# Merced County Employees' Retirement Association

Actuarial Review and Analysis as of June 30, 2009

June 9, 2010

EFI ACTUARIES | EFI/LIABILITY MANAGEMENT SERVICES, INC. The nation's leader in plan-specific, interactive asset allocation optimization counseling WASHINGTON, DC \_n PHILADELPHIA \_n SEATTLE \_n SAN FRANCISCO

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# **Summary of Results**

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

	June 30, 2008 (Buck)	June 30, 2008 (EFI)	June 30, 2009
Plan Membership			
Active	2,260	2,260	2,190
Inactive	600	600	609
Receiving Benefits	1,658	1,658	1,711
Total	4,518	4,518	4,510
Average Pay	\$ 48,342	\$ 48,342	\$54,169
Assets (\$ millions)			
Market Value	\$ 482.6	\$ 482.6	\$375.6
Actuarial Value	\$ 513.8	\$ 513.8	\$ 488.3
Actuarial Value	\$ 488.3	\$ 488.3	\$ 488.3
(excluding Interest Fluctuation Reserve)			
Valuation Assets	\$ 469.9	\$ 469.9	\$483.1
Valuation Results (\$ millions)			
Actuarial Accrued Liability (AAL)	\$ 673.8	\$ 740.2	\$ 809.7
AAL – Including Non-Valuation Liabilities	\$ 692.2	\$ 758.6	\$ 813.6
Unfunded Accrued Liability (UAAL)	\$ 203.9	\$ 270.3	\$ 326.5
Funding Ratio (Valuation)	69.7%	63.5%	59.7%
Funded Ratio (Market, Valuation)	65.1%	59.3%	45.9%
Funded Ratio (Actuarial, Including Non- Valuation Liabilities/Reserves)	70.5%	64.4%	60.0%
Funded Ratio (Inactive-Only)	57.2%	59.1%	58.8%
Employer Contribution Rate	23.19%	29.96%	30.23%
Expected Employer Contributions	\$ 25.3	\$ 31.9	\$ 34.8

The recommended employer contribution rate has increased by about 7% of active member payroll. The benefit provisions of the Plan remained unchanged from the prior valuation. The increase in the contribution rate over the past year was the net result of several factors:

• The prior Actuary (Buck Consultants) made a number of calculation errors that resulted in an understatement of the Plan's liabilities and costs as of June 30, 2008. EFI recalculated the results, which resulted in substantially higher employer costs.



- Several of assumptions used by Buck in the June 30, 2008 valuation were inappropriate, resulting in an additional understatement of future Plan liabilities and costs. The use of appropriate assumptions resulted in substantially higher employer costs.
- The demographic experience of the Plan rates of retirement, disability, termination, and death was less positive than was assumed in the actuarial assumptions. Consequently, the net effect of demographic changes was an increase in cost.
- Salaries for continuing active Plan members were greater than expected, but there was little impact on the cost as a percentage of payroll.
- New entrants joined the Plan to replace terminating and retiring members, increasing covered payroll, but decreasing the contribution rate.
- Costs increased significantly due to lower than expected returns on both the market and actuarial (smoothed) value of Plan assets. This was compounded by the cost impact of the one year delay in application of actuarial contribution rates and the prior underestimation of the employer rates.
- Several changes were made to the Plan's Funding Policy extending the amortization period from 15 to 18 years and widening the corridor around the market value of assets from 20% to 30%. The impact of these changes was to reduce the employer contribution rate for the current year.

There are a number of factors that can be expected to impact 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 130%; that means that about 30% of Plan actuarial assets are in fact losses that have yet to be recognized. This is likely to cause cost increases over the next few years as these losses are recognized in the actuarial value of assets.
- 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 9% of payroll 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.



#### **Purpose of the Report**

This Report presents the results of an actuarial review and analysis of the Merced County Employees' Retirement Association as of June 30, 2009. 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 contribution 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).

#### **Organization of the Report**

This Report is organized in five sections:

- This Summary presents the conclusions of the Report and discusses the reasons for changes since the last valuation.
- Section 1 below contains an outline of the Plan provisions on which our calculations are based, statistical data concerning Plan participants, and a summary of the actuarial assumptions used to compute liabilities and costs. A glossary of actuarial terms is also included.
- Section 2 presents information concerning Plan assets, including balance sheets and income statements from June 30, 2008 to June 30, 2009. The actuarial value of Plan assets is also computed in this Section.
- Section 3 contains the calculation of actuarial liabilities and the employer contribution rate, as well as the actuarial balance sheet and development of gain and loss.
- Section 4 contains pension plan information required under Statement No. 25 of the Governmental Accounting Standards Board.
- The Appendix contains contribution rates by Group, Class and Tier.



# **Review of June 30, 2008 Valuation**

## **Reproduction of Results**

The June 30, 2008 valuation was prepared by the Plan's prior actuary, Buck Consultants. For continuity, we reproduced the results of that valuation independently, using the same member information and actuarial methods and assumptions that were used to produce the Buck report.

With any change in Actuary, it is expected that there will be minor changes in liabilities and costs, even when using the same assumptions and data, due to differences in actuarial systems and methodologies. Using the same inputs to our actuarial systems that were used by Buck, our replication of the Buck valuations resulted in only minor differences, as expected.

## Data Errors

However, when we did our own analysis of the raw data provided by Merced to Buck, we uncovered two substantial errors in the processing of the data from its raw form to the format used in the valuation system:

- Nearly all members were valued by Buck assuming their benefits would be payable as an annuity for life, with no survivorship benefits. This conflicts with the actual information provided by MCERA, wherein most members have selected a benefit option that provides some type of survivor allowance.
- Members with deferred vested benefits were valued using a benefit equal to the annuitized value of the member's contributions, which does not include any additional benefits based on employer contributions.

We verified the presence of these errors by requesting **Test Lives** from Buck - in essence, mini-valuations of individual members that show all the details of the calculations. These test lives showed that our assumptions about how Buck had mishandled the data were correct. We recomputed the valuation using the correct date inputs, which results in a substantial increase in liabilities and cost.

#### **Assumption Issues**

In addition, Buck used an assumption in the June 30, 2008 valuation report that was clearly inappropriate. They assumed that a significant number of the members who will become eligible for a service retirement benefit in the future will instead take a refund of contributions when they leave service. This is an extremely unlikely event, since it means that an employee would be forfeiting all benefits provided by the employer. Staff has confirmed that this is an extremely rare event, and would be expected to occur with much less frequency than indicated in the assumptions used by Buck.

This assumption was the subject of similar issues at several other '37 Act systems that had been serviced by Buck in the past. At two of these systems, a third actuarial firm confirmed our argument that a



significant number of members eligible for service retirement should NOT be assumed to take a refund of contributions.

Accordingly, we recalculated the liabilities and cost of the Plan using the assumption that no members will take a refund of contributions once eligible for a service retirement benefit. This resulted in an additional increase in the cost of the Plan.

We made one additional adjustment to the assumptions used by Buck in the June 30, 2008 actuarial valuation. In their calculations, Buck applied their service retirement decrements (i.e. the percentage of members expected to retire at a given age) to all members, regardless of whether the member was eligible for retirement based on service. We feel it is more appropriate to apply the retirement rates only to those members who are eligible to receive a service retirement benefit, based on satisfying both the age and service criteria. The modification of this assumption also had an upward impact on cost, though smaller than that of the withdrawal issue described above.

The net effect on the liabilities and cost of the various changes described above is shown in the following table:

\$ in Millions	Actuarial	Employer	Employer
	Accrued	Contribution	Contribution
	Liability	(% Payroll)	(\$ Amount)
June 30, 2008 (Buck Valuation)	\$ 673.8	23.19%	\$ 25.3
Change Due to:			
Difference in Valuation Systems	(8.4)	0.40%	(0.4)
Data Correction (Survivor Benefits)	39.3	2.91%	3.2
Data Correction (Deferred Benefit Amount)	16.1	1.19%	1.3
Assumption Change (Withdrawal of Members Eligible for Service Retirement)	17.6	1.76%	1.9
Assumption Change (Application of Retirement Rates to Ineligible Members)	<u>1.7</u>	<u>0.51%</u>	<u>0.6</u>
Total Change:	66.4	6.77%	6.6
Revised as of June 30, 2008 (EFI)	\$ 740.2	29.96%	31.9



# Change in Plan Cost from June 30, 2008 to June 30, 2009

The table below summarizes the impact of actuarial experience and changes in funding policy on Plan cost, starting from the recomputed results as of June 30, 2008.

	Employer Cost	Employer Contribution Rate (% Payroll)
June 30, 2008	\$ 31,853,442	29.96%
Change in Cost Due to:		
Demographic Experience during 2008-2009	1,151,333	2.15%
Salary Experience during 2008-2009	1,764,264	(0.02%)
New Entrants to the Plan	978,994	(1.00%)
Investment Experience during 2008-2009	5,366,153	4.67%
Impact of 12-month delay in contribution rates and contribution shortfall	352,548	0.31%
Changes in Funding Policy (Amortization and Smoothing)	(6,706,474)	(5.83%)
Total Cost as of June 30, 2009	\$ 34,760,261	30.23%

The changes affecting the cost from 2008 through 2009 are described below:

• Demographic experience caused an increase in the contribution rate.

The actual demographic experience of the Plan – rates of retirement, death, disability, and termination, as well as other factors, such as sick leave credit and cost of living assumptions – was less positive than was predicted by the actuarial assumptions in aggregate, producing actuarial losses and increase in the employer contribution rate of 2.15% of pay.

These losses would have been worse had the assumption changes described earlier not been implemented. Some of these losses may have been caused by other insufficiently conservative assumptions. EFI will be performing an experience study with the next actuarial valuation, in which we will recommend new assumptions that will hopefully minimize future demographic gains and losses.

• Pay increases were higher than expected.

Increases in pay among active members during 2008-2009 were above those anticipated by the actuarial assumptions, increasing the cost as a dollar amount by almost \$1.8 million. However, the employer contribution rate decreased slightly as a percentage of payroll, indicating that these payroll increases did not occur evenly across the Plan population, but may have been applied differently to those with greater or lesser amounts of service.



• New members entered the Plan.

Although the total number of active members in the Plan decreased by about 70 members from June 30, 2008 to June 30, 2009, there were approximately 133 new hires (or rehires) entering the Plan to replace departing members.

These new hires were not included in the prior valuation cost calculations. In general, new hires have a lower Plan cost as a percentage of payroll than current members, but they increase the payroll on which contributions are based when they are hired. Therefore, due to the new hires, the employer contribution rate declined by 1.00% of payroll, but the addition of these new members increased member payroll by \$6.6 million, increasing the Plan cost in dollar terms by about \$1.0 million.

• The one year contribution rate delay and the underestimation of the FY2009 contribution rate caused a cost increase.

We have calculated the impact of the one year delay in the contribution rate (i.e. the use of the June 30, 2007 contribution rate for the computation of the FY2009 contribution) and the impact of the underestimation of the contribution rate due to improper prior calculations. Given that the amount actually contributed for FY2009 (\$27.9 million) was substantially less than the actuarial cost (\$31.9 million), there was a loss. This phenomenon caused costs to increase by 0.31% 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.

• Investment returns produced an actuarial loss.

The return on the *market* value of assets was a loss of -22.1% (net of expenses) over the fiscal year 2009. The return on the *actuarial* value of assets was a loss of -12.22%. The return on the actuarial value of the *valuation assets* (excluding the non-valuation reserves) was a -5.21% loss.

The higher return on the actuarial value of assets (-12.22% versus -22.13%) is a result of the delayed recognition of asset gains from prior years, and the deferral of the losses experienced in FY 2009. Under the actuarial smoothing policy previously implemented by the Board, only 20% of the gains or losses occurring in a given year are recognized in that year – with the remaining portion recognized over the next four years at 20% per year.

However, there is also a corridor around the market value of assets that does not allow the smoothed actuarial value of assets to differ from the market value by more than a certain amount (20% under the funding policy in place for the previous valuation). Because the losses during FY 2009 were so large, the actuarial value of assets was initially limited to 120% of the market value by the corridor. Therefore, the amount of smoothing on the current year loss was limited, and more than 20% of the current year loss is being recognized this year.

The higher return on the valuation assets versus the actuarial value (-5.21% versus -12.22%) is a



result of the fact that last year several of the reserves - the Interest Fluctuation Reserve (\$25.4 million as of June 30, 2008) and the Contingency Reserves (\$15.4 million) - were not included in the assets used to compute the cost of the Plan (the valuation assets) as of June 30, 2008. However, these reserves are not being excluded from the valuation asset amount this year, as the intent of these reserves was to cushion the impact of severe investment losses such as those that have occurred this year. There are still a couple of smaller reserves - the Ad-hoc COLA reserve and the 401(h) reserve - that are not included in the valuation assets.

The current actuarial assumption provides that the valuation assets are assumed to earn 8.16% each year. Thus the lower-than-expected return of -5.21% on the valuation assets produced an actuarial loss that increased Plan costs by 4.67% of active member payroll, or about \$5.4 million.

The above sources of actuarial gains and losses combined to increase Plan cost by 6.10% of payroll from 2008 to 2009, or \$9.6 million.

At the Board's meeting on April 29<sup>th</sup>, 2010, the Board made two funding policy changes that affect the employer contribution rate(s):

• The corridor around the market value of assets was increased from 20% to 30%.

The corridor which limits the amount of smoothing in the presence of extremely large asset gains or losses was loosened. This allows a larger portion (an additional \$37.5 million) of the current year asset loss to be recognized in future years. This change in policy reduced the overall current payment amount by 2.76% of payroll, but will result in higher payments in future years.

• The amortization policy for the Plan's unfunded liability was changed.

The Board increased the current amortization period from 15 years to 18 years. The change in amortization policy reduced the overall current payment amount by 3.07% of payroll, but will again result in higher payments in future years and a slower improvement in the funded ratio. With a level percentage of pay amortization policy and a period of 17 or more years, the amortization payment in the current year will be less than the interest on the unfunded amount – no payment towards "principal" is made. This is known as **negative amortization**.

The net impact of these changes to the funding policy reduced the current year contribution by 5.83% of payroll, of \$6.7 million.

## **Future Trends**

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

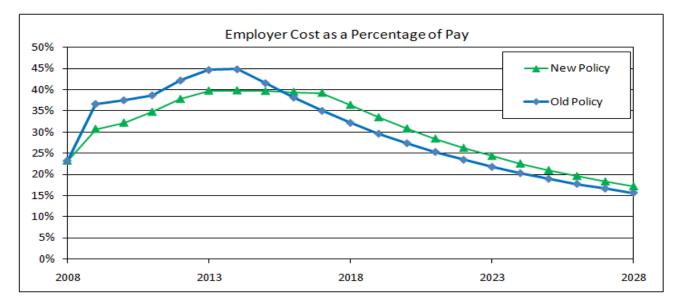
• The liabilities and contribution rates determined in this Report are based on a set of actuarial assumptions. Despite the care and effort expended in determining the most accurate possible set of assumptions, the future experience of the Plan will certainly differ from what we assume.



- The experience study to be performed as of June 30, 2010 will attempt to minimize future gains or losses by forming assumptions that represent our best estimate of future experience. We have found that some of the current assumptions established in prior Buck experience studies such as the use of age-based, rather than serviced-based termination rates will generally underestimate future costs. Therefore it is likely that some changes in the next experience study will increase the current cost. However, as stated above, it should always be kept in mind that it is actual experience, not the actuarial assumptions, that ultimately determines cost.
- There are investment losses that are deferred by the actuarial smoothing method and have not been recognized 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 now 130%; that means that 30% of Plan assets (or approximately \$112 million) actually represent investment losses that have yet to be recognized. If the cost of the plan were determined using the market value of valuation assets (rather than the actuarial value), the cost of the Plan would increase by over 7% of pay, to nearly 37.5%, or \$43 million.

The graph below shows a projection of the actuarial cost of the Plan over the next 20 years. The projection labeled "Old Policy" is based on the funding policies in effect last year; the projected cost is based on a 20% asset corridor, with an amortization period of 15 years for 2009, declining by one each year until a minimum period of 10 years is reached. The "New Policy" projection uses the same actuarial assumptions, but incorporates the new funding policies: 18 year amortization for 2009, declining by one year until the minimum period of 10 years is reached, and a 30% corridor around the market value of assets. An 8.16% return on the market value of Plan assets is assumed for all future years.

We note in the graph that the assumed Plan cost is lower under the revised funding policies for the next seven years, but then moves above the cost under the prior policies. This is due to the fact that a portion of the recent losses are being deferred to future years. The actual cost of the Plan in future years will be determined largely by the investment return produced on Plan assets.





## **Actuarial Certification**

In this study, we conducted an examination of all participant 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 18 years.

The funding objective of the Plan is to accumulate assets during the working lifetime of each member so that, at retirement, sufficient assets will be on hand to provide the member the promised benefit. 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, limited by a corridor that restrains the Actuarial Value to within 30% of the Market Value of assets.

Our firm has prepared all of the schedules presented in the actuarial report. The actuarial assumptions were developed by the prior actuary in the course of an analysis of experience which covered the period from July 1, 2004 through June 30, 2007. We will review and update these assumptions as necessary as part of the next experience analysis, expected to cover the years 2007 through 2010.

We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices. In particular, to the best of our knowledge the assumptions and methods used for funding purposes meet the parameters of the Governmental Accounting Standards Board Statement No. 25.

Respectfully Submitted,

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Section 1:

Summary of Plan Provisions, Member Statistics, and Actuarial Assumptions



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

### 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. One year of service credit is earned for each 2,080 hours worked (not including overtime), not to exceed one year of service per year.

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

- Prior Part-time Service: If a Member worked for an employer within the Association on a part-time or 'extra help' basis before his membership in the Retirement Association, the Member may buyback this service.
- Intermittent Part-time Service
- Prior full time Service: Member may buyback full time service that may have been cashed out upon termination.
- Leave of Absence (Including absence with State Disability or Worker's Compensation): No unpaid leave of absence can be bought back except for absence due to medical reasons of up to one year.
- Public Service: Members may purchase service credit for prior service in the following public agencies:. Federal Civil Service, Military Service and some public employers in California. This service is only eligible for purchase when the Board of Supervisors opens the window for purchase.
- Military Time: Members who resign or obtain a leave of absence to enter the military may purchase service credit for the period of military service. Members must re-enter employment within one year of terminating military service to be eligible to purchase service.

At retirement, Members have the option to convert 100% of sick leave time into retirement years of service credit. Unrepresented management will instead have some or all of their sick leave contributed to the Post Employment Health Plan.



#### **Final Compensation**

For Tier 1 Members, Final Compensation means the highest average Compensation earned during any 26 consecutive pay periods of the Member's employment. For Tier 2 Members, Final Compensation means the highest average Compensation earned during any 78 consecutive pay periods of the Member's employment.

The following compensation may be included in the Final Compensation computation:

- Loyalty Bonus
- Up to 160 hours of vacation payoff
- Sick Leave sold back during 25<sup>th</sup> pay period
- Vacation sold back during 25<sup>th</sup> pay period (management only)

#### **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 or as a probation officer is a Safety Member.

#### Membership

#### Eligibility

All full-time, permanent employees of Merced County and other participating employers become Members on their first date of service. Membership is mandatory; only elected officials and those entering employment at age 60 or older who are not reciprocal members of another system may choose not to participate.

#### **Member Contributions**

Each Member contributes a percentage of Compensation to the Plan through a pre-tax payroll deduction. The percentage contributed depends on the Member's age upon joining the Plan. Representative rates are shown in Table 1 below (full rate table in appendix). Rates have not changed since the prior valuation.

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.

Interest is credited semiannually to each Member's accumulated contributions. The crediting rate is set by the Board, and will fluctuate between zero and two percent less than the assumed rate of return (currently 8% - 2% = 6%), based in part on the investment earnings during that period.

	<u>Basic Rate – Tier 1</u>		Basic Rate – Tier 2		Cost of Living Rate – Tier 1	
Entry Age	1 <sup>st</sup> \$350/month	Over \$350	1 <sup>st</sup> \$350/month	Over \$350	1 <sup>st</sup> \$350/month	Over \$350
20	4.33%	6.49%	4.12%	6.18%	1.07%	1.61%
25	4.54%	6.81%	4.33%	6.49%	1.13%	1.69%
30	4.84%	7.26%	4.61%	6.92%	1.20%	1.80%
35	5.20%	7.80%	4.95%	7.43%	1.29%	1.93%
40	5.61%	8.42%	5.35%	8.02%	1.39%	2.09%
45	6.07%	9.10%	5.78%	8.67%	1.51%	2.26%
50	6.55%	9.82%	6.23%	9.35%	1.62%	2.43%

## Table 1 (a): General Member Contribution Rates

	Basic Rate	Basic Rate – Tier 1		Basic Rate – Tier 2		Cost of Living Rate – Tier 1	
Entry Age	1 <sup>st</sup> \$350/month	Over \$350	1 <sup>st</sup> \$350/month	Over \$350	1 <sup>st</sup> \$350/month	Over \$350	
20	4.73%	7.10%	4.51%	6.76%	2.91%	4.36%	
25	5.03	7.54%	4.79%	7.19%	3.09%	4.63%	
30	5.37%	8.06%	5.12%	7.68%	3.29%	4.94%	
35	5.78%	8.67%	5.51%	8.26%	3.55%	5.32%	
40	6.25%	9.37%	5.95%	8.93%	3.83%	5.75%	
45	6.74%	10.11%	6.42%	9.63%	4.13%	6.20%	
50	7.15%	10.73%	6.81%	10.22%	4.39%	6.58%	

## Table 1 (b): Safety Member Contribution Rates

#### **Service Retirement**

#### Eligibility

Tier 1 General Members are eligible to retire at age 50 if they have earned ten years of Credited Service. 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. Members hired prior to December 31, 1978 may retire upon reaching age 65 with no service requirement.

Tier 2 General Members are eligible to retire at age 55 if they have earned ten 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 ten years of Credited Service. Alternatively, Safety Members are eligible to retire at any age after having earned 20 years of Credited Service, or upon reaching age 70 with no service requirement. Members hired prior to December 31, 1978 may retire upon reaching age 65 with no service requirement.



#### **Benefit Amount**

The Service Retirement Benefit payable to the Member is equal to the Member's Final Compensation multiplied by credited service, the benefit factor from Table 2 and the age factor from Table 3 corresponding to the Member's code section. The appropriate code sections for each group are listed in Table 2.

For General members in the Merced County Cemetery District and those in Deferred Inactive Reciprocity status prior to March 15, 2005, benefits are calculated using the formula in Government Code Section 31676.11 or 31676.1. For all other Members, the percentage of Final Compensation may not exceed 100%. For those members integrated with Social Security, Retirement Benefits based on the first \$350 of monthly Final Average Compensation are reduced by one-third.

	Open					Тор	
	or		Max	Code		Retirement	
Group	Closed	FAP	COLA	Section	Description	Factor Age	Benefit Factor
General Tier 1	Closed <sup>1</sup>	1	3	31676.17	3% at 60	60	3.00%
General Tier 2	Open	3	0	31676.17	3% at 60	60	3.00%
Safety Tier 1	Closed <sup>1</sup>	1	3	31664.1	3% at 50	50	3.00%
Safety Tier 2	Open	3	0	31664.1	3% at 50	50	3.00%

#### Table 2: Member Group Descriptions

	Safety 3% at Age 50	General 3% at Age 60	General 2% at Age 58 ½
Age	CERL §: 31664.1	CERL §: 31676.1	CERL §: 31676.11
41.00	0.6258	N/A	N/A
42.00	0.6625	N/A	N/A
43.00	0.7004	N/A	N/A
44.00	0.7397	N/A	N/A
45.00	0.7805	N/A	N/A
46.00	0.8226	N/A	N/A
47.00	0.8678	N/A	N/A
48.00	0.9085	N/A	N/A
49.00	0.9522	N/A	N/A
50.00	1.0000	1.0000	0.7454
51.00	1.0000	1.0500	0.7882
52.00	1.0000	1.1000	0.8346
53.00	1.0000	1.1500	0.8850
54.00	1.0000	1.2000	0.9399
55.00	1.0000	1.2500	1.0000
56.00	1.0000	1.3000	1.0447
57.00	1.0000	1.3500	1.1048
58.00	1.0000	1.4000	1.1686
59.00	1.0000	1.4500	1.2365
60.00	1.0000	1.5000	1.3093
61.00	1.0000	1.5000	1.3608
62.00	1.0000	1.5000	1.4123
63.00	1.0000	1.5000	1.4638
64.00	1.0000	1.5000	1.5153
65.00	1.0000	1.5000	1.5668

#### **Table 3: Age Factors**

<sup>1</sup> Open for "A" Level management only.



#### 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 eligible spouse or domestic partner or to the age of majority of dependent minor children if there is no eligible spouse or domestic partner. To be eligible to receive this benefit, a surviving spouse or domestic partner must be married or state-registered at least one year prior to retirement. In the event there is no eligible surviving spouse, domestic partner 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, Tier 1 benefits are increased to reflect increases in the CPI for the San Francisco Bay Area. Annual increases may not exceed 3%, but CPI increases above this figure are "banked" and used for future increases when the CPI increases by less than 3%.

A lump sum benefit of \$3,000 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 his or her pay prior to becoming disabled. 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 eligible spouse or domestic partner or to the age of majority of dependent minor children if there is no eligible spouse or domestic partner. In the event there is no eligible surviving spouse, domestic partner 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, Tier 1 benefits are increased to reflect increases in the CPI for the San Francisco Bay Area. Annual increases may not exceed 3%, but CPI increases above this figure are "banked" and used for future increases when the CPI increases by less than 3%.

A lump sum benefit of \$3,000 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
- If the Member is not eligible at disability for a Service Retirement Benefit, the 90% of the Service Retirement Benefit accrued on the date of disability; 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;
- If the Member is not eligible at disability for a Service Retirement Benefit, the 90% of the Service Retirement Benefit accrued on the date of disability; 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 his or her pay prior to becoming disabled. 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 eligible spouse or domestic partner or to the age of majority of dependent minor children if there is no eligible spouse or domestic partner. In the event there is no eligible surviving spouse, domestic partner 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, Tier 1 benefits are increased to reflect increases in the CPI for the San Francisco Bay Area. Annual increases may not exceed 3%, but CPI increases above this figure are "banked" and used for future increases when the CPI increases by less than 3%.

A lump sum benefit of \$3,000 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 an eligible surviving spouse, domestic partner or minor children will be 50% of the Member's Final Compensation.

Furthermore, for Safety Members who die in the performance of duty, there will be an additional lump sum benefit of 12 months of pay at the time of death. 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.

#### Form of Benefit

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

Annually on April 1, benefits are increased to reflect increases in the CPI for the San Francisco Bay Area. Annual increases may not exceed 3%, but CPI increases above this figure are "banked" and used for future increases when the CPI increases by less than 3%.



#### **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 eligible surviving spouse, domestic partner 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 an eligible surviving spouse or domestic partner or to the age of majority of dependent minor children if there is no eligible spouse or domestic partner.

Annually on April 1, benefits are increased to reflect increases in the CPI for the San Francisco Bay Area. Annual increases may not exceed 3%, but CPI increases above this figure are "banked" and used for future increases when the CPI increases by less than 3%.

#### 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-fiftieth per year of Credited Service at age 50 (General) or 3% per year of Credited Service at age 50 (Safety), with adjustments for earlier or later retirement under Sections 31676.17 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 eligible spouse or domestic partner or to the age of majority of dependent minor children if there is no eligible spouse or domestic partner. In the event there is no eligible surviving spouse, domestic partner 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 increased to reflect increases in the CPI for the San Francisco Bay Area. Annual increases may not exceed 3%, but CPI increases above this figure are "banked" and used for future increases when the CPI increases by less than 3%.

A lump sum benefit of \$3,000 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 eligible spouse or domestic partner or to the age of majority of dependent minor children if there is no eligible spouse or domestic partner. In the event there is no eligible surviving spouse, domestic partner 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 increased to reflect increases in the CPI for the San Francisco Bay Area. Annual increases may not exceed 3%, but CPI increases above this figure are "banked" and used for future increases when the CPI increases by less than 3%.

A lump sum benefit may be payable upon the death of a retired Member by the last system the Member worked under.



	General	Safety	Total
Active Participants			
Number	1,848	342	2,190
Average Age	45.10	37.00	43.9
Average Service	9.43	7.62	9.15
Average Pay	\$53,716	\$56,619	\$54,169
Service Retired			
Number	1,152	138	1,290
Average Age	69.5	64.1	68.9
Average Annual Total Benefit	\$22,843	\$35,103	\$24,155
Beneficiaries			
Number	196	46	242
Average Age	73.1	68.3	72.2
Average Annual Total Benefit	\$10,654	\$17,334	\$11,924
Duty Disabled			
Number	54	75	129
Average Age	67.2	58.8	62.3
Average Annual Total Benefit	\$19,065	\$26,533	\$23,407
Non-Duty Disabled			
Number	49	1	50
Average Age	65.7	62.8	65.6
Average Annual Total Benefit	\$13,665	\$13,451	\$13,661
Total Receiving Benefits			
Number	1,451	260	1,711
Average Age	69.8	63.3	68.8
Average Annual Total Benefit	\$20,746	\$29,404	\$22,062
Terminated Vested			
Number	195	13	208
Average Age	51.5	38.8	50.6
Average Service	9.798	9.687	9.791
Transfers			
Number	212	71	283
Average Age	48.6	42.4	47.0
Average Service	5.566	5.596	5.564
Funds on Account			
Number	106	12	118
Average Age	43.7	29.8	42.3
Average Service	1.253	0.80	1.217
Total Inactive			
Number	513	96	609
Average Age	48.7	40.3	47.3
Average Service	6.27	5.54	6.172



#### Participant Data as of July 1, 2009: General Members

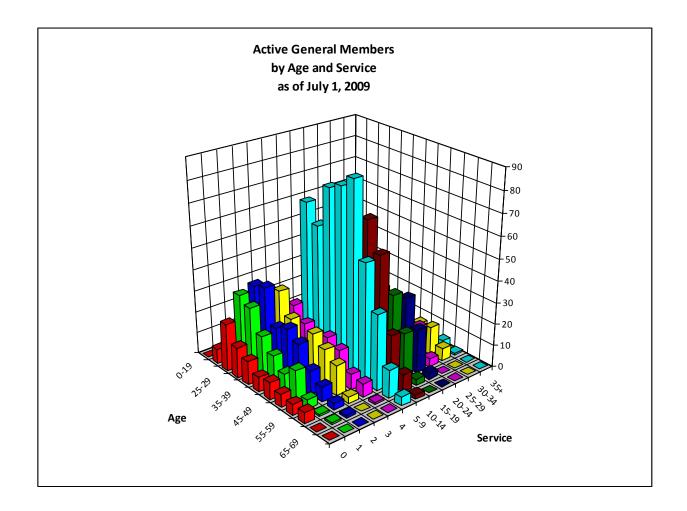
Participant Data as of July 1, 2009: Ge		-	
	General	General	General
	Tier 1	Tier 2	Total
Active Participants	100	4 400	4.040
Number	409	1,439	1,848
Average Age	53.2	42.8	45.1
Average Service	20.30	6.34	9.43
Average Pay	\$66,102	\$50,195	\$53,716
Service Retired			
Number	1,101	51	1,152
Average Age	69.6	65.7	69.5
Average Annual Total Benefit	\$23,398	\$10,853	\$22,843
Beneficiaries			
Number	185	11	196
Average Age	74.6	47.7	73.1
Average Annual Total Benefit	\$10,783	\$8,482	\$10,654
Duty Disabled	+	+-,	+,
Number	50	4	54
Average Age	68.1	55.6	67.2
Average Annual Total Benefit	\$19,093	\$18,717	\$19,065
Non-Duty Disabled	Ş19,093	J10,717	\$19,005
-	44	-	40
Number		5	49
Average Age	66.1	61.7	65.7
Average Annual Total Benefit	\$14,382	\$7,361	\$13,665
Total Receiving Benefits			
Number	1,380	71	1,451
Average Age	70.1	62.0	69.8
Average Annual Total Benefit	\$21,263	\$10,683	\$20,746
Terminated Vested			
Number	129	66	195
Average Age	53.8	47.0	51.5
Average Service	10.99	7.43	9.79
Transfers			
Number	98	114	212
Average Age	53	44.8	48.6
Average Service	7.48	3.90	5.56
Funds on Account	7.40	5.50	5.50
Number	12	94	106
	57.1	41.9	43.7
Average Age	1.15		
Average Service	1.15	1.27	1.25
Total Inactive			
Number	239	274	513
Average Age	53.6	44.3	48.7
Average Service	9.06	3.85	6.27



#### Participant Data as of July 1, 2009: Safety Members

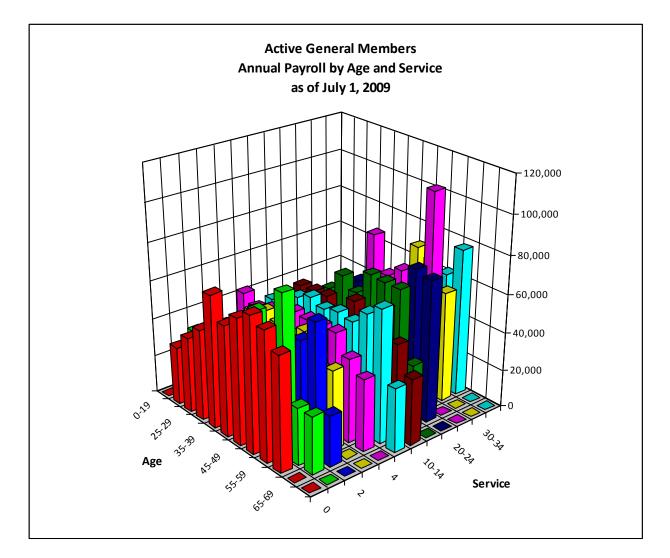
	Safety	Safety	Safety
	Tier 1	Tier 2	Total
Active Participants			
Number	75	267	342
Average Age	47.1	34.1	37.0
Average Service	19.16	4.37	7.62
Average Pay	\$72,360	\$52,197	\$56,619
Average Fay	\$72,500	\$32,197	\$30,019
Service Retired			
Number	138	0	138
Average Age	64.1	0.0	64.1
Average Annual Total Benefit	\$35,103	\$0	\$35,103
Beneficiaries			
Number	45	1	46
Average Age	68.9	38.3	68.3
Average Annual Total Benefit	\$17,535	\$8,311	\$17,334
Duty Disabled			
Number	68	7	75
Average Age	59.6	50.8	58.8
Average Annual Total Benefit	\$26,788	\$24,060	\$26,533
Non-Duty Disabled			
Number	1	0	1
Average Age	62.8	0.0	62.8
Average Annual Total Benefit	\$13,451	\$0	\$13,451
Total Receiving Benefits			
Number	252	8	260
Average Age	63.7	49.2	63.3
Average Annual Total Benefit	\$29,636	\$22,091	\$29,404
Terminated Vested			
Number	4	9	13
Average Age	46.5	35.3	38.8
Average Service	14.60	7.49	9.68
Transfers			
Number	37	34	71
Average Age	50.2	33.9	42.4
Average Service	5.86	5.29	5.59
Funds on Account			
Number	0	12	12
Average Age	0.0	29.8	29.8
Average Service	0.00	.80	0.80
Total Inactive			
Number	41	55	96
Average Age	49.8	33.3	40.3
Average Service	6.72	4.67	5.54





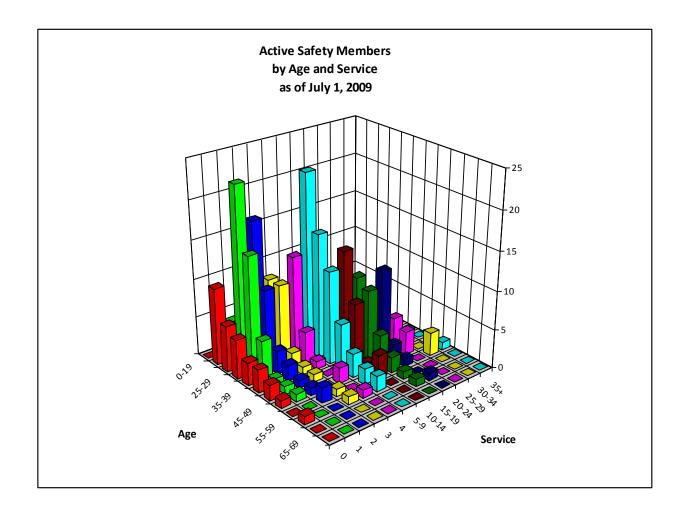
Service / Age	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35+	Total
	-	-				-							
0-19	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	7	6	9	2	1	0	0	0	0	0	0	0	25
25-29	22	33	35	30	19	18	0	0	0	0	0	0	157
30-34	14	30	37	33	24	69	11	0	0	0	0	0	218
35-39	11	20	21	23	18	61	41	6	1	0	0	0	202
40-44	7	14	24	14	14	80	52	19	3	1	0	0	228
45-49	8	9	20	22	18	83	57	41	27	5	0	1	291
50-54	6	14	11	18	15	88	69	36	30	15	12	0	314
55-59	5	4	7	14	7	55	56	36	32	16	13	4	249
60-64	5	1	3	3	6	35	23	21	20	4	6	1	128
65-69	0	1	1	0	1	13	8	3	3	0	0	0	30
70+	0	0	0	0	0	4	2	0	0	0	0	0	6
Total	85	132	168	159	123	506	319	162	116	41	31	6	1,848





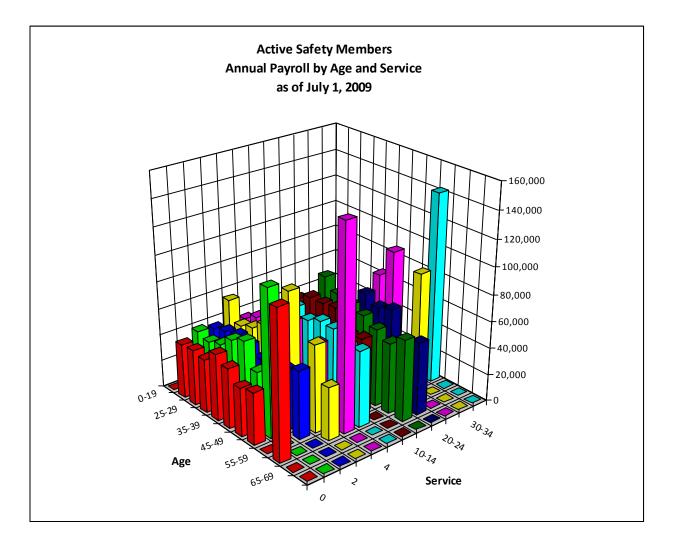
Service / Age	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35+	Average
0-19	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	30,511	35,906	36,246	33,251	47,310	0	0	0	0	0	0	0	34,762
25-29	39,453	39,250	40,259	40,717	43,317	44,592	0	0	0	0	0	0	40,888
30-34	47,702	42,604	45,019	48,162	46,036	47,481	52,505	0	0	0	0	0	46,604
35-39	69,439	49,490	45,001	51,988	47,927	53,111	53,027	51,472	43,243	0	0	0	52,094
40-44	57 <i>,</i> 893	52,583	44,745	49,323	51,846	56,803	54,099	62,020	56,001	77,834	0	0	54,444
45-49	65,311	65,792	47,435	46,652	51,902	54,293	48,904	56,496	57,471	59,790	0	32,053	53,322
50-54	70,651	45,641	45,281	53,064	52,261	56,176	58,755	69,305	56,132	65,690	75,237	0	58,486
55-59	67,486	81,992	55,578	37,856	52,926	55,157	55,229	69,043	61,337	62,743	71,617	61,334	59,076
60-64	59,402	29,349	68,518	41,025	43,359	62,995	62,016	68,803	76,125	111,670	58,117	77,459	65,520
65-69	0	29,786	26,374	0	37,336	69,218	48,113	33,758	74,005	0	0	0	56,717
70+	0	0	0	0	0	33,375	34,611	0	0	0	0	0	33,787
Average	52,933	46,462	44,569	46,529	48,373	54,515	54,482	63,767	61,674	68,602	70,405	59,141	53,716





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	10	5	5	1	1	0	0	0	0	0	0	0	22
25-29	6	23	18	10	7	6	0	0	0	0	0	0	70
30-34	5	15	10	10	13	23	1	0	0	0	0	0	77
35-39	3	5	3	2	4	16	9	3	0	0	0	0	45
40-44	3	1	2	1	1	12	14	10	0	0	0	0	44
45-49	2	1	1	1	0	6	8	9	11	4	0	0	43
50-54	1	1	1	0	2	3	1	4	2	3	0	0	18
55-59	0	0	2	1	0	2	3	2	1	0	3	1	15
60-64	1	0	0	1	1	2	0	1	0	0	0	0	6
65-69	0	0	0	0	0	0	0	1	1	0	0	0	2
70+	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	31	51	42	27	29	70	36	30	15	7	3	1	342





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	40,519	46,614	44,476	61,838	43,433	0	0	0	0	0	0	0	43,905
25-29	41,836	43,750	47,428	47,112	49,737	55 <i>,</i> 599	0	0	0	0	0	0	46,626
30-34	40,318	47,289	49,847	50,814	50,371	56,408	60,840	0	0	0	0	0	51,047
35-39	49,826	55,936	47,791	58,136	55,531	63,327	66,684	78,371	0	0	0	0	61,321
40-44	45,023	60,320	42,744	47,689	61,838	58,401	66,730	69,902	0	0	0	0	61,919
45-49	36,455	42,988	37,911	93 <i>,</i> 267	0	62 <i>,</i> 873	68,310	66,738	70,647	80,929	0	0	66,797
50-54	38,646	108,133	45,354	0	55,351	62,178	53,741	63,306	65,366	102,387	0	0	68,568
55-59	0	0	50 <i>,</i> 499	64,917	0	55 <i>,</i> 921	55 <i>,</i> 736	58,015	68,717	0	86,948	141,652	68,814
60-64	109,034	0	0	39,606	150,415	56,696	0	53,013	0	0	0	0	77,577
65-69	0	0	0	0	0	0	0	60,983	54,341	0	0	0	57,662
70+	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	43,966	47,839	47,326	51,957	54,879	59 <i>,</i> 058	65,629	67,268	68,727	90,125	86,948	141,652	56,619



		Ghanges		iber sinp: m	i di oups	,			
	Actives	Transfers	Non-Vested Terminations	Vested Terminations	Non- Duty Disabled	Duty Disabled	Retired	Beneficiaries	Total
July 1, 2008	2,260	123	40	437	51	134	1,257	216	4,518
New Entrants	123	0	0	0	0	0	0	0	123
Rehires	21	0	0	(11)	0	0	0	0	10
Duty Disabilities	(1)	0	0	(1)	0	2	0	0	0
Non-Duty Disabilities	(3)	0	0	0	3	0	0	0	0
Retirements	(58)	(9)	0	(13)	0	0	80	0	0
Dual Service Retirements	0	0	0	0	0	0	0	0	0
Vested Terminations	(17)	0	0	17	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	(2)	0	0	0	0	(1)	(6)	10	1
Died, Without Beneficiary, and Other Terminations	(40)	0	37	(5)	0	(4)	(28)	0	( 40)
Transfers	(15)	18	0	(3)	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0	(11)	(11)
Domestic Relations Orders	0	0	0	0	0	0	0	3	3
Withdrawals Paid	(85)	0	(2)	(19)	0	0	0	0	( 106)
Data Corrections	7	151	43	(194)	(4)	(2)	(13)	24	12
July 1, 2009	2,190	283	118	208	50	129	1,290	242	4,510

# **Changes in Plan Membership: All Groups**

		change	S III Plan Me	inder snip.					
	Actives	Transfers	Non-Vested Terminations	Vested Terminations	Non- Duty Disabled	Duty Disabled	Retired	Beneficiaries	Total
July 1, 2008	1,921	90	39	379	48	56	1,124	179	3,836
New Entrants	87	0	0	0	0	0	0	0	87
Rehires	16	0	0	(8)	0	0	0	0	8
Duty Disabilities	0	0	0	(1)	0	1	0	0	0
Non-Duty Disabilities	(3)	0	0	0	3	0	0	0	0
Retirements	(47)	(6)	0	(13)	0	0	66	0	0
Retirements from Safety with General Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(16)	0	0	16	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	(2)	0	0	0	0	(1)	(5)	9	1
Died, Without Beneficiary, and Other Terminations	(33)	0	30	(4)	0	0	(25)	0	(32)
Transfers	(12)	13	0	(1)	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0	(9)	(9)
Domestic Relations Orders	0	0	0	0	0	0	0	1	1
Withdrawals Paid	(70)	0	(2)	(19)	0	0	0	0	(91)
Data Corrections	7	115	39	(154)	(2)	(2)	(8)	16	11
July 1, 2009	1,848	212	106	195	49	54	1,152	196	3,812

# **Changes in Plan Membership: General**

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		Change	es in Plan Mo	ember smp.	Salety				
	Actives	Transfers	Non-Vested Terminations	Vested Terminations	Non- Duty Disabled	Duty Disabled	Retired	Beneficiaries	Total
July 1, 2008	339	33	1	58	3	78	133	37	682
New Entrants	36	0	0	0	0	0	0	0	36
Rehires	5	0	0	(3)	0	0	0	0	2
Duty Disabilities	(1)	0	0	0	0	1	0	0	0
Non-Duty Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(11)	(3)	0	0	0	0	14	0	0
Retirements from Safety with General Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(1)	0	0	1	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	0	(1)	1	0
Died, Without Beneficiary, and Other Terminations	(7)	0	7	(1)	0	(4)	(3)	0	(8)
Transfers	(3)	5		(2)	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0	(2)	(2)
Domestic Relations Orders	0		0	0	0	0	0	2	2
Withdrawals Paid	(15)	0	0	0	0	0	0	0	(15)
Data Corrections	0	36	4	(40)	(2)	0	(5)	8	1
July 1, 2009	342	71	12	13	1	75	138	46	698

# **Changes in Plan Membership: Safety**



	Gene	eral	Safe	ety	Tot	tal
		Annual Average		Annual Average		Annual Average
Age	Number	Benefit	Number	Benefit	Number	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	29,969	5	29,969
50-54	38	19,077	17	43,525	55	26,634
55-59	140	26,609	24	36,394	164	28,041
60-64	242	27,413	39	36,757	281	28,710
65-69	243	24,221	22	29,115	265	24,627
70-74	179	21,229	16	35,617	195	22,409
75-79	138	17,925	4	38,265	142	18,498
80-84	79	19,246	7	21,839	86	19,458
85-89	66	16,966	2	41,504	68	17,688
90-94	22	13,239	2	24,072	24	14,142
95+	5	28,037	0	0	5	28,037
All Ages	1,152	\$ 22,843	138	\$ 35,103	1,290	\$ 24,155

## **Service Retired**

## **Duty Disabled**

	Gene	ral	Safe	ety	Tot	al
		Annual		Annual		Annual
		Average		Average		Average
Age	Number	Benefit	Number	Benefit	Number	Benefit
0-24	0	\$0	0	\$0	0	\$0
25-29	0	0	0	0	0	0
30-34	0	0	2	\$ 28,074	2	28,074
35-39	0	0	1	26,126	1	26,126
40-44	0	0	1	33,839	1	33,839
45-49	1	23,151	6	30,527	7	29,473
50-54	4	18,671	11	19,095	15	18,982
55-59	10	19,564	17	21,679	27	20,896
60-64	10	18,990	17	34,741	27	28,907
65-69	10	20,668	17	25,545	27	23,739
70-74	6	17,451	3	29,089	9	21,331
75-79	7	16,795	0	0	7	16,795
80-84	4	23,748	0	0	4	23,748
85-89	0	0	0	0	0	0
90-94	2	11,107	0	0	2	11,107
95+	0	0	0	0	0	0
All Ages	54	\$ 19,065	75	\$ 26,533	129	\$ 23,407



			-			
	Gene	eral	Safe	ety	Tot	tal
		Annual Average		Annual Average		Annual Average
Age	Number	Benefit	Number	Benefit	Number	Benefit
0-24	0	\$0	0	\$0	0	\$0
25-20	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	1	35,114	0	0	1	35,114
40-44	1	11,612	0	0	1	11,612
45-49	2	15,946	0	0	2	15,946
50-54	1	13,196	0	0	1	13,196
55-59	9	14,809	0	0	9	14,809
60-64	7	12,195	1	\$ 13,451	8	12,352
65-69	11	12,440	0	0	11	12,440
70-74	9	13,314	0	0	9	13,314
75-79	6	15,144	0	0	6	15,144
80-84	0	0	0	0	0	0
85-89	2	5,805	0	0	2	5,805
90-94	0	0	0	0	0	0
95+	0	0	0	0	0	0
All Ages	49	\$13,665	1	\$13,451	50	\$13,661

## **Non-Duty Disabled**

## Surviving Beneficiaries (all benefit types)

	Gene	eral	Safe	ety	Tot	al
		Annual		Annual		Annual
		Average		Average		Average
Age	Number	Benefit	Number	Benefit	Number	Benefit
0-24	1	\$ 15,642	2	\$ 15,049	3	\$ 19,117
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	2	1,527	1	8,311	3	3,788
40-44	3	8,937	0	0	3	8,937
45-49	7	10,355	0	0	7	10,355
50-54	12	10,747	2	11,018	14	10,785
55-59	6	11,292	4	21,975	10	15,565
60-64	17	12,757	10	15,045	27	13,605
65-69	18	14,675	7	20,916	25	16,423
70-74	35	11,973	3	16,802	38	12,355
75-79	28	10,957	6	23,002	34	13,082
80-84	26	8,940	6	18,932	32	10,813
85-89	28	7,924	3	8,377	31	7,968
90-94	10	8,214	2	20,044	12	10,185
95+	3	10,050	0	0	3	10,050
All Ages	196	\$10,654	46	\$17,334	242	\$11,924



# **Benefit Form Elections**

	General	General	Safety	Safety	
Service Retired	Tier 1	Tier 2	Tier 1	Tier 2	Total
	240	10	40	0	200
Unmodified (No Continuance)	249	19	12	0	280
Unmodified (60% to Spouse)	613	25	86	0	724
Option #1 (Cash Refund)	38	2	1	0	41
Option #2 (100% Continuance)	87	4	15	0	106
Option #3 (50% Continuance)	12	1	1	0	14
Option #4 (Multiple Survivors)	1	0	0	0	1
Unmodified (No Continuance) w/SS	24	0	3	0	27
Unmodified (60% to Spouse) w/SS	72	0	20	0	92
Option #1 (Cash Refund) w/SS	3	0	0	0	3
Option #2 (100% Continuance) w/SS	2	0	0	0	2
Option #3 (50% Continuance) /SS	0	0	0	0	0
Total Service Retirement	1,101	51	138	0	1,290
Non-Duty Disability					
Unmodified (No Continuance)	18	3	0	0	21
Unmodified (60% to Spouse)	24	2	1	0	27
Option #1 (Cash Refund)	0	0	0	0	0
Option #2 (100% Continuance)	0	0	0	0	0
Option #3 (50% Continuance)	2	0	0	0	2
Total Non-Duty Disability	44	5	1	0	50
Duty Disability					
Unmodified (No Continuance)	12	2	10	1	25
Unmodified (60% to Spouse)	33	2	50	6	91
Option #1 (Cash Refund)	3	0	5	0	8
Option #2 (100% Continuance)	1	0	2	0	3
Option #3 (50% Continuance)	1	0	1	0	2
Total Duty Disability	50	4	68	7	129
Total	1,195	60	207	7	1,469



# **Retirement Eligibility**

		<u>Number</u>	of Actives R	Reaching R	etireme	nt Eligib	ility in Ye	ar(s)	
	Total								Total, Years
Plan	CurrentActives	0	1	2	3	4	5	6-10	0 - 10
General Tier 1	409	270	25	14	25	11	18	34	397
General Tier 2	1,439	85	32	48	52	50	50	304	621
Safety Tier 1	75	34	9	7	2	4	4	15	75
Safety Tier 2	267	7	4	0	1	5	7	42	66
Total	2,190	396	70	69	80	70	79	395	1,159



## **1.3: Summary of Actuarial Assumptions**

Valuation Date	All assets and liabilities are computed as of June 30, 2009.
Rate of Return	The annual rate of return on all Plan assets is assumed to be 8.16%, net of investment and administrative expenses.
Cost of Living	The cost of living, or inflation rate, as measured by the Consumer Price Index (CPI) will increase at the rate of 4.50% per year.
Post Retirement COLA	COLAs at the rate of 3.0% are assumed for Tier 1 members.
Increases in Pay	Current Rate: 4.50% Base salary increases
	Assumed new increases for active Members consist of increases due to

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

Age	General	Safety
20	6.52%	1.99%
25	2.43%	1.64%
30	1.03%	1.34%
35	1.10%	0.86%
40	0.82%	0.44%
45	0.45%	0.59%
50	0.56%	0.53%
55	0.54%	0.62%
60	0.53%	0.51%
65	0.52%	0.51%
70	0.51%	0.51%

### Active Member Mortality

Rates of mortality among Safety active Members are specified for male and female members combined; separate tables are used for General male and female active Members. Duty related mortality rates are only applicable for Safety Active Members. Sample rates are as follows:



	Duty <u>Death</u>	Or	dinary Dea	th	Deat	h While Elig	gible
	<u>Safety</u>	<u>Safety</u>	Gen	eral	<u>Safety</u>	Gen	<u>eral</u>
Age	All	All	Female	Male	All	Female	Male
20	0.0300%	0.0300%	0.0150%	0.0300%	0.0000%	0.0000%	0.0000%
25	0.0400%	0.0400%	0.0230%	0.0300%	0.0100%	0.0075%	0.0100%
30	0.0600%	0.0500%	0.0230%	0.0400%	0.0100%	0.0075%	0.0100%
35	0.1000%	0.0900%	0.0380%	0.0500%	0.0100%	0.0075%	0.0200%
40	0.1700%	0.1600%	0.0450%	0.0600%	0.0200%	0.0150%	0.0300%
45	0.2200%	0.1178%	0.0530%	0.0900%	0.0400%	0.0225%	0.0500%
50	0.2700%	0.2100%	0.0600%	0.1000%	0.1000%	0.0600%	0.1100%
55	0.3100%	0.3000%	0.0680%	0.1200%	0.2230%	0.1275%	0.2000%
60	0.0000%	0.0000%	0.0830%	0.1700%	0.0000%	0.2100%	0.3100%
65	0.0000%	0.0000%	0.1280%	0.2200%	0.0000%	0.3225%	0.4500%
70	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%



Retired Member Mortality Rates of mortality for retired Members and their beneficiaries are given by the 1994 GAM tables with no age adjustment. All Safety members use the Male table set back 1 year, and their beneficiaries have rates of mortality given by the 1994 GAM table for females with no adjustment. Sample rates are shown below.

	<u>Safety</u>	<u>General</u>	
Age	All	Female	Male
45	0.146%	0.097%	0.158%
50	0.233%	0.143%	0.258%
55	0.398%	0.229%	0.443%
60	0.709%	0.444%	0.798%
65	0.864%	0.864%	1.454%
70	1.373%	1.373%	2.373%
75	2.269%	2.269%	3.721%
80	5.586%	3.940%	6.203%
85	8.961%	6.774%	9.724%
90	13.945%	11.627%	15.293%



#### **Disabled Member Mortality**

Rates of mortality among disabled Members are given by the 1981 Disability Mortality Tables for General and Safety Members published by the Society of Actuaries. The rates for General female members are setback 5 years. Safety member rates are setback one year. There is no setback for General male members. Sample rates are as follows:

	<u>Safety</u> <u>General</u>		eral
Age	All	Male	Female
45	0.640%	2.080%	1.760%
50	0.860%	2.440%	2.080%
55	1.300%	2.840%	2.440%
60	2.600%	3.300%	2.840%
65	3.500%	3.790%	3.300%
70	4.220%	4.370%	3.790%
75	5.260%	5.530%	4.370%
80	7.970%	8.740%	5.530%
85	12.110%	13.010%	8.740%
90	16.870%	17.950%	13.010%



#### Service Retirement

Retirement is assumed to occur among eligible members in accordance with the table below. Rates are only applied to those members eligible to retire. The previous Actuary applied the rates regardless of eligibility.

	<u>Safety</u>	Gen	eral
Age	All	Female	Male
45	0.500%	0.00%	0.00%
46	0.750%	0.00%	0.00%
47	1.125%	0.00%	0.00%
48	1.688%	0.00%	0.00%
49	2.531%	0.00%	0.00%
50	4.500%	6.53%	6.15%
51	3.000%	4.36%	4.10%
52	3.000%	3.81%	4.10%
53	3.750%	3.91%	6.00%
54	3.750%	3.71%	3.38%
55	25.000%	13.50%	7.50%
56	12.500%	13.67%	7.88%
57	12.500%	13.83%	16.50%
58	15.000%	14.00%	8.63%
59	30.000%	14.00%	18.00%
60	100.000%	16.00%	16.00%
61	100.000%	12.88%	16.00%
62	100.000%	35.00%	34.50%
63	100.000%	20.00%	18.06%
64	100.000%	20.00%	22.14%
65	100.000%	40.00%	25.56%
66	100.000%	45.00%	25.00%
67	100.000%	50.00%	40.00%
68	100.000%	60.00%	70.00%
69	100.000%	80.00%	80.00%
70	100.000%	100.00%	100.00%



Service-Connected Disability Separate rates of duty disability are assumed among Safety and General Members; rates for both sexes for Safety Members are combined. Below are sample rates:

	<u>Safety</u>	General	
Age	All	Female	Male
20	0.6500%	0.0080%	0.0080%
25	0.7250%	0.0150%	0.0160%
30	0.8380%	0.0230%	0.0400%
35	1.0125%	0.0300%	0.0720%
40	1.2750%	0.0380%	0.0960%
45	1.5630%	0.0680%	0.1440%
50	1.9880%	0.1200%	0.1920%
55	2.5250%	0.2100%	0.2400%
60	0.0000%	0.3150%	0.3360%
65	0.0000%	0.0000%	0.0000%

Non Service-Connected Disability Separate rates of ordinary disability are assumed among Safety and General Members; rates for both sexes for Safety Members are combined. Below are sample rates:

	<u>Safety</u>	General	
Age	All	Female	Male
20	0.0000%	0.0000%	0.0000%
25	0.0200%	0.0100%	0.0400%
30	0.0300%	0.0200%	0.0800%
35	0.0400%	0.0300%	0.0800%
40	0.0600%	0.0400%	0.1300%
45	0.0900%	0.0900%	0.1900%
50	0.1200%	0.1800%	0.2400%
55	0.1600%	0.2800%	0.3200%
60	0.0000%	0.4600%	0.4200%
65	0.0000%	0.0000%	0.0000%



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

Separate rates of withdrawal are assumed among Safety and General Members. Current Rates are based on age, and do not overlap with the service retirement rates. The previous Actuary assumed withdrawal rates could overlap with the service retirement rates.

	<u>Safety</u>	Gen	eral
Age	All	Female	Male
20	13.00%	17.20%	20.90%
25	10.00%	16.08%	18.15%
30	7.80%	12.72%	14.85%
35	5.00%	9.44%	11.99%
40	2.50%	5.21%	6.69%
45	1.60%	4.64%	4.80%
50	0.90%	3.32%	3.04%
55	0.00%	2.32%	2.09%
60	0.00%	1.04%	1.32%
65	0.00%	0.00%	0.00%



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

> Vested terminated General Members are assumed to begin receiving benefits at age 60; terminated Safety Members are assumed to begin receiving benefits at age 50. Fifty percent of vested terminated members are assumed to be reciprocal. Separate rates of termination are assumed among Safety and General Members.

	<u>Safety</u>	General	
Age	All	Female	Male
20	0.00%	0.00%	0.00%
25	3.08%	2.34%	1.13%
30	4.50%	1.93%	1.85%
35	2.32%	4.60%	2.41%
40	1.66%	2.29%	2.27%
45	1.42%	4.42%	2.34%
50	0.70%	1.98%	2.32%
55	0.00%	1.66%	1.81%
60	0.00%	1.43%	1.48%
65	0.00%	0.00%	0.00%

Family Composition50% of female General members, 80% of male General members, and<br/>90% of Safety members are assumed to be married at retirement. Male<br/>spouses are assumed to be three years older than their wives.

### **Participant Data**

Data on 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.



## 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).



### **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.

#### 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 June 30, 2007, June 30, 2008 and June 30, 2009

	June 30, 2007	June 30, 2008	June 30, 2009
Cash and Equivalents	72,208,931	36,612,605	30,530,165
Receivables			
Interest	1,086,032	441,883	90,640
Dividends	184,718	158,240	168,439
Contributions	620,893	803,146	1,035,345
Income and Miscellaneous	3,174,296	2,550,260	388,409
	5,17 1,250	2,330,200	300,103
Total Receivables	5,065,939	3,953,529	1,682,833
Investments			
Government Bonds	57,427,648	19,313,900	49,603,648
Corporate Bonds	61,121,291	41,591,390	12,771,437
Domestic Fixed Income (Index Fund)	0	51,109,630	17,945,486
Common Stocks	224,139,859	166,039,934	120,536,402
Invesco (International Equity Fund)	55,705,055	82,975,316	62,567,853
Mellon Capital (Index Fund)	61,190,945	53,639,358	49,594,885
Real Estate	37,799,191	38,948,020	29,910,341
Alternative Investments	10,151,613	19,156,397	18,376,979
Other	0	0	0
Total Investments	507,535,602	472,773,945	361,307,031
Prepaid Expense	0	0	3,150
Property, Fixtures and Equipment Net of Accumulated Depreciation of			
\$51,997, \$61,026, and \$66,593 respectively	20,231	11,203	5,635
Total Property, Fixtures and Equipment	20,231	11,203	5,635
Liabilities	000 007	770.000	0.40.040
Accounts Payable	906,237	779,960	843,013
Securities Lending Obligations	51,309,226	24,344,477	15,468,497
Securities Purchased	13,266,111	5,474,099	1,437,979
Other	38,373	111,173	184,620
Total Liabilities	65,519,947	30,709,709	17,934,109
Market Value	\$519,310,756	\$482,641,573	\$375,594,705



# 2.2: Computation of Actuarial Value of Assets as of June 30, 2009

		(a)	(b)	(c)	(d)	(e) = (d) – (c)	(f)	(g) = (e) x (f)	
				Expected	Actual	Additional	Percentage	Unrecognized	
		Contributions	Benefits	Return	Return	Earnings	Unrecognized	Dollars	
	2006	22,971,691	27,715,779	35,038,804	34,655,253	(383,551)	20%	(76,710)	
	2007	31,987,396	31,131,453	36,012,796	75,916,614	39,903,818	40%	15,961,527	
	2008	33,109,139	34,897,506	37,838,089	(31,465,094)	(69,303,183)	60%	(41,581,910)	
	2009	37,798,955	38,089,689	39,371,923	(106,756,131)	(146,128,054)	80%	(116,902,443)	
(1)	Total Ur	nrecognized Doll	ars						(142,599,536)
(2)	Market	Value of Assets a	as of June 30, 20	009					375,594,705
(3)	Actuaria	al Value of Assets	s as of June 30,	2009 before co	orridor adjustmen	t			518,194,241
	[(2) - (1)	]							
(4)	Corrido	r Limits							
	a. 70% d	of Net Market Va	lue						262,916,294
	b. 130%	of Net Market V	/alue						488,273,117
(5)	Actuaria	al Value of Assets	s after Corridor						488,273,117
(6)	Ratio of	Actuarial Value	to Market Valu	e					130.0%
	[(5) ÷ (2	)]							
(7)	Special	(Non Valuation)	Reserves:						
	Healt	h Insurance Rese	erve [401(h)]					2,233,590	
	Special COL Reserve 1,711,303								
	Total Special Reserves 3,944,893								
	Total Special Reserves at Actuarial Value (Total x (6)) 5,128,3								5,128,361
(8)	Pension	Reserves at Act	uarial Value (Va	luation Assets)					483,144,756
	[(5) - (7)	]							

For the years Ending June 30, 2008 and June 30, 2009					
_	June 30, 2008	June 30, 2009			
Additions					
Contributions					
Employer's Contribution	\$ 23,751,437	\$ 27,882,650			
Members' Contributions	9,357,702	9,916,305			
Other Contributions	<u>0</u>	<u>0</u>			
Total Contributions	\$33,109,139	<u>\$37,798,955</u>			
Investment Income					
Net Appreciation/(Depreciation) in Fair Value of Investments	(79,599,096)	(78,834,137)			
Interest and Dividends	47,672,899	(25,320,017)			
Commission Recapture	0	0			
Other Investment Income	<u>258,045</u>	<u>82,889</u>			
Total Investment Income	<u>(\$31,668,152)</u>	<u>(\$104,071,265)</u>			
Investment Expenses	<u>(2,332,306)</u>	<u>(1,745,774)</u>			
Net Investment Income	<u>(\$34,000,458)</u>	<u>(\$105,817,039)</u>			
Securities Lending Activities					
Securities Lending Income	1,419,347	234,814			
Expenses from Securities Lending Activities	<u>(1,216,289)</u>	<u>(107,051)</u>			
Net Securities Lending Income	<u>\$203,058</u>	<u>\$127,763</u>			
Total Net Investment Income	<u>(\$33,797,400)</u>	<u>(\$105,689,276)</u>			
Total Additions	<u>(\$688,261)</u>	<u>(\$67,890,321)</u>			
Deductions					
Benefits	33,394,363	36,478,886			
Refunds	653,143	760,803			
Administrative Costs	1,029,916	1,005,060			
Actuarial Expense	53,500	61,795			
401(h) distribution to County	<u>850,000</u>	<u>850,000</u>			
Total Deductions	<u>\$35,980,922</u>	<u>\$39,156,544</u>			
Net increase (Decrease)	<u>(\$36,669,183)</u>	<u>(\$107,046,865)</u>			
Net Assets Beginning of Year	<u>\$</u> 519,310,756	<u>\$</u> 482,641,570			
Net Assets End of Year	\$482,641,573	\$375,594,705			

## 2.3: Income Statement

## For the Years Ending June 30, 2008 and June 30, 2009



## 2.4: Historical Returns

Year Ended June 30	Annualized Rate of Return (Market Value)	Annualized Rate of Return (Actuarial Value)	Annualized Rate of Return (Valuation Assets)	Increase in CPI*
1995		4.4%		3.0%
1996	9.8%	9.8%		2.8%
1997	16.7%	11.6%		2.3%
1998	13.9%	12.7%		1.7%
1999	10.0%	12.3%		2.0%
2000	9.1%	11.5%		3.7%
2001	-3.6%	8.6%		3.2%
2002	-5.6%	4.9%		1.1%
2003	4.6%	3.3%		2.1%
2004	12.6%	3.3%		3.3%
2005	8.7%	2.5%		2.5%
2006	7.6%	4.7%		4.3%
2007	16.3%	8.9%		2.7%
2008	-6.7%	1.2%		5.0%
2009	-22.1%	-4.9%	2.7%**	(1.4%)
Compounded 15 Year Average	N / A	6.2%	N / A	2.5%
Compounded 10 Year Average	1.5%	4.3%	N / A	2.6%
Compounded 5 Year Average	(0.2%)	2.4%	N / A	2.6%

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

\*\* Return on Valuation Assets was -5.2% prior to expansion of corridor from 20% to 30%



Section 3:

# **Actuarial Computations**



(1)	Fully Projected Liability	
	Active	428,668,274
	Inactive	30,434,589
	Receiving Benefits	407,116,499
	Total	866,219,362
(2)	Actuarial Accrued Liability	
	Active	302,617,148
	Inactive	30,434,589
	Receiving Benefits	407,116,499
	Total	740,168,236
(3)	Projected Payroll	106,306,679
(4)	Total Normal Cost (% Pay)	17.95%
(5)	Employee Contribution (% Pay)	8.66%
(6)	Employer Normal Cost (% Pay) [(4) - (5)]	9.29%
(7)	Valuation Assets	469,910,606
(8)	Unfunded Actuarial Accrued Liability [(2) – (7)]	270,257,630
(9)	Amortization of Unfunded Liability	21,972,069
(10)	Amortization of Unfunded	20.67%
	Liability (% Pay) [(9) ÷ (3)]	
(11)	Total Employer Cost (% Pay) [(6) + (10)]	29.96%
(12)	Total Employer Cost (% Pay) [(11) x (3)]	31,853,442
(13)	Projected Payroll FY 2009-2010 [(3) x (1.045)]	111,090,480
(13)	Projected Employer Cost FY 2009-2010 [(13) x (11)]	33,286,847
(++)		55,200,847

# 3.1: Computation of Annual Contribution Rate as of June 30, 2008 (EFI Recalculation)



(1)	Fully Projected Liability	
	Active	467,125,561
	Inactive	27,911,747
	Receiving Benefits	448,230,960
	Total	943,268,268
(2)	Actuarial Accrued Liability	
	Active	333,537,883
	Inactive	27,911,747
	Receiving Benefits	448,230,960
	Total	809,680,590
(3)	Projected Payroll	114,983,793
(4)	Total Normal Cost (% Pay)	17.58%
(5)	Employee Contribution (% Pay)	8.52%
(6)	Employer Normal Cost (% Pay) [(4) - (5)]	9.06%
(7)	Valuation Assets	483,144,756
(8)	Unfunded Actuarial Accrued Liability [(2) – (7)]	326,535,834
(9)	Amortization of Unfunded Liability	24,342,871
(10)	Amortization of Unfunded	21.17%
	Liability (% Pay) [(9) ÷ (3)]	
(11)	Total Employer Cost (% Pay) [(6) + (10)]	30.23%
(11)	Total Employer Cost (% Pay) [(1) $\times$ (3)]	34,760,261
(12)		54,700,201
(13)	Projected Payroll FY 2010-2011 [(3) x (1.045)]	120,158,064
(14)	Projected Employer Cost FY 2010-2011 [(13) x (11)]	36,324,472
(++)		50,527,772

# 3.2: Computation of Annual Contribution Rate as of June 30, 2009



## 3.3: Actuarial Balance Sheet

	Assets	
1.	Actuarial value of assets	\$ 488,273,117
2.	Present value of future contributions by members	61,341,417
3.	Present value of future employer contributions for normal cost	72,246,261
4.	Present value of other future employer contributions (UAAL)	326,535,834
5.	Total actuarial assets	\$948,396,629
	Liabilities	
6.	Present value of retirement allowances payable to retired/disabled members and their survivors	\$ 448,230,960
7.	Present value of service retirement allowances payable to presently active members and their survivors	353,267,128
8.	Present value of allowances payable to current and future vested terminated and their survivors	79,916,268
9.	Present value of disability retirement allowances payable to presently active members and their survivors	34,598,434
10.	Present value of death benefits payable on behalf of presently active members	7,799,138
11.	Present value of members' contributions to be returned upon withdrawal	19,456,340
12.	Special Reserves (Measured at Actuarial Value)	5,128,361
13.	Total actuarial liabilities	\$948,396,629



## 3.4: Actuarial Gain and Loss

1.	Unfunded actuarial accrued liability as of June 30, 2008, as originally computed		203,905,703
2.	Restated Unfunded actuarial accrued liability as of June 30, 2008 (EFI Calculations)		270,257,630
3.	Change due to contributions:		
	(a) Normal Cost	18,354,729	
	(b) Interest on (a)	1,497,746	
	(c) Interest on (1)	22,053,023	
	(d) Total contributions	(37,798,955)	
	(e) Interest on (d)	(1,542,197)	
	(f) Net change [(a) + (b) + (c) + (d) + (e)]		2,564,346
4.	Expected unfunded actuarial accrued liability as of June 30, 2009 [(2) + (3)]		272,821,976
5.	Change due to experience:		
	(a) Actuarial (gain)/loss from liabilities	23,892,043	
	(b) Actuarial (gain)/loss from assets	66,986,799	
	(c) Net change [(a) + (b)]		90,878,840
6.	Unfunded actuarial accrued liability before changes [(4) + (5)]		363,700,816
7.	Change in actuarial assumptions		0
8.	Change in plan provisions		0
9.	Change in actuarial methods (expand corridor to 30%)		(37,164,981)
10.	Unfunded actuarial accrued liability as of June 30, 2009 [(6) + (7) + (8) + (9)]		326,535,834



**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 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	Actuarial Value of Valuation Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio	Covered Payroll	Unfunded Liability as a Percent of Payroll		
7/1/1998	260,884	333,771	72,887	78.2%	57,854	126.0%		
7/1/1999	354,467	351,252	(3,215)	100.9%	62,521	(5.1%)		
7/1/2000	N/A	N/A	N/A	N/A	N/A	N/A		
7/1/2001	411,710	404,316	(7,394)	101.8%	76,015	(9.7%)		
7/1/2002	424,613	421,435	(3,178)	100.8%	83,001	(3.8%)		
7/1/2003	428,959	451,181	22,222	95.1%	88,586	25.1%		
7/1/2004	430,054	531,938	101,884	80.8%	89,516	113.8%		
7/1/2005	428,813	589,794	160,891	72.7%	97,507	165.1%		
7/1/2006	439,309	619,644	180,335	71.1%	101,137	178.3%		
7/1/2007	480,517	652,482	171,965	73.6%	100,589	171.0%		
7/1/2008	488,347	692,252	203,906	70.5%	109,253	186.6%		
7/1/2009	483,145	809,681	326,536	59.7%	114,984	284.0%		



Schedule of Employer Contributions (Dollar Amounts in Thousands)						
Year Ending	Annual Required Contribution	Percentage Contributed				
6/30/1999	69,919	100%				
6/30/2000	6,259	100%				
6/30/2001	6,927	100%				
6/30/2002	7,731	100%				
6/30/2003	7,201	100%				
6/30/2004	7,269	100%				
6/30/2005	8,931	100%				
6/30/2006	14,750	100%				
6/30/2007	23,232	100%				
6/30/2008	23,751	100%				
6/30/2009	27,883	100%				

The table below summarizes certain information about this actuarial report.

Valuation date June 30, 2009 Actuarial cost method **Entry Age Normal** Amortization method Level percentage of payroll closed Remaining amortization period 18 Years Asset valuation method Actuarial value: Excess earnings smoothed over five years, 70%/130% corridor around market value Actuarial assumptions: Investment rate of return\* 8.16% Projected salary increases\* 4.50%, plus service-based rates \*Includes inflation at 4.50% Cost of living adjustments For Tier 1, 100% of CPI to 3% annually with banking



**Appendix I:** 

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

EFI

### **Contribution Rates for General and Safety**

Separate rates for General and Safety members are shown below.

	<u>General Rates</u>			Safety Rates		
	Tier I	Tier II	Total	Tier I	Tier II	Total
Employer Normal Cost	11.60%	6.70%	8.02%	19.26%	12.48%	14.37%
UAAL Amortization Cost	21.31%	21.31%	21.31%	20.47%	20.47%	20.47%
Total Cost	32.91%	28.01%	29.33%	39.73%	32.96%	34.85%

### **Contribution Rates - Cemetery Members Only**

Only the rates for Tier II general members are shown below, as this is the only Tier with active Cemetery Members.

	General Rates				
	Tier I	Tier II	Total		
Employer Normal Cost	N / A	6.06%	6.06%		
UAAL Amortization Cost	N / A	4.52%	4.52%		
Total Cost	N / A	10.58%	10.58%		

/EFI

### **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 6/30/2009) was taken from the actuarial valuation report as of June 30, 2008.

	Actuarial Accrued Liability			Total Actuarial		Portion of Accrued Liabilities Covered by Assets		
Valuation Date	Active Member Contributions	Retirees and Beneficiaries	Active Members <sup>2</sup>	Accrued Liability	Valuation Assets	Active Member Contributions	Retirees and Beneficiaries	Active Members
6/30/1999	43,736,000	187,535,000	119,981,000	351,252,000	354,469,000	100%	100%	100%
6/30/2001	49,481,000	211,439,000	143,396,000	404,316,000	411,710,000	100%	100%	100%
6/30/2002	50,941,000	212,359,000	158,135,000	421,435,000	424,613,000	100%	100%	100%
6/30/2003	48,379,000	238,727,000	164,075,000	451,181,000	428,959,000	100%	100%	86%
6/30/2004	48,708,000	265,193,000	218,037,000	531,938,000	430,054,000	100%	100%	53%
6/30/2005	49,162,000	281,246,000	259,386,000	589,794,000	428,813,000	100%	100%	38%
6/30/2006	54,826,000	305,589,000	263,918,000	624,333,000	443,999,000	100%	100%	32%
6/30/2007	59,299,000	358,644,000	234,539,000	652,482,000	480,517,000	100%	100%	28%
6/30/2008	66,865,000	370,764,000	254,623,000	692,252,000	488,347,000	100%	100%	20%
6/30/2009	65,126,000	448,231,000	296,324,000	809,681,000	483,145,000	100%	93%	0%

<sup>2</sup> Includes terminated vested members

General Members							
	Basic Rate	e – Tier 1	Basic Rate	– Tier 2	Cost of Living Rate – Tier 1		
Entry Age	1 <sup>st</sup> \$350/month	Over \$350	1 <sup>st</sup> \$350/month	Over \$350	1 <sup>st</sup> \$350/month	Over \$350	
16	4.26%	6.39%	4.06%	6.09%	1.06%	1.58%	
17	4.27%	6.40%	4.07%	6.10%	1.06%	1.59%	
18	4.28%	6.42%	4.08%	6.12%	1.06%	1.59%	
19	4.30%	6.45%	4.10%	6.15%	1.07%	1.60%	
20	4.33%	6.49%	4.12%	6.18%	1.07%	1.61%	
21	4.35%	6.53%	4.15%	6.23%	1.08%	1.62%	
22	4.39%	6.59%	4.19%	6.28%	1.09%	1.63%	
23	4.44%	6.66%	4.23%	6.34%	1.10%	1.65%	
24	4.49%	6.73%	4.27%	6.41%	1.11%	1.67%	
25	4.54%	6.81%	4.33%	6.49%	1.13%	1.69%	
26	4.59%	6.89%	4.38%	6.57%	1.14%	1.71%	
27	4.65%	6.98%	4.43%	6.65%	1.15%	1.73%	
28	4.71%	7.07%	4.49%	6.73%	1.17%	1.75%	
29	4.77%	7.16%	4.55%	6.82%	1.18%	1.77%	
30	4.84%	7.26%	4.61%	6.92%	1.20%	1.80%	
31	4.91%	7.36%	4.68%	7.02%	1.22%	1.82%	
32	4.98%	7.47%	4.74%	7.11%	1.23%	1.85%	
33	5.05%	7.57%	4.81%	7.22%	1.25%	1.88%	
34	5.13%	7.69%	4.88%	7.32%	1.27%	1.91%	
35	5.20%	7.80%	4.95%	7.43%	1.29%	1.93%	
36	5.28%	7.92%	5.03%	7.54%	1.31%	1.96%	
37	5.36%	8.04%	5.11%	7.66%	1.33%	1.99%	
38	5.44%	8.16%	5.19%	7.78%	1.35%	2.02%	
39	5.53%	8.29%	5.27%	7.90%	1.37%	2.06%	
40	5.61%	8.42%	5.35%	8.02%	1.39%	2.09%	
41	5.70%	8.55%	5.43%	8.15%	1.41%	2.12%	
42	5.79%	8.68%	5.51%	8.27%	1.43%	2.15%	
43	5.88%	8.82%	5.61%	8.41%	1.46%	2.19%	
44	5.97%	8.96%	5.69%	8.54%	1.48%	2.22%	
45	6.07%	9.10%	5.78%	8.67%	1.50%	2.26%	
46	6.16%	9.24%	5.87%	8.81%	1.53%	2.29%	
47	6.25%	9.38%	5.96%	8.94%	1.55%	2.33%	
48	6.35%	9.53%	6.05%	9.08%	1.57%	2.36%	
49	6.45%	9.67%	6.15%	9.22%	1.60%	2.40%	
50	6.55%	9.82%	6.23%	9.35%	1.62%	2.43%	
51	6.64%	9.96%	6.33%	9.49%	1.65%	2.47%	
52	6.74%	10.11%	6.42%	9.63%	1.67%	2.51%	
53	6.84%	10.26%	6.51%	9.77%	1.70%	2.54%	
54+	6.94%	10.41%	6.61%	9.92%	1.72%	2.58%	

### **Table 1: Member Contribution Rates**

		S	afety Members			
	Basic Rate	<u>– Tier 1</u>	Basic Rate	Cost of Living Rate – Tier 1		
Entry Age	1 <sup>st</sup> \$350/month	Over \$350	1 <sup>st</sup> \$350/month	Over \$350	1 <sup>st</sup> \$350/month	Over \$350
20	4.73%	7.10%	4.51%	6.76%	2.90%	4.36%
21	4.79%	7.18%	4.56%	6.84%	2.94%	4.40%
22	4.85%	7.27%	4.61%	6.92%	2.97%	4.46%
23	4.91%	7.36%	4.67%	7.01%	3.01%	4.52%
24	4.97%	7.45%	4.73%	7.10%	3.05%	4.57%
25	5.03%	7.54%	4.79%	7.19%	3.08%	4.63%
26	5.09%	7.64%	4.85%	7.28%	3.12%	4.69%
27	5.16%	7.74%	4.92%	7.38%	3.17%	4.75%
28	5.23%	7.84%	4.99%	7.48%	3.21%	4.81%
29	5.30%	7.95%	5.05%	7.58%	3.25%	4.88%
30	5.37%	8.06%	5.12%	7.68%	3.30%	4.94%
31	5.45%	8.17%	5.19%	7.79%	3.34%	5.01%
32	5.53%	8.29%	5.27%	7.90%	3.39%	5.09%
33	5.61%	8.41%	5.35%	8.02%	3.44%	5.16%
34	5.69%	8.54%	5.43%	8.14%	3.49%	5.24%
35	5.78%	8.67%	5.51%	8.26%	3.55%	5.32%
36	5.87%	8.81%	5.59%	8.39%	3.60%	5.40%
37	5.96%	8.94%	5.68%	8.52%	3.66%	5.48%
38	6.06%	9.09%	5.77%	8.66%	3.72%	5.58%
39	6.15%	9.23%	5.86%	8.79%	3.78%	5.66%
40	6.25%	9.37%	5.95%	8.93%	3.83%	5.75%
41	6.35%	9.52%	6.05%	9.07%	3.89%	5.84%
42	6.44%	9.66%	6.14%	9.21%	3.95%	5.93%
43	6.54%	9.81%	6.23%	9.35%	4.01%	6.02%
44	6.64%	9.96%	6.33%	9.49%	4.07%	6.11%
45	6.74%	10.11%	6.42%	9.63%	4.13%	6.20%
46	6.84%	10.26%	6.52%	9.78%	4.20%	6.29%
47	6.94%	10.41%	6.61%	9.92%	4.26%	6.39%
48	7.04%	10.56%	6.71%	10.07%	4.32%	6.48%
49+	7.15%	10.73%	6.81%	10.22%	4.39%	6.58%

	Basic Rate – Tier 2					
Entry Age	1 <sup>st</sup> \$350/month	Over \$350				
16	3.38%	5.07%				
17	3.39%	5.09%				
18	3.40%	5.10%				
19	3.41%	5.12%				
20	3.43%	5.15%				
21	3.46%	5.19%				
22	3.49%	5.23%				
23	3.53%	5.29%				
24	3.56%	5.34%				
25	3.61%	5.41%				
26	3.65%	5.47%				
27	3.69%	5.54%				
28	3.74%	5.61%				
29	3.79%	5.69%				
30	3.85%	5.77%				
31	3.90%	5.85%				
32	3.95%	5.93%				
33	4.01%	6.01%				
34	4.07%	6.10%				
35	4.13%	6.19%				
36	4.19%	6.29%				
37	4.25%	6.38%				
38	4.32%	6.48%				
39	4.39%	6.58%				
40	4.46%	6.69%				
41	4.53%	6.79%				
42	4.60%	6.90%				
43	4.67%	7.00%				
44	4.74%	7.11%				
45	4.82%	7.23%				
46	4.89%	7.34%				
47	4.97%	7.45%				
48	5.05%	7.57%				
48	5.12%	7.68%				
50	5.19%	7.79%				
50	5.27%	7.91%				
51						
	5.35%	8.03%				
53 54+	5.43%	8.14%				

Merced County Employees' Retirement Association65Actuarial Review and Analysis as of June 30, 2009

**Appendix II:** 

Information for Completing Consolidated Annual Financial Report (CAFR)



### **Active Member Data**

					Average
Valuation at		Member		Average	Salary
Year End	Plan Type	Count	Annual Payroll	Annual Salary	Increase
2003	General	1,930	76,971,000	39,881	6.24%
	Safety	262	11,615,000	44,332	6.14%
	Total	2,192	88,586,000	40,413	6.29%
2004	General	1,824	77,023,000	42,228	5.89%
	Safety	268	12,493,000	46,616	5.15%
	Total	2,092	89,516,000	42,790	5.88%
2005	General	1,892	83,166,000	43,957	4.09%
	Safety	295	14,341,000	48,614	4.29%
	Total	2,187	97,507,000	44,585	4.19%
2006	General	1,919	85,864,000	44,744	1.79%
	Safety	310	15,274,000	49,271	1.35%
	Total	2,229	101,138,000	45,374	1.77%
2007	General	1,917	85,308,000	44,501	-0.54%
	Safety	318	15,281,000	48,053	-2.47%
	Total	2,235	100,589,000	45,006	-0.81%
2008	General	1,921	92,116,000	47,952	7.75%
	Safety	339	17,137,000	50,552	5.20%
	Total	2,260	109,253,000	48,342	7.41%
2009	General	1,848	99,266,589	53,716	12.02%
	Safety	342	19,363,697	56,619	12.00%
	Total	2,190	118,630,286	54,169	12.05%

EFI

Valuation at Year End	Beginning of Year	Added During Year	Allowances Added	Removed During Year	Allowances Removed	End of Year	Annual Retirement Payroll	Average Allowance Percentage Increase	Average Annual Allowance
2003	1,295	N/A	N/A	N/A	N/A	1,348	20,369,000	15.25%	15,111
2004	1,348	124	2,807,000	31	396,000	1,441	22,780,000	11.84%	15,808
2005	1,441	109	2,445,000	49	450,000	1,477	24,867,000	9.16%	16,836
2006	1,477	98	2,007,000	53	785,000	1,521	27,297,000	9.77%	17,934
2007	1,521	136	4,419,000	38	560,000	1,620	31,823,000	16.58%	19,644
2008	1,620	105	2,757,000	67	902,000	1,658	34,603,000	8.74%	20,870
2009	1,658	105	3,402,523	52	812,828	1,711	37,747,525	9.09%	22,062

### Schedule of Retirees and Beneficiaries Valuation Data