Actuarial Valuation Report

City of San Jose
Police and Fire Department Retirement Plan

Report as of June 30, 1999

Prepared by: **William M. Mercer, Incorporated**

January 2000

WILLIAM M.
MERCER

January 17, 2000

Board of Retirement
City of San Jose
Police and Fire Department Retirement Plan
777 North First Street, Suite 750
San Jose, CA 95112-6311

Dear Members of the Board:

We are pleased to present the actuarial valuation for the City of San Jose Police and Fire Department Retirement Plan prepared as of June 30, 1999 by William M. Mercer, Incorporated. The report includes:

(1)   a determination of the city contribution rates under the current and recommended actuarial methods and assumptions;

(2)   a determination of the employee contribution rates under the current and recommended actuarial methods and assumptions.

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

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

We look forward to presenting this report to the Board at your earliest convenience.
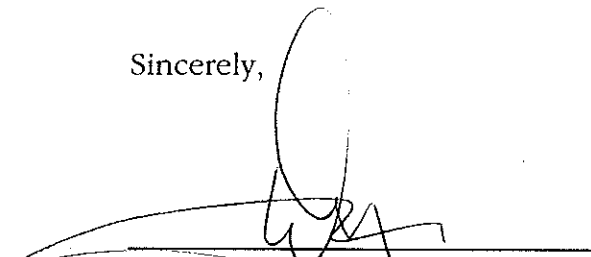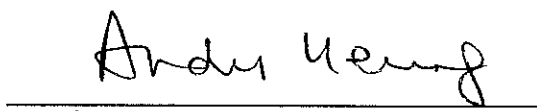
Sincerely,

_____   _____
Drew James, FSA, EA, MAAA   Andy Yeung, ASA, EA, MAAA

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ACTUARIAL CERTIFICATION

Actuarial Certification

The actuarial valuation required for the City of San Jose Police and Fire Retirement Plan has been prepared as of June 30, 1999 by William M. Mercer, Incorporated. In preparing this valuation, we have employed generally accepted actuarial methods and assumptions to evaluate the System's assets, liabilities and future contribution requirements. Our calculations are based upon member data and audited financial information provided to us by the System's staff. This information has not been audited by us, but it has been reviewed and found to be consistent, both internally and with prior years' information.

The contribution requirements are determined as a percentage of payroll. Employer rates provide for both normal cost and a contribution to amortize any unfunded or overfunded actuarial accrued liabilities. The Board elected to amortize the System's unfunded actuarial accrued liability over a 40 year period, beginning in 1977, with 18 years remaining as of the June 30, 1999 valuation date.

The ratio of actuarial value of assets to actuarial accrued liabilities increased from 112.8% to 115.3% as a result of this valuation. The primary cause of the increase was the greater than expected investment return on the System's assets.

The Board has adopted new non-economic assumptions and decreased the inflation assumption from 4.75% to 4.50%.

In our opinion, the recommended assumptions and methods, when applied in combination, fairly represent past and anticipated future experience of the System.

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.
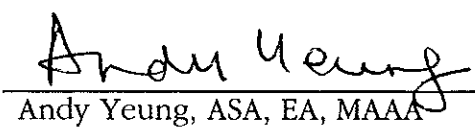
This report conforms with the requirements of the governing state and local statutes, accounting rules, and generally accepted actuarial principles and practices. The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

William M. Mercer, Incorporated

Drew James, FSA, EA, MAAA

Andy Yeung, ASA, EA, MAAA

1/20/2000

Date

1/20/2000

Date

BOARD MEMBER SUMMARY OF VALUATION RESULTS

SUMMARY OF RECOMMENDATIONS

City Contribution Rates [1]	June 30, 1999	June 30, 1997 [2]	Increase/Decrease
Normal Cost Rate:	21.67%	23.00%	-1.33%
Rate of Contribution to Unfunded Actuarial Accrued Liability:	-9.75%	-4.75%	-5.00%
Medical Insurance:	1.18%	1.39%	-0.21%
Dental Insurance:	0.36%	0.42%	-0.06%
Total City Rate:	13.46%	20.06%	-6.60%
Estimated Annual Amount:	$ 19,397,000	$ 28,911,000	$ (9,514,000)

Employee Contribution Rates [1]	June 30, 1999	June 30, 1997 [2]	Increase/Decrease
Normal Cost Rate:	8.12%	8.63%	-0.51%
Rate of Contribution to Unfunded Actuarial Accrued Liability:	0.06%	0.06%	0.00%
Medical Insurance:	1.18%	1.39%	-0.21%
Dental Insurance:	0.12%	0.14%	-0.02%
Total Employee Rate:	9.48%	10.22%	-0.74%
Estimated Annual Amount	$ 13,663,000	$ 14,729,000	$ (1,066,000)

[1] Annual amounts based on total annual salaries as of June 30, 1999 of $144,125,000.

[2] After reflection of the Arbitrator Decision to improve Retirement and Health Benefits in 1998, including the impact of FLSA pay.

SUMMARY OF RECOMMENDATIONS (CONT'D)

Actuarial Assumptions for Retirement Plan	June 30, 1999 [1]	June 30, 1997	Increase/Decrease
Annual Inflation Rate:	4.50%	4.75%	-0.25%
Annual Investment Return:	8.00%	8.00%	0.00%
Annual Salary Increases:			
First 5 years of service	10.50%	10.75%	-0.25%
After 5 years of service			
Age 25-29	9.90%	10.45%	-0.55%
Age 30-34	7.70%	8.55%	-0.85%
Age 35-39	6.20%	6.65%	-0.45%
Age 40-44	5.50%	5.95%	-0.45%
Age 45-49	5.20%	5.55%	-0.35%
Age 50-54	4.90%	5.25%	-0.35%
Age 55-59	4.90%	5.25%	-0.35%
Age 60 and over	4.60%	4.85%	-0.25%

Actuarial Assumptions for Medical and Dental Plans

Annual Increase in Medical and Dental Plan costs over the next 10 years:	Fiscal Year	June 30, 1999 Medical	June 30, 1999 Dental
	1999-2000	9.50%	9.00%
	2000-2001	8.50%	8.00%
	2001-2002	7.50%	7.00%
	2002-2003	6.50%	5.50%
	2003-2004	6.00%	5.50%
	2004-2005	6.00%	5.50%
	2005-2006	6.00%	5.50%
	2006-2007	6.00%	5.50%
	2007-2008 and later	6.00%	5.50%

[1]   Other assumptions are based upon the June 30, 1999 experience analysis.

Summary of Significant Actuarial Statistics and Measures

System Membership		June 30, 1999		June 30, 1997 [3]	Increase
Active Members					
1. Number of Members		1,953		1,954	-0.1%
2. Total Active Payroll	$	144,125,000	$	129,850,000	11.0%
3. Average Monthly Salary	$	6,150	$	5,538	11.1%
Retired Members					
1. Number of Members					
Service Retirement		273		210	30.0%
Disability Retirement		630		570	10.5%
Beneficiaries		157		160	-1.9%
2. Total Retired Payroll	$	41,072,000	$	31,990,000	28.4%
3. Average Monthly Pension	$	3,229	$	2,836	13.9%
Inactive Vested Members					
1. Number of Members		35		32	9.4%

Asset Values (Net)		June 30, 1999		June 30, 1997	Increase
Market Value [1]	$	1,579,385,000	$	1,252,614,000	26.1%
Return on Market Value [2]		12.33%		14.26%	
Actuarial Value [1]	$	1,464,185,000	$	1,139,401,000	28.5%
Return on Actuarial Value [2]		13.41%		11.00%	

Liability Values		June 30, 1999		June 30, 1997	Increase
Actuarial Accrued Liability	$	1,274,062,000	$	1,045,275,000	21.9%
Unfunded Actuarial Accrued Liability (UAAL)	$	(191,103,000)	$	(94,126,000)	-103.0%

Funding Ratios	June 30, 1999	June 30, 1997	Increase
GASB No. 25	115.3%	109.1%	6.2%

[1]   Includes Value of Health Insurance Reserve.

[2]   Annualized Rate of Return.

[3]   After reflection of the Arbitrator Decision to improve Retirement and Health Benefits in 1998, including the impact of FLSA pay.

EXPLANATION OF CHANGES IN ACTUARIAL VALUES

City Contribution Rates

The components of the change in City and employee contribution rates are approximately as follows:

Retirement Plan	City Contribution		Employee Contribution	
	% of Payroll	Dollar Impact	% of Payroll	Dollar Impact
June 30, 1997 Rate	18.25%	$ 26,301,000	8.69%	$ 12,525,000
Before Assumption Change				
Investment return greater than expected	-6.46%	$ (9,310,000)	0.00%	$ -
Salary increase more than expected	0.72%	$ 1,040,000	0.00%	$ -
Miscellaneous (gains)/ losses	0.19%	$ 271,000	0.00%	$ -
Subtotal	-5.55%	$ (7,999,000)	0.00%	$ -
After Assumption Change				
Change in Actuarial Assumptions	-0.78%	$ (1,124,000)	-0.51%	$ (735,000)
Subtotal	-0.78%	$ (1,124,000)	-0.51%	$ (735,000)
June 30, 1999 Rate	11.92%	$ 17,178,000	8.18%	$ 11,790,000

Medical and Dental Plan	City Contribution		Employee Contribution	
	% of Payroll	Dollar Impact	% of Payroll	Dollar Impact
June 30, 1997 Rate	1.81%	$ 2,608,000	1.53%	$ 2,205,000
Before Assumption Change				
Investment and other (gains) / losses	-0.37%	$ (533,000)	-0.33%	$ (476,000)
After Assumption Change				
Change in Actuarial Assumptions	0.10%	$ 144,000	0.10%	$ 144,000
June 30, 1999 Rate	1.54%	$ 2,219,000	1.30%	$ 1,873,000

Explanation of Gain/ Loss Items

Investment return greater than expected - The System's actuarial valuation assets earned an annual investment return return which was 5.41% in excess of the 8% return assumption on average over the two years since the last valuation.

Salary increase more than expected - The average annual salary increase was 7.14% versus the assumed 5.95%.

Miscellaneous (gains) / losses - Other rate changes with untraced sources.

Assumption Changes

Changes were made to most of the assumptions. Following were the most significant:

- Inflation — A reduction in the annual inflation assumption from 4.75% to 4.50%. This reduces costs, provided the investment return assumption is unchanged.

- Real Rate of Investment Return — An increase in the annual real rate of investment return from 3.25% to 3.50%. This reduces costs.

- Disability — Duty disability rates were decreased somewhat. This reduces costs.

- Service Retirement — Retirement rates were increased to reflect recent experience. This increases costs.

- Salary Increase — Changes were made to the merit and longevity salary increase assumptions to reflect salary increases over the last two years. This reduces costs.

- Post-Retirement Mortality — A setback (i.e., a mortality improvement) to the current mortality table (1994 Group Annuity Mortality Table for Males) used for service retirees, and a set forward (i.e., higher mortality) to the current table (1994 Group Annuity Mortality Table for Females) used for beneficiaries was adopted by the Board to reflect mortality changes since the current table (1994 Group Annuity Mortality Table) was developed. The combined change increases costs.

- Medical and Dental Premium Increases — Short term premium increases were raised to reflect anticipated experience. This increases costs.

ACTUARIAL ASSUMPTIONS

ECONOMIC ACTUARIAL ASSUMPTIONS

A. Introduction

Economic actuarial assumptions are of three types:

1. Inflation – Reflects expected increases in future prices of goods and services. Inflationary increases are closely tied to 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 that is earned from investments, the less that 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 determining the benefit that members will receive at retirement. This assumption contains two components — cost-of-living (inflation) 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 the setting of 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-specific 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 adopted our recommendation to reduce the current inflation assumption of 4.75% by 0.25% to 4.50%.

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 (1939 Through 1998)
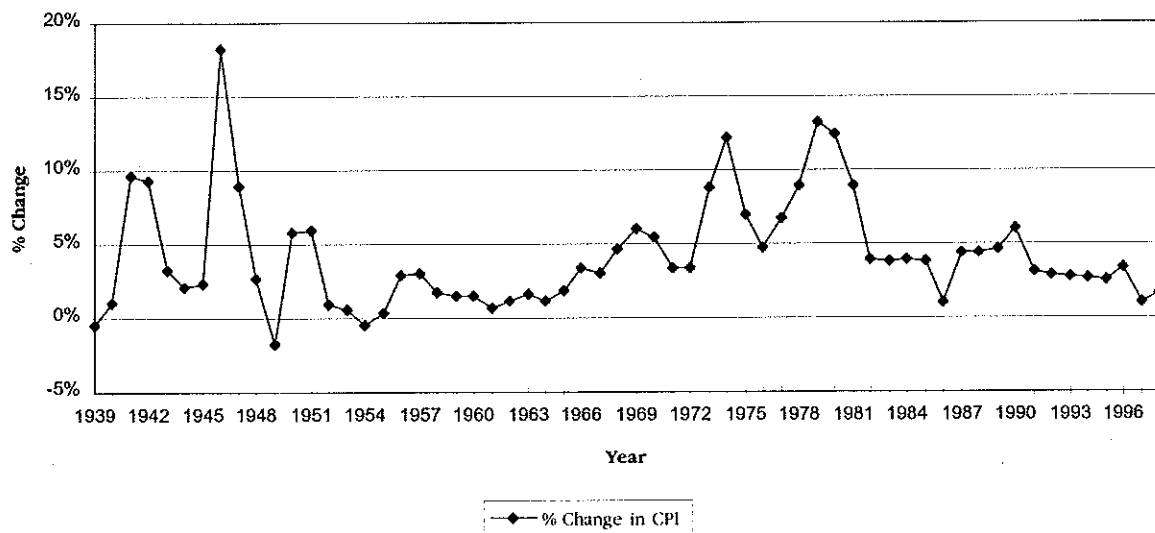
The actuarial SOP specifies the following data to be considered in setting the inflation assumption (Section 3.5.1):

- 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)

Number of Years Ending 12/31/98:	CPI
10	3.06%
20	4.48%
30	5.21%
40	4.41%
50	3.90%
60	4.17%

(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, inflation has typically ranged between about 3.00% and 4.50%. On the other hand, the last ten years have produced inflation at the low end of this range. 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 30 California public retirement systems who responded to Mercer's 1998 survey of economic actuarial assumptions, and the 9 chartered city respondents, respectively.

The average inflation rates from the survey for both of these groups is about 4.50%. Rates used by reporting chartered city systems have generally stabilized at the 4.50% rate.

Chart 2 - Comparisons of Economic Actuarial Assumptions
All Respondents
(based on 30 responses)

Inflation Assumption

Average	4.39%
25th Percentile	4.25%
50th Percentile	4.50%
75th Percentile	4.69%
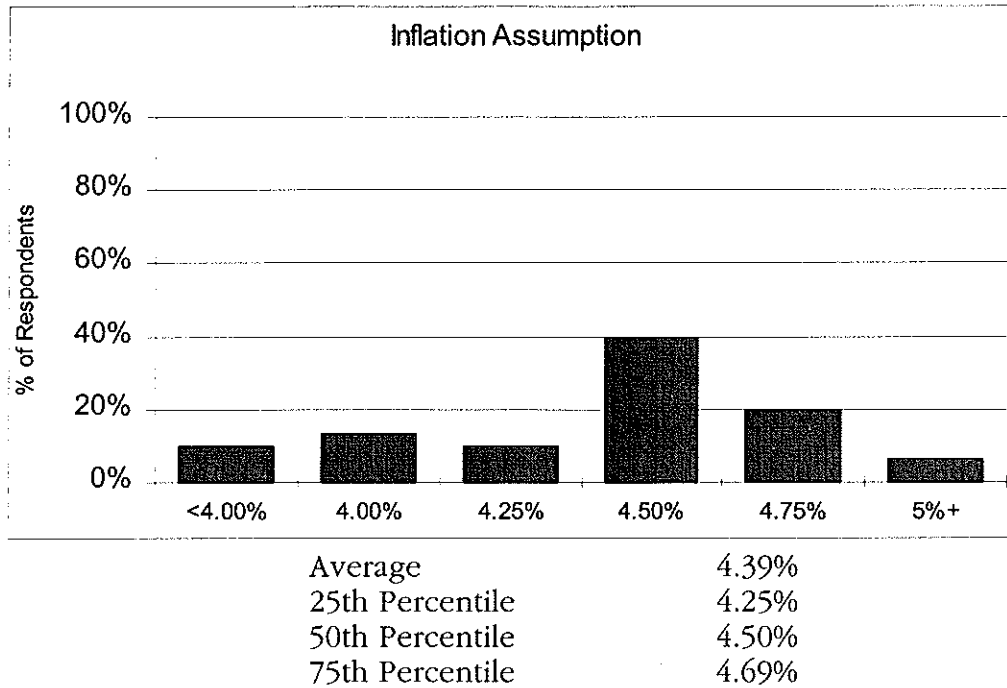
Chart 3 - Comparison of Economic Actuarial Assumptions
Chartered City Respondents
(based on 9 responses)

Inflation Assumption

Average	4.44%
25th Percentile	4.25%
50th Percentile	4.50%
75th Percentile	4.75%
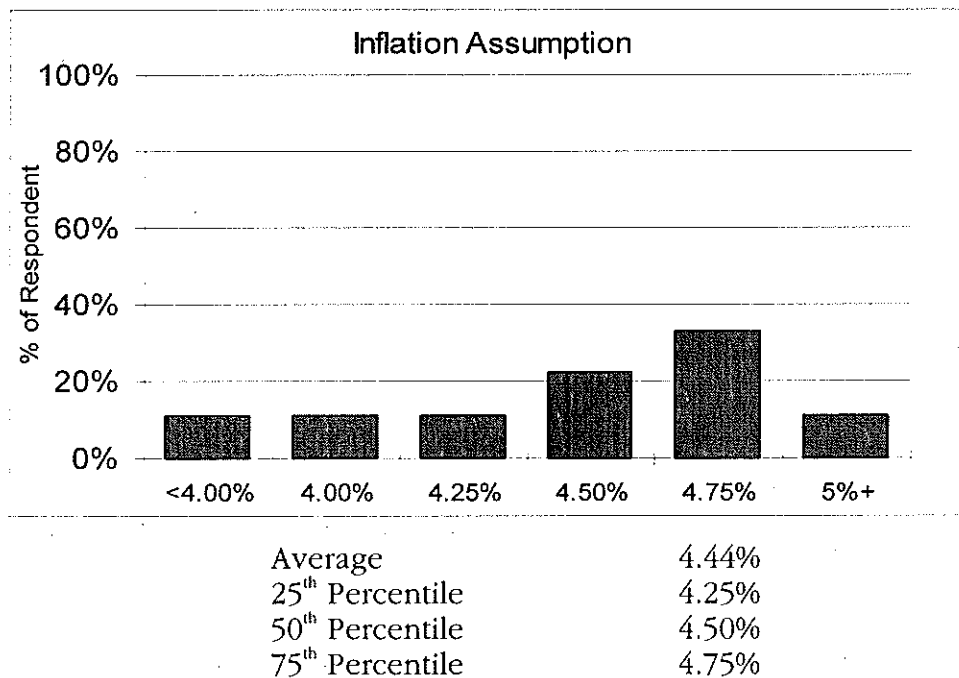
Treasury Yield Curves

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 expectations implicit in two- to three-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.

Summary

We conclude from our analysis that:

1. Historical inflation data can generally support an assumption in the range of 3.5% to 4.5%;

2. Inflation forecasts inherent in 1998 inflation assumptions adopted by similarly situated retirement systems are about 4.50%; and

3. Future inflation expectations in recent Treasury yield curves have been too volatile to use as an indicator of future inflation.

Based on this data, we recommended lowering the long-term inflation rate to 4.50% and the Board has adopted that recommendation.

Investment Return

Recommendation

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

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 as part of the development of the inflation assumption. 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. 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 as a resource upon which 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 the continued applicability of the historical averages.

Table 2

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

	(1926 – 1999)
Common Stocks	8.2%
Small Stocks	9.4%
Long-term government bonds	2.1%
Long-term corporate bonds	2.6%
Intermediate government bonds	2.1%
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
Expected Asset Class Returns Net of Inflation (Real)

Asset Class	Total Real Return
Large Stocks	6.4%
Small Stocks	7.4
Int'l Stocks	6.8
Long Bonds	3.2
Intermediate Bonds	3.2
Real Estate	5.1
Money Market	1.5

Asset Allocation

The Plan 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, the Plan'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 for the Plan's actual long-term asset allocation. The target asset allocation will be combined with the real rates of return on classes of securities to develop the expected gross real rate of return assumption for the Association's portfolio.

The current and target asset allocations utilized by the Plan are shown in Table 4.

Table 4
Plan Asset Allocation as of 6/30/99
At Market Value

	Current	Target
Domestic Stocks	42%	35%
International Stocks	11%	10%
Bonds and Fixed Income*	39%	45%
Real Estate	8%	10%
Cash Equivalents and Short-Term	0%	0%

*   Includes both U.S. and global fixed income

Applying the target asset allocation (Table 4) to the information in Table 3 results in a real return of approximately 5.0%. There are a number of additional factors which must be considered before arriving at an appropriate level 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;

b)   The cost of actuarial valuations;

c)   The cost of bank custodial services;

d)   Fees related to investment in deeds of trust or mortgages;

e)   Investment expenses; and

f)   The cost of legal counsel.

The Plan's actual expenses over the last 5 years (coupled with any expected changes in future expense levels) is used to develop the expense charge. This expected future charge is 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 each of the 5 fiscal years preceding June 30, 1999.

Table 5
Administrative and Investment Expenses as a Percentage of Average Assets at Actuarial Value
Fiscal Year End

1995	0.44%
1996	0.49%
1997	0.46%
1998	0.41%
1999	0.45%
Average	0.45%

A percentage of 0.45% was used as an estimate of future expenses.

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 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 1998 survey of economic assumptions of 30 California public retirement systems. From this survey we are able to identify the risk adjustment implicit within a system's investment return assumption versus the system's risk level as measured by the standard deviation of their current asset allocation. The diagram in Chart 4 provides that relationship. The chart also includes a regression line which, given a system's risk level, can be used to identify a risk adjustment consistent with the survey data.

Chart 4

Correlation Chart - Assumed Investment Return Margin vs Standard Deviation of Target Asset Allocation (1998 Mercer Survey)
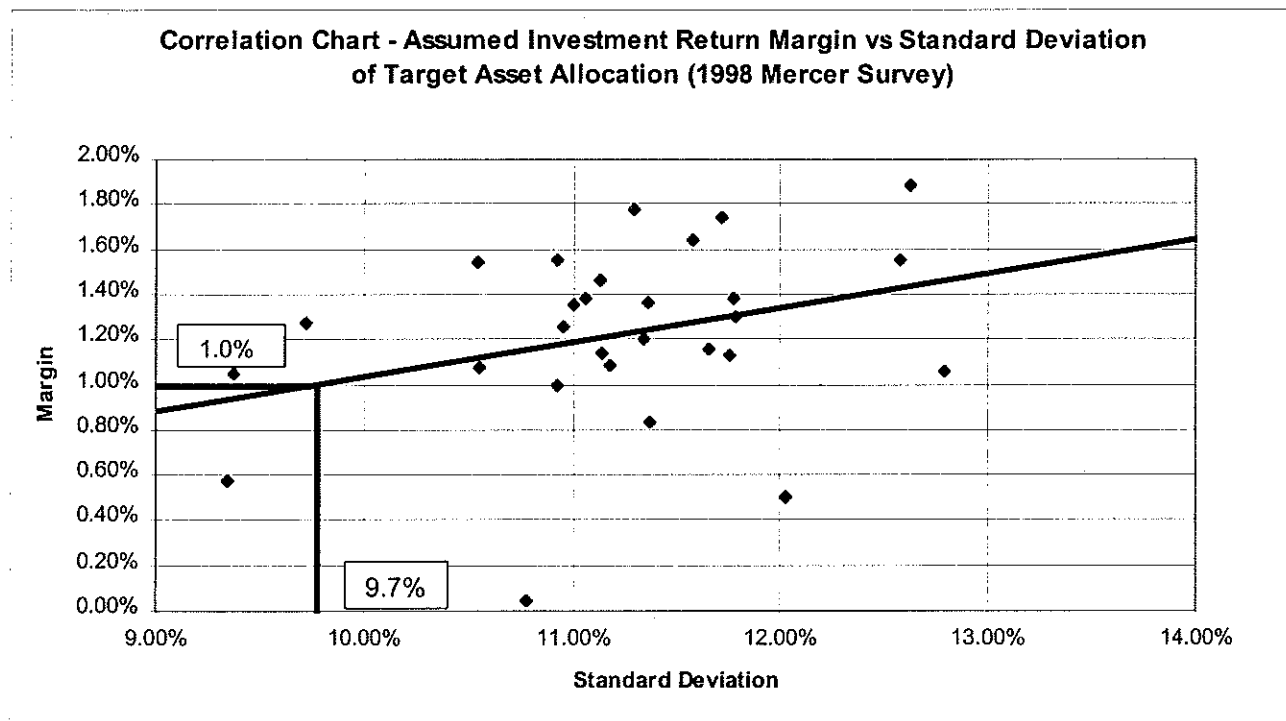
As you can see from the chart, the Plan's risk adjustment so calculated would be approximately 1.0%, based on our calculation of the portfolio's annual standard deviation of 9.7%. This standard deviation is determined from Mercer's market simulation model reflecting the target asset allocation in Table 4.

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 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 Systems

Charts 5 and 6 provide the investment return assumptions used by the 30 California public retirement systems who responded to Mercer's 1998 survey of the economic actuarial assumptions, and the 9 chartered city respondents, respectively.

Chart 5 - Comparison of Economic Actuarial Assumptions
All Respondents
(based on 30 responses)

Interest Assumption
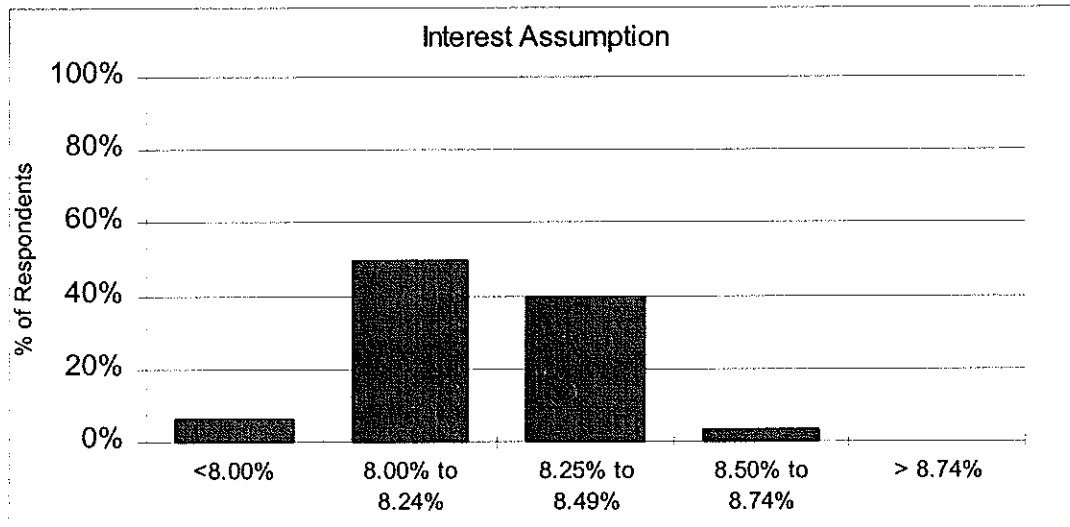
Average	8.10%
25th Percentile	8.00%
50th Percentile	8.16%
75th Percentile	8.25%

Chart 6 - Comparison of Economic Actuarial Assumptions
Chartered City Respondents
(based on 9 responses)

Interest Assumption
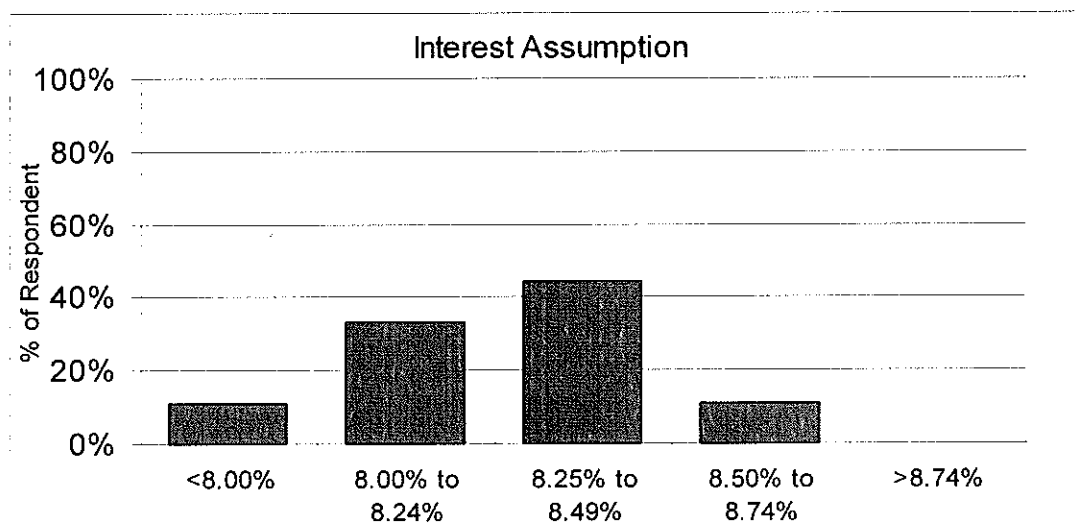
Average	8.08%
25th Percentile	8.00%
50th Percentile	8.25%
75th Percentile	8.25%

Development of Recommendation

Based on the above analysis, we arrive at a real rate of return assumption of 3.55% (average gross rate of return of 5.0% minus 0.45% expenses minus risk adjustment of 1.0%). Combining this rate and the inflation assumption of 4.50% results in an expected return of 8.05%. Thus, the continued use of an investment return assumption of 8.00% is recommended.

Salary Increase Assumptions

Recommendations

Salary Increase Assumptions

The Plan'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 two years ending June 30, 1999. 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 similarly situated public retirement systems as a scale of reasonableness for the new assumptions. We recommended and that Board adopted the following changes to the annual real salary increase assumptions:

Real Salary Increase Assumptions

First 5 years of service	6.0%
After 5 years of service	
Age 25-29	5.4%
Age 30-34	3.2%
Age 35-39	1.7%
Age 40-44	1.0%
Age 45-49	0.7%
Age 50-54	0.4%
Age 55-59	0.4%
Age 60 and Over	0.1%

Setting the Assumption

The Actuarial Standards Board has issued a Standard of Practice (SOP) for setting economic assumptions in valuations of pension benefits. The actuarial SOP specifies the following data be considered in setting the salary increase assumption (Section 3.7.2)

- 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 SOP 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 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 City is to continue as an ongoing operating entity.

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 more cheaply. 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.

Because of the general nature of governmental employment and the foreseeable budgetary outlook for California governmental employers, there is currently no Real Across-the-Board Salary Increase assumption for the Plan.

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 group and/or service group. This assumption is reviewed at the time of the experience investigation.

The following are the average nominal (inflation plus real) annual salary increases received by members over the two years ending June 30, 1999.

Members with less than 5 years of service: 9.19%
Members with 5 or more years of service:

Age Bracket	Annual Increase
25-29	7.97%
30-34	5.23%
35-39	4.39%
40-44	3.75%
45-49	3.71%
50-54	3.22%
55-59	3.31%
60-64	2.71%

The actual average annual salary increase for active members over this two year period was 3.19%. This was derived from the change in average salary for all active members between July 1, 1997 and June 30, 1999. Netting this average increase (as a proxy for actual wage inflation over the two-year period) from the above nominal increases yields the following real wage increases:

Members with less than 5 years of service: 6.00%
Members with 5 or more years of service:

Age Bracket	Annual Increase
25-29	4.78%
30-34	2.04%
35-39	1.20%
40-44	0.56%
45-49	0.52%
50-54	0.03%
55-59	0.12%
60-64	(0.48%)

In light of this experience, the merit and longevity assumption was modified using the detailed methodology at the beginning of this section. The following graph summarize the current and the actual real salary increase over the July 1, 1997 and June 30, 1999 period.

Chart 7

Police and Fire Members - Merit Longevity (Real) Salary Increases
(Members with Five or More Years of Service)
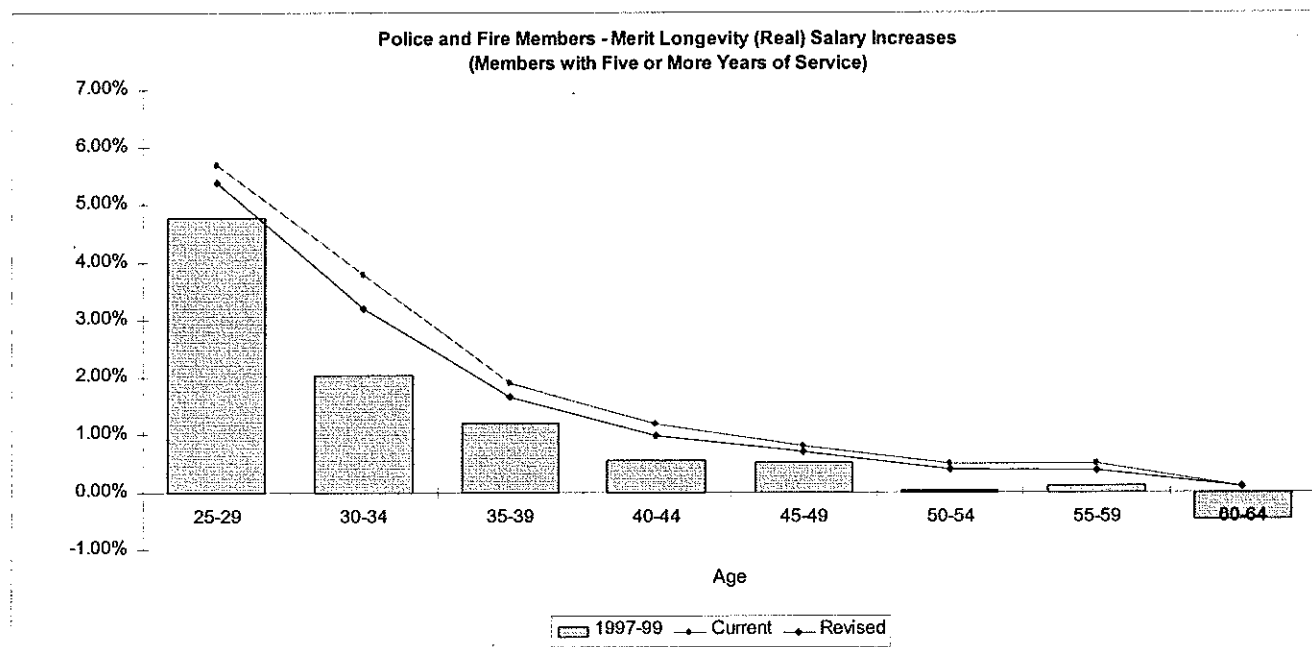
When we add the recommended real salary increases to the assumed 4.50% inflation rate, we get the following total annual salary increase rates.

Total Salary Increase Assumption Recommendations

Members with less than 5 years of service: 10.50%
Members with 5 or more years of service:

Ages 25-29	9.90%
Ages 30-34	7.70%
Ages 35-39	6.20%
Ages 40-44	5.50%
Ages 45-49	5.20%
Ages 50-54	4.90%
Ages 55-59	4.90%
Ages 60 and over	4.60%

Medical and Dental Premium Increases

Coverage

After retirement, members receive both medical and dental coverage through the following plans:

Medical Plan Choices
- Kaiser
- Lifeguard
- PacifiCare

Dental Plan
- Delta Dental
- Enhanced Delta Dental

Payment for this coverage is made from the Police and Fire Retirement Fund. The responsibility for funding the medical benefit is equally shared by the City and the members. For dental, the City contributes 75% of the cost and the member contributes 25%.

Premium Increase Assumptions

Contribution rates are calculated to provide prefunding for the next 10 years expected premium requirements. This requires a projection of the expected premium increases over the next 10 years.

Setting premium increase assumptions is difficult due to the complexities of the U.S. health care economy and the rapid change being experienced in the health care industry. However, guidelines for the establishment of future health care cost trends have evolved primarily from the application of Financial Accounting Standard No. 106. Although this

standard does not apply to public entities some of its principles are directly applicable to prefunding arrangements like the Police and Fire's.

The following assumptions have been developed in consultation with Mercer's retiree health care actuarial practice. They are consistent with the 4.50% general inflation assumption recommendation:

Fiscal Year	Medical	Dental
1999-2000	9.5%	9.0%
2000-2001	8.5%	8.0%
2001-2002	7.5%	7.0%
2002-2003	6.5%	5.5%
2003-2004	6.0%	5.5%
2004-2005	6.0%	5.5%
2005-2006	6.0%	5.5%
2006-2007	6.0%	5.5%
2007-2008 and later	6.0%	5.5%

These assumptions are modified for those medical plans with a Medicare risk component to reflect recent Federal law changes. The following annual increases were used for the Medicare component.

Fiscal Year	Medicare Increase
1999-2000	
2000-2001	1.30%
2001-2002	0.50%
2002-2003	0.20%
2003-2004	1.50%
2004-2005	4.00%
2005-2006	6.00%
2006-2007	6.00%
2007-2008	6.00%
2008-2009 and later	6.00%

The Medicare risk plans will experience more rapid cost increases as the plan is required to pick up more of what Medicare now reimburses.

ACTUARIAL VALUATION METHODS

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.

City Contributions

City 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 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 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 along with expected payroll. The UAAL is being funded over the 40-year period beginning in 1977, with 18 years remaining from the June 30, 1999 valuation date.

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 E.

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

Employee Contributions

The members' contribution rates are recalculated on an actuarial basis at each actuarial study. The members presently contribute at the rate of 10.22% of pay.

ACTUARIAL VALUE OF ASSETS

Background

Under the Entry Age Normal Actuarial Funding Method, a determination is made of the assets the Association would have on hand if the current levels of 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 actuarial interest rate 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

The Retirement Board uses a smoothing method for valuing the Plan's assets in the actuarial valuation. Under this approach, 20% of the deviation of total market return from the 8.00% return target is recognized in any one year. This smoothes these "unexpected" returns over a five year period and allows gains (relative to the 8.00% target) to offset losses.

Following is the calculation of the Actuarial Value of Assets under this method.

A. Determination of Actuarial Value of Assets

12 Months Ending:	Total Contributions	Total Benefits	Market Value	Average Value	(1) Total Market Return (Net)	(2) Expected Market Return (Net)	(1-2) Investment Gain (Loss)	Deferred Factor	Deferred Return
06/30/1994			$ 799,701,000						
06/30/1995	$ 35,987,000	$ 26,626,000	$ 941,786,000	$ 804,381,500	132,724,000	$ 64,350,520	$ 68,373,480	0.000	$ -
06/30/1996	$ 36,393,000	$ 30,031,000	$ 1,079,090,000	$ 944,967,000	130,942,000	$ 75,597,360	$ 55,344,640	0.200	$ 11,068,928
06/30/1997	$ 38,490,000	$ 33,572,000	$ 1,252,614,000	$ 1,081,549,000	168,606,000	$ 86,523,920	$ 82,082,080	0.400	$ 32,832,832
06/30/1998	$ 39,117,000	$ 37,923,000	$ 1,445,932,000	$ 1,253,211,000	192,124,000	$ 100,256,880	$ 91,867,120	0.600	$ 55,120,272
06/30/1999	$ 40,711,000	$ 43,061,000	$ 1,579,385,000	$ 1,444,757,000	135,803,000	$ 115,580,560	$ 20,222,440	0.800	$ 16,177,952

1. Total deferred return	$ 115,199,984
2. Market Value	1,579,385,000
3. Smoothed Market Value (Item 2 - Item 1)	1,464,185,016
4. Corridor Limit	
a. 80% of Net Market Value	1,263,508,000
b. 120% of Net Market Value	1,895,262,000
5. Total Actuarial Value (item 3 after corridor applied)	1,464,185,016
6. Ratio of Actuarial to Market Value (Item 5 / Item 2)	0.927060
7. Market Value of Defined Benefit Assets	1,552,366,000
8. Actuarial Value of Defined Benefit Assets (Item 7 X Item 6)	$ 1,439,136,776
9. Market Value of Postemployment Healthcare Plan Assets	27,019,000
10. Actuarial Value of Postemployment Healthcare Plan Assets (Item 9 X Item 6)	$ 25,048,240
11. Percentage Medical	87.43%
12. Actuarial Value of Medical Assets (Item 11 X Item 10)	$ 21,900,071
13. Percentage Dental	12.57%
14. Actuarial Value of Dental Assets (Item 13 X Item 10)	$ 3,148,170

[1]   Actuarial Value of Defined Benefit Assets including Expected Contributions from members to UAAL = $1,440,116,617

ACTUARIAL VALUATION RESULTS

CITY AND EMPLOYEE CONTRIBUTION RATES

The following Table 7 provides a comparison of the City and Employee contribution rates and estimated annual contribution amounts under the recommended actuarial assumptions. The estimated annual contribution amounts are based upon the annual payroll as of June 30, 1999.

Table 7
Contribution Rates and Estimated Annual Contributions

Valuation Basis (Inflation/Investment Return)	City Contributions		Employee Contributions	
	Rate	Annual Amount*	Rate	Annual Amount*
Current Rates (4.75%/8.0%)	20.06%	$ 28,911,000	10.22%	$ 14,729,000
Recommended Rates (4.50%/8.0%)	13.46%	$ 19,397,000	9.48%	$ 13,663,000

* Annual amounts based on total annual salaries as of June 30, 1999 of $144,125,000.

The component parts of the above City and employee contribution rates broken down among the various benefit categories can be found in Table 8 and Table 9.

Details supporting the medical and dental rate calculations can be found on Table 10 and 11.

Explanation of Contribution Rate Changes

City Contribution Rates

The components of the change in City and employee contribution rates are approximately as follows:

Retirement Plan	City Contribution		Employee Contribution	
	% of Payroll	Dollar Impact	% of Payroll	Dollar Impact
June 30, 1997 Rate	18.25%	$ 26,301,000	8.69%	$ 12,525,000
Before Assumption Change				
Investment return greater than expected	-6.46%	$ (9,310,000)	0.00%	$ -
Salary increase more than expected	0.72%	$ 1,040,000	0.00%	$ -
Miscellaneous (gains)/ losses	0.19%	$ 271,000	0.00%	$ -
Subtotal	-5.55%	$ (7,999,000)	0.00%	$ -
After Assumption Change				
Change in Actuarial Assumptions	-0.78%	$ (1,124,000)	-0.51%	$ (735,000)
Subtotal	-0.78%	$ (1,124,000)	-0.51%	$ (735,000)
June 30, 1999 Rate	11.92%	$ 17,178,000	8.18%	$ 11,790,000

Medical and Dental Plan	City Contribution		Employee Contribution	
	% of Payroll	Dollar Impact	% of Payroll	Dollar Impact
June 30, 1997 Rate	1.81%	$ 2,608,000	1.53%	$ 2,205,000
Before Assumption Change				
Investment and other (gains) / losses	-0.37%	$ (533,000)	-0.33%	$ (476,000)
After Assumption Change				
Change in Actuarial Assumptions	0.10%	$ 144,000	0.10%	$ 144,000
June 30, 1999 Rate	1.54%	$ 2,219,000	1.30%	$ 1,873,000

Explanation of Gain/ Loss Items

Investment return greater than expected - The System's actuarial valuation assets earned an annual investment return return which was 5.41% in excess of the 8% return assumption on average over the two years since the last valuation.

Salary increase more than expected - The average annual salary increase was 7.14% versus the assumed 5.95%.

Miscellaneous (gains) / losses - Other rate changes with untraced sources.

Assumption Change

Changes were made to most of the assumptions. Following were the most significant:

- Inflation — A reduction in the annual inflation assumption from 4.75% to 4.50%. This reduces costs, provided the investment return assumption is unchanged.

- Real Rate of Investment Return — An increase in the annual real rate of investment return from 3.25% to 3.50%. This reduces costs.

- Disability — Duty disability rates were decreased somewhat. This reduces costs.

- Service Retirement — Retirement rates were increased to reflect recent experience. This increases costs.

- Salary Increase — Changes were made to the merit and longevity salary increase assumptions to reflect salary increases over the last two years. This reduces costs.

- Post-Retirement Mortality — A setback (i.e., a mortality improvement) to the current mortality table (1994 Group Annuity Mortality Table for Males) used for service retirees, and a set forward (i.e., higher mortality) to the current table (1994 Group Annuity Mortality Table for Females) used for beneficiaries was adopted by the Board to reflect mortality changes since the current table (1994 Group Annuity Mortality Table) was developed. The combined change increases costs.

- Medical and Dental Premium Increases — Short term premium increases were raised to reflect anticipated experience. This increases costs.

Table 8
Employee Contribution Rate Detail
Total Employee Contribution Rates

	New (8% Interest, 4.50% Inflation)		Current (8% Interest, 4.75% Inflation)	
	% of Payroll	Annual Amount*	% of Payroll	Annual Amount*
a. Basic				
Normal Cost	5.87%	$8,460,000	6.25%	$9,008,000
UAAL	0.05%	$72,000	0.05%	$72,000
b. COL				
Normal Cost	2.25%	$3,243,000	2.38%	$3,430,000
UAAL	0.01%	$14,000	0.01%	$14,000
c. Medical Insurance	1.18%	$1,701,000	1.39%	$2,003,000
d. Dental Insurance	0.12%	$173,000	0.14%	$202,000
e. Total	9.48%	$13,663,000	10.22%	$14,729,000

* Annual amounts based on total annual salaries as of June 30, 1999 of $144,125,000.

Table 9
City Contribution Rate Detail
Total City Contribution Rates

	New (8% Interest, 4.50% Inflation)		Current (8% Interest, 4.75% Inflation)	
	% of Payroll	Annual Amount*	% of Payroll	Annual Amount*
a. Basic				
Normal Cost	15.65%	$22,556,000	16.67%	$24,026,000
UAAL	-7.52%	($10,837,000)	-6.55%	($9,440,000)
b. COL				
Normal Cost	6.02%	$8,676,000	6.33%	$9,123,000
UAAL	-2.23%	($3,218,000)	1.80%	$2,594,000
c. Medical Insurance	1.18%	$1,701,000	1.39%	$2,003,000
d. Dental Insurance	0.36%	$519,000	0.42%	$605,000
e. Total	13.46%	$19,397,000	20.06%	$28,911,000

* Annual amounts based on total annual salaries as of June 30, 1999 of $144,125,000.

TABLE 10
RETIREE HEALTH INSURANCE 10-YEAR COST PROJECTION
MEDICAL BENEFITS

	(1)	(2)	(3)	(4)	(5)	(6)
					Cost as a Percentage of Payroll	
	Annual Cost	Number of		Total	Actual	Level Funded
Year	Per Retiree	Insured Retirees	Annual Cost	Covered Payroll	Percentage	Percentage
			(1) x (2)		(3) / (4)	[(7) - (8)]/(9)
07/01/1999	3,848	978	3,764,000	144,124,780	2.61%	2.36%
07/01/2000	4,265	1,046	4,463,000	150,610,000	2.96%	2.36%
07/01/2001	4,678	1,120	5,238,000	157,387,000	3.33%	2.36%
07/01/2002	5,076	1,198	6,081,000	164,469,000	3.70%	2.36%
07/01/2003	5,437	1,282	6,971,000	171,870,000	4.06%	2.36%
07/01/2004	5,777	1,372	7,924,000	179,604,000	4.41%	2.36%
07/01/2005	6,123	1,468	8,987,000	187,686,000	4.79%	2.36%
07/01/2006	6,491	1,570	10,193,000	196,132,000	5.20%	2.36%
07/01/2007	6,880	1,680	11,561,000	204,958,000	5.64%	2.36%
07/01/2008	7,293	1,798	13,113,000	214,181,000	6.12%	2.36%

(7) Present Value of Future Benefits: 50,178,000

(8) Estimated Reserve of Assets
    Available for Medical Premiums: 21,900,071

(9) Present Value of Future Salaries: 1,201,108,000

Actuarial assumptions:

Investment Yield:	8.00%
Growth in Covered Payroll:	4.50%
Growth in Retiree Rolls:	7.00%
Funding:	10 year

TABLE 11
RETIREE HEALTH INSURANCE 10-YEAR COST PROJECTION
DENTAL BENEFITS

	(1)	(2)	(3)	(4)	(5)	(6)
					Cost as a Percentage of Payroll	
	Annual Cost	Number of		Total	Actual	Level Funded
Year	Per Retiree	Insured Retirees	Annual Cost	Covered Payroll	Percentage	Percentage
			(1) x (2)		(3) / (4)	[(7) - (8)]/(9)
07/01/1999	711	1,011	719,000	144,124,780	0.50%	0.48%
07/01/2000	775	1,082	838,000	150,610,000	0.56%	0.48%
07/01/2001	837	1,157	969,000	157,387,000	0.62%	0.48%
07/01/2002	896	1,239	1,110,000	164,469,000	0.67%	0.48%
07/01/2003	950	1,325	1,259,000	171,870,000	0.73%	0.48%
07/01/2004	1,002	1,418	1,421,000	179,604,000	0.79%	0.48%
07/01/2005	1,057	1,517	1,604,000	187,686,000	0.85%	0.48%
07/01/2006	1,115	1,623	1,810,000	196,132,000	0.92%	0.48%
07/01/2007	1,176	1,737	2,043,000	204,958,000	1.00%	0.48%
07/01/2008	1,241	1,859	2,307,000	214,181,000	1.08%	0.48%

(7) Present Value of Future Benefits: 9,069,000
(8) Estimated Reserve of Assets
    Available for Medical Premiums: 3,148,170
(9) Present Value of Future Salaries: 1,201,108,000

Actuarial assumptions:

Investment Yield:	8.00%
Growth in Covered Payroll:	4.50%
Growth in Retiree Rolls:	7.00%
Funding:	10 year

FUNDING STATUS

EVALUATION OF FUNDING STATUS

Background

The evaluation of the System's funding status is simply the comparison of its actual value of assets to a target value of assets. There are two funding status measures calculated for the System:

Funding Status Measure	Target Assets	Actual Assets	Purpose
Funding Progress (GASB No. 25)	Actuarial Accrued Liability	Actuarial Value of Assets	Progress toward funding UAAL

This section of the report provides the System's funding status under each of these measures, followed by an exhibit which summarizes the System's funding history.

Funding Progress – GASB No 25

The GASB 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). These statements, effective for plan years 1998 and 1997, respectively, require funding status to be measured based upon the actuarial funding method adopted by the Board of Retirement, i.e., the Entry Age Normal Funding Method. Thus, the target value of assets is equal to the Actuarial Accrued Liability (AAL) and the actual value of assets is the Actuarial Value of Assets developed earlier in this report. These new GASB standards superseded GASB Statement No. 5 in its entirety.

The funding ratios for June 30, 1993, 1995, 1997 and 1999 are as follows:

Actuarial Valuation Date	Actuarial Value of Assets [1] (a)	Entry Age Actuarial Accrued Liability (AAL) [2] (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
06/30/1993	$714,592,000	$716,123,000	$1,531,000	99.8%	$98,831,000	2%
06/30/1995	$854,414,000	$828,739,000	($25,675,000)	103.1%	$109,196,000	-24%
06/30/1997 [3]	$1,124,294,000	$1,030,168,000	($94,126,000)	109.1%	$129,850,000	-72%
06/30/1999	$1,440,117,000	$1,249,014,000	($191,103,000)	115.3%	$144,125,000	-133%

[1] Excludes accounts payable and postemployment healthcare plan assets.

[2] Excludes postemployement healthcare liability.

[3] After reflection of the Arbitrator Decision to improve Retirement and Health Benefits in 1998, including the impact of FLSA pay.

ACTUARIAL BALANCE SHEET

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 City and Employee 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 city.

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

1. The Present Value of Future City Normal Costs: Using the Entry Age Normal Cost Method, the City budgets a certain percentage of payroll which will be sufficient to fund benefits for members from their entry into the Plan. 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 Plan members. For this valuation, the Normal Cost percentage is 21.67% to the Retirement Plan and 1.54% to the medical and dental plans.

2. The Unfunded Actuarial Accrued Liability: The portion of the present value of future City contributions which will not be funded by the future Entry Age Normal Cost contributions is the (Prefunded)/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 City 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. The UAAL percentage is (9.75%).

Actuarial Balance Sheet
As of June 30, 1999

Assets

	BASIC	COL	TOTAL
1. Total Actuarial Value of Assets	$1,132,666,902	$452,280,955	$1,584,947,858
2. Present Value of Future Contributions by Members			
a. Retirement	$87,627,481	$33,654,643	$121,282,124
b. Medical and Dental	$27,356,250	$0	$27,356,250
2. Present Value of Future Contributions by the City:			
a. Normal Cost	$233,673,283	$89,745,716	$323,418,999
b. Unfunded Actuarial Accrued Liability	($147,347,321)	($43,755,705)	($191,103,027)
c. Medical and Dental	$6,842,509	$0	$6,842,509
4. Total Actuarial Assets	$1,340,819,104	$531,925,609	$1,872,744,713

Liabilities

	BASIC	COL	TOTAL
5. Present Value of Retirement Allowances Payable to Present Retired Members	$364,776,054	$228,000,347	$592,776,401
6. Present Value of Retirement Allowances to be Granted:			
a. Service Retirement	$418,120,210	$161,293,857	$579,414,067
b. Disability Retirement	$372,696,488	$140,626,195	$513,322,683
7. Present Value of Death Benefits to be Granted	$3,946,804	$1,645,409	$5,592,213
8. Present Value of Members' Contributions to be Returned upon Withdrawal before Retirement	$2,249,548	$359,801	$2,609,349
9. Present Value of Medical and Dental Benefits	$59,247,000	$0	$59,247,000
10. Accounts Payable	$119,783,000	$0	$119,783,000
11. Total Actuarial Liabilities	$1,340,819,104	$531,925,609	$1,872,744,713

SYSTEM ASSETS

SYSTEM ASSETS

The following asset information was provided to us by the System's staff. We have not audited or verified these figures. These assets are at market value and actuarial value.

	June 30, 1999	June 30, 1997	Percent Change
Actuarial Value	$1,464,185,000	$1,139,401,000	28.5%
Market Value	$1,579,385,000	$1,252,614,000	26.1%

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

	Market Value	Actuarial Value
Value of Assets at 6/30/97	$1,252,614,000	$1,139,401,000
Contributions:		
Employer	53,110,000	53,110,000
Members	26,718,000	26,718,000
Benefits Paid to Participants	80,984,000	80,984,000
Expenses Paid	11,368,000	11,368,000
Investment Earnings	339,295,000	337,308,000
Value of Assets at 6/30/99	**$1,579,385,000**	**$1,464,185,000**
ANNUALIZED NET RATE OF RETURN (Net of Expenses)	**12.33%**	**13.41%**

The 13.41% annualized rate of return on the actuarial value of assets over the two years ending June 30, 1999 is more than the 8% rate assumed in the June 30, 1997 actuarial valuation. This resulted in an actuarial gain which reduced the budgeted contribution for the City.

SYSTEM ACCOUNTING ASSETS,
RESERVES AND OTHER LIABILITIES
Investment of Retirement Plan

	Retirement Fund	Cost-of-Living Fund	Total
ASSETS			
Securities	$1,146,311,000	$399,773,000	$1,546,084,000
Securities Lending Collateral	67,588,000	27,605,000	95,193,000
Receivable from City of San Jose			
Employee Contributions	474,000	172,000	646,000
Employer Contributions	670,000	571,000	1,241,000
Accrued Investment Income	5,910,000	2,036,000	7,946,000
Due from Brokers and Others	13,744,000	5,356,000	19,100,000
Subtotal	$1,234,697,000	$435,513,000	$1,670,210,000
LIABILITIES			
Due to Brokers	$ 13,181,000	$ 6,368,000	$ 19,549,000
Securities Lending Collateral	67,588,000	27,605,000	95,193,000
Other Liabilities	2,561,000	541,000	3,102,000
Subtotal	$83,330,000	$34,514,000	$117,844,000
Net Assets Available for Benefits	$1,151,367,000	$400,999,000	$1,552,366,000

SYSTEM ACCOUNTING ASSETS,
RESERVES AND OTHER LIABILITIES
Investment of Postemployment Healthcare Plans

	Retirement Fund	Cost-of-Living Fund	Total
ASSETS			
Securities	$26,678,000	-	$26,678,000
Securities Lending Collateral	1,573,000	-	1,573,000
Receivable from City of San Jose			
Employee Contributions	86,000	-	86,000
Employer Contributions	163,000	-	163,000
Accrued Investment Income	138,000	-	138,000
Due from Brokers and Others	320,000	-	320,000
Subtotal	$28,958,000	-	$28,958,000
LIABILITIES			
Due to Brokers	$307,000	-	$307,000
Securities Lending Collateral	1,573,000	-	1,573,000
Other Liabilities	59,000	-	59,000
Subtotal	$1,939,000	-	$1,939,000
Net Assets Available for Benefits	$27,019,000	-	$27,019,000

APPENDICES

APPENDIX A
MAJOR PROVISIONS OF THE RETIREMENT PLAN

Briefly summarized below are the major provisions of the 1961 San Jose Police and Fire Department Retirement Plan, as amended through June 30, 1999.

Final Average Salary (FAS)

Final average salary is defined as the highest 12 consecutive months of compensation earnable, not to exceed 108% of compensation paid to the member during the 12 months immediately preceding the last 12 months of service. FAS excludes overtime pay and expense allowances.

Return of Contributions

If a member should resign or die before becoming eligible for retirement, his or her contributions plus 2% interest per annum will be refunded.

Service Retirement Benefit

Members with 20 years of service who have attained age 55 are eligible to retire. Members age 70 (no service requirement) and members with 30 years of service, regardless of age, are also eligible to retire.

The normal service retirement benefit is 2.5% of FAS per year of service up to 20 years of service, plus 3.0% of FAS per year of service over 20, not to exceed 80% of FAS.

A special study was performed by the plan's prior actuary in 1992 (and subsequently adopted by the Board) which allows members with 25 years of service to retire at age 50 with unreduced benefits. Otherwise, members age 50 with 20 years of service receive their accrued service retirement benefit, reduced for interest below age 55.

Ten years of service are required for vesting purposes.

Disability Benefit

Nonservice-connected

Members with 2 years of service, regardless of age, are eligible for nonservice-connected disability. The benefit is 32% of FAS for the first 2 years of service plus 1% of FAS for each successive year. The maximum benefit is 50% of FAS.

Service-connected

Members may retire regardless of length of service, and the benefit is the greater of 2.5% of FAS per year of service up to 20 years of service, plus 3.0% per year of service over 20 (maximum 80% of FAS) or 50% of FAS.

Death Benefit (before and after retirement)

Nonservice-connected

Eligibility is based on 2 years of service, regardless of age. The spouse receives 24% of FAS for the first 2 years of service plus 0.75% of FAS for each successive year. The maximum benefit is 37.5% of FAS.

If a member has eligible dependent children (under age 18, or age 22 if a full time student), the benefits are as follows:

1 child	25% of FAS
2 children	37.5% of FAS
3 or more children	50% of FAS

The total benefits payable to a family shall not exceed 75% of FAS.

If a member does not have a spouse nor dependent children at death, a lump sum equal to the greater of the member's contributions or $1,000 is paid to the estate.

These benefits are payable for active member deaths and deaths after nonservice-connected disability retirement.

Service-connected

The spouse receives 37.5% of FAS. Eligible dependent children receive 25% of FAS per child. The total benefits payable to a family shall not exceed 75% of FAS.

These benefits are payable for active member deaths and deaths after service-connected disability retirement and service retirement.

Death Benefit - Inactive Members (after retirement)

The spouse receives 1.875% of FAS per year of service, not to exceed 37.5% of FAS. Eligible dependent children receive the following:

1 child	1.25% of FAS per year of service
2 children	1.875% of FAS per year of service
3 or more children	2.5% of FAS per year of service

The total benefits payable to a family shall not exceed 75% of FAS.

Cost of Living

The maximum increase in retirement allowance is 3% a year. The increases are based on the annual change in the Consumer Price Index.

Post-Retirement Health and Dental

Retirees and survivors with 15 years of service, or receiving a benefit of at least 37.5% of FAS, receive the same medical coverage that the City pays for an active member. Members must have retired from active service to be eligible.

Members' Retirement Contributions

The members' contribution rates are recalculated on an actuarial basis at each actuarial study. The members presently contribute at the rate of 10.22% of pay.

City's Retirement Contributions

The City presently contributes at a rate of 20.06% of pay for all members. The City rate is the percentage of salary necessary, on an actuarial basis, to provide for the payment of the benefits promised, also taking into account the contributions being made by the members and the assets on hand. These rates are changed in accordance with the results of each actuarial study.

APPENDIX B

SUMMARY OF ASSUMPTIONS AND FUNDING METHOD

Assumptions

Valuation Interest Rate   8%

Inflation Rate   4.50%

Post-Retirement Mortality

(a) Service

       Males   1994 Male Group Annuity Mortality Table
(set back 3 years)

       Females   1994 Female Group Annuity Mortality Table
set forward 1 year

(b) Disability   PERS Industrial Disability Table 88-92 (set back 2 years)

Pre-Retirement Mortality   Based upon the 6/30/99 Experience Analysis

Withdrawal Rates   Based upon the 6/30/99 Experience Analysis

Disability Rates   Based upon the 6/30/99 Experience Analysis

Service Retirement Rates   Based upon the 6/30/99 Experience Analysis

Salary Scales   10.50% for the first five years of service. Graded
increases thereafter ranging from 9.90% at age 25 to
4.60% at ages 60 and over. Of the total salary increases,
4.50% is for inflation.

Percentage of Members
  Married   85%

Reciprocity   75% of all terminated vested members are assumed to be
employed by a reciprocal entity.

Assets   Five-year smoothed recognition of total market return
that differs from the 8% return target.

Funding Method

The System's liability is being funded on the Entry Age Normal Cost method with the
Unfunded Actuarial Accrued Liability being amortized over a period of 40 years beginning
in 1977, with 18 years remaining on the June 30, 1999 valuation date.

PROBABILITIES OF SEPARATION
Prior to Retirement

Age	withdrawal 0-1	withdrawal 1-2	withdrawal 2-3	withdrawal 3-4	withdrawal 4-5	withdrawal 5-10	withdrawal 10+	deferred	ordinary disab.	duty disability	ordinary death	duty death	retirement AgeSv
<= 20	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0000	0.0000	0.0001	0.0000	0.0000
21	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0000	0.0001	0.0001	0.0000	0.0000
22	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0000	0.0001	0.0001	0.0000	0.0000
23	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0000	0.0001	0.0001	0.0000	0.0000
24	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0000	0.0001	0.0001	0.0000	0.0000
25	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0000	0.0002	0.0001	0.0000	0.0000
26	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0001	0.0002	0.0001	0.0001	0.0000
27	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0001	0.0003	0.0001	0.0001	0.0000
28	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0001	0.0002	0.0001	0.0001	0.0000
29	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0001	0.0002	0.0001	0.0001	0.0000
30	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0001	0.0007	0.0001	0.0001	0.0000
31	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0001	0.0006	0.0001	0.0001	0.0000
32	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0001	0.0003	0.0001	0.0001	0.0000
33	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0001	0.0008	0.0002	0.0002	0.0000
34	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0002	0.0015	0.0002	0.0002	0.0000
35	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0004	0.0015	0.0002	0.0002	0.0000
36	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0006	0.0015	0.0002	0.0002	0.0000
37	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0008	0.0018	0.0002	0.0002	0.0000
38	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0010	0.0019	0.0002	0.0002	0.0000
39	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0012	0.0020	0.0002	0.0002	0.0000
40	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0014	0.0020	0.0002	0.0003	0.0000
41	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0016	0.0020	0.0002	0.0003	0.0000
42	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0016	0.0021	0.0002	0.0003	0.0000
43	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0016	0.0029	0.0002	0.0003	0.0000
44	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0070	0.0016	0.0041	0.0003	0.0003	0.0000
45	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0038	0.0014	0.0078	0.0003	0.0003	0.0000
46	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0038	0.0012	0.0100	0.0003	0.0004	0.0000
47	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0038	0.0010	0.0128	0.0003	0.0004	0.0000
48	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0038	0.0010	0.0161	0.0003	0.0004	0.0000
49	0.0900	0.0130	0.0130	0.0130	0.0130	0.0085	0.0020	0.0038	0.0010	0.0204	0.0003	0.0004	0.0000
50	0.0900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0010	0.0449	0.0004	0.0004	0.1300
51	0.0900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0010	0.0526	0.0004	0.0004	0.1250
52	0.0900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0010	0.0603	0.0004	0.0005	0.1000
53	0.0900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0010	0.0677	0.0005	0.0005	0.0900
54	0.0900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0010	0.0750	0.0005	0.0006	0.0800
55	0.0900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1193	0.0005	0.0006	0.1500
56	0.0900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1469	0.0006	0.0007	0.1400
57	0.0900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1745	0.0006	0.0008	0.1284
58	0.0900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1899	0.0007	0.0008	0.1276
59	0.0900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1959	0.0008	0.0009	0.1691
60	0.0900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1959	0.0009	0.0010	0.2101
61	0.0900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1959	0.0010	0.0010	0.2506
62	0.0900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1959	0.0011	0.0011	0.2490
63	0.0900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1959	0.0012	0.0012	0.3456
64	0.0900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1959	0.0014	0.0012	0.4490
65	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000

YEARS OF LIFE EXPECTANCY AFTER SERVICE RETIREMENT
San Jose Police and Fire

Age	Member	Beneficiary	Age	Member	Beneficiary
50	32.80	33.29	80	9.52	9.30
51	31.87	32.34	81	8.98	8.74
52	30.94	31.40	82	8.46	8.20
53	30.01	30.47	83	7.97	7.68
54	29.09	29.53	84	7.51	7.18
55	28.18	28.61	85	7.07	6.71
56	27.28	27.68	86	6.65	6.25
57	26.38	26.77	87	6.24	5.83
58	25.49	25.86	88	5.86	5.42
59	24.61	24.97	89	5.48	5.05
60	23.74	24.09	90	5.12	4.70
61	22.88	23.22	91	4.78	4.37
62	22.04	22.36	92	4.45	4.07
63	21.20	21.52	93	4.15	3.79
64	20.38	20.69	94	3.87	3.53
65	19.57	19.88	95	3.61	3.28
66	18.78	19.09	96	3.37	3.06
67	18.01	18.30	97	3.15	2.85
68	17.26	17.53	98	2.95	2.65
69	16.53	16.77	99	2.77	2.48
70	15.81	16.01	100	2.60	2.31
71	15.11	15.26	101	2.46	2.16
72	14.43	14.53	102	2.33	2.02
73	13.77	13.81	103	2.20	1.89
74	13.11	13.11	104	2.09	1.78
75	12.48	12.43	105	1.97	1.70
76	11.85	11.76	106	1.87	1.63
77	11.25	11.11	107	1.76	1.57
78	10.66	10.49	108	1.67	1.53
79	10.08	9.88	109	1.60	1.50
			110	1.53	1.47

Member
94 GAM Male -3

Beneficiary
94 GAM Female +1

YEARS OF LIFE EXPECTANCY AFTER DISABILITY RETIREMENT
San Jose Police and Fire

Age	Member	Age	Member	Age	Member
20	56.78	50	28.66	80	8.42
21	55.81	51	27.79	81	8.00
22	54.84	52	26.93	82	7.61
23	53.86	53	26.07	83	7.23
24	52.89	54	25.22	84	6.87
25	51.92	55	24.39	85	6.51
26	50.95	56	23.56	86	6.16
27	49.98	57	22.75	87	5.82
28	49.02	58	21.94	88	5.48
29	48.05	59	21.16	89	5.15
30	47.09	60	20.38	90	4.81
31	46.13	61	19.62	91	4.48
32	45.18	62	18.88	92	4.16
33	44.22	63	18.15	93	3.86
34	43.27	64	17.44	94	3.57
35	42.32	65	16.75	95	3.30
36	41.38	66	16.08	96	3.04
37	40.43	67	15.43	97	2.79
38	39.49	68	14.80	98	2.56
39	38.56	69	14.18	99	2.35
40	37.63	70	13.58	100	2.15
41	36.71	71	13.00	101	1.95
42	35.79	72	12.43	102	1.77
43	34.88	73	11.87	103	1.61
44	33.98	74	11.33	104	1.45
45	33.08	75	10.81	105	1.30
46	32.18	76	10.30	106	1.17
47	31.30	77	9.80	107	1.04
48	30.41	78	9.32	108	0.92
49	29.53	79	8.86	109	0.81

88' - 92' PERS Industrial Disability -2

System Membership and Benefit Statistics

Active Members			
	June 30, 1999	June 30, 1997	Percent Change
A. Number	1,953	1,954	-0.1%
B. Average Age	39.86	39.64	0.6%
C. Average Years of Service	12.82	12.67	1.2%
D. Annual Salary			
i. Total	$ 144,125,000	$ 129,850,000	11.0%
ii. Average	$ 73,797	$ 66,453	11.1%

Retired and Inactive Vested Members			
	June 30, 1999	June 30, 1997	Percent Change
Retired Members			
A. Service Retirement			
i. Number	273	210	30.0%
ii. Annual Allowance			
Basic Only	$11,548,137	$8,119,000	42.2%
COLA	$1,491,171	$937,000	59.1%
Total	$13,039,308	$9,056,000	44.0%
Average Monthly Amount	$3,980	$3,594	10.8%
B. Disability Retirement			
i. Number	630	570	10.5%
ii. Annual Allowance			
Basic Only	$19,413,166	$15,585,000	24.6%
COLA	$5,549,404	$4,460,000	24.4%
Total	$24,962,570	$20,045,000	24.5%
Average Monthly Amount	$3,302	$2,931	12.7%
C. Beneficiaries			
i. Number	157	160	-1.9%
ii. Annual Allowance			
Basic Only	$1,898,951	$1,846,000	2.9%
COLA	$1,171,641	$1,043,000	12.3%
Total	$3,070,592	$2,889,000	6.3%
Average Monthly Amount	$1,630	$1,505	8.3%
Inactive Vested Members			
A. Number	35	32	9.4%

CITY OF SAN JOSE - POLICE AND FIRE
ACTIVE MEMBERS

YEARS OF SERVICE

Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL
0-19										0
20-24	18									18
	52,715									52,715
25-29	187	28	2							217
	58,454	67,060	55,100							59,534
30-34	187	180	40	1						408
	59,931	71,569	75,301	73,581						66,606
35-39	66	115	142	43						366
	63,984	71,127	76,702	78,324						72,847
40-44	11	27	84	161	26	2				311
	66,617	72,452	77,663	81,560	83,234	79,390				79,314
45-49	2	9	36	110	117	41				315
	73,592	73,205	78,064	80,599	85,333	83,801				82,229
50-54	2	3	12	32	55	121	10			235
	45,216	69,586	70,354	79,117	82,105	84,196	90,111			82,042
55-59			1	1	12	33	25	3		75
			73,581	85,198	72,931	79,643	78,716	86,549		78,530
60-64							5	3		8
							82,114	90,431		85,233
65-69										0
70-74										0
75+										0
Total	473	362	317	348	210	197	40	6	0	1,953
	59,789	71,170	76,548	80,619	83,519	83,302	81,990	88,490	0	73,797

Total Salary	S	144,124,782
Average Age		39.86
Average Service		12.67

SERVICE RETIREMENT

Age Group	YEARS OF RETIREMENT									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL
BELOW 30										0
30-34										0
35-39										0
40-44										0
45-49										0
50-54	56 52,441									56 52,441
55-59	71 48,798	31 52,736								102 49,995
60-64	18 51,638	53 44,603	1 50,349							72 46,442
65-69		10 53,329	11 38,870	1 21,711						22 44,662
70-74			3 48,785		2 19,312					5 36,996
75-79					4 34,212					4 34,212
80-84					1 22,446	6 32,764				7 31,290
85-89						2 31,637				2 31,637
90+						1 28,995		2 21,852		3 24,233
Total	145 50,558	94 48,213	15 41,618	1 21,711	7 28,274	9 32,095		2 21,852		273 47,763

Total Retired Benefit	$ 13,039,308
Average Age	59.85
Average Years Retired	5.73

CITY OF SAN JOSE - POLICE AND FIRE

DISABLED RETIREES

YEARS OF RETIREMENT

Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL
BELOW 30										0
30-34										0
35-39	4	3	1							8
	32,944	30,651	25,866							31,199
40-44	3	4		1						8
	35,778	30,317		18,740						30,918
45-49	12	4	3		1					20
	40,266	30,167	28,612		17,474					35,359
50-54	45	12	11	2	7					77
	51,853	35,629	27,679	24,393	19,979					42,260
55-59	81	38	12	9	8	5	1			154
	51,085	43,969	30,532	24,400	20,649	17,429	16,142			43,267
60-64	23	53	31	17	6	6	2			138
	51,033	50,529	37,654	30,113	21,040	19,361	16,265			42,072
65-69	2	16	54	14	4	9	2			101
	55,899	49,787	42,915	29,214	26,418	21,938	16,992			39,326
70-74		1	12	36	9	4	2	1		65
		64,835	44,313	32,870	28,453	24,893	17,564	14,350		33,616
75-79			1	9	19	9				38
			38,137	30,545	32,974	28,688				31,519
80-84					8	8				16
					30,175	35,649				32,912
85-89						4			1	5
						34,895			14,448	30,806
90+										0
Total	170	131	125	88	62	45	7	1	1	630
	49,877	45,586	38,697	30,299	27,071	26,295	16,826	14,350	14,448	39,623

Total Retired Benefit	$ 24,962,570
Average Age	61.92
Average Years Retired	11.29

CITY OF SAN JOSE - POLICE AND FIRE

BENEFICIARIES

YEARS OF RETIREMENT

Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL
0-19		1	2							3
		16,184	10,402							12,329
20-24	1		1	2						4
	16,162		13,346	11,231						12,993
25-29										0
30-34										0
35-39		2	2							4
		12,401	15,071							13,736
40-44		1	3							4
		42,397	23,609							28,306
45-49	3	3	3							9
	25,949	29,661	31,642							29,084
50-54	3	2	5		1					11
	20,218	39,955	19,377		11,109					22,596
55-59	7	6	5							18
	16,187	20,289	18,249							18,127
60-64	7	6	2	5	2					22
	14,472	23,615	15,162	14,641	9,579					16,622
65-69	7	5	6	1	1	1				21
	24,304	24,646	21,511	16,274	12,596	17,337				22,316
70-74	1	7	5		5	4				22
	22,239	19,788	16,592		21,356	19,718				19,517
75-79	4	5	2	1	2	1				15
	14,192	19,587	20,476	17,543	16,055	44,076				19,292
80-84	1	3	4	1	2	1				12
	17,349	17,916	22,370	13,188	14,245	16,926				18,265
85-89	3	2	3		2					10
	16,712	14,266	17,645		11,606					15,482
90+			1			1				2
			38,214			11,586				24,900
Total	37	43	44	10	15	8				157
	18,538	22,271	20,048	14,267	15,564	21,100				19,558

Total Retired Benefit	$ 3,070,592
Average Age	63.92
Average Years Retired	10.36

APPENDIX E

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 System's current level of benefits to have been funded by normal costs from date of entry into the System 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.

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 System'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 system.

Assets: Underlying funds available to provide for the System'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 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.

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

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.

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

Normal Cost: That annual contribution 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 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.

Projected Unit Credit Actuarial Funding Method: An actuarial method for pre-funding future retirement benefits. Under this method the member contribution stream plus the employer contribution stream is determined as a pro-rata portion of the amount necessary to finance future benefits for current members. The pro-ration is based on the pattern by which benefits accrue to member by age and service.

UAAL: (See Unfunded Actuarial Accrued Liability).

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