68.17	72.13	76.38	79.38	82.38	85.39	88.39	91.40	91.40	91.40	91.40
36							60.00	62.68	66.29	70.12	74.19	78.56	81.65	84.74	87.83	90.92	94.01	94.01	94.01	94.01
37								64.42	68.13	72.06	76.25	80.74	83.92	87.09	90.27	93.44	96.62	96.62	96.62	96.62
38									69.97	74.01	78.31	82.92	86.18	89.44	92.71	95.97	99.23	99.23	99.23	99.23
39										75.96	80.37	85.11	88.45	91.80	95.15	98.49	100	100	100	100
40											82.43	87.29	90.72	94.15	97.59	100				
41												89.47	92.99	96.51	100					
42													95.26	98.86						
43														100						

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Table 4: Tier I Safety Members (CERL Section 31664.1)

Service	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
10										30.00	30.00	30.00	30.00	30.00	30.00
11										33.00	33.00	33.00	33.00	33.00	33.00
12										36.00	36.00	36.00	36.00	36.00	36.00
13										39.00	39.00	39.00	39.00	39.00	39.00
14										42.00	42.00	42.00	42.00	42.00	42.00
15										45.00	45.00	45.00	45.00	45.00	45.00
16										48.00	48.00	48.00	48.00	48.00	48.00
17										51.00	51.00	51.00	51.00	51.00	51.00
18										54.00	54.00	54.00	54.00	54.00	54.00
19										57.00	57.00	57.00	57.00	57.00	57.00
20	37.55	39.75	42.02	44.38	46.83	49.36	52.07	54.51	57.13	60.00	60.00	60.00	60.00	60.00	60.00
21		41.74	44.13	46.6	49.17	51.82	54.67	57.24	59.99	63.00	63.00	63.00	63.00	63.00	63.00
22			46.23	48.82	51.51	54.29	57.27	59.96	62.85	66.00	66.00	66.00	66.00	66.00	66.00
23				51.04	53.85	56.76	59.88	62.69	65.7	69.00	69.00	69.00	69.00	69.00	69.00
24					56.2	59.23	62.48	65.41	68.56	72.00	72.00	72.00	72.00	72.00	72.00
25						61.7	65.09	68.14	71.42	75.00	75.00	75.00	75.00	75.00	75.00
26							67.69	70.86	74.27	78.00	78.00	78.00	78.00	78.00	78.00
27								73.59	77.13	81.00	81.00	81.00	81.00	81.00	81.00
28									79.98	84.00	84.00	84.00	84.00	84.00	84.00
29										87.00	87.00	87.00	87.00	87.00	87.00
30										90.00	90.00	90.00	90.00	90.00	90.00
31										93.00	93.00	93.00	93.00	93.00	93.00
32										96.00	96.00	96.00	96.00	96.00	96.00
33										99.00	99.00	99.00	99.00	99.00	99.00
34										100.00	100.00	100.00	100.00	100.00	100.00
35											100.00	100.00	100.00	100.00	100.00
36												100.00	100.00	100.00	100.00
37													100.00	100.00	100.00
38														100.00	100.00
39															100.00

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Table 5: Tier I Social Security Adjustment

Age at Retirement	General Member Reduction	Safety Member Reduction
46	\$1.372	\$2.879
47	\$1.449	\$3.037
48	\$1.533	\$3.180
49	\$1.623	\$3.333
50	\$1.721	\$3.500
51	\$1.828	\$3.500
52	\$1.944	\$3.500
53	\$2.031	\$3.500
54	\$2.148	\$3.500
55	\$2.272	\$3.500
56	\$2.404	\$3.500
57	\$2.546	\$3.500
58	\$2.646	\$3.500
59	\$2.746	\$3.500
60	\$2.846	\$3.500
61	\$2.946	\$3.500
62	\$3.046	\$3.500
63	\$3.046	\$3.500
64	\$3.046	\$3.500
65	\$3.046	\$3.500

For Tier II General Members, the benefit multiplier is 1% at age 52, increasing by 0.1% for each year of age to 2.5% at 67. For Tier II Safety Members, the benefit multiplier is 2% at age 50, increasing by 0.1% for each year of age to 2.7% at age 57. In between exact ages, the multiplier increases by 0.025% for each quarter year increase in age.

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 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 are also available.

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Annually on April 1, benefits are adjusted to reflect changes in the CPI for the San Francisco Bay Area. Annual adjustments may not exceed 3%, but changes in CPI in excess of 3% are “banked” and used for future adjustments when changes in CPI are less than 3%.

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.

D. Service-Connected Disability

Eligibility: 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.

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.

Members who return to work at a different position with lower pay may receive a Supplemental Disability Allowance that, when added to their new pay, may bring the Member’s total income up to the current pay for his or her position at the time of disability. The Supplemental Disability Allowance may not exceed the Service-Connected Disability Retirement benefit.

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.

Actuarially equivalent optional benefit forms are also available.

Annually on April 1, benefits are adjusted to reflect changes in the CPI for the San Francisco Bay Area. Annual adjustments may not exceed 3%, but changes in CPI in excess of 3% are “banked” and used for future adjustments when changes in CPI are less than 3%.

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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.

E. Nonservice-Connected Disability

Eligibility: Members are eligible for Nonservice-Connected Disability Retirement benefits if they are permanently disabled at any age after earning five years of Credited Service or after becoming eligible for a deferred vested benefit.

Benefit Amount: The Nonservice-Connected Disability Retirement Benefit payable to 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.

Members who return to work at a different position with lower pay may receive a Supplemental Disability Allowance that, when added to their new pay, may bring the Member's total income up to the current pay for his or her position at the time of disability. The Supplemental Disability Allowance may not exceed the Nonservice-Connected Disability Retirement benefit.

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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 are also available.

Annually on April 1, benefits are adjusted to reflect changes in the CPI for the San Francisco Bay Area. Annual adjustments may not exceed 3%, but changes in CPI in excess of 3% are "banked" and used for future adjustments when changes in CPI are less than 3%.

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.

F. Service-Connected Death

Eligibility: A Member's survivors are eligible to receive Service-Connected Death benefits if the Member's death resulted from injury or illness sustained in connection with the Member's duties.

Benefit Amount: The Service-Connected Death benefit payable to a surviving spouse or minor children will be 50% of the Member's Final Compensation.

In the event the Member's death was caused by external violence or physical force, an additional benefit of 25% of the above basic benefit will be paid for the first minor child, 15% for the second, and 10% for the third.

Furthermore, for Safety Members only, there will be an additional lump sum benefit of 12 months of pay at the time of death.

Form of Benefit: The Service-Connected Death Benefit will be paid monthly beginning at the Member's death and for the life of the surviving spouse or to the age of majority of dependent minor children if there is no spouse.

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Annually on April 1, benefits are adjusted to reflect changes in the CPI for the San Francisco Bay Area. Annual adjustments may not exceed 3%, but changes in CPI in excess of 3% are “banked” and used for future adjustments when changes in CPI are less than 3%.

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

G. Nonservice-Connected Death

Eligibility: A Member’s survivors are eligible to receive Nonservice-Connected Death benefits if the Member’s death arose from causes unrelated to the Member’s duties.

Benefit Amount: In the event the Member had earned fewer than five years of Credited Service and has no or insufficient reciprocity service from another system, the Nonservice-Connected Death benefit will be a refund of the Member’s accumulated contributions with interest plus a payment of one month of Final Compensation for each year of Credited Service, not to exceed six months.

In the event the Member had earned five or more years of Credited Service, the Nonservice-Connected Death benefit payable to a surviving spouse or minor children will be 60% of the amount the Member would have received as a Nonservice-Connected Disability Retirement Benefit on the date of death.

Form of Benefit: For Members who had earned fewer than five years of Credited Service at death, the benefit will be paid as a lump sum.

For Members with five or more years of Credited Service, the Nonservice-Connected Death Benefit will be paid monthly beginning at the Member’s death and for the life of the surviving spouse or to the age of majority of dependent minor children if there is no spouse.

Annually on April 1, benefits are adjusted to reflect changes in the CPI for the San Francisco Bay Area. Annual adjustments may not exceed 3%, but changes in CPI in excess of 3% are “banked” and used for future adjustments when changes in CPI are less than 3%.

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

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H. Withdrawal Benefit:

- Eligibility: A Member is eligible for a Withdrawal Benefit upon termination of employment.
- 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.

I. 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. The Member must leave his or her Member Contributions with interest on deposit with the 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.

For Tier I Members, Tables 2 and 3 are extended for service under ten years using benefit multipliers of one-sixtieth per year of Credited Service at age 52 (General) or 3% per year of Credited Service at age 50 (Safety), with adjustments for earlier or later retirement under Sections 31676.14 and 31664.1, respectively, of the County Employees Retirement Law of 1937.

- 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. 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 are adjusted to reflect changes in the CPI for the San Francisco Bay Area. Annual adjustments may not exceed 3%, but changes in CPI in excess of 3% are "banked" and used for future adjustments when changes in CPI are less than 3%.

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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.

J. Reciprocal Benefit:

Eligibility: A Member is eligible for a Reciprocal Benefit upon termination of employment and entry, within a specified period of time, into another retirement system recognized as a reciprocal system by the Plan. In addition, the Member must leave his or her Member Contributions with interest on deposit with the 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. 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 are adjusted to reflect changes in the CPI for the San Francisco Bay Area. Annual adjustments may not exceed 3%, but changes in CPI in excess of 3% are "banked" and used for future adjustments when changes in CPI are less than 3%.

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 may be payable upon the death of a retired Member by the last system under which the Member's service was covered.

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**APPENDIX D
401(H) REPAYMENT SCHEDULE**

As of January 1, 2014, a separate amortization layer was established for the repayment of funds originally transferred to a retiree health reserve. This schedule was prepared in compliance with an approved Voluntary Correction Program that SJCERA submitted to the IRS. The original balance of the amortization layer (\$48.0 million) is being amortized using the same methodology and assumptions as the UAL - as a level percentage of payroll over a 19-year period - after an initial payment of \$19.8 million.

Date	Outstanding Balance	Years Remaining	Initial Payment	End of Year Payment
1/1/2014	\$48,000,000	19	\$19,800,000	\$2,238,831
1/1/2015	\$28,076,169	18		\$2,311,593
1/1/2016	\$27,870,288	17		\$2,386,720
1/1/2017	\$27,573,839	16		\$2,464,289
1/1/2018	\$27,177,588	15		\$2,544,378
1/1/2019	\$26,671,529	14		\$2,627,070
1/1/2020	\$26,044,824	13		\$2,712,450
1/1/2021	\$25,285,736	12		\$2,800,605
1/1/2022	\$24,381,561	11		\$2,891,624
1/1/2023	\$23,318,554	10		\$2,985,602
1/1/2024	\$22,081,843	9		\$3,082,634
1/1/2025	\$20,655,347	8		\$3,182,820
1/1/2026	\$19,021,678	7		\$3,286,262
1/1/2027	\$17,162,042	6		\$3,393,065
1/1/2028	\$15,056,131	5		\$3,503,340
1/1/2029	\$12,682,001	4		\$3,617,198
1/1/2030	\$10,015,953	3		\$3,734,757
1/1/2031	\$7,032,392	2		\$3,856,137
1/1/2032	\$3,703,685	1		\$3,981,461
1/1/2033	\$0	0		\$4,110,859

APPENDIX E
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.

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.

APPENDIX E
GLOSSARY

9. Amortization Payment

The portion of the pension plan contribution that 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 Liabilities. The Funded Ratio shown in this report is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations, in the case 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.

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.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**APPENDIX F
GENERAL AND SAFETY EMPLOYER CONTRIBUTION RATES**

Tier I Contribution Rates for General and Safety (no COLA Cost-Sharing)

Separate rates for General and Safety members are shown below. These rates are applicable for employment groups that have not implemented equal sharing of the contributions required for post-retirement cost-of-living adjustments (COLA) in accordance with Government Code Section 31873.

As of January 1, 2014				As of January 1, 2015			
	General	Safety	Total		General	Safety	Total
Employer Normal Cost				Employer Normal Cost			
Basic	12.38%	21.50%	14.06%	Basic	13.23%	23.18%	15.13%
COL	4.83%	8.90%	5.58%	COL	5.21%	9.52%	6.04%
Total	17.21%	30.40%	19.64%	Total	18.44%	32.70%	21.17%
UAL Amortization Cost				UAL Amortization Cost			
Basic	15.80%	29.30%	18.25%	Basic	16.07%	29.97%	18.71%
COL	4.29%	9.10%	5.17%	COL	4.79%	9.61%	5.70%
Total	20.09%	38.40%	23.42%	Total	20.86%	39.58%	24.41%
Total Cost				Total Cost			
Basic	28.18%	50.80%	32.31%	Basic	29.30%	53.15%	33.84%
COL	9.12%	18.00%	10.75%	COL	10.00%	19.13%	11.74%
Total	37.30%	68.80%	43.06%	Total	39.30%	72.28%	45.58%

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015

APPENDIX F
GENERAL AND SAFETY EMPLOYER CONTRIBUTION RATES

Tier I Contribution Rates for General and Safety (Employer Cost with additional 14% / 33% Normal Rates by members without COLA Cost-sharing)

Separate rates for General and Safety members contributing an additional 14% / 33% of Normal Rates are shown below.

As of January 1, 2014				As of January 1, 2015			
	General	Safety	Total		General	Safety	Total
Employer Normal Cost				Employer Normal Cost			
Basic	11.91%	20.02%	13.40%	Basic	12.71%	21.61%	14.41%
COL	4.83%	8.90%	5.58%	COL	5.21%	9.52%	6.04%
Total	16.74%	28.92%	18.98%	Total	17.92%	31.13%	20.45%
UAL Amortization Cost				UAL Amortization Cost			
Basic	15.80%	29.30%	18.25%	Basic	16.07%	29.97%	18.71%
COL	4.29%	9.10%	5.17%	COL	4.79%	9.61%	5.70%
Total	20.09%	38.40%	23.42%	Total	20.86%	39.58%	24.41%
Total Cost				Total Cost			
Basic	27.71%	49.32%	31.65%	Basic	28.78%	51.58%	33.12%
COL	9.12%	18.00%	10.75%	COL	10.00%	19.13%	11.74%
Total	36.83%	67.32%	42.40%	Total	38.78%	70.71%	44.86%

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015

APPENDIX F
GENERAL AND SAFETY EMPLOYER CONTRIBUTION RATES

Tier I Contribution Rates for General and Safety (with COLA Cost-sharing)

Separate rates for General and Safety members contributing Normal Rates plus COLA Cost-sharing are shown below.

As of January 1, 2014				As of January 1, 2015			
	General	Safety	Total		General	Safety	Total
Employer Normal Cost				Employer Normal Cost			
Basic	12.38%	21.50%	14.06%	Basic	13.23%	23.18%	15.13%
COL	2.64%	4.70%	3.02%	COL	2.80%	5.06%	3.24%
Total	15.02%	26.20%	17.08%	Total	16.03%	28.24%	18.37%
UAL Amortization Cost				UAL Amortization Cost			
Basic	15.80%	29.30%	18.25%	Basic	16.07%	29.97%	18.71%
COL	4.29%	9.10%	5.17%	COL	4.79%	9.61%	5.70%
Total	20.09%	38.40%	23.42%	Total	20.86%	39.58%	24.41%
Total Cost				Total Cost			
Basic	28.18%	50.80%	32.31%	Basic	29.30%	53.15%	33.84%
COL	6.93%	13.80%	8.19%	COL	7.59%	14.67%	8.94%
Total	35.11%	64.60%	40.50%	Total	36.89%	67.82%	42.78%

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**APPENDIX F
GENERAL AND SAFETY EMPLOYER CONTRIBUTION RATES**

Tier I Contribution Rates for General and Safety (Employer Cost with additional 14% / 33% Normal Rates by members and COLA Cost-sharing)

Separate rates for General and Safety members contributing an additional 14% / 33% of Normal Rates and COLA Cost-sharing are shown below.

As of January 1, 2014				As of January 1, 2015			
	General	Safety	Total		General	Safety	Total
Employer Normal Cost				Employer Normal Cost			
Basic	11.91%	20.02%	13.40%	Basic	12.71%	21.61%	14.41%
COL	2.64%	4.70%	3.02%	COL	2.80%	5.06%	3.24%
Total	14.55%	24.72%	16.42%	Total	15.51%	26.67%	17.65%
UAL Amortization Cost				UAL Amortization Cost			
Basic	15.80%	29.30%	18.25%	Basic	16.07%	29.97%	18.71%
COL	4.29%	9.10%	5.17%	COL	4.79%	9.61%	5.70%
Total	20.09%	38.40%	23.42%	Total	20.86%	39.58%	24.41%
Total Cost				Total Cost			
Basic	27.71%	49.32%	31.65%	Basic	28.78%	51.58%	33.12%
COL	6.93%	13.80%	8.19%	COL	7.59%	14.67%	8.94%
Total	34.64%	63.12%	39.84%	Total	36.37%	66.25%	42.06%

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015

APPENDIX F
GENERAL AND SAFETY EMPLOYER CONTRIBUTION RATES

Tier II Contribution Rates for General and Safety (PEPRA Members)

Separate rates for General and Safety members are shown below. These rates are applicable for employment groups that are subject to Government Code Section 7522.30.

As of January 1, 2014				As of January 1, 2015			
	General	Safety	Total		General	Safety	Total
Employer Normal Cost				Employer Normal Cost			
Basic	7.28%	11.62%	7.44%	Basic	7.08%	11.33%	7.42%
COL	2.10%	3.97%	2.16%	COL	2.07%	3.89%	2.21%
Total	9.38%	15.59%	9.60%	Total	9.15%	15.22%	9.63%
UAL Amortization Cost				UAL Amortization Cost			
Basic	15.80%	29.30%	16.28%	Basic	16.07%	29.97%	17.15%
COL	4.29%	9.10%	4.46%	COL	4.79%	9.61%	5.17%
Total	20.09%	38.40%	20.74%	Total	20.86%	39.58%	22.32%
Total Cost				Total Cost			
Basic	23.08%	40.92%	23.72%	Basic	23.15%	41.30%	24.57%
COL	6.39%	13.07%	6.62%	COL	6.86%	13.50%	7.38%
Total	29.47%	53.99%	30.34%	Total	30.01%	54.80%	31.95%

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**APPENDIX G
MEMBER CONTRIBUTION RATES**

General Member Contribution Rates

Basic Half Rate (Government Code Section 31621.3)

Entry Age	Basic Rate		COLA Cost-Sharing Rate¹	
	1st \$350/month	Over \$350	1st \$350/month	Over \$350
16	1.63%	2.45%	1.14%	1.71%
17	1.68%	2.52%	1.14%	1.71%
18	1.73%	2.59%	1.14%	1.71%
19	1.77%	2.66%	1.14%	1.71%
20	1.83%	2.74%	1.14%	1.71%
21	1.87%	2.81%	1.17%	1.76%
22	1.93%	2.89%	1.21%	1.82%
23	1.98%	2.97%	1.25%	1.87%
24	2.03%	3.05%	1.29%	1.93%
25	2.07%	3.11%	1.32%	1.98%
26	2.11%	3.17%	1.35%	2.03%
27	2.15%	3.22%	1.38%	2.08%
28	2.19%	3.28%	1.41%	2.12%
29	2.23%	3.34%	1.44%	2.16%
30	2.27%	3.40%	1.47%	2.20%
31	2.31%	3.46%	1.50%	2.24%
32	2.35%	3.53%	1.52%	2.28%
33	2.39%	3.59%	1.55%	2.32%
34	2.43%	3.65%	1.58%	2.37%
35	2.48%	3.72%	1.61%	2.41%
36	2.53%	3.79%	1.64%	2.47%
37	2.57%	3.86%	1.68%	2.52%
38	2.62%	3.93%	1.72%	2.58%
39	2.67%	4.00%	1.77%	2.65%
40	2.71%	4.07%	1.81%	2.72%
41	2.77%	4.15%	1.83%	2.75%
42	2.81%	4.22%	1.86%	2.79%
43	2.87%	4.30%	1.89%	2.83%
44	2.93%	4.39%	1.91%	2.86%
45	2.99%	4.48%	1.95%	2.92%
46	3.05%	4.57%	1.97%	2.96%
47	3.11%	4.67%	1.99%	2.99%
48	3.19%	4.78%	2.01%	3.01%
49	3.27%	4.90%	2.02%	3.03%
50	3.27%	4.91%	2.02%	3.03%
51	3.27%	4.91%	2.03%	3.04%
52	3.28%	4.92%	2.02%	3.02%
53	3.28%	4.92%	1.98%	2.97%
54+	3.29%	4.93%	1.94%	2.91%

¹ Some members and employers share equally the contributions required for post-retirement cost-of-living adjustments (COLA) in accordance with Government Code Section 31873. For other members, the employers pay all of the contributions required for post-retirement COLA.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**APPENDIX G
MEMBER CONTRIBUTION RATES**

General Member Contribution Rates

**Basic Half Rate (Government Code Section 31621.3) + 14%, not greater than 1/2
Normal Cost**

Entry Age	<u>Basic Rate</u>		<u>COLA Cost-Sharing Rate¹</u>	
	1st \$350/month	Over \$350	1st \$350/month	Over \$350
16	1.86%	2.79%	1.14%	1.71%
17	1.91%	2.87%	1.14%	1.71%
18	1.97%	2.95%	1.14%	1.71%
19	2.02%	3.03%	1.14%	1.71%
20	2.08%	3.12%	1.14%	1.71%
21	2.13%	3.20%	1.18%	1.77%
22	2.19%	3.29%	1.21%	1.82%
23	2.26%	3.39%	1.25%	1.88%
24	2.32%	3.48%	1.29%	1.93%
25	2.37%	3.55%	1.32%	1.98%
26	2.41%	3.61%	1.35%	2.03%
27	2.45%	3.67%	1.39%	2.08%
28	2.49%	3.74%	1.41%	2.12%
29	2.54%	3.81%	1.45%	2.17%
30	2.59%	3.88%	1.47%	2.20%
31	2.63%	3.94%	1.50%	2.25%
32	2.68%	4.02%	1.52%	2.28%
33	2.73%	4.09%	1.55%	2.32%
34	2.77%	4.16%	1.58%	2.37%
35	2.83%	4.24%	1.61%	2.42%
36	2.88%	4.32%	1.65%	2.47%
37	2.93%	4.40%	1.69%	2.53%
38	2.99%	4.48%	1.73%	2.59%
39	3.04%	4.56%	1.77%	2.65%
40	3.09%	4.64%	1.81%	2.72%
41	3.15%	4.73%	1.84%	2.76%
42	3.21%	4.81%	1.87%	2.80%
43	3.27%	4.90%	1.89%	2.83%
44	3.33%	5.00%	1.91%	2.86%
45	3.41%	5.11%	1.95%	2.93%
46	3.47%	5.21%	1.98%	2.97%
47	3.55%	5.32%	1.99%	2.99%
48	3.63%	5.45%	2.01%	3.01%
49	3.73%	5.59%	2.02%	3.03%
50	3.73%	5.60%	2.02%	3.03%
51	3.73%	5.60%	2.03%	3.04%
52	3.74%	5.61%	2.01%	3.02%
53	3.74%	5.61%	1.98%	2.97%
54+	3.75%	5.62%	1.94%	2.91%

¹ Some members and employers share equally the contributions required for post-retirement cost-of-living adjustments (COLA) in accordance with Government Code Section 31873. For other members, the employers pay all of the contributions required for post-retirement COLA.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**APPENDIX G
MEMBER CONTRIBUTION RATES**

**Safety Member Contribution Rates
Basic Half Rate (Government Code Section 31639.5)**

Entry Age	<u>Basic Rate</u>		<u>COLA Cost-Sharing Rate¹</u>	
	1st \$350/month	Over \$350	1st \$350/month	Over \$350
16	2.85%	4.28%	2.85%	4.27%
17	2.89%	4.34%	2.85%	4.27%
18	2.93%	4.39%	2.85%	4.27%
19	2.96%	4.44%	2.85%	4.27%
20	3.00%	4.50%	2.85%	4.27%
21	3.03%	4.55%	2.87%	4.31%
22	3.07%	4.61%	2.91%	4.36%
23	3.11%	4.66%	2.93%	4.40%
24	3.15%	4.72%	2.96%	4.44%
25	3.19%	4.78%	2.99%	4.49%
26	3.23%	4.84%	3.03%	4.54%
27	3.27%	4.90%	3.05%	4.58%
28	3.31%	4.96%	3.08%	4.62%
29	3.35%	5.02%	3.11%	4.66%
30	3.39%	5.08%	3.13%	4.69%
31	3.43%	5.14%	3.16%	4.74%
32	3.47%	5.21%	3.19%	4.78%
33	3.51%	5.27%	3.23%	4.84%
34	3.56%	5.34%	3.23%	4.84%
35	3.61%	5.41%	3.24%	4.86%
36	3.65%	5.48%	3.22%	4.83%
37	3.70%	5.55%	3.23%	4.85%
38	3.75%	5.63%	3.25%	4.88%
39	3.81%	5.71%	3.28%	4.92%
40	3.86%	5.79%	3.31%	4.96%
41	3.92%	5.88%	3.27%	4.90%
42	3.99%	5.98%	3.30%	4.95%
43	4.06%	6.09%	3.31%	4.96%
44	4.15%	6.22%	3.33%	5.00%
45	4.13%	6.20%	3.36%	5.04%
46	4.11%	6.17%	3.40%	5.10%
47	4.10%	6.15%	3.44%	5.16%
48	4.09%	6.13%	3.48%	5.22%
49+	4.07%	6.11%	3.51%	5.27%

1 Some members and employers share equally the contributions required for post-retirement cost-of-living adjustments (COLA) in accordance with Government Code Section 31873. For other members, the employers pay all of the contributions required for post-retirement COLA.

**SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JANUARY 1, 2015**

**APPENDIX G
MEMBER CONTRIBUTION RATES**

Safety Member Contribution Rates

**Basic Half Rate (Government Code Section 31639.5) + 33% , not greater than 1/2
Normal Cost**

Entry Age	<u>Basic Rate</u>		<u>COLA Cost-Sharing Rate¹</u>	
	1st \$350/month	Over \$350	1st \$350/month	Over \$350
16	3.79%	5.69%	2.85%	4.27%
17	3.85%	5.77%	2.85%	4.27%
18	3.89%	5.84%	2.85%	4.27%
19	3.94%	5.91%	2.85%	4.27%
20	3.99%	5.99%	2.85%	4.27%
21	4.03%	6.05%	2.87%	4.31%
22	4.09%	6.13%	2.91%	4.36%
23	4.13%	6.20%	2.93%	4.40%
24	4.19%	6.28%	2.96%	4.44%
25	4.24%	6.36%	3.00%	4.50%
26	4.29%	6.44%	3.03%	4.54%
27	4.35%	6.52%	3.05%	4.58%
28	4.40%	6.60%	3.09%	4.63%
29	4.45%	6.68%	3.11%	4.66%
30	4.51%	6.76%	3.13%	4.69%
31	4.56%	6.84%	3.16%	4.74%
32	4.62%	6.93%	3.19%	4.79%
33	4.67%	7.01%	3.23%	4.84%
34	4.73%	7.10%	3.23%	4.85%
35	4.80%	7.20%	3.24%	4.86%
36	4.86%	7.29%	3.22%	4.83%
37	4.92%	7.38%	3.23%	4.85%
38	4.99%	7.49%	3.25%	4.88%
39	5.06%	7.59%	3.28%	4.92%
40	5.13%	7.70%	3.31%	4.96%
41	5.21%	7.82%	3.27%	4.91%
42	5.30%	7.95%	3.30%	4.95%
43	5.40%	8.10%	3.31%	4.96%
44	5.51%	8.27%	3.34%	5.01%
45	5.50%	8.25%	3.36%	5.04%
46	5.47%	8.21%	3.40%	5.10%
47	5.45%	8.18%	3.44%	5.16%
48	5.43%	8.15%	3.48%	5.22%
49+	5.42%	8.13%	3.52%	5.28%

¹ Some members and employers share equally the contributions required for post-retirement cost-of-living adjustments (COLA) in accordance with Government Code Section 31873. For other members, the employers pay all of the contributions required for post-retirement COLA.