



**San Joaquin County  
Employees' Retirement Association**

**Actuarial Review and Analysis as of January 1, 2012**

July 10, 2012



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## Summary of Results

This Actuarial Review and Analysis (Report) of the San Joaquin County Employees' Retirement Association (SJCERA, the Plan) has produced a very slight increase in the recommended employer contribution rate. A summary of the current status of the Plan is as follows:

	January 1, 2011	January 1, 2012
<b>Plan Membership</b>		
Active	5,473	5,254
Inactive	1,428	1,418
Receiving Benefits	<u>4,489</u>	<u>4,685</u>
Total	11,390	11,357
Average Pay	\$68,153	\$68,967
<b>Assets (\$ millions)</b>		
Market Value (MVA), excluding special reserves	\$1,868.1	\$1,921.8
Valuation Assets (AVA)	\$2,120.4	\$2,130.1
<b>Actuarial Calculations (\$ millions)</b>		
Actuarial Accrued Liability	\$2,917.7	\$3,048.3
Funding Ratio (AVA/AAL)	72.7%	69.9%
Funding Ratio (MVA/AAL)	64.0%	63.0%
Employer Contribution Rate	32.04%	35.12%
Plan Year Actuarial Employer Cost	\$117.7	\$125.2

The benefit provisions and actuarial assumptions of the Plan remained unchanged from the prior valuation. The contribution rate continues to increase as the significant investment losses experienced during 2008 are fully recognized in the actuarial value of assets used to compute the employer contribution. This was the primary reason that the contribution rate increased since 2011, and this is expected to drive costs upward for one more year. Poor investment experience in 2011 will also contribute to this, but will be partially offset by favorable returns in 2009 and 2010.

There are a number of factors that can be expected to affect costs in the future:

- The liabilities and contribution rates determined in this Valuation are based on a set of actuarial assumptions. Despite the care and effort expended in determining the most accurate possible set of assumptions, the future experience of the Plan will certainly differ from what we assume. As a result, actuarial gains or losses will occur annually, and the employer contribution rate will fluctuate.
- There are investment losses that are deferred by the actuarial smoothing method and not included in the actuarial value of assets used to determine the employer contribution rate. The ratio of the

actuarial value of Plan assets to the market value is 110.8%, indicating that 10.8% of the actuarial value of Plan assets, or about \$211 million, consists of unrecognized investment losses. As a result, cost increases are expected as these deferred losses are recognized.

- Based on the assumptions and cost method, Plan assets are currently below the target level of assets determined by the cost method; consequently, there is an unfunded actuarial accrued liability. As a result, the employer contribution consists of two components: The normal cost and the amortization of the unfunded actuarial accrued liability.

The employer normal cost of 17.9% of payroll (a weighted average of 15.1% for General employees and 27.6% for Safety employees) represents the cost of the additional benefits earned each year by active Plan members. The balance of the employer contribution rate represents the amortization of the unfunded liability, which is a payment designed to bring the Plan's assets up to the target level set by the actuarial cost method.

As the unfunded liability is amortized, it will eventually decline in value and the amortization payment will decline; this will result in a long-term downward trend in employer contributions.

### **Purpose of the Report**

This Report presents the results of an actuarial review and analysis of the San Joaquin County Employees' Retirement Association as of January 1, 2012. The purposes of this Report are:

- To review the experience of the Plan over the past year and to discuss reasons for changes in Plan cost;
- To compute the annual employer contribution - expressed as a percentage of payroll to be contributed beginning January 1, 2013 - required to fund the Plan in accordance with actuarial principles;
- To discuss and project any emerging trends in Plan costs; and
- To present those items required for disclosure under Statement No. 25 of the Governmental Accounting Standards Board (GASB).

### Change in Plan Cost from Prior Review

The table below summarizes the impact of actuarial experience and changes in benefits on Plan cost.

	Employer Cost	Employer Contribution Rate (% Payroll)
<b>January 1, 2011</b>	<b>\$117,685,744</b>	<b>32.04%</b>
Change in Cost Due to:		
Expected Increase from Investment Loss Recognition	16,891,087	3.53%
Demographic Experience	(2,758,821)	0.23%
Salary Experience	(6,752,609)	(1.14%)
New Entrants to the Plan	2,662,289	0.13%
Decrease in Payroll for Amortization of Unfunded Actuarial Accrued Liabilities	0	1.04%
Impact of 12-month delay in contribution rates	31,373	0.01%
Asset Experience	(1,390,073)	(0.39%)
Impact of Rolling 20-Year Amortization	(1,181,305)	(0.33%)
<b>Total Cost as of January 1, 2012</b>	<b>\$125,187,685</b>	<b>35.12%</b>

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

- Prior investment losses were recognized according to asset smoothing policy.

As the significant investment losses from 2008 continue to be recognized according to the Plan's asset smoothing policy, costs continue to increase. If the market value investment return and actuarial liabilities increased exactly as expected during 2011, the contribution rate would have increased by 3.53% of pay due to the prior loss recognition. An increase of similar magnitude is expected as of January 1, 2013, when the 2008 loss is fully recognized.

- Demographic experience was favorable.

The demographic experience of the Plan – rates of retirement, death, disability, and termination – was better than what was predicted by the actuarial assumptions in aggregate, causing a decrease in cost. However, the percentage of pay cost was slightly higher due to the decrease in payroll since the prior year.

- Pay increases were below expectations.

Increases in pay among active members during 2011 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 1.14% of payroll.

- New members entered the Plan.

During 2011, there were 180 newly hired or rehired members entering the Plan to replace departing members. Recent new hires have a similar 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 the new hires, the employer contribution rate increased by 0.13% of payroll. The addition of these new members increased member payroll by \$12 million, increasing the Plan cost by about \$2.7 million.

- Payroll used to amortize unfunded liabilities was lower than expected.

For the second consecutive year, total member payroll decreased. The total decrease was \$11 million from January 1, 2011 to January 1, 2012. As a result, unfunded actuarial accrued liabilities were amortized over a smaller payroll base, and the employer contribution rate increased by 1.04% of pay.

Overall, the combined demographic and salary experience was closely in line with expectations, for a net decrease in cost of about 0.3% of pay.

- The one year contribution rate delay caused a small cost increase.

We have calculated the impact of the one year delay in the contribution rate (i.e. the use of the January 1, 2010 valuation contribution rate for the computation of the 2011 annual contribution). The contribution rate as a percentage of payroll as of January 1, 2011 was only 0.12% of pay higher than the previous year's rate, therefore there was a slight cost increase of 0.01% of pay.

This type of loss will occur in any year in which the contribution rate has increased. Conversely, a decrease in the contribution rate will result in a gain in the following year.

- Asset experience produced an actuarial gain.

The assets of the Plan returned 1.3% (net of expenses) on a market basis, lower than the assumed rate of 7.75%. Under the actuarial asset smoothing policy, 20% of this loss is recognized in the current year, resulting in a recognized loss of approximately \$25 million for 2011. However, under the Interest Crediting Policy adopted by the Board, the lack of sufficient assets to fully credit reserves resulted in a drawdown of funds from the Contingency Reserve, thereby adding approximately \$29 million to the valuation assets and offsetting the impact of the market loss.



In addition, the net benefit and contribution cash-flows were more favorable than anticipated during 2011: benefits exceeded contributions by only \$5.8 million, rather than by the \$7.6 million anticipated in our prior projections. The combination of these two factors - the drawdown of the Contingency Reserve and the better-than-anticipated cash-flows - resulted in a reduction in Plan cost by 0.39% of pay..

- Amortization under the Plan's Funding Policy caused a decrease in costs.

In 2009, the funding policies were revised as follows:

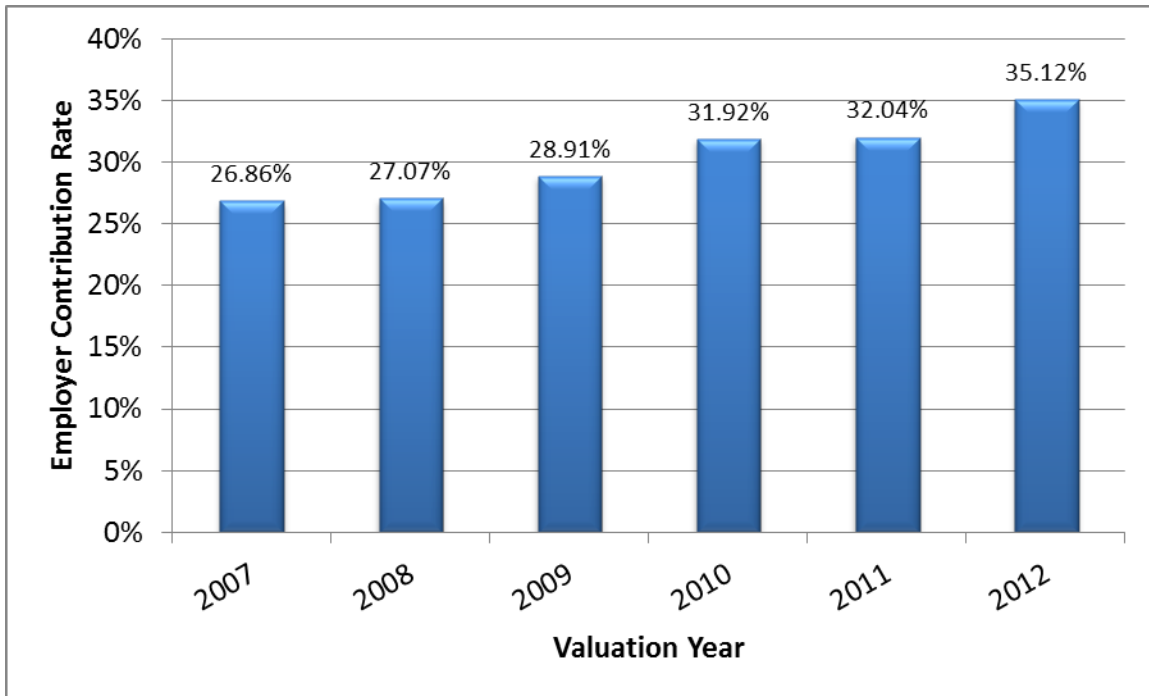
1. Half of the actuarial loss experienced in 2008 was deemed to be an Extraordinary Actuarial Loss. Thus 50% of the loss will be separately amortized, as a level percentage of pay, over a closed 30 year period. Currently, 27 years remain in this closed period.
2. The remaining Unfunded Actuarial Accrued Liability (UAAL) will be amortized, as a level percentage of pay, over a 20 year period, which will remain an open period amortization until January 1, 2014, when it will be decreased by one year in each valuation report until a 12 year amortization period is reached.

The above was reflected in the 2009 valuation for the first time, and continues to be followed for this valuation. The impact of using a rolling 20 year amortization, as opposed to a closed period which would entail 19 years remaining as of January 1, 2012, was a decrease in Plan costs of about 0.33% of pay.

Graphs 1 and 2 below show the history of Plan costs and funding status since 2007. The ratios shown in Graph 2 are based on the actuarial value of Plan assets divided by the actuarial accrued liability (blue bars), as well as the market value of assets divided by the same liability (red bars).

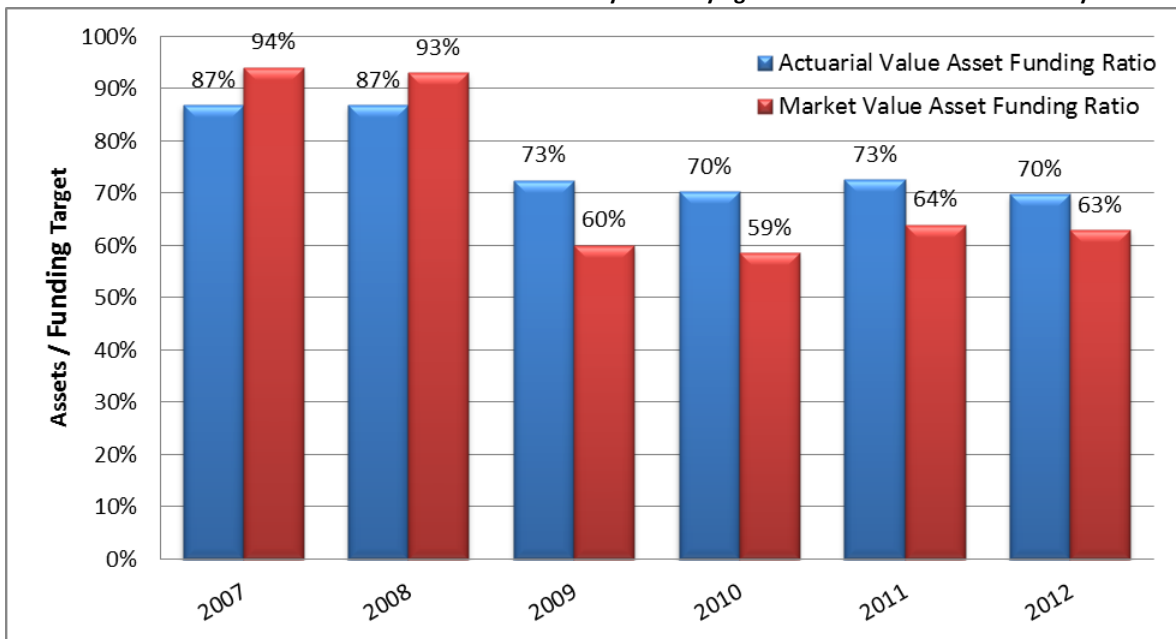
We see in Graph 2 that the funding ratios were close to 90% until 2009, by either measure. The 2008 investment losses have had a significant impact on funding ratios, and will continue to be felt for a number of years.

**Graph 1: History of the Employer Contribution Rate as a Percentage of Member Payroll**



**Graph 2: History of Plan Funding Ratio**

The ratio shown is the value of Plan assets divided by the entry age normal actuarial accrued liability.



The table below shows the ratio of assets to active member payroll for SJCERA.

December 31, 2011	
Active Member Payroll	356,419,122
Assets (Market Value Net of Non-Valuation Reserves)	1,921,750,430
Ratio of Assets to Payroll	5.39
Ratio with 100% Funding	8.55

One of the most important measures of a plan's risk is the ratio of plan assets to payroll. The table above shows SJCERA's assets as a percentage of active member payroll. This ratio indicates the sensitivity of the plan to the returns earned on plan assets. We note in the table that plan assets currently are over 5 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 8 times payroll, perhaps higher depending on the plan's 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 7.75%, there is an actuarial loss of 17.75% of plan assets. Based on the current ratio of asset to payroll (539%), that means the loss in assets is about 96% of active payroll (539% of the 17.75% 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 require an additional amortization payment in the vicinity of 7.0% of payroll if amortized over 20 years.

## Future Trends

The contribution rate computed in this Report is calculated at a point in time: It is based on a snapshot of Plan assets and actuarial liabilities taken as of January 1, 2012. It is instructive to project actuarial liabilities and costs into the future, to try to discern forces that may cause changes in Plan cost. Accordingly, in this section of the Report we will project Plan benefits, costs, and funding ratios for the next 45 years.

In our projections we assume that the Plan's actuarial assumptions are exactly realized. This will not happen, but such projections can give us important information on long-term trends that are obscured by the yearly variation in Plan costs caused by investment experience. We also assume that active Plan membership remains constant: The number of new entrants each year is assumed to equal the number of active members who retire, become disabled, terminate, or die.

Graph 3 below shows a projection of the employer cost as a percentage of payroll for the next 45 years. Both the normal cost and the amortization of any unfunded actuarial accrued liability are included. Graph 4 is a projection of the Plan's funded ratio over the next 45 years, based on the actuarially smoothed asset value.

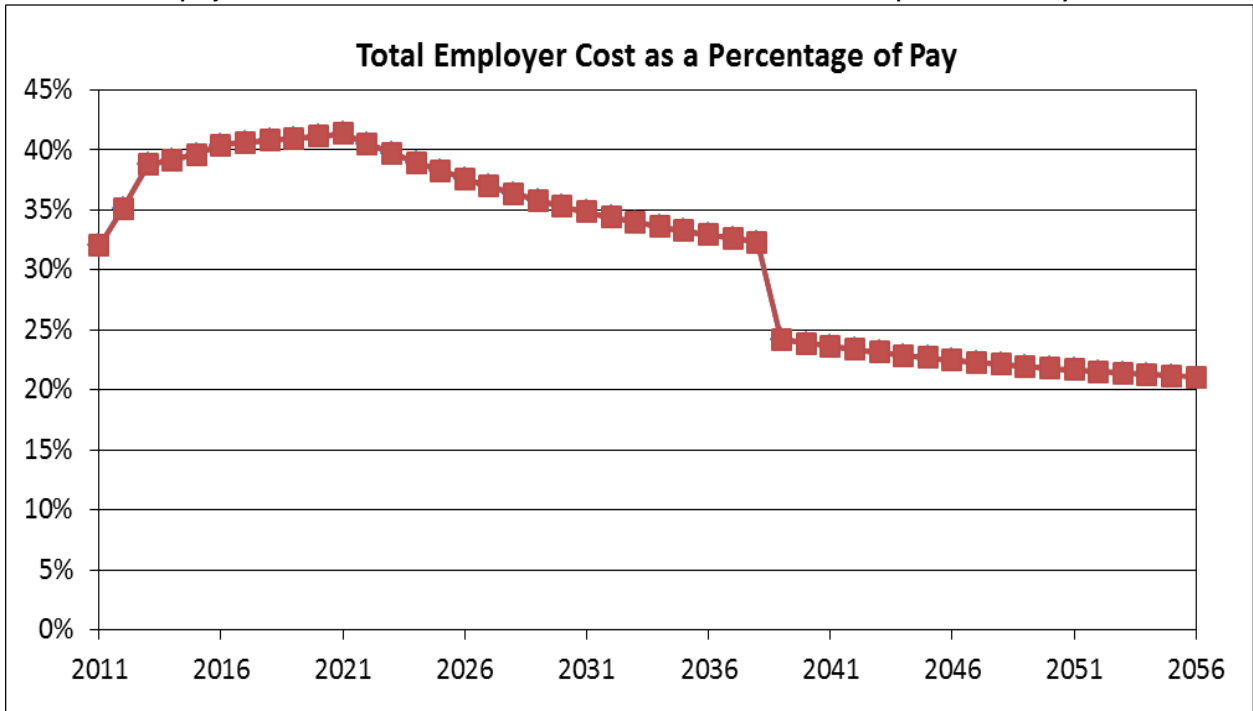
Graph 3 shows that Plan costs are projected to increase over the next five years to over 40% of pay as 2008 and 2011 market losses continue to be recognized and as the amortization period decreases after 2014. After 2020 or so, costs are expected to decrease gradually, but remaining above 30% of pay for the next two decades.

The Plan is currently underfunded, with assets below the target asset level set by the actuarial funding method. As the unfunded actuarial accrued liability is paid off through amortization (including amortization of Extraordinary Actuarial Losses), the Plan cost is expected to decrease to the level of the employer normal cost for new entrants, about 18% of pay.

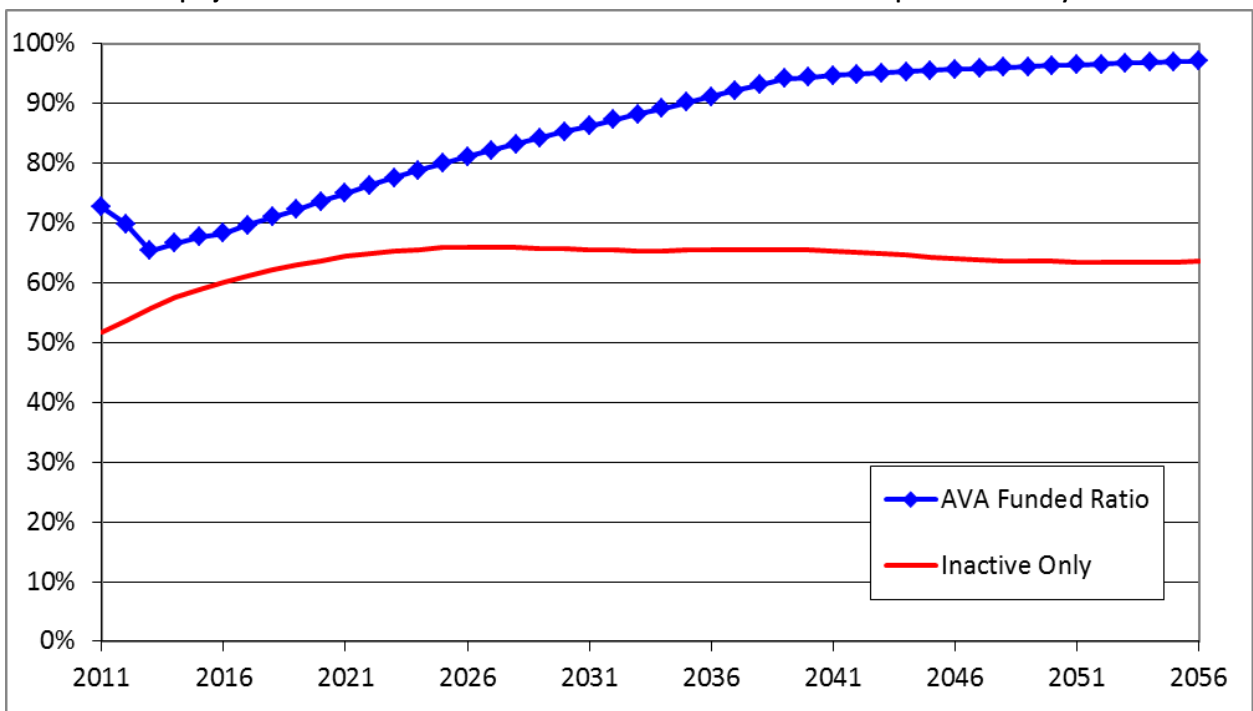
In Graph 4 we see that the funded level, based on smoothed assets, is projected to increase over time, but will decrease somewhat during the next year during which 2008 market losses are being recognized. Over the long term, the Plan should gradually approach full funding.

The red line shown in Graph 4 represents the portion of the total actuarial liability that is based on benefits for inactive participants only. As this Inactive Funded Ratio increases over time (it is expected to reach 60% over the next five years), the risk of the Plan funding ratio dropping below this level also increases. When the Plan's funded ratio is lower than the Inactive Funded Ratio, it indicates that no Plan assets have been set aside to fund future benefits for current active participants. This in turn indicates that the generational equity that actuarial funding is designed to accomplish is not being achieved.

**Graph 3: Projection of Employer Cost as a Percentage of Member Payroll**  
This projection assumes a level active workforce and that all actuarial assumptions are exactly met.



**Graph 4: Projection of Funded Ratio Based on Actuarial Accrued Liability**  
This projection assumes a level active workforce and that all actuarial assumptions are exactly met.



To summarize, the 2008 and 2011 investment losses will continue to be felt for a number of years in the form of increasing costs and decreasing funded ratios. Once these losses are fully recognized in the

valuation results, there is expected to be a period of relatively level employer contributions of around 40% of pay, followed by decreasing costs as the unfunded liability is amortized.

This scenario is based on the actuarial assumptions currently in place, and it will certainly not unfold as we have outlined it above. Investment and other actuarial gains and losses will occur to make employer costs and funded ratios vary, and the sensitivity of the employer contribution to gains and losses will increase as the Plan matures. However, the baseline scenario described herein shows the trends that underlie future costs and funding.

## Actuarial Certification

EFI Actuaries, under contract with the San Joaquin County Employees' Retirement Association (SJCERA), performed an actuarial valuation of Plan benefits as of January 1, 2012. In this study, we relied on participant and financial data supplied by SJCERA staff, and conducted an examination of such data for reasonableness and consistency.

Actuarial funding is based on the Entry Age Normal Cost Method. Under this method, the employer contribution rate provides for current cost (normal cost) plus a level percentage of payroll to amortize the unfunded actuarial accrued liability (UAAL). As of the valuation date, the amortization period is 27 years for half of the 2008 investment loss and 20 years for the remaining UAAL. The funding objective of the Plan is to establish contribution rates that will adequately fund member benefits. For actuarial valuation purposes, Plan assets are valued at Actuarial Value with adjustments for certain Special Reserves. Under this method, the assets used to determine employer contribution rates take into account market value by spreading all investment gains and losses (returns above or below expected returns) over a period of five years; the Actuarial Value so determined is constrained to remain within 20% of Market Value.

We selected the actuarial assumptions shown in the schedules to be appropriate for use under the Plan. We performed an analysis of the Plan's noneconomic experience for the years 2007 through 2009 to establish the validity of these assumptions. The assumptions used in the most recent valuation produce results that, individually and in aggregate, reasonably approximate the anticipated future experience of the Plan. The next experience analysis will take place during 2013 and is expected to cover the years 2010 through 2012.

Our firm has prepared the following schedules for the actuarial report: All demographic rate tables, salary increase rates, and Actuarial Value of Assets and Reserves. Additionally, we have prepared the following schedules based on historical information and our calculations as of January 1, 2012: Solvency Test, Schedule of Funding Progress, and Schedule of Contributions. We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices. In particular, the assumptions and methods used for funding purposes meet the parameters of the Governmental Accounting Standards Board Statement No. 25. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Respectfully Submitted,



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## **Section 1:**

### **Summary of Plan Provisions, Member Statistics, and Actuarial Assumptions**



## **1.1: Brief Outline of Plan Provisions**

### **Changes in Plan Provisions**

There have been no changes in Plan provisions since the prior valuation.

### **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.

#### ***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 twelve 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***

Final Compensation means the highest average Compensation earned during any twelve consecutive months of the Member's employment.

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

### **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 may choose not to participate.

#### ***Member Contributions***

Each Member contributes a percentage of Compensation to the Plan through payroll deduction. The percentage contributed depends on the Member's age upon joining the Plan. Representative rates are shown in Table 1 below (complete rate tables in appendix).

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.

**Table 1: Member Contribution Rates**

Entry Age	<u>General Member Rate</u>		<u>Safety Member Rate</u>	
	1 <sup>st</sup> \$350/month	Over \$350	1 <sup>st</sup> \$350/month	Over \$350
20	1.70%	2.55%	2.81%	4.22%
25	1.93%	2.90%	2.99%	4.48%
30	2.12%	3.17%	3.17%	4.76%
35	2.31%	3.47%	3.38%	5.07%
40	2.53%	3.79%	3.62%	5.43%
45	2.78%	4.17%	3.87%	5.80%
50	3.05%	4.57%	3.81%	5.72%

Interest is credited semiannually to each Member's accumulated contributions. The crediting rate is set by the Board; the current semi-annual rate is 3.80%, for an effective annual rate of 7.75%.

### **Service Retirement**

#### ***Eligibility***

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.

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.

***Benefit Amount***

The Service Retirement Benefit payable to General Members is equal to the percentage in Table 2 below multiplied by the Member's Final Compensation.

The Service Retirement Benefit payable to Safety Members is equal to the percentage in Table 3 below multiplied by the Member's Final Compensation.

The percentage of Final Compensation may not exceed 100%.

Members covered by Social Security will have their benefits reduced by the monthly dollar amounts shown in Table 4, multiplied by the years of Credited Service during which they were covered by Social Security.

**Table 2: 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	100.0	100.0	100.0	100.0
40											82.43	87.29	90.72	94.15	97.59	100.0				
41												89.47	92.99	96.51	100.0					
42													95.26	98.86						
43														100.0						

**Table 3: 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	46.60	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	65.70	69.00	69.00	69.00	69.00	69.00	69.00
24					56.20	59.23	62.48	65.41	68.56	72.00	72.00	72.00	72.00	72.00	72.00
25						61.70	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

**Table 4: 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

***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.

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.

## **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%.

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.

## **Nonservice-Connected Disability**

### ***Eligibility***

Members are eligible to 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.

### ***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.

## **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.

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.

## **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.

## **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.

## **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.

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%.

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.

## **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.

## 1.2: Summary of Participant Data as of January 1, 2012

	General	Safety	Total
<b>Active Participants</b>			
Number	4,441	813	5,254
Average Age	47.90	41.20	46.86
Average Service	12.26	11.93	12.21
Average Pay	\$67,172	\$78,772	\$68,967
<b>Service Retired</b>			
Number	2,946	485	3,431
Average Age	69.75	64.72	69.03
Average Annual Base Benefit	\$21,222	\$43,114	\$24,317
Average Annual Total Benefit	\$26,223	\$54,116	\$30,166
<b>Beneficiaries</b>			
Number	544	139	683
Average Age	73.14	66.34	71.76
Average Annual Base Benefit	\$9,408	\$17,219	\$10,998
Average Annual Total Benefit	\$15,716	\$28,512	\$18,320
<b>Duty Disabled</b>			
Number	218	177	395
Average Age	62.02	59.32	60.81
Average Annual Base Benefit	\$16,709	\$31,923	\$23,526
Average Annual Total Benefit	\$22,232	\$42,896	\$31,491
<b>Non-Duty Disabled</b>			
Number	163	13	176
Average Age	63.36	63.85	63.40
Average Annual Base Benefit	\$10,511	\$14,663	\$10,818
Average Annual Total Benefit	\$14,051	\$22,848	\$14,700
<b>Total Receiving Benefits</b>			
Number	3,871	814	4,685
Average Age	69.52	63.81	68.53
Average Annual Base Benefit	\$18,857	\$35,804	\$21,801
Average Annual Total Benefit	\$24,009	\$46,805	\$27,970
<b>Deferred Vested</b>			
Number	423	40	463
Average Age	48.68	42.52	48.15
Average Service	8.51	6.24	8.32

	General	Safety	Total
<b>Transfers and DROs</b>			
Number	362	94	456
Average Age	49.83	43.07	48.44
Average Service	6.00	5.16	5.83
<b>Funds on Account</b>			
Number	472	27	499
Average Age	43.67	35.97	43.26
Average Service	1.78	1.60	1.77
<b>Total Inactive</b>			
Number	1,257	161	1,418
Average Age	47.13	41.75	46.52
Average Service	5.26	4.83	5.21

Data pertaining to active and inactive Members and their beneficiaries as of the valuation date was supplied by the Plan Administrator on electronic media. As is usual in studies of this type, Member data was neither verified nor audited.

### Changes in Plan Membership: General

	Actives	Transfers/ DROS	Non-Vested Terminations	Vested Terminations	Non-Duty Disabled	Duty Disabled	Retired	Beneficiaries	Total
January 1, 2011	4,643	363	484	407	169	214	2,799	515	9,594
New Entrants	148	-	-	-	-	-	-	-	148
Rehires	25	(1)	(7)	(10)	-	-	(1)	-	6
Duty Disabilities	(3)	-	-	-	-	4	-	-	1
Non-Duty Disabilities	(5)	-	(1)	-	6	-	-	-	0
Retirements	(177)	(20)	(1)	(21)	-	-	217	2	0
Retirements from Safety with General Service	-	-	-	-	-	-	5	1	6
Vested Terminations	(47)	-	-	47	-	-	-	-	0
Died, With Beneficiaries' Benefit Payable	(3)	-	-	-	(4)	-	(34)	41	0
Died, Without Beneficiary, and Other Terminations	(39)	-	32	-	(7)	(3)	(37)	-	(54)
Transfers	(14)	15	-	(2)	-	-	-	-	(1)
Redeposits – AB 2766	-	-	-	-	-	-	-	-	0
Withdrawals Paid	(87)	(2)	(27)	(7)	-	-	-	-	(123)
Beneficiary Deaths	-	-	-	-	-	-	-	(22)	(22)
Domestic Relations Orders	-	7	-	-	-	-	-	5	12
Data Corrections	-	-	(8)	9	(1)	3	(3)	2	2
January 1, 2012	<b>4,441</b>	<b>362</b>	<b>472</b>	<b>423</b>	<b>163</b>	<b>218</b>	<b>2,946</b>	<b>544</b>	<b>9,569</b>

### Changes in Plan Membership: Safety

	Actives	Transfers/ DROS	Non-Vested Terminations	Vested Terminations	Non- Duty Disabled	Duty Disabled	Retired	Beneficiaries	Total
January 1, 2011	830	92	38	44	13	175	469	135	1,796
New Entrants	2	-	-	-	-	-	-	-	2
Rehires	5	-	(3)	(1)	-	-	-	-	1
Duty Disabilities	(2)	-	(1)	-	-	3	-	-	0
Non-Duty Disabilities	-	-	-	-	1	-	-	-	1
Retirements	(14)	(4)	-	(7)	-	-	24	1	0
Retirements from Safety with General Service	-	-	-	-	-	-	1	-	1
Vested Terminations	(5)	-	-	5	-	-	-	-	0
Died, With Beneficiaries' Benefit Payable	-	-	-	-	(1)	(1)	(2)	4	0
Died, Without Beneficiary, and Other Terminations	(2)	-	1	-	-	-	(7)	-	(8)
Transfers	2	4	(3)	(1)	-	-	-	-	2
Redeposits – AB 2766	-	1	-	-	-	-	-	-	1
Withdrawals Paid	(3)	(1)	(5)	-	-	-	-	-	(9)
Beneficiary Deaths	-	-	-	-	-	-	-	(3)	(3)
Domestic Relations Orders	-	2	-	-	-	-	-	2	4
Data Corrections	-	-	-	-	-	-	-	-	0
January 1, 2012	813	94	27	40	13	177	485	139	1,788



### Changes in Plan Membership: All Groups

	Actives	Transfers/ DROS	Non-Vested Terminations	Vested Terminations	Non- Duty Disabled	Duty Disabled	Retired	Beneficiaries	Total
January 1, 2011	5,473	455	522	451	182	389	3,268	650	11,390
New Entrants	150	0	0	0	0	0	0	0	150
Rehires	30	(1)	(10)	(11)	0	0	(1)	0	7
Duty Disabilities	(5)	0	(1)	0	0	7	0	0	1
Non-Duty Disabilities	(5)	0	(1)	0	7	0	0	0	1
Retirements	(191)	(24)	(1)	(28)	0	0	241	3	0
Dual Service Retirements	0	0	0	0	0	0	6	1	7
Vested Terminations	(52)	0	0	52	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	(3)	0	0	0	(5)	(1)	(36)	45	0
Died, Without Beneficiary, and Other Terminations	(41)	0	33	0	(7)	(3)	(44)	0	(62)
Transfers	(12)	19	(3)	(3)	0	0	0	0	1
Redeposits – AB 2766	0	1	0	0	0	0	0	0	1
Withdrawals Paid	(90)	(3)	(32)	(7)	0	0	0	0	(132)
Beneficiary Deaths	0	0	0	0	0	0	0	(25)	(25)
Domestic Relations Orders	0	9	0	0	0	0	0	7	16
Data Corrections	0	0	(8)	9	(1)	3	(3)	2	2
January 1, 2012	<b>5,254</b>	<b>456</b>	<b>499</b>	<b>463</b>	<b>176</b>	<b>395</b>	<b>3,431</b>	<b>683</b>	<b>11,357</b>

## 1.3: Summary of Actuarial Assumptions

### Changes in Actuarial Assumptions

The assumptions shown below are based on an experience study conducted as of January 1, 2011. There have been no changes in assumptions since the prior valuation.

Valuation Date	All assets and actuarial liabilities are computed as of January 1, 2012.
Rate of Return	The annual rate of return on all Plan assets is assumed to be 7.75%, net of investment and administrative expenses.
Cost of Living	The cost of living as measured by the Consumer Price Index (CPI) will increase at the rate of 3.25% per year.
Post Retirement COLA	Benefits are assumed to increase after retirement at the rate of 2.7% per year.
Increases in Pay	Assumed pay increases for active Members consist of increases due to base salary adjustments plus service-based increases due to longevity and promotion, as shown below:

	<u>Service</u>		
	<5	5-29	30+
<b>Base Increase</b>			
	3.50%	3.50%	3.50%
<b>Longevity &amp; Promotion</b>			
General	3.86%	0.96%	0.96%
Safety	4.83%	1.93%	1.93%
<b>Total (Compound)</b>			
General	7.49%	4.50%	3.50%
Safety	8.50%	5.50%	5.50%

Mortality Improvement	No mortality improvement is explicitly assumed; however we build a margin in our mortality assumption between the actual and expected number of deaths in order to assume some future mortality improvements. The experience study report for the period covering January 1, 2007 to December 31, 2009 contains a full description of these margins.
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**Mortality**

Rates of mortality for active and retired Members and their beneficiaries are specified by the Retired Pensioners (RP) 2000 tables published by the Society of Actuaries (projected from 2000 to 2010 using Scale AA), with a one year age setback for female members

All deaths among active General members are assumed to be non-duty.

**Duty Related Mortality**

Duty related deaths are assumed for Safety Members according to a 1981 Table. Representative rates are as follows:

Age	Rate
30	0.03%
35	0.04%
40	0.05%
45	0.06%
50	0.07%
55	0.08%
60	0.00%

**Disabled Member Mortality**

Rates of mortality for disabled Members are specified by the Retired Pensioners (RP) 2000 tables published by the Society of Actuaries (projected from 2000 to 2010 using Scale AA), with a five year age set-forward for male Members and a six year age set-forward for female Members.

Service Retirement

Retirement is assumed to occur among General Members and Safety Members in accordance with the tables below:

General

Service:	5 - 9	10 - 29		30 +	
Age	Both	Male	Female	Male	Female
50	0.0%	2.0%	2.0%	5.0%	7.0%
51	0.0%	2.0%	2.0%	5.0%	7.0%
52	0.0%	2.0%	2.0%	5.0%	7.0%
53	0.0%	3.0%	2.0%	5.0%	7.0%
54	1.0%	3.0%	3.0%	5.0%	7.0%
55	1.0%	5.0%	4.0%	15.0%	15.0%
56	1.0%	5.0%	7.0%	15.0%	15.0%
57	1.0%	5.0%	7.0%	15.0%	15.0%
58	1.0%	7.5%	7.0%	20.0%	20.0%
59	1.0%	7.5%	10.0%	25.0%	25.0%
60	1.0%	7.5%	10.0%	25.0%	25.0%
61	1.0%	7.5%	15.0%	35.0%	35.0%
62	1.0%	40.0%	25.0%	40.0%	35.0%
63	1.0%	25.0%	25.0%	35.0%	35.0%
64	1.0%	25.0%	25.0%	35.0%	35.0%
65	5.0%	50.0%	50.0%	50.0%	50.0%
66	5.0%	50.0%	50.0%	50.0%	50.0%
67	5.0%	40.0%	40.0%	40.0%	40.0%
68	5.0%	30.0%	30.0%	30.0%	30.0%
69	5.0%	30.0%	30.0%	30.0%	30.0%
70+	100.0%	100.0%	100.0%	100.0%	100.0%

Safety

Age	10-19 Years Service	20+ Years Service
45-49	0.0%	1.0%
50	10.0%	10.0%
51-52	5.0%	5.0%
53-60	5.0%	20.0%
61	25.0%	25.0%
62-64	25.0%	50.0%
65+	100.0%	100.0%

### Service-Connected Disability

Separate rates of duty disability are assumed among male and female General Members; rates for both sexes are combined for Safety Members. Below are sample rates:

Age	General Male	General Female	Safety
22	0.066%	0.032%	0.072%
27	0.066%	0.043%	0.125%
32	0.066%	0.073%	0.235%
37	0.066%	0.104%	0.432%
42	0.380%	0.134%	0.809%
47	0.380%	0.175%	1.421%
52	0.226%	0.227%	2.447%
57	0.226%	0.291%	3.762%
62	0.226%	0.356%	0.000%

### Non Service-Connected Disability

Separate rates of ordinary disability are assumed among male and female General and Safety Members. All rates are applied after five Years of Service. Sample rates are shown below.

Age	General Male	General Female	Safety Male	Safety Female
22	0.051%	0.076%	0.000%	0.000%
27	0.068%	0.095%	0.005%	0.009%
32	0.086%	0.115%	0.007%	0.014%
37	0.108%	0.145%	0.014%	0.027%
42	0.138%	0.197%	0.041%	0.081%
47	0.178%	0.281%	0.117%	0.234%
52	0.225%	0.381%	0.239%	0.477%
57	0.286%	0.482%	0.378%	0.756%
62	0.362%	0.583%	0.000%	0.000%

## Withdrawal

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

The rates shown in the sample table below are not applied to Members eligible for service retirement, or to Safety members age 60 or older

Service	General	Safety
0	12.0%	8.0%
1	7.0%	7.0%
2	4.0%	5.0%
3	4.0%	2.0%
4	4.0%	2.0%
5-9	1.5%	1.0%
10-19	0.5%	0.0%
20+	0.0%	0.0%

## Pay for Benefits

No allowance has been made for special increases in Compensation prior to termination or retirement. In particular, no special terminal payouts or pay increases are assumed to increase Final Compensation at retirement; however expected pensionable pay in excess of base pay is included in the determination of valuation pay for each member.

## Family Composition

50% of female members and 70% of males are assumed to be married. Male spouses are assumed to be three years older than their wives.

80% of male members and 50% of female members who die during active service are assumed to have a spouse or minor child eligible for a monthly survivor's benefit.

## Employment Status

No future transfers among member groups are assumed.

## Deferral Age

Terminated vested members are assumed to commence benefits at age 56 for General and age 55 for Safety.

**Vested Termination with  
Deferred Benefit**

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

Service	General	Safety
0-4	0.75%	0.75%
5-9	3.00%	2.50%
10-19	3.00%	1.00%
20-29	1.50%	0.00%
30+	0.00%	0.00%

No terminations are assumed for participants who are eligible for retirement, or among Safety members age 50 or older. For all members who terminate with less than five years of service, 100% are assumed to go to work with a reciprocal employer. For General members who terminate with at least five years of service, 25% are assumed to go to work with a reciprocal employer. This rate is 50% for Safety members.

## 1.4: Glossary of Actuarial Terms

### Actuarial Accrued Liability

A plan's actuarial accrued liability is the level of assets estimated by the system actuary to be needed as of the valuation date to

- Finance all previously earned benefits for actively employed members of the plan (and their beneficiaries, if applicable) for when they eventually retire, die or terminate with deferred vested benefits, and
- Finance all currently payable benefits of current pensioners and their beneficiaries (if applicable).

It is important to note that the Actuarial Accrued Liability is not a debt; instead, it is an asset target set by the actuarial cost method to produce an orderly accumulation of assets to pay for the plan's obligations.

### Actuarial Assumptions

The actuarial assumptions are the actuary's anticipated rates of future termination, death, disability and retirement for each member of the plan as well as the actuary's anticipated rate of investment return on underlying assets. To the extent that these assumptions are not in exact accord with actual events (which they never are), actuarial gains and losses will materialize.

### Actuarial Value of Assets

The actuarial value of assets, used for funding purposes, is computed using an asset smoothing technique in which investment gains and losses are not fully recognized in the year they occur, but are spread out. Use of an actuarial value of assets (rather than market value) helps avoid large fluctuations in recognized value of the underlying assets and, in turn, avoids large fluctuations in required contribution rates.

### Actuarial Present Value of Benefits

The actuarial present value of benefits is the Actuarial Accrued Liability plus actuarial present value of future Normal Costs. The actuarial present value of benefits is also the actuarial present value of all future benefits expected to be paid to the Plan's current members, whether accrued on the valuation data or after.

### Actuarial Funding Policy

The plan's actuarial funding policy is the scheduled program of accumulating assets to fund the plan's obligations, typically, but not necessarily, as a level percentage of payroll. The funding policy includes:

- The Normal Cost, and
- Amortization of the Unfunded or Overfunded Actuarial Accrued Liability (whichever is applicable).



### Closed Amortization Period

An amortization period which decreases each year, typically one year at a time. For example, a closed 30 year amortization has 29 years remaining in year 2, 28 remaining in year 3, etc.

### Extraordinary Actuarial Gain (Loss)

An Experience Gain (Loss) determined by the Board to be of such magnitude and rarity to warrant creation of a special amortization policy.

### Investment Gains and Losses

When the investment return on assets exceeds the assumed rate of return (the actuarial assumption as to investment return), this difference is identified as an investment gain. Correspondingly, when the returns are less than expected, this difference is identified as an investment loss. These investment gains and losses are either recognized immediately to produce the market value of assets or are spread out to produce the Actuarial Value of Assets.

### Normal Cost

The Normal Cost is calculated as the amount necessary to fund each Member's benefits from that Member's Plan entry date to the end of his or her projected working life.

### Open (or Rolling) Amortization Period

An amortization period which remains at the same number of years, without decreasing.

### Unfunded Actuarial Accrued Liabilities

When the actuarial value of assets is below the Actuarial Accrued Liability, there is an Unfunded Actuarial Accrued Liability which must be paid off or amortized on a schedule. When the actuarial value of assets is in excess of the Actuarial Accrued Liability, this can lead to a reduction in future contributions on an amortization schedule.

## **Section 2:**

### **Asset Information**

## 2.1: Balance Sheet as of December 31, 2011

	Market Value
<b>Assets</b>	
Cash and Cash Equivalents	\$90,956,861
Cash collateral-security lending	<u>104,691,368</u>
Total Cash and Cash Equivalents	\$195,648,229
Receivables:	
Investment Income Receivables	\$ 3,985,464
Contributions Receivable	4,986,684
Securities sold, not received	595,652
SWAP Payments receivable	0
Other investment income receivable	324
Miscellaneous receivables	<u>18,917</u>
Total Receivables	\$ 9,587,041
Investments, at market value:	
Short-Term Investments	\$-
Bonds	355,287,877
Stocks	639,572,887
Real Estate	378,273,891
Alternative Investments	<u>478,077,009</u>
Total Investments	\$1,851,211,664
Other Assets:	
Prepaid Expenses	\$ 90,900
Equipment and fixtures, Net	<u>572,057</u>
<b>Total Assets</b>	<b>\$2,057,109,892</b>
<b>Liabilities</b>	
Securities Lending-Cash Collateral	\$104,691,368
Securities Purchased, Not Paid	1,454,516
Accrued Expenses and Other Payables	1,018,634
Security Lending Interest and Other Expense	<u>0</u>
<b>Total Liabilities</b>	<b>\$107,164,518</b>
<b>Net assets held in trust for pension benefits</b>	<b>\$1,949,945,374</b>

## 2.2: Computation of Actuarial Value of Assets

	(a)	(b)	(c)	(d)	(e) = (d) - (c)	(f)	(g) = (e) x (f)
YEAR	Contributions	Benefits	Expected Return	Actual Return	Additional Earnings	Not Recognized	Unrecognized Earnings
2008	111,297,006	109,001,147	178,311,579	(670,218,219)	(848,529,798)	20%	(169,705,960)
2009	115,020,830	117,115,895	152,687,874	178,491,823	25,803,949	40%	10,321,579
2010	121,911,631	126,364,628	134,414,380	214,747,485	80,333,105	60%	48,199,863
2011	126,932,474	132,709,273	150,952,879	25,735,622	(125,217,257)	80%	<u>(100,173,806)</u>
(1)	Total Unrecognized Dollars						(211,358,323)
(2)	Market Value of Assets as of December 31, 2011						1,949,945,374
(3)	Preliminary Actuarial Value of Assets as of December 31, 2011: [(2) - (1)]						2,161,303,697
(4)	Corridor Limits						
	a. 80% of Net Market Value						1,559,956,299
	b. 120% of Net Market Value						2,339,934,449
(5)	Actuarial Value of Assets after Corridor						2,161,303,697
(6)	Ratio of Actuarial Value to Market Value [(5) ÷ (2)]						110.8%
(7)	Market Stabilization Designation [(2) - (5)]						(211,358,323)
(8)	Special (Non Valuation) Reserves:						
	\$5,000 Death Benefits						6,789,058
	Purchasing Power COL Reserve						6,716,507
	Class Action Settlement – Pre 4/1/1982						132,513
	Class Action Settlement – Post 4/1/1982						14,556,866
	Contingency						0
	Undistributed Earnings Reserve						0
	Total Special Reserves						<u>28,194,944</u>
(9)	Pension Reserves at Actuarial Value (Valuation Assets): [(5) - (8)*(6)]						<b>\$ 2,130,052,649</b>

Prior to 2011, the actuarial value of assets included the post-employment healthcare agency fund.

## 2.3: Income Statement (Pension Fund)

### January 1, 2011 through December 31, 2011

	Market Value	Expected Market Value	Actuarial Value
<b>Additions</b>			
Contributions			
Employer's Contribution	\$112,891,701	\$ 112,891,701	\$ 112,891,701
Members' Contributions	<u>14,040,773</u>	<u>14,040,773</u>	<u>14,040,773</u>
Total Contributions	126,932,474	\$ 126,932,474	\$ 126,932,474
Net Investment Income			
Net Appreciation/(Depreciation) in Fair Value of Investments	\$4,552,554	N/A	N/A
Interest	29,172,659	N/A	N/A
Dividends	4,014,690	N/A	N/A
Real Estate Income, net	5,265,951	N/A	N/A
Investment Expenses	(14,090,669)	N/A	N/A
Miscellaneous Investment Income	<u>8,348</u>	<u>N/A</u>	<u>N/A</u>
Net Investment Income, Before Securities Lending Income	28,923,533	\$ 150,952,879	\$ (39,318,213)
Securities Lending Income			
Earnings	\$365,553	\$ 365,553	\$ 365,553
Rebates	81,589	81,589	81,589
Fees	(108,444)	(108,444)	(108,444)
Net Securities Lending Income	338,698	338,698	338,698
Net Investment Income	29,262,231	151,291,577	(38,979,515)
Miscellaneous Income	<u>68,107</u>	<u>68,107</u>	<u>68,107</u>
<b>Total Additions</b>	\$156,262,812	\$ 278,292,159	\$ 88,021,066
<b>Deductions</b>			
Benefit payments	\$131,069,532	\$ 131,069,532	\$ 131,069,532
Death Benefits	572,007	572,007	572,007
Refunds of Members' Contributions	<u>1,067,734</u>	<u>1,067,734</u>	<u>1,067,734</u>
Total Benefit Payments	\$132,709,273	\$ 132,709,273	\$ 132,709,273

	Market Value	Expected Market Value	Actuarial Value
Administrative & Other Expenses			
General Administrative Expenses	\$3,292,734	\$ 3,292,734	\$ 3,292,734
Actuary Fees	134,553	134,553	134,553
Fund Legal Fees	<u>321,661</u>	<u>321,661</u>	<u>321,661</u>
Total Administrative & Other Expenses	\$3,748,948	\$ 3,748,948	\$ 3,748,948
<b>Transfer Between Plans</b>	\$(154,232)		
<b>Total Deductions</b>	\$136,303,989	\$ 136,458,221	\$ 136,458,221
<b>Net increase (Decrease)</b>	\$19,958,823	\$ 141,833,938	\$ (48,437,155)
Net Assets Held in Trust for Pension Benefits			
Beginning of Year	\$1,929,986,551	\$ 1,929,986,551	\$ 2,209,740,852
<b>End of Year</b>	\$1,949,945,374	\$ 2,071,820,489	\$ 2,161,303,697
Approximate Return	1.34%	7.75%	-1.77%

## 2.4: Historical Returns

Year Ended December 31	Annualized Rate of Return (Market Value)	Annualized Rate of Return (Actuarial Value)	Increase in CPI*
1994	0.2%	8.2%	2.7%
1995	25.3%	21.7%	2.5%
1996	13.5%	12.2%	3.3%
1997	17.3%	3.9%	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	-29.9%	-14.2%	-0.5%
2009	11.4%	11.6%	2.5%
2010	12.4%	6.4%	1.5%
2011	1.3%	-1.8%	3.0%
Compounded 15 Year Average	5.7%	7.1%	2.3%
Compounded 10 Year Average	4.2%	4.5%	2.4%
Compounded 5 Year Average	-1.1%	2.1%	2.1%

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

## 2.5: 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 <sup>1</sup>	5

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<sup>1</sup> As of January 1, 2012 the total projected liability associated with paying the Post-82 Settlement allowances for the lifetime of the members and beneficiaries is estimated to be \$32,194,116



### **Section 3:**

### **Actuarial Computations**

### 3.1: Computation of Annual Employer Contribution Rate

	January 1, 2011	January 1, 2012
(1) Active Fully Projected Actuarial Liability		
Retirement	1,747,264,432	1,724,377,187
Disability	204,334,581	199,448,573
Death	31,170,894	27,391,717
Termination	<u>45,605,853</u>	<u>43,910,653</u>
Total Active	2,028,375,760	1,995,128,130
(2) Inactive Actuarial Liability		
Retired and Beneficiaries	1,185,157,155	1,290,813,859
Disability	192,686,433	207,531,882
Death	117,821,487	128,992,663
Deferred Vested/Reciprocal	<u>65,454,568</u>	<u>69,506,921</u>
Total Inactive	1,561,119,643	1,696,845,325
(3) Total Fully Projected Actuarial Liability [(1) + (2)]	3,589,495,403	3,691,973,455
(4) Present Value Future Employee Contributions	107,719,578	103,281,094
(5) Present Value Future Employer Normal Cost	564,087,866	540,371,005
(6) Mid-Year Employer Normal Cost	65,470,683	63,718,815
(7) Projected Payroll	367,344,479	356,419,122
(8) Employer Normal Cost (% Pay) [(6) ÷ (7)]	17.82%	17.88%
(9) Actuarial Accrued Liability [(3) – (4) – (5)]	2,917,687,959	3,048,321,356
(10) Valuation Assets	2,120,384,183	2,130,052,649
(11) Total Unfunded Actuarial Accrued Liability [(9) – (10)]	797,303,776	918,268,707
(12) Extraordinary Actuarial Loss	439,480,988	445,907,593
(13) Amortization of Extraordinary UAAL	26,166,878	27,082,719
(14) Remaining UAAL [(11) – (12)]	357,822,788	472,361,114
(15) Amortization of Remaining UAAL	26,048,183	34,386,151
(16) Total Amortization of Unfunded Actuarial Liability [(13) + (15)]	52,215,061	61,468,870
(17) Amortization of Unfunded Actuarial Liability (% Pay) [(16) ÷ (7)]	14.21%	17.25%
(18) Total Employer Cost [(6) + (16)]	117,685,744	125,187,685
(19) <b>Total Employer Cost (% Pay)</b> [(18) ÷ (7)]	<b>32.04%</b>	<b>35.12%</b>

## 3.2: Computation of Funding Ratios as of January 1, 2012

	Accumulated Benefit Obligation (Unit Credit Accrued Liability)	Projected Benefit Obligation (Projected Unit Credit Accrued Liability)	Entry Age Normal Accrued Liability
(1) Active Actuarial Accrued Liability	1,050,540,173	1,361,203,631	1,351,476,031
(2) Inactive Actuarial Liability			
Retired and Beneficiaries	1,290,813,859	1,290,813,859	1,290,813,859
Disability	207,531,882	207,531,882	207,531,882
Death/DRO	128,992,663	128,992,663	128,992,663
Vested Term and Reciprocal	69,506,921	69,506,921	69,506,921
Total Inactive	1,696,845,325	1,696,845,325	1,696,845,325
(3) Total Actuarial Accrued Liability [(1) + (2)]	2,747,385,498	3,058,048,956	3,048,321,356
(4) Valuation Assets	2,130,052,649	2,130,052,649	2,130,052,649
(5) <b>Funding Ratio</b> [(4) ÷ (3)]	<b>77.5%</b>	<b>69.7%</b>	<b>69.9%</b>

### 3.3: Actuarial Balance Sheet

<b>Assets</b>	
1. Actuarial value of assets	\$2,161,303,697
2. Present value of future contributions by members	103,281,094
3. Present value of future employer contributions for normal cost	540,371,005
4. Present value of other future employer contributions (UAAL)	918,268,707
<b>5. Total actuarial assets</b>	<b>\$3,723,224,503</b>
<b>Actuarial Liabilities</b>	
6. Present value of retirement allowances payable to retired/disabled members and their survivors	\$1,627,338,404
7. Present value of service retirement allowances payable to presently active members and their survivors	1,724,377,187
8. Present value of allowances payable to current and future vested terminated and their survivors	107,490,363
9. Present value of disability retirement allowances payable to presently active members and their survivors	199,448,573
10. Present value of death benefits payable on behalf of presently active members	27,391,717
11. Present value of members' contributions to be returned upon withdrawal	5,927,211
12. Special Reserves	28,194,944
13. Adjustment to Special Reserves (asset smoothing)	3,056,104
<b>14. Total Actuarial Liabilities</b>	<b>\$3,723,224,503</b>

### 3.4: Actuarial Gain and Loss

1.	Unfunded actuarial accrued liability as of December 31, 2010	797,303,776
2.	Change due to contributions:	
	(a) Normal Cost	75,402,795
	(b) Interest on (a)	5,843,717
	(c) Interest on (1)	61,791,043
	(d) Total contributions <sup>2</sup>	(126,932,474)
	(e) Interest on (d)	(4,918,633)
	(f) Net change [(a) + (b) + (c) + (d) + (e)]	11,186,448
3.	Expected unfunded actuarial accrued liability as of December 31, 2011 [(1) + (2)]	808,490,224
4.	Change due to experience:	
	(a) Actuarial (gain)/loss from liabilities	(31,402,644)
	(b) Actuarial (gain)/loss from assets	141,181,127
	(c) Net change [(a) + (b)]	109,778,483
5.	Unfunded actuarial accrued liability before changes [(3) + (4)]	918,268,707
6.	Change in actuarial assumptions	0
7.	Change in plan provisions	0
8.	Change in actuarial methods	0
9.	Unfunded actuarial accrued liability as of December 31, 2011 [(5) + (6) + (7) + (8)]	918,268,707

<sup>2</sup> Does not include contributions to Post-employment Healthcare Agency Fund

## **Section 4:**

### **Disclosure Information**

## 4.1: Schedules of Funding Status and Employer Contributions Required Under GASB Statement No. 25

The Governmental Accounting Standards Board (GASB) Statements No. 25 and 27 relate to the disclosure of actuarial pension liabilities on a public employer's financial statements. For accounting periods beginning after June 15, 1996, information required under these statements must be prepared for a public employer who seeks compliance with generally accepted accounting principles (GAAP) on behalf of its public employee retirement system.

GASB Statement No. 25 requires preparation of schedules of funding status and employer contributions, as well as the disclosure of plan provisions, actuarial assumptions, and other information. The required schedules are shown below. In each case, we have relied upon information from our files and contained in the reports of other actuaries employed by the employer in completing the schedules. While we have no reason to believe the information in our files or in other actuaries' reports is inaccurate, we strongly recommend that employer personnel verify the schedules below before they are included in Plan or employer financial statements.

### Schedule of Funding Status (Dollar Amounts in Thousands)

Actuarial Valuation Date	Valuation Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio	Covered Payroll	Unfunded Liability as a Percent of Payroll
1/1/2001	1,182,914	1,091,830	(91,084)	108.3%	215,363	(42.3%)
1/1/2002	1,357,409	1,266,747	90,662	107.2%	243,327	(37.3%)
1/1/2003	1,448,905	1,418,209	(30,696)	102.2%	259,812	(11.8%)
1/1/2004	1,531,288	1,621,060	89,772	94.5%	286,429	31.3%
1/1/2005	1,614,979	1,769,507	154,528	91.3%	296,473	52.1%
1/1/2006	1,727,033	1,935,818	208,785	89.2%	309,692	67.4%
1/1/2007	1,869,717	2,149,938	280,221	87.0%	340,828	82.2%
1/1/2008	2,029,949	2,334,521	304,572	87.0%	367,361	82.9%
1/1/2009	1,821,357	2,510,925	689,568	72.5%	377,559	182.6%
1/1/2010	1,949,011	2,769,612	820,600	70.4%	385,442	212.9%
1/1/2011	2,120,384	2,917,688	797,304	72.7%	367,344	217.0%
1/1/2012	2,130,053	3,048,321	918,269	69.9%	356,419	257.6%

**Schedule of Employer Contributions**  
**(Dollar Amounts in Thousands)**

<b>Year Ending</b>	<b>Annual Required Contribution<sup>3</sup></b>	<b>Actual Contribution</b>	<b>Percentage Contributed</b>
12/31/2000	17,798	17,798	100%
12/31/2001	22,642	22,642	100%
12/31/2002	25,016	25,016	100%
12/31/2003	34,784	34,784	100%
12/31/2004	42,688	42,688	100%
12/31/2005	62,509	62,509	100%
12/31/2006	73,612	73,612	100%
12/31/2007	85,869	85,869	100%
12/31/2008	94,163	94,163	100%
12/31/2009	97,806	97,806	100%
12/31/2010	104,452	104,452	100%
12/31/2011	112,892	112,892	100%

The table below summarizes certain information about this actuarial report.

Valuation date	January 1, 2012
Actuarial cost method	Entry Age Normal
Amortization method	Level percentage of payroll with separate amortization periods for Extraordinary Actuarial Gains or Losses
Remaining amortization period	27 Years for 2008 Extraordinary loss, 20 years for remaining UAAL. (23 year Single Equivalent Period)
Asset valuation method	Actuarial value: Excess earnings smoothed over five years, 80%/120% corridor around market value
Actuarial assumptions:	
Investment rate of return*	7.75%
Projected salary increases*	3.50%, plus service-based rates
*Includes inflation at	3.25%
Cost of living adjustments	2.70% per year assumed

<sup>3</sup> It was reported to the actuary that the County's practice is to contribute the percent-of-pay employer contribution rate shown in the actuarial valuation report, so the annual required contributions shown in the Schedule of Employer Contributions are the actual contributions made by the County in the Plan Year.



## **Appendix I:**

### **General and Safety Contribution Rates, Solvency Test, Member Contribution Rates**

## Contribution Rates for General and Safety

Separate rates for General and Safety members are shown below.

	<u>As of 1/1/2011</u>			<u>As of 1/1/2012</u>		
	General	Safety	Total	General	Safety	Total
<b>Employer Normal Cost</b>						
Basic	11.00%	19.24%	12.45%	11.00%	19.27%	12.48%
COL	4.69%	8.77%	5.37%	4.70%	8.78%	5.39%
Total	15.69%	28.01%	17.82%	15.70%	28.05%	17.88%
<b>UAAL Amortization Cost</b>						
Basic	9.78%	17.31%	11.11%	11.78%	21.18%	13.46%
COL	2.67%	5.17%	3.11%	3.22%	6.38%	3.78%
Total	12.45%	22.48%	14.22%	14.99%	27.56%	17.25%
<b>Total Cost</b>						
Basic	20.78%	36.55%	23.56%	22.78%	40.44%	25.95%
COL	7.35%	13.93%	8.48%	7.91%	15.16%	9.18%
Total	28.13%	50.49%	32.04%	30.69%	55.61%	35.12%

\* Some net percentages may appear to be off by one basis point. This is due to rounding.

## Solvency Test

As part of the information required for financial reporting, a solvency test and history of such is shown in the table below. Historical information (prior to 1/1/2007) was taken from the actuarial valuation report as of December 31, 2005.

Valuation Date	<u>Actuarial Accrued Liability</u>				<u>Portion of Accrued Liabilities Covered by Assets</u>			
	Active Member Contributions	Retirees and Beneficiaries	Active Members <sup>4</sup>	Total	Valuation Assets	Active Member Contributions	Retirees and Beneficiaries	Active Members
1/1/2001	123,941,000	486,532,000	481,357,000	1,091,830,000	1,182,914,000	100%	100%	100%
1/1/2002	132,004,000	541,321,000	593,423,000	1,266,748,000	1,357,409,000	100%	100%	100%
1/1/2003	137,209,000	643,984,000	637,016,000	1,418,209,000	1,448,905,000	100%	100%	100%
1/1/2004	129,606,000	726,382,000	739,749,000	1,595,737,000	1,531,288,000	100%	100%	91%
1/1/2005	140,800,000	805,878,000	822,829,000	1,769,507,000	1,614,979,000	100%	100%	81%
1/1/2006	147,953,000	904,208,000	883,657,000	1,935,818,000	1,727,033,000	100%	100%	76%
1/1/2007	159,100,000	1,023,296,000	967,542,000	2,149,938,000	1,869,717,000	100%	100%	71%
1/1/2008	166,804,000	1,119,690,000	1,048,027,000	2,334,521,000	2,029,949,000	100%	100%	71%
1/1/2009	176,235,961	1,231,647,623	1,103,041,755	2,510,925,339	1,821,357,079	100%	100%	37%
1/1/2010	187,986,706	1,373,256,766	1,208,368,072	2,769,611,544	1,949,011,498	100%	100%	32%
1/1/2011	193,612,757	1,495,665,075	1,228,410,127	2,917,687,959	2,120,384,183	100%	100%	35%
1/1/2012	202,924,928	1,627,338,404	1,218,058,024	3,048,321,356	2,130,052,649	100%	100%	25%

<sup>4</sup> Includes terminated vested members

**Table 1: General Member Contribution Rates**

Entry Age	<u>Basic Rate</u>		<u>COLA Cost-Sharing Rate<sup>1</sup></u>	
	1 <sup>st</sup> \$350/month	Over \$350	1 <sup>st</sup> \$350/month	Over \$350
16	1.53%	2.29%	0.99%	1.49%
17	1.57%	2.35%	0.99%	1.49%
18	1.61%	2.42%	0.99%	1.49%
19	1.66%	2.48%	0.99%	1.49%
20	1.70%	2.55%	0.99%	1.49%
21	1.75%	2.62%	1.03%	1.54%
22	1.80%	2.70%	1.06%	1.59%
23	1.85%	2.77%	1.09%	1.64%
24	1.90%	2.85%	1.12%	1.69%
25	1.93%	2.90%	1.16%	1.74%
26	1.97%	2.95%	1.19%	1.78%
27	2.00%	3.01%	1.22%	1.83%
28	2.04%	3.06%	1.25%	1.87%
29	2.08%	3.12%	1.27%	1.91%
30	2.12%	3.17%	1.30%	1.95%
31	2.15%	3.23%	1.33%	2.00%
32	2.19%	3.29%	1.35%	2.03%
33	2.23%	3.35%	1.39%	2.09%
34	2.27%	3.41%	1.43%	2.14%
35	2.31%	3.47%	1.47%	2.21%
36	2.35%	3.53%	1.51%	2.27%
37	2.40%	3.59%	1.55%	2.33%
38	2.44%	3.66%	1.60%	2.39%
39	2.48%	3.73%	1.64%	2.46%
40	2.53%	3.79%	1.68%	2.52%
41	2.58%	3.86%	1.71%	2.56%
42	2.62%	3.94%	1.73%	2.60%
43	2.67%	4.01%	1.76%	2.64%
44	2.73%	4.09%	1.78%	2.67%
45	2.78%	4.17%	1.81%	2.72%
46	2.84%	4.26%	1.84%	2.76%
47	2.90%	4.35%	1.86%	2.80%
48	2.97%	4.45%	1.88%	2.83%
49	3.04%	4.57%	1.90%	2.85%
50	3.05%	4.57%	1.90%	2.84%
51	3.05%	4.58%	1.90%	2.85%
52	3.05%	4.58%	1.89%	2.83%
53	3.06%	4.59%	1.83%	2.74%
54+	3.06%	4.59%	1.79%	2.68%

<sup>1</sup> 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.

**Table 2: Safety Member Contribution Rates**

Entry Age	<u>Basic Rate</u>		<u>COLA Cost-Sharing Rate<sup>1</sup></u>	
	1 <sup>st</sup> \$350/month	Over \$350	1 <sup>st</sup> \$350/month	Over \$350
16	2.68%	4.02%	2.50%	3.74%
17	2.71%	4.07%	2.50%	3.74%
18	2.74%	4.12%	2.50%	3.74%
19	2.78%	4.17%	2.50%	3.74%
20	2.81%	4.22%	2.50%	3.74%
21	2.85%	4.27%	2.53%	3.79%
22	2.88%	4.32%	2.55%	3.83%
23	2.92%	4.37%	2.58%	3.87%
24	2.95%	4.43%	2.60%	3.90%
25	2.99%	4.48%	2.63%	3.95%
26	3.02%	4.53%	2.66%	3.99%
27	3.06%	4.59%	2.69%	4.04%
28	3.10%	4.65%	2.73%	4.09%
29	3.13%	4.70%	2.76%	4.14%
30	3.17%	4.76%	2.80%	4.20%
31	3.21%	4.82%	2.85%	4.27%
32	3.25%	4.88%	2.90%	4.35%
33	3.29%	4.94%	2.96%	4.44%
34	3.34%	5.00%	2.97%	4.45%
35	3.38%	5.07%	2.98%	4.47%
36	3.42%	5.13%	3.00%	4.51%
37	3.47%	5.20%	3.03%	4.55%
38	3.52%	5.27%	3.06%	4.59%
39	3.56%	5.35%	3.10%	4.65%
40	3.62%	5.43%	3.15%	4.73%
41	3.67%	5.51%	3.14%	4.71%
42	3.73%	5.60%	3.19%	4.78%
43	3.80%	5.70%	3.21%	4.81%
44	3.88%	5.82%	3.24%	4.86%
45	3.87%	5.80%	3.27%	4.90%
46	3.85%	5.78%	3.32%	4.98%
47	3.84%	5.76%	3.38%	5.06%
48	3.83%	5.74%	3.43%	5.14%
49+	3.81%	5.72%	3.48%	5.21%
<sup>1</sup> 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.				

## **Appendix II:**

### **Detailed Data Summaries, and Demographic Assumption Summary**

## Active Member Data

Valuation at Year End	Plan Type	Member Count	Annual Payroll	Average Annual Salary	Average Salary Increase
<b>2006</b>	General	5,234	288,178,806	55,059	18.22%
	Safety	820	56,293,820	68,651	15.52%
	<b>Total</b>	<b>6,054</b>	<b>344,472,626</b>	<b>56,900</b>	<b>17.68%</b>
<b>2007</b>	General	5,353	308,773,122	57,682	4.76%
	Safety	871	62,988,014	72,317	5.34%
	<b>Total</b>	<b>6,224</b>	<b>371,761,136</b>	<b>59,730</b>	<b>4.97%</b>
<b>2008</b>	General	5,180	315,202,954	60,850	5.49%
	Safety	900	67,127,759	74,586	3.14%
	<b>Total</b>	<b>6,080</b>	<b>382,330,713</b>	<b>62,883</b>	<b>5.28%</b>
<b>2009</b>	General	4,990	320,526,792	64,234	5.56%
	Safety	925	70,801,157	76,542	2.62%
	<b>Total</b>	<b>5,915</b>	<b>391,327,949</b>	<b>66,159</b>	<b>5.21%</b>
<b>2010</b>	General	4,643	308,183,424	66,376	3.33%
	Safety	830	64,817,396	78,093	2.03%
	<b>Total</b>	<b>5,473</b>	<b>373,000,820</b>	<b>68,153</b>	<b>3.01%</b>
<b>2011</b>	General	4,441	298,308,687	67,172	1.20%
	Safety	813	64,041,814	78,772	0.87%
	<b>Total</b>	<b>5,254</b>	<b>362,350,501</b>	<b>68,967</b>	<b>1.19%</b>

Payroll figures represent active member's annualized pay rates on December 31. Prior to 2006, payroll was not annualized, which explains the large apparent increases in average salary from 2005 to 2006.

### 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 Percentage Increase
<b>2006</b>	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%
	<b>Total</b>	<b>221</b>	<b>49</b>	<b>113</b>	<b>3,739</b>	<b>83,637,900</b>	<b>22,369</b>	<b>3.45%</b>
<b>2007</b>	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%
	<b>Total</b>	<b>237</b>	<b>37</b>	<b>107</b>	<b>3,906</b>	<b>92,610,060</b>	<b>23,710</b>	<b>5.99%</b>
<b>2008</b>	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%
	<b>Total</b>	<b>253</b>	<b>40</b>	<b>101</b>	<b>4,098</b>	<b>102,063,875</b>	<b>24,906</b>	<b>5.04%</b>
<b>2009</b>	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%
	<b>Total</b>	<b>231</b>	<b>38</b>	<b>115</b>	<b>4,252</b>	<b>111,564,034</b>	<b>26,238</b>	<b>5.35%</b>
<b>2010</b>	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%
	<b>Total</b>	<b>307</b>	<b>40</b>	<b>110</b>	<b>4,489</b>	<b>122,285,816</b>	<b>27,241</b>	<b>3.82%</b>
<b>2011</b>	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%
	<b>Total</b>	<b>272</b>	<b>46</b>	<b>122</b>	<b>4,685</b>	<b>131,037,227</b>	<b>27,970</b>	<b>2.68%</b>

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



## Schedule of Average Monthly Benefit Payments

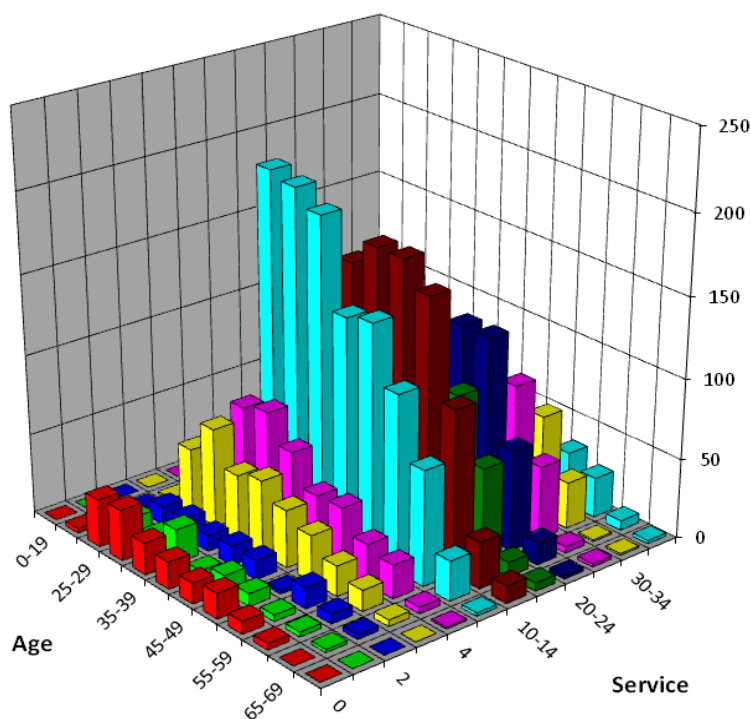
### Number of Years Since Retirement

Valuation at Year End	Plan Type		0-4	5-9	10-14	15-19	20-24	25-29	30 and Over
2006	General	Average Benefits	\$1,933	\$1,519	\$1,560	\$1,376	\$1,246	\$874	\$755
		Count	1,036	721	505	375	226	161	83
	Safety	Average Benefits	\$3,788	\$3,443	\$2,867	\$2,914	\$3,000	\$2,178	\$1,461
		Count	219	191	88	52	36	24	22
	Total	Average Benefits	\$2,256	\$1,922	\$1,754	\$1,564	\$1,487	\$1,043	\$903
		Count	1,255	912	593	427	262	185	105
2007	General	Average Benefits	\$2,063	\$1,675	\$1,615	\$1,389	\$1,403	\$974	\$803
		Count	1,055	786	535	365	243	152	102
	Safety	Average Benefits	\$3,698	\$3,848	\$3,068	\$2,766	\$3,110	\$2,333	\$1,522
		Count	198	231	91	58	39	29	22
	Total	Average Benefits	\$2,321	\$2,168	\$1,826	\$1,578	\$1,639	\$1,191	\$930
		Count	1,253	1,017	626	423	282	181	124
2008	General	Average Benefits	\$2,133	\$1,835	\$1,557	\$1,586	\$1,474	\$1,004	\$830
		Count	1,068	839	555	414	265	135	112
	Safety	Average Benefits	\$4,056	\$3,940	\$3,109	\$3,055	\$2,904	\$2,481	\$1,673
		Count	217	234	104	65	38	33	19
	Total	Average Benefits	\$2,458	\$2,294	\$1,802	\$1,785	\$1,653	\$1,294	\$ 952
		Count	1,285	1,073	659	479	303	168	131

**Number of Years Since Retirement**

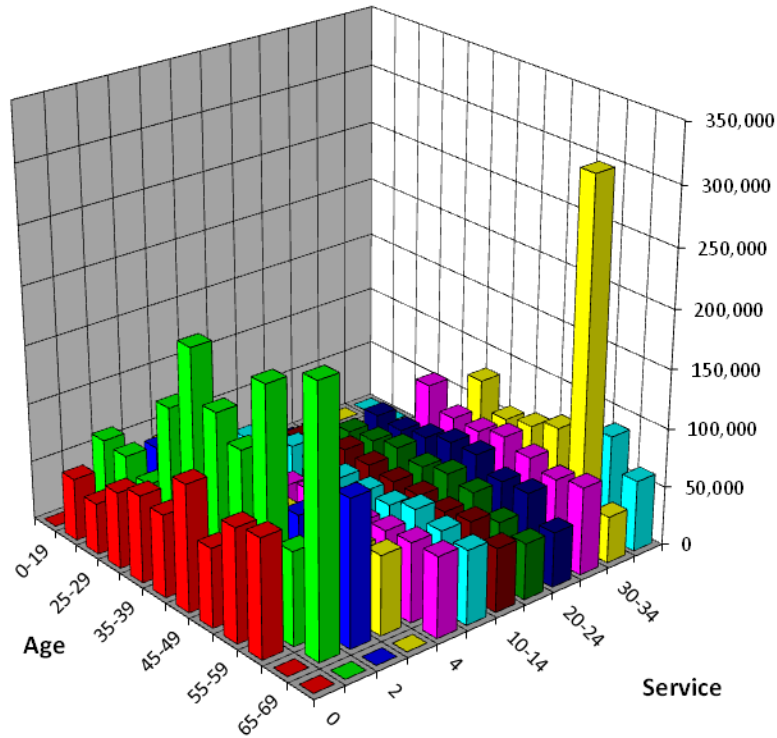
Valuation at Year End	Plan Type		0-4	5-9	10-14	15-19	20-24	25-29	30 and Over
<b>2009</b>	General	Average Benefits	\$2,278	\$1,923	\$1,632	\$1,683	\$1,524	\$1,250	\$1,073
		Count	1,108	850	598	433	271	143	119
	Safety	Average Benefits	\$4,022	\$4,178	\$3,453	\$2,811	\$3,220	\$2,997	\$2,553
		Count	204	233	131	73	36	27	26
	Total	Average Benefits	\$2,549	\$2,408	\$1,959	\$1,846	\$1,723	\$1,527	\$1,339
		Count	1,312	1,083	729	506	307	170	145
<b>2010</b>	General	Average Benefits	\$2,269	\$2,093	\$1,696	\$1,806	\$1,549	\$1,379	\$1,015
		Count	1,149	912	640	428	285	157	126
	Safety	Average Benefits	\$4,033	\$4,353	\$3,570	\$2,931	\$3,567	\$2,848	\$2,646
		Count	235	241	150	74	34	28	30
	Total	Average Benefits	\$2,569	\$2,565	\$2,052	\$1,972	\$1,764	\$1,602	\$1,329
		Count	1,384	1,153	790	502	319	185	156
<b>2011</b>	General	Average Benefits	2,349	2,168	1,737	1,799	1,649	1,506	1,050
		Count	1,198	976	654	444	289	169	141
	Safety	Average Benefits	4,134	4,371	3,841	3,183	3,322	3,223	2,633
		Count	232	214	184	78	44	27	35
	Total	Average Benefits	\$2,639	\$2,564	\$2,199	\$2,006	\$1,870	\$1,743	\$1,364
		Count	1,430	1,190	838	522	333	196	176

**Active General Members  
 by Age and Service  
 as of January 1, 2012**



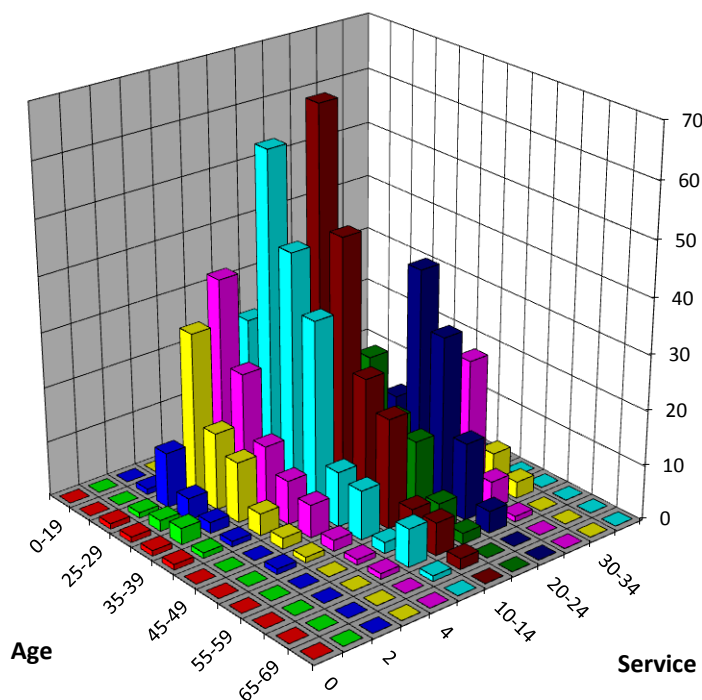
Service / Age	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35+	Total
0-19	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	3	1	2	1	3	0	0	0	0	0	0	0	10
25-29	30	11	11	41	40	45	0	0	0	0	0	0	178
30-34	32	8	12	62	69	209	43	0	0	0	0	0	435
35-39	20	21	10	41	74	205	153	13	1	0	0	0	538
40-44	17	4	12	46	57	195	161	54	34	1	0	0	581
45-49	13	10	12	36	38	141	177	83	107	32	1	0	650
50-54	16	8	2	29	39	145	177	88	125	70	31	2	732
55-59	8	4	13	19	25	110	162	96	125	89	63	33	747
60-64	4	3	6	13	21	72	102	59	63	46	29	25	443
65-69	0	2	3	4	4	25	29	9	14	4	1	6	101
70+	0	0	0	0	1	2	11	5	2	2	1	2	26
<b>Total</b>	<b>143</b>	<b>72</b>	<b>83</b>	<b>292</b>	<b>371</b>	<b>1149</b>	<b>1015</b>	<b>407</b>	<b>471</b>	<b>244</b>	<b>126</b>	<b>68</b>	<b>4,441</b>

**Active General Members  
Annual Payroll by Age and Service  
as of January 1, 2012**



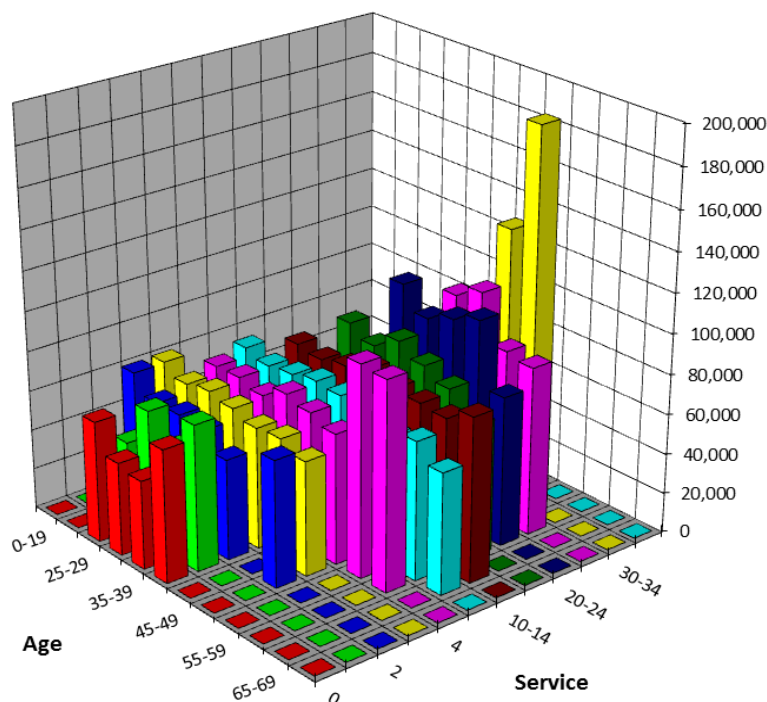
Service / Age	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35+	Average
<b>0-19</b>	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>20-24</b>	53,110	77,168	46,480	56,055	41,307	0	0	0	0	0	0	0	50,943
<b>25-29</b>	43,546	74,844	72,609	45,241	49,437	53,286	0	0	0	0	0	0	51,453
<b>30-34</b>	65,015	62,409	69,811	50,625	59,864	61,837	54,206	0	0	0	0	0	59,636
<b>35-39</b>	74,338	138,149	73,611	55,318	59,456	68,106	61,425	62,143	66,976	0	0	0	66,964
<b>40-44</b>	70,250	198,176	54,372	63,980	55,324	66,454	67,099	65,434	65,077	95,244	0	0	65,987
<b>45-49</b>	107,662	156,507	62,333	54,557	62,844	63,942	65,166	70,564	70,014	77,559	101,005	0	68,533
<b>50-54</b>	67,015	137,336	49,258	52,063	64,871	64,218	62,500	65,377	76,967	77,234	78,313	61,963	68,327
<b>55-59</b>	96,264	200,999	85,985	54,421	60,045	64,206	62,372	70,991	77,778	83,580	83,366	68,774	72,144
<b>60-64</b>	100,437	78,791	50,313	61,199	64,951	72,565	60,464	66,723	66,238	76,710	92,575	88,294	70,027
<b>65-69</b>	0	225,168	123,927	67,150	67,308	66,689	64,106	53,309	67,961	69,815	311,339	87,262	73,581
<b>70+</b>	0	0	0	0	68,318	63,024	53,948	47,520	46,451	74,443	39,562	60,253	54,894
<b>Average</b>	69,027	128,445	69,349	54,222	59,046	64,970	62,909	67,372	72,891	79,422	85,844	77,131	67,172

**Active Safety Members  
by Age and Service  
as of January 1, 2012**



Service / Age	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35+	Total
0-19	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	0	0	1	1	0	0	0	0	0	0	0	0	2
25-29	1	1	10	30	38	29	0	0	0	0	0	0	109
30-34	1	2	4	14	23	61	27	0	0	0	0	0	132
35-39	1	3	2	11	12	45	69	5	0	0	0	0	148
40-44	1	1	1	4	8	35	48	25	16	0	0	0	139
45-49	0	0	0	2	6	10	25	16	41	14	0	0	114
50-54	0	0	1	1	2	9	20	14	31	25	6	0	109
55-59	0	0	0	0	1	2	6	5	14	5	3	0	36
60-64	0	0	0	0	1	7	6	2	4	1	0	0	21
65-69	0	0	0	0	0	1	2	0	0	0	0	0	3
70+	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>4</b>	<b>7</b>	<b>19</b>	<b>63</b>	<b>91</b>	<b>199</b>	<b>203</b>	<b>67</b>	<b>106</b>	<b>45</b>	<b>9</b>	<b>0</b>	<b>813</b>

**Active Safety Members  
Annual Payroll by Age and Service  
as of January 1, 2012**



Service / Age	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35+	Average
0-19	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	0	0	68,963	69,406	0	0	0	0	0	0	0	0	69,185
25-29	60,759	44,907	59,830	64,231	68,102	72,655	0	0	0	0	0	0	67,209
30-34	46,717	67,287	60,178	66,767	68,666	69,410	75,469	0	0	0	0	0	69,756
35-39	44,470	54,889	58,665	64,433	65,622	71,068	73,534	87,107	0	0	0	0	71,150
40-44	66,664	73,279	50,475	60,982	72,637	73,911	76,262	81,540	107,519	0	0	0	79,293
45-49	0	0	0	62,187	69,666	72,886	80,984	89,766	96,072	102,872	0	0	88,695
50-54	0	0	63,642	57,469	65,519	72,550	77,673	83,583	101,430	109,855	136,257	0	94,835
55-59	0	0	0	0	105,772	65,834	76,392	78,202	106,693	86,470	191,048	0	99,611
60-64	0	0	0	0	104,551	69,452	75,244	66,422	74,811	84,247	0	0	74,215
65-69	0	0	0	0	0	60,778	82,297	0	0	0	0	0	75,124
70+	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	54,653	59,632	59,970	64,533	69,177	71,288	75,983	83,646	99,967	104,515	154,521	0	78,772

### Service Retired Benefits

General			Safety		Total	
Current Age	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	5	\$38,123	5	\$38,123
50-54	98	\$13,533	56	\$49,175	154	\$26,494
55-59	301	\$23,357	79	\$60,939	380	\$31,170
60-64	654	\$30,878	132	\$61,130	786	\$35,959
65-69	636	\$30,604	99	\$55,831	735	\$34,002
70-74	463	\$25,457	56	\$38,031	519	\$26,814
75-79	317	\$22,882	32	\$43,091	349	\$24,735
80-84	226	\$23,509	16	\$53,237	242	\$25,474
85-89	165	\$19,054	8	\$53,439	173	\$20,644
90-94	76	\$20,877	2	\$51,578	78	\$21,664
95+	10	\$15,328	0	\$0	10	\$15,328
<b>All Ages</b>	<b>2,946</b>	<b>\$26,223</b>	<b>485</b>	<b>\$54,116</b>	<b>3,431</b>	<b>\$30,166</b>

### Duty Disabled Benefits

General			Safety		Total	
Current Age	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit
0-24	0	\$0	0	\$0	0	\$0
25-29	0	\$0	1	\$25,738	1	\$25,738
30-34	0	\$0	2	\$28,199	2	\$28,199
35-39	3	\$9,139	4	\$29,541	7	\$20,797
40-44	5	\$8,350	9	\$33,126	14	\$24,278
45-49	9	\$18,411	21	\$32,589	30	\$28,335
50-54	26	\$16,578	23	\$39,111	49	\$27,155
55-59	42	\$20,819	31	\$46,576	73	\$31,757
60-64	64	\$23,117	38	\$49,858	102	\$33,079
65-69	33	\$27,184	22	\$42,608	55	\$33,354
70-74	16	\$27,556	12	\$42,292	28	\$33,871
75-79	11	\$25,145	4	\$59,656	15	\$34,348
80-84	5	\$19,807	7	\$54,186	12	\$39,861
85-89	3	\$33,657	2	\$32,490	5	\$33,190
90-94	0	\$0	1	\$43,949	1	\$43,949
95+	1	\$12,157	0	\$0	1	\$12,157
<b>All Ages</b>	<b>218</b>	<b>\$22,232</b>	<b>177</b>	<b>\$42,896</b>	<b>395</b>	<b>\$31,491</b>

### Non-Duty Disabled Benefits

General		Safety		Total	
Current Age	Number	Annual Average Benefit	Number	Annual Average Benefit	Number
0-24	0	\$0	0	\$0	0
25-20	0	\$0	0	\$0	0
30-34	0	\$0	0	\$0	0
35-39	2	\$18,150	0	\$0	2
40-44	2	\$14,044	0	\$0	2
45-49	11	\$16,516	0	\$0	11
50-54	20	\$16,439	2	\$22,927	22
55-59	26	\$15,048	2	\$20,858	28
60-64	37	\$12,323	4	\$16,590	41
65-69	31	\$13,149	2	\$44,958	33
70-74	13	\$16,348	2	\$17,506	15
75-79	8	\$12,743	1	\$18,158	9
80-84	5	\$10,899	0	\$0	5
85-89	5	\$12,304	0	\$0	5
90-94	3	\$10,039	0	\$0	3
95+	0	\$0	0	\$0	0
<b>All Ages</b>	<b>163</b>	<b>\$14,051</b>	<b>13</b>	<b>\$22,848</b>	<b>176</b>

### Surviving Beneficiary Benefits (all benefit types)

General		Safety		Total	
Current Age	Number	Annual Average Benefit	Number	Annual Average Benefit	Number
0-24	9	\$6,210	0	\$0	9
25-29	1	\$8,033	0	\$0	1
30-34	1	\$10,351	0	\$0	1
35-39	2	\$9,468	0	\$0	2
40-44	5	\$12,116	4	\$30,892	9
45-49	8	\$7,776	11	\$15,737	19
50-54	20	\$18,624	15	\$15,534	35
55-59	43	\$11,452	17	\$35,615	60
60-64	66	\$18,077	22	\$29,201	88
65-69	60	\$19,432	17	\$26,824	77
70-74	58	\$13,424	13	\$39,629	71
75-79	67	\$15,990	15	\$29,391	82
80-84	80	\$15,591	14	\$33,727	94
85-89	62	\$17,583	6	\$24,321	68
90-94	49	\$15,462	4	\$31,724	53
95+	13	\$12,656	1	\$28,551	14
<b>All Ages</b>	<b>544</b>	<b>\$15,716</b>	<b>139</b>	<b>\$28,512</b>	<b>683</b>



### Assumed Probabilities of Separation from Active Membership

Age	Non-Duty Death	Ordinary Disability	Service Retirement <sup>1</sup>	Duty Death	Duty Disability
<b>General Members – Male</b>					
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	0.0013	0.002	0.000	0.000	0.004
50	0.0018	0.002	0.020	0.000	0.002
55	0.0030	0.003	0.050	0.000	0.002
60	0.0057	0.003	0.075	0.000	0.002
65	0.0111	0.004	0.500	0.000	0.002
<b>General Members – Female</b>					
20	0.0002	0.001	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	0.001
35	0.0004	0.001	0.000	0.000	0.001
40	0.0006	0.002	0.000	0.000	0.001
45	0.0009	0.002	0.000	0.000	0.002
50	0.0013	0.003	0.020	0.000	0.002
55	0.0022	0.004	0.040	0.000	0.003
60	0.0042	0.005	0.100	0.000	0.003
65	0.0082	0.006	0.500	0.000	0.004
<sup>1</sup> 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.					

**Assumed Probabilities of Separation from Active Membership**

Age	Non-Duty Death	Ordinary Disability	Service Retirement <sup>1</sup>	Duty Death	Duty Disability
<b>Safety Members – Male</b>					
20	0.0003	0.000	0.000	0.0003	0.0003
25	0.0003	0.000	0.000	0.0003	0.0003
30	0.0004	0.000	0.000	0.0003	0.0004
35	0.0007	0.000	0.000	0.0004	0.0007
40	0.0010	0.000	0.000	0.0005	0.0010
45	0.0013	0.001	0.010	0.0006	0.0013
50	0.0018	0.002	0.100	0.0007	0.0018
55	0.0030	0.003	0.200	0.0008	0.0030
<b>Safety Members – Female</b>					
20	0.0002	0.000	0.000	0.0003	0.0002
25	0.0002	0.000	0.000	0.0003	0.0002
30	0.0002	0.000	0.000	0.0003	0.0002
35	0.0004	0.000	0.000	0.0004	0.0004
40	0.0006	0.000	0.000	0.0005	0.0006
45	0.0009	0.002	0.010	0.0006	0.0009
50	0.0013	0.004	0.100	0.0007	0.0013
55	0.0023	0.006	0.200	0.0008	0.0023

### Salary Increase, Termination and Withdrawal Assumptions

Years of Service	Salary Increase: General	Salary Increase: Safety	Withdrawal: General	Withdrawal: Safety	Termination: General	Termination: Safety
0	0.0749	0.0850	0.120	0.080	0.008	0.008
1	0.0749	0.0850	0.070	0.070	0.008	0.008
2	0.0749	0.0850	0.040	0.050	0.008	0.008
3	0.0749	0.0850	0.040	0.020	0.008	0.008
4	0.0749	0.0850	0.040	0.020	0.008	0.008
5	0.0450	0.0550	0.015	0.010	0.030	0.025
6	0.0450	0.0550	0.015	0.010	0.030	0.025
7	0.0450	0.0550	0.015	0.010	0.030	0.025
8	0.0450	0.0550	0.015	0.010	0.030	0.025
9	0.0450	0.0550	0.015	0.010	0.030	0.025
10	0.0450	0.0550	0.008	0.000	0.030	0.010
11	0.0450	0.0550	0.008	0.000	0.030	0.010
12	0.0450	0.0550	0.008	0.000	0.030	0.010
13	0.0450	0.0550	0.008	0.000	0.030	0.010
14	0.0450	0.0550	0.008	0.000	0.030	0.010
15	0.0450	0.0550	0.008	0.000	0.030	0.010
16	0.0450	0.0550	0.008	0.000	0.030	0.010
17	0.0450	0.0550	0.008	0.000	0.030	0.010
18	0.0450	0.0550	0.008	0.000	0.030	0.010
19	0.0450	0.0550	0.008	0.000	0.030	0.010
20	0.0450	0.0550	0.000	0.000	0.015	0.000
21	0.0450	0.0550	0.000	0.000	0.015	0.000
22	0.0450	0.0550	0.000	0.000	0.015	0.000
23	0.0450	0.0550	0.000	0.000	0.015	0.000
24	0.0450	0.0550	0.000	0.000	0.015	0.000
25	0.0450	0.0550	0.000	0.000	0.015	0.000
26	0.0450	0.0550	0.000	0.000	0.015	0.000
27	0.0450	0.0550	0.000	0.000	0.015	0.000
28	0.0450	0.0550	0.000	0.000	0.015	0.000
29	0.0450	0.0550	0.000	0.000	0.015	0.000
30+	0.0350	0.0550	0.000	0.000	0.000	0.000