

**SANTA BARBARA COUNTY
EMPLOYEES' RETIREMENT SYSTEM**

**REPORT ON THE
ACTUARIAL VALUATION
AS OF JUNE 30, 2003**



October 10, 2003

Board of Retirement
Santa Barbara County
Employees' Retirement System
County Administration Building, Room 301
105 East Anapamu Street
Santa Barbara, CA 93101

Members of the Board:

We are pleased to present our report on the actuarial valuation of your Retirement System as of June 30, 2003.

We hereby certify that the valuation was performed in accordance with generally accepted actuarial principles and practices.

We look forward to discussing this report with the Board and wish to express our appreciation for the invaluable cooperation extended to us by the Retirement Staff during the course of this study.

Respectfully submitted,

Handwritten signature of Krystyna H. Upstill.

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SECTION I: EXECUTIVE SUMMARY

We were commissioned by the Board to perform an actuarial valuation of the Retirement System as of June 30, 2003, using the statistical information available for the active, inactive and retired membership, and the financial statements as of June 30, 2003.

The results presented herein are based upon the unaudited data supplied by the Retirement Office and the benefits for General Plans 5A, 2, 5B, and Safety Plans 4A and 4B, and Air Pollution Control District (APCD) Plans 1 and 2 members under Sections 31676.12, 31486.4, 31676.12, 31664.2, and 31676.15, respectively, of the County Employees Retirement Law of 1937.

A brief summary of the results of our valuation is presented below. More comprehensive information on each topic is presented in the relevant section of the report.

Section II - Statistical Highlights

Total System membership increased from 7,547 to 7,578. Active membership decreased by 1.0% while total covered payroll increased by \$5,403,000, or 2.1%.

The number of retired members increased by 3.1% and the retired pension roll increased by 10.5%.

Section III - Summary of Actuarial Assumptions

Noneconomic Assumptions

An experience study of the members of your System was performed as of June 30, 2003. We analyzed the plan experience during the two and one-half-year period from January 1, 2001 through June 30, 2003 regarding service retirements, deaths, disabilities and terminations of employment, and compared the number of actual terminations to the incidence expected using the then current actuarial assumptions. Where the results differed materially, we recommended modifying the

assumptions. We will continue to use these actuarial assumptions until the next experience analysis, which is due to be performed at the time of the June 30, 2006 actuarial valuation.

Economic Assumptions

In order to ensure that the same inflationary expectations are consistently included in all of the economic assumptions, we have used a building block approach in developing the economic assumptions. That is, we assumed that the investment return earned over the long term is comprised of two components: inflation and real rate of return. In addition, we have assumed that future salary increases are comprised of inflation and merit and longevity increases.

Our recommendations were summarized in a report dated September 10, 2003 and were presented to, and adopted by, the Board of Retirement at their September 17, 2003 meeting. The summary of our findings and recommendations are incorporated in the body of this report.

Section IV - Contribution Rates

A comparison between the current, recalculated and recommended employer and employee contribution rates is shown on the following page. The current and recalculated rates utilize the same actuarial assumptions as those used to conduct the December 31, 2000 valuation. The recommended rates utilize the actuarial assumptions adopted as part of the June 30, 2003 experience study. All contribution rates and corresponding annual amounts shown on the following page include the amounts payable by the Air Pollution Control District.

	EMPLOYER		EMPLOYEE	
	% of Payroll	Annual Amount	% of Payroll	Annual Amount
Current Rates – 12/31/2002	13.92%	\$35,059,000	6.42%	\$15,254,000
Recalculated Rates – 6/30/2003*	14.45%	\$37,181,000	6.51%	\$15,802,000
Recommended Rates – 6/30/2003*	15.21%	\$39,114,000	6.59%	\$16,026,000

* Based on June 30, 2003 population and payroll.

The higher *recalculated* employer contribution rate reflects higher retirees benefits offset by higher than expected Plan assets. The increase in the recommended rates reflects the changes made in the non-economic assumptions.

The table below summarizes the significant changes in unfunded liabilities and contribution rates since the last valuation.

	Unfunded Liability	Contribution Rate
Values as of December 31, 2002	\$67,649,000	13.92%
Adjustment through June 30, 2003	9,968,000	0.33%
Change due to		
Asset losses/(gains)	(10,810,000)	(0.36)%
Retiree losses/(gains)	11,548,000	0.38%
Other losses (demographic experience)	6,406,000	0.18%
Change in assumptions	23,438,000	0.76%
Total changes	40,550,000	1.29%
Values as of June 30, 2003	\$108,199,000	15.21%

Section V - Assets and Liabilities

Actuarial Value of Assets

An actuarial value of assets is used for purposes of determining employer contribution rates. Under this method, the difference between expected and actual market returns are spread over five years (i.e., only 20% is recognized in any one year). As of June 30, 2003 the actuarial value of assets was \$1,346,664,733. The value of assets was \$1,169,417,097 at market value. The returns on an actuarial value basis, net of expenses, were 4.8% and 2.9% for the first six months of 2003 and 2002 calendar years, respectively.

Actuarial Balance Sheet

The actuarial balance sheet compares the present value of all future benefits anticipated to be paid for the current membership with the sources of funds to be used to provide these benefits. It illustrates that if recommended contribution levels made in the future prove out over time, current assets plus future employer and member contributions will be adequate to meet future benefit payments for the current membership.

Funding Ratio - GASB 25

The Governmental Accounting Standards Board Statement No. 25 (GASB 25) requires that the funding progress be shown based on the same funding method which was used to develop the System's contribution requirements. The following table shows the funding ratio based on the Entry Age Normal Cost funding method:

SCHEDULE OF FUNDING PROGRESS GASB 25 (dollar amounts in thousands)						
Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL as a Percent of Covered Payroll
1/1/95	\$ 562,861	\$ 643,453	\$ 80,592	87.5%	\$ 140,571	57.3%
1/1/96	\$ 624,823	\$ 711,869	\$ 87,046	87.8%	\$ 154,120	56.5%
1/1/97	\$ 693,301	\$ 758,772	\$ 65,471	91.4%	\$ 159,906	40.9%
1/1/98	\$ 799,539	\$ 873,624	\$ 74,085	91.5%	\$ 171,602	43.2%
1/1/99	\$ 938,295	\$ 950,205	\$ 11,910	98.7%	\$ 184,291	6.5%
1/1/00	\$ 1,068,357	\$ 1,067,377	\$ (980)	100.1%	\$ 199,448	(0.5)%
1/1/01	\$ 1,171,138	\$ 1,145,519*	\$(25,619)	102.2%	\$ 219,739	(11.7)%
1/1/03	\$ 1,295,956	\$ 1,363,605	\$ 67,649	95.0%	\$ 251,834	26.9%
6/30/03	\$ 1,346,665	\$ 1,454,864	\$ 108,199	92.6%	\$ 257,237	42.1%

* Excluding benefit improvements.

Section VI - Appendix

A summary of the major provisions of the Plan is included in the Appendix, together with detailed information on the actuarial assumptions, demographic information and plan assets. General, Safety, and APCD member contribution rates, by entry age, are shown in Schedule 5.

SECTION II: STATISTICAL HIGHLIGHTS

Our June 30, 2003 actuarial valuation of your System was based on the following data. For comparison, we also show a summary of the December 31, 2002 statistical information.

SUMMARY OF INACTIVE MEMBERSHIP			
	December 31, 2002	June 30, 2003	Percentage Change During the Period
TOTAL			
Number*	652	660	1.2%

* Excludes pending withdrawals.

SUMMARY OF RETIRED MEMBERSHIP			
	December 31, 2002	June 30, 2003	Percentage Change During the Period
TOTAL			
Number	2,275	2,345	3.1%
Basic Annual Allowance	\$33,416,000	\$36,770,000	10.0%
Average Basic Monthly Allowance	\$1,224	\$1,307	6.8%
Total Annual Allowance	\$42,771,000	\$47,280,000	10.5%
Average Total Monthly Allowance	\$1,567	\$1,680	7.2%
Average Age	70.02	70.26	0.3%

SUMMARY OF ACTIVE MEMBERSHIP			
	December 31, 2002	June 30, 2003	Percentage Change During the Period
TOTAL			
Number	4,620	4,573	(1.0)%
Annual Payroll †	\$251,834,000	\$257,237,000	2.1%
Average Monthly Salary	\$4,542	\$4,688	3.2%
Average Age	43.77	43.91	0.3%
Average Service	9.66	9.70	0.4%

† Represents the annualization of active members' pay rates on June 30, 2003.

SUMMARY OF ACTIVE MEMBERSHIP			
	December 31, 2002	June 30, 2003	Percentage Change During the Period
GENERAL PLAN 5A			
Number	1,609	1,554	(3.4)%
Annual Payroll*	\$91,806,000	\$90,825,000	(1.1)%
Average Monthly Salary	\$4,755	\$4,870	2.4%
Average Age	49.18	49.32	0.3%
Average Service	15.55	15.90	2.3%
GENERAL PLAN 2			
Number	41	38	(7.3)%
Annual Payroll*	\$1,973,000	\$1,886,000	(4.4)%
Average Monthly Salary	\$4,010	\$4,135	3.1%
Average Age	47.98	48.61	1.3%
Average Service	13.32	13.59	2.0%
GENERAL PLAN 5B			
Number	1,950	1,970	1.0%
Annual Payroll*	\$91,918,000	\$96,563,000	5.1%
Average Monthly Salary	\$3,928	\$4,085	4.0%
Average Age	40.23	40.72	1.2%
Average Service	3.68	3.84	4.3%
SAFETY PLAN 4A			
Number	443	421	(5.0)%
Annual Payroll*	\$32,761,000	\$32,591,000	(0.5)%
Average Monthly Salary	\$6,163	\$6,451	4.7%
Average Age	45.50	45.50	0.0%
Average Service	17.74	17.68	(0.3)%
SAFETY PLAN 4B			
Number	518	529	2.1%
Annual Payroll*	\$29,702,000	\$31,544,000	6.2%
Average Monthly Salary	\$4,778	\$4,969	4.0%
Average Age	38.03	37.90	(0.3)%
Average Service	6.49	6.50	0.2%
APCD PLAN 1			
Number	42	42	0.0%
Annual Payroll*	\$2,842,000	\$2,873,000	1.1%
Average Monthly Salary	\$5,639	\$5,700	1.1%
Average Age	48.79	49.19	0.8%
Average Service	14.31	15.09	5.5%
APCD PLAN 2			
Number	17	19	11.8%
Annual Payroll*	\$830,000	\$955,000	15.1%
Average Monthly Salary	\$4,069	\$4,189	2.9%
Average Age	44.82	43.68	(2.5)%
Average Service	2.65	2.93	10.6%

* Represents the annualization of active members' pay rates on June 30, 2003.

SECTION III: SUMMARY OF ACTUARIAL ASSUMPTIONS

To carry out an actuarial valuation of the assets and liabilities of your System, the actuary must first adopt assumptions with respect to each of the following items:

Noneconomic assumptions

- ♦ The probabilities of members separating from active service on account of nonvested and vested withdrawal, retirement for service, death, and disability, and
- ♦ The mortality rates to be experienced among retired persons.

Economic assumptions

- ♦ Interest earnings to be realized on the funds over many years in the future, and
- ♦ The relative increases in a member's salary from the date of the valuation to the date of separation from active service.

We discuss each of the above items in the following paragraphs of this Section.

NONECONOMIC ASSUMPTIONS

Rates of Separation from Active Service

In connection with the June 30, 2003 actuarial valuation, we compared the expected number of terminations from active service to the number actually experienced during the two and one-half-year period beginning January 1, 2001 and ending June 30, 2003. Based on this comparison and the trends observed over the prior years, the probabilities of separation were adjusted accordingly. We are using the probabilities developed in the June 30, 2003 study to determine the costs shown in this report.

A complete listing of the rates of separation from active service can be found in Schedule 6 of the Appendix. These rates should be viewed in the aggregate rather than examining each of them

separately. This is due to interdependency of the rates. For example, if turnover were to increase, there would be fewer retirements.

Mortality After Retirement

At the time of the June 30, 2003 actuarial valuation, we also analyzed mortality after retirement. The following mortality tables were adopted for use at that time:

Revised Service Retirement Mortality Tables

- ◆ General Males 1994 Group Annuity Mortality Table for Males, setback two years
- ◆ General Females 1994 Group Annuity Mortality Table for Females, set forward 1 year
- ◆ Safety Males 1994 Group Annuity Mortality Table for Males, setback two years
- ◆ Safety Females 1994 Group Annuity Mortality Table for Females, set forward 1 year

Note: No setback means that the table is used as published. When the table is set forward one year, the member's life expectancy is that of someone one year older. When the table is set back one year, the member's life expectancy is that of someone one year younger.

Disability Retirement Mortality Tables

- ◆ General 1981 Disability Mortality Table for General Members, with no setback
- ◆ Safety 1981 Disability Mortality Table for Safety Members, setback two years

A full listing of the life expectancies based on these tables is shown in Schedule 7 of the Appendix. The costs developed for this report are based upon these tables.

Mortality Tables for Employee Contribution Rates

As a result of the June 30, 2003 changes in the mortality tables after service retirement noted above, employee contribution rates are based on the following unisex mortality tables.

- ◆ General 1994 Group Annuity Mortality Table for Males, set back 3 years
- ◆ Safety 1994 Group Annuity Mortality Table for Males, set back 2 years

The full set of employee contribution rates is shown in Schedule 5 of the Appendix.

ECONOMIC ASSUMPTIONS

In setting the economic assumptions, we take a building block approach. Specifically, we first look at the rate of inflation which underlies both the total rate of return and the salary scale assumptions. To aid us in determining an appropriate inflation rate for your System, we have reviewed long-term historical inflation averages, recent trends, and the assumptions adopted by other public retirement systems governed by the 1937 Act. It should be noted that we have placed more emphasis on long-term historical averages and long-term future predictions than on the more recent, short-term trends. This helps to minimize fluctuations which are more apparent in short-term trends.

Secondly, we review the anticipated real rate of return on investments. The real rate of return is dependent on the anticipated returns on classes of investments and the asset allocation of the System's funds. To develop the individual real rates of return we utilize various empirical studies. By applying the results of these studies to the System's target asset allocation, we develop the real rate of return. This rate may then be adjusted for any known or anticipated changes in the economy that may occur. Using our building block approach, we combine the underlying inflation assumption with the real rate of return to develop the total rate of return assumption (interest rate assumption).

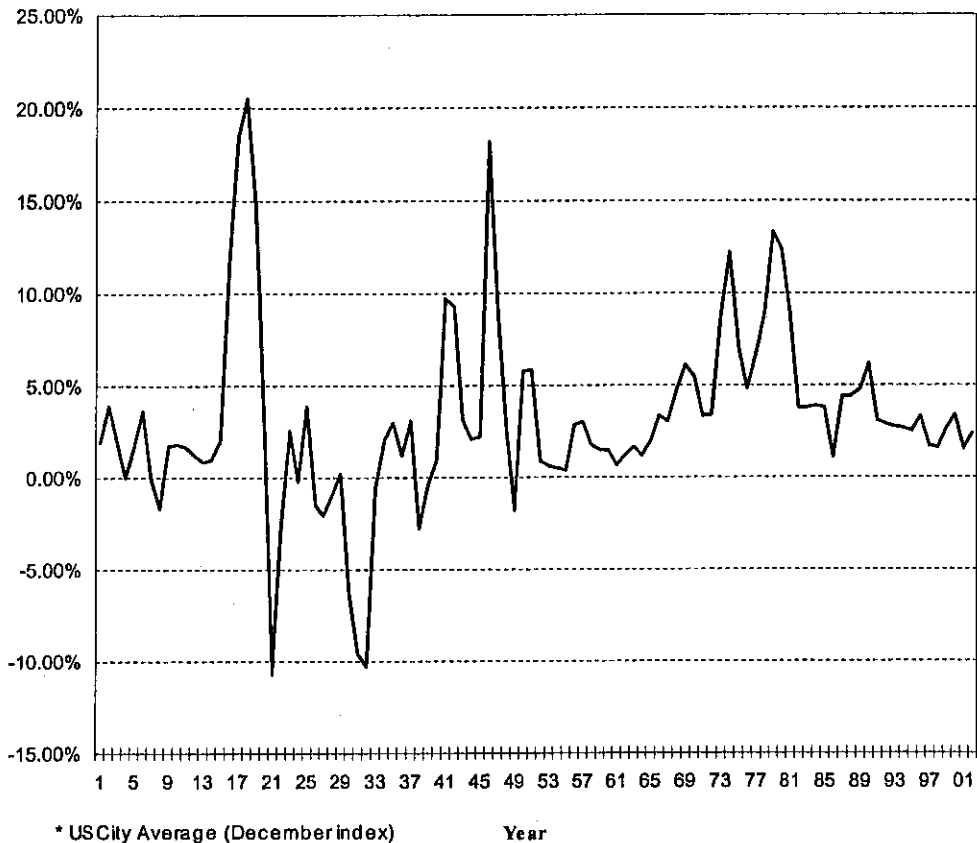
The salary scale assumption is developed in a similar manner. The inflation rate is combined with merit and longevity increases to produce a total salary scale assumption.

Inflation

One of the most important assumptions used in valuing the System's liabilities is the rate of inflation. This assumption underlies both the investment return assumption and the salary increases assumption. These in turn directly impact the employer and employee contribution rates.

If the pattern of inflation during the last 90-year period is analyzed, it may be extrapolated that the current low rates will not continue into the future indefinitely. Inflation appears to move in a cyclical fashion as may be seen in the graph on the following page.

HISTORICAL INFLATION RATE*



From	To	Years	Average
1993	2002	10	2.46%
1983	2002	20	3.15%
1973	2002	30	5.00%
1963	2002	40	4.61%
1953	2002	50	3.96%
1943	2002	60	4.11%
1933	2002	70	3.88%
1923	2002	80	3.10%
1913	2002	90	3.40%

Because of the cyclical nature of inflation and the long-term nature of the System's liabilities, we believe that it is appropriate to assume that the average inflation rate to be experienced over the next 30 to 50 years (which is approximately the lifetime of the present obligations of the System) will be between 4.00% and 5.00%.

Based on the information presented in the economic assumption section, we recommend that the current inflation rate assumption remain at 4.50%.

Real Rate of Return

The first step in developing a real rate of return is to analyze how the System's assets are allocated among the various investment classes. Based on this information, we can then apply the anticipated rate of return to the respective classes and develop an overall estimated real rate of return. The System has adopted the target asset allocation shown below.

ASSET ALLOCATION AS OF DECEMBER 31, 2002 (MARKET VALUE)	
	Target
Equity	68%*
Fixed Income/Bonds	27%*
Real Estate	4%
Short Term Cash Equivalents	1%

*Includes International Equity and Fixed Income

There have been numerous studies performed which analyze the expected long-term real rates of return for use in asset allocation models. Roger Ibbotson and Rex A. Sinquefeld produced one of these studies for the period 1926-2001 called *Stocks, Bonds and Inflation: Simulations of the Future*. The results of this study are presented below.

IBBOTSON-SINQUEFIELD REAL RATES OF RETURN (1926 - 2001)	
Stocks	7.4%
Long-term government bonds	2.2%
Long-term corporate bonds	2.6%
Treasury bills	0.7%

Applying the System's target asset allocation to the real rates of return in the table above produces a real rate of return of approximately 5.85% (assuming an equal proportion of government and corporate bonds and assuming a return of 4% for real estate). After adjusting for expenses and potential adverse future experience, we believe that a real rate of return of 3.50% provides a

reasonable degree of conservatism when used with a 4.50% inflation rate. Thus, we recommend that the 8.00% investment return assumption be continued.

In addition, since the reserves are credited at the assumed interest rate biannually, we recommend that the 8.00% interest rate be compounded for valuation purposes.

The return on assets, net of expenses, experienced by the Fund since 1981 is shown below. The increase in the Consumer Price Index is also shown for comparative purposes.

NET RETURN ON ASSETS vs. INCREASE IN CONSUMER PRICE INDEX		
Year Ended June 30,	Net Return @ Market Value	Increase in Consumer Price Index*
1981		9.6%
1982		7.1%
1983		2.6%
1984		4.2%
1985		3.8%
1986		1.8%
1987		3.7%
1988	1.9%	4.0%
1989	17.6%	5.2%
1990	10.8%	4.7%
1991	9.7%	4.7%
1992	18.5%	3.1%
1993	13.2%	3.0%
1994	(0.7)%	2.5%
1995	17.7%	3.0%
1996	15.6%	2.8%
1997	19.9%	2.3%
1998	18.9%	1.7%
1999	10.5%	2.0%
2000	6.4%	3.7%
2001	(4.3)%	3.3%
2002	(5.4)%	1.1%
2003	4.6%	2.1%
January 1, 2003 to June 30, 2003	9.4%	-
23-Year Compound Average	N/A	3.5%
16-Year Compound Average	9.4%	3.1%

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

The returns on an actuarial value basis, net of expenses, were 4.8% and 2.9% for the first six months of 2003 and 2002 calendar years, respectively.

Merit and Longevity Increases

The merit and longevity component of the total salary scale assumption reflects increases in members' salaries due to promotions, advances in pay grades, etc. These increases are dependent on an individual's membership and are graded downward as members age.

The overall effect of the merit and longevity increases is to add approximately 1.00% to the total salary scale assumption.

Recommendation

Since interest is credited biannually at a nominal rate of 4.00%, we recommend that an effective rate of 8.16% be used. We also recommended that a 4.50% inflation rate assumption and a total salary scale assumption of 5.50% (approximately) be used to develop the System's costs.

SECTION IV: CONTRIBUTION RATES

Below we show a comparison between the contribution rates that are currently being paid and the recalculated rates developed for this valuation.

	EMPLOYER		EMPLOYEE	
	% of Payroll	Annual Amount	% of Payroll	Annual Amount
Current Rates – 12/31/2002	13.92%	\$35,059,000	6.42%	\$15,254,000
Recalculated Rates – 6/30/2003*	14.45%	\$37,181,000	6.51%	\$15,802,000
Recommended Rates – 6/30/2003*	15.21%	\$39,114,000	6.59%	\$16,026,000

* Based on June 30, 2003 population and payroll.

The higher recalculated employer contribution rate reflects higher retirees benefits offset by higher than expected Plan assets. The increase in the recommended rates reflects the changes made in the non-economic assumptions.

MEMBER CONTRIBUTION RATES

Member Basic Contributions

Sections 31621.5 and 31621.2 set forth the basis for the determination of the normal rates of contribution for General Plan 5A and Plan 5B members, respectively. Sections 31639.5 and 31639.25 set forth the basis for the normal rates of contribution for Safety Plan 4A and Safety Plan 4B members, respectively. Section 31621.6 sets forth the basis for the determination of the normal rates of contribution for APCD Plan 1 and Plan 2 members.

The law further provides that the contribution rates of members will be based on the age nearest birthday at the time of entrance into the Retirement System. Section 31453 states that no adjustment will be included in the rates of contribution for time prior to the effective date of any revisions.

We recommend that employee contribution rates be developed based on the following unisex mortality tables:

- ◆ General 1994 Group Annuity Mortality Table for Males, set back 3 years
- ◆ Safety 1994 Group Annuity Mortality Table for Males, set back 2 years

A summary of the average recommended employee contribution rates and rates at sample ages are shown below.

AVERAGE MEMBER BASIC CONTRIBUTION RATES						
	GENERAL		SAFETY		APCD	
	Plan 5A	Plan 5B	Plan 4A	Plan 4B	Plan 1	Plan 2
Recommended Rates	3.42%	7.30%	5.78%	12.00%	4.09%	8.78%

SAMPLE GENERAL PLAN 5A MEMBER CONTRIBUTION RATES	
Entry Age	Recommended Rates
25	3.26%
35	3.55%
59	4.89%

SAMPLE GENERAL PLAN 5B MEMBER CONTRIBUTION RATES	
Entry Age	Recommended Rates
25	6.53%
35	7.09%
59	9.77%

SAMPLE SAFETY PLAN 4A MEMBER CONTRIBUTION RATES	
Entry Age	Recommended Rates
25	5.74%
35	6.35%
54	7.72%

SAMPLE SAFETY PLAN 4B MEMBER CONTRIBUTION RATES	
Entry Age	Recommended Rates
25	11.48%
35	12.71%
54	15.45%

SAMPLE APCD PLAN 1 MEMBER CONTRIBUTION RATES	
Entry Age	Recommended Rates
25	3.83%
35	4.13%
54	5.21%

SAMPLE APCD PLAN 2 MEMBER CONTRIBUTION RATES	
Entry Age	Recommended Rates
25	7.67%
35	8.27%
54	10.41%

Schedule 5 in the Appendix contains the complete set of members' basic contribution rates. The interest rate, mortality table and inflation rate are indicated on the bottom of the schedules.

Cost of Living Contributions

The employees do not pay for any portion of the cost-of-living contribution rates.

EMPLOYER CONTRIBUTION RATES

Employer contributions have been determined under the Entry Age Normal Actuarial Cost Method, permitted by Section 31453.5. The Entry Age Normal method defines the Normal Cost as the level percentage of salary necessary to fund the projected future benefit over the period from the date of entry to the date of separation from active service. The Actuarial Accrued Liability is the cost allocated to years prior to the actuarial valuation date; it is the excess of the total value of benefits over the value of future member contributions and the value of future Normal Costs. The difference between the Actuarial Accrued Liability and the Actuarial Value of Assets is called the Unfunded Actuarial Accrued Liability and is funded (amortized) as a level percentage of projected future payroll over 15 years from the date each new liability is first recognized from June 30, 2003.

TOTAL EMPLOYER CONTRIBUTION RATES – CURRENT Based on 6/30/2003 Payroll							
	GENERAL			SAFETY	SAFETY	APCD	
	Plan 5A	Plan 2	Plan 5B	Plan 4A	Plan 4B	Plan 1	Plan 2
Total Employer Contribution Rate	11.66%	4.62%	11.33%	22.83%	19.57%	14.82%	16.39%

Average Rate for Total Group: 13.92%

TOTAL EMPLOYER CONTRIBUTION RATES – RECALCULATED Based on 6/30/2003 Payroll							
	GENERAL			SAFETY	SAFETY	APCD	
	Plan 5A	Plan 2	Plan 5B	Plan 4A	Plan 4B	Plan 1	Plan 2
Total Employer Contribution Rate	11.81%	4.78%	11.60%	24.22%	21.05%	16.30%	17.12%

Average Rate for Total Group: 14.45%

TOTAL EMPLOYER CONTRIBUTION RATES – RECOMMENDED Based on 6/30/2003 Payroll							
	GENERAL			SAFETY	SAFETY	APCD	
	Plan 5A	Plan 2	Plan 5B	Plan 4A	Plan 4B	Plan 1	Plan 2
Total Employer Contribution Rate	12.13%	5.27%	12.04%	26.10%	22.90%	16.49%	17.62%

Average Rate for Total Group: 15.21%

The higher recalculated employer contribution rate reflects higher retirees benefits offset by higher than expected Plan assets. The increase in the recommended rates reflects the changes made in the non-economic assumptions.

RECOMMENDATIONS

TOTAL EMPLOYER CONTRIBUTION RATES							
	GENERAL			SAFETY	SAFETY & PROBATION	APCD	
	Plan 5A	Plan 2	Plan 5B	Plan 4A	Plan 4B	Plan 1	Plan 2
Normal Cost	9.65%	2.79%	9.56%	19.07%	15.87%	11.57%	12.70%
UAAL	2.48	2.48	2.48	7.03	7.03	4.92	4.92
Total	12.13%	5.27%	12.04%	26.10%	22.90%	16.49%	17.62%

Recommended Average Rate for Total Group:

Normal Cost	11.56%
UAAL	3.65
Total	<u>15.21%</u>

TOTAL EMPLOYER CONTRIBUTION RATES							
	GENERAL			SAFETY	SAFETY & PROBATION	APCD	
	Plan 5A	Plan 2	Plan 5B	Plan 4A	Plan 4B	Plan 1	Plan 2
Basic	8.03%	4.00%	7.30%	17.23%	13.44%	11.26%	11.32%
COL	4.10	1.27	4.74	8.87	9.46	5.23	6.30
Total	12.13%	5.27%	12.04%	26.10%	22.90%	16.49%	17.62%

Recommended Average Rate for Total Group:

Basic	9.60%
COL	5.61
Total	<u>15.21%</u>

We recommend that the Board adopt the contribution rates as of June 30, 2003 as shown in this section. These rates reflect the recommended noneconomic and economic assumptions. They are also based on the Entry Age Normal Actuarial Cost Method with an unfunded actuarial accrued liability amortized as a level percentage of payroll over 15 years from the date each new liability is first recognized from June 30, 2003, and utilize an actuarial value of assets. This combination of assumptions and methods reflects our best judgment of future long-term experience for the System.

The recommended employee contribution rates are shown in Schedule 5 of the Appendix.

SECTION V: ASSETS AND LIABILITIES

ACTUARIAL VALUE OF ASSETS

The current asset smoothing method reflects the actual versus expected return on market value. This method spreads the difference between the expected and the actual investment return, net of expenses, over five years. In other words, only 20% of this difference is being recognized in any one year.

The June 30, 2003 actuarial value of assets based on this new method was determined as follows:

1. Additions

	(a)	(b)	(c)	(d)	(e) = (d) - (c)	(f)	(g) = (e) x (f)
	Contributions	Benefit Payments	Expected Investment Return	Actual Investment Return	Additional Earnings	Percentage Not Recognized	Unrecognized Dollars
1999	37,851,294	38,868,337	88,472,753	141,638,959	53,166,206	10%	\$ 5,316,621
2000	36,999,819	40,283,577	99,631,619	(60,499,595)	(160,131,214)	30%	(48,039,364)
2001	47,959,930	43,603,616	96,731,238	(2,985,071)	(99,716,309)	50%	(49,858,154)
2002	45,267,450	50,634,377	96,446,423	(99,294,891)	(195,741,314)	70%	(137,018,920)
2003	15,852,113	27,532,133	42,964,924	101,134,014	58,169,090	90%	<u>52,352,181</u>
							\$ (177,247,636)
2. Market Value of Assets as of June 30, 2003							\$1,169,417,097
3. Amount Not Recognized as of June 30, 2003							<u>(177,247,636)</u>
4. Actuarial Value of Assets as of June 30, 2003 (Item 2 - Item 3)							\$1,346,664,733
5. Corridor Limit							
a. 80% of Net Market Value							\$ 935,533,678
b. 120% of Net Market Value							\$1,403,300,516
6. Actuarial Value of Assets After corridor as of June 30, 2003							\$1,346,664,733
7. Special Reserves							
Health Coverage Reserve							36,323,645
Supplemental Health Coverage Reserve							43,409,654
Special Allowance							21,182,303
Contingency Reserve							<u>34,401,083</u>
							135,316,685
8. Actuarial Value of Assets for pension valuation							\$1,211,348,048

RESERVE CERTIFICATIONS

Certain reserves are excluded from the actuarial valuation of assets for purposes of determining contribution rates. The following section clarifies the purpose of these reserves in supporting the liabilities of the Santa Barbara County Employees' Retirement System.

Special Reserve for Interest Fluctuation

The Special Reserve for Interest Fluctuation of \$34,401,083 as of June 30, 2003 has been funded by investment income that has exceeded the interest crediting benchmark over the years. It will be utilized to supplement investment income in shortfall periods. The following describes its importance in the operation of the 1937 Act and the setting of actuarial interest rates.

There are two aspects to the application of the actuarial interest rate in 1937 Act retirement systems: (1) The expected long-term total rate of return on the funds, and (2) a short-term benchmark for the semiannual crediting of interest on the fund's reserves.

With respect to the second application, six-month returns on the fund are volatile, due to the short measuring period. In some six-month periods, the returns will exceed the benchmark, and in others they will fall short. Given that the actuarial rate serves as a benchmark, there is a natural tendency to minimize the probability of a shortfall by setting a lower benchmark. The restricted balance counteracts this tendency by serving as a stabilizing mechanism which allows the county retirement systems to consistently maintain a higher level of interest crediting on reserve accounts.

Thus, the restricted balance mechanism is a factor in the actuarial interest rate setting process. We can focus on the expected long-term total rate of return in setting the interest rate assumption rather than on the short-term downside risks.

ACTUARIAL BALANCE SHEET

The Actuarial Balance Sheet provides insight into the ongoing employer and employee financial commitment necessary to fund the benefits provided by the System.

We first determine the amount and timing of all future payments that will be made by the System. We then discount these payments at the assumed interest rate to the date of the valuation, thereby determining their present value.

Second, in the upper portion, we determine how this liability will be met. Item 1 in the Balance Sheet represents the amount of assets already accumulated by the System at Actuarial Value. Item 2 is the present value of the contributions anticipated to be received in the future from the current members. Item 3 is the present value of future employer normal costs with respect to current members, using the Entry Age Normal Cost method. The employer is budgeting a percentage of payroll on behalf of each member. The Entry Age Normal Cost percentage is, simply stated, the employer's level percentage of payroll needed to fund benefits for new entrants to the System.

Finally, we compare the existing assets plus the present value of the future normal costs and future member contributions to the present value of the benefits to be paid from the System. This shortfall (or balancing item) is known as the Unfunded Actuarial Accrued Liability of your System. In the text we will abbreviate it as UAAL. The UAAL is amortized as a level percentage of payroll over 15 years from the date each new liability is first recognized from June 30, 2003.

ACTUARIAL BALANCE SHEET AS OF JUNE 30, 2003

ASSETS

1. Total actuarial value of assets	1,346,664,733
2. Present value of future contributions by members	141,116,633
3. Present value of future employer contributions for normal cost	253,603,366
4. Present value of other future employer contributions for UAAL	108,199,266
5. Total actuarial assets	1,849,583,998

LIABILITIES

6. Present value of retirement allowances payable to retired members and their survivors	572,737,316
7. Present value of service retirement allowances payable to presently active members and their survivors	902,004,243
8. Present value of allowances payable to vested terminated members and their survivors	115,441,145
9. Present value of disability retirement allowances payable to presently active members and their survivors	66,597,310
10. Present value of death benefits payable on behalf of presently active members	15,702,831
11. Present value of members' contributions to be returned upon withdrawal	41,784,468
12. Contingency reserves	34,401,083
13. Other designated reserves	100,915,602
14. Total actuarial liabilities	1,849,583,998

FUNDING RATIO -- GASB 25

SCHEDULE OF FUNDING PROGRESS GASB 25 (dollar amounts in thousands)						
Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL as a Percent of Covered Payroll
1/1/95	\$ 562,861	\$ 643,453	\$ 80,592	87.5%	\$ 140,571	57.3%
1/1/96	\$ 624,823	\$ 711,869	\$ 87,046	87.8%	\$ 154,120	56.5%
1/1/97	\$ 693,301	\$ 758,772	\$ 65,471	91.4%	\$ 159,906	40.9%
1/1/98	\$ 799,539	\$ 873,624	\$ 74,085	91.5%	\$ 171,602	43.2%
1/1/99	\$ 938,295	\$ 950,205	\$ 11,910	98.7%	\$ 184,291	6.5%
1/1/00	\$ 1,068,357	\$ 1,067,377	\$ (980)	100.1%	\$ 199,448	(0.5)%
1/1/01	\$ 1,171,138	\$ 1,145,519*	\$(25,619)	102.2%	\$ 219,739	(11.7)%
1/1/03	\$ 1,295,956	\$ 1,363,605	\$ 67,649	95.0%	\$ 251,834	26.9%
6/30/03	\$ 1,346,665	\$ 1,454,864	\$ 108,199	92.6%	\$ 257,237	42.1%

* Excluding benefit improvements.

SCHEDULE OF EMPLOYER CONTRIBUTIONS GASB 25 (dollar amounts in thousands)		
Year Ended	Annual Required Contribution	Percentage Contributed
12/31/94	\$ 24,678	100%
12/31/95	\$ 27,664	100%
12/31/96	\$ 27,114	100%
12/31/97	\$ 31,692	100%
12/31/98	\$ 28,414	100%
12/31/99	\$ 30,484	100%
12/31/00	\$ 29,272	100%
12/31/01	\$ 27,155	100%
12/31/02	\$ 32,999	100%
6/30/03	\$ 9,118	100%

SECTION VI - APPENDIX

SCHEDULE 1

SUMMARY OF ACTUARIAL ASSUMPTIONS

The Entry Age Normal Actuarial Cost Method was used in conjunction with the following actuarial assumptions. The UAAL is being funded over 15 years from the date each new liability is first recognized effective from the June 30, 2003 valuation date.

1. Interest: 8.00% per annum, compounded biannually.
2. Interest Credited to Employee Accounts: 8.00% per annum, compounded biannually.
3. Inflation: 4.50% per annum.
4. Asset Valuation: Actuarial value.
5. Salary Scale: See Schedule 9
6. Spouses and Dependents: 80% of male employees and 50% of female employees assumed married at retirement, with wives assumed three years younger than husbands.
7. Rates of Termination of Employment: See Schedule 6
8. Years of Life Expectancy After Retirement: See Schedule 7
9. Years of Life Expectancy After Disability: See Schedule 7
10. Life Expectancy After Retirement for Employee Contribution Rate Purposes
 - ◆ General Members: 1994 Group Annuity Table for Males, set back three years.
 - ◆ Safety Members: 1994 Group Annuity Table for Males, set back two years.
11. Reciprocity Assumption: 50% of members who terminate with a vested benefit are assumed to enter a reciprocal system.
12. Deferral Age for Vested Terminations: 62 for General members; 55 for Safety members

SCHEDULE 2

SUMMARY OF MAJOR PLAN PROVISIONS

1. ELIGIBILITY

First of pay period following date of employment.

2. DEFINITION OF SALARY

Highest 12 consecutive months of compensation earnable for all members. Except General Plan 2 members using highest 36 consecutive months of compensation earnable.

3. SERVICE RETIREMENT

- ◆ Normal retirement age

Age 57 for Sections 31676.12 (General Plan 5), age 65 for Section 31486.4 (General Plan 2), age 55 for Section 31664.2 (Safety Plan 4), and age 55 for Section 31676.15 (APCD Plans 1 and 2).

- ◆ Early retirement

Age 50 and 10 years for Plans 1, 4 and 5 and APCD Plan 2 and age 55 and 10 years for General Plan 2; or 30 years for General Plan 5 and APCD, and 20 years for Safety.

- ◆ Benefit

2% of final average salary per year of service for General Plan 5 and APCD.

2% of final average salary per year of service (max. 35 years) plus 1% of final average salary per year of service in excess of 35 (max. 10 years) reduced by 1/35 of Social Security benefit at age 65 per year of service (max. 35 years) for General Plan 2.

3% of final average salary per year of service for Safety Plan 4.

- ◆ Benefit adjustments

Reduced for retirement before age 57 for Sections 31676.12, age 65 for Section 31486.4, age 55 for Section 31664.2, and age 55 for Section 31676.15. Reductions for Section 31486.4 are actuarial equivalents.

Increased for retirement after age 57 for Sections 31676.12 and age 55 for Section 31676.15.

4. DISABILITY RETIREMENT

- ◆ Nonservice connected for Plans General Plan 5, Safety Plan 4 and APCD Plans 1 and 2.
1.8% (General Plan 5, Safety Plan 4 and APCD) of final average salary per year of service, with a maximum of 33-1/3% if projected service is used (age 62 for General Plan 5, age 65 for APCD and age 55 for Safety Plan 4), or 90% of the accrued service retirement benefit without a benefit adjustment, or service retirement benefit (if eligible).
- ◆ Service connected for General Plan 5, Safety Plan 4 and APCD Plans 1 and 2.
Greater of 50% of final average salary or service retirement benefit (if eligible).
- ◆ Benefit for General Plan 2
60% of salary provided outside of the Plan. Payments are reduced by other disability income benefits. Service retirement at age 65 (credit given toward service retirement while disabled under the LTD plan).

5. DEATH BEFORE RETIREMENT

- ◆ Nonservice connected before eligible to retire, for General Plan 5, Safety Plan 4 and APCD Plans 1 and 2.
Refund of contributions plus 1/12 of last years' salary per year of service up to 6 years.
- ◆ Eligible for nonservice connected disability or service retirement for General Plan 5, Safety Plan 4 and APCD Plans 1 and 2.
60% of member's accrued allowance.
- ◆ Service connected for General Plan 5, Safety Plan 4 and APCD Plans 1 and 2.
50% of salary.
- ◆ Benefit for General Plan 2
1/12 of last years' salary per year of service up to 6 years.

6. DEATH AFTER RETIREMENT

- ◆ \$5,000 lump sum death benefit for all Plans except General Plan 2.
- ◆ Service retirement or nonservice connected disability
60% of member's allowance payable to an eligible spouse for General Plan 5, Safety Plan 4 and APCD Plans 1 and 2.
50% of member's allowance payable to an eligible spouse for General Plan 2.
- ◆ Service connected disability
100% of member's allowance payable to an eligible spouse for General Plan 5, Safety Plan 4 and APCD Plans 1 and 2.
50% of member's allowance payable to an eligible spouse for General Plan 2.

7. VESTING

- ◆ Must leave contributions on deposit.
- ◆ Five years of service for General Plan 5, Safety Plan 4 and APCD Plans 1 and 2.
- ◆ Ten years of service for General Plan 2.

8. MEMBERS' CONTRIBUTIONS

- ◆ Based on entry age.
- ◆ Half rates for General Plan 5A, Safety Plan 4A and APCD Plan 1. Full rates for General Plan 5B, Safety Plan 4B, and APCD Plan 2. General Plan 2 is noncontributory.

9. MAXIMUM BENEFIT

- ◆ 100% of final average salary for General Plan 5, Safety Plan 4 and APCD Plans 1 and 2.
- ◆ Benefit and Social Security combined cannot exceed 70% of final average salary if service is less than 35, otherwise 80% for General Plan 2.

10. COST-OF-LIVING

- ◆ Up to 3% cost-of-living adjustment for General Plan 5, Safety Plan 4 and APCD Plans 1 and 2.
- ◆ None for General Plan 2.

SCHEDULE 3

**AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY
OF ACTIVE GENERAL MEMBERS
AS OF JUNE 30, 2003**

PLAN 5A

CURRENT AGE	YEARS OF SERVICE							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 19	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
25-29	3	8	0	0	0	0	0	11
	45,655	38,417	0	0	0	0	0	40,391
30-34	2	19	38	1	0	0	0	60
	43,531	49,272	46,152	46,922	0	0	0	47,065
35-39	8	39	85	28	1	0	0	161
	55,226	50,014	52,152	50,239	78,888	0	0	51,620
40-44	0	31	109	75	23	0	0	238
	0	56,841	53,655	58,144	53,592	0	0	55,478
45-49	2	31	129	92	69	14	1	338
	55,264	65,324	56,763	58,560	59,854	51,746	47,863	58,425
50-54	2	25	115	88	65	30	10	335
	48,835	65,480	58,372	59,429	73,859	72,924	57,614	63,409
55-59	1	25	90	56	50	26	21	269
	33,150	54,561	56,128	70,166	58,953	68,306	70,167	61,617
60-64	1	8	37	26	12	9	7	100
	35,476	55,700	54,097	73,006	69,085	66,431	52,983	61,786
65-69	0	4	11	6	1	5	2	29
	0	40,465	48,054	62,072	32,972	59,555	41,672	50,930
70 & Over	0	3	6	1	1	1	1	13
	0	81,579	51,178	37,119	146,156	39,142	47,423	63,203
TOTAL	19	193	620	373	222	85	42	1,554
	49,614	56,137	54,773	60,774	63,955	66,152	61,885	58,446

SCHEDULE 3

**AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY
OF ACTIVE GENERAL MEMBERS
AS OF JUNE 30, 2003**

PLAN 2

YEARS OF SERVICE

CURRENT AGE	YEARS OF SERVICE							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 19	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
25-29	1	1	0	0	0	0	0	2
	53,801	38,228	0	0	0	0	0	46,015
30-34	0	3	0	0	0	0	0	3
	0	50,827	0	0	0	0	0	50,827
35-39	0	4	0	0	0	0	0	4
	0	53,206	0	0	0	0	0	53,206
40-44	0	2	3	2	1	0	0	8
	0	55,122	39,311	43,517	69,900	0	0	48,139
45-49	0	1	1	4	0	0	0	6
	0	46,442	37,119	45,556	0	0	0	44,298
50-54	0	1	0	0	3	1	0	5
	0	59,498	0	0	61,015	45,421	0	57,593
55-59	0	1	0	0	0	0	1	2
	0	42,623	0	0	0	0	58,687	50,655
60-64	0	1	0	2	0	0	0	3
	0	37,119	0	80,956	0	0	0	66,344
65-69	0	1	0	0	0	1	0	2
	0	28,457	0	0	0	38,630	0	33,544
70 & Over	0	0	1	2	0	0	0	3
	0	0	38,759	41,657	0	0	0	40,691
TOTAL	1	15	5	10	4	2	1	38
	53,801	48,528	38,762	51,448	63,236	42,026	58,687	49,624

SCHEDULE 3

AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY OF ACTIVE GENERAL MEMBERS AS OF JUNE 30, 2003

PLAN 5B

CURRENT AGE	YEARS OF SERVICE							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 19	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
20-24	88	1	0	0	0	0	0	89
	34,797	34,081	0	0	0	0	0	34,789
25-29	216	49	0	0	0	0	0	265
	41,609	44,098	0	0	0	0	0	42,069
30-34	240	106	2	0	0	0	0	348
	46,582	46,637	66,520	0	0	0	0	46,713
35-39	191	96	3	1	0	0	0	291
	49,640	49,271	43,510	50,449	0	0	0	49,458
40-44	166	101	5	2	3	0	0	277
	49,908	51,342	55,627	85,545	46,055	0	0	50,750
45-49	175	101	1	1	4	0	0	282
	54,258	50,964	38,471	37,119	58,526	0	0	53,022
50-54	130	76	1	0	2	0	0	209
	50,569	57,148	45,421	0	59,230	0	0	53,020
55-59	75	64	0	2	1	0	0	142
	57,717	54,756	0	60,228	46,920	0	0	56,342
60-64	29	22	0	0	0	0	0	51
	51,819	55,488	0	0	0	0	0	53,402
65-69	5	7	0	1	0	0	0	13
	55,207	55,668	0	38,630	0	0	0	54,180
70 & Over	2	1	0	0	0	0	0	3
	46,184	58,406	0	0	0	0	0	50,258
TOTAL	1,317	624	12	7	10	0	0	1,970
	48,037	50,830	52,133	59,678	53,765	0	0	49,017

SCHEDULE 3

**AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY
OF ACTIVE SAFETY MEMBERS
AS OF JUNE 30, 2003**

PLAN 4A

CURRENT AGE	YEARS OF SERVICE							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 19	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
25-29	1	0	0	0	0	0	0	1
	49,729	0	0	0	0	0	0	49,729
30-34	5	14	12	0	0	0	0	31
	60,537	70,006	66,887	0	0	0	0	67,271
35-39	3	11	34	15	0	0	0	63
	61,756	73,948	68,351	75,271	0	0	0	70,662
40-44	2	9	28	44	20	0	0	103
	61,892	70,150	71,124	75,950	82,410	0	0	75,113
45-49	1	7	14	27	50	15	0	114
	62,590	73,791	75,939	78,042	84,315	99,581	0	82,973
50-54	0	2	6	9	20	29	4	70
	0	75,426	61,484	72,183	75,487	89,529	89,268	80,465
55-59	0	2	6	5	7	5	7	32
	0	65,873	70,432	75,667	86,694	95,935	91,384	83,090
60-64	0	0	1	0	3	0	2	6
	0	0	54,129	0	78,575	0	86,454	77,127
65-69	0	1	0	0	0	0	0	1
	0	54,129	0	0	0	0	0	54,129
70 & Over	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
TOTAL	12	46	101	100	100	49	13	421
	60,338	71,264	69,572	76,060	82,163	93,260	89,974	77,412

SCHEDULE 3

AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY OF ACTIVE SAFETY MEMBERS AS OF JUNE 30, 2003

PLAN 4B

CURRENT AGE	YEARS OF SERVICE							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 19	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
20-24	19	0	0	0	0	0	0	19
	52,010	0	0	0	0	0	0	52,010
25-29	86	25	0	0	0	0	0	111
	56,255	63,472	0	0	0	0	0	57,880
30-34	79	53	3	0	0	0	0	135
	59,619	60,569	57,984	0	0	0	0	59,956
35-39	36	34	7	2	0	0	0	79
	57,917	63,357	59,196	73,666	0	0	0	60,770
40-44	19	19	5	10	3	0	0	56
	56,569	59,740	57,983	59,369	85,024	0	0	59,796
45-49	16	17	1	7	6	0	0	47
	52,884	57,817	53,095	63,533	59,192	0	0	57,064
50-54	8	8	6	3	11	1	0	37
	56,292	56,994	60,561	71,961	68,505	59,252	0	62,117
55-59	6	6	3	3	2	7	2	29
	71,127	60,421	56,882	62,962	70,490	70,457	128,762	70,363
60-64	3	3	3	0	2	1	0	12
	50,120	61,725	37,975	0	63,008	82,742	0	54,852
65-69	0	1	1	0	0	0	0	2
	0	52,392	50,099	0	0	0	0	51,246
70 & Over	0	1	0	1	0	0	0	2
	0	53,687	0	52,140	0	0	0	52,914
TOTAL	272	167	29	26	24	9	2	529
	57,241	60,951	56,185	63,179	67,949	70,577	128,762	59,629

SCHEDULE 3

**AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY
OF ACTIVE APCD MEMBERS
AS OF JUNE 30, 2003**

PLAN 1

YEARS OF SERVICE

CURRENT AGE	YEARS OF SERVICE							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 19	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
30-34	0	0	3	2	0	0	0	5
	0	0	60,522	55,224	0	0	0	58,403
35-39	0	0	4	4	0	0	0	8
	0	0	59,152	68,938	0	0	0	64,045
40-44	0	0	4	3	0	0	0	7
	0	0	69,629	82,226	0	0	0	75,028
45-49	0	1	7	2	2	0	0	12
	0	86,827	55,938	82,907	75,682	0	0	66,298
50-54	0	0	4	3	0	1	0	8
	0	0	65,845	84,148	0	91,509	0	75,917
55-59	0	0	1	0	0	0	0	1
	0	0	70,287	0	0	0	0	70,287
60-64	0	0	0	1	0	0	0	1
	0	0	0	70,287	0	0	0	70,287
65-69	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
70 & Over	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
TOTAL	0	1	23	15	2	1	0	42
	0	86,827	61,823	74,762	75,682	91,509	0	68,406

SCHEDULE 3

**AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY
OF ACTIVE APCD MEMBERS
AS OF JUNE 30, 2003**

PLAN 2

CURRENT AGE	YEARS OF SERVICE							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 19	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
20-24	2	0	0	0	0	0	0	2
	50,092	0	0	0	0	0	0	50,092
25-29	2	0	0	0	0	0	0	2
	42,157	0	0	0	0	0	0	42,157
30-34	1	0	0	0	0	0	0	1
	60,144	0	0	0	0	0	0	60,144
35-39	2	0	0	0	0	0	0	2
	47,625	0	0	0	0	0	0	47,625
40-44	1	0	0	0	0	0	0	1
	49,884	0	0	0	0	0	0	49,884
45-49	4	1	0	0	0	0	0	5
	54,801	60,762	0	0	0	0	0	55,993
50-54	0	1	0	0	0	0	0	1
	0	78,585	0	0	0	0	0	78,585
55-59	3	2	0	0	0	0	0	5
	41,006	41,606	0	0	0	0	0	41,246
60-64	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
65-69	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
70 & Over	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
TOTAL	15	4	0	0	0	0	0	19
	48,800	55,640	0	0	0	0	0	50,240

SCHEDULE 3

AVERAGE ANNUAL BENEFIT AND MEMBERSHIP DISTRIBUTION OF RETIRED GENERAL MEMBERS AS OF JUNE 30, 2003

MALES

CURRENT AGE	YEARS OF SERVICE							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 45	5	2	0	0	0	0	0	7
	7,709	14,297	0	0	0	0	0	9,591
45-49	2	2	1	0	0	0	0	5
	18,178	9,669	18,769	0	0	0	0	14,893
50-54	20	3	1	2	0	0	0	26
	11,870	20,563	13,612	25,517	0	0	0	13,990
55-59	49	15	1	0	0	0	0	65
	24,050	12,139	20,993	0	0	0	0	21,254
60-64	54	26	25	3	0	1	0	109
	31,955	14,184	16,918	9,896	0	15,674	0	23,511
65-69	53	28	29	17	2	1	0	130
	31,653	19,614	21,498	8,478	11,323	12,188	0	23,302
70-74	9	28	48	19	17	0	1	122
	14,736	22,284	26,388	14,632	8,135	0	12,286	20,097
75-79	7	10	32	35	18	11	1	114
	7,500	10,816	24,463	19,485	12,927	8,925	970	17,169
80-84	14	3	6	24	38	19	1	105
	5,418	17,553	13,361	22,705	17,116	9,891	13,059	15,286
85 & Over	7	1	3	4	30	22	17	84
	5,969	10,817	26,360	8,121	12,915	14,510	11,930	12,781
TOTAL	220	118	146	104	105	54	20	767
	23,621	16,994	22,661	16,945	13,633	11,726	11,456	18,991

SCHEDULE 3

AVERAGE ANNUAL BENEFIT AND MEMBERSHIP DISTRIBUTION OF RETIRED GENERAL MEMBERS AS OF JUNE 30, 2003

FEMALES

CURRENT AGE	YEARS OF SERVICE							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 45	7	5	1	0	0	0	0	13
	9,693	12,385	5,461	0	0	0	0	10,403
45-49	5	3	0	1	0	0	0	9
	20,005	11,051	0	16,254	0	0	0	16,604
50-54	39	6	2	0	1	0	0	48
	11,622	18,676	20,074	0	9,960	0	0	12,821
55-59	72	33	2	2	1	0	0	110
	19,593	9,481	10,457	10,471	11,539	0	0	16,154
60-64	77	38	18	2	2	1	0	138
	19,230	10,420	9,288	15,654	9,385	3,545	0	15,199
65-69	62	52	24	13	3	2	2	158
	18,062	14,285	11,523	8,731	9,775	10,487	12,769	14,738
70-74	36	59	53	22	15	2	2	189
	14,570	17,100	15,888	10,007	7,944	4,459	7,463	14,490
75-79	15	17	51	43	31	19	0	176
	10,286	10,968	14,694	12,930	7,216	4,933	0	11,157
80-84	11	4	12	32	38	28	7	132
	10,355	10,646	16,759	15,200	7,971	8,141	5,943	10,731
85 & Over	17	2	2	5	40	47	26	139
	7,055	3,127	27,812	14,425	9,427	9,245	9,217	9,390
TOTAL	341	219	165	120	131	99	37	1,112
	16,261	13,256	14,294	12,639	8,339	7,976	8,695	13,064

SCHEDULE 3

AVERAGE ANNUAL BENEFIT AND MEMBERSHIP DISTRIBUTION OF RETIRED SAFETY MEMBERS AS OF JUNE 30, 2003

TOTAL

YEARS OF SERVICE

CURRENT AGE	YEARS OF SERVICE							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 45	4	2	0	0	0	0	0	6
	23,148	24,843	0	0	0	0	0	23,713
45-49	8	2	0	0	0	0	0	10
	24,615	28,267	0	0	0	0	0	25,345
50-54	25	0	2	2	2	0	0	31
	22,140	0	28,342	20,966	22,196	0	0	22,468
55-59	101	19	6	3	6	7	0	142
	61,233	33,032	37,260	18,915	19,752	16,458	0	51,593
60-64	39	49	18	5	9	6	5	131
	54,225	52,659	32,455	23,252	17,419	18,614	13,183	43,740
65-69	4	15	22	14	10	7	0	72
	16,529	33,228	42,406	25,462	16,483	21,715	0	30,150
70-74	3	9	5	8	5	1	3	34
	12,250	26,495	59,438	30,032	24,003	15,936	17,666	29,459
75-79	2	0	1	1	2	10	1	17
	13,664	0	75,334	10,040	36,118	16,190	7,986	20,872
80-84	0	1	0	0	3	4	6	14
	0	19,301	0	0	38,218	26,782	15,878	24,025
85 & Over	0	0	0	1	1	1	6	9
	0	0	0	12,887	18,554	48,123	15,885	19,430
TOTAL	186	97	54	34	38	36	21	466
	49,852	41,962	40,183	24,547	21,315	19,777	15,118	39,027

SCHEDULE 4

SUMMARY OF ANNUAL RETIREMENT ALLOWANCES

AS OF JUNE 30, 2003

GENERAL MEMBERS

		<u>Number</u>		<u>Annual Allowance</u>
Service				
	Males	650	\$	13,288,219
	Females	<u>810</u>		<u>11,031,621</u>
	Total	1,460	\$	24,319,840
Disability				
	Males	53	\$	886,895
	Females	<u>62</u>		<u>1,131,076</u>
	Total	115	\$	2,017,971
Beneficiaries				
	Males	64	\$	391,249
	Females	<u>240</u>		<u>2,364,176</u>
	Total	304	\$	2,755,426
Total		<u>1,879</u>	\$	<u>29,093,237</u>

SAFETY MEMBERS

		<u>Number</u>		<u>Annual Allowance</u>
Service				
	Males	281	\$	13,973,430
	Females	<u>35</u>		<u>923,401</u>
	Total	316	\$	14,896,831
Disability				
	Males	85	\$	2,061,893
	Females	<u>15</u>		<u>350,159</u>
	Total	100	\$	2,412,052
Beneficiaries				
	Males	3	\$	51,255
	Females	<u>47</u>		<u>826,633</u>
	Total	50	\$	877,888
Total		<u>466</u>	\$	<u>18,186,771</u>

SCHEDULE 5

GENERAL MEMBERS' CONTRIBUTION RATES
 (expressed as a percentage of biweekly compensation)

	Current Plan5A - Section 31676.12	Recommended Plan5A - Section 31676.12	Current Plan 5B - Section 31676.12	Recommended Plan 5B - Section 31676.12
Entry Age	FAS 1 - Half Rates	FAS 1 - Half Rates	FAS 1 - Full Rates	FAS 1 - Full Rates
20	3.15%	3.20%	6.30%	6.39%
21	3.16	3.21	6.32	6.41
22	3.17	3.22	6.34	6.43
23	3.18	3.23	6.36	6.46
24	3.20	3.25	6.39	6.49
25	3.21	3.26	6.43	6.53
26	3.23	3.28	6.47	6.56
27	3.25	3.30	6.51	6.61
28	3.28	3.33	6.56	6.65
29	3.30	3.35	6.61	6.71
30	3.33	3.38	6.66	6.76
31	3.36	3.41	6.72	6.82
32	3.39	3.44	6.78	6.88
33	3.42	3.48	6.85	6.95
34	3.46	3.51	6.92	7.02
35	3.49	3.55	6.99	7.09
36	3.53	3.59	7.06	7.17
37	3.57	3.63	7.14	7.25
38	3.61	3.67	7.22	7.33
39	3.65	3.71	7.31	7.42
40	3.70	3.75	7.40	7.51
41	3.74	3.80	7.49	7.60
42	3.79	3.85	7.58	7.70
43	3.84	3.90	7.68	7.79
44	3.89	3.95	7.78	7.89
45	3.94	4.00	7.88	8.00
46	3.99	4.05	7.98	8.10
47	4.05	4.11	8.09	8.21
48	4.10	4.16	8.20	8.33
49	4.16	4.22	8.31	8.44
50	4.21	4.28	8.43	8.56
51	4.28	4.34	8.55	8.68
52	4.34	4.40	8.67	8.81
53	4.40	4.47	8.80	8.93
54	4.46	4.53	8.93	9.06
55	4.53	4.60	9.06	9.20
56	4.60	4.67	9.20	9.34
57	4.67	4.74	9.34	9.48
58	4.74	4.81	9.48	9.62
59 & over	4.81	4.89	9.63	9.77
INTEREST:	8.16%	8.16%	8.16%	8.16%
INFLATION:	4.50%	4.50%	4.50%	4.50%
MORTALITY:	94 GA (Male, -2)	94 GA (Male, -3)	94 GA (Male, -2)	94 GA (Male, -3)

SCHEDULE 5

SAFETY MEMBERS' CONTRIBUTION RATES
 (expressed as a percentage of biweekly compensation)

	Current Plan 4A - Section 31664.2	Recommended Plan 4A - Section 31664.2	Current Plan 4B - Section 31664.2	Recommended Plan 4B - Section 31664.2
Entry Age	FAS 1 - Half Rates	FAS 1 - Half Rates	FAS 1 - Full Rates	FAS 1 - Full Rates
20	5.38%	5.45%	10.77%	10.90%
21	5.44	5.51	10.88	11.01
22	5.50	5.57	11.00	11.13
23	5.56	5.62	11.12	11.25
24	5.62	5.68	11.23	11.37
25	5.67	5.74	11.35	11.48
26	5.73	5.80	11.47	11.60
27	5.79	5.86	11.58	11.72
28	5.85	5.92	11.70	11.84
29	5.91	5.98	11.82	11.96
30	5.97	6.04	11.94	12.08
31	6.03	6.10	12.06	12.20
32	6.09	6.16	12.18	12.33
33	6.15	6.23	12.31	12.45
34	6.22	6.29	12.43	12.58
35	6.28	6.35	12.56	12.71
36	6.34	6.42	12.69	12.84
37	6.41	6.48	12.81	12.97
38	6.47	6.55	12.94	13.10
39	6.54	6.61	13.07	13.23
40	6.60	6.68	13.20	13.36
41	6.67	6.75	13.33	13.49
42	6.73	6.81	13.47	13.63
43	6.80	6.88	13.60	13.76
44	6.86	6.95	13.73	13.89
45	6.93	7.01	13.86	14.03
46	7.00	7.08	13.99	14.16
47	7.07	7.15	14.13	14.30
48	7.14	7.22	14.28	14.45
49	7.21	7.30	14.43	14.60
50	7.29	7.38	14.58	14.76
51	7.37	7.46	14.74	14.92
52	7.45	7.54	14.90	15.08
53	7.54	7.63	15.08	15.26
54 & over	7.63	7.72	15.26	15.45
INTEREST:	8.16%	8.16%	8.16%	8.16%
INFLATION:	4.50%	4.50%	4.50%	4.50%
MORTALITY:	94 GA (Male, -1)	94 GA (Male, -2)	94 GA (Male, -1)	94 GA (Male, -2)

SCHEDULE 5

APCD MEMBERS' CONTRIBUTION RATES
 (expressed as a percentage of biweekly compensation)

	Current Plan 1 - Section 31676.15	Recommended Plan 1 - Section 31676.15	Current Plan 2 - Section 31676.15	Recommended Plan 2 - Section 31676.15
Entry Age	FAS 1 - Half Rates	FAS 1 - Half Rates	FAS 1 - Full Rates	FAS 1 - Full Rates
20	3.73%	3.77%	7.46%	7.55%
21	3.74	3.78	7.48	7.56
22	3.75	3.79	7.50	7.58
23	3.76	3.80	7.52	7.61
24	3.78	3.82	7.55	7.64
25	3.79	3.83	7.58	7.67
26	3.81	3.85	7.62	7.71
27	3.83	3.88	7.67	7.75
28	3.86	3.90	7.71	7.80
29	3.88	3.93	7.77	7.85
30	3.91	3.96	7.83	7.91
31	3.94	3.99	7.89	7.98
32	3.98	4.02	7.95	8.04
33	4.01	4.06	8.02	8.11
34	4.05	4.10	8.10	8.19
35	4.09	4.13	8.18	8.27
36	4.13	4.18	8.26	8.35
37	4.17	4.22	8.34	8.44
38	4.22	4.26	8.43	8.53
39	4.26	4.31	8.53	8.62
40	4.31	4.36	8.62	8.72
41	4.36	4.41	8.72	8.82
42	4.41	4.46	8.82	8.92
43	4.46	4.51	8.93	9.03
44	4.52	4.57	9.04	9.14
45	4.57	4.63	9.15	9.25
46	4.63	4.68	9.26	9.37
47	4.69	4.74	9.38	9.49
48	4.75	4.80	9.50	9.61
49	4.81	4.87	9.62	9.73
50	4.87	4.93	9.75	9.86
51	4.94	5.00	9.88	9.99
52	5.01	5.07	10.02	10.13
53	5.08	5.14	10.16	10.27
54 & over	5.15	5.21	10.30	10.41
INTEREST:	8.16%	8.16%	8.16%	8.16%
INFLATION:	4.50%	4.50%	4.50%	4.50%
MORTALITY:	94 GA (Male, -2)	94 GA (Male, -3)	94 GA (Male, -2)	94 GA (Male, -3)

SCHEDULE 6

PROBABILITIES OF SEPARATION FROM ACTIVE SERVICE

The following pages indicate the probability of separation from active service for each of eight separate sources of termination:

- ◆ *Withdrawal:* member terminates and elects refund of member contributions.
- ◆ *Vested termination:* member terminates and contributions are left on deposit.
- ◆ *Ordinary death:* member dies prior to eligibility for retirement; death not employment-related.
- ◆ *Ordinary disability:* member receives disability retirement; disability not employment-related.
- ◆ *Service retirement:* member retires after satisfaction of requirements of age and/or service for reasons other than disability.
- ◆ *Duty disability:* member receives disability retirement; disability is employment-related.
- ◆ *Duty death:* member dies prior to retirement; death is employment-related.
- ◆ *Death while eligible:* member dies prior to retirement but after satisfaction of age and/or service requirements for service retirement or ordinary disability.

The probabilities shown for each cause of termination represent the probability that a given member will terminate at a particular age for the indicated reason. For example, if the probability of withdrawal at age 25 is .1200, then we are assuming that 12.0% of the active members at age 25 will terminate without vested rights during the next year.

SCHEDULE 6

PROBABILITIES OF SEPARATION FROM ACTIVE SERVICE

(RECOMMENDED ASSUMPTIONS)

GENERAL MEMBERS -- MALES

Age	Withdrawal	Ordinary Death	Ordinary Disability	Service	Death While Eligible	Duty Death	Duty Disability	Terminated Vested
20	0.18975	0.00011	0.00000	0.00000	0.00000	0.00013	0.00011	0.00000
21	0.17825	0.00011	0.00000	0.00000	0.00000	0.00013	0.00011	0.00000
22	0.16675	0.00011	0.00000	0.00000	0.00000	0.00013	0.00011	0.00000
23	0.15525	0.00011	0.00000	0.00000	0.00000	0.00013	0.00011	0.00000
24	0.14375	0.00011	0.00000	0.00000	0.00000	0.00013	0.00011	0.00000
25	0.13800	0.00017	0.00000	0.00000	0.00006	0.00013	0.00011	0.00000
26	0.13225	0.00017	0.00000	0.00000	0.00006	0.00013	0.00011	0.00000
27	0.12363	0.00017	0.00000	0.00000	0.00006	0.00013	0.00011	0.00000
28	0.11500	0.00017	0.00000	0.00000	0.00006	0.00013	0.00011	0.00100
29	0.10638	0.00017	0.00000	0.00000	0.00006	0.00013	0.00011	0.00200
30	0.09775	0.00023	0.00000	0.00000	0.00014	0.00013	0.00022	0.00450
31	0.09200	0.00023	0.00000	0.00000	0.00014	0.00013	0.00022	0.00650
32	0.08625	0.00023	0.00000	0.00000	0.00014	0.00013	0.00022	0.00850
33	0.08050	0.00023	0.00000	0.00000	0.00014	0.00013	0.00022	0.01100
34	0.07475	0.00023	0.00000	0.00000	0.00014	0.00013	0.00022	0.01200
35	0.06900	0.00029	0.00011	0.00000	0.00014	0.00013	0.00033	0.01300
36	0.06325	0.00029	0.00011	0.00000	0.00014	0.00013	0.00044	0.01350
37	0.05865	0.00029	0.00011	0.00000	0.00020	0.00013	0.00055	0.01400
38	0.05520	0.00029	0.00011	0.00000	0.00020	0.00013	0.00066	0.01300
39	0.05175	0.00034	0.00021	0.00000	0.00020	0.00013	0.00077	0.01200
40	0.04945	0.00034	0.00021	0.00000	0.00020	0.00013	0.00088	0.01200
41	0.04715	0.00034	0.00021	0.00000	0.00027	0.00013	0.00099	0.01250
42	0.04485	0.00039	0.00032	0.00000	0.00027	0.00013	0.00121	0.01300
43	0.04140	0.00039	0.00042	0.00000	0.00034	0.00013	0.00132	0.01400
44	0.03795	0.00039	0.00053	0.00000	0.00034	0.00013	0.00143	0.01500
45	0.03450	0.00045	0.00063	0.00000	0.00041	0.00013	0.00165	0.01650
46	0.03220	0.00051	0.00074	0.00000	0.00047	0.00013	0.00176	0.01800
47	0.02990	0.00056	0.00084	0.00000	0.00054	0.00013	0.00187	0.02000
48	0.02875	0.00062	0.00095	0.00000	0.00068	0.00013	0.00198	0.01800
49	0.02760	0.00068	0.00116	0.00000	0.00082	0.00013	0.00209	0.01650
50	0.02645	0.00073	0.00137	0.04500	0.00095	0.00013	0.00220	0.01500
51	0.02530	0.00079	0.00158	0.02500	0.00109	0.00013	0.00242	0.01400
52	0.02415	0.00090	0.00179	0.02500	0.00122	0.00013	0.00264	0.01300
53	0.02300	0.00101	0.00200	0.02500	0.00142	0.00013	0.00275	0.01200
54	0.02185	0.00112	0.00221	0.03000	0.00163	0.00013	0.00286	0.01100
55	0.02070	0.00124	0.00242	0.06000	0.00184	0.00013	0.00308	0.01000
56	0.01955	0.00135	0.00263	0.04000	0.00204	0.00013	0.00330	0.00950
57	0.01840	0.00146	0.00284	0.04500	0.00224	0.00013	0.00341	0.00850
58	0.01725	0.00157	0.00315	0.07000	0.00245	0.00013	0.00352	0.00800
59	0.01610	0.00169	0.00347	0.09000	0.00265	0.00013	0.00374	0.00750
60	0.01495	0.00180	0.00389	0.11000	0.00278	0.00013	0.00385	0.00700
61	0.01380	0.00191	0.00431	0.25000	0.00299	0.00013	0.00407	0.00650
62	0.01265	0.00203	0.00473	0.31000	0.00319	0.00013	0.00418	0.00600
63	0.01150	0.00214	0.00515	0.12000	0.00340	0.00013	0.00440	0.00550
64	0.01150	0.00225	0.00557	0.20000	0.00360	0.00013	0.00462	0.00500
65	0.01150	0.00236	0.00599	0.29000	0.00381	0.00013	0.00000	0.00000
66	0.01150	0.00253	0.00641	0.22000	0.00401	0.00013	0.00000	0.00000
67	0.01150	0.00270	0.00693	0.22000	0.00422	0.00013	0.00000	0.00000
68	0.01150	0.00287	0.00746	0.30000	0.00449	0.00013	0.00000	0.00000
69	0.01150	0.00304	0.00798	0.40000	0.00476	0.00013	0.00000	0.00000
70	0.00000	0.00000	0.00000	1.00000	0.00000	0.00000	0.00000	0.00000

SCHEDULE 6
PROBABILITIES OF SEPARATION FROM ACTIVE SERVICE
(RECOMMENDED ASSUMPTIONS)
GENERAL MEMBERS -- FEMALES

Age	Withdrawal	Ordinary Death	Ordinary Disability	Service	Death While Eligible	Duty Death	Duty Disability	Terminated Vested
20	0.17250	0.00010	0.00000	0.00000	0.00000	0.00010	0.00012	0.00000
21	0.16500	0.00010	0.00000	0.00000	0.00000	0.00010	0.00012	0.00000
22	0.15750	0.00010	0.00000	0.00000	0.00000	0.00010	0.00012	0.00000
23	0.14750	0.00010	0.00000	0.00000	0.00000	0.00010	0.00012	0.00000
24	0.13750	0.00010	0.00000	0.00000	0.00000	0.00010	0.00012	0.00000
25	0.13250	0.00010	0.00018	0.00000	0.00008	0.00010	0.00012	0.00000
26	0.13000	0.00010	0.00018	0.00000	0.00008	0.00010	0.00012	0.00000
27	0.12500	0.00020	0.00018	0.00000	0.00008	0.00010	0.00012	0.00440
28	0.12000	0.00020	0.00018	0.00000	0.00008	0.00010	0.00012	0.00660
29	0.11500	0.00020	0.00018	0.00000	0.00008	0.00010	0.00012	0.00880
30	0.11000	0.00020	0.00018	0.00000	0.00008	0.00010	0.00012	0.01100
31	0.10500	0.00020	0.00018	0.00000	0.00008	0.00010	0.00012	0.01320
32	0.10000	0.00020	0.00035	0.00000	0.00008	0.00010	0.00012	0.01540
33	0.09500	0.00020	0.00035	0.00000	0.00008	0.00010	0.00012	0.01760
34	0.09100	0.00020	0.00035	0.00000	0.00008	0.00010	0.00012	0.01870
35	0.08700	0.00030	0.00050	0.00000	0.00008	0.00010	0.00024	0.01980
36	0.08200	0.00030	0.00050	0.00000	0.00008	0.00010	0.00024	0.01980
37	0.07600	0.00030	0.00050	0.00000	0.00008	0.00010	0.00036	0.01980
38	0.06900	0.00030	0.00050	0.00000	0.00008	0.00010	0.00036	0.01980
39	0.06200	0.00030	0.00050	0.00000	0.00008	0.00010	0.00048	0.01980
40	0.05500	0.00040	0.00068	0.00000	0.00008	0.00010	0.00060	0.02035
41	0.05000	0.00040	0.00085	0.00000	0.00008	0.00010	0.00072	0.02090
42	0.04500	0.00040	0.00085	0.00000	0.00008	0.00010	0.00084	0.02090
43	0.04000	0.00040	0.00117	0.00000	0.00008	0.00010	0.00096	0.02090
44	0.03600	0.00040	0.00135	0.00000	0.00008	0.00010	0.00096	0.02090
45	0.03200	0.00050	0.00153	0.00000	0.00016	0.00010	0.00108	0.02090
46	0.03000	0.00050	0.00168	0.00000	0.00016	0.00010	0.00108	0.02090
47	0.02900	0.00050	0.00168	0.00000	0.00016	0.00010	0.00120	0.02035
48	0.02800	0.00060	0.00185	0.00000	0.00024	0.00010	0.00132	0.02035
49	0.02700	0.00060	0.00203	0.00000	0.00024	0.00010	0.00144	0.01980
50	0.02600	0.00060	0.00219	0.02000	0.00032	0.00010	0.00144	0.01925
51	0.02500	0.00060	0.00236	0.01200	0.00040	0.00010	0.00156	0.01815
52	0.02400	0.00070	0.00252	0.01200	0.00048	0.00010	0.00168	0.01650
53	0.02300	0.00080	0.00252	0.01300	0.00056	0.00010	0.00180	0.01430
54	0.02200	0.00090	0.00270	0.01300	0.00064	0.00010	0.00192	0.01100
55	0.02100	0.00100	0.00286	0.05000	0.00072	0.00010	0.00204	0.00880
56	0.02000	0.00110	0.00305	0.03000	0.00080	0.00010	0.00216	0.00660
57	0.01900	0.00120	0.00319	0.02500	0.00088	0.00010	0.00216	0.00550
58	0.01800	0.00140	0.00354	0.03500	0.00096	0.00010	0.00228	0.00440
59	0.01700	0.00160	0.00387	0.04000	0.00104	0.00010	0.00240	0.00440
60	0.01650	0.00180	0.00422	0.06000	0.00112	0.00010	0.00252	0.00440
61	0.01550	0.00200	0.00458	0.10000	0.00120	0.00010	0.00264	0.00440
62	0.01500	0.00220	0.00506	0.20000	0.00128	0.00010	0.00276	0.00440
63	0.01500	0.00240	0.00557	0.15000	0.00136	0.00010	0.00288	0.00440
64	0.01500	0.00260	0.00608	0.15000	0.00144	0.00010	0.00300	0.00440
65	0.01500	0.00280	0.00000	0.30000	0.00160	0.00010	0.00000	0.00000
66	0.01500	0.00300	0.00000	0.25000	0.00176	0.00010	0.00000	0.00000
67	0.01500	0.00330	0.00000	0.25000	0.00192	0.00010	0.00000	0.00000
68	0.01500	0.00360	0.00000	0.30000	0.00208	0.00010	0.00000	0.00000
69	0.01500	0.00390	0.00000	0.50000	0.00224	0.00010	0.00000	0.00000
70	0.00000	0.00000	0.00000	1.00000	0.00000	0.00000	0.00000	0.00000

SCHEDULE 7

PROBABILITIES OF SEPARATION FROM ACTIVE SERVICE
(RECOMMENDED ASSUMPTIONS)

SAFETY MEMBERS

Age	Withdrawal	Ordinary Death	Ordinary Disability	Service	Death While Eligible	Duty Death	Duty Disability	Terminated Vested
20	0.07000	0.00007	0.00000	0.00000	0.00000	0.00006	0.00014	0.00000
21	0.06700	0.00007	0.00000	0.00000	0.00000	0.00006	0.00014	0.00260
22	0.06400	0.00007	0.00000	0.00000	0.00000	0.00006	0.00014	0.00585
23	0.06100	0.00007	0.00000	0.00000	0.00000	0.00006	0.00014	0.00910
24	0.05800	0.00007	0.00000	0.00000	0.00000	0.00006	0.00018	0.01235
25	0.05500	0.00015	0.00004	0.00000	0.00006	0.00013	0.00027	0.01560
26	0.05200	0.00015	0.00004	0.00000	0.00006	0.00013	0.00036	0.01885
27	0.04900	0.00015	0.00004	0.00000	0.00006	0.00013	0.00049	0.02145
28	0.04500	0.00015	0.00004	0.00000	0.00006	0.00013	0.00063	0.02405
29	0.04100	0.00015	0.00004	0.00000	0.00006	0.00013	0.00077	0.02340
30	0.03800	0.00015	0.00004	0.00000	0.00006	0.00013	0.00094	0.02275
31	0.03500	0.00015	0.00007	0.00000	0.00006	0.00013	0.00112	0.02145
32	0.03200	0.00015	0.00010	0.00000	0.00012	0.00013	0.00130	0.01950
33	0.02900	0.00015	0.00017	0.00000	0.00012	0.00013	0.00153	0.01690
34	0.02700	0.00015	0.00025	0.00000	0.00012	0.00013	0.00175	0.01365
35	0.02500	0.00015	0.00032	0.00000	0.00012	0.00013	0.00202	0.01235
36	0.02300	0.00015	0.00038	0.00000	0.00018	0.00013	0.00234	0.01170
37	0.02100	0.00015	0.00046	0.00000	0.00024	0.00013	0.00265	0.01105
38	0.01900	0.00015	0.00052	0.00000	0.00024	0.00013	0.00297	0.01040
39	0.01700	0.00015	0.00059	0.00000	0.00030	0.00013	0.00329	0.00975
40	0.01500	0.00023	0.00066	0.00000	0.00036	0.00020	0.00360	0.00910
41	0.01300	0.00023	0.00074	0.00000	0.00036	0.00020	0.00391	0.00845
42	0.01100	0.00023	0.00081	0.00000	0.00036	0.00020	0.00427	0.00780
43	0.00900	0.00023	0.00084	0.00000	0.00042	0.00020	0.00464	0.00650
44	0.00700	0.00023	0.00084	0.00000	0.00042	0.00020	0.00499	0.00520
45	0.00600	0.00030	0.00088	0.00660	0.00048	0.00026	0.00540	0.00455
46	0.00500	0.00030	0.00088	0.00880	0.00054	0.00033	0.00581	0.00390
47	0.00450	0.00030	0.00091	0.01100	0.00054	0.00039	0.00621	0.00325
48	0.00400	0.00038	0.00091	0.01100	0.00060	0.00045	0.00661	0.00260
49	0.00400	0.00038	0.00094	0.01100	0.00060	0.00052	0.00702	0.00195
50	0.00400	0.00045	0.00094	0.05500	0.00066	0.00058	0.00742	0.00130
51	0.00400	0.00052	0.00098	0.04400	0.00072	0.00065	0.00788	0.00104
52	0.00400	0.00060	0.00098	0.04400	0.00078	0.00071	0.00833	0.00091
53	0.00400	0.00068	0.00102	0.03850	0.00084	0.00078	0.00877	0.00078
54	0.00400	0.00075	0.00105	0.03850	0.00090	0.00084	0.00922	0.00065
55	0.00000	0.00082	0.00000	0.10000	0.00096	0.00091	0.00000	0.00000
56	0.00000	0.00090	0.00000	0.07500	0.00102	0.00097	0.00000	0.00000
57	0.00000	0.00097	0.00000	0.07500	0.00108	0.00104	0.00000	0.00000
58	0.00000	0.00105	0.00000	0.15000	0.00114	0.00117	0.00000	0.00000
59	0.00000	0.00112	0.00000	0.40000	0.00120	0.00130	0.00000	0.00000
60	0.00000	0.00000	0.00000	1.00000	0.00000	0.00000	0.00000	0.00000

SCHEDULE 7

YEARS OF LIFE EXPECTANCY AFTER SERVICE RETIREMENT

Age	GENERAL		SAFETY		Age	GENERAL		SAFETY	
	Male	Female	Male	Female		Male	Female	Male	Female
50	32.55	33.94	32.55	33.94	81	8.88	9.14	8.88	9.14
51	31.62	32.99	31.62	32.99	82	8.37	8.58	8.37	8.58
52	30.69	32.05	30.69	32.05	83	7.89	8.05	7.89	8.05
53	29.77	31.11	29.77	31.11	84	7.44	7.54	7.44	7.54
54	28.85	30.17	28.85	30.17	85	7.00	7.06	7.00	7.06
55	27.95	29.24	27.95	29.24	86	6.59	6.59	6.59	6.59
56	27.04	28.31	27.04	28.31	87	6.19	6.15	6.19	6.15
57	26.15	27.40	26.15	27.40	88	5.80	5.73	5.80	5.73
58	25.27	26.49	25.27	26.49	89	5.43	5.34	5.43	5.34
59	24.39	25.59	24.39	25.59	90	5.07	4.98	5.07	4.98
60	23.52	24.70	23.52	24.70	91	4.73	4.64	4.73	4.64
61	22.67	23.82	22.67	23.82	92	4.42	4.33	4.42	4.33
62	21.83	22.96	21.83	22.96	93	4.13	4.04	4.13	4.04
63	21.00	22.11	21.00	22.11	94	3.86	3.76	3.86	3.76
64	20.18	21.28	20.18	21.28	95	3.61	3.51	3.61	3.51
65	19.39	20.46	19.39	20.46	96	3.37	3.28	3.37	3.28
66	18.60	19.65	18.60	19.65	97	3.16	3.06	3.16	3.06
67	17.84	18.86	17.84	18.86	98	2.98	2.86	2.98	2.86
68	17.10	18.08	17.10	18.08	99	2.81	2.67	2.81	2.67
69	16.37	17.31	16.37	17.31	100	2.66	2.50	2.66	2.50
70	15.66	16.54	15.66	16.54	101	2.52	2.34	2.52	2.34
71	14.97	15.78	14.97	15.78	102	2.39	2.19	2.39	2.19
72	14.29	15.04	14.29	15.04	103	2.26	2.06	2.26	2.06
73	13.63	14.31	13.63	14.31	104	2.15	1.94	2.15	1.94
74	12.98	13.60	12.98	13.60	105	2.04	1.83	2.04	1.83
75	12.34	12.90	12.34	12.90	106	1.93	1.74	1.93	1.74
76	11.72	12.22	11.72	12.22	107	1.84	1.66	1.84	1.66
77	11.12	11.57	11.12	11.57	108	1.75	1.59	1.75	1.59
78	10.53	10.93	10.53	10.93	109	1.68	1.54	1.68	1.54
79	9.96	10.31	9.96	10.31	110	1.62	1.50	1.62	1.50
80	9.40	9.71	9.40	9.71					

1994 GA (x-2, y+1) for General Members

1994 GA (x-2, y+1) for Safety Members

SCHEDULE 7

YEARS OF LIFE EXPECTANCY AFTER DISABILITY RETIREMENT

GENERAL MEMBERS					
Age	Years of Life Expectancy	Age	Years of Life Expectancy	Age	Years of Life Expectancy
20	38.73	51	20.59	82	6.27
21	37.98	52	20.11	83	5.94
22	37.26	53	19.63	84	5.63
23	36.56	54	19.16	85	5.34
24	35.87	55	18.68	86	5.06
25	35.19	56	18.22	87	4.80
26	34.53	57	17.75	88	4.55
27	33.87	58	17.29	89	4.31
28	33.23	59	16.83	90	4.09
29	32.60	60	16.37	91	3.87
30	31.98	61	15.91	92	3.66
31	31.37	62	15.45	93	3.46
32	30.76	63	14.99	94	3.26
33	30.17	64	14.53	95	3.07
34	29.58	65	14.07	96	2.89
35	29.00	66	13.60	97	2.71
36	28.43	67	13.13	98	2.54
37	27.87	68	12.66	99	2.37
38	27.31	69	12.18	100	2.20
39	26.76	70	11.70	101	2.04
40	26.21	71	11.21	102	1.88
41	25.67	72	10.72	103	1.72
42	25.14	73	10.22	104	1.55
43	24.61	74	9.73	105	1.38
44	24.09	75	9.24	106	1.21
45	23.57	76	8.76	107	1.04
46	23.06	77	8.28	108	.88
47	22.56	78	7.83	109	.72
48	22.06	79	7.41	110	.50
49	21.57	80	7.00		
50	21.08	81	6.63		

1981 Disability (General)

SCHEDULE 7

YEARS OF LIFE EXPECTANCY AFTER DISABILITY RETIREMENT

SAFETY AND PROBATION MEMBERS					
Age	Years of Life Expectancy	Age	Years of Life Expectancy	Age	Years of Life Expectancy
20	51.12	51	24.38	81	7.41
21	50.20	52	23.59	82	7.00
22	49.29	53	22.80	83	6.63
23	48.39	54	22.03	84	6.27
24	47.48	55	21.26	85	5.94
25	46.58	56	20.50	86	5.63
26	45.68	57	19.77	87	5.34
27	44.79	58	19.06	88	5.06
28	43.89	59	18.40	89	4.80
29	43.01	60	17.78	90	4.55
30	42.12	61	17.20	91	4.31
31	41.24	62	16.64	92	4.09
32	40.36	63	16.11	93	3.87
33	39.48	64	15.59	94	3.66
34	38.61	65	15.08	95	3.46
35	37.74	66	14.58	96	3.26
36	36.88	67	14.09	97	3.07
37	36.02	68	13.61	98	2.89
38	35.16	69	13.13	99	2.71
39	34.31	70	12.66	100	2.54
40	33.46	71	12.18	101	2.37
41	32.61	72	11.70	102	2.20
42	31.77	73	11.21	103	2.04
43	30.93	74	10.72	104	1.88
44	30.09	75	10.22	105	1.72
45	29.26	76	9.73	106	1.55
46	28.43	77	9.24	107	1.38
47	27.61	78	8.75	108	1.21
48	26.80	79	8.28	109	1.04
49	25.99	80	7.83	110	.88
50	25.18				

1981 Disability (x-2) for Safety members

SCHEDULE 8

GLOSSARY OF TERMS

Following is a glossary of some of the commonly used actuarial terms.

Actuarial Accrued Liability

The portion, as determined by a particular cost method, of the total present value of benefits that is attributable to past service credit.

Actuarial Gain (Loss)

A measure of the difference between actual and expected experience based upon a set of actuarial assumptions. Examples include higher than expected salary increases (loss) and a higher return on fund assets than anticipated (gain).

Actuarial Present Value

Also referred to as the present value of benefits. It is the value, as of a specified date, of an amount payable in the future, where the amount has been adjusted to reflect both the time value of money and the probability that the payment is actually made.

Amortization or UAAL Payment

That portion of the pension plan contribution which is designed to pay off (amortize) the unfunded actuarial accrued liability in a systematic fashion. Equivalently, it is a series of periodic payments required to pay off a debt.

Annual Amount

Estimated contributions due for the year in order to ensure the orderly funding of the pension plan (equal to the contribution rate multiplied by the annual payroll). The annual amount is comprised of normal cost and UAAL payments.

Entry Age Actuarial Cost Method

This method assumes that the annual costs are the level premiums needed from entry age until retirement age to fund the ultimate retirement benefit. These premiums are expressed as a percentage of salary. The portion of this actuarial present value allocated to a valuation year is called the normal cost.

Final Average Salary

The average amount of compensation earned over a specified number of consecutive months preceding retirement during which compensation was highest.

Funding Policy

The policy for the amounts and timing of contributions to be made by the employer, members, and any other sources to provide the benefits promised by the pension plan.

Noneconomic Actuarial Assumptions

Probabilities that members will separate from active service for causes such as retirement, disability, death and withdrawal, as well as rates of post-retirement mortality. The probabilities reflect the experience of the System membership.

Normal Cost

The ongoing annual cost allocated to the system by a particular actuarial cost method for providing benefits (future cost). Normal cost payments are made during the working lifetime of the member.

Unfunded Actuarial Accrued Liability

The excess of the actuarial accrued liability over the actuarial value of assets.

Vested Benefit

The benefit an employee is entitled to even if the employee separates from active service prior to normal retirement age.

SCHEDULE 9

**RATIO OF CURRENT COMPENSATION
TO COMPENSATION ANTICIPATED AT RETIREMENT**

Age	General Members	Safety Members	Age	General Members	Safety Members
20	0.046	0.100	46	0.305	0.469
21	0.051	0.106	47	0.322	0.499
22	0.055	0.113	48	0.340	0.530
23	0.061	0.119	49	0.360	0.563
24	0.067	0.126	50	0.380	0.598
25	0.073	0.134	51	0.401	0.634
26	0.079	0.142	52	0.423	0.671
27	0.086	0.151	53	0.445	0.711
28	0.093	0.160	54	0.469	0.752
29	0.101	0.170	55	0.493	0.794
30	0.109	0.180	56	0.519	0.837
31	0.118	0.192	57	0.546	0.875
32	0.127	0.203	58	0.574	0.915
33	0.136	0.216	59	0.602	0.956
34	0.146	0.230	60	0.632	1.000
35	0.156	0.244	61	0.663	
36	0.167	0.258	62	0.695	
37	0.178	0.274	63	0.729	
38	0.189	0.291	64	0.764	
39	0.202	0.309	65	0.800	
40	0.215	0.328	66	0.837	
41	0.228	0.348	67	0.875	
42	0.242	0.369	68	0.915	
43	0.257	0.391	69	0.956	
44	0.272	0.415	70	1.000	
45	0.288	0.441			

Note: Salary scale assumption reflects 4.50% for inflation and graded merit and longevity.

SCHEDULE 10

ASSET STATEMENT

STATEMENT OF PLAN NET ASSETS - As of June 30, 2003

	<u>June 30, 2003</u>
ASSETS	
Cash	\$ 6,603,809
Receivables	
Contributions	2,713,779
Accrued Interest	3,146,109
Dividends	744,134
Due from Brokers for Security Sales	20,016,238
Total Receivables	26,620,260
Investments, at Fair Value	
Short Term Investments	46,781,238
Domestic Equity	552,371,510
Domestic Fixed Income	369,999,537
International Equity	203,795,090
Global Fixed Income	-
Real Estate	5,451,703
Real Estate Mortgage Loans	2,145
Total Investments	1,178,401,223
Collateral Held for Securities Lent	99,384,485
Total Investments Including Collateral Held for Securities Lent	1,277,785,708
TOTAL ASSETS	\$ 1,311,009,777
LIABILITIES	
Accounts Payable	\$ 280,065
Benefits Payable	293,890
Collateral Held for Securities Lent	99,384,485
Due to Brokers for Security Purchases	41,634,240
TOTAL LIABILITIES	\$ 141,592,680
Net Assets Held in Trust for Pension Benefits	\$ 1,169,417,097

SCHEDULE 11

Health Coverage Benefit

As requested, we have calculated the liabilities associated with the current monthly Health Insurance Offset benefit (\$8.00 per year of service for covered employees and \$1.47 per year of service for non-covered employees). We assumed that this benefit *will not* receive any future adjustment after retirement. Our results are based upon the current retirees and members retiring in the future from the current active and inactive group. We assumed that 60% of the current active and inactive group will be covered at the time of retirement based on the most recent actuarial experience.

The liabilities determined as of June 30, 2003 are shown below. These amounts reflect the recommended economic and noneconomic actuarial assumptions. Note that employees hired after June 30, 2003 are excluded from this analysis.

HEALTH INSURANCE OFFSET BENEFIT	
Present Value of Benefits	
♦ Current Actives and Inactives	\$ 19,637,000
♦ Current Retirees	<u>27,464,000</u>
♦ Total Present Value	\$ 47,101,000
Health Coverage Reserve	\$ 36,324,000

Supplemental Health Coverage Benefit

We have calculated the liabilities associated with the current monthly Supplemental Health Coverage benefit (\$7.00 per year of service for covered employees and \$2.53 per year of service for non-covered employees). We assumed that this benefit *will not* receive any future adjustment after retirement. Our results are based upon the current retirees and members retiring in the future from the current active and inactive group. We assumed that 60% of the current active and inactive group will be covered at the time of retirement based on the most recent actuarial experience.

The liabilities determined as of June 30, 2003 are shown below. These amounts reflect the recommended economic and noneconomic actuarial assumptions. Note that employees hired after June 30, 2003 are excluded from this analysis.

HEALTH INSURANCE OFFSET BENEFIT	
Present Value of Benefits	
♦ Current Actives and Inactives	\$ 18,979,000
♦ Current Retirees	<u>25,154,000</u>
♦ Total Present Value	\$ 44,133,000
Health Coverage Reserve	\$ 43,410,000

SCHEDULE 12
Summary of Valuation Results

	12/31/2002		6/30/2003		12/31/2002		6/30/2003		12/31/2002		6/30/2003		Percentage Change
	General	Safety	General	Safety	APCD	Percentage Change	APCD	Percentage Change	Totals	Percentage Change	Totals	Percentage Change	
Actives	3,600	961	3,562	950	59	-1.1%	61	3.4%	4,620	3.4%	4,573	-1.0%	
Inactives	516	118	519	123	18	4.2%	18	0.0%	652	0.0%	660	1.2%	
Retirees	1,830	439	1,873	466	6	6.2%	6	0.0%	2,275	0.0%	2,345	3.1%	
Totals	5,946	1,518	5,954	1,539	83	1.4%	85	2.4%	7,547	2.4%	7,578	0.4%	
Active Payroll Average	185,698,089	62,463,566	189,273,698	64,134,385	3,672,760	2.7%	3,827,600	4.2%	251,834,415	4.2%	257,235,683	2.1%	
Retiree Benefits Average	26,632,274	16,042,867	28,994,538	18,186,769	62,250	3.9%	62,748	0.8%	54,510	0.8%	56,251	3.2%	
Actuarial Value of Assets	14,553	36,544	15,480	39,027	95,825	13.4%	98,699	3.0%	42,770,966	3.0%	47,280,006	10.5%	
Market Value of Assets	676,238,161	472,942,231	706,678,524	492,509,350	12,168,267	4.1%	12,160,174	-0.1%	1,161,348,659	-0.1%	1,211,348,048	4.3%	
Actuarial Accrued Liability	563,531,800	394,118,525	603,275,462	420,444,085	10,140,222	6.7%	10,380,865	2.4%	967,790,548	2.4%	1,034,100,412	6.9%	
Retirement Health	713,857,252	501,745,425	760,642,630	544,572,036	13,595,301	8.5%	14,332,648	7.0%	1,228,997,978	7.0%	1,319,547,314	7.4%	
Unfunded Actuarial Accrued Liability	60,547,687	27,005,532	62,253,530	28,306,248	647,856	4.8%	674,765	4.2%	88,201,075	4.2%	91,234,543	3.4%	
Retirement Health	37,619,091	28,803,194	53,964,106	52,062,686	1,227,034	80.8%	2,172,474	77.1%	67,649,319	77.1%	108,199,266	59.9%	
Retirement Health	5,678,107	2,532,554	7,847,829	3,568,353	60,755	40.9%	85,062	40.0%	8,271,417	40.0%	11,501,244	39.0%	
Retirement Contribution Rates													
Normal Cost	9.69%	17.34%	9.54%	17.50%	12.32%	0.9%	11.85%	-3.9%	11.63%	-3.9%	11.56%	-0.6%	
Unfunded Actuarial Accrued Liability	1.73%	3.94%	2.48%	7.03%	2.85%	78.4%	4.92%	72.6%	2.29%	72.6%	3.65%	59.4%	
Total	11.42%	21.28%	12.02%	24.53%	15.17%	15.3%	16.77%	10.5%	13.92%	10.5%	15.21%	9.3%	
Actuarial Value of Assets Funded Ratios													
Retirement Health	94.7%	94.3%	92.9%	90.4%	90.8%	-4.1%	84.8%	-6.6%	94.5%	-6.6%	92.6%	-2.0%	
Retirement Health	90.6%	90.6%	87.4%	87.4%	90.6%	-3.6%	87.4%	-3.6%	90.6%	-3.6%	87.4%	-3.6%	
Market Value of Assets Funded Ratios													
Retirement Health	78.9%	78.5%	79.3%	77.2%	75.7%	-1.7%	72.4%	-4.3%	78.7%	-4.3%	78.4%	-0.5%	
Retirement Health	75.5%	75.5%	74.0%	74.0%	75.5%	-2.0%	74.0%	-2.0%	75.5%	-2.0%	74.0%	-2.0%	

