

**City of San José Police and Fire
Department Retirement Plan**

**June 30, 2014
Actuarial Valuation**

Produced by **Cheiron**

**January 8, 2015
2nd Revision**

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LETTER OF TRANSMITTAL

January 8, 2015

Board of Administration
City of San José Police and Fire Department Retirement Plan
1737 North 1st Street, Suite 580
San José, California 95112

Dear Members of the Board:

The purpose of this report is to present the June 30, 2014 actuarial valuation of the City of San José Police and Fire Department Retirement Plan (“Plan”). The report includes:

- Measures of funded status,
- Analysis of changes since the prior valuation,
- Development of City and member contribution rates for the fiscal year ending (FYE) June 30, 2016, and
- Historical and projected trends.

This report is for the use of the Board of Administration and its auditors in preparing financial reports in accordance with applicable laws and accounting requirements.

If you have any questions about the report or would like additional information, please let us know.

Sincerely,
Cheiron



William R. Hallmark, ASA, FCA, EA, MAAA
Consulting Actuary



Gene Kalwarski, FSA, FCA, EA, MAAA
Principal Consulting Actuary



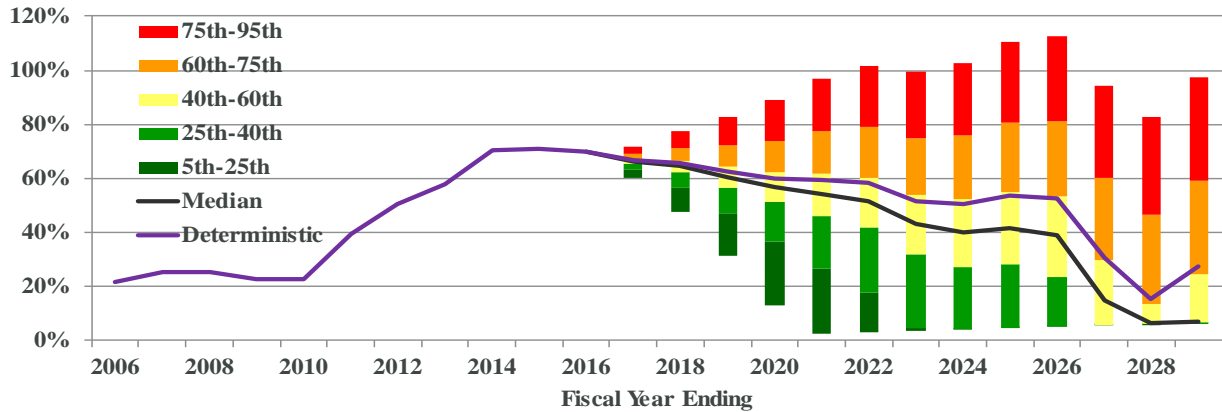
**CITY OF SAN JOSÉ POLICE AND FIRE DEPARTMENT RETIREMENT PLAN
JUNE 30, 2014 ACTUARIAL VALUATION**

**SECTION I
BOARD SUMMARY**

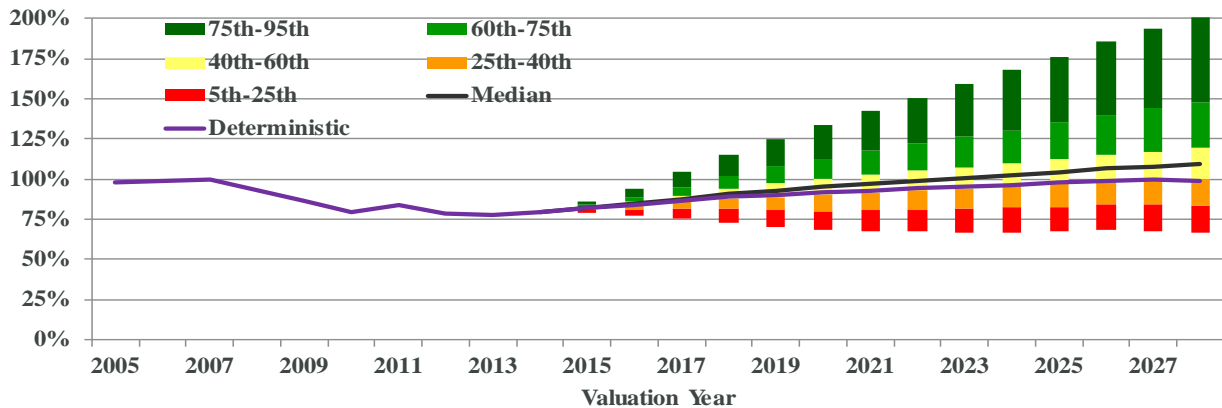
Highlights of this report are summarized in the tables and graphs below.

<u>Aggregate Contributions</u>			<u>Actuarial Liability</u>	<u>Funding Status</u>		
	<u>Fiscal Year Ending</u>			<u>Valuation Date</u>		
	2016	2015		6/30/2014	6/30/2013	
Member Rate	11.47%	11.48%		Actuarial Liability	\$ 3,814	\$ 3,578
City Rate	69.81%	70.91%		Market Value of Assets	3,168	2,790
City BOY Amount	\$ 131.1	\$ 128.8		UAL - Market Value	\$ 646	\$ 788
Normal Cost Rate	39.59%	39.97%		Funded Percentage	83.1%	78.0%
Interest on MV UAL	24.02%	29.89%		Actuarial Value of Assets	3,025	2,772
Additional UAL Rate	17.68%	12.53%		UAL - Actuarial Value	\$ 789	\$ 806
Total UAL Rate	41.70%	42.42%		Funded Percentage	79.3%	77.5%
Total Rate	81.29%	82.39%				
						<i>Amounts in Millions</i>

Aggregate City Contribution Rates



Aggregate Funded Status (AVA Basis)



Funded Status

This report measures assets and liabilities for funding purposes. Table I-1 below summarizes the actuarial liability, assets, and related ratios for each tier as of June 30, 2014. Tier 2 is very new, and consequently has very little impact on the measures for the total Plan.

CITY OF SAN JOSÉ POLICE AND FIRE DEPARTMENT RETIREMENT PLAN
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Table I-1 Summary of Funded Status and Related Ratios by Tier			
	Tier 1	Tier 2	Total
Actuarial Liability			
Actives	\$ 1,227,793	\$ 421	\$ 1,228,214
Deferred Vested	48,797	73	48,870
In Pay Status	<u>2,536,741</u>	<u>0</u>	<u>2,536,741</u>
Total	\$ 3,813,331	\$ 494	\$ 3,813,825
Market Value of Assets (MVA)	\$ 3,167,629	\$ 543	\$ 3,168,171
Actuarial Value of Assets (AVA)	\$ 3,024,574	\$ 527	\$ 3,025,101
Unfunded Actuarial Liability - MVA Basis	\$ 645,702	\$ (49)	\$ 645,654
Unfunded Actuarial Liability - AVA Basis	\$ 788,757	\$ (33)	\$ 788,724
Funding Ratio - MVA Basis	83.1%	109.8%	83.1%
Funding Ratio - AVA Basis	79.3%	106.7%	79.3%
Expected Payroll	\$ 179,322	\$ 8,867	\$ 188,189
Asset Leverage Ratio	17.7	0.1	16.8
Actuarial Liability Leverage Ratio	21.3	0.1	20.3
Interest on UAL - MVA Basis	\$ 45,199	\$ (3)	\$ 45,196
Interest Cost as Percent of Payroll	25.2%	0.0%	24.0%

Dollar amounts in thousands

The market value of assets is greater than the actuarial value, so if assumptions are met in the future, we expect a decrease in contribution rates as the deferred asset gains are recognized in the actuarial value of assets.

The asset leverage ratio of 16.8 means that if the Plan experiences a 10% loss on assets compared to the discount rate of 7.0%, the loss would be equivalent to 168% of payroll. Interest payments on such a loss would be approximately 11.75% of payroll. Interest payments on the current UAL are approximately 24% of payroll. As the Plan becomes better funded, the asset leverage ratio will increase, and if it was 100% funded, the leverage ratio would be 20.3. This leverage ratio is extremely high compared to other plans indicating that this plan is far more sensitive to investment gains and losses than other large public pension plans.

Table I-2 below compares the same measures for Tier 1 between June 30, 2014 and June 30, 2013. The actuarial liability increased 6.6% while the market value of assets increased 13.6%. As a result, the unfunded actuarial liability measured on the market value of assets decreased 18.1% from approximately \$788.5 million to \$645.7 million, and the funding ratio on an MVA basis increased from 78.0% to 83.1%.

**CITY OF SAN JOSÉ POLICE AND FIRE DEPARTMENT RETIREMENT PLAN
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Table I-2 Tier 1 Summary of Change in Funded Status and Related Ratios			
	June 30, 2014	June 30, 2013	% Change
Actuarial Liability			
Actives	\$ 1,227,793	\$ 1,125,303	9.1%
Terminated Vested	48,797	37,529	30.0%
In Pay Status	2,536,741	2,415,199	5.0%
Total	\$ 3,813,331	\$ 3,578,031	6.6%
Market Value of Assets (MVA)	\$ 3,167,629	\$ 2,789,524	13.6%
Actuarial Value of Assets (AVA)	\$ 3,024,574	\$ 2,771,924	9.1%
Unfunded Actuarial Liability - MVA Basis	\$ 645,702	\$ 788,507	-18.1%
Unfunded Actuarial Liability - AVA Basis	\$ 788,757	\$ 806,107	-2.2%
Funding Ratio - MVA Basis	83.1%	78.0%	6.5%
Funding Ratio - AVA Basis	79.3%	77.5%	2.4%
Expected Payroll	\$ 179,322	\$ 182,586	-1.8%
Asset Leverage Ratio	17.7	15.3	15.6%
Actuarial Liability Leverage Ratio	21.3	19.6	8.5%
Interest on UAL - MVA Basis	\$ 45,199	\$ 56,181	-19.5%
Interest Cost as Percent of Payroll	25.2%	30.8%	-18.1%

Dollar amounts in thousands

The increase in assets combined with the decrease in payroll for the closed Tier resulted in an increase in the asset leverage ratio from 15.3 to 17.7 indicating an increase in the sensitivity of Tier 1 to investment returns. The positive investment returns also reduced the interest cost on the UAL by approximately \$10 million or 5% of payroll.

Membership

As shown in Table I-3 below, total membership grew 0.9% from 2013 to 2014, but the changes within categories of membership were significant. Active membership decreased 3.1%, terminated vested membership increased 23.7%, and the number of members receiving benefits increased 1.8%. Total payroll increased by 1.9%, while the average pay per active member increased by 5.2%.

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**SECTION I
BOARD SUMMARY**

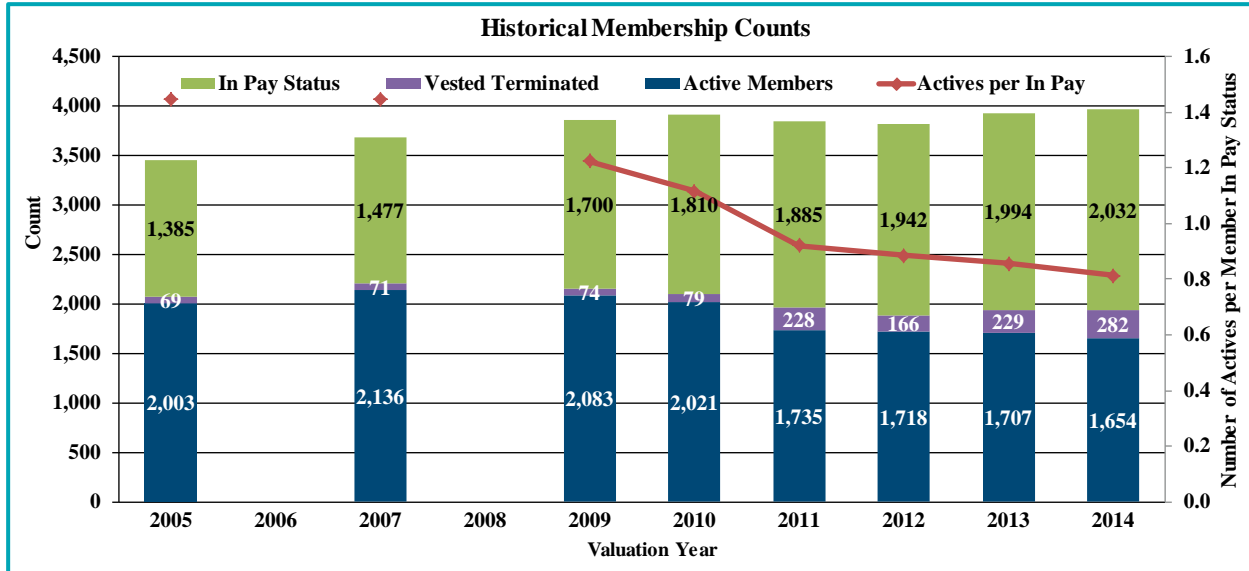
Table I-3 Total Membership			
	June 30, 2014	June 30, 2013	% Change
Active Members			
Tier 1			
Police	930	1,028	-9.5%
Fire	<u>657</u>	<u>679</u>	<u>-3.2%</u>
Total	1,587	1,707	-7.0%
Tier 2	<u>67</u>	<u>0</u>	<u>N/A</u>
Total Actives	1,654	1,707	-3.1%
Terminated Vested Members			
Tier 1	262	229	14.4%
Tier 2	<u>20</u>	<u>0</u>	<u>N/A</u>
Total Terminated Vesteds	282	229	23.1%
Members In Pay Status			
Service Retirees	880	874	0.7%
Beneficiaries	275	269	2.2%
Disabled Retirees	<u>877</u>	<u>851</u>	<u>3.1%</u>
Total In Pay Status	2,032	1,994	1.9%
Active Member Payroll			
Tier 1			
Police	\$ 107,413	\$ 109,783	-2.2%
Fire	<u>75,242</u>	<u>74,862</u>	<u>0.5%</u>
Total	\$ 182,655	\$ 184,645	-1.1%
Tier 2	<u>5,534</u>	<u>0</u>	<u>N/A</u>
Total	\$ 188,189	\$ 184,645	1.9%
Average Pay per Active Member			
Tier 1			
Police	\$ 115.5	\$ 106.8	8.2%
Fire	<u>114.5</u>	<u>110.3</u>	<u>3.9%</u>
Total	\$ 115.1	\$ 108.2	6.4%
Tier 2	<u>82.6</u>	<u>N/A</u>	<u>N/A</u>
Total	\$ 113.8	\$ 108.2	5.2%

Dollar amounts in thousands

As shown in the chart below, the number of active members has declined about 23% from 2,136 in 2007 to 1,654 in 2014. At the same time, the number of members in pay status has increased 37% from 1,477 in 2007 to 2,029 in 2014. As a result, the number of active members available to support each member in pay status has declined from approximately 1.4 in 2007 to 0.8 in 2014. This type of progression is to be expected for a maturing plan, but the impact of the recession accelerated the trend significantly. As there are fewer actives to support each retiree, contributions tend to become more volatile and sensitive to gains and losses.

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Contribution Rates

Tier 1 Member contribution rates are set equal to the sum of:

- A portion (3/11th) of the Entry Age Normal Cost Rate (excluding reciprocity),
- A historical share of the assumed administrative expenses, and
- A portion of the UAL Rate attributable to certain benefit improvements.

The City’s Tier 1 contribution rates are equal to the sum of:

- A portion (8/11th) of the Entry Age Normal Cost Rate (excluding reciprocity),
- The Reciprocity Rate which is the prefunding of the liability for reciprocal benefits with certain other California public pension plans,
- A historical share of the assumed administrative expenses, and
- The remaining portion of the UAL Rate.

Beginning with the June 30, 2011 valuation, any changes in methods or assumptions are amortized over a closed 20-year period, and all other portions of the UAL are amortized over a closed 16-year period from the valuation in which they are first recognized. All amortization schedules are a level percent of expected payroll with payroll assumed to increase 3.25% each year.

For Tier 2, members and the City share the total contribution rate equally.

Table I-4 below summarizes the contribution rates and City contribution amounts for the fiscal years ending in 2015 and 2016. Tier 1 rates have increased slightly from 2015 to 2016, reflecting the assumption changes offset by the investment gains. Tier 2 rates have increased slightly largely due to the assumption changes.

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BOARD SUMMARY**

Table I-4 Summary of Contributions						
	Fiscal Year Ending 2016			Fiscal Year Ending 2015		
	Police	Fire	Total	Police	Fire	Total
Tier 1						
Member Rate	11.26%	11.83%	11.50%	11.27%	11.64%	11.43%
City Rate	<u>73.01%</u>	<u>74.95%</u>	<u>73.82%</u>	<u>72.14%</u>	<u>73.49%</u>	<u>72.70%</u>
Total Rate	84.27%	86.78%	85.31%	83.41%	85.13%	84.13%
Projected Payroll	\$ 105,928	\$ 75,923	\$ 181,851	\$ 106,177	\$ 76,359	\$ 182,536
City Contribution Amounts						
Beginning of Year	74,758	55,011	129,769	74,047	54,247	128,294
Throughout the Year	\$ 77,330	\$ 56,904	\$ 134,234	\$ 76,595	\$ 56,114	\$ 132,709
Tier 2						
Member Rate	11.27%	11.16%	11.25%	10.80%	10.94%	10.80%
City Rate	<u>11.27%</u>	<u>11.17%</u>	<u>11.25%</u>	<u>10.80%</u>	<u>10.94%</u>	<u>10.80%</u>
Total Rate	22.54%	22.33%	22.50%	21.60%	21.88%	21.60%
Projected Payroll	\$ 10,690	\$ 1,764	\$ 12,454	\$ 5,802	\$ 0	\$ 5,802
City Contribution Amounts						
Beginning of Year	1,164	190	1,354	606	0	606
Throughout the Year	\$ 1,204	\$ 197	\$ 1,401	\$ 627	\$ 0	\$ 627

Dollar amounts in thousands

Table I-5 below shows sources for the change in the Tier 1 member and City contribution rates from the rates that were calculated in the prior report and the rates that were expected to be calculated in this report. Member contribution rates increased slightly due to the assumption changes. The City's contribution was expected to increase to \$128.9 million, but the combination of investment gains, demographic losses, a reduction in covered payroll, and assumption changes caused the City's contribution to increase to \$129.8 million.

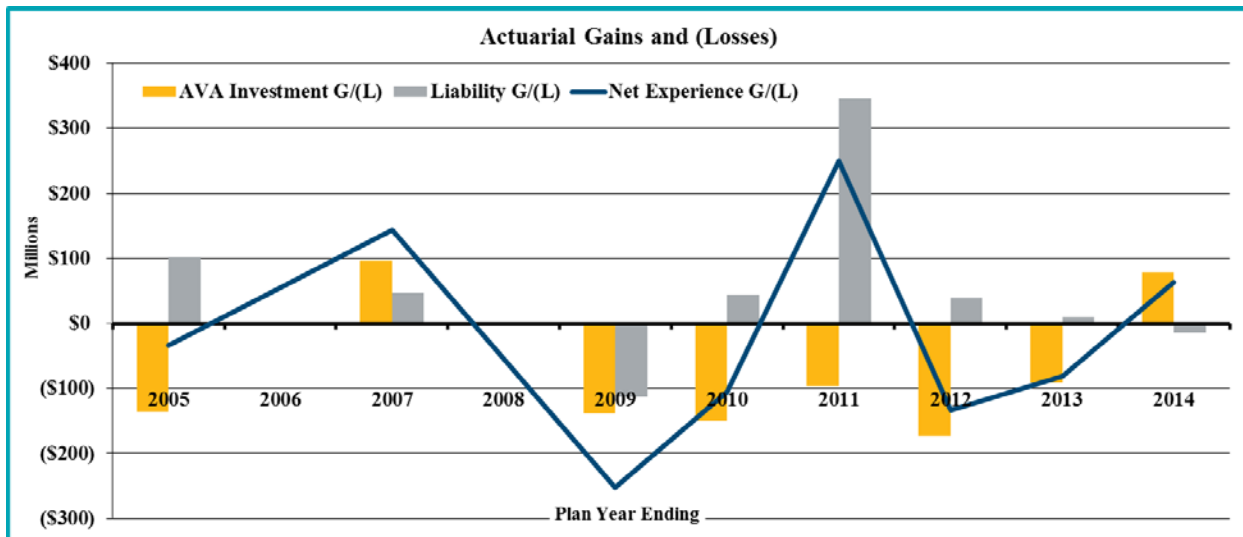
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Table I-5 Reconciliation of Changes in Tier 1 Contribution Rates and Amounts						
	Member Rate	City Normal Cost	City UAL Rate	City Total Rate	Projected Payroll	BOY City Amount
FYE 2015 Contribution	11.4%	31.4%	41.3%	72.7%	\$ 182,536	\$ 128,294
Expected FYE 2016 Contribution	11.4%	31.4%	40.9%	72.3%	184,659	128,945
Changes Due to:						
Investment experience	0.0%	0.0%	-3.5%	-3.5%	184,659	(6,244)
Demographic experience	-0.1%	-0.4%	1.8%	1.4%	184,659	2,567
Payroll Change	0.0%	0.0%	1.1%	1.1%	179,649	(1,500)
Assumption Change	<u>0.2%</u>	<u>0.5%</u>	<u>2.0%</u>	<u>2.5%</u>	181,851	<u>5,940</u>
Subtotal	0.1%	0.1%	1.4%	1.5%	181,851	\$ 763
FYE 2016 Contribution	11.5%	31.5%	42.3%	73.8%	\$ 181,851	\$ 129,769

Dollar amounts in thousands

The chart below puts the experience gains and losses in an historical perspective. It is worth noting that 2014 is the only year in the last 10 years other than 2007 in which there was an investment gain on the actuarial value of assets. The recent investment losses on the actuarial value of assets have been due to the five-year smoothing of the large losses experienced in 2009. This year is also the only year in the last 10 years other than 2009 in which there was an actuarial loss on the actuarial liability. The large gain in 2011 on the actuarial liability is due to the significant reductions in pay that year.



In Section IV of this report, more detail is provided on both the plan experience during the year and the impact of the assumption changes. In Section V of this report, more detail is provided on the development of the contribution rates.

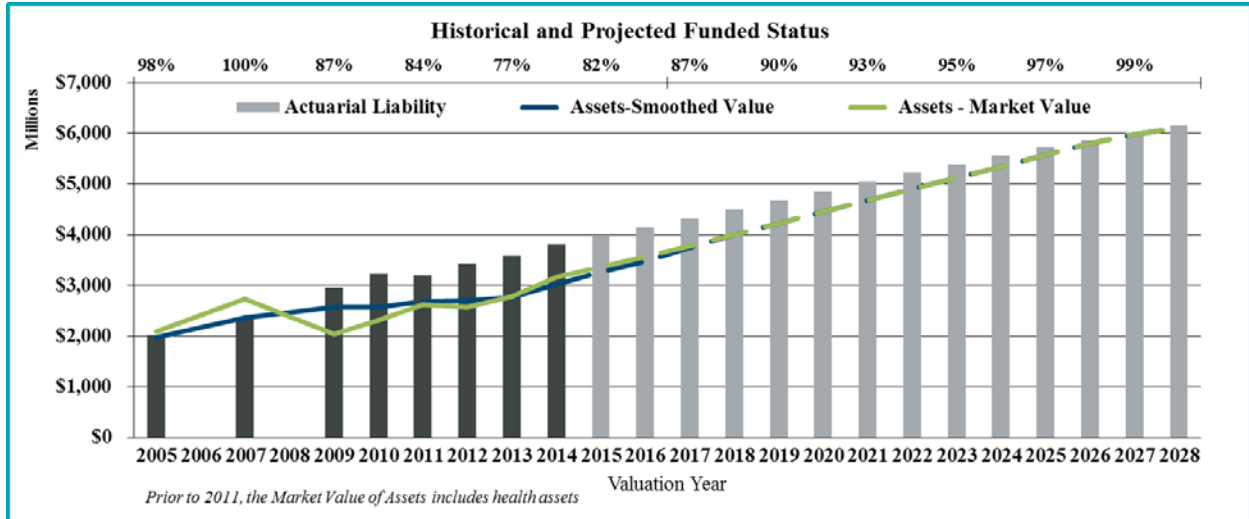
SECTION I
 BOARD SUMMARY

Historical and Projected Trends

Despite the fact that most of the attention given to the valuation is with respect to the most recently computed unfunded actuarial liability, funding ratio, and contribution rates, it is important to remember that each valuation is merely a snapshot of 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.

The chart below shows the historical and projected trends for assets (both market and smoothed actuarial) versus the actuarial liability, and also shows the progress of the funding ratios (based on the actuarial value of assets) since 2005. The historical actuarial liability is shown in dark gray while the projected actuarial liability is shown in a lighter gray. Historical assets are shown with solid lines while projected assets are shown with dashed lines. From 2007 to 2013, (with the exception of 2011), the funding ratio declined primarily because the plan experienced lower than expected investment returns on the actuarial value of assets and reduced its assumption of future investment returns. With the full recognition of the 2009 investment losses in the past, the funded status has begun to improve, and if all assumptions are met in the future, it is expected to reach 100% by 2029.

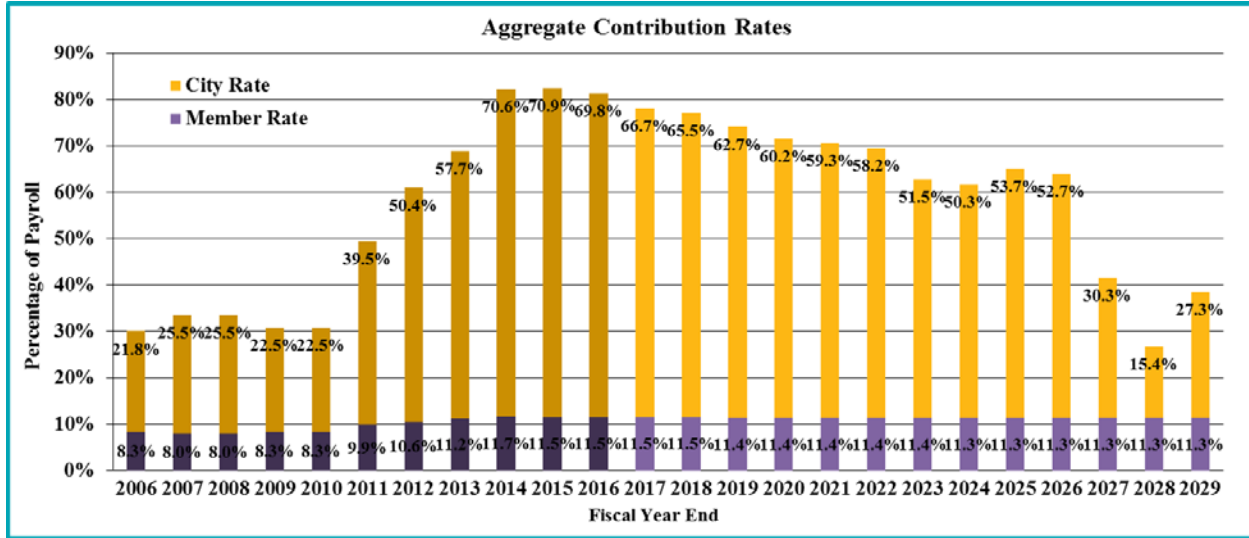
Assets and Actuarial Liability 2005-2028



The chart below shows the historical and projected trends for the Plan’s aggregate contribution rates from the fiscal year ending June 30, 2006 through June 30, 2029. Historical rates and rates calculated through the fiscal year ending June 30, 2016 are shown in a darker shade than the projected future contribution rates.

SECTION I
 BOARD SUMMARY

Employer and Member Contribution Rates for FYE 2006 – 2029



The large increases in the City’s contribution rate since FYE 2010 are largely due to the poor investment earnings during 2008 and 2009, but lower discount rates were also adopted effective for contribution rates in FYE 2012, 2013, 2014, 2015, and 2016. In aggregate, the discount rate over this period has been reduced from 8.0% to 7.0%.

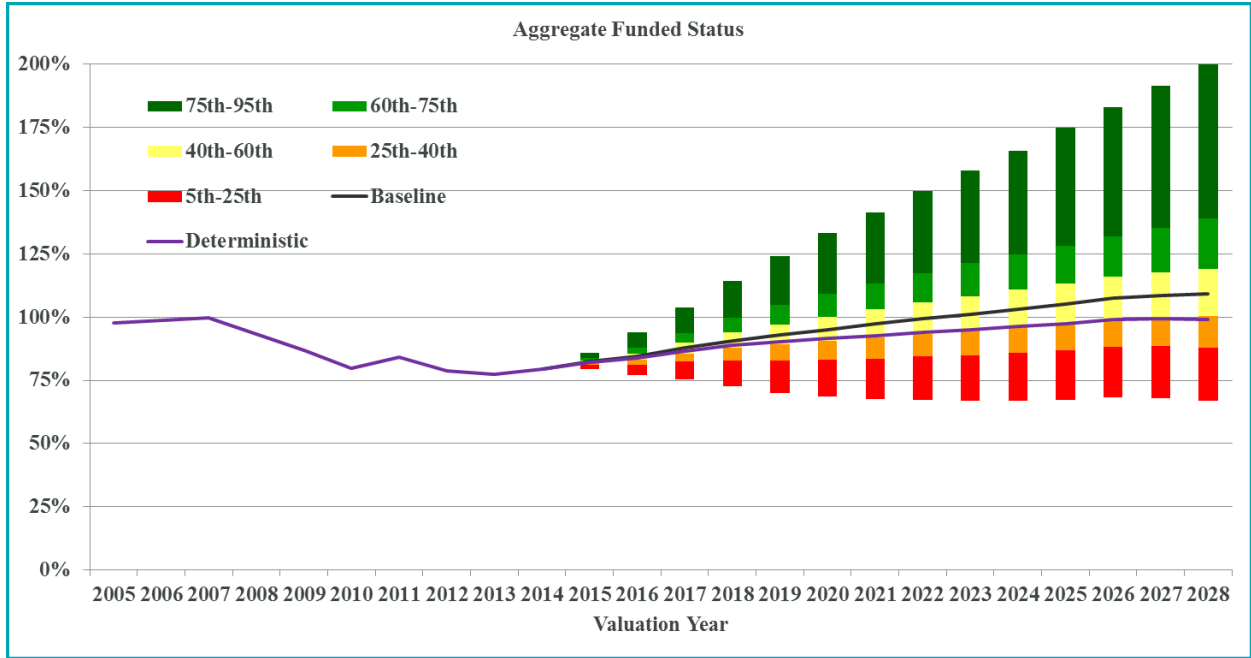
In the future, aggregate contribution rates are expected to decline gradually as recent investment gains are fully recognized and as Tier 2, with its lower normal cost, become a larger portion of the Plan. After FYE 2026, the City’s contribution rate is expected to decrease significantly as the first portion of the amortization of the 2009 investment losses is completed.

The projections shown above assume all assumptions are met each and every year in the future. We know that will not be the case. The charts below use a stochastic projection of future contribution rates based on NEPC’s long-term expected investment return of 7.97% and standard deviation of 12.48%.

The chart below shows the projected funded status of the Plan, including both Tier 1 and Tier 2 for Police and Fire. For each year in the projection, the results of the 10,000 trials are rank ordered and the percentile ranges of the results are shown on the chart. The black line represents the median result and the purple line represents the historical funded status and the projected funded status based on all actuarial valuation assumptions being met. Since the valuation uses a discount rate of 7.00%, which is lower than NEPC’s expected rate of return, the purple line projects a lower funded status than the median result.

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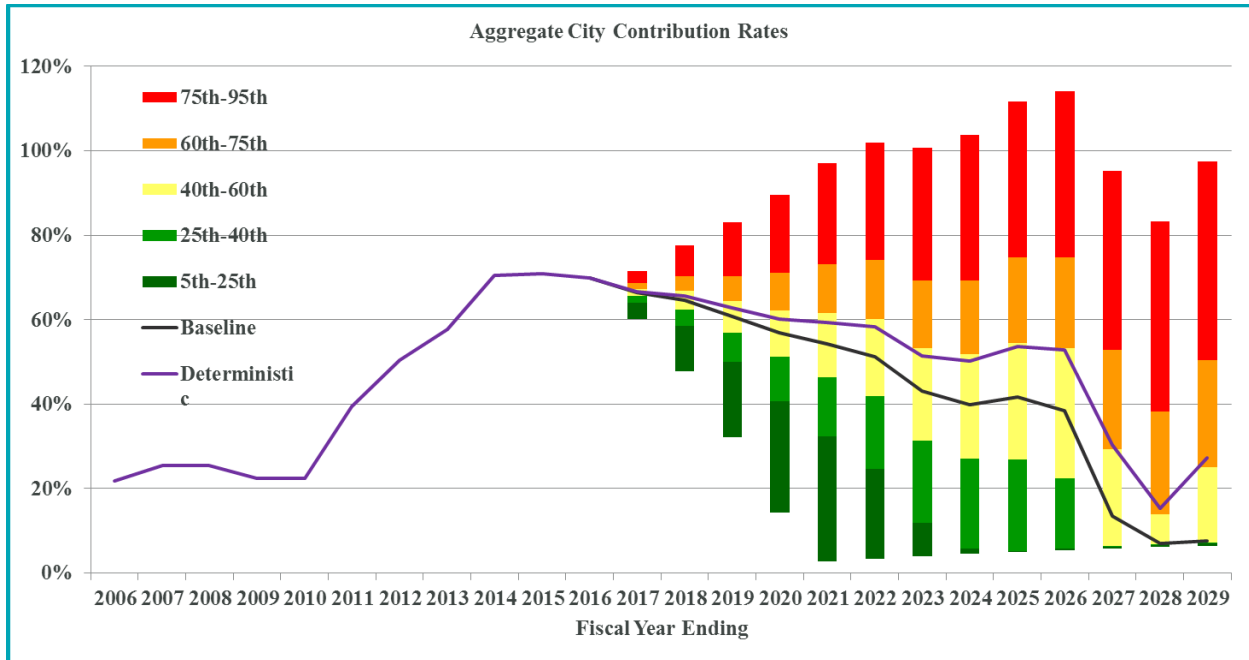


The projections of aggregate funded status assume that there are no changes to the benefits provided under the plan and that the City and members make whatever contributions are required by the contribution policy. As a result, in the best case scenarios, the funded status approaches 200% while in the worst case scenarios, the funded status does not go below 65%.

The chart below shows the historical and projected aggregate City contribution rates for the same 10,000 trials. Again, the purple line is based on a 7.00% discount rate which results in expected contribution rates greater than the median using NEPC's expected return. The overall trend is for lower contribution rates in the future, but the range of potential contribution rates is enormous.

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In the worst scenarios, the City’s aggregate contribution rate can exceed 110% of payroll. In the best scenarios, the City’s Tier 1 rate can drop to 0%, leaving a relatively small Tier 2 rate for the City. The volatility of the asset allocation combined with the asset leverage ratio results in a very wide range of results. For the fiscal year ending 2021 (based on the 2019 valuation), the range from the 5th to 95th percentile for City’s aggregate contribution rate is from 2.5% of pay to 96.9% of pay. The Board may want to assess whether such a wide range of projected contribution rates that could develop over a relatively short period is affordable.

**CITY OF SAN JOSÉ POLICE AND FIRE DEPARTMENT RETIREMENT PLAN
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**SECTION II
CERTIFICATION**

The purpose of this report is to present the June 30, 2014 actuarial valuation of the City of San José Police and Fire Department Retirement Plan (“Plan”). This report is for the use of the Plan and the City of San José.

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

The discount rate and wage inflation assumptions in this report were adopted by the Board of Administration with our input at the December 5, 2014 Board meeting. All other assumptions were adopted at the November 7, 2013 Board meeting based on recommendations from our experience study covering plan experience during the period from July 1, 2007 through June 30, 2013.

The funding ratios in this report are for the purpose of establishing contribution rates. These measures are not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan’s benefit obligations.

Future actuarial measurements may differ significantly from the current measurements due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and, changes in plan provisions or applicable law.

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 that are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. The schedules provided for financial reporting purposes have been prepared in accordance with our understanding of generally accepted accounting principles as promulgated by the GASB. 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.

This report was prepared for the Plan for the purposes described herein. This report is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

William R. Hallmark, ASA, FCA, EA, MAAA
Consulting Actuary

Gene Kalwarski, FSA, FCA, EA, MAAA
Principal Consulting Actuary

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**SECTION III
ASSETS**

The Plan uses and discloses two different asset measurements which are presented in this section of the report: market value and actuarial value of assets. The market value represents, as of the valuation date, the value of the assets if they were liquidated on that date. The actuarial value of assets is a value that smoothes annual investment returns over multiple years to reduce the impact of short-term investment volatility on contribution rates. The market value of assets is used primarily for reporting and disclosure, and the actuarial value of assets is used primarily to determine contribution rates.

This section shows the changes in the market value of assets and develops the actuarial value of assets.

Statement of Changes in the Market Value of Assets

Table III-1 shows the changes in the market value of assets for the current and prior fiscal years for each tier.

	Table III-1					
	Change in Market Value of Assets					
	Fiscal Year Ending 2014			Fiscal Year Ending 2013		
	Tier 1	Tier 2	Total	Tier 1	Tier 2	Total
Beginning Market Value	\$ 2,789,524	\$ 0	\$ 2,789,524	\$ 2,578,929	\$ 0	\$ 2,578,929
Contributions						
Member	20,853	262	21,115	20,228	0	20,228
City	123,321	262	123,583	105,234	0	105,234
Total	\$ 144,174	\$ 524	\$ 144,698	\$ 125,462	\$ 0	\$ 125,462
Net Investment Earnings	404,941	37	404,979	248,258	0	248,258
Benefit Payments	167,393	5	167,398	159,702	0	159,702
Administrative Expenses	3,617	14	3,631	3,422	0	3,422
Market Value, End of Year	\$ 3,167,629	\$ 543	\$ 3,168,171	\$ 2,789,524	\$ 0	\$ 2,789,524
Estimated Rate of Return	14.3%	14.7%	14.3%	9.5%		9.5%

Dollar amounts in thousands

The net investment earnings for the year ended June 30, 2014 represent approximately a 14.3% return on the market value of assets compared to an assumed return of 7.125%. For the year ended June 30, 2013, the net investment return was approximately 9.5% (7.25% was assumed).

**SECTION III
ASSETS**

Actuarial Value of Assets

To determine on-going contribution amounts, most pension funds use an actuarial value of assets that smoothes year-to-year market value returns in order to reduce the volatility of contribution rates.

The actuarial value of assets is calculated by recognizing the deviation of actual investment returns compared to the expected return (7.125% for 2013-14, 7.25% for 2012-13, 7.50% for 2011-12, 7.75% for 2010-11, 8.00% for prior years) over a five-year period. The dollar amount of the expected return on the market value of assets is determined using the actual contributions, benefit payments and administrative expenses during the year. Any difference between the expected return and the actual net investment earnings is considered a gain or loss. Table III-2 below shows the calculation of the actuarial value of assets separately for Tier 1 and Tier 2. For each of the last four years, it shows the actual earnings, the expected earnings, the gain or loss and the portion of the gain or loss that is not recognized in the current actuarial value of assets. These deferred amounts will be recognized in future years.

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**SECTION III
ASSETS**

Table III-2 Development of Actuarial Value of Assets						
	Tier 1			Police Tier 2		
	Retirement	COLA	Total	Retirement	COLA	Total
Market Value of Assets (MVA)	\$ 2,036,850	\$ 1,130,778	\$ 3,167,629	\$ 466	\$ 76	\$ 543
<u>FYE 2014</u>						
Actual Earnings	\$ 261,314	\$ 143,628	\$ 404,941	\$ 32	\$ 5	\$ 37
Expected Earnings	130,576	71,707	202,283	15	2	18
Investment Gain or (Loss)	130,738	71,921	202,658	17	3	20
Deferred (80%)	\$ 104,590	\$ 57,537	\$ 162,127	\$ 13	\$ 2	\$ 16
<u>FYE 2013</u>						
Actual Earnings	\$ 162,995	\$ 85,263	\$ 248,258	\$ 0	\$ 0	\$ 0
Expected Earnings	126,296	66,639	192,935	0	0	0
Investment Gain or (Loss)	36,699	18,624	55,323	0	0	0
Deferred (60%)	\$ 22,019	\$ 11,175	\$ 33,194	\$ 0	\$ 0	\$ 0
<u>FYE 2012</u>						
Actual Earnings	\$ (22,427)	\$ (11,449)	\$ (33,877)	\$ 0	\$ 0	\$ 0
Expected Earnings	136,054	68,652	204,706	0	0	0
Investment Gain or (Loss)	(158,481)	(80,101)	(238,582)	0	0	0
Deferred (40%)	\$ (63,393)	\$ (32,040)	\$ (95,433)	\$ 0	\$ 0	\$ 0
<u>FYE 2011</u>						
Actual Earnings	\$ 265,595	\$ 127,655	\$ 393,250	\$ 0	\$ 0	\$ 0
Expected Earnings	119,275	58,140	177,415	0	0	0
Investment Gain or (Loss)	146,320	69,515	215,835	0	0	0
Deferred (20%)	\$ 29,264	\$ 13,903	\$ 43,167	\$ 0	\$ 0	\$ 0
Total Deferred Gain or (Loss)	\$ 92,481	\$ 50,574	\$ 143,055	\$ 13	\$ 2	\$ 16
Preliminary Actuarial Value of Assets	\$ 1,944,369	\$ 1,080,205	\$ 3,024,574	\$ 453	\$ 74	\$ 527
Minimum (80% of MVA)	\$ 1,629,480	\$ 904,623	\$ 2,534,103	\$ 373	\$ 61	\$ 434
Maximum (120% of MVA)	\$ 2,444,221	\$ 1,356,934	\$ 3,801,155	\$ 559	\$ 92	\$ 651
Actuarial Value of Assets	\$ 1,944,369	\$ 1,080,205	\$ 3,024,574	\$ 453	\$ 74	\$ 527
Ratio of Actuarial to Market	95.5%	95.5%	95.5%	97.1%	97.2%	97.1%
Estimated Rate of Return	10.0%	9.7%	9.9%	8.6%	8.5%	8.6%

Dollar amounts in thousands

On the basis of the smoothed actuarial value of assets, the return for the year ending June 30, 2014 was approximately 9.9%, more than the assumed return of 7.125%, but less than the return on the market value of assets.

**SECTION IV
MEASURES OF LIABILITY**

This section presents detailed information on liability measures for the Plan for funding purposes, including:

- Present value of future benefits,
- Normal cost
- Actuarial liability, and
- Analysis of changes in the unfunded actuarial liability during the year.

Present Value of Future Benefits

The present value of future benefits represents the expected amount of money needed today to fully pay off all benefits both earned as of the valuation date and expected to be earned in the future by current plan members under the current plan provisions. Table IV-1 below shows the present value of future benefits as of June 30, 2014 and June 30, 2013 separately by Tier for Police and Fire. Police Tier 2 members entered the plan beginning August 3, 2013. There are no Fire Tier 2 members as of June 30, 2014.

Table IV-1 Present Value of Future Benefits						
	Police			Fire		
	6/30/2014	6/30/2013	% Change	6/30/2014	6/30/2013	% Change
Tier 1						
Actives	\$ 1,133,390	\$ 1,101,856	2.9%	\$ 791,297	\$ 753,050	5.1%
Terminated Vested	41,417	32,428	27.7%	7,379	5,100	44.7%
In Pay Status	<u>1,570,682</u>	<u>1,479,313</u>	<u>6.2%</u>	<u>966,059</u>	<u>935,886</u>	<u>3.2%</u>
Total Tier 1	\$ 2,745,489	\$ 2,613,597	5.0%	\$ 1,764,735	\$ 1,694,036	4.2%
Tier 2						
Actives	\$ 19,543	\$ 0	N/A	\$ 0	\$ 0	N/A
Terminated Vested	73	0	N/A	0	0	N/A
In Pay Status	<u>0</u>	<u>0</u>	<u>N/A</u>	<u>0</u>	<u>0</u>	<u>N/A</u>
Total Tier 2	\$ 19,617	\$ 0	N/A	\$ 0	\$ 0	N/A
Total	\$ 2,765,106	\$ 2,613,597	5.8%	\$ 1,764,735	\$ 1,694,036	4.2%

Dollar amounts in thousands

Normal Cost

Under the Entry Age (EA) actuarial cost method, the present value of future benefits for each individual is spread over the individual's expected working career under the Plan as a level percentage of the individual's expected pay. The normal cost rate is determined by taking the value, as of entry age into the Plan, of each member's projected future benefits divided by the value, also at entry age, of the each member's expected future salary. The normal cost rate is multiplied by current salary to determine each member's normal cost. The normal cost of the Plan is the sum of the normal costs for each individual in the Plan. The normal cost represents the expected amount of money needed to fund the benefits attributed to the next year of service under the Entry Age actuarial cost method. In addition, administrative expenses are added to the

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MEASURES OF LIABILITY**

EA normal cost rate to get the total normal cost rate. Table IV-2 below shows the EA normal cost and Total normal cost rates as of June 30, 2014 and June 30, 2013 separately by Tier for Police and Fire. There are no Fire Tier 2 members as of June 30, 2014. The rate for Fire Tier 2 is based on a hypothetical set of data consisting of Fire Tier 1 members hired in the last ten years (See footnote to Table A-1 for a summary of the hypothetical data).

Table IV-2 Entry Age Normal Cost By Group							
	Police			Fire			
	6/30/2014	6/30/2013	Change	6/30/2014	6/30/2013	Change	
Tier 1							
Retirement	\$ 26,444	\$ 25,489	3.7%	\$ 17,689	\$ 16,652	6.2%	
Termination	3,139	3,354	-6.4%	1,155	1,181	-2.2%	
Death	492	634	-22.4%	408	474	-14.1%	
Disability	10,339	11,966	-13.6%	10,769	11,154	-3.5%	
Reciprocity	<u>524</u>	<u>591</u>	<u>-11.4%</u>	<u>175</u>	<u>186</u>	<u>-6.1%</u>	
Total Tier 1 Normal Cost	\$ 40,938	\$ 42,034	-2.6%	\$ 30,195	\$ 29,648	1.8%	
Expected Payroll	\$ 101,748	\$ 104,080	-2.2%	\$ 71,609	\$ 71,329	0.4%	
Normal Cost Rate	40.23%	40.39%	-0.16%	42.16%	41.57%	0.59%	
Administrative Expense Rate	<u>1.80%</u>	<u>1.80%</u>	<u>0.00%</u>	<u>1.80%</u>	<u>1.80%</u>	<u>0.00%</u>	
Total Normal Cost Rate	42.03%	42.19%	-0.16%	43.96%	43.37%	0.59%	
Tier 2							
Retirement	\$ 396	N/A	N/A	N/A	N/A	N/A	
Termination	114	N/A	N/A	N/A	N/A	N/A	
Death	26	N/A	N/A	N/A	N/A	N/A	
Disability	524	N/A	N/A	N/A	N/A	N/A	
Reciprocity	<u>0</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	
Total Tier 2 Normal Cost	\$ 1,060	N/A	N/A	N/A	N/A	N/A	
Expected Payroll	\$ 5,102	N/A	N/A	N/A	N/A	N/A	
Normal Cost Rate	20.76%	19.80%	0.96%	20.53%	18.28%	2.25%	
Administrative Expense Rate	<u>1.80%</u>	<u>1.80%</u>	<u>0.00%</u>	<u>1.80%</u>	<u>1.80%</u>	<u>0.00%</u>	
Total Normal Cost Rate	22.56%	21.60%	0.96%	22.33%	20.08%	2.25%	

Dollar amounts in thousands

Table IV-3 on the following page shows the impact of the assumption changes as of June 30, 2014 on the normal cost rate by Tier for Police and Fire members.

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MEASURES OF LIABILITY**

Table IV-3 Impact of Assumption Changes on Normal Cost						
	Police			Fire		
	New	Old	Change	New	Old	Change
Tier 1						
Normal Cost Rate	40.23%	39.54%	0.69%	42.16%	41.53%	0.63%
Administrative Expense Rate	<u>1.80%</u>	<u>1.80%</u>	<u>0.00%</u>	<u>1.80%</u>	<u>1.80%</u>	<u>0.00%</u>
Total Normal Cost Rate	42.03%	41.34%	0.69%	43.96%	43.33%	0.63%
Tier 2						
Normal Cost Rate	20.76%	20.74%	0.02%	20.53%	20.38%	0.15%
Administrative Expense Rate	<u>1.80%</u>	<u>1.80%</u>	<u>0.00%</u>	<u>1.80%</u>	<u>1.80%</u>	<u>0.00%</u>
Total Normal Cost Rate	22.56%	22.54%	0.02%	22.33%	22.18%	0.15%

Table IV-4 below shows the breakdown of the normal cost rate between the Retirement and COLA funds.

Table IV-4 Normal Cost Rate Breakdown						
	Police			Fire		
	Retirement	COLA	Total	Retirement	COLA	Total
Tier 1						
Normal Cost Rate	28.22%	12.01%	40.23%	29.71%	12.45%	42.16%
Administrative Expense Rate	<u>1.26%</u>	<u>0.54%</u>	<u>1.80%</u>	<u>1.27%</u>	<u>0.53%</u>	<u>1.80%</u>
Total Normal Cost Rate	29.48%	12.55%	42.03%	30.98%	12.98%	43.96%
Tier 2						
Normal Cost Rate	17.91%	2.85%	20.76%	17.67%	2.86%	20.53%
Administrative Expense Rate	<u>1.55%</u>	<u>0.25%</u>	<u>1.80%</u>	<u>1.55%</u>	<u>0.25%</u>	<u>1.80%</u>
Total Normal Cost Rate	19.46%	3.10%	22.56%	19.22%	3.11%	22.33%

Actuarial Liability

The actuarial liability represents the expected amount of money needed today to pay for benefits attributed to service prior to the valuation date under the EA method. It is the difference between the present value of future benefits and the present value of future normal costs. Table IV-5 below shows the actuarial liability as of June 30, 2014 and June 30, 2013 separately by Tier for Police and Fire. There are no Fire Tier 2 members as of June 30, 2014, so they have no actuarial liability.

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Table IV-5 Actuarial Liability						
	Police			Fire		
	6/30/2014	6/30/2013	% Change	6/30/2014	6/30/2013	% Change
Tier 1						
Actives						
Retirement	\$ 614,817	\$ 567,989	8.2%	\$ 316,519	\$ 287,573	10.1%
Termination	15,012	13,412	11.9%	5,411	4,562	18.6%
Death	3,512	2,620	34.0%	2,698	2,002	34.8%
Disability	<u>134,095</u>	<u>123,947</u>	<u>8.2%</u>	<u>135,729</u>	<u>123,197</u>	<u>10.2%</u>
Total Actives	\$ 767,437	\$ 707,969	8.4%	\$ 460,357	\$ 417,334	10.3%
Terminated Vested	\$ 41,417	\$ 32,428	27.7%	\$ 7,379	\$ 5,100	44.7%
In Pay Status						
Service Retirees	\$ 1,020,454	\$ 988,629	3.2%	\$ 389,200	\$ 380,350	2.3%
Beneficiaries	54,289	51,370	5.7%	60,422	55,200	9.5%
Disabled Retirees	<u>495,939</u>	<u>439,314</u>	<u>12.9%</u>	<u>516,437</u>	<u>500,336</u>	<u>3.2%</u>
Total In Pay Status	\$ 1,570,682	\$ 1,479,313	6.2%	\$ 966,059	\$ 935,886	3.2%
Tier 1 Actuarial Liability	\$ 2,379,536	\$ 2,219,711	7.2%	\$ 1,433,795	\$ 1,358,320	5.6%
Tier 2						
Actives						
Retirement	\$ 165	N/A	N/A	0	N/A	N/A
Termination	78	N/A	N/A	0	N/A	N/A
Death	7	N/A	N/A	0	N/A	N/A
Disability	<u>170</u>	<u>N/A</u>	<u>N/A</u>	<u>0</u>	<u>N/A</u>	<u>N/A</u>
Total Actives	\$ 421	N/A	N/A	0	N/A	N/A
Terminated Vested	\$ 73	N/A	N/A	0	N/A	N/A
Tier 2 Actuarial Liability	\$ 494	N/A	N/A	0	N/A	N/A
Total Actuarial Liability	\$ 2,380,030	\$ 2,219,711	7.2%	\$ 1,433,795	\$ 1,358,320	5.6%

Dollar amounts in thousands

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Table IV-6 below shows the impact of the assumption changes on the actuarial liability by Tier for Police and Fire as of June 30, 2014.

Table IV-6 Impact of Assumption Changes on Actuarial Liability						
	Police			Fire		
	New	Old	% Change	New	Old	% Change
Tier 1						
Actives	\$ 767,437	\$ 753,448	1.9%	\$ 460,357	\$ 453,289	1.6%
Terminated Vested	41,417	40,267	2.9%	7,379	7,181	2.8%
In Pay Status	<u>1,570,682</u>	<u>1,549,293</u>	<u>1.4%</u>	<u>966,059</u>	<u>954,061</u>	<u>1.3%</u>
Tier 1 Total	\$ 2,379,536	\$ 2,343,009	1.6%	\$ 1,433,795	\$ 1,414,531	1.4%
Tier 2						
Actives	\$ 421	\$ 426	-1.1%	\$ 0	\$ 0	N/A
Terminated Vested	<u>73</u>	<u>73</u>	<u>0.0%</u>	<u>0</u>	<u>0</u>	<u>N/A</u>
Tier 2 Total	\$ 494	\$ 499	-0.9%	\$ 0	\$ 0	N/A
Plan Total	\$ 2,380,030	\$ 2,343,507	1.6%	\$ 1,433,795	\$ 1,414,531	1.4%

Dollar amounts in thousands

Table IV-7 below shows the breakdown of the Actuarial Liability as of June 30, 2014 between the Retirement and COLA funds.

Table IV-7 Actuarial Liability Breakdown						
	Police			Fire		
	Retirement	COLA	Total	Retirement	COLA	Total
Tier 1						
Actives	\$ 534,333	\$ 233,103	\$ 767,437	\$ 324,389	\$ 135,968	\$ 460,357
Terminated Vested	26,718	14,699	41,417	4,639	2,741	7,379
In Pay Status	<u>876,595</u>	<u>694,087</u>	<u>1,570,682</u>	<u>536,668</u>	<u>429,391</u>	<u>966,059</u>
Tier 1 Total	\$ 1,437,646	\$ 941,890	\$ 2,379,536	\$ 865,695	\$ 568,100	\$ 1,433,795
Tier 2						
Actives	\$ 368	\$ 53	\$ 421	\$ 0	\$ 0	\$ 0
Terminated Vested	<u>73</u>	<u>0</u>	<u>73</u>	<u>0</u>	<u>0</u>	<u>0</u>
Tier 2 Total	\$ 440	\$ 54	\$ 494	\$ 0	\$ 0	\$ 0
Plan Total	\$ 1,438,087	\$ 941,943	\$ 2,380,030	\$ 865,695	\$ 568,100	\$ 1,433,795

Dollar amounts in thousands

Analysis of Change in Unfunded Actuarial Liability (UAL)

The UAL of any retirement plan is expected to change at each subsequent valuation for a variety of reasons. In each valuation, we report on those elements of change in the UAL that have particular significance or could potentially affect the long-term financial outlook of a retirement plan. Table IV-8 below develops the expected UAL by Tier and identifies the primary sources for changes in the UAL since the last valuation.

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Table IV-8 Development of Experience Gain or (Loss)			
	Tier 1	Tier 2	Total
Unfunded actuarial liability, 6/30/2013	\$ 806,107	\$ 0	\$ 806,107
Interest	57,435	0	57,435
Expected unfunded actuarial liability payment with interest	(66,821)	0	(66,821)
Change in assumptions	55,791	(5)	55,787
Expected unfunded actuarial liability, 6/30/2014	\$ 852,513	\$ (5)	\$ 852,508
Actual unfunded actuarial liability	788,757	(33)	788,724
Experience Gain or (Loss)	\$ 63,756	\$ 28	\$ 63,784
Portion due to investment experience	\$ 78,458	\$ 4	\$ 78,462
Portion due to salary experience	(11,347)	0	(11,347)
Portion due to retirement experience	(9,203)	0	(9,203)
Portion due to other experience	5,847	24	5,871
Total	\$ 63,756	\$ 28	\$ 63,784

Dollar amounts in thousands

There were no Tier 2 members in the June 30, 2013 data. The experience gain for Tier 2 is attributable to the different demographic characteristics and turnover of the actual Police Tier 2 hires compared to what had been expected based on the hypothetical data used to set the Police Tier 2 normal cost rate.

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**SECTION V
CONTRIBUTIONS**

Under the contribution allocation procedure employed by the Plan, there are two components to the total contribution: the normal cost, including assumed administrative expenses, and the unfunded actuarial liability contribution. The normal cost rate was developed in Section IV. This section develops the UAL contribution rate and divides the contributions between the members and the City.

Table V-1 UAL Amortization Bases						
Source	Date	Outstanding Balance		Remaining Period	Amortization Payment	
		Retirement	COLA		Retirement	COLA
Tier 1 - Members						
Ben Improvement (All)	6/30/1996	\$ (982)	\$ 1,497	3.0	\$ (363)	\$ 553
Rate Increase Delay (Police)	12/17/2006	135	52	7.5	22	8
Total Tier 1 Members		\$ (846)	\$ 1,549		\$ (341)	\$ 561
Tier 1 - City						
UAAL	6/30/2003	\$ 3,307	\$ (5,043)	3.0	\$ 1,222	\$ (1,863)
Experience Loss	6/30/2005	(64,716)	98,682	7.0	(10,982)	16,746
Ben Improvement (Police)	6/30/2005	20,056	7,766	7.0	3,403	1,318
Ben Improvement (Fire)	6/30/2007	20,356	7,738	9.0	2,779	1,057
Experience Gain	6/30/2007	(80,928)	(36,326)	9.0	(11,050)	(4,960)
Assumption Change	6/30/2007	17,737	9,523	9.0	2,422	1,300
Experience Loss	6/30/2009	142,953	75,843	11.0	16,516	8,762
Assumption Change	6/30/2009	84,048	46,544	11.0	9,710	5,377
Experience Loss	6/30/2010	95,607	51,626	12.0	10,295	5,559
Assumption Change	6/30/2010	61,408	34,995	12.0	6,612	3,768
Experience Gain	6/30/2011	(144,689)	(91,536)	13.0	(14,621)	(9,250)
Assumption Change	6/30/2011	22,718	32,340	17.0	1,873	2,667
Experience Loss	6/30/2012	83,875	45,153	14.0	8,001	4,307
SRBR Elimination	6/30/2012	(31,467)	0	14.0	(3,002)	0
Assumption Change	6/30/2012	57,866	49,290	18.0	4,579	3,901
Experience Loss	6/30/2013	50,565	29,652	15.0	4,576	2,683
Assumption Change	6/30/2013	6,510	21,678	19.0	496	1,651
Experience Gain	6/30/2014	(45,241)	(18,515)	16.0	(3,901)	(1,596)
Assumption Change	6/30/2014	28,334	27,458	20.0	2,083	2,019
7/1 UAL Payment		31,521	41,368			
Total Tier 1 City		\$ 359,819	\$ 428,235		\$ 31,012	\$ 43,445
Total Tier 1		\$ 358,973	\$ 429,784		\$ 30,671	\$ 44,007
Tier 2 - Members and City						
Experience Gain	6/30/2014	\$ (8)	\$ (20)	16.0	\$ (1)	\$ (2)
Assumption Change	6/30/2014	(4)	(0)	20.0	(0)	(0)
7/1 UAL Payment		0	0		0	0
Total Tier 2		\$ (12)	\$ (21)		\$ (1)	\$ (2)

Dollar amounts in thousands

Table V-1 above shows the outstanding balance, remaining period and amortization payments for each component of the UAL by Tier as of June 30, 2014. Each component is amortized from the valuation date in which it was first recognized. For Tier 1, the City is responsible for all components except the 1996 benefit improvement and the contribution rate increase delay for Police in 2006. For Tier 2, all components of the UAL are split evenly between the members and

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the City. Table V-2 below shows the division of the UAL payments between Police and Fire and between the members and the City.

Table V-2 UAL Amortization Bases						
Source	Police			Fire		
	Retirement	COLA	Total	Retirement	COLA	Total
Tier 1 - Members						
1996 Ben Improvement (All)	\$ (211)	\$ 322	\$ 111	\$ (151)	\$ 231	\$ 79
2006 Rate Increase Delay (Police)	22	8	30	0	0	0
Total Tier 1 Members	\$ (190)	\$ 331	\$ 141	\$ (151)	\$ 231	\$ 79
Tier 1 - City						
2003 UAAL	\$ 712	\$ (1,085)	\$ (374)	\$ 510	\$ (778)	\$ (268)
2005 Experience Loss	(6,397)	9,754	3,357	(4,585)	6,991	2,406
2005 Ben Improvement (Police)	3,403	1,318	4,721	0	0	0
2007 Ben Improvement (Fire)	0	0	0	2,779	1,057	3,836
2007 Experience Gain	(6,437)	(2,889)	(9,326)	(4,614)	(2,071)	(6,684)
2007 Assumption Change	1,411	757	2,168	1,011	543	1,554
2009 Experience Loss	9,620	5,104	14,724	6,895	3,658	10,554
2009 Assumption Change	5,656	3,132	8,788	4,054	2,245	6,299
2010 Experience Loss	5,997	3,238	9,235	4,298	2,321	6,619
2010 Assumption Change	3,852	2,195	6,047	2,761	1,573	4,334
2011 Experience Gain	(8,517)	(5,388)	(13,905)	(6,104)	(3,862)	(9,966)
2011 Assumption Change	1,091	1,553	2,645	782	1,113	1,896
2012 Experience Loss	4,660	2,509	7,169	3,340	1,798	5,138
2012 SRBR Elimination	(1,748)	0	(1,748)	(1,253)	0	(1,253)
2012 Assumption Change	2,668	2,272	4,940	1,912	1,629	3,541
2013 Experience Loss	2,665	1,563	4,228	1,910	1,120	3,031
2013 Assumption Change	289	962	1,251	207	689	896
2014 Experience Gain	(2,276)	(930)	(3,207)	(1,632)	(667)	(2,298)
2014 Assumption Change	1,213	1,176	2,389	870	843	1,713
Total Tier 1 City	\$ 17,862	\$ 25,241	\$ 43,103	\$ 13,143	\$ 18,204	\$ 31,346
Total Tier 1	\$ 17,673	\$ 25,572	\$ 43,244	\$ 12,991	\$ 18,434	\$ 31,426
Tier 2 - Members and City						
2014 Experience Gain	\$ (5)	\$ (2)	\$ (8)	\$ 0	\$ 0	\$ 0
2014 Assumption Change	(0)	(0)	(0)	0	0	0
Total Tier 2	\$ (6)	\$ (2)	\$ (8)	\$ 0	\$ 0	\$ 0

Dollar amounts in thousands

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**SECTION V
CONTRIBUTIONS**

In addition to the UAL payments shown above, Tier 1 members pay 3/11ths of the EA normal cost (excluding reciprocity normal cost) plus their historical share of administrative expenses. Tier 2 members pay half of the EA normal cost, half of administrative expenses, and half of the UAL payments. Table V-3 below shows the contribution rates for the 2015-16 fiscal year for members and the City by Tier split between Police and Fire groups.

Table V-3 Fiscal Year 2015-16 Contribution Rates						
	Police			Fire		
	Retirement	COLA	Total	Retirement	COLA	Total
Tier 1 - Members						
Normal Cost	7.80%	3.32%	11.12%	8.26%	3.46%	11.72%
UAL	<u>-0.19%</u>	<u>0.33%</u>	<u>0.14%</u>	<u>-0.21%</u>	<u>0.32%</u>	<u>0.11%</u>
Total	7.61%	3.65%	11.26%	8.05%	3.78%	11.83%
Tier 1 - City						
Normal Cost	21.68%	9.23%	30.91%	22.72%	9.52%	32.24%
UAL	<u>17.45%</u>	<u>24.65%</u>	<u>42.10%</u>	<u>17.91%</u>	<u>24.80%</u>	<u>42.71%</u>
Total	39.13%	33.88%	73.01%	40.63%	34.32%	74.95%
Tier 2 - Members						
Normal Cost	9.73%	1.55%	11.28%	9.61%	1.55%	11.16%
UAL	<u>0.00%</u>	<u>-0.01%</u>	<u>-0.01%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
Total	9.73%	1.54%	11.27%	9.61%	1.55%	11.16%
Tier 2 - City						
Normal Cost	9.73%	1.55%	11.28%	9.61%	1.56%	11.17%
UAL	<u>0.00%</u>	<u>-0.01%</u>	<u>-0.01%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
Total	9.73%	1.54%	11.27%	9.61%	1.56%	11.17%

Table V-4 below shows the estimated dollar amounts of the City’s contributions assuming contributions are made at the beginning of the fiscal year. To the extent the City’s contributions are made after the beginning of the fiscal year, the amounts should be increased at the assumed valuation interest rate (7.0% for 2015-16).

CITY OF SAN JOSÉ POLICE AND FIRE DEPARTMENT RETIREMENT PLAN
JUNE 30, 2014 ACTUARIAL VALUATION

**SECTION V
CONTRIBUTIONS**

Table V-4 Fiscal Year 2015-16 Estimated City Contribution Amounts Beginning of Year						
	Police			Fire		
	Retirement	COLA	Total	Retirement	COLA	Total
Tier 1						
Normal Cost	\$ 22,202	\$ 9,448	\$ 31,650	\$ 16,674	\$ 6,987	\$ 23,661
UAL	<u>17,866</u>	<u>25,242</u>	<u>43,108</u>	<u>13,146</u>	<u>18,204</u>	<u>31,350</u>
Total	\$ 40,068	\$ 34,690	\$ 74,758	\$ 29,820	\$ 25,191	\$ 55,011
Tier 2						
Normal Cost	\$ 1,006	\$ 160	\$ 1,166	\$ 164	\$ 27	\$ 190
UAL	<u>(0)</u>	<u>(1)</u>	<u>(1)</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	\$ 1,005	\$ 159	\$ 1,164	\$ 164	\$ 27	\$ 190
Total						
Normal Cost	\$ 23,208	\$ 9,608	\$ 32,816	\$ 16,838	\$ 7,014	\$ 23,852
UAL	<u>17,866</u>	<u>25,241</u>	<u>43,107</u>	<u>13,146</u>	<u>18,204</u>	<u>31,350</u>
Total	\$ 41,074	\$ 34,849	\$ 75,923	\$ 29,984	\$ 25,218	\$ 55,202

Dollar amounts in thousands

**CITY OF SAN JOSÉ POLICE AND FIRE DEPARTMENT RETIREMENT PLAN
JUNE 30, 2014 ACTUARIAL VALUATION**

**SECTION VI
ACTUARIAL SECTION OF THE CAFR**

The Government Finance Officers Association (GFOA) maintains a checklist of items to be included in the System's Comprehensive Annual Financial Report (CAFR) in order to receive recognition for excellence in financial reporting. The schedules in this section are listed by the GFOA for inclusion in the Actuarial Section of the System's CAFR.

Table VI-1 Schedule of Funding Progress						
Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Liability (AL)	Unfunded Actuarial Liability	Funded Ratio	Covered Payroll	Unfunded AL as a % of Covered Payroll
6/30/2014	\$ 3,025,101	\$ 3,813,825	\$ 788,724	79.3%	\$ 188,189	419.1%
6/30/2013	2,771,924	3,578,031	806,107	77.5%	184,645	436.6%
6/30/2012	2,703,539	3,397,792	694,253	79.6%	187,959	369.4%
6/30/2011	2,685,721	3,196,007	510,286	84.0%	190,726	267.5%
6/30/2010	2,576,705	3,230,456	653,751	79.8%	251,058	260.4%
6/30/2009	2,569,569	2,963,482	393,913	86.7%	255,223	154.3%
6/30/2007	2,365,790	2,372,386	6,596	99.7%	227,734	2.9%
6/30/2005	1,983,090	2,027,432	44,342	97.8%	210,018	21.1%

Amounts prior to June 30, 2011 calculated by prior actuary

Dollar amounts in thousands

Table VI-2 Solvency Test							
Actuarial Valuation Date	Actuarial Liability For			Reported Assets	Portion of Actuarial Liability Covered by Reported Assets		
	Active Member Contributions (A)	Retirees, Beneficiaries and Other Inactives (B)	Remaining Active Members' Liability (C)		(A)	(B)	(C)
6/30/2014	\$ 288,227	\$ 2,585,611	\$ 939,988	\$ 3,025,101	100%	100%	16%
6/30/2013	280,727	2,452,728	844,576	2,771,924	100%	100%	5%
6/30/2012	276,047	2,310,295	811,450	2,703,539	100%	100%	14%
6/30/2011	260,172	2,174,044	761,791	2,685,721	100%	100%	33%
6/30/2010	246,356	1,907,931	1,076,169	2,576,705	100%	100%	39%
6/30/2009	243,302	1,630,914	1,089,266	2,569,569	100%	100%	64%
6/30/2007	227,191	1,240,126	905,069	2,365,790	100%	100%	99%
6/30/2005	194,008	1,062,247	771,177	1,983,090	100%	100%	94%

Amounts prior to June 30, 2011 calculated by prior actuary

Dollar amounts in thousands

CITY OF SAN JOSÉ POLICE AND FIRE DEPARTMENT RETIREMENT PLAN
JUNE 30, 2014 ACTUARIAL VALUATION

SECTION VI
ACTUARIAL SECTION OF THE CAFR

Table VI-3					
Analysis of Financial Experience					
Gain or (Loss) for Year(s) Ending on Valuation Date Due To:					
Actuarial Valuation Date	Investment Income	Combined Liability Experience	Total Financial Experience	Non-Recurring Items	Total Experience
6/30/2014	\$ 78,462	\$ (14,678)	\$ 63,784	\$ (55,787)	\$ 7,997
6/30/2013	(92,499)	11,115	(81,384)	(28,233)	(109,618)
6/30/2012	(172,759)	39,432	(133,327)	(75,220)	(208,548)
6/30/2011	(96,473)	278,051	181,578	12,360	193,938
6/30/2010	(149,621)	43,880	(105,741)	(104,240)	(209,981)
6/30/2009	(138,383)	(113,495)	(251,878)	(145,351)	(397,229)
6/30/2007	97,135	47,735	144,870	(93,343)	51,527
6/30/2005	(136,013)	101,668	(34,345)	(12,960)	(47,305)

Amounts prior to June 30, 2011 calculated by prior actuary

Dollar amounts in thousands

**CITY OF SAN JOSÉ POLICE AND FIRE DEPARTMENT RETIREMENT PLAN
JUNE 30, 2014 ACTUARIAL VALUATION**

**APPENDIX A
MEMBERSHIP INFORMATION**

Table A-1					
City of San Jose Police and Fire Department Retirement Plan					
Active Member Data					
	June 30, 2014			June 30, 2013	
	Tier 1	Tier 2	Total	Total	% Change
Total					
Count	1,587	67	1,654	1,707	-3.1%
Average Current Age	42.5	29.1	42.0	41.6	1.0%
Average Vesting Service	14.6	1.2	14.1	13.6	3.7%
Expected Pensionable Earnings					
Total	\$ 182,655,038	\$ 5,533,674	\$ 188,188,712	\$ 184,645,250	1.9%
Average	\$ 115,095	\$ 82,592	\$ 113,778	\$ 108,169	5.2%

As of June 30, 2014, there are no Tier 2 Fire members. For determining the Fire Tier 2 normal cost, a hypothetical data set was used based on Fire members hired within the last 10 years (Count = 266 and average age at hire = 30.0).

Table A-2						
City of San Jose Police and Fire Department Retirement Plan						
Non-Active Member Data						
	Count			Average Age		
	June 30, 2014	June 30, 2013	%Change	June 30, 2014	June 30, 2013	%Change
Total						
Retired & Disabled	1,757	1,725	1.9%	65.2	64.8	0.6%
Beneficiaries	275	269	2.2%	65.2	64.6	0.9%
Payee Total	2,032	1,994	1.9%	65.2	64.8	0.6%
Inactives	282	229	23.1%	40.4	40.8	-1.0%

Table A-3						
City of San Jose Police and Fire Department Retirement Plan						
Non-Active Member Data						
	Total Annual Benefit*			Average Annual Benefit*		
	June 30, 2014	June 30, 2013	%Change	June 30, 2014	June 30, 2013	%Change
Total						
Retired & Disabled	\$ 160,681,838	\$ 153,249,704	4.8%	\$ 91,452	\$ 88,840	2.9%
Beneficiaries	10,189,737	9,466,184	7.6%	37,054	35,190	5.3%
Payee Total	\$ 170,871,575	\$ 162,715,888	5.0%	\$ 84,090	\$ 81,603	3.0%
Inactives**	\$ 3,268,472	\$ 2,705,254	20.8%	\$ 11,590	\$ 11,813	-1.9%

* Benefits provided in June 30 valuation data

** For Inactives, benefit is calculated based on the data, assumptions and methods outlined in Appendix B.

**CITY OF SAN JOSÉ POLICE AND FIRE DEPARTMENT RETIREMENT PLAN
JUNE 30, 2014 ACTUARIAL VALUATION**

**APPENDIX A
MEMBERSHIP INFORMATION**

**Table A-4
City of San Jose Police and Fire Department Retirement Plan
Distribution of Active Members as of June 30, 2014**

Age	Years of Benefit Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 and Up	
Under 25	13	4	-	-	-	-	-	-	17
25 to 29	34	39	10	-	-	-	-	-	83
30 to 34	12	75	117	7	-	-	-	-	211
35 to 39	2	39	115	95	15	-	-	-	266
40 to 44	1	13	61	110	184	12	-	-	381
45 to 49	1	1	26	60	205	134	17	-	444
50 to 54	1	1	4	20	65	103	26	-	220
55 to 59	1	-	-	4	13	10	1	-	29
60 to 64	-	-	-	-	1	-	-	1	2
65 to 69	-	-	-	1	-	-	-	-	1
70 and up	-	-	-	-	-	-	-	-	-
Total Count	65	172	333	297	483	259	44	1	1,654

**Table A-5
City of San Jose Police and Fire Department Retirement Plan
Distribution of Active Members as of June 30, 2014**

Age	Average Expected Salary Years of Benefit Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 and Up	
Under 25	\$ 82,883	\$ 85,050	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 83,393
25 to 29	80,775	85,580	109,254	-	-	-	-	-	86,464
30 to 34	80,752	89,046	111,155	115,163	-	-	-	-	101,700
35 to 39	87,096	91,853	110,901	113,827	124,961	-	-	-	109,767
40 to 44	80,775	90,251	110,910	113,521	119,811	136,838	-	-	115,995
45 to 49	86,585	91,745	110,937	113,714	120,050	127,863	132,505	-	121,356
50 to 54	80,775	94,257	111,789	114,681	118,227	122,736	146,675	-	122,982
55 to 59	80,775	-	-	113,052	117,077	124,370	160,429	-	119,279
60 to 64	-	-	-	-	112,259	-	-	129,952	121,106
65 to 69	-	-	-	104,427	-	-	-	-	104,427
70 and up	-	-	-	-	-	-	-	-	-
Avg. Salary	\$ 81,476	\$ 88,941	\$ 110,956	\$ 113,738	\$ 119,770	\$ 126,105	\$ 141,513	\$ 129,952	\$ 113,778

**CITY OF SAN JOSÉ POLICE AND FIRE DEPARTMENT RETIREMENT PLAN
JUNE 30, 2014 ACTUARIAL VALUATION**

**APPENDIX A
MEMBERSHIP INFORMATION**

**Table A-6
City of San Jose Police and Fire Department Retirement Plan
Retirees and Disabled by Attained Age and Benefit Effective Date
As of June 30, 2014**

Benefit Effective	Age										Total
	Under 50	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 and up	
Pre-1994	-	2	5	6	23	60	115	66	32	6	315
PYE 1994	-	2	-	1	2	20	17	2	-	-	44
PYE 1995	-	-	2	-	11	34	13	2	-	-	62
PYE 1996	-	2	-	1	8	25	7	-	-	-	43
PYE 1997	-	1	-	4	18	32	6	2	-	-	63
PYE 1998	-	1	-	6	35	21	6	-	-	-	69
PYE 1999	-	-	1	1	25	25	4	-	-	-	56
PYE 2000	-	1	-	2	24	18	4	-	-	-	49
PYE 2001	-	2	2	5	34	11	1	-	-	-	55
PYE 2002	-	2	2	11	26	9	-	-	-	-	50
PYE 2003	1	3	1	25	37	9	1	-	-	-	77
PYE 2004	-	-	2	19	20	5	-	-	-	-	46
PYE 2005	1	3	1	43	22	7	1	-	-	-	78
PYE 2006	-	-	6	14	15	2	-	-	-	-	37
PYE 2007	2	1	16	34	11	2	-	-	-	-	66
PYE 2008	4	-	19	31	8	-	-	-	-	-	62
PYE 2009	3	4	53	67	25	3	-	-	-	-	155
PYE 2010	2	7	84	38	6	-	-	-	-	-	137
PYE 2011	6	37	56	13	1	1	-	-	-	-	114
PYE 2012	8	33	21	7	1	-	-	-	-	-	70
PYE 2013	12	30	9	3	1	-	-	-	-	-	55
PYE 2014	11	30	12	1	-	-	-	-	-	-	54
Total	50	161	292	332	353	284	175	72	32	6	1,757

Average Age at Retirement/Disability 52.5
Average Current Age 65.2
Average Annual Pension \$ 91,452

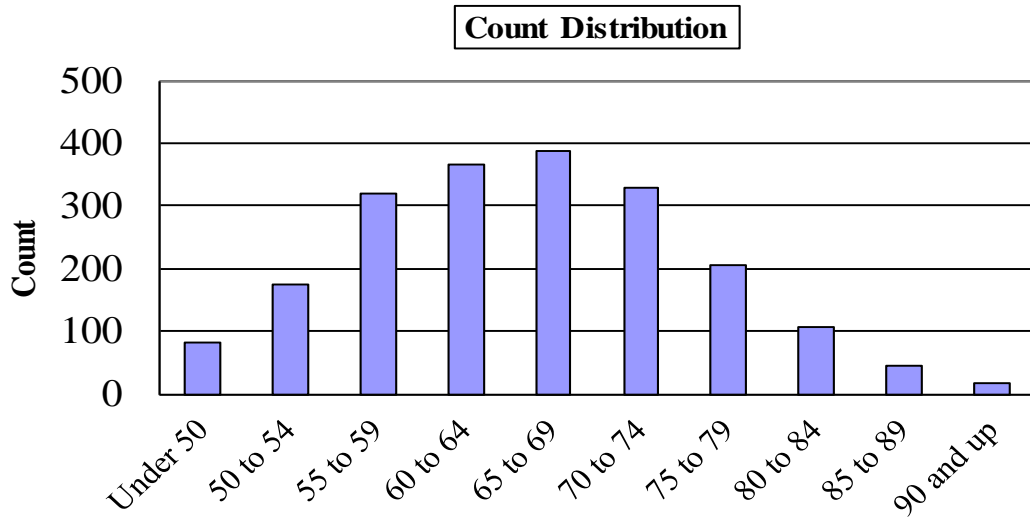
**CITY OF SAN JOSÉ POLICE AND FIRE DEPARTMENT RETIREMENT PLAN
JUNE 30, 2014 ACTUARIAL VALUATION**

**APPENDIX A
MEMBERSHIP INFORMATION**

**Table A-7
City of San Jose Police and
Fire Department Retirement Plan
Distribution of Retirees, Disabled Members,
and Beneficiaries as of June 30, 2014**

Age	Count
Under 50	81
50 to 54	174
55 to 59	319
60 to 64	367
65 to 69	386
70 to 74	330
75 to 79	205
80 to 84	105
85 to 89	46
90 and up	<u>18</u>
Total	2,031

Chart A-1

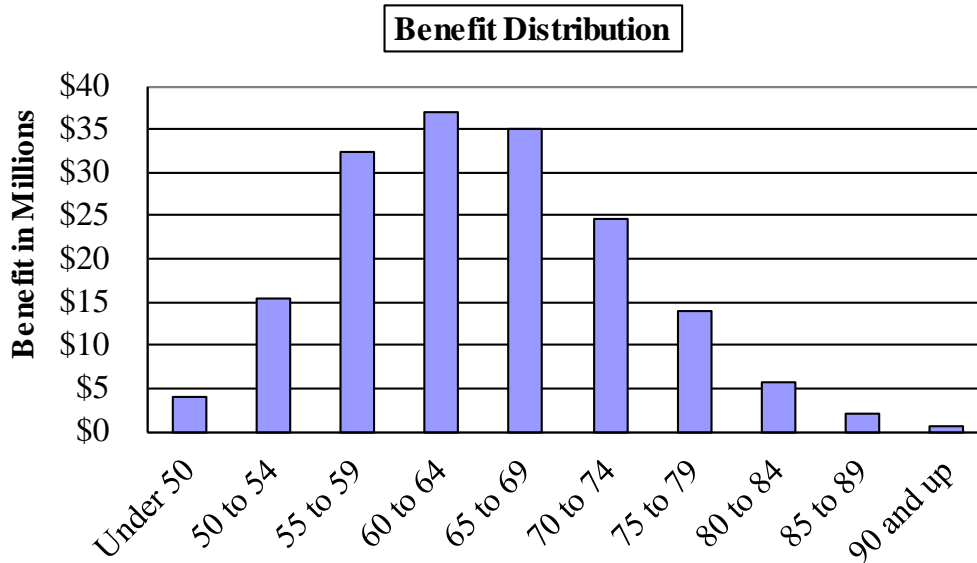


APPENDIX A
 MEMBERSHIP INFORMATION

Table A-8
City of San Jose Police and
Fire Department Retirement Plan
Distribution of Retirees, Disabled Members,
and Beneficiaries as of June 30, 2014

Age	Annual Benefit
Under 50	\$ 3,908,691
50 to 54	15,464,942
55 to 59	32,413,697
60 to 64	36,858,217
65 to 69	35,138,633
70 to 74	24,614,395
75 to 79	13,888,497
80 to 84	5,816,317
85 to 89	2,121,369
90 and up	646,816
Total	\$ 170,871,575

Chart A-2



**CITY OF SAN JOSÉ POLICE AND FIRE DEPARTMENT RETIREMENT PLAN
JUNE 30, 2014 ACTUARIAL VALUATION**

**APPENDIX A
MEMBERSHIP INFORMATION**

Table A-9						
San Jose Police and Fire Department Retirement Plan						
Change in Plan Membership						
	Actives	Terminations	Retirees	Disabilities	Beneficiaries	Total
June 30, 2013	1,707	229	874	851	270	3,931
New Entrants	63	25	2	0	0	90
Rehires	5	(4)	0	0	0	1
Terminations	(51)	51	0	0	0	0
Return of Contributions	(6)	(16)	0	0	0	(22)
Disabilities	(21)	0	(23)	44	0	0
Retirements	(31)	(2)	33	0	0	0
Deaths	0	0	(6)	(17)	17	(6)
Beneficiary Deaths	0	0	0	0	(9)	(9)
Miscellaneous Adjustments	(12)	(1)	0	(1)	(3)	(17)
June 30, 2014	1,654	282	880	877	275	3,968

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

The discount rate and wage inflation assumptions shown below were adopted by the Board of Administration with our input at the December 5, 2014 Board meeting. All other assumptions were adopted at the November 7, 2013 Board meeting based on recommendations from our experience study covering plan experience during the period from July 1, 2007 through June 30, 2013.

1. Discount Rate

7.00% net of investment expenses. The long-term expected return on assets based on NEPC's capital market assumptions for a 30-year time horizon is 7.97%. The Board applied a margin for adverse deviation to improve the probability of achieving the discount rate.

2. Salary Increase Rate

Wage inflation component is assumed to be 3.25%.

In addition, the following merit component is added based on an individual member's years of service:

Table B-1	
Salary Merit Increases	
Years of Service	Merit/ Longevity
0	9.25%
1	7.55
2	6.75
3	5.75
4	5.00
5	4.25
6	3.75
7	3.25
8	2.75
9	2.25
10+	2.00

3. Family Composition

Percentage married is shown in the following Table B-2. Women are assumed to be three years younger than men.

**APPENDIX B
 ACTUARIAL ASSUMPTIONS AND METHODS**

Gender	Percentage
Males	85%
Females	85%

4. Rates of Termination

Sample rates of termination are shown in the following Table B-3.

Service	Police	Fire
0	9.50%	9.50%
1	8.00	7.00
2	6.50	4.50
3	5.50	2.00
4	4.50	1.30
5	3.50	1.10
6	2.50	1.00
7	2.00	0.90
8	1.50	0.80
9	1.30	0.70
10	1.00	0.60
11+	1.00	0.50

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

75% of terminating employees are assumed to subsequently work for a reciprocal employer and receive 3.5% pay increases per year.

5. Rates of Disability

Sample disability rates of active participants are provided in Table B-4.

**APPENDIX B
 ACTUARIAL ASSUMPTIONS AND METHODS**

Table B-4 Rates of Disability at Selected Ages		
Age	Police	Fire
25	0.09%	0.09%
30	0.13	0.13
35	0.32	0.20
40	0.52	0.31
45	0.84	0.51
50	1.96	2.50
55	6.44	6.50
60	8.04	12.70
65	8.50	19.00

100% of disabilities are assumed to be duty related.

6. Rates of Mortality for Healthy Lives

Mortality rates for actives, retirees, beneficiaries, terminated vested, and reciprocals are based on the male and female RP-2000 combined employee and annuitant mortality tables. To reflect mortality improvement since the date of the table and to project future mortality improvements, the tables are projected to 2010 using scale AA and set back three years for males and no setback for females.

Table B-5 Rates of Mortality for Active and Retired Healthy Lives at Selected Ages		
Age	Male	Female
25	0.0308%	0.0180%
30	0.0363	0.0239
35	0.0535	0.0425
40	0.0860	0.0607
45	0.1099	0.0957
50	0.1491	0.1412
55	0.2179	0.2507
60	0.3954	0.4808
65	0.7529	0.9231
70	1.4103	1.5923
75	2.3454	2.5937
80	4.1153	4.2767
85	7.4274	7.2923
90	12.8097	12.7784
95	21.0194	19.0654

It is assumed that 50% of active deaths are service related.

**APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS**

7. Rates of Mortality for Retired Disabled Lives

Mortality rates for disabled retirees are based on the male RP-2000 combined employee and annuitant mortality table. To reflect mortality improvement since the date of the table and to project future mortality improvements, the tables are projected to 2010 using scale AA and set back two years.

Table B-6 Rates of Mortality for Disabled Lives at Selected Ages	
Age	Mortality
50	0.1583%
55	0.2383
60	0.4488
65	0.8695
70	1.5521
75	2.6125
80	4.6195
85	8.2794
90	14.3228
95	22.6746

8. Rates of Retirement

Rates of retirement are based on age and service according to the following Table B-7.

Table B-7 Rates of Retirement by Age						
Age	Police			Fire		
	Tier 1	Tier 2 <30 Years	Tier 2 30+ Years	Tier 1	Tier 2 <30 Years	Tier 2 30+ Years
50	45.00%	0.00%	0.00%	27.50%	0.00%	0.00%
51 - 54	35.00	0.00	0.00	22.50	0.00	0.00
55 - 59	35.00	0.00	0.00	22.50	0.00	0.00
60 - 61	50.00	50.00	100.00	22.50	25.00	50.00
62 - 64	100.00	50.00	100.00	100.00	25.00	50.00
65 - 69	100.00	50.00	100.00	100.00	35.00	100.00
70+	100.00	100.00	100.00	100.00	100.00	100.00

These retirement rates apply only to those eligible for unreduced benefits.

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

9. Administrative Expenses

1.80% of valuation payroll added to normal cost. The administrative expenses are assumed to increase with wage inflation. Historically, the administrative expenses were assumed to reduce the investment return assumption by 10 basis points which resulted in a higher Normal Cost. To maintain the same historic division of member and City contributions for administrative expenses for this valuation, members were allocated a portion of the administrative expenses equal to 3/11ths of the difference in Normal Cost that a 10 basis point reduction in the investment return assumption would cause.

10. Changes Since Last Valuation

The investment return assumption was reduced from 7.125% to 7.0%, and wage inflation was changed from 2.00% for FYE 2014-2015 and 3.50% thereafter to 3.25% for all years.

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

B. Contribution Allocation Procedure

The contribution allocation procedure primarily consists of an actuarial cost method, an asset smoothing method, and an amortization method as described below. All components of the contribution allocation procedure were established prior to the June 30, 2011 actuarial valuation except as specifically noted below.

1. Actuarial Cost Method

The Entry Age actuarial cost method was used for active employees, whereby the normal cost is computed as the level annual percentage of pay required to fund the retirement benefits between each member's date of hire and assumed retirement. The actuarial liability is the difference between the present value of future benefits and the present value of future normal cost. The unfunded actuarial liability is the difference between the actuarial liability and the actuarial value of assets.

2. Asset Valuation Method

For the purposes of determining the employer's contribution, we use an actuarial value of assets. The asset smoothing method dampens the volatility in asset values that could occur because of the fluctuations in market conditions. Use of an asset smoothing method is consistent with the long-term nature of the actuarial valuation process. Assets are assumed to be used exclusively for the provision of retirement benefits and expenses.

The actuarial value of assets is calculated by recognizing the deviation of actual investment returns compared to the expected return (7.125% for 2013-14, 7.25% for 2012-13, 7.50% for 2011-12, 7.75% for 2010-11, 8.00% for prior years) over a five-year period. The dollar amount of the expected return on the market value of assets is determined using the actual contributions and benefit payments during the year. Any difference between this amount and the actual net investment earnings is considered a gain or loss.

Finally, the actuarial value of assets is restricted to a corridor between 80 percent and 120 percent of the market value of assets.

3. Amortization Method

Actuarial gains and losses and plan changes are amortized as a level percentage of pay assuming 3.25% annual growth in payroll over a 16-year period beginning with the valuation date in which they first arise. Changes in methods and assumptions are amortized as a level percentage of pay assuming 3.25% annual growth in payroll over a 20-year period (16 years for changes prior to June 30, 2011) beginning with the valuation date on which they are effective. Payroll growth was assumed to be 3.50% in the prior valuation.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 1

1. Membership Requirement

Participation in the plan is immediate upon the first day of employment with the City of San José as a police officer or fire fighter except for the following:

- Independent contractors,
- Person in City service principally for training or educational purposes,
- Auxiliary or voluntary police officers or fire fighters,
- Part-time or non-salaried employees, and
- Employees receiving credit in any other retirement or pension system.

2. Final Compensation

The highest twelve consecutive months of compensation in covered employment. However, in determining Final Compensation, no compensation in the last 12 months of employment that exceeds 108% of compensation during the 12 months immediately preceding the last 12 month shall be considered. Compensation excludes overtime pay and expense allowances.

3. Credited Service

Years of service in covered employment plus service purchased for military leave of absence, Federated service, and unpaid leaves of absence.

4. Contributions

a. Member:

The amount needed to fund 3/11ths of normal cost calculated under the Entry Age actuarial cost method plus the amortization payment on the February 4, 1996 benefit improvement. For Police members, there is an additional amortization payment for member contributions not made for the last 6 months of 2006.

b. Employer:

The Employer contributes the remaining amounts necessary to fund the Plan in accordance with the Board's funding policy.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 1

5. Service Retirement

Eligibility

Age 55 with 20 years of service, age 50 with 25 years of service, age 70 with no service requirement, or any age with 30 years of service. Reduced benefits are also available at age 50 with 20 years of service.

Benefit

Police: 2.5% of Final Compensation for each year of credited service up to 20 years plus 4.0% of Final Compensation for each year of credited service in excess of 20, subject to a maximum of 90% of Final Compensation.

Fire: For members with less than 20 years of service, 2.5% of Final Compensation for each year of credited service. For members with 20 or more years of service, 3.0% of Final Compensation for each year of service, subject to a maximum of 90% of Final compensation.

6. Service Connected Disability Retirement

Eligibility

No age or service requirement.

Benefit

Police: 50% of Final Compensation plus 4.0% of Final Compensation for each year of credited service in excess of 20, subject to a maximum of 90% of Final Compensation.

Fire: For members with less than 20 years of service, 50% of Final Compensation. For members with 20 or more years of service, 3.0% of Final Compensation for each year of service, subject to a maximum of 90% of Final Compensation.

7. Non-Service Connected Disability Retirement

Eligibility

Two years of service.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 1

Benefit

For members with less than 20 years of service, 32% of Final Compensation plus 1% of Final Compensation for each year of service in excess of two. For members with 20 or more years of service, the benefit amount equals the amount that would be calculated under the service retirement formula.

8. Non-Service-Connected Death

Less than 2 Years of Service:

Lump sum benefit equal to the greater of accumulated employee contributions with interest or \$1,000.

Disabled retirees or members ineligible for service retirement:

Spouse receives 24% of Final Compensation plus 0.75% of Final Compensation for each year of service in excess of two, subject to a maximum of 37.5% of Final Compensation. If a member has eligible dependent children, an additional benefit is payable as follows:

1 Child:	25% of Final Compensation
2 Children:	37.5% of Final Compensation
3+ Children:	50% of Final Compensation

The total benefit payable to a family is limited to 75% of Final Compensation.

If a member does not have a spouse or eligible dependent children, a lump sum benefit equal to the greater of accumulated employee contributions with interest or \$1,000.

Service retirees or members eligible for service retirement:

Spouse receives the greater of 37.5% of Final Compensation or 50% of the member's service retirement benefit, subject to a maximum of 42.5% of Final Compensation for Police and 45% of Final Compensation for Fire. Eligible dependent children will receive the same benefit as defined under the non-service connected death for disabled retirees or members ineligible for service retirement. The total benefit payable to a family is limited to 75% of Final Compensation.

9. Service-Connected Death

Spouse receives the greater of 37.5% of Final Compensation or 50% of the member's service retirement benefit, subject to a maximum of 42.5% of Final Compensation for Police and 45% of Final Compensation for Fire. If a member has eligible dependent children, an additional benefit of 25% of Final Compensation is payable for each eligible dependent child. The total benefit payable to a family is limited to 75% of Final Compensation.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 1

10. Termination Benefits

Less than 10 Years of Service:

Lump sum benefit equal to the accumulated employee contributions with interest at 2% per annum.

10 or more years of credited service:

The amount of the service retirement benefit, payable at the later of age 55 or 20 years from date of membership.

11. Post-retirement Cost-of-Living Benefit

Benefits are increased every February 1 by 3.0%.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 2

1. Membership Requirement

Any person who is hired, rehired or reinstated by the City on or after August 4, 2013.

2. Final Compensation

The average annual compensation earnable during the highest three consecutive years of service. Final compensation only includes base pay, excluding premium pay and any other additional compensation.

3. Credited Service

One year of service credit is given for 2,080 or more hours of city service rendered in any calendar year. A partial year (fraction with the numerator equal to the hours worked, and the denominator equal to 2,080) is given for each calendar year with less than 2,080 hours worked.

4. Member Contributions

50% of total Tier 2 contributions to the pension plan, including, but not limited to administrative expenses, normal cost and unfunded actuarial liability.

5. Unreduced Service Retirement

Eligibility

Age 60 with ten years of service.

Benefit – Member

2.0% of Final Compensation for each year of credited service attributable to Tier 2 plus the applicable Tier 1 multiplier for each year of credited service attributable to Tier 1, subject to a maximum of 65% of Final Compensation.

Benefit - Survivor

Single life annuity.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 2

6. Early Service Retirement

Eligibility

Age 50 with ten years of service.

Benefit - Member

Reduced benefit actuarially equivalent to the unreduced service retirement benefits commencing at age 60. The early retirement reduction is applied to the benefit after the application of the maximum of 65% of final compensation.

7. Service-Connected Disability Retirement

Eligibility

No age or service requirement.

Benefit - Member

Monthly benefit equivalent to 50% of Final Compensation.

8. Non-Service Connected Disability Retirement

Eligibility

Five years of service.

Benefit - Member

2.0% of Final Compensation for each year of credited service attributable to Tier 2 plus the applicable Tier 1 multiplier for each year of credited service attributable to Tier 1, subject to a minimum of 20% of Final Compensation and a maximum of 50% of Final Compensation.

9. Death Before Retirement

If death occurs before retirement eligibility is reached and after two years of service

Monthly benefit equal to the greater of:

- 10% of Final Compensation or
- 2% of Final Compensation for each year of service up to a maximum of 30% of Final Compensation

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 2

If death occurs after retirement eligibility is reached

Benefit equivalent to what the employee would have received if retired at the time of death.

Employees killed in the line of duty

Monthly benefit equal to the greater of:

- 50% of Final Compensation or
- Benefit equivalent to what the employee would have received if retired at the time of death.

10. Withdrawal Benefits

Less than ten Years of Service

Lump sum benefit equal to the accumulated employee contributions with interest.

Ten or more years of credited service

The amount of the service retirement benefit, actuarially reduced for early retirement, and payable when retirement eligibility is reached.

11. Benefit Forms

Annuity benefits are paid in the form of a life annuity or an actuarially equivalent annuity with 50%, 75% or 100% continuance to a survivor.

12. Post-retirement Cost-of-Living Benefit

Benefits are increased every April 1 by the change in the December CPI-U for San José-San Francisco-Oakland, subject to a cap of 1.5%. The first COLA after retirement shall be prorated based on the number of months retired.

Note: The summary of major plan provisions is designed to outline principal plan benefits. If the Department of Retirement Services should find the plan summary not in accordance with the actual provisions, the actuary should immediately be alerted so the proper provisions are valued.

**APPENDIX D
GLOSSARY OF TERMS**

1. Actuarial Liability

The Actuarial Liability is the difference between the Present Value of Future Benefits and the present value of total future Normal Costs. This is also referred to by some actuaries as the “accrued liability” or “actuarial accrued liability”. The Actuarial Liability represents the amount of assets a plan should have as of a valuation date according to the Actuarial Cost Method.

2. Actuarial Assumptions

Estimates of future experience with respect to rates of mortality, disability, turnover, retirement rate or rates of investment income and salary increases. Demographic actuarial assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (price inflation, wage inflation and investment income) are generally based on expectations for the future that may differ from the Plan’s past experience.

3. Actuarial Cost Method

A mathematical budgeting procedure for allocating the dollar amount of the Present Value of Future Benefits between future Normal Cost and Actuarial Liability.

4. Actuarial Gain (Loss)

The difference between actual experience and the anticipated experience based on the actuarial assumptions during the period between two actuarial valuation dates.

5. Actuarial Present Value

The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at the discount rate and by probabilities of payment.

6. Actuarially Determined Contribution

The payment to the Plan as determined by the actuary using a Contribution Allocation Procedure. It may or may not be the actual amount contributed to the Plan.

7. Amortization Method

A method for determining the amount, timing, and pattern of payment of the Unfunded Actuarial Liability.

**APPENDIX D
GLOSSARY OF TERMS**

8. Asset Valuation Method

The method used to develop the actuarial value of assets from the market value of assets typically by smoothing investment returns above or below the assumed rate of return over a period of time.

9. Contribution Allocation Procedure

A procedure typically using an Actuarial Cost Method, an Asset Valuation Method, and an Amortization Method to develop the Actuarially Determined Contribution.

10. Discount Rate

The rate of interest used to discount future benefit payments to determine the Actuarial Present Value. For purposes of determining an Actuarially Determined Contribution, the Discount Rate is typically based on the long-term expected return on assets.

11. Funded Status or Funding Ratio

The Actuarial Liability divided by either the market or actuarial value of assets. For purposes of this report, the Funded Status represents the proportion of the assets expected by the Actuarial Cost Method compared to the actual assets as of the valuation date. These measures are for contribution budgeting purposes and are not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.

12. Normal Cost

The portion of the Present Value of Future Benefits allocated to the current year by the Actuarial Cost Method.

13. Present Value of Future Benefits

The Actuarial Present Value of all benefits both earned as of the valuation date and expected to be earned in the future by current plan members based on current plan provisions and actuarial assumptions.

14. Unfunded Actuarial Liability (UAL)

The unfunded actuarial liability is the difference between actuarial liability and either the market or the actuarial value of assets. This value is sometimes referred to as "unfunded actuarial accrued liability." It represents the difference between the actual assets and the amount of assets expected by the Actuarial Cost Method as of the valuation date.