

# **Actuarial Valuation Report**

## **Sacramento County Employees' Retirement System**

As of June 30, 2001

December 2001

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William M. Mercer, Incorporated  
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Suite 1500  
San Francisco, CA 94111

415 743 8700

WILLIAM M.  
**MERCER**

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December 3, 2001

Board of Retirement  
Sacramento County Employees'  
Retirement System  
980 - 9<sup>th</sup> Street, Suite 750  
Sacramento, California 95814

Dear Members of the Board:

We are pleased to present the actuarial valuation for the Sacramento County Employees' Retirement System prepared as of June 30, 2001 by William M. Mercer, Incorporated. The report includes:

- (1) a determination of the recommended employer contribution rates. These rates are to be effective July 1, 2002;
- (2) a determination of the recommended member contribution rates, also to be effective on July 1, 2002;
- (3) a determination of the funded status as of June 30, 2001; and
- (4) financial reporting and disclosure information pursuant to applicable accounting standards.

This report conforms with the requirements of the governing state and local statutes, accounting rules, and generally accepted actuarial principles and practices.

This report reflects the impact on funding status and contribution rates of the Retirement Board's expansion of the pay items includable in Earnable Compensation in response to the 1997 California Supreme Court decision in the Ventura County Deputy Sheriff's Association vs. Board of Retirement, Ventura County Employees' Retirement Association. This report assumes no retroactive application of the Ventura decision.

We have calculated the employer and member contribution rates assuming:

- The Reserve for Interest Fluctuations is retained at 2.5%; and
- The Board will not transfer any excess earnings to reduce member and employer contribution rates.

We have provided in the report the amount that would be required to be transferred from excess earnings to maintain member and employer contribution rates at the same level determined in the June 30, 2000 valuation, for information purposes only.

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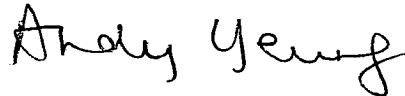
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The undersigned are Members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

We look forward to presenting this report to the Board on December 20, 2001.

Sincerely,



Andy Yeung, ASA, EA, MAAA



Marcia L. Chapman, FSA, EA, MAAA



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# Actuarial Certification

The annual actuarial valuation required for the Sacramento County Employees' Retirement System has been prepared as of June 30, 2001 by William M. Mercer, Incorporated. In preparing this valuation, we have employed generally accepted actuarial methods and assumptions to determine a sound value for the System's assets, liability and future contribution requirements. Our calculations are based upon member data and unaudited financial information provided to us by the System's staff. This data has not been audited by us, but it has been reviewed and found to be consistent, both internally and with prior years' data.

The contribution requirements are determined as a percentage of payroll. The primary funding objective of the System is to determine employer rates required to provide for both normal cost and a contribution to amortize the unfunded actuarial accrued liability. The amortization period for the unfunded actuarial accrued liability is 21 years as of June 30, 2001. The contribution to the unfunded actuarial accrued liability (which is currently negative for the County, resulting in a rate credit) is calculated to remain level as a percentage of future payroll (including projected payroll for future members). The dollar amount of payments (credits) will increase with payroll at a rate of 4.25% per year. The period for amortizing the unfunded actuarial accrued liability is set by the Board of Retirement.

The County issued Pension Obligation Bonds on July 5, 1995 to fully fund its unfunded actuarial accrued liability calculated as of June 30, 1994. Districts did not participate in the bond issue, so they are required to contribute at a higher level.

Contribution levels are recommended by the Actuary and adopted by the Board each year. The ratio of Actuarial Value of Assets to Actuarial Accrued Liabilities decreased from 110.1% to 107.7% during the year as a result of greater than expected salary increases for active members and actuarial assumption changes.

The results in this valuation were based on the actuarial assumptions adopted by the Board in the June 30, 2001 experience study. A summary of the assumption changes identified in the June 30, 2001 experience study were as follows:

## **Pre-Retirement Assumptions:**

- **Withdrawal** – Some changes were made to General and Safety withdrawal assumptions to more closely match the observed experience. In general, we observed more withdrawals than expected. The modifications to assumptions were slight and had an insignificant impact on costs.
- **Termination with Vested Benefit** – In all categories, more members than expected left and maintained a benefit in the System. The assumptions were increased to reflect this trend. This change also had an insignificant cost impact.



- Disability – There were fewer duty and ordinary disabilities among all categories than expected. Adjustments were made to anticipate fewer duty and ordinary disabilities. However, since disability rates tend to increase in times of economic uncertainty, we made only slight modifications to the assumptions. We believe that the low observed disabilities over the past three years may be related to the good economic environment. This reduces plan costs slightly.
- Service Retirement Rates — Service retirement was lower than expected in all categories. We recommend only slight modifications since external factors such as the expectation of a benefit improvement in the near future often impact retirement rates. We will continue to monitor this assumption. This should have an insignificant impact on plan costs.
- Average Entry Age – To determine member contribution rates for those members hired after January 1, 1975, we use an average entry age. The age increased by one year for both General and Safety members. This increases member rates.

### **Salary Increase**

- Salary Increase — The merit and longevity salary increase assumptions were raised to partially reflect observed salary increases over the last three years.

### **Post-Retirement Mortality**

- Post-Retirement Mortality — The mortality tables for retired male General members reflect lower than expected deaths over the experience study period. Adjustments were made to reflect the improvement in life expectancy for this group.

In our opinion, the combined operation of the assumptions and methods applied in this valuation fairly represent past and anticipated future experience of the System and meet the parameters required by GASB Statement 25.

A list of the supporting schedules we prepared for inclusion in the Actuarial and Financial Sections of the System's CAFR report is provided below:

- (1) Schedule of Active Member Valuation Data
- (2) Retirees and beneficiaries Added to and Removed From Retiree Payroll
- (3) Solvency Tests
- (4) Actuarial Analysis of Financial Experience
- (5) Schedule of Average Benefit Payments for Retirees and Beneficiaries
- (6) Schedule of Funding Progress

ACTUARIAL CERTIFICATION

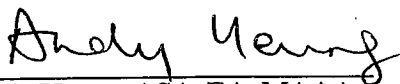
Future contribution requirements may differ from those determined in the valuation because of:

- (1) differences between actual experience and anticipated experience;
- (2) changes in actuarial assumptions or methods;
- (3) changes in statutory provisions; and
- (4) differences between the contribution rates determined by the valuation and those adopted by the Board.

This report reflects the impact on funding status and contribution rates of the Retirement Board's expansion of the pay items includable in Earnable Compensation in response to the 1997 California Supreme Court decision in the Ventura County Deputy Sheriff's Association vs. Board of Retirement, Ventura County Employees' Retirement Association. This report assumes no retroactive application of the Ventura decision.

The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

William M. Mercer, Incorporated



Andy Yeung, ASA, EA, MAAA

12/3/01

Date



Marcia L. Chapman, FSA, EA, MAAA

12/03/01

Date

**Board Member Summary  
Of Valuation  
Results**

# Board Member Summary of Valuation Results

## Summary of Recommendations

Employer Contributions Rates*	June 30, 2001	June 30, 2000	Increase/ (Decrease)	
Normal Cost Rate:	10.55%	10.52%	0.03%	
Rate of Contribution to Unfunded Actuarial Accrued Liability:	-2.69%	-3.61%	0.92%	
Total Employer Rate:	7.86%	6.91%	0.95%	
Estimated Annual Amount:	\$49,897,000	\$43,895,000	\$6,002,000	

Member Contribution Rates**	June 30, 2001	June 30, 2000	Increase/ (Decrease)	Average Change per Bi-Week
<i>General Members</i>				
Tier 1	7.03%	6.65%	0.38%	\$ 8.39
Tier 2	5.98%	5.78%	0.20%	\$ 3.80
Tier 3	6.36%	6.12%	0.24%	\$ 4.15
<i>Safety Members</i>				
Tier 1	9.51%	9.13%	0.38%	\$ 9.95
Tier 2	8.83%	8.62%	0.21%	\$ 4.45
Estimated Annual Amount	\$ 35,453,000	\$ 34,322,000	\$ 1,131,000	

Actuarial Assumptions	June 30, 2001	June 30, 2000	Increase/ (Decrease)
Annual Inflation Rate:	4.25%	4.25%	0.00%
Annual Investment Return:	8.00%	8.00%	0.00%
Average Annual Salary Increases:	5.75%	5.55%	0.20%

Other assumptions are based upon the June 30, 2001 experience analysis

\* Result based on recommended study (8.0% interest, 4.25% inflation and 1.50% average merit and longevity assumptions.)

\*\* Based on single full-rates payable by member.

SUMMARY OF VALUATION RESULTS

SACRAMENTO COUNTY  
 EMPLOYEES' RETIREMENT SYSTEM  
 Summary of Significant Actuarial Statistics and Measures

	June 30, 2001	June 30, 2000	Increase/ (Decrease)
<b>System Membership</b>			
<i>Active Members</i>			
1. Number of Members	12,991	12,235	6%
2. Total Active Payroll	\$634,798,000	\$559,047,000	14%
3. Average Monthly Salary	\$4,072	\$3,808	7%
<i>Retired Members</i>			
1. Number of Members			
Service Retirement	3,975	3,937	1%
Disability Retirement	651	675	(4%)
Beneficiaries	900	876	3%
Total	5,526	5,488	1%
2. Total Retired Payroll	\$98,600,000	\$93,620,000	5%
3. Average Monthly Pension	\$1,487	\$1,388	7%
<i>Inactive Vested Members</i>			
1. Number of Members	2,146	1,828	17%
<b>Asset Values (Net)</b>			
Market Value	\$3,432,826,000	\$3,679,913,000	(7%)
Return on Market Value	-5.74%	9.18%	(2.53%)
Actuarial Value	\$3,718,198,000	\$3,427,348,000	8%
Return on Actuarial Value	9.52%	14.46%	(2.06%)
<b>Liability Values</b>			
Actuarial Accrued Liability	\$3,451,864,000	\$3,111,760,000	11%
Unfunded Actuarial Accrued Liability (UAAL)	(\$266,334,000)	(\$315,588,000)	(16%)
<b>Funding Ratios</b>			
GASB No. 25	107.7%	110.1%	-2%

## Explanation of Changes in Actuarial Values

### **Impact on Contribution Rates (Before Board of Retirement Transfer)**

Following is the estimated impact on 2002-2003 fiscal year contribution rates of the recommendations in this study.

Summary of Gain/ Loss	Rate Impact	Dollar Impact
June 30, 2000 Employer Rate	6.91% \$	43,895,000
Investment return greater than expected	-0.03% \$	(190,000)
Transfer to Offset Future Employer Contributions	0.00% \$	-
Salary increase greater than expected	0.53% \$	3,364,000
Change in Normal Cost	0.06% \$	381,000
Retiree COLA greater than expected	0.04% \$	241,000
Dilution of Prefunded Actuarial Accrued Liability Credit	0.32% \$	2,044,000
Impact of Assumption Changes	0.21% \$	1,333,000
Miscellaneous (gains)/ losses	-0.18% \$	(1,171,000)
Subtotal	0.95% \$	6,002,000
June 30, 2001 Employer Rate	7.86% \$	49,897,000

### Explanation of Gain/ Loss Items

Investment return greater than expected - The System's actuarial valuation assets earned 0.11% in excess of the 8% return assumption.

Salary increase greater than expected - The average salary for continuing actives increased by 7.66% and was higher than the expected increase of 5.55%.

Change in Normal Cost - There was a slight increase in the Normal Cost.

Retiree Cola - Average COLA increase for retirees was greater than expected.

Dilution of Prefunded Actuarial Accrued Liability Credit - The aggregate payroll increased by 13.39% and was higher than the expected increase of 4.25%. The unexpected increase diluted the percentage of payroll credit drawn from the Prefunded Actuarial Accrued Liability.

Impact of Assumption Changes - Net employer rate impact of experience study recommendations.

Miscellaneous (gains)/ losses - Other actuarial gains or losses with untraced sources.

**Member Contribution Rates**

The average entry age of members has increased since the previous experience analysis. As a result, those members who entered the System after January 1, 1975 and pay a single rate have a basic rate adjustment from a shift in entry age. In addition, the changes to salary scale also impacted the rates.

**Funding Ratios**

The change in funding ratio is due to actuarial experience as detailed under Employer Contribution Rate above.

**Asset Valuation Method**

There were no changes to the asset valuation method from the June 30, 2000 valuation.

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## Transfers Required to Maintain Contribution Rates At Last Year's Level

We were requested to provide the transfer amounts necessary to maintain employer and member contribution rates at the same level determined in the June 30, 2000 valuation. The following transfers required from excess earnings are provided for information purposes only, since they were not assumed in this valuation.

	<u>Transfers Required</u>
Maintain Employer's Rate at Last Year's Level	\$86,000,000
Maintain Member's Rate at Last Year's Level*	\$11,000,000
Total	<hr/> \$97,000,000

\* Please note that in determining the transfer amount, we assume that the Board would transfer amount sufficient to maintain the total (basic plus COLA) member rate at the level determined in the June 30, 2000 valuation. However, since General Tier 2 members are only required to pay a higher basic rate, the Board would not be able to use excess earnings to reduce their rate to last year's level.

Again, please note that the rates included in this Report assume the Board will not transfer any excess earnings to reduce employer and member contribution rates.





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# Actuarial Assumptions

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## Economic Actuarial Assumptions

### Introduction

Economic actuarial assumptions are of three types:

- (1) *Inflation* results from increases in prices of goods and services. Inflation drives employee salary increases, retiree cost-of-living increases and the returns that investors demand from securities markets and other investments. For those reasons the inflation assumption underlies all economic actuarial assumptions. This assumption also determines the rate at which payments to the Unfunded Actuarial Accrued Liability increase each year.
- (2) *Investment Return* has a powerful influence on a retirement system's cost to employers and members. The more money earned from investments, the less needs to be contributed. Assuming a typical new member's pension is funded over a 25 year career and that employee receives pension checks for 20 years after retirement, a 1% higher rate of investment return will reduce required contributions by about 20% (all else remaining equal). For this reason, setting the investment return assumption is an important decision.
- (3) *Salary Increases* have a significant impact on the benefit members will receive at retirement. This assumption contains two components -- cost-of-living (inflation) increases plus pay raises that members receive as a result of promotions and step increases.

### Setting Economic Assumptions

The Actuarial Standards Board has issued a practice standard entitled "Selection of Economic Assumptions for Measuring Pension Obligations". This Actuarial Standard of Practice (SOP) is designed to provide pension actuaries guidance in setting the economic assumptions. Section 3.4 of the SOP provides the following general steps for selecting economic assumptions for a specific measurement:

- (1) Identify components, if any, of each assumption and evaluate relevant data;
- (2) Develop a best-estimate range for each economic assumption required for the measurement, reflecting appropriate measurement factors; and
- (3) Further evaluate measurement-specific factors and select a specific point within the best estimate range.

After completing these steps for each assumption, the actuary should review the set of economic assumptions for reasonableness and consistency and make any needed changes.

The relevant data referred to in step 1 should consist of appropriate historical and recent economic data. In Section 3.3, the SOP recommends that the actuary consider recent economic data, “however, the actuary should not give undue weight to recent experience.”

The remainder of this Section provides the analytical development behind each of the three economic assumptions.

## Inflation

### Recommendation

The Board has adopted our recommendation to retain the current inflation assumption of 4.25%.

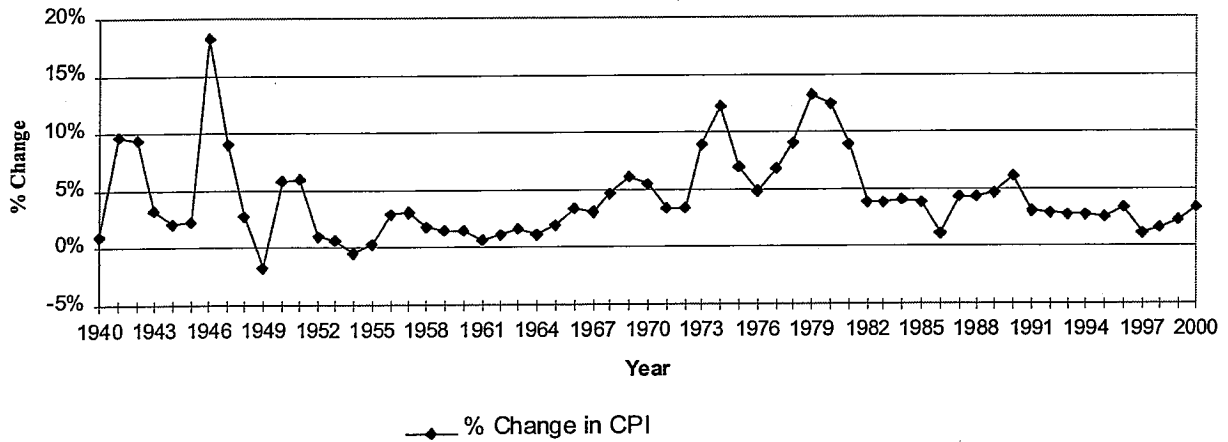
The analysis supporting our recommendation follows.

### Setting the Assumption

The rate of inflation has varied significantly over time. The following chart shows the annual increases in the Consumer Price Index over the last 60 years:

Chart 1

Annual Increase in CPI (1940 Through 2000)



The actuarial SOP specifies the following data to be considered in setting the inflation assumption (Section 3.5.1):

- Consumer Price Indices (CPI)
- The Gross Domestic Product Implicit Price Deflator (IPD)
- Forecasts of inflation
- Yields on government securities of various maturities

Because the CPI and IPD have not differed significantly over the last 60 years, we will focus our analysis on the CPI.

**CPI History**

Table 1 provides the annualized increases in the Consumer Price Index for recent and extended periods over the last 60 years.

**Table 1**  
**History of CPI Increases**  
**Expressed as an Annualized Average (1)**

<u>Number of Years</u> <u>Ending December 31, 2000:</u>	<u>CPI</u>
10	2.55%
20	3.51%
30	5.00%
40	4.48%
50	3.93%
60	4.26%

(1) Geometric average. CPI data is based upon US All City Average, CPI-U for years after 1979.

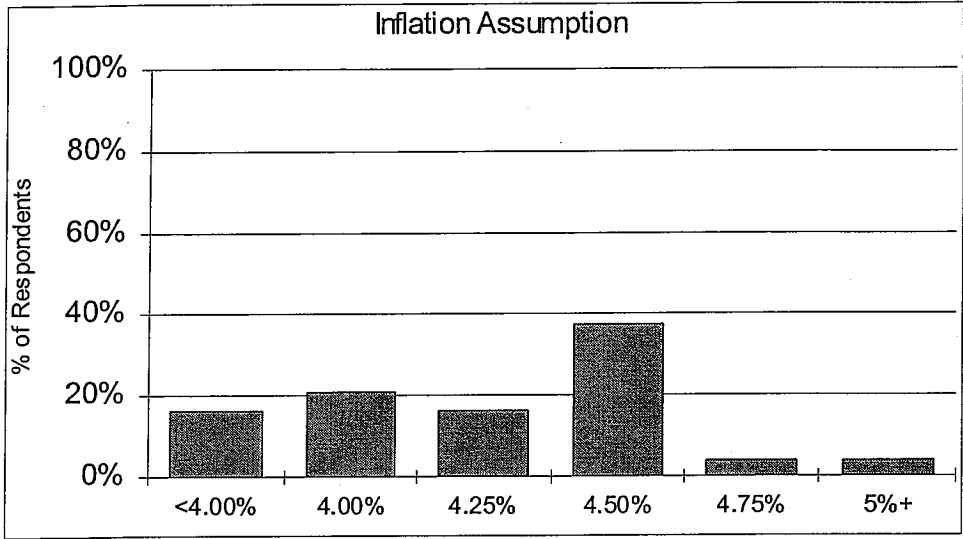
With the exception of the last 30-year period, which is heavily influenced by the high inflationary period between 1972 and 1981 and the low inflation levels experienced over the last 10 years, inflation has typically ranged between about 3.00% and 4.50%. After considering both long-term historical and recent trends, we have concluded that an appropriate range for long-term inflation is 3.50% to 4.50%.

**Forecasts of Inflation**

We believe it is valuable to examine inflation assumptions adopted by similarly situated public retirement systems as an indicator of their long-term inflation expectations. Charts 2 and 3 provide the inflation assumptions used by the 24 California public retirement systems who responded to Mercer's 2000 survey of economic actuarial assumptions, and the 14 1937 Act respondents, respectively.

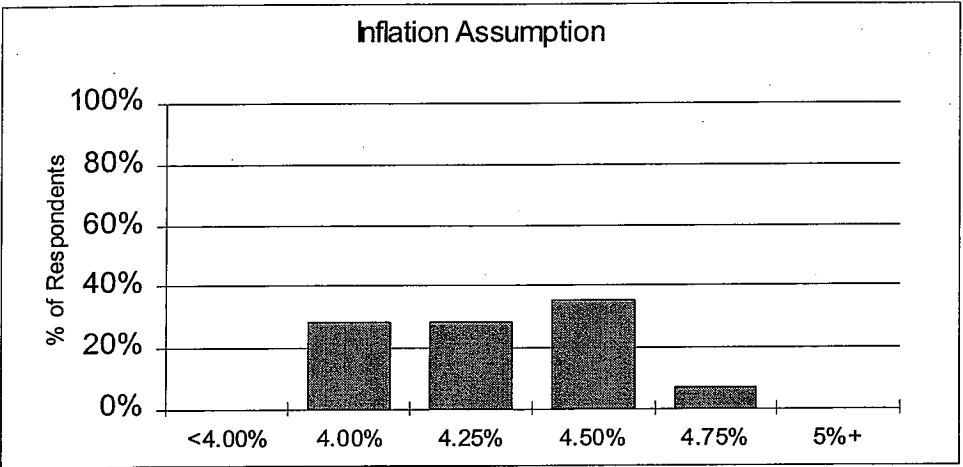
Based on this survey, the average inflation assumptions for the California Systems is about 4.20%.

**Chart 2 - Comparisons of Economic Actuarial Assumptions  
All Respondents  
(based on 24 responses)**



Average	4.20%
25th Percentile	4.00%
50th Percentile	4.25%
75th Percentile	4.50%

**Chart 3 - Comparison of Economic Actuarial Assumptions  
37 Act County Respondents  
(based on 14 responses)**



Average	4.30%
25 <sup>th</sup> Percentile	4.06%
50 <sup>th</sup> Percentile	4.25%
75 <sup>th</sup> Percentile	4.50%

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### **Treasury Yield Curves**

Inflation expectations implicit in Treasury yield curves can vary widely over a relatively short period of time. One might average Treasury yield data over some period of time; however, we question whether utilizing inflation explications implicit in 2- to 3-year-old Treasury yields would be meaningful. Also, the usefulness of this data is hampered by the Federal Reserve's use of interest rates as a means of controlling the economy. As a result, we have not included a treasury yield analysis as part of our inflation assumption development.

### **Summary**

We conclude from our analysis that:

- (1) Historical inflation data indicates an assumption range of 3.5% to 4.5%; and
- (2) Inflation forecasts inherent in inflation assumptions adopted by similarly situated retirement systems are about 4.20%.

Based on this data, we believe a 4.25% long-term inflation assumption remains reasonable.

### **Investment Return**

#### **Recommendation**

The Board has adopted our recommendation to retain an investment return assumption of 8.00%.

The analysis supporting our recommendation follows.

#### **Setting the Assumption**

The actuarial SOP specifies that in addition to historical plan performance, the following data may be considered in setting the investment return assumption (Section 3.6.1):

- Forecasts of inflation
- Historical risk-free returns
- Real return or risk premium for each asset class
- Yields to maturity on fixed income government securities and corporate bonds

The first item has already been addressed in the previous section. The second item is the historical return on short term Treasury bills, such as 30 days, and is used to develop risk premiums for other asset classes. The fourth item relates primarily to corporate pension plans. Our analysis will focus on the third item.

Section 3.6.3 of the actuarial SOP includes the following measurement-specific factors that should be considered in selecting the investment return assumption:

- Investment policy or asset allocation
- Expenses
- Investment manager performance

Each of these items will be addressed in the context of our analysis.

### ***Real Rate of Return on Investments***

The real rate of return on investments is a function of:

- The real rates of return on individual classes of assets within the investment portfolio;
- The relative proportion of the fund's total investments held in each class of securities (the "Asset Allocation");
- Expenses to be paid from earnings; and
- Reasonable risk (variability) adjustments.

Each of these four components are addressed separately.

### ***Real Returns on Classes of Securities***

Empirical studies of total real rates of return are available on most classes of securities in which the System invests. These studies are used to develop historical average real rates of return. These historical averages are adjusted considering any fundamental changes in the economy, changes in government regulation, and any other factors which might affect their continued applicability.

Many empirical studies have been carried out to measure historical real rates of return on various types of investment. One most frequently used is the Ibbotson Associates studies. Table 2 provides the Ibbotson-Sinquefeld measure of the real rates of return between 1926 and 2000. Investment consulting firms also utilize this and other studies to derive expected long-term real rates of return for use in asset allocation models. These models serve as an aid to retirement plan fiduciaries in determining what proportion of the plans' investment portfolio to place in various classes of securities.



Table 2

**Ibbotson Associates**  
**Real Rates of Return of Investments**  
**(Geometric Mean)**

	<u>(1926 – 2000)</u>
Common Stocks	7.7%
Small Stocks	9.0%
Long-term government bonds	2.2%
Long-term corporate bonds	2.5%
Intermediate government bonds	2.2%
Treasury bills	0.7%

Since this data is entirely historical it does not necessarily reflect future expectations. It also does not cover some types of investments common in the System's portfolio. Mercer has developed the following more detailed rate of return assumption by asset class. These expected real rates of return are taken from a number of sources which do include consideration of future expectations.

**Table 3**  
**Asset Class Returns Net of Inflation (Real)**

<u>Asset Class</u>	<u>Total Real Return</u>
Large Cap Stocks	6.1%
Small Cap Stocks	7.0%
International Stocks	6.7%
Long-Term Bonds	3.9%
Intermediate Bonds	3.5%
Real Estate	5.2%
Money Market	1.8%

**Asset Allocation**

SCERS employs a third-party investment consultant to assist in establishing its target asset allocation and investment policy. The target asset allocation reflects the consultant's professional opinion on expected returns, SCERS's risk profile, prudent diversification, asset/liability matching, cash flow needs and other investment considerations. This target allocation is designed as a guidepost for balancing investments among asset classes. As such, it is the best indicator of SCERS's actual long-term asset allocation. The target asset allocation is combined with the real rates of return on classes of securities to develop the expected gross real rate of return assumption for the System's portfolio.

The current and target SCERS asset allocations are shown in Table 4.

**Table 4**  
**SCERS Asset Allocation**  
**At Market Value**

	<u>Current</u>	<u>Target</u>
Domestic Stocks*	42%	40%
International Stocks	19%	20%
Bonds and Fixed Income	29%	30%
Real Estate	9%	10%
Cash and Equivalents	1%	0%

\* 5.0% is in small cap stocks

Applying the target asset allocation (Table 4) to the information in Table 3 results in a real return of approximately 5.43%. There are a number of additional factors that must be considered before arriving at an appropriate rate for actuarial valuation purposes. These are discussed below.

### ***Expenses to be Paid from Earnings***

The expected gross real rate of return must be reduced to reflect expenses to be charged against investment earnings. To the extent such charges are expected to be made in the future, the expense margin will be sufficient to cover:

- a) Administrative expenses (Section 31580.2);
- b) The cost of actuarial valuations (Section 31596.1(a));
- c) The cost of bank custodial services (Section 31596.1(b));
- d) Fees related to investment in deeds of trust or mortgages (Section 31596.1(c));
- e) Investment expenses (Section 31529.5); and
- f) The cost of legal counsel (Section 31529.5).

(References are to sections of the County Employees' Retirement Law of 1937.)

SCERS's actual expenses over the last 3 to 5 years (coupled with any expected changes in future expense levels) were used to develop an expected future expense charge of 0.40%. This expected charge will be applied against the expected gross real rate of return to produce a net real rate of return assumption.

Table 5 provides the expenses of the fund as a percentage of assets for the 5 years ending June 30, 2001.

**Table 5**  
**Expenses as a Percentage of Average Assets at Actuarial Value**

<u>Year Ending June 30</u>	<u>Administrative</u>	<u>Investment</u>	<u>Total</u>
1997	0.11%	0.29%	0.40%
1998	0.12%	0.29%	0.41%
1999	0.12%	0.26%	0.38%
2000	0.10%	0.33%	0.43%
2001	0.11%	0.24%	0.35%
Average	0.11%	0.28%	0.39%

**Risk Adjustment**

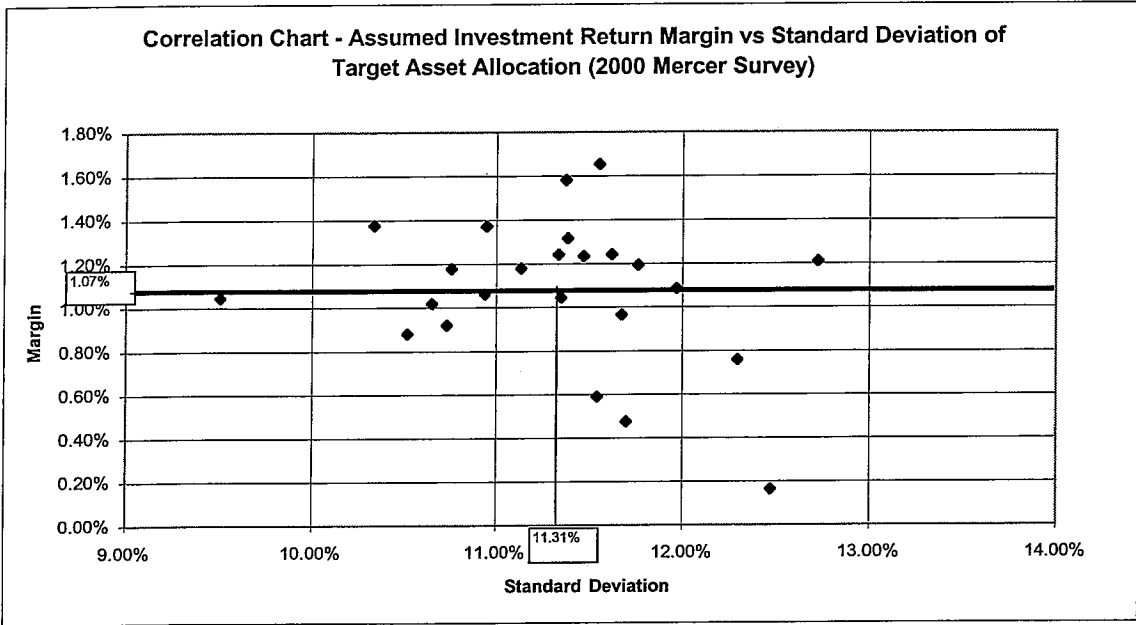
The net real rate of return assumption should reflect the risk associated with not achieving expectations. This is developed by considering:

- The probability that actual future returns within asset classes will deviate statistically from historical averages;
- The effect that asset diversification will have on dampening statistical fluctuations of future returns; and
- The expectation that fund managers will underperform or outperform the general market indices upon which the real rates of return on individual classes of securities are measured.

Annual real rates of return have varied substantially over the years. For example, even if we expect the averages displayed in Table 3 to be a reasonable estimate of real returns in the future, we know there is some likelihood that future real rates will be more or less than historical averages. The most critical risk lies in setting too high an investment earnings assumption, which leads to future losses and higher employer contributions. The risk adjustment helps protect against such an occurrence.

As an aid in setting an appropriate risk adjustment, Chart 4 presents a distribution diagram developed from Mercer’s 2000 survey of economic assumptions of 24 California public retirement systems. From this survey we are able to identify how the risk adjustments implicit within each system’s investment return assumption varies with the system’s risk level (as measured by the standard deviation of its target asset allocation). The 2000 survey indicated in significant relationship between the systems’ implicit risk adjustments and the standard deviation of their portfolios. As a result, the average risk adjustment is used as our calculated risk adjustment.

Chart 4



As you can see from the chart, SCERS’s risk adjustment so calculated would be 1.07%, based on a target asset allocation standard deviation of 11.31% derived from generating future market simulations from the System’s target asset allocation.

The following table provides the actuarial risk adjustments implicit in SCERS’s investment return assumptions over the last 5 years.

<u>Actuarial Valuation Date</u>	<u>System Risk Adjustment</u>
6/30/2000	1.57%
6/30/1999	1.39%
6/30/1998	1.45%
6/30/1997	1.45%
6/30/1996	<u>1.45%</u>
Average	1.46%

**Investment Manager Performance**

Section 3.6.3.e. of the actuarial SOP states that:

Anticipating superior (or inferior) investment manager performance may be unduly optimistic (or pessimistic). Few investment managers consistently achieve significant

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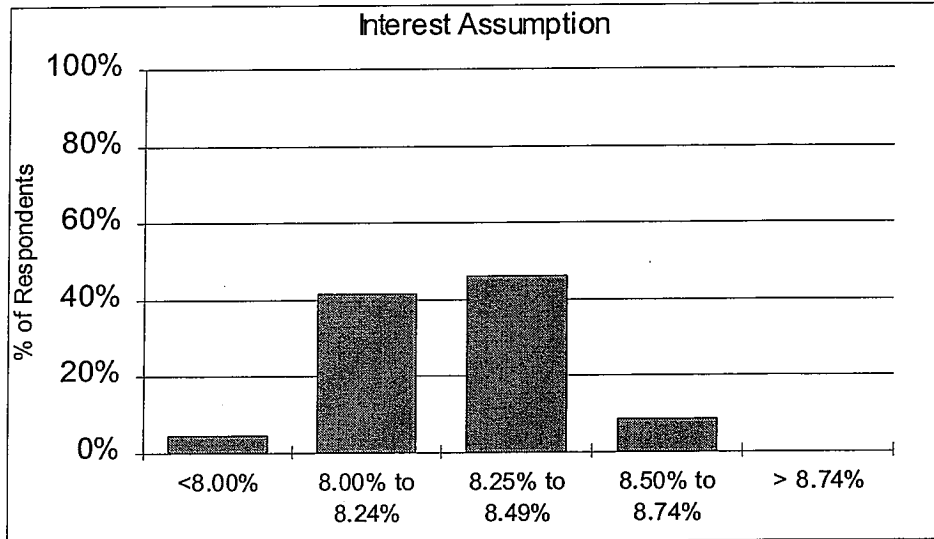
above-market returns net of expenses over long periods. The plan sponsor may replace managers who consistently underperform market indices.

We concur with this statement, thus do not make any provision within our investment return assumption for superior or inferior performance relative to the market.

***Comparison with Similarly Situated Associations***

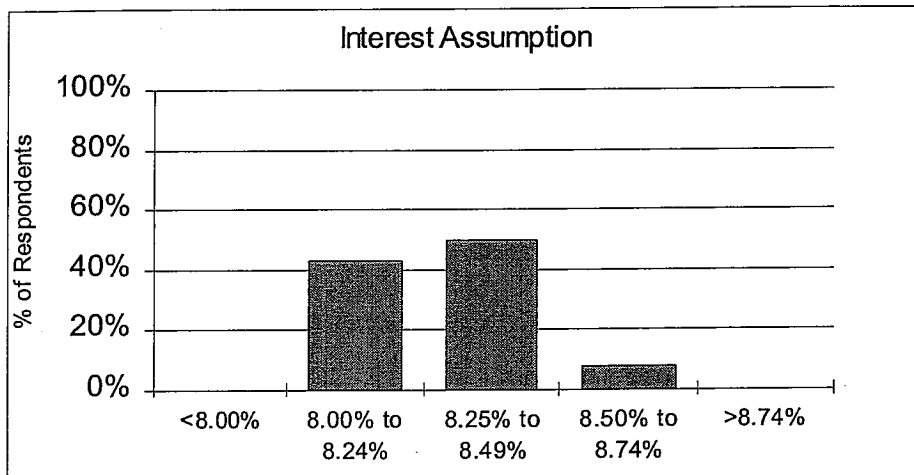
Charts 5 and 6 provide the investment return assumptions used by the 24 California public retirement systems who responded to Mercer's 2000 survey of the economic actuarial assumptions, and the 14 1937 Act respondents, respectively.

**Chart 5 - Comparison of Economic Actuarial Assumptions  
All Respondents  
(based on 24 responses)**



Average	8.15%
25th Percentile	8.00%
50th Percentile	8.25%
75th Percentile	8.25%

**Chart 6 - Comparison of Economic Actuarial Assumptions  
37 Act County Respondents  
(based on 14 responses)**



Average	8.17%
25th Percentile	8.00%
50th Percentile	8.25%
75th Percentile	8.25%

The average investment return rates from the survey for the groups surveyed is approximately 8.2%.

### ***Development of Recommendation***

Based on the above analysis, we arrive at a real rate of return assumption of 3.96% (average gross real rate of return of 5.43% minus 0.40% expenses minus a risk adjustment of 1.07%). Combining this rate and the inflation assumption of 4.25% results in an expected return of 8.21%.

Even though the calculated return is higher than the current investment return of 8.00%, we are recommending that the Board maintain the 8.00% current investment assumption.

Our recommendation is based partly on the fact that this year's calculated risk adjustment (1.07%) is significantly less than the average risk adjustment (1.46%) recognized by the Board in setting the investment return assumption. An assumption of 8.0% provides a risk adjustment of 1.28%

Also, by maintaining the current 8.00% assumption, it provides the Board some additional flexibility and conservatism against future court interpretations requiring Earnable Compensation to include such items as accrued vacation time at retirement or application of the Ventura Decision retroactively.

## **Salary Increase Assumptions**

### **Recommendations**

#### ***Salary Increase Assumptions***

The System's salary increase assumptions are comprised of two components:

- Inflation Rate
- Salary Scale

Salary increases are provided to employees in the form of cost-of-living adjustments to offset the debasement of pay levels caused by inflation. In addition to inflationary increases, active members will receive "real" salary increases (i.e., over inflation) as they advance through salary grades and receive promotions over their career.

As part of our analysis we have reviewed real salary increases received by members over the three years ending June 30, 2001. Members were grouped by service and age to determine how salary increases vary across these groups. We also reviewed the merit and longevity assumptions for other 1937 Act counties as a scale of reasonableness for the new assumptions. We recommend that the real salary increases be continued as a function of age rather than both age and years of service. Current experience does not support a years of service based assumption. Also, years of service



## ACTUARIAL ASSUMPTIONS

based salary increase assumptions are uncommon in California county retirement systems. The Board accepted the following recommended changes to the annual real salary increase assumptions:

<b>Real Salary Increase Assumptions</b>				
	<b>General Members</b>		<b>Safety Members</b>	
	Current Salary Increase Assumptions	Recommended Salary Increase Assumptions	Current Salary Increase Assumptions	Recommended Salary Increase Assumptions
Ages 20-24	5.4%	7.0%	5.3%	5.4%
Ages 25-29	3.6%	4.0%	3.8%	4.3%
Ages 30-34	2.4%	2.8%	2.3%	2.6%
Ages 35-39	2.1%	2.3%	1.3%	1.5%
Ages 40-44	1.8%	2.0%	1.1%	1.2%
Ages 45-49	1.4%	1.7%	0.9%	1.0%
Ages 50-54	1.1%	1.3%	0.9%	1.0%
Ages 55-59	0.7%	0.9%	0.9%	1.0%
Ages 60-64	0.6%	0.8%	0.8%	0.8%
Ages 65-69	0.6%	0.7%	0.0%	0.0%
Age 70+	0.4%	0.4%	0.0%	0.0%

### Setting the Assumption

The Actuarial Standards Board has specified the following data be considered in setting the salary increase assumptions (Section 3.7):

- Employer's current compensation practice and any anticipated changes in this practice;
- Current compensation distributions by service or age;
- Historical compensation increases of employer and other employers in the same industry or geographic area; and
- Historical national wage and productivity increases.

In addition, the Standard of Practice states that the actuary should consider employer-specific compensation data, but the actuary must carefully weigh the credibility of this data when selecting the salary increase assumption.

The methodology used to construct the assumption is to utilize the inflation assumption as a base salary increase assumption. There is a sound economic reason for doing this. This is a long-term assumption and represents the expected annual increases in the cost of goods and services. In order for a member to maintain the same standard of living in the future as he or she does today, wages must at least keep up with inflation. If they do not, members will suffer a continuously

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eroding standard of living, which in turn will increase member turnover as workers seek jobs elsewhere that offer more competitive salaries. This creates obvious instability, which may occur for a short while, but eventually will have to return to equilibrium if the County and special districts are to continue as ongoing operating entities.

Once the inflation component of the salary increase assumption is set, the process turns to the selection of the real (inflation-free) salary increase assumption component.

## **Real Salary Increases**

In addition to inflation, member salaries are expected to increase due to:

- General increases which exceeded inflation (“Real Across-the-Board Salary Increases”); and
- Merit and longevity increases.

## **Real Across-the-Board Salary Increases**

These are generally categorized as productivity increases because, in theory, they are generated from any activity that allows workers to produce goods and services more efficiently, thus cheaper. If these efficiencies result in increased revenues to the employer and are passed along as salary increases, Real Across-the-Board Salary Increases will result.

There is currently no Real Across-the-Board Salary Increase assumption for the System.

As part of our analysis, we monitor the Bureau of Labor Statistics Employment Cost Index (ECI). The ECI was developed in the early 1970’s to provide wage growth data free from the influence of employment shifts among industries and occupations. The ECI was expanded to include a separate index for state and local governments in 1981.

The State and Local Government Workers ECI data provides evidence that real wage growth for this sector has averaged about 0.83% since 1982. However, we believe this evidence does not require any change to our current assumption of no real Across-the-Board wage growth for the following reasons:

1. The period since 1982 has been a period of low inflation. The average annual increase in total wage growth over this period was 4.12% – below our recommended 4.25% inflation assumption. This indicates that our inflation assumption is sufficient to predict total wage growth.
2. This has also been a period of very high real rates of investment return. Real rates of investment return have been almost double our long term assumptions. Adding a wage growth assumption to the 4.25% recommended inflation rate would only make sense if we also increased the real rate of investment return assumption by at least that same amount. This would more than offset the effect of the additional wage growth assumption on liabilities.

We will continue to monitor the ECI to determine whether more compelling evidence for a real wage growth assumption emerges.

### Merit and Longevity Salary Increases

Merit and longevity increases reflect the promotional grade increase an individual member is expected to receive over his or her career. This assumption is based on observed experience of real salary increases by category of member by age and/or service group. This assumption is reviewed at the time of the triennial experience investigation.

Following are the average nominal (inflation plus real) annual salary increases received by members over the three years ending June 30, 2001.

<u>Age Bracket</u>	<u>General Members Average Annual Increase</u>	<u>Safety Members Average Annual Increase</u>
20-24	25.67%	11.92%
25-29	14.23	14.22
30-34	11.83	11.30
35-39	10.28	9.35
40-44	9.05	7.57
45-49	8.65	8.38
50-54	8.97	7.22
55-59	8.24	7.95
60-64	7.48	4.62
65-69	7.85	—
70+	4.66	—

The increase in average annual salary for active members annualized over this three year period was about 3.63% for General Members and 5.39% for Safety members. Removing these average increases provides the following real increases over the three years.

<u>Age Bracket</u>	<u>General Members Average Annual Increase</u>	<u>Safety Members Average Annual Increase</u>
20-24	21.27%	6.20%
25-29	10.23	8.37
30-34	7.91	5.61
35-39	6.42	3.75
40-44	5.23	2.07
45-49	4.84	2.84
50-54	5.15	1.74
55-59	4.45	2.42
60-64	3.72	-0.73
65-69	4.07	—
70+	1.0	—

## ACTUARIAL ASSUMPTIONS

Because of the uncertainty surrounding the impact of Ventura Decision on the results, we also utilized salary increase assumptions used by other California counties served by Mercer in the process of developing our recommendations. This was similar to the process used in the last experience study.

Because of the relatively large difference between the recommended assumptions and the actual salary increases over the six years ending June 30, 2001, we recommend that the Board review the salary increase assumption again in the June 30, 2002 actuarial valuation.

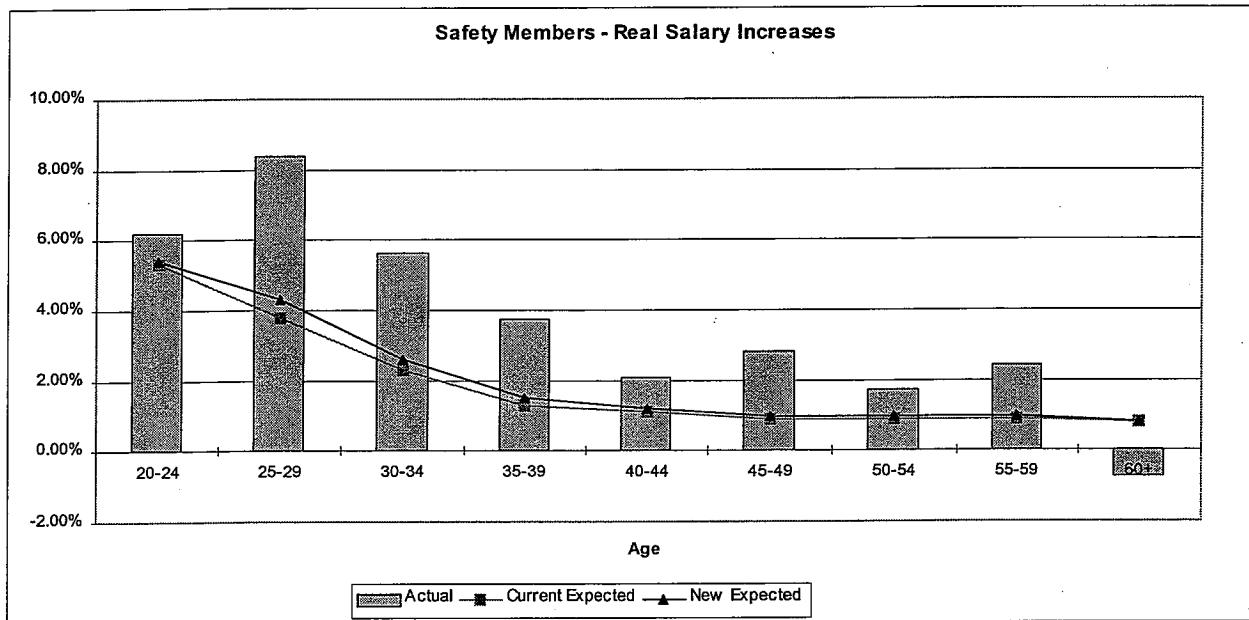
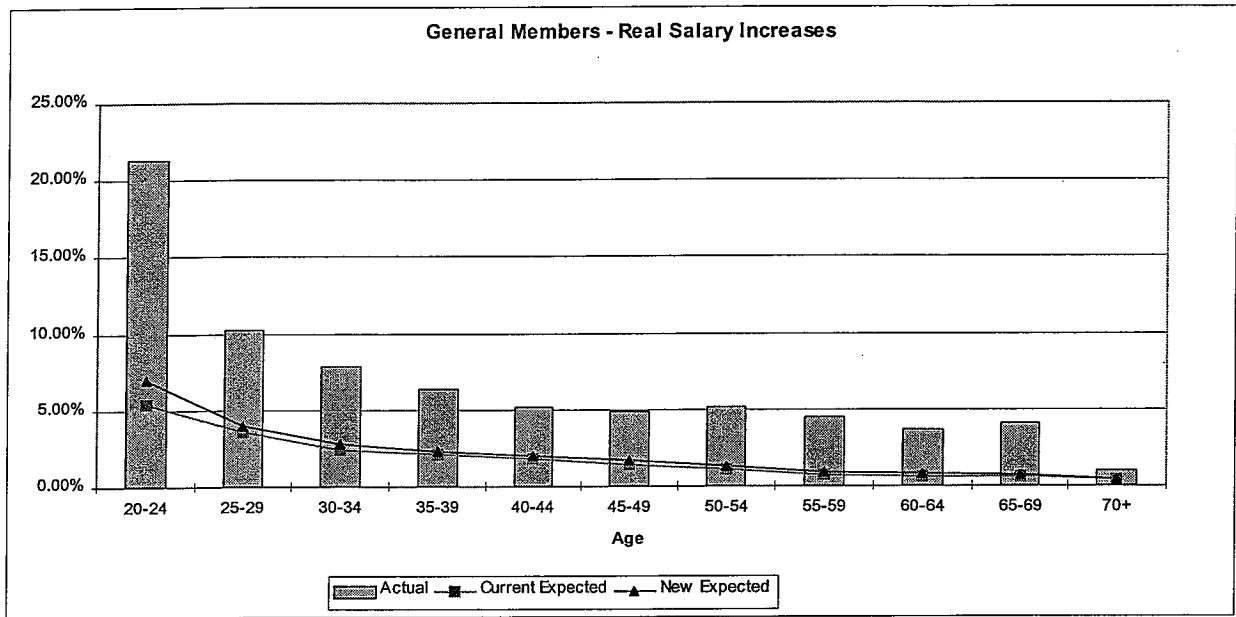
A comparison of our recommended salary increase assumptions and those used by other California counties served by Mercer is provided below.

### Real Salary Increase Assumptions

	General Members		Safety Members	
	Average California Counties Salary Increase Assumptions	Recommended Salary Increase Assumptions	Average California Counties Salary Increase Assumptions	Recommended Salary Increase Assumptions
Ages 20-24	5.4%	7.0%	4.3%	5.4%
Ages 25-29	3.9%	4.0%	3.6%	4.3%
Ages 30-34	2.9%	2.8%	2.4%	2.6%
Ages 35-39	2.1%	2.3%	1.4%	1.5%
Ages 40-44	1.7%	2.0%	1.2%	1.2%
Ages 45-49	1.3%	1.7%	1.0%	1.0%
Ages 50-54	1.0%	1.3%	0.7%	1.0%
Ages 55-59	0.8%	0.9%	0.7%	1.0%
Ages 60-64	0.7%	0.8%	0.5%	0.8%
Ages 65-69	0.6%	0.7%	0.0%	0.0%
Age 70+	0.3%	0.4%	0.0%	0.0%

# ACTUARIAL ASSUMPTIONS

The following graphs summarize the actual (over the 3 years study period), current expected and new expected and (recommended) real salary increase assumptions.



**Total Salary Increase Assumptions  
(Inflation plus Merit and Longevity)**

	<b>General Members</b>	<b>Safety Members</b>
	<b>Recommended Salary Increase Assumptions</b>	<b>Recommended Salary Increase Assumptions</b>
Ages 20-24	11.3%	9.7%
Ages 25-29	8.3%	8.4%
Ages 30-34	6.9%	6.3%
Ages 35-39	6.4%	5.3%
Ages 40-44	6.0%	4.9%
Ages 45-49	5.6%	4.9%
Ages 50-54	5.4%	4.9%
Ages 55-59	5.0%	4.8%
Ages 60-64	4.9%	4.8%
Ages 65-69	4.9%	—
Age 70+	4.5%	—

Note: The average annual salary increase under the recommended assumption is about 5.75%.

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## Noneconomic Actuarial Assumptions

### **General**

Noneconomic assumptions are based on observed experience by category of employment by age and/or service group.

The noneconomic assumptions were reviewed at the time of June 30, 2001 triennial experience investigation. Adjustments to the current assumptions were based upon a determination of the likelihood that the most recent experience could be produced as merely a statistical variation of the current assumptions.

If the most recent experience demonstrates a deviation from current assumptions which is deemed statistically significant, a credibility weighting is attached to this experience. The credibility weighting can vary significantly among the various components depending upon whether there is a low or high number of occurrences. The credibility weighting will also depend upon the presence of any non-recurring events that might affect the predictive ability of the recent experience.

Post-retirement mortality tables will generally be some variation of standard tables developed by actuarial professional organizations from a much wider base of data.

### **Components**

1. Nonvested withdrawal
2. Service retirement
3. Disability retirement (service and nonservice connected)
4. Pre-retirement death benefits (while eligible for service retirement; before service retirement eligibility; service and nonservice connected)
5. Deferred retirement
6. Post-retirement mortality

Components 1 through 5 represent the probabilities of separation from active service due to various causes. Component 6 represents the length of time members will live after retirement.

### ***Separation from Active Service***

In the June 30, 2001 experience study, an analysis was carried out to determine the probability of members terminating from active service for various causes. The probabilities developed in that study are used as the basis of determining costs in this valuation.

The probabilities for each noneconomic assumption component are listed in Appendix B.

*Post-Retirement Mortality*

In the June 30, 2001 experience study, the mortality of members after service and after disability retirement was also analyzed. The life expectancies based on tables developed from that study are shown in Appendix B.

*Mortality Basis for Members' Basic Contribution Rates*

We have calculated member contribution rates utilizing a sex-independent mortality basis under Section 31676.1 and 31497.3 for General members, and Section 31664 for Safety members. The mortality table is the 1994 Group Annuity Mortality Table for males set back three years for General Members and no set back for Safety Members. In our opinion, these tables can reasonably be expected to represent the aggregate future mortality for each group and provide an adequate and equitable mortality basis for determining member contribution rates.





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# Actuarial Valuation Methods

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## Actuarial Funding Method

### ***Responsibility of the Actuary***

A retirement system is a long term proposition. It contains benefit promises that extend many decades into the future. The fiduciaries responsible for funding the System cannot wait until these promises become due before seeking out the money needed to pay for them. The actuary's primary responsibility is to assist the Board to structure a financial plan to advance fund the benefit promises of the System and to monitor its performance. This financial plan is more commonly referred to as an actuarial funding method.

### ***Employer Contributions***

Employer contributions consist of two components:

1. *Normal Cost* - That annual contribution rate which, if paid annually from a member's first year of membership through the year of retirement, would accumulate to the amount necessary to fully fund the member's retirement-related benefits. Accumulation includes annual crediting of interest at the assumed investment earnings rate. The contribution rate is expressed as a level percentage of the member's compensation.
2. *Contribution to the Unfunded Actuarial Accrued Liability (UAAL)* - That annual contribution rate which, if paid annually over the UAAL amortization period, would accumulate to the amount necessary to fully fund the UAAL. Accumulation includes annual crediting of interest at the assumed investment earnings rate. The contribution (or rate credit in the case of a negative UAAL) is calculated to remain as a level percentage of future active member payroll (including payroll of new members as they enter the System) assuming a constant number of active members. In order to remain as a level percentage of payroll, amortization payments are scheduled to increase at the annual inflation rate of 4.25% along with expected payroll. The UAAL is being funded over the 21 years following June 30, 2001.

The actuarial funding method just described, which has been adopted by the Board, is called the Entry Age Normal Funding Method.

A more complete definition of the Unfunded Actuarial Accrued Liability and other actuarial terms is provided in the Glossary of Actuarial Terms which can be found in Appendix F.

### ***Member Contributions***

Articles 6 and 6.8 of the 1937 Act define the methodology to be used in the calculation of member basic contribution rates for General members and Safety members, respectively. The

basic contribution rate is determined as that percentage of compensation which, if paid annually from a member's first year of membership through age 60 for General members (age 50 for Safety members), would accumulate to the amount necessary to fund an annuity at that age equal to 1/240 of Final Average Salary for General members (1/200 for Safety members). In addition to their basic contributions, members pay for one-quarter of the total contributions necessary to fund their cost-of-living benefits. Accumulation includes annual crediting of interest at the assumed investment earnings rate.

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## **Actuarial Value of Assets**

### ***Background***

Under the Entry Age Normal Actuarial Funding Method, a determination is made of the target value of assets the System would hold if current employer normal cost and member contribution rates had been paid from each member's entry age through the actuarial valuation date and credited with the current investment return assumption. This target value of assets is called the Actuarial Accrued Liability (AAL). The Unfunded Actuarial Accrued Liability (UAAL) is equal to the AAL less the Actuarial Value of Assets as of the actuarial valuation date.

### ***Actuarial Standards***

In 1993, the Actuarial Standards Board issued Standard of Practice (SOP) No. 4 entitled Measuring Pension Obligations. Section 5.2.6 of SOP No. 4 states, in part, that the Actuarial Value of Assets should generally reflect some function of market value; however, it may be appropriate to use methods which smooth out the effects of short-term volatility in market value.

In Mercer's opinion, the use of smoothing methods are especially important for employers with limited budgetary flexibility, such as governmental entities.

### ***Determination of Actuarial Value of Assets***

Effective July 1, 1995, the Board adopted an asset valuation method that smoothes the deviation of total market return (net of expenses) from the 8% return target. This method uses a 5 year period to smooth these deviations.

As a transition to this method, the difference between the June 30, 1994 actuarial value of assets and market value of assets was "smoothed in" over the 5 years beginning on June 30, 1995. The difference between the 1995 market returns (approximately 15.2% net of expenses) and the 8% assumption were also smoothed in over that period.

The following table shows the development of the smoothed actuarial value of assets.

ACTUARIAL VALUATION METHODS

Sacramento County Employees' Retirement System

Actuarial Value of Assets as of June 30, 2001

Fiscal Year Ending	Total Contributions	Total Benefits	Market Value	Average Value	(1)		(2)		Deferred Factor	Deferred Return
					Total Market Return (Net)	Expected Market Return (Net)	Investment Gain (Loss)	(1-2)		
through 6/30/94			\$ 1,141,165,829							
1994-95	\$ 69,492,787	\$ 63,808,943	1,321,033,733	\$ 1,144,007,751	\$ 174,184,060	\$ 90,153,128	\$ 34,243,920	0	\$ -	
1995-96	592,983,671	68,900,796	2,166,064,778	\$ 1,849,592,351	\$ 320,948,170	\$ 147,967,388	\$ 84,030,932	0	\$ -	
1996-97	71,993,092	75,264,340	2,598,645,719	\$ 2,182,684,591	\$ 435,852,189	\$ 174,614,767	\$ 172,980,782	0	\$ -	
1997-98	73,038,917	82,460,820	3,050,881,721	\$ 2,612,534,046	\$ 461,657,905	\$ 209,002,724	\$ 261,237,422	0	\$ -	
1998-99	77,130,416	89,990,489	3,395,406,934	\$ 3,066,925,269	\$ 357,385,286	\$ 245,354,021	\$ 252,655,181	0.2	\$ 50,531,036	
1999-00	72,041,588	99,723,387	3,679,912,856	\$ 3,401,769,825	\$ 312,187,721	\$ 272,141,586	\$ 112,031,265	0.4	\$ 44,812,506	
2000-01	73,322,363	108,998,139	3,432,825,810	\$ 3,681,477,927	\$ (211,411,270)	\$ 294,518,234	\$ (505,929,504)	0.6	\$ 24,027,681	
								0.8	\$ (404,743,603)	
1. Total deferred return									\$ (285,372,380)	
2. Market Value									3,432,825,810	
3. Smoothed Market Value (Item 2 - Item 1)									3,718,198,190	
4. Corridor Limit										
a. 80% of Net Market Value										2,746,260,648
b. 120% of Net Market Value										4,119,390,972
5. Actuarial Value (Item 3 after corridor applied)										3,718,198,190
6. Amounts Excluded from Valuation Reserves (Before Transfer)										
a. Contingency reserves										\$ (96,678,789)
b. Retiree health and death benefit reserve										(14,603,588)
c. Amount over reserved benefits (Before Transfer)										(418,209,169)
7. Valuation Reserves (Item 5 + Item 6)										\$ 3,188,706,644
8. Balance of transfer to member COLA reserves (Before Transfer)										\$ (51,918,586)
9. (Surplus)/ Deficit for Withdrawn Employers (Preliminary)										(5,080,000)
10. Net Valuation Reserve (Item 7 + Item 8 + Item 9)										\$ 3,131,708,059



# Actuarial Valuation Results

## Employer and Member Contribution Rates

The following Table 10 provides a comparison of the Employer and Member contribution rates and estimated annual contribution amounts under the current and recommended actuarial assumption. The estimated annual contribution amounts are based upon annual payroll as of the actuarial valuation date.

**Table 10**  
**Contribution Rates and Estimated Annual Contributions**

Valuation Basis (Inflation/Investment Return) Salary Increase)	<u>Employer Contributions</u>		<u>Member Contributions</u>	
	<u>Rate</u>	<u>Annual Amount*</u>	<u>Rate</u>	<u>Annual Amount*</u>
<b>Current Rates</b> (4.25%/8.0%/5.55%)	6.91%	\$43,895,000	5.41%	\$ 34,322,000
<b>Recommended Rates</b> (4.25%/8.0%/5.75%)	7.86%	\$49,897,000	5.58%	\$ 35,453,000

\* Based on total annual salaries as of June 30, 2001 of \$634,798,000

### Portion of Rates Due to Disability Retirements

We have been asked to provide the Board with a breakdown of the employer rate between costs associated with disability and those relating to other benefits. This breakdown is provided in the following table:

	<u>% of Recommended Employer Rate for Disability</u>
General Members	18%
Safety Members	31%
Total Group	21%

In developing these percentages we have assumed that the liabilities for all types of benefits are funded to the same degree.

**Recommendation**

Mercer recommends the adoption of the recommended rates and the assumptions which underlie those rates. The component parts of the current and recommended member and employer contribution rates broken down among the various member categories can be found in Tables 11 and 12, respectively.

These rates reflect all past transfers from unallocated reserves to provide for the funding of cost-of-living benefits.

## Explanation of Changes in Actuarial Values

### Impact on Contribution Rates (Before Board of Retirement Transfer)

Following is the estimated impact on 2002-2003 fiscal year contribution rates of the recommendations in this study.

Summary of Gain/ Loss	Rate Impact	Dollar Impact
June 30, 2000 Employer Rate	6.91% \$	43,895,000
Investment return greater than expected	-0.03% \$	(190,000)
Transfer to Offset Future Employer Contributions	0.00% \$	-
Salary increase greater than expected	0.53% \$	3,364,000
Change in Normal Cost	0.06% \$	381,000
Retiree COLA greater than expected	0.04% \$	241,000
Dilution of Prefunded Actuarial Accrued Liability Credit	0.32% \$	2,044,000
Impact of Assumption Changes	0.21% \$	1,333,000
Miscellaneous (gains)/ losses	-0.18% \$	(1,171,000)
Subtotal	0.95% \$	6,002,000
June 30, 2001 Employer Rate	7.86% \$	49,897,000

### Explanation of Gain/ Loss Items

Investment return greater than expected - The System's actuarial valuation assets earned 0.11% in excess of the 8% return assumption.

Salary increase greater than expected - The average salary for continuing actives increased by 7.66% and was higher than the expected increase of 5.55%.

Change in Normal Cost - There was a slight increase in the Normal Cost.

Retiree Cola - Average COLA increase for retirees was greater than expected.

Dilution of Prefunded Actuarial Accrued Liability Credit - The aggregate payroll increased by 13.39% and was higher than the expected increase of 4.25%. The unexpected increase diluted the percentage of payroll credit drawn from the Prefunded Actuarial Accrued Liability.

Impact of Assumption Changes - Net employer rate impact of experience study recommendations.

Miscellaneous (gains)/ losses - Other actuarial gains or losses with untraced sources.



***Member Contribution Rates***

The average entry age of members has increased since the previous experience analysis. As a result, those members who entered the System after January 1, 1975 and pay a single rate have a basic rate adjustment from a shift in entry age. In addition, the changes to salary scale also impacted the rates.

***Funding Ratios***

The change in funding ratio is due to actuarial experience as detailed under Employer Contribution Rate above.

***Asset Valuation Method***

There were no changes to the asset valuation method from the June 30, 2000 valuation.

# ACTUARIAL VALUATION RESULTS

**Table 11**  
**Member Contribution Rates**

**Current Rates**  
**8% Interest, 4.25% Inflation and 5.55% Salary Scale Assumption**

<u>General Members</u>						<u>Safety Members</u>					
Tier 1			Tier 2/3			Tier 1			Tier 2		
Basic	COLA	Total	Basic	COLA	Total	Basic	COLA	Total	Basic	COLA	Total
6.06%	0.59%	6.65%	5.78%	0.34%	6.12%	8.32%	0.81%	9.13%	7.92%	0.70%	8.62%

Note: These are the single full rates payable by members who entered the System after January 1, 1975.

These rates are applicable for monthly salary in excess of \$350. Contribution rates for the first \$350 of salary are one-third lower for members covered by Social Security.

**Recommended Rates**  
**8% Interest, 4.25% Inflation and 5.75% Salary Scale Assumption**

<u>General Members</u>						<u>Safety Members</u>					
Tier 1			Tier 2/3			Tier 1			Tier 2		
Basic	COLA	Total	Basic	COLA	Total	Basic	COLA	Total	Basic	COLA	Total
6.29%	0.74%	7.03%	5.98%	0.38%	6.36%	8.51%	1.00%	9.51%	8.09%	0.74%	8.83%

Note: These are the single full rates payable by members who entered the System after January 1, 1975.

These rates are applicable for monthly salary in excess of \$350. Contribution rates for the first \$350 of salary are one-third lower for members covered by Social Security.

ACTUARIAL VALUATION RESULTS

Table 12  
Employer Contribution Rate Detail

8% Interest, 4.25% Inflation and 5.55% Salary Scale Assumptions

	Current Rates (County Rates)												
	General			Tier 3			Tier 1			Safety			Total
	Tier 1	Tier 2	Annual Amount (\$)	% of Payroll	Annual Amount (\$)	% of Payroll	Annual Amount (\$)	% of Payroll	Annual Amount (\$)	% of Payroll	Annual Amount (\$)	% of Payroll	
Normal Cost	9.06%	6.00%	1,329,000	7.76%	28,579,000	21.33%	16,812,000	17.20%	9,769,000	10.52%	63,596,000	10.52%	
UAAL	-3.21%	-3.10%	(687,000)	-3.23%	(11,892,000)	-6.81%	(5,368,000)	-6.83%	(3,880,000)	-4.03%	(24,344,000)	-4.03%	
Total	5.85%	2.90%	642,000	4.53%	16,687,000	14.52%	11,444,000	10.37%	5,889,000	6.49%	39,252,000	6.49%	

Current Rates (District Rates)

	Current Rates (District Rates)												
	General			Tier 3			Tier 1			Safety			Total
	Tier 1	Tier 2	Annual Amount (\$)	% of Payroll	Annual Amount (\$)	% of Payroll	Annual Amount (\$)	% of Payroll	Annual Amount (\$)	% of Payroll	Annual Amount (\$)	% of Payroll	
Normal Cost	11.55%	6.00%	-	10.32%	2,756,000	18.89%	143,000	17.20%	-	10.65%	3,242,000	10.65%	
UAAL	4.89%	4.93%	-	4.62%	1,234,000	2.86%	22,000	2.90%	-	4.60%	1,401,000	4.60%	
Total	16.44%	10.93%	-	14.94%	3,990,000	21.75%	165,000	20.10%	-	15.25%	4,643,000	15.25%	

Average weighted rate for the total group = 6.91%

	Annual Salary at June 30, 2001 (\$)		
County	78,408,000	22,158,000	604,362,000
District	2,975,000	26,704,000	30,436,000
Total	81,383,000	22,158,000	634,798,000

ACTUARIAL VALUATION RESULTS

Table 12 (Cont'd)  
Employer Contribution Rate Detail

8% Interest, 4.25% Inflation and 5.75% Salary Scale Assumptions

Recommended (County Rates)

	General			Safety			Total		
	Tier 1	Tier 2	Tier 3	Tier 1	Tier 2	Tier 3	Tier 1	Tier 2	Tier 3
	% of Payroll	% of Payroll	% of Payroll	% of Payroll	% of Payroll	% of Payroll	% of Payroll	% of Payroll	% of Payroll
	Annual Amount (\$)	Annual Amount (\$)	Annual Amount (\$)	Annual Amount (\$)	Annual Amount (\$)	Annual Amount (\$)	Annual Amount (\$)	Annual Amount (\$)	Annual Amount (\$)
Normal Cost	9.50%	6.03%	7.86%	20.89%	16.73%	16.73%	16.73%	9,503,000	63,692,000
UAAL	-2.62%	-2.62%	-2.62%	-4.79%	-4.79%	-4.79%	-4.79%	(2,721,000)	(18,778,000)
Total	6.88%	3.41%	5.24%	16.10%	11.94%	11.94%	11.94%	6,782,000	44,914,000

Recommended (District Rates)

	General			Safety			Total		
	Tier 1	Tier 2	Tier 3	Tier 1	Tier 2	Tier 3	Tier 1	Tier 2	Tier 3
	% of Payroll	% of Payroll	% of Payroll	% of Payroll	% of Payroll	% of Payroll	% of Payroll	% of Payroll	% of Payroll
	Annual Amount (\$)	Annual Amount (\$)	Annual Amount (\$)	Annual Amount (\$)	Annual Amount (\$)	Annual Amount (\$)	Annual Amount (\$)	Annual Amount (\$)	Annual Amount (\$)
Normal Cost	11.67%	6.03%	10.68%	18.49%	16.73%	16.73%	16.73%	-	3,340,000
UAAL	5.41%	5.41%	5.41%	4.94%	4.94%	4.94%	4.94%	-	1,643,000
Total	17.08%	11.44%	16.09%	23.43%	21.67%	21.67%	21.67%	-	4,983,000

Average weighted rate for the total group = 7.86%

	Annual Salary at June 30, 2001 (\$)
County	78,408,000
District	2,975,000
	<u>81,383,000</u>
	368,163,000
	<u>26,704,000</u>
	<u>394,867,000</u>
	56,803,000
	<u>56,803,000</u>
	604,362,000
	<u>30,436,000</u>
	<u>634,798,000</u>



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# Funding Status

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## Evaluation of Funding Status

### **Background**

The evaluation of the System's funding status is simply the comparison of its actuarial value of assets to a target value of assets. The funding status measure which is required and calculated for the System is based on GASB No. 25 Guidelines. The table below shows the required elements:

<u>Funding Status Measure</u>	<u>Target Assets</u>	<u>Actual Assets</u>	<u>Purpose</u>
GASB No. 25 Funding Method Progress	Actuarial Accrued Liability	Actuarial Value of Assets	Progress toward funding UAAL

This section of the report provides the System's funding status required by GASB No. 25, followed by an exhibit which summarizes the System's funding history.

### **Funding Progress – GASB No. 25**

The GASB has issued two statements; Accounting for Pensions by State and Local Government Employers (GASB Statement No. 27); and Financial Reporting for Defined Benefit and Note Disclosures for Defined Contribution Plans (GASB Statement No. 25). Both of these statements effective in 1997 and 1996, respectively, require funding status to be measured based upon the actuarial funding method adopted by the Board of Retirement, i.e., for SCERS, the Entry Age Normal Funding Method. Thus, the target value of assets is equal to the Actuarial Accrued Liability (AAL) and is compared to the Actuarial Value of Assets developed earlier in this report.

The GASB Statement No. 25 liabilities and assets calculated for the last seven years are as follows:

# FUNDING STATUS

Actuarial Valuation Date	Actuarial Value of Assets <sup>(i)</sup> (a)	Actuarial Accrued Liability (AAL) - Entry Age <sup>(ii)</sup> (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
6/30/95	\$ 1,767,064,000	\$ 1,835,864,000	\$ 68,800,000	96.3%	\$ 405,284,000	17.0%
6/30/96	\$ 1,956,715,000	\$ 1,987,230,000	\$ 30,515,000	98.5%	\$ 417,603,000	7.3%
6/30/97	\$ 2,238,557,000	\$ 2,226,440,000	\$ (12,117,000)	100.5%	\$ 419,467,000	-2.9%
6/30/98	\$ 2,600,547,000	\$ 2,409,642,000	\$ (190,905,000)	107.9%	\$ 470,385,000	-40.6%
6/30/99	\$ 3,017,639,000	\$ 2,734,548,000	\$ (283,091,000)	110.4%	\$ 502,325,000	-56.4%
6/30/00	\$ 3,427,348,000	\$ 3,111,760,000	\$ (315,588,000)	110.1%	\$ 559,047,000	-56.5%
6/30/01	\$ 3,718,198,000	\$ 3,451,864,000	\$ (266,334,000)	107.7%	\$ 634,798,000	-42.0%

(i) Excludes accounts payable.

(ii) Includes reserve for interest fluctuations, retiree health benefit reserve, retiree death benefit reserve and amount over reserved benefits.





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## Funding History

It is informative to monitor the history of key actuarial and other financial results over time as a dynamic indicator of the System's ongoing funding progress. The following exhibit provides a 11-year history of the following items:

- (1) Actuarial Accrued Liability (AAL)
- (2) Actuarial Value of Assets
- (3) Unfunded Actuarial Accrued Liability (UAAL)
- (4) Funding Method Progress Ratio
- (5) Investment Return Assumption
- (6) Rate of Return on Actuarial Value of Assets
- (7) Aggregate Employer Contribution Rate
- (8) Aggregate Member Contribution Rate
- (9) Total Contributions to the System
- (10) Benefit Payments
- (11) Aggregate Contributions minus Benefit Payments
- (12) Investment Income
- (13) Aggregate Contributions plus Investment Income minus Benefit Payments

FUNDING HISTORY

Sacramento County Employees' Retirement System Funding History  
(All Dollars in 1,000's)

Actuarial Valuation Date	(1) AAL	(2) Actuarial Value of Assets	(3) UAAL	(4) (2)/(1) Funding Method Progress Ratio	(5) Investment Return Assumption	(6) Net Return on Actuarial Value of Assets	(7) Employer Contribution Rate	(8) Average Member Contribution Rate	(9) Prior Year Total Contributions to System	(10) Prior Year Benefit Payments	(11) Prior Year Free Cash Flow (9)-(10)
June 30, 1991	\$1,206,889	\$895,611	\$311,278	74.2%	9.00%	6.60%	12.60%	\$51,671	\$39,763	\$11,908	
June 30, 1992 <sup>1</sup>	\$1,327,407	\$959,560	\$367,847	72.3%	8.75%	6.07%	12.72%	\$54,971	\$45,678	\$9,293	
June 30, 1993 <sup>2</sup>	\$1,501,988	\$1,039,025	\$461,884	69.2%	8.50%	7.83%	13.61%	\$55,522	\$51,338	\$4,184	
June 30, 1994 <sup>3</sup>	\$1,634,773	\$1,106,922	\$533,659	67.7%	8.00%	5.98%	16.27%	\$63,691 <sup>4</sup>	\$58,095	\$5,596	
June 30, 1995 <sup>5</sup>	\$1,835,864	\$1,767,064	\$68,800	96.3%	8.00%	7.68%	10.81%	\$602,527	\$63,809	\$538,718	
June 30, 1996	\$1,987,230	\$1,956,715	\$30,515	98.5%	8.00%	13.71%	10.13%	\$59,949	\$68,901	\$(8,952)	
June 30, 1997	\$2,226,440	\$2,238,557	\$(12,117)	100.5%	8.00%	14.50%	9.83%	\$71,993	\$75,264	\$(3,271)	
June 30, 1998	\$2,409,642	\$2,600,547	\$(190,905)	107.9%	8.00%	16.47%	8.07%	\$73,039	\$82,461	\$(9,422)	
June 30, 1999	\$2,734,548	\$3,017,639	\$(283,091)	110.4%	8.00%	16.52%	6.77%	\$77,130	\$89,990	\$(12,860)	
June 30, 2000	\$3,111,760	\$3,427,348	\$(315,588)	110.1%	8.00%	14.46%	6.86%	\$72,042	\$99,723	\$(27,681)	
June 30, 2001	\$3,451,864	\$3,718,198	\$(266,334)	107.7%	8.00%	9.52%	7.86%	\$73,322	\$108,998	\$(35,676)	

<sup>1</sup>The increase in the employer contribution rates was primarily due to the new 2% cost of living benefit that was granted to Tier 2 members who moved to Tier 3. The earnings on an Accounting Book Value basis were lower than expected, thereby causing the employer rate to increase. In addition, the continued grade-in of the rate adjustments which resulted from the valuation date change in 1990 from January 1 to July 1. Finally, the change in actuarial assumptions (both economic and noneconomic) caused the employer and member rates to increase. Partially offsetting this increase was a decrease due to a slightly higher percentage of Safety members paying full rates rather than half rates. Also offsetting the increase was a decrease due to changing the Unfunded Actuarial Accrued Liability amortization period from 17.5 years to 30 years. The decrease in the funding ratio was due to the 2% cost-of-living benefit granted to Tier 2 members who moved to Tier 3, as well as the changes in actuarial assumptions.

<sup>2</sup>The aggregate employer rate decreased due to a higher proportion of the contributions being paid by members at full rather than half-member rates. Offsetting this decrease was an increase due to the golden handshake that was offered during the year and lower than expected return on assets. Also, the change in economic assumptions caused the employer and member rates to increase. The decrease in the funding ratio was due to the change in economic assumptions.

<sup>3</sup>The employer rate increase resulted from three sources: The change in economic actuarial assumptions, modification to the interest calculation and other miscellaneous changes. Member contribution rates and funding ratios were impacted by the change in economic assumptions.

<sup>4</sup>The County begins prepayment of contribution during this year.

<sup>5</sup>Considering \$533,034,360 of pension obligation bonds issued on July 5, 1995

## Historical Rates of Return

The annual investment returns as well as the rates of return assumed by the System over the past thirteen and one-half years are as follows:

### SCERS Actual and Assumed Rate of Investment Returns (Net of Expenses)

Year-Ended	YIELD		
	Actuarial Value	Market Value	Assumed Rate of Return
December 31, 1988		13.9%	9.50%
December 31, 1989		18.3%	9.00%
June 30, 1990 <sup>(2)</sup>		1.2% <sup>(1)</sup>	4.50% <sup>(1)</sup>
June 30, 1991 <sup>(2)</sup>	6.6%	6.9%	9.00%
June 30, 1992 <sup>(2)</sup>	6.1%	8.7%	9.00%
June 30, 1993	7.8%	8.1%	8.75%
June 30, 1994	6.0%	1.5%	8.50%
June 30, 1995	7.7%	15.4%	8.00%
June 30, 1996	13.7%	17.2%	8.00%
June 30, 1997	14.5%	20.1%	8.00%
June 30, 1998	16.5%	17.6%	8.00%
June 30, 1999	16.5%	11.7%	8.00%
June 30, 2000	14.5%	9.2%	8.00%
June 30, 2001	9.5%	-5.7%	8.00%
Annualized average over 11 years	10.8%	9.8%	8.29%
Annualized average over 13-1/2 years	—	10.5%	8.47%

(1) Six month period only.

(2) Reserves credited with 9% interest from the Unreserved account. For the year ended June 30, 1992, reserves were credited with 4.5% interest for the first 6 months, and 4.0% for the second 6 months.



## Actuarial Balance Sheet

The purpose of the Actuarial Balance Sheet is to compare assets with liabilities in order to define the portion of the liabilities which need to be funded by the Employer and Members in the future.

System liabilities equal the present value of all future benefits expected to be paid to current and future pensioners and beneficiaries of the System.

System assets are equal to the sum of:

- the assets currently available to pay benefits,
- the present value of future contributions expected to be made by current active members, and
- the present value of future contributions expected to be made by the employer.

The last item, the present value of future employer contributions, is made up of two parts:

1. The Present Value of Future Employer Normal Costs: Using the Entry Age Normal Cost Method, the employer budgets a certain percentage of payroll which will be sufficient to fund benefits for members from their entry into the System. The Normal Cost is the level percentage of salary each year that is necessary to fund Members' benefits under the current benefit provisions. Normal Cost is funded from a Member's date of employment to the expected retirement date. An adjustment is made for the deductions which will be made from the future salaries of System members. For this valuation, the Normal Costs are:

<u>Member Category</u>	<u>Contribution Rate</u>	<u>Annual Amount</u>
<i>County</i>		
General Tier 1	9.50%	\$7,449,000
General Tier 2	6.03%	\$1,336,000
General Tier 3	7.86%	\$28,934,000
Safety Tier 1	20.89%	\$16,470,000
Safety Tier 2	16.73%	\$9,503,000
<i>Special Districts</i>		
General Tier 1	11.67%	\$347,000
General Tier 3	10.68%	\$2,853,000
Safety Tier 1	18.49%	\$140,000

ACTUARIAL BALANCE SHEET

The present value of these future Employer Normal Cost contributions represents one piece of the present value of future employer contributions.

2. The Unfunded Actuarial Accrued Liability: The portion of the present value of future employer contributions which will not be funded by the future Entry Age Normal Cost contributions is the Unfunded Actuarial Accrued Liability (UAAL). The UAAL arises from prior contributions that were less than the current Normal Cost. This usually results from benefits and assumption changes and the net effect of prior gains and losses. If the employer had always contributed the current Normal Cost, if there were no prior benefit or assumption changes and if actual experience exactly matched the actuarial assumptions, the Normal Cost would be sufficient to fund all benefits and there would be no UAAL. If the UAAL is negative, it is used (on an amortized basis) to reduce future normal cost contributions.

For the current year, we have determined that the appropriate amounts needed to fund the UAAL are:

<u>Member Category</u>	<u>Contribution Rate</u>	<u>Annual Amount*</u>
<i>County</i>		
General Tier 1	(2.62%)	(\$2,054,000)
General Tier 2	(2.62%)	(\$581,000)
General Tier 3	(2.62%)	(\$9,646,000)
Safety Tier 1	(4.79%)	(\$3,776,000)
Safety Tier 2	(4.79%)	(\$2,721,000)
<i>Special Districts</i>		
General Tier 1	5.41%	\$161,000
General Tier 3	5.41%	\$1,445,000
Safety Tier 1	4.94%	\$37,000

\* Increases with inflation rate to remain as a level percentage of payroll for current and future members.

ACTUARIAL BALANCE SHEET\*  
AS OF JUNE 30, 2001

ASSETS			
	<u>Basic</u>	<u>COL</u>	<u>Total</u>
1. Total Assets at Actuarial Value	\$2,799,453,931	\$1,231,820,290	\$4,031,274,221
2. Present Value of Future Member Contributions	\$303,841,490	\$22,748,884	\$326,590,374
3. Present Value of Future Employer Contributions on Account of:			
a) Normal Cost	\$470,911,748	\$113,489,138	\$584,400,886
b) Unfunded Actuarial Accrued Liability	<u>(\$23,566,625)</u>	<u>(\$242,767,145)</u>	<u>(\$266,333,770)</u>
4. Total Actuarial Assets	<u>\$3,550,640,544</u>	<u>\$1,125,291,167</u>	<u>\$4,675,931,711</u>

LIABILITIES			
	<u>Basic</u>	<u>COL</u>	<u>Total</u>
5. Present Value of Retirement Allowances Payable to Present Retired Members	\$691,628,711	\$532,471,820	\$1,224,100,531
6. Present Value of Retirement Allowances to be Granted for:			
a) Service Retirement	\$1,772,879,471	\$530,196,618	\$2,303,076,089
b) Disability Retirement	\$156,054,423	\$48,501,590	\$204,556,013
7. Present Value of Death Benefits to be Granted for:			
a) Duty Deaths	\$2,770,056	\$901,541	\$3,671,597
b) Non-duty Death	\$37,536,715	\$8,829,424	\$46,366,139
8. Present Value of Members' Contributions to be Returned Upon Withdrawal Before Retirement	\$42,123,591	\$4,390,174	\$46,513,765
9. Amount over Reserved Benefits	\$296,959,471	\$0	\$296,959,471
10. Retiree Health Insurance Reserve	\$2,698,450	\$0	\$2,698,450
11. Retiree Death Benefit Reserve	\$11,905,138	\$0	\$11,905,138
12. Reserve for Interest Fluctuation	\$96,678,789	\$0	\$96,678,789
13. Surplus for Withdrawn Employers	\$5,080,000	\$0	\$5,080,000
14. Payables	<u>\$434,325,730</u>	<u>\$0</u>	<u>\$434,325,730</u>
15. Total Actuarial Liabilities	<u>\$3,550,640,544</u>	<u>\$1,125,291,167</u>	<u>\$4,675,931,711</u>

\* Based on 8.0% interest rate and 5.75% salary scale assumptions.





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# System Assets

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## System Assets – Reserve Accounting

The Board of Retirement adopted an excess earnings policy on July 25, 1996. This policy governs the allocation of excess earnings for particular statutory and Board designations.

In previous years, excess earnings which remained after establishing the Reserve for Interest Fluctuations and reserving for future 401(h) contribution offsets were used to reduce employer contributions and member COLA contributions. The allocation of available excess earnings between employer and member offsets was based upon the relative size of reserves held for these two categories.

However, starting with the June 30, 1999 valuation, a portion of these remaining excess earnings will be retained in the Reserve for Interest Fluctuations rather than used for contribution offsets.

The process we used to establish the additional excess earnings allocation this year was as follows:

- Adjust earnings for the change in the market stabilization Reserve;
- Increase the Reserve for Interest Fluctuations to 2.5% of the System's gross assets before any other excess earnings transfers;
- Allocate excess earnings to provide for the 2001-2002 and 2002-2003 retiree health and dental benefits; and
- Allocate the remaining excess earnings to the Amount over Reserve Benefits.

However, we assumed the Board would not transfer any excess earnings to maintain employer and member contribution rates at the same level as those calculated in the June 30, 2000 valuation.

Current and past years' amounts transferred to offset member COLA contributions are considered member reserves even though they are not included in member's accounts. The amounts available to offset employer and member contributions have been used to reduce the contribution rates that appear earlier in this report.

The following tables provide the specific amounts allocated for various purposes and the reserve balances as of June 30, 2001.

**Sacramento County Employees' Retirement System**  
Summary of Earnings for 2000-2001 Fiscal Year

RECOMMENDED BASED ON 2.5% CONTINGENCY RESERVE

	<u>Per Excess Earnings Policy</u>
Total Earnings	\$ (211,411,270)
Amounts Credited For:	
Market Stabilization Reserve	\$ 537,937,604
Regular Interest Crediting*	<u>\$ (239,261,323)</u>
Net Earnings	\$ 87,265,011
Amount Credited Under Excess Earnings Policy For:	
Reserve for Interest Fluctuation (2.5%)	\$ 9,184,996
Retiree Health/ Dental Insurance Reserve for 2001-2002	\$ (8,442,141)
Replenish 2002-2003 Health Benefits Reserve**	<u>\$ (1,468,500)</u>
Net Excess Earnings	\$ 86,539,366
Amount Transferred Under Excess Earnings Policy For:	
Employer Reserves	\$ -
Member Future COL Contribution Offset	<u>\$ -</u>
Subtotal	\$ -
Remaining Excess Earnings	\$ 86,539,366

\* Includes interest credit for Death Benefit Reserve

\*\* Equals \$11,935,000 for 2002-2003 net of \$10,466,500 available as of June 30, 2000 to cover second year health/dental insurance reserve.

**Sacramento County Employees' Retirement System**  
Statement of Reserves  
June 30, 2001 and 2000  
**Market Value Accounting/ Smoothed Market Value of Reserves**  
(Net of Liabilities)

RECOMMENDED BASED ON 2.5% CONTINGENCY RESERVE

	6/30/2001	6/30/2001	6/30/2000
	(After Transfer)	(Before Transfer)	(After Transfer)
Employee Reserves	\$ 437,665,741	\$ 437,665,741	\$ 392,113,512
Employer Reserves	1,508,527,881	1,508,527,881	1,411,149,062
Retiree Reserve	1,242,513,022	1,242,513,022	1,174,134,562
Subtotal (Valuation Reserves)	<u>\$ 3,188,706,644</u>	<u>\$ 3,188,706,644</u>	<u>\$ 2,977,397,136</u>
Reserve for Interest Fluctuations	\$ 96,678,789	\$ 96,678,789	105,863,785
Retiree Health Benefit Reserve	2,698,450	2,698,450	1,363,450
Death Benefit Reserve	11,905,138	11,905,138	11,556,635
Ventura Reserve	121,249,698	121,249,698	121,249,698
Amount over Reserved Benefits	296,959,471	296,959,471	209,916,928
Subtotal	<u>\$ 529,491,546</u>	<u>\$ 529,491,546</u>	<u>\$ 449,950,496</u>
Total Allocated Reserves	\$ 3,718,198,190	\$ 3,718,198,190	\$ 3,427,347,632
Market Stabilization Reserve	<u>\$ (285,372,380)</u>	<u>\$ (285,372,380)</u>	<u>\$ 252,565,224</u>
Net Assets Held In Trust for Pension Benefits	<u>\$ 3,432,825,810</u>	<u>\$ 3,432,825,810</u>	<u>\$ 3,679,912,856</u>
Liabilities netted from above	\$ 434,325,730	\$ 434,325,730	\$ 565,585,287
Gross Assets	\$ 3,867,151,540	\$ 3,867,151,540	\$ 4,245,498,143
Net Actuarial Value Assets	\$ 3,718,198,190	\$ 3,718,198,190	\$ 3,427,347,632
Net Valuation Assets:			
From Above	\$ 3,188,706,644	\$ 3,188,706,644	\$ 2,977,397,136
For Member Contribution Offset*	\$ (51,918,586)	\$ (51,918,586)	\$ (49,459,313)
Net	<u>3,136,788,058</u>	<u>3,136,788,059</u>	<u>2,927,937,823</u>
ESTIMATED (Surplus)/ Deficit for Withdrawn Employers	\$ (5,080,000)		
<b>Final Valuation Assets</b>	<u>\$ 3,131,708,058</u>		
* Balance remaining from prior year:	\$ 51,918,586		

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SYSTEM ASSETS

Sacramento County Employees' Retirement System

Change in Reserves

2000 - 2001 Fiscal Year

Market Value Accounting/Smoothed Market Value of Reserves

30-Jun-01

RECOMMENDED BASED ON 2.5% CONTINGENCY RESERVE

	Balance at 6/30/00	2000 - 2001 Interest	2000 - 2001 Contributions	2000 - 2001 Benefits	2000 - 2001 Transfers	Balance at 6/30/01	RECOMMENDED Application of 30-Jun-01 Transfer Policy	Adjusted Balance at 6/30/01
Employee Reserves	392,113,512	31,609,196	32,964,208	(3,611,188)	(15,409,987)	437,665,741	-	437,665,741
Employer Reserves	1,411,149,062	112,908,791	31,241,282	(342,555)	(46,428,699)	1,508,527,881	-	1,508,527,881
Retiree Reserve	1,174,134,562	93,833,513	-	(96,410,612)	70,955,559	1,242,513,022	-	1,242,513,022
Subtotal	2,977,397,136	238,351,500	64,205,490	(100,364,355)	9,116,873	3,188,706,644	-	3,188,706,644
Reserve for Interest Fluctuations	105,863,785	(9,184,996)	-	-	-	96,678,789	-	96,678,789
Retiree Health Benefit Reserve	1,363,450	290,591	9,116,873	(8,072,464)	-	2,698,450	8,151,550	2,698,450
Death Benefit Reserve	11,556,635	909,823	-	(561,320)	-	11,905,138	-	11,905,138
Ventura Reserve	121,249,698	-	-	-	-	121,249,698	-	121,249,698
Amount over Reserved Benefits	209,916,928	96,159,416	-	-	(9,116,873)	296,959,471	(8,151,550)	296,959,471
Subtotal	449,950,496	88,174,834	9,116,873	(8,633,784)	(9,116,873)	529,491,546	-	529,491,546
Total Allocated Reserves	3,427,347,632	326,526,334	73,322,363	(108,998,139)	-	3,718,198,190	-	3,718,198,190
Market Stabilization Reserve	252,565,224	(537,937,604)	-	-	-	(285,372,380)	-	(285,372,380)
Net Assets	3,679,912,856	(211,411,270)	73,322,363	(108,998,139)	-	3,432,825,810	-	3,432,825,810

\* Includes beginning of year transfers reflected in actuarial valuation.

\*\* Preliminary portion to offset future member contributions:

\*\*\* Held in Amount over Reserved Benefits to offset employer contribution to 401(h) Account. Total required 401(h) balance at 6/30/01 is:

Balance: \$ 276,872,921 ; Employer: \$ 276,872,921 ; Balance: \$ 276,872,921

\*\*\*\* UNALLOCATED EXCESS EARNINGS:

Unallocated excess earnings as of 6/30/2000 = \$ 191,298,879

Unallocated excess earnings as of 6/30/2001 = \$ 276,872,921

## System Assets – Return On Investment

The market value of assets and related financial information was provided to us by the System staff. We have not audited or verified the financial statements.

	June 30, 2001	June 30, 2000	Percent Change
Actuarial Value	\$3,718,198,190	\$3,427,347,633	8.5%
Market Value	\$3,432,825,810	\$3,679,912,856	-6.7%

The approximate rates of return on plan assets are shown below, based on the following analysis.

	Market Value	Actuarial Value	Valuation Assets
Value of Assets at 6/30/00	\$ 3,679,912,856	\$ 3,427,347,632	\$ 2,920,804,823
Contributions:			
Employer	40,358,155	40,358,155	40,358,155
Members	32,964,208	32,964,208	32,964,208
Benefits Paid to Participants	108,998,139	108,998,139	100,364,355
Expenses Paid	12,321,634	12,321,634	12,321,634
Investment Earnings	(199,089,636)	338,847,968	250,266,861
Value of Assets at 6/30/01	\$ 3,432,825,810	\$ 3,718,198,190	\$ 3,131,708,059
NET RATE OF RETURN (Net of Expenses)	-5.74%	9.52%	8.11%

**SYSTEM ACCOUNTING ASSETS,  
RESERVES AND OTHER LIABILITIES**

As of June 30, 2001

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<u>Assets</u>	
Cash	\$1,219,009
Short-term Investments	114,406,832
Accounts Receivable	42,161,898
Investments @ Market Value	3,181,375,440
Real estate mortgage loans	133,686,215
Real estate equity	394,079,312
Equipment and fixtures (net of depreciation)	91,229
Prepaid Dental	131,605
	<hr/>
Total Assets	\$3,867,151,540
Accounts Payable & Other Current Liabilities	434,325,730
	<hr/>
Assets Net of Payable and Current Liabilities	3,432,825,810
	<hr/>

<u>Reserves and Liabilities</u>		
	<u>Before Transfer</u>	<u>After Transfer</u>
Employee Reserves	\$437,665,741	437,665,741
Employer Reserves	1,508,527,881	1,508,527,881
Retiree Reserve	1,242,513,022	1,242,513,022
Subtotal (Valuation Reserves)	<hr/>	<hr/>
	\$3,188,706,644	3,188,706,644
Reserve for Interest Fluctuations	96,678,789	96,678,789
Retiree Health Benefit Reserve	2,698,450	2,698,450
Retiree Death Benefit Reserve	11,905,138	11,905,138
Ventura Reserve	121,249,698	121,249,698
Amount over Reserved Benefits	296,959,471	296,959,471
Subtotal	<hr/>	<hr/>
	529,491,545	529,491,545
Total Allocated Reserves (Total Actuarial Value)	3,718,198,190	3,718,198,190
Market Stabilization Reserve	(285,372,380)	(285,372,380)
Accounts Payable & Other Current Liabilities	434,325,730	434,325,730
	<hr/>	<hr/>
Total Reserves & Liabilities	3,867,151,540	3,867,151,540
Amounts Transferred to:		
Member COL Contributions		\$ -
Employer Reserves		\$ -



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# Appendices

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## A. Major Provisions of the Present System

### MAJOR PROVISIONS OF THE PRESENT SYSTEM

#### Benefit Sections 31676.1 and 31664 of the 1937 County Act

Briefly summarized below are the major provisions of the County Employees Retirement Law of 1937, as amended through June 30, 2001 that are applicable to Sacramento County Employees' Retirement System.

#### *Membership*

General employees entering after September 27, 1981 become members of Tier 2 or Tier 3. Safety members entering after June 24, 1995 become members of Tier 2. All others are covered by Tier 1 provisions.

#### *Final Average Salary (FAS)*

Final average salary is defined as the highest 12 consecutive months of compensation earnable for Tier 1 and highest 36 consecutive months for Tier 2 and Tier 3.

#### *Return of Contributions*

If a member should resign or die before becoming eligible for retirement, his or her contributions plus interest will be refunded. In lieu of receiving a return of contributions, a member with five or more years of service may elect to leave his or her contributions on deposit and receive a deferred vested benefit when eligible for retirement.

#### *Service Retirement Benefit*

Members with 10 years of service who have attained the age of 50 are eligible to retire. Members with 30 years of service (20 years for Safety), regardless of age, are eligible to retire.

The benefit expressed as a percentage of monthly FAS per year of service, depending on age at retirement, is illustrated below for typical ages. For members integrated with Social Security, the benefit is reduced by one-third of the percentage shown below times the first \$350 of monthly FAS per year of service after January 1, 1956.



Age	General	Safety
50	1.18%	2.00%
55	1.49%	2.62%
60	1.92%	2.62%
65 and over	2.43%	2.62%

### *Disability Benefit*

Members with five years of service, regardless of age, are eligible for nonservice connected disability.

For Tier 1 General members, the benefit is 1.5% (1.8% for Tier 1 Safety members) of FAS for each year of service. If this benefit does not equal one-third of FAS, the benefit is increased by the same percentage of FAS for the years which would have been credited to age 65 (age 55 for Safety members), but the total benefit in this case cannot be more than one-third of FAS.

For Tier 2 and Tier 3 members, the benefit is 20% of FAS for the first five years of service plus 2% for each additional year for a maximum of 40% of FAS.

If the disability is service connected, the member may retire regardless of length of service, with a benefit of 50% of FAS.

### *Death Benefit (Before Retirement)*

In addition to the return of contributions, a death benefit is payable to the member's beneficiary or estate equal to one month's salary for each completed year of service under the retirement system, based on the final year's average salary, but not to exceed six (6) months' salary.

If a member dies while eligible for service retirement or non-service connected disability, the spouse receives 60% of the allowance that the member would have received for retirement on the day of his or her death.

If a member dies in the performance of duty, the spouse receives 50% of the member's final average salary.

### *Death Benefit (After Retirement)*

If a member dies after retirement, a lump burial allowance is paid to the beneficiary or estate.

If the retirement was for service connected disability, 100% of the member's allowance as it was at death is continued to the surviving spouse for life.

If the retirement was for other than service connected disability, 60% of the member's allowance is continued to the spouse for life.

#### *Maximum Benefit*

The maximum benefit payable to a member or beneficiary is 100% of FAS.

#### *Cost of Living*

The maximum increase in retirement allowance is 4% per year for Tier 1 General and Safety members, 2% for Tier 2 Safety members and, effective April 1, 1993, 2% for Tier 3 members. Tier 2 General members have no cost of living benefit. The cost of living increases are based on the change in the Consumer Price Index for the calendar year prior to the April 1 effective date.

#### *Contribution Rates*

Basic member contribution rates are based on the age nearest birthday at entry into the System (single rate for entrants after January 1, 1975). The rates are such as to provide an average annuity at age 60 equal to 1/240 of FAS for General members and at age 50 equal to 1/200 of FAS for Safety members. For members integrated with Social Security, the above contributions are reduced by one-third of that portion of such contribution payable with respect to the first \$350 of monthly salary. Cost of living rates are designed to pay for one quarter of the future cost of living costs. Member contributions are refundable upon termination from the System.

The Employer rates are actuarially determined to provide for the balance of the contributions needed to fund the benefits promised under the Retirement System.

## B. Summary of Assumptions and Funding Method

### Assumptions

Valuation Interest Rate	8.00%
Post-Retirement Mortality	
(a) Service	
Males	1994 Male Group Annuity Mortality Table set back two years
Females	1994 Female Group Annuity Mortality Table with no set back
Safety	1994 Male Group Annuity Mortality Table with no set back
(b) Disability	
General	1981 General Disability Mortality Table with no set back
Safety	1981 Safety Disability Mortality Table set back one year
(c) For Employee Contribution Rate Purposes	
General	1994 Male Group Annuity Mortality Table with a three year set back
Safety	1994 Male Group Annuity Mortality Table with no set back
Pre-Retirement Mortality	Based upon the 06/30/2001 Experience Analysis
Withdrawal Rates	Based upon the 06/30/2001 Experience Analysis
Disability Rates	Based upon the 06/30/2001 Experience Analysis
Service Retirement Rates	Based upon the 06/30/2001 Experience Analysis
Salary Scales	Total increases of 5.75% per year reflecting 4.25% for inflation and approximately 1.50% for merit and longevity
Assets	Valued at Smoothed Actuarial Value as described in Actuarial Valuation Methods Section of this report
Percentage of Members Married at Retirement	70% for male members and 50% for female members
Terminated Members Eligible for Reciprocal Benefits	60%
Funding Method	The County's liability is being funded on the Entry Age Normal Method. The amortization period for the Unfunded Actuarial Accrued Liability is 21 years from the June 30, 2001 valuation date.

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Average Entry Ages  
(for Member Rates)

General = 36; Safety = 29

PROBABILITIES OF SEPARATION PRIOR TO RETIREMENT  
General Male Members - Tier 1

Age	With(0<Svc<1)	With(1<Svc<2)	With(2<Svc<3)	With(3<Svc<4)	With(4<Svc<5)	With(Svc>5)	Vested Term	Ord. Disab	Duty Disab	Ord. Dth	Duty Dth	Svc Ret
<= 20	0.1040	0.1040	0.1040	0.1040	0.1040	0.1040	0.0150	0.0000	0.0001	0.0005	0.0001	0.0000
21	0.1010	0.1010	0.1010	0.1010	0.1010	0.0965	0.0150	0.0000	0.0001	0.0005	0.0001	0.0000
22	0.0980	0.0980	0.0980	0.0980	0.0980	0.0891	0.0150	0.0000	0.0001	0.0005	0.0001	0.0000
23	0.0950	0.0950	0.0950	0.0950	0.0950	0.0796	0.0150	0.0000	0.0001	0.0006	0.0001	0.0000
24	0.0920	0.0920	0.0920	0.0920	0.0920	0.0705	0.0150	0.0000	0.0001	0.0006	0.0001	0.0000
25	0.0900	0.0900	0.0900	0.0900	0.0900	0.0618	0.0150	0.0025	0.0001	0.0006	0.0001	0.0000
26	0.0850	0.0850	0.0850	0.0850	0.0850	0.0534	0.0150	0.0025	0.0001	0.0007	0.0001	0.0000
27	0.0800	0.0800	0.0800	0.0800	0.0800	0.0454	0.0150	0.0025	0.0001	0.0007	0.0001	0.0000
28	0.0750	0.0750	0.0750	0.0750	0.0750	0.0399	0.0150	0.0025	0.0001	0.0007	0.0001	0.0000
29	0.0700	0.0700	0.0700	0.0700	0.0700	0.0340	0.0150	0.0025	0.0001	0.0008	0.0001	0.0000
30	0.0660	0.0660	0.0660	0.0660	0.0660	0.0343	0.0150	0.0025	0.0001	0.0008	0.0001	0.0000
31	0.0620	0.0620	0.0620	0.0620	0.0620	0.0347	0.0150	0.0025	0.0001	0.0008	0.0001	0.0000
32	0.0570	0.0570	0.0570	0.0570	0.0570	0.0351	0.0150	0.0025	0.0001	0.0009	0.0001	0.0000
33	0.0530	0.0530	0.0530	0.0530	0.0530	0.0354	0.0150	0.0025	0.0001	0.0009	0.0001	0.0000
34	0.0480	0.0480	0.0480	0.0480	0.0480	0.0358	0.0150	0.0025	0.0001	0.0009	0.0001	0.0000
35	0.0460	0.0460	0.0460	0.0460	0.0460	0.0361	0.0125	0.0025	0.0002	0.0009	0.0001	0.0000
36	0.0440	0.0440	0.0440	0.0440	0.0440	0.0401	0.0125	0.0025	0.0002	0.0009	0.0001	0.0000
37	0.0410	0.0410	0.0410	0.0410	0.0410	0.0425	0.0125	0.0025	0.0003	0.0009	0.0001	0.0000
38	0.0380	0.0380	0.0380	0.0380	0.0380	0.0347	0.0125	0.0025	0.0004	0.0009	0.0001	0.0000
39	0.0350	0.0350	0.0350	0.0350	0.0350	0.0276	0.0125	0.0025	0.0005	0.0010	0.0001	0.0000
40	0.0290	0.0290	0.0290	0.0290	0.0290	0.0206	0.0125	0.0025	0.0006	0.0010	0.0001	0.0000
41	0.0262	0.0262	0.0262	0.0262	0.0262	0.0146	0.0125	0.0025	0.0007	0.0011	0.0001	0.0000
42	0.0235	0.0235	0.0235	0.0235	0.0235	0.0096	0.0125	0.0025	0.0007	0.0012	0.0001	0.0000
43	0.0208	0.0208	0.0208	0.0208	0.0208	0.0074	0.0125	0.0025	0.0009	0.0012	0.0001	0.0000
44	0.0181	0.0181	0.0181	0.0181	0.0181	0.0055	0.0125	0.0025	0.0010	0.0013	0.0001	0.0000
45	0.0166	0.0166	0.0166	0.0166	0.0166	0.0055	0.0108	0.0025	0.0011	0.0015	0.0001	0.0000
46	0.0148	0.0148	0.0148	0.0148	0.0148	0.0053	0.0092	0.0029	0.0013	0.0016	0.0001	0.0000
47	0.0129	0.0129	0.0129	0.0129	0.0129	0.0046	0.0075	0.0034	0.0014	0.0017	0.0001	0.0000
48	0.0111	0.0111	0.0111	0.0111	0.0111	0.0041	0.0058	0.0037	0.0017	0.0019	0.0001	0.0000
49	0.0102	0.0102	0.0102	0.0102	0.0102	0.0036	0.0042	0.0040	0.0020	0.0020	0.0001	0.0000
50	0.0102	0.0102	0.0102	0.0102	0.0102	0.0032	0.0042	0.0045	0.0022	0.0023	0.0001	0.0418
51	0.0097	0.0097	0.0097	0.0097	0.0097	0.0028	0.0042	0.0045	0.0025	0.0025	0.0001	0.0359
52	0.0092	0.0092	0.0092	0.0092	0.0092	0.0024	0.0042	0.0045	0.0028	0.0028	0.0001	0.0260
53	0.0087	0.0087	0.0087	0.0087	0.0087	0.0020	0.0042	0.0045	0.0029	0.0031	0.0001	0.0214
54	0.0082	0.0082	0.0082	0.0082	0.0082	0.0017	0.0042	0.0045	0.0031	0.0035	0.0001	0.0254
55	0.0078	0.0078	0.0078	0.0078	0.0078	0.0000	0.0000	0.0045	0.0033	0.0039	0.0001	0.0560
56	0.0074	0.0074	0.0074	0.0074	0.0074	0.0000	0.0000	0.0045	0.0035	0.0043	0.0001	0.0665
57	0.0069	0.0069	0.0069	0.0069	0.0069	0.0000	0.0000	0.0045	0.0038	0.0048	0.0001	0.0767
58	0.0064	0.0064	0.0064	0.0064	0.0064	0.0000	0.0000	0.0045	0.0041	0.0053	0.0001	0.0979
59	0.0059	0.0059	0.0059	0.0059	0.0059	0.0000	0.0000	0.0045	0.0044	0.0060	0.0001	0.1209
60	0.0055	0.0055	0.0055	0.0055	0.0055	0.0000	0.0000	0.0045	0.0048	0.0068	0.0001	0.1525
61	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0000	0.0045	0.0053	0.0076	0.0001	0.2608
62	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0000	0.0045	0.0059	0.0086	0.0001	0.3475
63	0.0045	0.0045	0.0045	0.0045	0.0045	0.0000	0.0000	0.0045	0.0065	0.0097	0.0001	0.3476
64	0.0045	0.0045	0.0045	0.0045	0.0045	0.0000	0.0000	0.0045	0.0071	0.0109	0.0001	0.3600
65	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0045	0.0077	0.0123	0.0001	0.4169
66	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0045	0.0083	0.0139	0.0001	0.4478
67	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0045	0.0090	0.0156	0.0001	0.4788
68	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0045	0.0097	0.0175	0.0001	0.5472
69	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0045	0.0104	0.0194	0.0001	0.6840
70	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000

PROBABILITIES OF SEPARATION PRIOR TO RETIREMENT  
General Female Members - Tier I

Age	With(0<Svc<1)	With(1<Svc<2)	With(2<Svc<3)	With(3<Svc<4)	With(4<Svc<5)	With(Svc>5)	Vested Term	Ord. Disab	Duty Disab	Ord. Dth	Duty Dth	Svc Ret
<= 20	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.0150	0.0000	0.0000	0.0003	0.0000	0.0000
21	0.1150	0.1150	0.1150	0.1150	0.1150	0.1150	0.0150	0.0000	0.0000	0.0003	0.0000	0.0000
22	0.1060	0.1060	0.1060	0.1060	0.1060	0.1060	0.0150	0.0000	0.0000	0.0003	0.0000	0.0000
23	0.0980	0.0980	0.0980	0.0980	0.0980	0.0980	0.0150	0.0000	0.0000	0.0003	0.0000	0.0000
24	0.0930	0.0930	0.0930	0.0930	0.0930	0.0930	0.0150	0.0000	0.0000	0.0003	0.0000	0.0000
25	0.0900	0.0900	0.0900	0.0900	0.0900	0.0858	0.0150	0.0001	0.0001	0.0003	0.0000	0.0000
26	0.0880	0.0880	0.0880	0.0880	0.0880	0.0786	0.0150	0.0001	0.0001	0.0003	0.0000	0.0000
27	0.0860	0.0860	0.0860	0.0860	0.0860	0.0714	0.0150	0.0001	0.0001	0.0003	0.0000	0.0000
28	0.0840	0.0840	0.0840	0.0840	0.0840	0.0614	0.0150	0.0001	0.0001	0.0003	0.0000	0.0000
29	0.0820	0.0820	0.0820	0.0820	0.0820	0.0520	0.0150	0.0001	0.0001	0.0004	0.0000	0.0000
30	0.0759	0.0759	0.0759	0.0759	0.0759	0.0432	0.0150	0.0002	0.0001	0.0004	0.0000	0.0000
31	0.0711	0.0711	0.0711	0.0711	0.0711	0.0351	0.0150	0.0002	0.0001	0.0004	0.0000	0.0000
32	0.0663	0.0663	0.0663	0.0663	0.0663	0.0276	0.0150	0.0002	0.0001	0.0004	0.0000	0.0000
33	0.0615	0.0615	0.0615	0.0615	0.0615	0.0210	0.0150	0.0003	0.0001	0.0005	0.0000	0.0000
34	0.0567	0.0567	0.0567	0.0567	0.0567	0.0149	0.0150	0.0003	0.0001	0.0005	0.0000	0.0000
35	0.0479	0.0479	0.0479	0.0479	0.0479	0.0113	0.0125	0.0002	0.0002	0.0005	0.0000	0.0000
36	0.0452	0.0452	0.0452	0.0452	0.0452	0.0101	0.0125	0.0003	0.0002	0.0006	0.0000	0.0000
37	0.0408	0.0408	0.0408	0.0408	0.0408	0.0086	0.0125	0.0004	0.0002	0.0006	0.0000	0.0000
38	0.0364	0.0364	0.0364	0.0364	0.0364	0.0073	0.0125	0.0004	0.0002	0.0006	0.0000	0.0000
39	0.0328	0.0328	0.0328	0.0328	0.0328	0.0063	0.0125	0.0005	0.0002	0.0007	0.0000	0.0000
40	0.0293	0.0293	0.0293	0.0293	0.0293	0.0065	0.0125	0.0010	0.0002	0.0008	0.0000	0.0000
41	0.0275	0.0275	0.0275	0.0275	0.0275	0.0055	0.0125	0.0014	0.0002	0.0008	0.0000	0.0000
42	0.0258	0.0258	0.0258	0.0258	0.0258	0.0046	0.0125	0.0017	0.0003	0.0009	0.0000	0.0000
43	0.0241	0.0241	0.0241	0.0241	0.0241	0.0041	0.0125	0.0023	0.0003	0.0009	0.0000	0.0000
44	0.0224	0.0224	0.0224	0.0224	0.0224	0.0035	0.0125	0.0029	0.0003	0.0010	0.0000	0.0000
45	0.0215	0.0215	0.0215	0.0215	0.0215	0.0029	0.0100	0.0036	0.0004	0.0010	0.0000	0.0000
46	0.0206	0.0206	0.0206	0.0206	0.0206	0.0029	0.0100	0.0044	0.0004	0.0011	0.0000	0.0000
47	0.0197	0.0197	0.0197	0.0197	0.0197	0.0029	0.0100	0.0050	0.0004	0.0012	0.0000	0.0000
48	0.0188	0.0188	0.0188	0.0188	0.0188	0.0029	0.0100	0.0050	0.0006	0.0013	0.0000	0.0000
49	0.0179	0.0179	0.0179	0.0179	0.0179	0.0029	0.0100	0.0050	0.0007	0.0014	0.0000	0.0000
50	0.0184	0.0184	0.0184	0.0184	0.0184	0.0026	0.0070	0.0050	0.0008	0.0015	0.0000	0.0702
51	0.0175	0.0175	0.0175	0.0175	0.0175	0.0026	0.0070	0.0050	0.0010	0.0017	0.0000	0.0491
52	0.0165	0.0165	0.0165	0.0165	0.0165	0.0026	0.0070	0.0050	0.0012	0.0019	0.0000	0.0408
53	0.0155	0.0155	0.0155	0.0155	0.0155	0.0023	0.0070	0.0050	0.0013	0.0021	0.0000	0.0472
54	0.0146	0.0146	0.0146	0.0146	0.0146	0.0023	0.0070	0.0050	0.0015	0.0022	0.0000	0.0540
55	0.0137	0.0137	0.0137	0.0137	0.0137	0.0000	0.0000	0.0050	0.0017	0.0025	0.0000	0.0701
56	0.0127	0.0127	0.0127	0.0127	0.0127	0.0000	0.0000	0.0050	0.0018	0.0028	0.0000	0.0861
57	0.0113	0.0113	0.0113	0.0113	0.0113	0.0000	0.0000	0.0050	0.0020	0.0031	0.0000	0.1022
58	0.0098	0.0098	0.0098	0.0098	0.0098	0.0000	0.0000	0.0050	0.0019	0.0036	0.0000	0.1182
59	0.0088	0.0088	0.0088	0.0088	0.0088	0.0000	0.0000	0.0050	0.0018	0.0042	0.0000	0.1343
60	0.0080	0.0080	0.0080	0.0080	0.0080	0.0000	0.0000	0.0050	0.0017	0.0048	0.0000	0.1503
61	0.0070	0.0070	0.0070	0.0070	0.0070	0.0000	0.0000	0.0050	0.0016	0.0055	0.0000	0.2154
62	0.0060	0.0060	0.0060	0.0060	0.0060	0.0000	0.0000	0.0050	0.0015	0.0063	0.0000	0.3147
63	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0000	0.0050	0.0016	0.0072	0.0000	0.2790
64	0.0040	0.0040	0.0040	0.0040	0.0040	0.0000	0.0000	0.0050	0.0018	0.0082	0.0000	0.2844
65	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0050	0.0021	0.0093	0.0000	0.6000
66	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0050	0.0022	0.0104	0.0000	0.4729
67	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0050	0.0024	0.0116	0.0000	0.5618
68	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0050	0.0024	0.0126	0.0000	0.6420
69	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0050	0.0024	0.0137	0.0000	0.8025
70	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000

PROBABILITIES OF SEPARATION PRIOR TO RETIREMENT  
General Male Members - Tiers 2 & 3

Age	With(0<Svc<1)	With(1<Svc<2)	With(2<Svc<3)	With(3<Svc<4)	With(4<Svc<5)	With(Svc>5)	Vested Term	Ord. Disab	Duty Disab	Ord. Dth	Duty Dth	Svc Ret
<= 20	0.0932	0.0628	0.0470	0.0440	0.0250	0.1022	0.1817	0.0000	0.0001	0.0005	0.0001	0.0000
21	0.0932	0.0628	0.0470	0.0440	0.0250	0.0992	0.1647	0.0000	0.0001	0.0005	0.0001	0.0000
22	0.0932	0.0628	0.0470	0.0440	0.0250	0.0963	0.1478	0.0000	0.0001	0.0005	0.0001	0.0000
23	0.0932	0.0628	0.0470	0.0440	0.0250	0.0916	0.1309	0.0000	0.0001	0.0006	0.0001	0.0000
24	0.0932	0.0628	0.0470	0.0440	0.0250	0.0871	0.1139	0.0000	0.0001	0.0006	0.0001	0.0000
25	0.0932	0.0628	0.0470	0.0440	0.0250	0.0731	0.0970	0.0001	0.0001	0.0006	0.0001	0.0000
26	0.0932	0.0628	0.0470	0.0440	0.0250	0.0596	0.0801	0.0001	0.0001	0.0007	0.0001	0.0000
27	0.0932	0.0628	0.0470	0.0440	0.0250	0.0465	0.0632	0.0001	0.0001	0.0007	0.0001	0.0000
28	0.0932	0.0628	0.0470	0.0440	0.0250	0.0407	0.0462	0.0001	0.0002	0.0007	0.0001	0.0000
29	0.0932	0.0628	0.0470	0.0440	0.0250	0.0307	0.0400	0.0001	0.0003	0.0008	0.0001	0.0000
30	0.0932	0.0628	0.0470	0.0440	0.0250	0.0240	0.0300	0.0002	0.0003	0.0008	0.0001	0.0000
31	0.0932	0.0628	0.0470	0.0440	0.0250	0.0228	0.0300	0.0002	0.0003	0.0008	0.0001	0.0000
32	0.0932	0.0628	0.0470	0.0440	0.0250	0.0216	0.0300	0.0002	0.0003	0.0009	0.0001	0.0000
33	0.0932	0.0628	0.0470	0.0440	0.0250	0.0216	0.0300	0.0002	0.0003	0.0009	0.0001	0.0000
34	0.0932	0.0628	0.0470	0.0440	0.0250	0.0216	0.0300	0.0002	0.0003	0.0009	0.0001	0.0000
35	0.0932	0.0628	0.0470	0.0440	0.0250	0.0216	0.0250	0.0002	0.0004	0.0009	0.0001	0.0000
36	0.0932	0.0628	0.0470	0.0440	0.0250	0.0216	0.0250	0.0003	0.0004	0.0009	0.0001	0.0000
37	0.0932	0.0628	0.0470	0.0440	0.0250	0.0218	0.0250	0.0003	0.0004	0.0009	0.0001	0.0000
38	0.0932	0.0628	0.0470	0.0440	0.0250	0.0210	0.0250	0.0008	0.0004	0.0009	0.0001	0.0000
39	0.0932	0.0628	0.0470	0.0440	0.0250	0.0202	0.0250	0.0010	0.0004	0.0010	0.0001	0.0000
40	0.0932	0.0628	0.0470	0.0440	0.0250	0.0194	0.0225	0.0013	0.0004	0.0010	0.0001	0.0000
41	0.0932	0.0628	0.0470	0.0440	0.0250	0.0186	0.0225	0.0014	0.0004	0.0011	0.0001	0.0000
42	0.0932	0.0628	0.0470	0.0440	0.0250	0.0178	0.0225	0.0016	0.0004	0.0012	0.0001	0.0000
43	0.0932	0.0628	0.0470	0.0440	0.0250	0.0169	0.0225	0.0017	0.0004	0.0012	0.0001	0.0000
44	0.0932	0.0628	0.0470	0.0440	0.0250	0.0160	0.0225	0.0019	0.0004	0.0013	0.0001	0.0000
45	0.0932	0.0628	0.0470	0.0440	0.0250	0.0138	0.0210	0.0020	0.0005	0.0015	0.0001	0.0000
46	0.0932	0.0628	0.0470	0.0440	0.0250	0.0129	0.0210	0.0023	0.0005	0.0016	0.0001	0.0000
47	0.0932	0.0628	0.0470	0.0440	0.0250	0.0120	0.0210	0.0027	0.0006	0.0017	0.0001	0.0000
48	0.0932	0.0628	0.0470	0.0440	0.0250	0.0120	0.0210	0.0028	0.0006	0.0019	0.0001	0.0000
49	0.0932	0.0628	0.0470	0.0440	0.0250	0.0120	0.0210	0.0029	0.0007	0.0020	0.0001	0.0000
50	0.0932	0.0628	0.0470	0.0440	0.0250	0.0105	0.0200	0.0032	0.0008	0.0023	0.0001	0.0178
51	0.0932	0.0628	0.0470	0.0440	0.0250	0.0100	0.0200	0.0032	0.0009	0.0025	0.0001	0.0194
52	0.0932	0.0628	0.0470	0.0440	0.0250	0.0095	0.0200	0.0034	0.0010	0.0028	0.0001	0.0172
53	0.0932	0.0628	0.0470	0.0440	0.0250	0.0090	0.0200	0.0035	0.0011	0.0031	0.0001	0.0125
54	0.0932	0.0628	0.0470	0.0440	0.0250	0.0085	0.0200	0.0037	0.0012	0.0035	0.0001	0.0127
55	0.0932	0.0628	0.0470	0.0440	0.0250	0.0080	0.0200	0.0039	0.0012	0.0039	0.0001	0.0614
56	0.0932	0.0628	0.0470	0.0440	0.0250	0.0075	0.0200	0.0041	0.0013	0.0043	0.0001	0.0577
57	0.0932	0.0628	0.0470	0.0440	0.0250	0.0070	0.0200	0.0043	0.0015	0.0048	0.0001	0.0487
58	0.0932	0.0628	0.0470	0.0440	0.0250	0.0065	0.0200	0.0046	0.0017	0.0053	0.0001	0.0613
59	0.0932	0.0628	0.0470	0.0440	0.0250	0.0060	0.0200	0.0047	0.0018	0.0060	0.0001	0.0747
60	0.0932	0.0628	0.0470	0.0440	0.0250	0.0055	0.0200	0.0049	0.0021	0.0068	0.0001	0.1042
61	0.0932	0.0628	0.0470	0.0440	0.0250	0.0050	0.0200	0.0049	0.0023	0.0076	0.0001	0.1762
62	0.0932	0.0628	0.0470	0.0440	0.0250	0.0050	0.0200	0.0049	0.0026	0.0086	0.0001	0.2325
63	0.0932	0.0628	0.0470	0.0440	0.0250	0.0045	0.0200	0.0049	0.0029	0.0097	0.0001	0.1977
64	0.0932	0.0628	0.0470	0.0440	0.0250	0.0045	0.0200	0.0049	0.0031	0.0109	0.0001	0.1744
65	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0200	0.0049	0.0034	0.0123	0.0001	0.6474
66	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0200	0.0049	0.0036	0.0139	0.0001	0.5914
67	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0200	0.0049	0.0039	0.0156	0.0001	0.5354
68	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0200	0.0049	0.0042	0.0175	0.0001	0.6119
69	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0200	0.0049	0.0045	0.0194	0.0001	0.7648
70	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000

PROBABILITIES OF SEPARATION PRIOR TO RETIREMENT  
General Female Members - Tiers 2 & 3

Age	With(0<Svc<1)	With(1<Svc<2)	With(2<Svc<3)	With(3<Svc<4)	With(4<Svc<5)	With(Svc>5)	Vested Term	Ord. Disab	Duty Disab	Ord. Dth	Duty Dth	Svc Ret
<= 20	0.1050	0.0850	0.0538	0.1000	0.0350	0.1500	0.1400	0.0000	0.0000	0.0003	0.0000	0.0000
21	0.1050	0.0850	0.0538	0.1000	0.0350	0.1368	0.1300	0.0000	0.0000	0.0003	0.0000	0.0000
22	0.1050	0.0850	0.0538	0.1000	0.0350	0.1236	0.1200	0.0000	0.0000	0.0003	0.0000	0.0000
23	0.1050	0.0850	0.0538	0.1000	0.0350	0.1145	0.1036	0.0000	0.0000	0.0003	0.0000	0.0000
24	0.1050	0.0850	0.0538	0.1000	0.0350	0.1045	0.0872	0.0000	0.0000	0.0003	0.0000	0.0000
25	0.1050	0.0850	0.0538	0.0750	0.0350	0.0934	0.0707	0.0001	0.0001	0.0003	0.0000	0.0000
26	0.1050	0.0850	0.0538	0.0750	0.0350	0.0897	0.0543	0.0001	0.0001	0.0003	0.0000	0.0000
27	0.1050	0.0850	0.0538	0.0750	0.0350	0.0856	0.0379	0.0001	0.0001	0.0003	0.0000	0.0000
28	0.1050	0.0850	0.0538	0.0750	0.0350	0.0720	0.0355	0.0001	0.0001	0.0003	0.0000	0.0000
29	0.1050	0.0850	0.0538	0.0750	0.0350	0.0596	0.0331	0.0001	0.0001	0.0004	0.0000	0.0000
30	0.1050	0.0850	0.0538	0.0600	0.0350	0.0484	0.0307	0.0002	0.0001	0.0004	0.0000	0.0000
31	0.1050	0.0850	0.0538	0.0600	0.0350	0.0383	0.0283	0.0002	0.0001	0.0004	0.0000	0.0000
32	0.1050	0.0850	0.0538	0.0600	0.0350	0.0294	0.0259	0.0002	0.0001	0.0004	0.0000	0.0000
33	0.1050	0.0850	0.0538	0.0600	0.0350	0.0286	0.0262	0.0003	0.0001	0.0005	0.0000	0.0000
34	0.1050	0.0850	0.0538	0.0600	0.0350	0.0267	0.0260	0.0003	0.0001	0.0005	0.0000	0.0000
35	0.1050	0.0850	0.0538	0.0500	0.0350	0.0237	0.0260	0.0003	0.0002	0.0005	0.0000	0.0000
36	0.1050	0.0850	0.0538	0.0500	0.0350	0.0245	0.0260	0.0005	0.0002	0.0006	0.0000	0.0000
37	0.1050	0.0850	0.0538	0.0500	0.0350	0.0239	0.0260	0.0007	0.0002	0.0006	0.0000	0.0000
38	0.1050	0.0850	0.0538	0.0500	0.0350	0.0240	0.0260	0.0007	0.0002	0.0006	0.0000	0.0000
39	0.1050	0.0850	0.0538	0.0500	0.0350	0.0240	0.0260	0.0008	0.0002	0.0007	0.0000	0.0000
40	0.1050	0.0850	0.0538	0.0450	0.0350	0.0220	0.0220	0.0008	0.0001	0.0008	0.0000	0.0000
41	0.1050	0.0850	0.0538	0.0450	0.0350	0.0220	0.0220	0.0009	0.0001	0.0008	0.0000	0.0000
42	0.1050	0.0850	0.0538	0.0450	0.0350	0.0216	0.0220	0.0009	0.0002	0.0009	0.0000	0.0000
43	0.1050	0.0850	0.0538	0.0450	0.0350	0.0191	0.0220	0.0010	0.0002	0.0009	0.0000	0.0000
44	0.1050	0.0850	0.0538	0.0450	0.0350	0.0165	0.0220	0.0010	0.0003	0.0010	0.0000	0.0000
45	0.1050	0.0850	0.0538	0.0350	0.0350	0.0139	0.0160	0.0011	0.0001	0.0010	0.0000	0.0000
46	0.1050	0.0850	0.0538	0.0350	0.0350	0.0114	0.0160	0.0011	0.0002	0.0011	0.0000	0.0000
47	0.1050	0.0850	0.0538	0.0350	0.0350	0.0088	0.0160	0.0011	0.0002	0.0012	0.0000	0.0000
48	0.1050	0.0850	0.0538	0.0350	0.0350	0.0082	0.0160	0.0014	0.0002	0.0013	0.0000	0.0000
49	0.1050	0.0850	0.0538	0.0350	0.0350	0.0076	0.0160	0.0017	0.0003	0.0014	0.0000	0.0000
50	0.1050	0.0850	0.0538	0.0300	0.0350	0.0070	0.0150	0.0020	0.0006	0.0015	0.0000	0.0458
51	0.1050	0.0850	0.0538	0.0300	0.0350	0.0066	0.0150	0.0023	0.0009	0.0017	0.0000	0.0296
52	0.1050	0.0850	0.0538	0.0300	0.0350	0.0066	0.0150	0.0026	0.0012	0.0019	0.0000	0.0227
53	0.1050	0.0850	0.0538	0.0300	0.0350	0.0066	0.0150	0.0031	0.0015	0.0021	0.0000	0.0256
54	0.1050	0.0850	0.0538	0.0300	0.0350	0.0066	0.0150	0.0036	0.0018	0.0022	0.0000	0.0286
55	0.1050	0.0850	0.0538	0.0150	0.0350	0.0066	0.0150	0.0041	0.0021	0.0025	0.0000	0.0535
56	0.1050	0.0850	0.0538	0.0150	0.0350	0.0066	0.0150	0.0048	0.0022	0.0028	0.0000	0.0747
57	0.1050	0.0850	0.0538	0.0150	0.0350	0.0061	0.0150	0.0055	0.0023	0.0031	0.0000	0.0896
58	0.1050	0.0850	0.0538	0.0150	0.0350	0.0059	0.0150	0.0058	0.0023	0.0036	0.0000	0.1033
59	0.1050	0.0850	0.0538	0.0150	0.0350	0.0059	0.0150	0.0062	0.0023	0.0042	0.0000	0.1349
60	0.1050	0.0850	0.0538	0.0100	0.0350	0.0048	0.0102	0.0066	0.0023	0.0048	0.0000	0.1232
61	0.1050	0.0850	0.0538	0.0100	0.0350	0.0046	0.0102	0.0069	0.0024	0.0055	0.0000	0.2041
62	0.1050	0.0850	0.0538	0.0100	0.0350	0.0042	0.0102	0.0074	0.0024	0.0063	0.0000	0.4000
63	0.1050	0.0850	0.0538	0.0100	0.0350	0.0038	0.0102	0.0083	0.0025	0.0072	0.0000	0.3130
64	0.1050	0.0850	0.0538	0.0100	0.0350	0.0032	0.0102	0.0093	0.0025	0.0082	0.0000	0.3281
65	0.1050	0.0850	0.0538	0.0000	0.0350	0.0000	0.0000	0.0104	0.0026	0.0093	0.0000	0.7500
66	0.1050	0.0850	0.0538	0.0000	0.0350	0.0000	0.0000	0.0115	0.0026	0.0104	0.0000	0.4986
67	0.1050	0.0850	0.0538	0.0000	0.0350	0.0000	0.0000	0.0127	0.0026	0.0116	0.0000	0.6061
68	0.1050	0.0850	0.0538	0.0000	0.0350	0.0000	0.0000	0.0133	0.0026	0.0126	0.0000	0.6927
69	0.1050	0.0850	0.0538	0.0000	0.0350	0.0000	0.0000	0.0139	0.0026	0.0137	0.0000	0.8659
70	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000



PROBABILITIES OF SEPARATION PRIOR TO RETIREMENT  
Safety Members

Age	With(0<Svc<1)	With(1<Svc<2)	With(2<Svc<3)	With(3<Svc<4)	With(4<Svc<5)	With(Svc>5)	Vested Term	Ord. Disab	Duty Disab	Ord. Dth	Duty Dth	Svc Ret
<= 20	0.0600	0.0250	0.0200	0.0200	0.0100	0.0070	0.0500	0.0000	0.0005	0.0005	0.0002	0.0000
21	0.0600	0.0250	0.0200	0.0200	0.0100	0.0070	0.0500	0.0000	0.0006	0.0006	0.0002	0.0000
22	0.0600	0.0250	0.0200	0.0200	0.0100	0.0070	0.0500	0.0000	0.0007	0.0006	0.0002	0.0000
23	0.0600	0.0250	0.0200	0.0200	0.0100	0.0070	0.0500	0.0000	0.0007	0.0006	0.0002	0.0000
24	0.0600	0.0250	0.0200	0.0200	0.0100	0.0070	0.0500	0.0000	0.0007	0.0007	0.0002	0.0000
25	0.0600	0.0250	0.0200	0.0200	0.0100	0.0070	0.0500	0.0002	0.0009	0.0007	0.0002	0.0000
26	0.0600	0.0250	0.0200	0.0200	0.0100	0.0070	0.0500	0.0002	0.0011	0.0007	0.0002	0.0000
27	0.0600	0.0250	0.0200	0.0200	0.0100	0.0068	0.0142	0.0003	0.0012	0.0008	0.0002	0.0000
28	0.0600	0.0250	0.0200	0.0200	0.0100	0.0065	0.0139	0.0003	0.0015	0.0008	0.0002	0.0000
29	0.0600	0.0250	0.0200	0.0200	0.0100	0.0063	0.0136	0.0004	0.0018	0.0008	0.0002	0.0000
30	0.0600	0.0250	0.0200	0.0200	0.0100	0.0060	0.0132	0.0004	0.0018	0.0009	0.0002	0.0000
31	0.0600	0.0250	0.0200	0.0200	0.0100	0.0060	0.0129	0.0005	0.0022	0.0009	0.0002	0.0000
32	0.0600	0.0250	0.0200	0.0200	0.0100	0.0060	0.0126	0.0005	0.0026	0.0009	0.0002	0.0000
33	0.0600	0.0250	0.0200	0.0200	0.0100	0.0060	0.0115	0.0006	0.0028	0.0009	0.0002	0.0000
34	0.0600	0.0250	0.0200	0.0200	0.0100	0.0060	0.0104	0.0006	0.0031	0.0009	0.0002	0.0000
35	0.0600	0.0250	0.0200	0.0200	0.0100	0.0055	0.0096	0.0007	0.0035	0.0009	0.0002	0.0000
36	0.0600	0.0250	0.0200	0.0200	0.0100	0.0055	0.0089	0.0008	0.0039	0.0009	0.0002	0.0000
37	0.0600	0.0250	0.0200	0.0200	0.0100	0.0055	0.0081	0.0009	0.0045	0.0010	0.0002	0.0000
38	0.0600	0.0250	0.0200	0.0200	0.0100	0.0055	0.0074	0.0010	0.0046	0.0010	0.0002	0.0000
39	0.0600	0.0250	0.0200	0.0200	0.0100	0.0055	0.0066	0.0011	0.0046	0.0011	0.0002	0.0000
40	0.0600	0.0250	0.0200	0.0200	0.0100	0.0050	0.0066	0.0012	0.0046	0.0012	0.0002	0.0000
41	0.0600	0.0250	0.0200	0.0200	0.0100	0.0050	0.0066	0.0013	0.0046	0.0012	0.0002	0.0000
42	0.0600	0.0250	0.0200	0.0200	0.0100	0.0050	0.0066	0.0014	0.0047	0.0013	0.0002	0.0000
43	0.0600	0.0250	0.0200	0.0200	0.0100	0.0050	0.0066	0.0015	0.0049	0.0015	0.0002	0.0000
44	0.0600	0.0250	0.0200	0.0200	0.0100	0.0050	0.0066	0.0017	0.0052	0.0016	0.0002	0.0000
45	0.0600	0.0000	0.0000	0.0000	0.0000	0.0050	0.0046	0.0019	0.0068	0.0017	0.0003	0.0020
46	0.0600	0.0000	0.0000	0.0000	0.0000	0.0050	0.0046	0.0021	0.0077	0.0019	0.0003	0.0040
47	0.0600	0.0000	0.0000	0.0000	0.0000	0.0050	0.0046	0.0023	0.0087	0.0020	0.0003	0.0075
48	0.0600	0.0000	0.0000	0.0000	0.0000	0.0050	0.0046	0.0025	0.0095	0.0023	0.0003	0.0146
49	0.0600	0.0000	0.0000	0.0000	0.0000	0.0050	0.0046	0.0028	0.0100	0.0025	0.0003	0.0283
50	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0025	0.0028	0.0100	0.0028	0.0003	0.0509
51	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0025	0.0031	0.0100	0.0031	0.0003	0.0493
52	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0025	0.0033	0.0100	0.0035	0.0003	0.0521
53	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0025	0.0037	0.0100	0.0039	0.0003	0.0638
54	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0025	0.0040	0.0100	0.0043	0.0003	0.0624
55	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0025	0.0043	0.0100	0.0048	0.0004	0.3255
56	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0025	0.0047	0.0100	0.0053	0.0004	0.3315
57	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0025	0.0051	0.0100	0.0060	0.0004	0.2332
58	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0025	0.0054	0.0100	0.0068	0.0004	0.2060
59	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0025	0.0058	0.0100	0.0076	0.0004	0.2176
60	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000
61	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000
62	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000
63	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000
64	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000
65	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000
66	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000
67	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000
68	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000
69	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000
70	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000

**Ratio of Current Compensation to Compensation  
Anticipated At Retirement Age**

Age	General	Safety
20	0.041	0.085
21	0.046	0.093
22	0.051	0.103
23	0.057	0.112
24	0.063	0.123
25	0.069	0.134
26	0.076	0.146
27	0.083	0.159
28	0.089	0.173
29	0.097	0.187
30	0.104	0.202
31	0.112	0.217
32	0.120	0.233
33	0.129	0.249
34	0.138	0.265
35	0.147	0.282
36	0.157	0.300
37	0.167	0.317
38	0.178	0.336
39	0.190	0.355
40	0.202	0.375
41	0.215	0.396
42	0.229	0.417
43	0.243	0.440
44	0.258	0.464
45	0.274	0.489
46	0.290	0.515
47	0.308	0.542
48	0.326	0.571
49	0.345	0.601
50	0.365	0.632
51	0.386	0.665
52	0.408	0.700
53	0.430	0.737
54	0.454	0.776
55	0.478	0.816
56	0.504	0.859
57	0.530	0.904
58	0.557	0.952
59	0.586	1.000
60	0.616	
61	0.647	
62	0.680	
63	0.715	
64	0.750	
65	0.788	
66	0.827	
67	0.869	
68	0.912	
69	0.955	
70	1.000	

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YEARS OF LIFE EXPECTANCY AFTER SERVICE RETIREMENT

Age	General		Safety		Age	General		Safety	
	Male	Female	Male	Female		Male	Female	Male	Female
50	31.87	34.24	30.01	34.24	81	8.46	9.30	7.51	9.30
51	30.94	33.29	29.09	33.29	82	7.97	8.74	7.07	8.74
52	30.01	32.34	28.18	32.34	83	7.51	8.20	6.65	8.20
53	29.09	31.40	27.28	31.40	84	7.07	7.68	6.24	7.68
54	28.18	30.47	26.38	30.47	85	6.65	7.18	5.86	7.18
55	27.28	29.53	25.49	29.53	86	6.24	6.71	5.48	6.71
56	26.38	28.61	24.61	28.61	87	5.86	6.25	5.12	6.25
57	25.49	27.68	23.74	27.68	88	5.48	5.83	4.78	5.83
58	24.61	26.77	22.88	26.77	89	5.12	5.42	4.45	5.42
59	23.74	25.86	22.04	25.86	90	4.78	5.05	4.15	5.05
60	22.88	24.97	21.20	24.97	91	4.45	4.70	3.87	4.70
61	22.04	24.09	20.38	24.09	92	4.15	4.37	3.61	4.37
62	21.20	23.22	19.57	23.22	93	3.87	4.07	3.37	4.07
63	20.38	22.36	18.78	22.36	94	3.61	3.79	3.15	3.79
64	19.57	21.52	18.01	21.52	95	3.37	3.53	2.95	3.53
65	18.78	20.69	17.26	20.69	96	3.15	3.28	2.77	3.28
66	18.01	19.88	6.53	19.88	97	2.95	3.06	2.61	3.06
67	17.26	19.09	15.81	19.09	98	2.77	2.85	2.46	2.85
68	6.53	18.30	15.11	18.30	99	2.61	2.65	2.33	2.65
69	15.81	17.53	14.43	17.53	100	2.46	2.48	2.21	2.48
70	15.11	16.77	13.77	16.77	101	2.33	2.31	2.09	2.31
71	14.43	16.01	13.11	16.01	102	2.21	2.16	1.98	2.16
72	13.77	15.26	12.48	15.26	103	2.09	2.02	1.87	2.02
73	13.11	14.53	11.85	14.53	104	1.98	1.89	1.77	1.89
74	12.48	13.81	11.25	13.81	105	1.87	1.78	1.68	1.78
75	11.85	13.11	10.66	13.11	106	1.77	1.69	1.62	1.69
76	11.25	12.43	10.08	12.43	107	1.68	1.62	1.57	1.62
77	10.66	11.76	9.52	11.76	108	1.62	1.56	1.53	1.56
78	10.08	11.11	8.98	11.11	109	1.57	1.51	1.50	1.51
79	9.52	10.49	8.46	10.49	110	1.53	1.48	1.47	1.48
80	8.98	9.88	7.97	9.88					

	Male	Female
General	1994 GAM Male -2	1994 GAM Female
	Member	Beneficiary
Safety	1994 GAM Male	1994 GAM Female

**YEARS OF LIFE EXPECTANCY AFTER DISABILITY RETIREMENT  
General Members**

Age	Male & Female	Age	Male & Female	Age	Male & Female
20	38.73	50	21.08	80	7.00
21	37.98	51	20.59	81	6.63
22	37.26	52	20.11	82	6.27
23	36.56	53	19.63	83	5.94
24	35.87	54	19.16	84	5.63
25	35.19	55	18.68	85	5.34
26	34.53	56	18.21	86	5.06
27	33.87	57	17.75	87	4.80
28	33.23	58	17.29	88	4.55
29	32.60	59	16.83	89	4.31
30	31.98	60	16.37	90	4.09
31	31.37	61	15.91	91	3.87
32	30.76	62	15.45	92	3.66
33	30.17	63	14.99	93	3.46
34	29.58	64	14.53	94	3.26
35	29.00	65	14.07	95	3.07
36	28.43	66	13.60	96	2.89
37	27.87	67	13.13	97	2.71
38	27.31	68	12.66	98	2.54
39	26.76	69	12.18	99	2.37
40	26.21	70	11.70	100	2.20
41	25.67	71	11.21	101	2.04
42	25.14	72	10.72	102	1.88
43	24.61	73	10.22	103	1.72
44	24.09	74	9.73	104	1.55
45	23.57	75	9.24	105	1.38
46	23.06	76	8.76	106	1.21
47	22.56	77	8.28	107	1.04
48	22.06	78	7.83	108	0.88
49	21.57	79	7.41	109	0.71
				110	0.50

1981 Disability Table (General)

**YEARS OF LIFE EXPECTANCY AFTER DISABILITY RETIREMENT**  
**Safety Members**

Age	Male & Female	Age	Male & Female	Age	Male & Female
20	50.19	50	24.38	80	7.41
21	49.29	51	23.59	81	7.00
22	48.39	52	22.80	82	6.63
23	47.48	53	22.03	83	6.27
24	46.58	54	21.26	84	5.94
25	45.68	55	20.50	85	5.63
26	44.79	56	19.77	86	5.34
27	43.89	57	19.06	87	5.06
28	43.01	58	18.40	88	4.80
29	42.12	59	17.78	89	4.55
30	41.24	60	17.20	90	4.31
31	40.36	61	16.64	91	4.09
32	39.48	62	16.11	92	3.87
33	38.61	63	15.59	93	3.66
34	37.74	64	15.08	94	3.46
35	36.88	65	14.58	95	3.26
36	36.02	66	14.09	96	3.07
37	35.16	67	13.61	97	2.89
38	34.31	68	13.13	98	2.71
39	33.45	69	12.66	99	2.54
40	32.61	70	12.18	100	2.37
41	31.77	71	11.70	101	2.20
42	30.93	72	11.21	102	2.04
43	30.09	73	10.72	103	1.88
44	29.26	74	10.22	104	1.72
45	28.43	75	9.73	105	1.55
46	27.61	76	9.24	106	1.38
47	26.80	77	8.76	107	1.21
48	25.98	78	8.28	108	1.04
49	25.18	79	7.83	109	0.88
				110	0.71

1981 Disability Table (Safety) - 1

## C. Summary of Membership and Benefit Statistics

### SACRAMENTO COUNTY EMPLOYEES RETIREMENT SYSTEM ACTIVE GENERAL TIER 1 MEMBERS

Age Group	YEARS OF SERVICE									TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0-19										0
20-24										0
25-29										0
30-34										0
35-39				4	4					8
				49,346	40,306					44,826
40-44			2	20	61	5				88
			32,497	42,807	51,399	42,805				48,528
45-49		4	8	33	181	60	3			289
		49,227	47,783	47,934	58,007	51,643	52,081			55,069
50-54		4	7	47	212	179	62	3		514
		33,930	45,651	58,603	63,787	61,950	60,416	49,791		61,706
55-59	4	4	6	23	78	99	128	35		377
	42,899	56,513	60,218	50,493	53,238	61,445	63,250	59,696		59,261
60-64			3	4	32	31	20	9	5	104
			47,078	53,594	48,708	55,977	61,563	48,607	52,822	53,677
65-69				1	8	5	2	2		18
				76,572	57,141	51,928	53,854	52,196		55,858
70-74						2				2
						44,582				44,582
75+					1		1			2
					41,350		62,483			51,916
Total	4	12	26	132	577	381	216	49	5	1,402
	42,899	46,557	48,821	51,833	58,108	59,236	62,035	56,747	52,822	58,048

Total Salary \$81,382,876  
Average Age 52.64  
Average Service 24.57

SACRAMENTO COUNTY EMPLOYEES RETIREMENT SYSTEM  
ACTIVE GENERAL TIER 2 & 3 MEMBERS

Age Group	YEARS OF SERVICE									TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0-19	20									20
	25,534									25,534
20-24	329									329
	28,316									28,316
25-29	698	40	3							741
	34,199	42,549	47,491							34,704
30-34	778	244	105	2						1,129
	38,540	45,303	45,036	56,473						40,638
35-39	668	381	342	56						1,447
	40,352	48,860	47,839	47,223						44,627
40-44	669	381	457	195	3					1,705
	37,490	49,313	53,875	55,609	46,635					46,612
45-49	559	338	409	203	4					1,513
	41,397	48,966	51,616	56,234	65,494					47,904
50-54	476	274	385	200	10					1,345
	39,798	50,584	53,982	56,176	60,656					48,646
55-59	250	145	193	117	4	1	1			711
	42,557	49,469	49,466	51,654	55,257	31,772	53,606			47,410
60-64	96	79	110	60	2			1		348
	39,764	43,595	47,304	50,906	42,577			47,301		44,976
65-69	23	18	20	5	2		1			69
	51,760	50,086	47,182	43,747	64,875		46,930			49,725
70-74	7	4	4	1						16
	29,610	39,927	40,814	37,657						35,494
75+	1	1	2	2						6
	13,129	57,696	76,865	31,481						47,920
Total	4,574	1,905	2,030	841	25	1	2	1	0	9,379
	37,969	48,455	51,112	54,303	57,775	31,772	50,268	47,301	0	44,464

Total Salary     \$417,026,460  
Average Age         42.46  
Average Service     6.08

SACRAMENTO COUNTY EMPLOYEES RETIREMENT SYSTEM  
ACTIVE SAFETY TIER 1 MEMBERS

Age Group	YEARS OF SERVICE									TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0-19										0
20-24	1									1
	35,746									35,746
25-29	7	18								25
	43,312	62,160								56,882
30-34	8	65	59							132
	44,920	62,521	64,309							62,253
35-39	10	61	166	34	1					272
	58,128	60,644	65,832	72,473	62,078					65,201
40-44	11	22	88	103	23					247
	52,411	64,553	64,692	70,195	76,967					67,570
45-49	5	12	37	52	88	13				207
	57,711	68,288	63,317	67,556	77,160	86,672				71,886
50-54	2	6	15	25	46	98	21			213
	71,024	65,541	64,404	64,121	69,424	73,394	79,373			71,161
55-59	2	1	10	3	8	24	10			58
	73,596	102,586	87,694	42,171	72,607	75,263	93,142			78,824
60-64		1	3	1		3	1			9
		80,761	61,287	70,096		69,641	102,685			71,814
65-69			2	1						3
			59,484	46,109						55,026
70-74										0
75+				1						1
				66,099						66,099
Total	46	186	380	220	166	138	32	0	0	1,168
	52,911	62,894	65,536	68,722	74,679	74,888	84,404	0	0	68,140

Total Salary   \$79,587,006  
Average Age       43.15  
Average Service   15.35



SACRAMENTO COUNTY EMPLOYEES RETIREMENT SYSTEM  
ACTIVE SAFETY TIER 2 MEMBERS

Age Group	YEARS OF SERVICE									TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0-19										0
20-24	66									66
	47,109									47,109
25-29	286	24								310
	49,444	58,761								50,165
30-34	207	66	4							277
	51,886	57,237	53,164							53,179
35-39	80	38	46	3						167
	51,366	56,998	60,830	67,188						55,538
40-44	31	14	15	16	1					77
	47,672	58,314	58,016	64,538	48,103					55,132
45-49	14	7	9	12	13	1				56
	45,632	54,280	63,512	61,919	62,529	64,834				57,342
50-54	7	3	3	10	15	12	6			56
	50,746	68,170	51,654	56,416	59,468	63,919	74,531			60,448
55-59	3	1	1	2	5	8	9	1		30
	68,833	61,888	76,275	95,336	64,803	63,131	77,627	67,827		71,029
60-64	1						1	1		3
	69,761						71,890	114,092		85,248
65-69										0
70-74										0
75+										0
Total	695	153	78	43	34	21	16	2	0	1,042
	50,141	57,625	60,050	63,536	61,089	63,662	76,107	90,960	0	54,513

Total Salary \$56,802,864  
Average Age 34.16  
Average Service 5.45

ANNUAL BENEFIT AND MEMBERSHIP DISTRIBUTION OF  
RETIRED GENERAL MEMBERS AND BENEFICIARIES

Age Group	YEARS SINCE RETIREMENT									TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0-19	3	3	1							7
	8,301	3,678	2,205							5,449
20-24		1	1	1						3
		12,892	4,719	3,759						7,123
25-29		2	2	1						5
		6,977	4,961	3,759						5,527
30-34	3		1	2						6
	10,622		7,706	9,355						9,714
35-39	9	1		1	1					12
	5,465	3,040		3,853	3,679					4,980
40-44	9	10	5		1					25
	12,167	11,661	8,539		5,096					10,956
45-49	16	16	9	1	2					44
	11,548	10,326	10,084	6,407	10,670					10,647
50-54	175	37	19	6	2					239
	11,209	11,681	12,713	8,361	4,149					11,272
55-59	266	195	30	12	12	2	1			518
	14,548	12,053	9,802	15,754	9,846	10,898	7,737			13,225
60-64	318	234	137	19	6	6	1	1		722
	19,600	16,162	11,647	9,294	8,507	8,038	7,395	7,935		16,484
65-69	239	329	182	75	24	11	5	2		867
	18,665	21,266	13,844	9,197	12,467	11,188	10,545	6,659		17,480
70-74	53	197	257	152	58	18	2			737
	14,360	21,412	17,654	9,700	9,595	8,026	12,098			15,897
75-79	14	32	190	258	152	30	4	2	1	683
	19,956	15,417	16,285	14,490	11,231	7,883	12,705	6,892	8,468	14,088
80-84	3	9	29	156	177	80	3		1	458
	20,567	18,899	12,983	15,181	11,722	7,308	14,372		10,169	12,422
85-89	1	2	2	20	84	84	14	4	1	212
	16,670	11,775	12,475	16,513	12,130	8,885	7,071	6,572	6,388	10,813
90+					13	44	14	6	1	78
					8,798	9,096	7,098	5,427	7,966	8,391
Total	1,109	1,068	865	704	532	275	44	15	4	4,616
	16,270	17,593	14,846	12,860	11,238	8,383	8,735	6,259	8,248	14,628

Total Retired Benefit \$67,522,829

Average Age 68.88

Average Years Retired 11.43

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ANNUAL BENEFIT AND MEMBERSHIP DISTRIBUTION OF  
RETIRED SAFETY MEMBERS AND BENEFICIARIES

Age Group	YEARS SINCE RETIREMENT									TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0-19										0
20-24										0
25-29										0
30-34	1 34,512	2 9,743								3 17,999
35-39	7 19,701	4 13,913								11 17,596
40-44	9 27,978	2 28,564	2 28,957	2 13,767						15 26,292
45-49	20 26,265	9 19,138	4 15,848	3 28,311						36 23,497
50-54	58 32,657	14 16,809	13 24,050	9 16,443	3 13,376					97 27,115
55-59	156 42,409	42 27,018	10 24,681	12 27,145	3 18,597					223 37,573
60-64	55 38,940	111 50,286	36 30,003	20 23,912	8 21,556	3 10,926				233 40,717
65-69	14 34,768	28 41,006	53 40,867	33 33,036	8 27,370	2 12,205				138 37,205
70-74	4 22,979	5 51,352	14 30,385	25 38,381	26 19,229	6 15,016				80 29,045
75-79		2 8,709	4 20,484	5 41,528	25 23,897	11 17,929	1 8,447			48 23,127
80-84			1 27,726	2 19,891	5 20,524	4 18,223	4 18,520			16 19,819
85-89						7 20,816				7 20,816
90+							3 20,644			3 20,644
Total	324 37,592	219 39,629	137 32,568	111 30,284	78 21,632	33 17,064	8 18,057	0 0	0 0	910 34,150
Total Retired Benefit						\$31,076,805				
Average Age						61.49				
Average Years Retired						9.47				

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## Summary of Active Membership

<b>Active General Members</b>			
	<u>June 30, 2001</u>	<u>June 30, 2000</u>	<u>Percent Change</u>
<b>General Plan 1</b>			
A. Number	1,402	1,493	-6.1%
B. Average Age	52.64	51.89	1.4%
C. Average Years of Service	24.57	23.72	3.6%
D. Annual Salary			
i. Total	\$ 81,383,000	\$ 80,064,000	1.6%
ii. Average Salary	\$ 58,048	\$ 53,626	8.2%
<b>General Plan 2</b>			
A. Number	457	505	-9.5%
B. Average Age	45.61	44.69	2.1%
C. Average Years of Service	11.39	10.27	10.9%
D. Annual Salary			
i. Total	\$ 22,158,000	\$ 22,952,000	-3.5%
ii. Average Salary	\$ 48,486	\$ 45,450	6.7%
<b>General Plan 3</b>			
A. Number	8,922	8,219	8.6%
B. Average Age	42.30	42.14	0.4%
C. Average Years of Service	5.81	5.77	0.7%
D. Annual Salary			
i. Total	\$ 394,867,000	\$ 338,102,000	16.8%
ii. Average Salary	\$ 44,258	\$ 41,137	7.6%
<b>General Total</b>			
A. Number	10,781	10,217	5.5%
B. Average Age	43.78	43.69	0.2%
C. Average Years of Service	8.49	8.62	-1.5%
D. Annual Salary			
i. Total	\$ 498,408,000	\$ 441,118,000	13.0%
ii. Average Salary	\$ 46,230	\$ 43,175	7.1%

<b>Active Safety Members</b>			
	<u>June 30, 2001</u>	<u>June 30, 2000</u>	<u>Percent Change</u>
<b>Safety Plan 1</b>			
A. Number	1,168	1,162	0.5%
B. Average Age	43.15	42.38	1.8%
C. Average Years of Service	15.35	14.75	4.1%
D. Annual Salary			
i. Total	\$ 79,587,000	\$ 75,590,000	5.3%
ii. Average Salary	\$ 68,140	\$ 65,052	4.7%
<b>Safety Plan 2</b>			
A. Number	1,042	856	21.7%
B. Average Age	34.16	34.14	0.1%
C. Average Years of Service	5.45	5.37	1.5%
D. Annual Salary			
i. Total	\$ 56,803,000	\$ 42,340,000	34.2%
ii. Average Salary	\$ 54,513	\$ 49,463	10.2%
<b>Safety Total</b>			
A. Number	2,210	2,018	9.5%
B. Average Age	38.91	38.88	0.1%
C. Average Years of Service	10.68	10.77	-0.8%
D. Annual Salary			
i. Total	\$ 136,390,000	\$ 117,930,000	15.7%
ii. Average Salary	\$ 61,715	\$ 58,439	5.6%

**Summary of Retired and Inactive Vested Membership**

	June 30, 2001	June 30, 2000	Percent Change
<b>Retired Members</b>			
A. Service Retirement			
i. Number	3,975	3,937	1.0%
ii. Annual Allowance			
Basic Only	\$ 58,159,452	\$ 56,229,664	3.4%
COLA	18,925,765	16,849,994	12.3%
Total	\$ 77,085,216	\$ 73,079,657	5.5%
Average Monthly Amount	\$ 1,616	\$ 1,547	4.5%
B. Disability Retirement			
i. Number	651	675	-3.6%
ii. Annual Allowance			
Basic Only	\$ 8,424,180	\$ 8,387,187	0.4%
COLA	3,720,504	3,505,395	6.1%
Total	\$ 12,144,684	\$ 11,892,582	2.1%
Average Monthly Amount	\$ 1,555	\$ 1,468	5.9%
C. Beneficiaries			
i. Number	900	876	2.7%
ii. Annual Allowance			
Basic Only	\$ 6,038,508	\$ 5,599,196	7.8%
COLA	3,331,235	3,049,039	9.3%
Total	\$ 9,369,744	\$ 8,648,236	8.3%
Average Monthly Amount	\$ 868	\$ 823	5.5%
Total			
i. Number	5,526	5,488	0.7%
ii. Annual Allowance			
Basic Only	\$ 72,622,140	\$ 70,216,047	3.4%
COLA	\$ 25,977,504	\$ 23,404,428	11.0%
Total	\$ 98,599,644	\$ 93,620,475	5.3%
Average Monthly Amount	\$ 1,487	\$ 1,422	4.6%
<b>Inactive Vested Members</b>			
A. Number	2,146	1,828	17.4%

Note: Effective June 30, 2001, we have only counted those members with a non-zero benefit.

**Summary of Monthly Allowances being Paid  
as of June 30, 2001**

**General Members**

	Count	Monthly Allowance		
		Basic	COLA	Total
<b>Service Retirement</b>				
Unmodified	2,942	2,952,472	1,073,932	4,026,404
Option 1	225	196,831	57,332	254,163
Options 2, 3 & 4	227	179,857	43,889	223,746
<b>Total</b>	<b>3,394</b>	<b>3,329,160</b>	<b>1,175,153</b>	<b>4,504,313</b>
<b>Ordinary Disability</b>				
Unmodified	279	189,996	86,060	276,056
Option 1	18	9,904	4,268	14,172
Options 2, 3 & 4	8	5,893	1,575	7,468
<b>Total</b>	<b>305</b>	<b>205,793</b>	<b>91,903</b>	<b>297,696</b>
<b>Duty Disability</b>				
Unmodified	161	170,191	84,614	254,805
Option 1	6	7,873	1,876	9,749
Options 2, 3 & 4	5	5,672	1,806	7,478
<b>Total</b>	<b>172</b>	<b>183,736</b>	<b>88,296</b>	<b>272,032</b>
<b>Beneficiary</b>				
<b>Total</b>	<b>745</b>	<b>351,944</b>	<b>200,918</b>	<b>552,862</b>
<b>Total (all groups)</b>	<b>4,616</b>	<b>4,070,633</b>	<b>1,556,270</b>	<b>5,626,903</b>

**Safety Members**

	Count	Monthly Allowance		
		Basic	COLA	Total
<b>Service Retirement</b>				
Unmodified	534	1,403,197	375,198	1,778,395
Option 1	20	45,481	14,203	59,684
Options 2, 3 & 4	27	68,783	12,593	81,376
<b>Total</b>	<b>581</b>	<b>1,517,461</b>	<b>401,994</b>	<b>1,919,455</b>
<b>Ordinary Disability</b>				
Unmodified	22	29,039	13,339	42,378
Option 1	-	-	-	-
Options 2, 3 & 4	1	1,434	294	1,728
<b>Total</b>	<b>23</b>	<b>30,473</b>	<b>13,633</b>	<b>44,106</b>
<b>Duty Disability</b>				
Unmodified	142	266,677	111,957	378,634
Option 1	6	10,284	3,469	13,753
Options 2, 3 & 4	3	5,052	784	5,836
<b>Total</b>	<b>151</b>	<b>282,013</b>	<b>116,210</b>	<b>398,223</b>
<b>Beneficiary</b>				
<b>Total</b>	<b>155</b>	<b>151,265</b>	<b>76,685</b>	<b>227,950</b>
<b>Total (all groups)</b>	<b>910</b>	<b>1,981,212</b>	<b>608,522</b>	<b>2,589,734</b>

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## D. Members' Contribution Rates

### RECOMMENDED GENERAL MEMBERS' CONTRIBUTION RATES

Age	Basic				COL **				Basic and COL			
	First \$350 of Monthly Salary		Salary In Excess of \$350		First \$350 of Monthly Salary		Salary In Excess of \$350		First \$350 of Monthly Salary		Salary In Excess of \$350	
	Tier 1	Tier 2 & 3	Tier 1	Tier 2 & 3	Tier 1	Tier 3	Tier 1	Tier 3	Tier 1	Tier 2 & 3	Tier 1	Tier 2 & 3
20	3.84%		5.77%		0.45%		0.67%		4.29%		6.44%	
21	3.84%		5.76%		0.45%		0.67%		4.29%		6.43%	
22	3.85%		5.77%		0.45%		0.67%		4.30%		6.44%	
23	3.85%		5.78%		0.45%		0.68%		4.30%		6.46%	
24	3.86%		5.79%		0.45%		0.68%		4.31%		6.47%	
25	3.88%		5.81%		0.45%		0.68%		4.33%		6.49%	
26	3.89%		5.84%		0.46%		0.68%		4.35%		6.52%	
27	3.91%		5.87%		0.46%		0.69%		4.37%		6.56%	
28	3.94%		5.91%		0.46%		0.69%		4.40%		6.60%	
29	3.96%		5.94%		0.46%		0.70%		4.42%		6.64%	
30	3.99%		5.99%		0.47%		0.70%		4.46%		6.69%	
31	4.02%		6.03%		0.47%		0.71%		4.49%		6.74%	
32	4.05%		6.08%		0.47%		0.71%		4.52%		6.79%	
33	4.08%		6.13%		0.48%		0.72%		4.56%		6.85%	
34	4.12%		6.18%		0.48%		0.72%		4.60%		6.90%	
35	4.15%		6.23%		0.49%		0.73%		4.64%		6.96%	
36	4.19%	3.99%	6.29%	5.98%	0.49%	0.26%	0.74%	0.38%	4.68%	4.25%	7.03%	6.36%
37	4.23%		6.34%		0.49%		0.74%		4.72%		7.08%	
38	4.27%		6.40%		0.50%		0.75%		4.77%		7.15%	
39	4.31%		6.46%		0.50%		0.76%		4.81%		7.22%	
40	4.35%		6.53%		0.51%		0.76%		4.86%		7.29%	
41	4.40%		6.59%		0.51%		0.77%		4.91%		7.36%	
42	4.44%		6.66%		0.52%		0.78%		4.96%		7.44%	
43	4.49%		6.73%		0.53%		0.79%		5.02%		7.52%	
44	4.53%		6.80%		0.53%		0.80%		5.06%		7.60%	
45	4.58%		6.87%		0.54%		0.80%		5.12%		7.67%	
46	4.63%		6.95%		0.54%		0.81%		5.17%		7.76%	
47	4.69%		7.03%		0.55%		0.82%		5.24%		7.85%	
48	4.74%		7.11%		0.55%		0.83%		5.29%		7.94%	
49	4.79%		7.19%		0.56%		0.84%		5.35%		8.03%	
50	4.85%		7.28%		0.57%		0.85%		5.42%		8.13%	
51	4.91%		7.37%		0.57%		0.86%		5.48%		8.23%	
52	4.97%		7.46%		0.58%		0.87%		5.55%		8.33%	
53	5.04%		7.55%		0.59%		0.88%		5.63%		8.43%	
54	5.10%		7.65%		0.60%		0.90%		5.70%		8.55%	
55	5.17%		7.75%		0.60%		0.91%		5.77%		8.66%	
56	5.24%		7.85%		0.61%		0.92%		5.85%		8.77%	
57	5.31%		7.96%		0.62%		0.93%		5.93%		8.89%	
58	5.38%		8.07%		0.63%		0.94%		6.01%		9.01%	
59	5.45%		8.18%		0.64%		0.96%		6.09%		9.14%	

\* Full contribution rates expressed as a percentage of salary based upon 8.00% interest and 5.75% salary scale assumptions. Members who enter prior to 1/1/75 contribute as indicated above and all others contribute on the basis of a single entry age of 36.

\*\* COL fraction: Tier 1: 11.70%  
Tier 3: 6.49%



## RECOMMENDED SAFETY MEMBERS' CONTRIBUTION RATES

Age	Basic				COL **				Basic and COL			
	First \$350 of Monthly Salary		Salary In Excess of \$350		First \$350 of Monthly Salary		Salary In Excess of \$350		First \$350 of Monthly Salary		Salary In Excess of \$350	
	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2
20	5.50%		8.25%		0.64%		0.96%		6.14%		9.21%	
21	5.50%		8.25%		0.64%		0.97%		6.14%		9.22%	
22	5.51%		8.26%		0.64%		0.97%		6.15%		9.23%	
23	5.52%		8.27%		0.65%		0.97%		6.17%		9.24%	
24	5.53%		8.30%		0.65%		0.97%		6.18%		9.27%	
25	5.55%		8.32%		0.65%		0.97%		6.20%		9.29%	
26	5.57%		8.36%		0.65%		0.98%		6.22%		9.34%	
27	5.60%		8.40%		0.66%		0.98%		6.26%		9.38%	
28	5.63%		8.45%		0.66%		0.99%		6.29%		9.44%	
29	5.67%	5.39%	8.51%	8.09%	0.66%	0.49%	1.00%	0.74%	6.33%	5.88%	9.51%	8.83%
30	5.72%		8.58%		0.67%		1.00%		6.39%		9.58%	
31	5.77%		8.65%		0.68%		1.01%		6.45%		9.66%	
32	5.82%		8.73%		0.68%		1.02%		6.50%		9.75%	
33	5.88%		8.81%		0.69%		1.03%		6.57%		9.84%	
34	5.94%		8.91%		0.69%		1.04%		6.63%		9.95%	
35	6.00%		9.00%		0.70%		1.05%		6.70%		10.05%	
36	6.07%		9.11%		0.71%		1.07%		6.78%		10.18%	
37	6.14%		9.21%		0.72%		1.08%		6.86%		10.29%	
38	6.22%		9.33%		0.73%		1.09%		6.95%		10.42%	
39	6.29%		9.44%		0.74%		1.10%		7.03%		10.54%	
40	6.37%		9.56%		0.75%		1.12%		7.12%		10.68%	
41	6.45%		9.68%		0.75%		1.13%		7.20%		10.81%	
42	6.53%		9.80%		0.76%		1.15%		7.29%		10.95%	
43	6.62%		9.92%		0.77%		1.16%		7.39%		11.08%	
44	6.70%		10.05%		0.78%		1.18%		7.48%		11.23%	
45	6.79%		10.18%		0.79%		1.19%		7.58%		11.37%	
46	6.88%		10.31%		0.80%		1.21%		7.68%		11.52%	
47	6.97%		10.45%		0.82%		1.22%		7.79%		11.67%	
48	7.06%		10.59%		0.83%		1.24%		7.89%		11.83%	
49	7.15%		10.72%		0.84%		1.25%		7.99%		11.97%	

\* Full contribution rates expressed as a percentage of salary based upon 8.00% interest and 5.75% salary scale assumptions. Members who enter prior to 1/1/75 contribute as indicated above and all others contribute on the basis of a single entry age of 29.

\*\* COL fraction: Tier 1: 11.70%  
Tier 2: 9.14%

## E. CAFR Schedules

### Schedule of Active Member Valuation Data

Schedule of Active Member Valuation Data					
Valuation Date	Plan Type	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay *
06/30/1994	General	8,704	\$ 312,603,000	\$ 35,915	2.63%
	Safety	1,406	62,667,000	44,571	0.83%
	Total	10,110	\$ 375,270,000	\$ 37,119	2.21%
06/30/1995	General	8,973	\$ 335,175,000	\$ 37,354	4.01%
	Safety	1,488	70,108,000	47,116	5.71%
	Total	10,461	\$ 405,283,000	\$ 38,742	4.37%
06/30/1996	General	8,860	\$ 329,019,000	\$ 37,135	-0.58%
	Safety	1,896	88,584,000	46,722	-0.84%
	Total	10,756	\$ 417,603,000	\$ 38,825	0.21%
06/30/1997	General	8,684	\$ 328,676,000	\$ 37,848	1.92%
	Safety	1,863	90,791,000	48,734	4.31%
	Total	10,547	\$ 419,467,000	\$ 39,771	2.44%
06/30/1998	General	8,866	\$ 367,781,000	\$ 41,482	9.60%
	Safety	1,935	102,604,000	53,025	8.81%
	Total	10,801	\$ 470,385,000	\$ 43,550	9.50%
06/30/1999	General	9,350	\$ 400,287,000	\$ 42,811	3.20%
	Safety	2,004	102,038,000	50,917	-3.98%
	Total	11,354	\$ 502,325,000	\$ 44,242	1.59%
06/30/2000	General	10,217	\$ 441,118,000	\$ 43,175	0.85%
	Safety	2,018	117,930,000	58,439	14.77%
	Total	12,235	\$ 559,048,000	\$ 45,693	3.28%
06/30/2001	General	10,781	\$ 498,408,000	\$ 46,230	7.08%
	Safety	2,210	136,390,000	61,715	5.61%
	Total	12,991	\$ 634,798,000	\$ 48,864	6.94%

\* Reflects the increase in average salary for members at the beginning of the year versus those at the end of the year, it does not reflect the average salary increases received by members who worked the full year.

APPENDICES

Retirees and Beneficiaries Added To and Removed From Retiree Payroll

Plan Year Ending	At Beginning of Year	Added During Year	Removed During Year	At End of Year	Annual Retiree Payroll (In Thousands)	% Increase in Annual Retiree Payroll	Average Annual Allowance
06/30/1994	3,935	N/A	N/A	4,130	\$ 55,035	11.30%	\$ 13,326
06/30/1995	4,130	N/A	N/A	4,387	\$ 61,140	11.09%	\$ 13,937
06/30/1996	4,387	N/A	N/A	4,502	\$ 65,098	6.47%	\$ 14,460
06/30/1997	4,502	320	176	4,646	\$ 70,716	8.63%	\$ 15,221
06/30/1998	4,646	394	156	4,884	\$ 78,762	11.38%	\$ 16,127
06/30/1999	4,884	573	154	5,303	\$ 85,698	8.81%	\$ 16,160
06/30/2000	5,303	377	192	5,488	\$ 93,620	9.24%	\$ 17,059
06/30/2001	5,488	205	167	5,526	\$ 98,600	5.32%	\$ 17,843

N/A - Not Available

APPENDICES

Solvency Test  
(amounts in thousands)

Valuation Date	Aggregate Accrued Liabilities for				Portion of Accrued Liabilities Covered by Reported Assets			
	Active Member Contributions	Retired/Vested Members	Active Members (Employer Financed Portion)	Total	Actuarial Value of Assets	Active Member Contributions	Retired/Vested Members	Active Members (Employer Financed Portion)
06/30/1994	\$ 192,649	\$ 732,203	\$ 709,921	\$ 1,634,773	\$ 1,106,922	100%	100%	26%
06/30/1995	\$ 213,766	\$ 848,904	\$ 773,194	\$ 1,835,864	\$ 1,767,064	100%	100%	91%
06/30/1996	\$ 244,228	\$ 892,185	\$ 850,817	\$ 1,987,230	\$ 1,956,715	100%	100%	96%
06/30/1997	\$ 260,787	\$ 975,206	\$ 990,447	\$ 2,226,440	\$ 2,238,557	100%	100%	100%
06/30/1998	\$ 285,779	\$ 1,043,514	\$ 1,080,349	\$ 2,409,642	\$ 2,600,547	100%	100%	100%
06/30/1999	\$ 303,957	\$ 1,122,054	\$ 1,308,537	\$ 2,734,548	\$ 3,017,639	100%	100%	100%
06/30/2000	\$ 322,134	\$ 1,239,894	\$ 1,549,732	\$ 3,111,760	\$ 3,427,348	100%	100%	100%
06/30/2001	\$ 393,924	\$ 1,323,405	\$ 1,734,535	\$ 3,451,864	\$ 3,718,198	100%	100%	100%

Events affecting year to year comparability:

- 06/30/94 - Investment return assumption reduced from 8.50% to 8.00%; Inflation assumption dropped from 5% to 4.50%; Salary increase assumption decreased from 6.00% to 5.50%.
- 06/30/95 - Inflation assumption decreased from 4.50% to 4.25%. Modification in non-economic assumptions. Included \$533,034 of Pension Obligation Bonds issued on July 5, 1995.
- 06/30/98 - Salary increase assumption increased from 5.50% to 5.55%. Modification in non-economic assumptions. Liability as a result of Ventura Court Decision was included.
- 06/30/01 - Salary increase assumption increased from 5.55% to 5.75%. Modification in non-economic assumptions.

APPENDICES

Sacramento County Employees' Retirement System -- 2001 CAFR  
 Actuarial Analysis of Financial Experience  
 (Amounts in millions)

	2001	2000	1999	1998	1997	1996	1995
Prior Valuation Unfunded Actuarial Accrued Liability	\$ (316)	\$ (283)	\$ (191)	\$ (12)	\$ 31	\$ 69	\$ 533
Salary Increase Greater (Less) than Expected	\$ 50	\$ 46	\$ (93)	\$ (29)			
Asset Return Less (Greater) than Expected	\$ (3)	\$ (6)	\$ (11)	\$ (205)			
Other Experience	\$ (18)	\$ (2)	\$ (18)	\$ 55			
Liability from Ventura Court Decision	\$ -	\$ -	\$ -	\$ 95			
Economic and Non-Economic Assumption Changes	\$ 21	\$ -	\$ -	\$ 21			
Data Corrections	\$ -	\$ -	\$ 30 *	\$ -			
Transfer from Excess Earnings	\$ -	\$ (71)	\$ -	\$ (116)			
Ending Unfunded Actuarial Accrued Liability	\$ (266)	\$ (316)	\$ (283)	\$ (191)	\$ (12)	\$ 31	\$ 69

\* Includes \$24 million in Recognition of Sick Leave Service in Valuation and \$6 million in Loss from Retirements.

## SCHEDULE OF AVERAGE BENEFIT PAYMENTS

Retirement Effective Dates 7/1/93-6/30/99	Years Since Retirement						
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER
Period 7/1/93-6/30/94:							
Average Monthly Benefit	\$1,469	\$1,184	\$979	\$759	\$628	\$535	\$396
Number of Active Retirants	1,225	1,074	862	571	301	68	29
Period 7/1/94-6/30/95:							
Average Monthly Benefit	\$1,505	\$1,248	\$1,037	\$823	\$652	\$573	\$610
Number of Active Retirants	1,337	1,103	877	627	328	82	33
Period 7/1/95-6/30/96:							
Average Monthly Benefit	\$1,501	\$1,283	\$1,114	\$893	\$697	\$633	\$478
Number of Active Retirants	1,430	1,121	875	649	317	82	28
Period 7/1/96-6/30/97:							
Average Monthly Benefit	\$1,539	\$1,404	\$1,151	\$950	\$760	\$651	\$485
Number of Active Retirants	1,501	1,092	902	683	337	104	27
Period 7/1/97-6/30/98:							
Average Monthly Benefit	\$1,659	\$1,472	\$1,228	\$1,007	\$858	\$698	\$482
Number of Active Retirants	1,633	1,043	962	700	366	147	33
Period 7/1/98-6/30/99:							
Average Monthly Benefit	\$1,639	\$1,552	\$1,313	\$1,079	\$923	\$727	\$579
Number of Active Retirants	1,667	1,262	979	744	432	179	40
Period 7/1/99-6/30/00:							
Average Monthly Benefit	\$1,821	\$1,675	\$1,381	\$1,180	\$947	\$729	\$2,125
Number of Active Retirants	1,528	1,249	965	840	561	282	75
Period 7/1/00-6/30/01:							
Average Monthly Benefit	\$1,758	\$1,779	\$1,439	\$1,269	\$1,047	\$776	\$770
Number of Active Retirants	1,433	1,287	1,002	815	610	308	71

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## F. Glossary of Actuarial Terminology

### Glossary of Actuarial Terminology

**AAL:** See Actuarial (Accrued Liability)

**Accrued Benefit:** The amount of an individual's benefit (whether or not vested) as of a specified date, determined in accordance with the terms of a pension plan and based on compensation (if applicable) and service to that date.

**Actuarial Accrued Liability:** "Target assets" which would be on hand were the Association's current level of benefits to have been funded as a level percentage of pay each year from date of entry into the Association by all current members and interest at the current investment return assumption were credited each year. It also includes the actuarial present value of all retired members and beneficiaries future benefits. Under the Entry Age Normal Funding Method, changes in Actuarial Accrued Liability due to experience different from our assumptions increase or decrease the Actuarial Accrued Liability.

**Actuarial Asset Value:** The value of Assets used by the actuary in the actuarial valuation. In order to reduce the impact of assets value fluctuation and to capture the long term intrinsic value of the Association's assets, actuaries sometimes use smoothing methods. These methods usually reflect the current market value of assets in some manner.

**Actuarial Assumptions:** Those assumptions such as interest (investment return), salary increases, termination from service and mortality needed by the actuary to complete an actuarial valuation.

**Actuarial Gain (Loss):** The difference between actual experience and actuarial assumption anticipated experience during the period between two actuarial valuation dates.

**Actuarial Present Value:** The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:

- (a) adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, Social Security, marital status, etc.)
- (b) multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and
- (c) discounted according to an assumed rate (or rates) of return to reflect the time value of money.

**Actuarial Valuation:** The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

**Actuary:** A business mathematician trained in mathematics, risk analysis and finance. An actuary is assigned the task of determining the contribution required to maintain financial balance as to inflow and outflow from a retirement Association.

**Assets:** Underlying funds available to provide for the Association's benefits. It reflects the accumulation of all contributions and investment earnings.

**Contribution to the Unfunded Actuarial Accrued Liability (UAAL):** That annual contribution rate which, if paid annually over the UAAL amortization period, would accumulate to the amount necessary to fully fund the UAAL. Accumulation includes annual crediting of interest at the assumed investment earnings rate. The contribution is calculated to remain as a level percentage of future active member payroll (including payroll of new members as they enter the Association) assuming a constant number of active members. In order to remain as a level percentage of payroll, amortization payments are scheduled to increase at the annual inflation rate.

**Entry Age Normal Actuarial Funding Method:** An actuarial method for pre-funding future retirement benefits. Under this method which the member contribution stream plus the employer contribution stream is determined as that level of percentage of payroll sufficient to finance benefits and employee contribution refunds for new entrant.

**GASB:** The Government Accounting Standards Board which promulgates financial reporting and disclosure requirements for governmental entities, including public retirement Associations.

**GASB Statement No. 5:** A set of disclosures promulgated by GASB to provide users of financial statements information as to the funding status of a public retirement system. GASB No. 5 specifies the Pension Benefit Obligation as a standardized target level of the accounting value of assets.

**GASB Statement No. 25:** A set of disclosures promulgated by GASB to provide users of financial statements information as to the funding status of a public retirement system. GASB No. 25 specifies the Actuarial Accrued Liability as a standardized level of the Actuarial Value of Assets.

**Investment Return Assumption:** The average rate of investment earnings which is assumed will be earned by Association funds.

**Normal Cost:** That annual contribution rate which, if paid annually from a member's first year of membership through the year of retirement, would accumulate to the amount necessary to fully fund the member's retirement benefits. Accumulation includes annual crediting of interest at the assumed investment earnings rate. The contribution rate is expressed as a level percentage of the member's compensation.



**Pension Benefit Obligation:** A standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increases, estimated to be payable in the future as a result of employee service to date.

**UAAL:** (See Unfunded Actuarial Accrued Liability).

**Unfunded Actuarial Accrued Liability:** Actuarial Accrued Liability minus the Actuarial Value of Assets.