



**Mellon**

**SANTA BARBARA COUNTY  
EMPLOYEES' RETIREMENT SYSTEM**

**REPORT ON THE  
ACTUARIAL VALUATION  
AS OF JUNE 30, 2004**



October 8, 2004

Board of Retirement  
Santa Barbara County  
Employees' Retirement System  
3916 State Street, Suite 210  
Santa Barbara, CA 93105

Members of the Board:

We are pleased to present our report on the actuarial valuation of the Santa Barbara County Employees' Retirement System as of June 30, 2004. The actuarial valuation is based on audited financial information and unaudited member data provided by the Retirement System Administrator and summarized in this report.

All costs, liabilities and other factors under the plan were determined in accordance with generally accepted actuarial principles and procedures, using an actuarial cost method which we believe is reasonable. This report fully and fairly discloses the actuarial position of the Plan.

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the Plan and reasonable expectations, and represent our best estimate of the anticipated experience under the Plan. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown in Section 8.

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,

Michael Moehle, F.S.A., E.A., M.A.A.A.  
Principal and Consulting Actuary

Eva Yum, F.S.A., E.A.  
Director and Consulting Actuary

# Table of Contents

---

<b>Section 1.</b>	<b>Executive Summary</b> .....	1
<b>Section 2.</b>	<b>Assets</b> .....	5
	Exhibit 2.1 - Statement of Plan Net Assets .....	6
	Exhibit 2.2 - Statement of Changes in Plan Net Assets .....	7
	Exhibit 2.3 - Actuarial Value of Assets .....	8
	Exhibit 2.4 - Asset Gain/Loss.....	8
	Exhibit 2.5 - Historical Returns on System Assets .....	9
<b>Section 3.</b>	<b>Liabilities</b> .....	10
	Exhibit 3.1 - Actuarial Balance Sheet.....	12
	Exhibit 3.2 - Actuarial Accrued Liability .....	12
	Exhibit 3.3 - Actuarial Gain and Loss .....	13
<b>Section 4.</b>	<b>Member Contribution Rates</b> .....	14
	Exhibit 4.1 - Average Current Contribution Rates.....	15
	Exhibit 4.2 - Sample Members' Current Contribution Rates .....	15
	Exhibit 4.3 - General Members' Contribution Rates .....	16
	Exhibit 4.4 - Safety Members' Contribution Rates .....	17
	Exhibit 4.5 - APCD Members' Contribution Rates .....	18
<b>Section 5.</b>	<b>Employer Contribution Rates</b> .....	19
	Exhibit 5.1 - Changed in UAAL and Employer Contribution Rates .....	20
	Exhibit 5.2 - Current Total Employer Contribution Rates.....	20
	Exhibit 5.3 - Recommended Employer Normal Cost and UAAL Rates .....	21
	Exhibit 5.4 - Recommended Employer Basic and Cost of Living Rates.....	21
<b>Section 6.</b>	<b>Recommendations</b> .....	22
<b>Section 7.</b>	<b>GASB Disclosures and CAFR Information</b> .....	23
	Certification Letter.....	24
	Exhibit 7.1 - GASB 25 Schedule of Funding Progress .....	25
	Exhibit 7.2 - GASB 25 Schedule of Employer Contributions.....	25
	Exhibit 7.3 - Actuarial Analysis of Financial Experience .....	26
	Exhibit 7.4 - Retiree and Beneficiary Experience.....	26
	Exhibit 7.5 - Solvency Test .....	26
<b>Section 8.</b>	<b>Summary of Actuarial Methods and Assumptions</b> .....	27
	Noneconomic Assumptions.....	27
	Economic Assumptions .....	28
	Exhibits 8.1 to 8.3 - Probabilities of Separation From Active Service.....	33
	Exhibits 8.4 to 8.6 - Years of Life Expectancy .....	36
	Exhibit 8.7 - Salary Increase Assumption .....	39

## Table of Contents

---

<b>Section 9.</b>	<b>Member Data .....</b>	<b>40</b>
	Exhibit 9.1 – Summary of Retired Membership .....	40
	Exhibit 9.2 – Summary of Inactive Membership .....	40
	Exhibits 9.3 to 9.4 – Summary of Active Membership .....	40
	Exhibits 9.5 to 9.11 – Age and Service Distribution of Active Members .....	42
	Exhibits 9.12 to 9.14 – Age and Service Distribution of Retired Members .....	49
	Exhibit 9.15 – Summary of Annual Retirement Allowances .....	52
<b>Section 10.</b>	<b>Summary of Major Plan Provisions .....</b>	<b>53</b>
<b>Section 11.</b>	<b>Glossary of Terms .....</b>	<b>56</b>
<b>Section 12.</b>	<b>Valuation Summary .....</b>	<b>58</b>

## Section 1: Executive Summary

The table below summarizes the principal results from the current and the prior valuations.

Item	Actuarial Valuation as of		Change Between Years	
	June 30, 2003	June 30, 2004	Amount	Percent
<b>Contribution Summary*</b>				
1. Average Employer Contribution Rate	15.21%	18.11%	2.90%	19.1%
2. Estimated Employer Contributions	\$ 39,114,000	\$ 48,353,000	\$ 9,239,000	23.6%
3. Average Member Contribution Rate	6.59%	6.75%	0.16%	2.4%
4. Estimated Member Contributions	\$ 16,026,000	\$ 16,965,000	\$ 939,000	5.9%
<b>Market Value of Assets</b>				
5. Market Value of Assets	\$ 1,169,417,000	\$ 1,346,619,000	\$ 177,202,000	15.2%
6. Actuarial Value of Assets	\$ 1,346,665,000	\$ 1,379,170,000	\$ 32,505,000	2.4%
7. Valuation Assets	\$ 1,211,348,000	\$ 1,241,557,000	\$ 30,209,000	2.5%
<b>GASB No. 25 Funded Status</b>				
8. Actuarial Accrued Liability	\$ 1,454,864,000	\$ 1,578,769,000	\$ 123,905,000	8.5%
9. Unfunded Actuarial Accrued Liability/(Surplus)	\$ 108,199,000	\$ 199,599,000	\$ 91,400,000	84.5%
10. Funded Ratio	92.6%	87.4%	(5.2%)	(5.6%)
<b>Summary of Data</b>				
11. Active Participants	4,573	4,503	(70)	(1.5)%
12. Participants with Deferred Benefits	660	717	58	8.8%
13. Retired Participants and Beneficiaries	<u>2,345</u>	<u>2,440</u>	<u>95</u>	4.1%
<b>Total</b>	<b>7,578</b>	<b>7,660</b>	<b>83</b>	<b>1.1%</b>
<b>Retired Participant Statistics</b>				
14. Total Annual Allowance	\$ 47,280,000	\$ 52,268,000	\$ 4,988,000	10.6%
15. Average Annual Allowance	\$ 20,162	\$ 21,421	\$ 1,259	6.2%
<b>Active Participant Statistics</b>				
16. Total Annual Compensation	\$ 257,237,000	\$ 266,961,000	\$ 9,724,000	3.8%
17. Average Annual Compensation	\$ 56,251	\$ 59,285	\$ 3,034	5.4%
18. Average Age	43.91	44.26	0.35	0.8%
19. Average Service	9.70	10.17	0.47	4.8%
<b>Key Assumptions</b>				
Interest rate	8.16%	8.16%	N/A	N/A
Inflation	4.50%	4.50%	N/A	N/A

\* Weighted by respective payrolls.

## Section 1: Executive Summary

---

### **Purpose**

This report has been prepared by Mellon to present the results of the June 30, 2004 actuarial valuation of the Santa Barbara County Employees' Retirement System. The main purposes of the report are to:

1. Review the experience of the System over the past year and identify reasons for changes in costs;
2. Recommend economic assumptions to be used in computing System liabilities and costs;
3. Calculate the annual contribution required to fund the System in accordance with actuarial principles;
4. Project any emerging trends in System costs;
5. Present items required for disclosure under Statement No. 25 of the Governmental Accounting Standards Board (GASB).

### **Significant Changes Since Last Year**

There have been no changes in benefit provisions since last year.

There have been no changes in the actuarial assumptions since the last actuarial report as of June 30, 2003.

### **Contribution Rates**

During the year, the return on the actuarial value of assets was 3.0%, short of the actuarial assumption of 8.16%. This, along with pay increases larger than expected for recent retirees, resulted in an increase in the calculated County contribution rate of 2.90%.

The contribution rates reflect the recommended current economic and noneconomic assumptions. The recommended rates utilize the recommended actuarial assumptions as outlined in our experience study report as of June 30, 2003.

### **Asset Returns**

During the twelve months ended June 30, 2004, the System assets had an investment return of 15.7% on a market value basis and 2.9% on an actuarial value basis, compared to the actuarial assumption of 8.16%.

## Section 1: Executive Summary

---

### **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 Entry Age Normal Cost funding method. The funding ratio decreased from 92.6% on June 30, 2003 to 87.4% on June 30, 2004.

### **Noneconomic Assumptions**

A triannual experience study of the members of the System was performed at the time of the June 30, 2003 valuation. We analyzed the plan experience during the two and a 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 these assumptions. That is, we assumed that the investment return earned over the long-term is comprised of inflation and the real rate of return. In addition, we have assumed future salary increases are comprised of inflation, merit and longevity increases.

### **Inflation Assumption**

We recommend that the current 4.50% long-term level of inflation be continued.

## Section 1: Executive Summary

---

### **Investment Return Assumption**

Based upon future anticipated long-term returns on the System's targeted asset mixes, we also recommend that the 3.50% future real rate of return be continued. In combination, these assumptions equate to an 8.00% long-term investment return assumption. Since interest is credited semi-annually, the nominal rate of 4.00% produces an effective rate of 8.16%.

### **Salary Increase Assumption**

We incorporated the same inflation assumption, 4.50%, into the recommended long-term salary increase assumption. The overall effect of the merit and longevity increases is to add approximately 1.00% to the total salary increase assumption.

### **Actuarial Value of Assets**

The Board has adopted an actuarial value of assets method that recognizes the difference between expected and actual market returns, net of expenses, over a 5-year period. The resulting actuarial value cannot exceed 120% of market value or be less than 80% of market value. The net market value of assets as of June 30, 2004 was \$1,346,619,352 and the net current actuarial value of assets under this method was \$1,379,170,014, or about 102% of market value as of June 30, 2004.

### **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.



## Section 2: Assets

---

### **Assets**

The following discussion focuses on the assets of the Santa Barbara County Employees' Retirement System, which is a key component in the determination of the System's funding status.

### **Financial Exhibits**

Exhibit 2.1 presents a statement of net Plan assets at Market Value

Exhibit 2.2 presents a statement of changes in net Plan assets

Exhibit 2.3 presents the derivation of the Actuarial Value of Assets

Exhibit 2.4 presents the derivation of the asset gain and loss for the year

Exhibit 2.5 presents the historical returns on the System's assets

### **Market Value of Assets**

Represents the fair market value of assets as of June 30, 2003 and June 30, 2004 as reported by the Trustee.

### **Actuarial Value of Assets**

The Board has adopted an actuarial value of assets method that recognizes the difference between expected and actual market returns, net of expenses, over a 5-year period. The resulting actuarial value cannot exceed 120% of market value or be less than 80% of market value. The net market value of assets as of June 30, 2004 was \$1,346,619,352 and the net current actuarial value of assets under this method was \$1,379,170,014, or about 102% of market value as of June 30, 2004.

### **Valuation Assets**

Represents the actuarial value of the assets of the fund, less the value of any special reserves that have been set aside for benefits that are to be funded outside the actuarially determined contribution rates. As of the valuation date, there are four special reserves totaling \$137,613,400. The valuation assets as of June 30, 2004 was \$1,241,556,614.

### **Asset Returns**

During the twelve months ended June 30, 2004, the System assets had an investment return of 15.7% on a market value basis and 2.9% on an actuarial value basis, compared to the actuarial assumption of 8.16%.

Section 2: Assets

EXHIBIT 2.1 – STATEMENT OF PLAN NET ASSETS

AS OF JUNE 30, 2004 AND JUNE 30, 2003

	June 30, 2004	June 30, 2003
<b>Assets</b>		
Cash and Cash Equivalents	\$ 5,617,044	\$ 6,603,809
Receivables		
Contributions	1,851,954	2,713,779
Accrued interest	2,553,668	3,146,109
Dividends	874,101	744,134
Due from brokers for security sales	46,761,149	20,016,238
Total Receivables	<u>52,040,872</u>	<u>26,620,260</u>
Investments (At Fair Value)		
Short term investments	46,056,733	46,781,238
Domestic equity	688,591,135	552,371,510
Domestic fixed income	347,476,401	369,999,537
International equity	270,012,650	203,795,090
Global fixed income	0	0
Real estate	29,851,955	5,451,703
Real estate mortgage loans	0	2,145
Total Investments	<u>1,381,988,874</u>	<u>1,178,401,223</u>
Collateral Held for Securities Lent	190,891,848	99,384,485
Total Assets	\$ 1,630,538,638	\$ 1,311,009,777
<b>Liabilities</b>		
Accounts payable	174,938	280,065
Benefits payable	721,928	293,890
Collateral Held for Securities Lent	190,891,848	99,384,485
Due to brokers for security purchases	92,130,572	41,634,240
Total Liabilities	<u>283,919,286</u>	<u>141,592,680</u>
<b>Net Assets Held in Trust For Benefits</b>	\$ 1,346,619,352	\$ 1,169,417,097

Section 2: Assets

EXHIBIT 2.2 – STATEMENT OF CHANGES IN PLAN NET ASSETS

AS OF JUNE 30, 2004 AND JUNE 30, 2003

	June 30, 2004	June 30, 2003
<b>Additions</b>		
Contributions:		
Employer	\$ 39,334,678	\$ 33,799,166
Plan Members	13,633,762	12,796,575
Total Contributions	52,968,440	46,595,741
Investment Income (Loss):		
Net Appreciation (Depreciation) in fair value of investments	162,070,041	24,562,234
Interest less amort & accretion	14,923,133	23,048,991
Dividends	11,892,463	8,345,642
Total Investment Income/(Loss)	188,885,637	55,956,867
Less: Investment Expense	(3,772,335)	(3,247,780)
Net Investment Income/(Loss)	185,113,302	52,709,087
Securities Lending Activities:		
Securities Lending Income	1,630,772	1,344,752
Less: Securities Lending Expenses	(1,425,985)	(1,178,497)
Total Securities Income	204,787	166,255
Administrative Reimbursement	4,001	4,012
Total Additions	238,290,530	99,475,095
<b>Deductions</b>		
Benefits	57,634,424	51,443,905
Member withdrawals	1,467,988	1,204,495
Administrative expenses	1,985,863	1,520,815
Total Deductions	61,088,275	54,169,215
Increase in net assets	177,202,255	45,305,880
<b>Net Assets Held in Trust For Benefits</b>		
Beginning of year	1,169,417,097	1,124,111,217
End of year	\$ 1,346,619,352	\$ 1,169,417,097

Section 2: Assets

EXHIBIT 2.3 – ACTUARIAL VALUE OF ASSETS

	<u>Contributions</u>	<u>Benefit Payments</u>	<u>Expected Investment Return</u>	<u>Actual Investment Return</u>	<u>Additional Earnings</u>	<u>Portion Deferred</u>	<u>Deferred Earnings</u>	
1.								
2000	\$36,999,819	\$40,283,577	\$99,631,619	\$(60,499,595)	\$(160,131,214)	10%	\$(16,013,121)	
2001	47,959,930	43,603,616	96,731,238	(2,985,071)	(99,716,309)	30%	(29,914,893)	
2002	45,267,450	50,634,377	96,446,423	(99,294,891)	(195,741,314)	50%	(97,870,657)	
2003	15,852,113	27,532,133	42,964,924	101,134,014	58,169,090	70%	40,718,363	
2004	52,968,440	59,102,412	95,174,169	183,336,227	88,162,058	80%	<u>70,529,646</u>	
Total							(32,550,662)	
2.	Market Value of Assets as of June 30, 2004							1,346,619,352
3.	Actuarial Value of Assets as of June 30, 2004 = (2)-(1)							1,379,170,014
4.	Corridor Limit							
	a. 80% of Net Market Value							1,077,295,482
	b. 120% of Net Market Value							1,615,943,222
5.	Actuarial Value of Assets After corridor as of June 30, 2004							1,379,170,014
6.	Health Coverage Reserve							47,270,304
	Supplemental Health Coverage Reserve							45,186,844
	Special Allowance							20,386,441
	Contingency Reserve							<u>24,769,811</u>
	Total Special Reserves							137,613,400
7.	Valuation Assets as of June 30, 2004 = (5)-(6)							<u>\$1,241,556,614</u>

EXHIBIT 2.4 – ASSET GAIN/LOSS

	<u>Valuation Assets</u>	<u>Actuarial Value</u>	<u>Market Value</u>	
1.	Total as of June 30, 2003	\$ 1,211,348,048	\$ 1,346,664,733	\$ 1,169,417,097
2.	Changes During the Year			
	County Contributions	39,334,678	39,334,678	39,334,678
	Member Contributions	13,633,762	13,633,762	13,633,762
	Benefit Payments	59,102,412	59,102,412	59,102,412
	Expenses	5,758,198	5,758,198	5,758,198
	Investment Return	<u>42,100,736</u>	<u>44,397,451</u>	<u>189,094,425</u>
	Total Changes	30,208,566	32,505,281	177,202,255
3.	Total as of June 30, 2004 = (1) + (2)	\$ 1,241,556,614	\$ 1,379,170,014	\$ 1,346,619,352
4.	Expected Value as of June 30, 2004	\$ 1,303,814,718	\$ 1,450,173,244	\$ 1,258,462,201
5.	Gain/Loss = (3) – (4)	\$ (62,258,104)	\$ (71,003,230)	\$ 88,157,151
6.	Rate of Return	3.01%	2.88%	15.72%

**EXHIBIT 2.5 – HISTORICAL RETURNS ON SYSTEM ASSETS**

NET RETURN ON ASSETS vs. INCREASE IN CONSUMER PRICE INDEX			
<u>Year Ended June 30,</u>	<u>Net Return at Market Value</u>	<u>Net Return at Actuarial Value</u>	<u>Increase in Consumer Price Index*</u>
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%
2004	15.7%	2.9%	3.3%
17-Year Compound Average	9.7%	N/A	3.1%

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

## Section 3: Liabilities

---

<b>Liabilities</b>	This section focuses on the System's actuarial liabilities and the cost components that are derived from those liabilities.
<b>Actuarial Value of Assets</b>	Represents the amount of assets already accumulated by the System at Actuarial Value (item 1 in Exhibit 3.1).
<b>Present Value of Future Member Contributions</b>	Represents the present value of the contributions anticipated to be received in the future from the current members (item 2 in Exhibit 3.1).
<b>Present Value of Future Employer Normal Cost Contributions</b>	Represents the present value of future employer normal costs with respect to current members (item 3 in Exhibit 3.1).
<b>Unfunded Actuarial Accrued Liability (Surplus)</b>	Represents the difference between the present value of the benefits to be paid from the System and the total of the existing assets plus the present value of the future normal costs and future member contributions. In the text we will abbreviate it as UAAL. The UAAL is amortized over 15 years from the date each new liability is first recognized (item 4 in Exhibit 3.1).
<b>Total Actuarial Assets</b>	Represents the total of all current assets of actuarial value plus the value of all future member and employer contributions for normal cost plus current and future employer costs to amortize the UAAL (item 5 in Exhibit 3.1).
<b>Present Value of Benefits</b>	The valuation determines the amount and timing of all future payments that will be made by the System. For active members, the present value of benefits includes the value of all benefits earned to date and all benefits to be earned in the future. For all members, the present value of benefits includes the value of benefits payable to members and survivors over their remaining lifetimes. The present value is then determined by discounting these payments at the assumed interest rate to June 30, 2004, the date of the valuation. The present value of supplemental benefits is shown at reserve values (items 6 to 12 in Exhibit 3.1).

## Section 3: Liabilities

---

### **Actuarial Accrued Liability**

Employer contributions have been determined under the Entry Age Normal Actuarial Cost Method, permitted by Government Code 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 employer Normal Costs. The difference between the Actuarial Accrued Liability and the Actuarial Value of Assets is called the Unfunded Actuarial Accrued Liability.

### **Unfunded Actuarial Accrued Liability**

The valuation compares the Actuarial Value of Assets to the Actuarial Accrued Liabilities. The shortfall, if any, is called the Unfunded Actuarial Accrued Liability (UAAL) and is amortized over 15 years from the date each new liability is first recognized.

### **Actuarial Gain and Loss**

The difference between the UAAL and the expected UAAL is an actuarial gain or loss. The actuarial gain and loss is comprised of two components: an asset gain and loss (from investment experience different than expected) and a liability gain and loss (from other sources, such as salary growth, turnover and retirement patterns and life expectancies different than expected).

### **Funded Ratio**

Measures the portion of the AAL already funded by the current assets at actuarial value.

Section 3: Liabilities

**Exhibit 3.1 – ACTUARIAL BALANCE SHEET**

<b>ASSETS</b>	
1. Actuarial value of assets	\$ 1,379,170,014
2. Present value of future contributions by members	148,731,092
3. Present value of future employer contributions for normal cost	259,559,011
4. Present value of other future employer contributions (UAAL)	199,599,460
5. Total actuarial assets = (1) + (2) + (3) + (4)	\$ 1,987,059,577
<b>LIABILITIES</b>	
6. Present value of retirement allowances payable to retired members and their survivors	\$ 633,082,255
7. Present value of service retirement allowances payable to presently active members and their survivors	958,839,533
8. Present value of allowances payable to current and future vested terminated members and their survivors	127,340,445
9. Present value of disability retirement allowances payable to presently active members and their survivors	69,558,757
10. Present value of death benefits payable on behalf of presently active members	16,439,051
11. Present value of members' contributions to be returned upon withdrawal	44,186,137
12. Special Reserves	137,613,400
13. Total actuarial liabilities = (6) + (7) + (8) + (9) + (10) + (11) + (12)	\$ 1,987,059,577

**EXHIBIT 3.2 – ACTUARIAL ACCRUED LIABILITY**

14. Present value of future benefits (items 6 to 12)	\$ 1,987,059,577
15. Present value of future contributions by members and employers = (2) + (3)	408,290,103
16. Actuarial accrued liability = (14) – (15)	1,578,769,474
17. Actuarial value of assets	1,379,170,014
18. Unfunded actuarial accrued liability (UAAL) = (16) – (17)	\$ 199,599,460
19. Funded ratio (including Special Reserves) = (17)/(16) * 100%	87.4%



Section 3: Liabilities

EXHIBIT 3.3 – ACTUARIAL GAIN AND LOSS

1.	Unfunded actuarial accrued liability as of July 1, 2003		\$	108,199,266
2.	Change due to contributions:			
	(a) Normal cost	\$	47,544,587	
	(b) Interest on (a)		1,939,819	
	(c) Interest on (1)		8,829,060	
	(d) Contributions (member and employer)		(52,968,440)	
	(e) Interest on (d)		(1,150,054)	
	(f) Net change = (a)+(b)+(c)+(d)+(e)			\$ 4,194,972
3.	Expected unfunded actuarial accrued liability = (1)+(2)			\$ 112,394,238
4.	Change due to actuarial experience:			
	(a) Actuarial (gain)/loss from liability sources	\$	24,947,118	
	(b) Actuarial (gain)/loss from asset sources		62,258,104	
	(c) Net change = (a)+(b)			87,205,222
5.	Unfunded actuarial accrued liability before changes = (1)+(2)+(4)			\$ 199,599,460
6.	Change in actuarial assumptions			0
7.	Change in plan provisions			0
8.	Change in actuarial methods			0
9.	Unfunded actuarial accrued liability as of June 30, 2004 = (5)+(6)+(7)+(8)			\$ 199,599,460

## Section 4: Member Contribution Rates

---

### **Member Contributions**

This section focuses on the determination of the member contribution rates to the System.

### **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.

Member Basic Contributions are based on entry age into the System and the following actuarial assumptions:

1. Actuarial investment return (8.16%)
2. Salary increase (average of 5.50%)
3. Life expectancy

The basic employee contribution rates for General members were calculated on a unisex basis using the 1994 Group Annuity Mortality Table for Males with a 3-year setback. The Safety basic employee rates were based upon the 1994 Group Annuity Mortality Table for Males with a 2-year setback.

### **Cost-of-Living Contributions**

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

## Section 4: Member Contribution Rates

A summary of the current average member contribution rates is provided below.

**EXHIBIT 4.1 – AVERAGE CURRENT CONTRIBUTION RATES**

	Average Member Basic Contribution Rates					
	General		Safety		APCD	
	Plan 5A	Plan 5B	Plan 4A	Plan 4B	Plan 1	Plan 2
June 30, 2003	3.42%	7.30%	5.78%	12.00%	4.09%	8.78%
June 30, 2004	3.42%	7.30%	5.79%	11.98%	4.07%	8.73%

Member rates at sample ages are shown below.

**EXHIBIT 4.2 – SAMPLE MEMBERS' CURRENT CONTRIBUTION RATES**

Entry Age	Sample Member Basic Contribution Rates					
	General		Safety		APCD	
	Plan 5A	Plan 5B	Plan 4A	Plan 4B	Plan 1	Plan 2
25	3.26%	6.53%	5.74%	11.48%	3.83%	7.67%
35	3.55%	7.09%	6.35%	12.71%	4.13%	8.27%
54	4.53%	9.06%	7.72%	15.45%	5.21%	10.41%

The following pages set forth the complete set of members' contribution. The interest rate, mortality table, inflation rate are indicated on the bottom of the tables.

Section 4: Member Contribution Rates

**EXHIBIT 4.3 – GENERAL MEMBERS’ CONTRIBUTION RATES**  
(expressed as a percentage of monthly compensation)

RECOMMENDED - SECTION 31676.12

	Recommended Plan5A - Section 31676.12	Recommended Plan 5B - Section 31676.12
Entry Age	FAS 1 - Half Rates	FAS 1 - Full Rates
20	3.20%	6.39%
21	3.21	6.41
22	3.22	6.43
23	3.23	6.46
24	3.25	6.49
25	3.26	6.53
26	3.28	6.56
27	3.30	6.61
28	3.33	6.65
29	3.35	6.71
30	3.38	6.76
31	3.41	6.82
32	3.44	6.88
33	3.48	6.95
34	3.51	7.02
35	3.55	7.09
36	3.59	7.17
37	3.63	7.25
38	3.67	7.33
39	3.71	7.42
40	3.75	7.51
41	3.80	7.60
42	3.85	7.70
43	3.90	7.79
44	3.95	7.89
45	4.00	8.00
46	4.05	8.10
47	4.11	8.21
48	4.16	8.33
49	4.22	8.44
50	4.28	8.56
51	4.34	8.68
52	4.40	8.81
53	4.47	8.93
54	4.53	9.06
55	4.60	9.20
56	4.67	9.34
57	4.74	9.48
58	4.81	9.62
59 & over	4.89	9.77
Interest:	8.16%	8.16%
Inflation:	4.50%	4.50%
Mortality:	94 GA (Male, -3)	94 GA (Male, -3)

## Section 4: Member Contribution Rates

### EXHIBIT 4.4 – SAFETY MEMBERS' CONTRIBUTION RATES (expressed as a percentage of monthly compensation)

#### RECOMMENDED SECTION 31664.2

	Recommended Plan 4A - Section 31664.2	Recommended Plan 4B - Section 31664.2
Entry Age	FAS 1 – Half Rates	FAS 1 - Full Rates
20	5.45%	10.90%
21	5.51	11.01
22	5.57	11.13
23	5.62	11.25
24	5.68	11.37
25	5.74	11.48
26	5.80	11.60
27	5.86	11.72
28	5.92	11.84
29	5.98	11.96
30	6.04	12.08
31	6.10	12.20
32	6.16	12.33
33	6.23	12.45
34	6.29	12.58
35	6.35	12.71
36	6.42	12.84
37	6.48	12.97
38	6.55	13.10
39	6.61	13.23
40	6.68	13.36
41	6.75	13.49
42	6.81	13.63
43	6.88	13.76
44	6.95	13.89
45	7.01	14.03
46	7.08	14.16
47	7.15	14.30
48	7.22	14.45
49	7.30	14.60
50	7.38	14.76
51	7.46	14.92
52	7.54	15.08
53	7.63	15.26
54 & over	7.72	15.45
Interest:	8.16%	8.16%
Inflation:	4.50%	4.50%
Mortality:	94 GA (Male, -2)	94 GA (Male, -2)

Section 4: Member Contribution Rates

**EXHIBIT 4.5 – APCD MEMBERS’ CONTRIBUTION RATES**  
(expressed as a percentage of monthly compensation)

RECOMMENDED SECTION 31676.15

	Recommended Plan 1 - Section 31676.15	Recommended Plan 2 - Section 31676.15
Entry Age	FAS 1 – Half Rates	FAS 1 - Full Rates
20	3.77%	7.55%
21	3.78	7.56
22	3.79	7.58
23	3.80	7.61
24	3.82	7.64
25	3.83	7.67
26	3.85	7.71
27	3.88	7.75
28	3.90	7.80
29	3.93	7.85
30	3.96	7.91
31	3.99	7.98
32	4.02	8.04
33	4.06	8.11
34	4.10	8.19
35	4.13	8.27
36	4.18	8.35
37	4.22	8.44
38	4.26	8.53
39	4.31	8.62
40	4.36	8.72
41	4.41	8.82
42	4.46	8.92
43	4.51	9.03
44	4.57	9.14
45	4.63	9.25
46	4.68	9.37
47	4.74	9.49
48	4.80	9.61
49	4.87	9.73
50	4.93	9.86
51	5.00	9.99
52	5.07	10.13
53	5.14	10.27
54 & over	5.21	10.41
Interest:	8.16%	8.16%
Inflation:	4.50%	4.50%
Mortality:	94 GA (Male, -3)	94 GA (Male, -3)

## Section 5: Employer Contribution Rates

---

### **Employer Contributions**

This section focuses on the determination of the employer contribution rates to the System.

### **Employer Contribution rates**

Employer contributions have been determined under the Entry Age Normal Actuarial Cost Method, permitted by Government Code 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 plan assets is called the Unfunded Actuarial Accrued Liability and is amortized over 15 years from the date each new liability is first recognized.

The contribution rates reflect the current economic and noneconomic assumptions. During the year, the return on the valuation assets was 3.0%, short of the actuarial assumption of 8.16%. This, along with pay increases larger than expected for recent retirees, resulted in an increase in the calculated County contribution rate of 2.90%.

The following charts specify the recommended employer contributions and components thereof (expressed as a level percentage of payroll) for this valuation. A breakdown between normal cost and UAAL and by basic and cost-of-living benefits is provided.

## Section 5: Employer Contribution Rates

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

### EXHIBIT 5.1 – CHANGE IN UNFUNDED ACTUARIAL ACCRUED LIABILITIES AND CONTRIBUTION RATES

	Unfunded Liability	Contribution Rate
Values as of June 30, 2003	\$108,199,000	15.21%
Interest and contribution adjustment through June 30, 2004	4,195,000	
Change due to ....		
Asset losses/(gains)	62,258,000	1.99
Retiree losses/(gains)	9,695,000	0.31
Other losses (demographic experience)	15,252,000	0.60
Total changes	91,400,000	2.90%
Values as of June 30, 2004	\$199,599,000	18.11%

### EXHIBIT 5.2 – CURRENT TOTAL EMPLOYER CONTRIBUTION RATES

TOTAL EMPLOYER CONTRIBUTION RATES – CURRENT							
	GENERAL			SAFETY	SAFETY & PROBATION	APCD	
	Plan 5A	Plan 2	Plan 5B	Plan 4A	Plan 4B	Plan 1	Plan 2
Total	12.13%	5.27%	12.04%	26.10%	22.90%	16.49%	17.62%

Recommended Average Rate for Total Group:

15.21%



## Section 5: Employer Contribution Rates

### EXHIBIT 5.3 – RECOMMENDED EMPLOYER CONTRIBUTION RATES

#### NORMAL COST AND UAAL RATE BREAKDOWN

TOTAL EMPLOYER CONTRIBUTION RATES – RECOMMENDED							
	GENERAL		IV Plan 5B	III SAFETY Plan 4A	SAFETY & IV PROBATION Plan 4B	APCD	
	III Plan 5A	II Plan 2				Plan 1	Plan 2
Normal Cost	9.50%	2.83%	9.52%	18.97%	15.83%	11.25%	12.34%
UAAL	4.86	4.86	4.86	11.85	11.85	4.96	4.96
Total	14.36%	7.69%	14.38%	30.82%	27.68%	16.21%	17.30%

Recommended Average Rate for Total Group:

Normal Cost	11.48%
UAAL	6.63
Total	<u>18.11%</u>

### EXHIBIT 5.4 – RECOMMENDED EMPLOYER CONTRIBUTION RATES

#### BASIC AND COST OF LIVING RATE BREAKDOWN

TOTAL EMPLOYER CONTRIBUTION RATES – RECOMMENDED							
	GENERAL		IV Plan 5B	III SAFETY Plan 4A	SAFETY & IV PROBATION Plan 4B	APCD	
	III Plan 5A	II Plan 2				Plan 1	Plan 2
Basic	9.58%	5.70%	8.93%	20.45%	16.70%	11.03%	11.06%
COL	4.78	1.99	5.45	10.37	10.98	5.18	6.24
Total	14.36%	7.69%	14.38%	30.82%	27.68%	16.21%	17.30%

Recommended Average Rate for Total Group:

Basic	11.48%
COL	6.63
Total	<u>18.11%</u>

## Section 6: Recommendations

---

### Recommendations

We recommend that the current inflation rate assumption remain at 4.50% and the current investment return assumption remain at 8.16%.

We recommend that the Board adopt the member and employer contribution rates as of June 30, 2004 as shown in the prior sections. These rates, which reflect the current economic assumptions, are based on the Entry Age Normal Actuarial Cost Method and the actuarial value of assets, with an unfunded Actuarial Accrued Liability amortized over 15 years from the date each new liability is first recognized.

This combination of assumptions and methods reflects our best judgment of future long-term experience for the System.

## Section 7: GASB Disclosures and CAFR Information

---

### **GASB and CAFR Information**

This section focuses on the required GASB disclosures and the required CAFR information.

### **GASB 25 Schedule of Funding Progress**

GASB 25 established reporting and disclosures for defined benefit pension plans. The required Schedule of Funding Progress shows a historical comparison of the System's assets and liabilities, using the same actuarial method used for funding the System.

### **GASB 25 Schedule of Employer Contributions**

The required Schedule of Employer Contributions compares the actual employer contributions to the "Annual Required Contributions" (ARC). The ARC is the employer contribution determined under GASB 25 standards (normal cost and amortization of unfunded actuarial accrued liabilities) using the actuarial funding method used for funding the System.

### **Actuarial Analysis of Financial Experience**

The annual CAFR requires the disclosure of historical sources of actuarial gains and losses.

### **Retiree and Beneficiary Experience**

The annual CAFR requires the disclosure of historical summary data for retired members.

### **Solvency Test**

The annual CAFR requires the disclosure of a "Solvency Test." This test compares actuarial assets to actuarial accrued liabilities, applying assets to active member contributions first, then to inactive and retired members and then to the remaining active member liabilities.

## Section 7: GASB Disclosures and CAFR Information

---

### Actuary's Certification Letter

October 8, 2004

Board of Retirement  
Santa Barbara County  
Employees' Retirement System  
3916 State Street, Suite 210  
Santa Barbara, CA 93105

Re: *Actuarial Certification of the Santa Barbara County Employees' Retirement System*

Members of the Board:

Mellon Consultants, Inc. is the Consulting Actuary for the Santa Barbara County Employees' Retirement System. The date of the most recent actuarial valuation was June 30, 2004. In each actuarial study, we conduct an examination of all participant data for reasonableness.

Actuarial funding is based on the Entry Age Normal Cost Method. Under this method, the employer contribution rate provides for current cost (normal cost) plus a level percentage of payroll to amortize the unfunded actuarial accrued liability (UAAL). As of June 30, 2004, the amortization period is 15 years. The funding objective of the Plan is to establish contribution rates which, over time, will remain as a level percentage of payroll unless Plan benefit provisions are changed.

For actuarial valuation purposes, Plan assets are valued at Actuarial Value. Under this method, the assets used to determine employer contribution rates take into account market value by spreading all gains and losses (returns above or below expected returns) over five years. The System's financial statements are audited by an outside auditor.

Our firm has prepared all of the schedules presented in the actuarial report. The actuarial assumptions shown in the schedules were selected by us as being appropriate for use under the Plan. An analysis of the Plan's noneconomic experience was performed as of June 30, 2003 to establish the validity of these assumptions. The assumptions used in the most recent valuation produce results which, in the aggregate, reasonably approximate the anticipated future experience of the Plan. The next experience analysis is due to be performed as of June 30, 2006.

We certify that the Retirement System is in sound financial condition and that the valuation was performed in accordance with generally accepted actuarial principles and practices. In particular, the assumptions and methods used for funding purposes meet the parameters of the Governmental Accounting Standards Board Statement No. 25.

Respectfully submitted,



Michael Moehle, F.S.A., E.A., M.A.A.A.  
Principal and Consulting Actuary



Eva Yum, F.S.A., E.A.  
Director and Consulting Actuary

Section 7: GASB Disclosures and CAFR Information

**EXHIBIT 7.1 – GASB 25 SCHEDULE OF FUNDING PROGRESS**  
(IN THOUSANDS)

<u>Actuarial Valuation Date</u>	<u>Actuarial Value of Assets*</u>	<u>Actuarial Accrued Liability (AAL)*</u>	<u>Unfunded AAL (UAAL)</u>	<u>Funded Ratio</u>	<u>Covered Payroll</u>	<u>UAAL as a Percent of Covered Payroll</u>
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%
6/30/04	\$ 1,379,170	\$ 1,578,769	\$ 199,599	87.4%	\$ 266,960	74.8%

\* Excluding benefit improvements.

**EXHIBIT 7.2 – GASB 25 SCHEDULE OF EMPLOYER CONTRIBUTIONS**  
(IN THOUSANDS)

<u>Year Ended</u>	<u>Annual Required Contribution</u>	<u>Percentage Contributed</u>
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%
6/30/04	\$ 39,335	100%

\* January 1, 2003 to June 30, 2003

Section 7: GASB Disclosures and CAFR Information

**EXHIBIT 7.3 - ACTUARIAL ANALYSIS OF FINANCIAL EXPERIENCE**  
(DOLLARS IN THOUSANDS)

<u>Plan Year Ending</u>	<u>Actuarial (Gains)/Losses</u>			<u>Changes in Plan Provisions</u>	<u>Changes in Assumptions/Methods</u>	<u>Total (Gain)/Loss</u>
	<u>Asset Sources</u>	<u>Liability Sources</u>	<u>Total</u>			
6/30/2003	(10,810)	17,954	7,144	0	23,438	30,582
6/30/2004	62,258	24,947	87,205	0	0	87,205

**EXHIBIT 7.4 - RETIREE AND BENEFICIARY EXPERIENCE**

<u>Plan Year Ending</u>	<u>At Beginning of Year</u>	<u>At End of Year</u>	<u>Retiree Payroll</u>	<u>% Increase in Retiree Payroll</u>	<u>Average Annual Allowances</u>
6/30/2003	2,275	2,345	47,280,000	10.50%	20,160
6/30/2004	2,345	2,440	52,268,000	10.55%	21,420

**EXHIBIT 7.5 - SOLVENCY TEST**  
(DOLLARS IN THOUSANDS)

<u>Valuation Date</u>	<u>Actuarial Accrued Liabilities For</u>			<u>Actuarial Accrued Liabilities</u>	<u>Valuation Assets</u>	<u>Portion of Accrued Liabilities Covered by Valuation Assets</u>		
	<u>(1) Active Member Contributions</u>	<u>(2) Retirees and Beneficiaries</u>	<u>(3) Active Members</u>			<u>(1)</u>	<u>(2)</u>	<u>(3)</u>
6/30/2003	105,570	572,737	776,557	1,454,864	1,346,665	100%	100%	86.1%
6/30/2004	115,530	633,082	830,157	1,578,769	1,379,170	100%	100%	76.0%

## Section 8: Summary of Actuarial Assumptions

---

### **Actuarial Assumptions**

This section focuses on the actuarial assumptions used to perform the valuation.

To carry out an actuarial valuation of the assets and liabilities of the 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.

### **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.

A complete list of the current rates of separation from active service can be found in Exhibits 8.1 – 8.3. These rates should be viewed in the aggregate rather than examining each of them separately. This is due to the interdependency of the rates. For example, if turnover were to increase, there would be fewer retirements.

## Section 8: Summary of Actuarial Assumptions

---

### Economic Assumptions

#### Inflation

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 the 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.

The rate of inflation is an important assumption used in valuing the System's liabilities. This assumption underlies both the investment return assumption and the salary increase 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.

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 System's present obligations) 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%.



## Section 8: Summary of Actuarial Assumptions

### Economic Assumptions (continued)

#### Real Rate of Return

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 this building block approach, we then combine the underlying inflation assumption with the real rate of return to develop the total rate of return assumption (interest rate assumption).

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's target and actual asset allocations are shown in the table below.

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 1926-2003 called *Stocks, Bonds and Inflation: Simulations of the Future*. The results of this study are presented below.

ASSET CLASS	ASSET ALLOCATION AS OF JUNE 30, 2004 (MARKET VALUE)		IBBOTSON-SINQUEFIELD REAL RATES OF RETURN (1926 - 2003)	TARGET WEIGHTED RETURN
	TARGET	ACTUAL		
Equity	68%	70%	7.2%	4.90%
Fixed				
Income/Bonds	27%	25%	2.6%	0.70%
Real Estate	4%	2%	4.0%	0.16%
Short Term	<u>1%</u>	<u>3%</u>	0.7%	0.01%
Total	100%	100%		5.77%

\*Includes International Equity and Fixed Income

## Section 8: Summary of Actuarial Assumptions

---

### **Economic Assumptions (continued)**

#### **Real Rate of Return (continued)**

Applying the System's target asset allocation to the real rates of return in the table produces a real rate of return of approximately 5.77% (assuming an equal proportion of government and corporate bonds and a return of 4% on real estate). This rate, however, should be adjusted to reflect administrative expenses and potential adverse future experience.

After making this adjustment, 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 feel that the 8.16% investment return assumption should be continued.

#### **Salary Scale**

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.

#### **Merit and Longevity Increases**

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

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

## Section 8: Summary of Actuarial Assumptions

---

The Entry Age Normal Actuarial Cost Method was used in conjunction with the following actuarial assumptions. The UAAL is being amortized over 15 years from the date each new liability is first recognized.

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: Smoothed actuarial value.
5. Salary Scale: See Exhibit 8.7
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 Exhibits 8.1 – 8.3
8. Years of Life Expectancy After Retirement (Exhibit 8.4):
  - General & Safety Males - 1994 Group Annuity Table for Males, set back two years.
  - General & Safety Females - 1994 Group Annuity Table for Males, set forward one year.
9. Years of Life Expectancy After Disability Retirement (Exhibits 8.5 – 8.6):
  - General 1981 Disability Mortality Table for General Members, with no setback.
  - Safety 1981 Disability Mortality Table for Safety Members, set back two years.

## Section 8: Summary of Actuarial Assumptions

---

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, setback 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.

Section 8: Summary of Actuarial Assumptions

**EXHIBIT 8.1 – PROBABILITIES OF SEPARATION FROM ACTIVE SERVICE  
GENERAL MEMBERS – MALES  
CURRENT ASSUMPTIONS**

<u>Age</u>	<u>Withdrawal</u>	<u>Ordinary Death</u>	<u>Ordinary Disability</u>	<u>Service</u>	<u>Death While Eligible</u>	<u>Duty Death</u>	<u>Duty Disability</u>	<u>Terminated Vested</u>
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

## Section 8: Summary of Actuarial Assumptions

### EXHIBIT 8.2 – PROBABILITIES OF SEPARATION FROM ACTIVE SERVICE GENERAL MEMBERS - FEMALES CURRENT ASSUMPTIONS

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

Section 8: Summary of Actuarial Assumptions

**EXHIBIT 8.3 – PROBABILITIES OF SEPARATION FROM ACTIVE SERVICE  
SAFETY MEMBERS  
CURRENT ASSUMPTIONS**

<u>Age</u>	<u>Withdrawal</u>	<u>Ordinary Death</u>	<u>Ordinary Disability</u>	<u>Service</u>	<u>Death While Eligible</u>	<u>Duty Death</u>	<u>Duty Disability</u>	<u>Terminated Vested</u>
20	0.07000	0.00007	0.00000	0.00000	0.00000	0.00006	0.00014	0.00000
22	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

## Section 8: Summary of Actuarial Assumptions

### EXHIBIT 8.4 – YEARS OF LIFE EXPECTANCY AFTER SERVICE RETIREMENT

GENERAL					SAFETY				
Age	Male	Female	Male	Female	Age	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



Section 8: Summary of Actuarial Assumptions

**EXHIBIT 8.5 – YEARS OF LIFE EXPECTANCY AFTER DISABILITY RETIREMENT  
GENERAL MEMBERS**

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

1981 Disability for General members

Section 8: Summary of Actuarial Assumptions

**EXHIBIT 8.6 – YEARS OF LIFE EXPECTANCY AFTER DISABILITY RETIREMENT  
SAFETY AND PROBATION MEMBERS**

<u>Age</u>	<u>Years of Life Expectancy</u>	<u>Age</u>	<u>Years of Life Expectancy</u>	<u>Age</u>	<u>Years of Life Expectancy</u>
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

## Section 8: Summary of Actuarial Assumptions

### EXHIBIT 8.7 – RATIO OF CURRENT COMPENSATION TO COMPENSATION ANTICIPATED AT RETIREMENT

<u>Age</u>	<u>General Members</u>	<u>Safety Members</u>	<u>Age</u>	<u>General Members</u>	<u>Safety Members</u>
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.

## Section 9: Member Data

The June 30, 2004 actuarial valuation of the System was based on the following data. For comparison, we also show a summary of the June 30, 2003 statistical information.

**EXHIBIT 9.1 - SUMMARY OF RETIRED MEMBERSHIP**

	<u>June 30, 2003</u>	<u>June 30, 2004</u>	<u>Percentage Change During the Period</u>
<b>GENERAL and APCD</b>			
Number	1,879	1,941	3.30%
Basic Annual Allowance	\$ 21,877,000	\$ 24,092,000	10.12%
Average Basic Monthly Allowance	\$ 970	\$ 1,034	6.60%
Total Annual Allowance	\$ 29,093,000	\$ 31,927,000	9.74%
Average Total Monthly Allowance	\$ 1,290	\$ 1,371	6.28%
<b>SAFETY</b>			
Number	466	499	7.08%
Basic Annual Allowance	\$ 14,892,000	\$ 16,515,000	10.90%
Average Basic Monthly Allowance	\$ 2,663	\$ 2,758	3.57%
Total Annual Allowance	\$ 18,187,000	\$ 20,341,000	11.84%
Average Total Monthly Allowance	\$ 3,252	\$ 3,397	4.46%
<b>TOTAL</b>			
Number	2,345	2,440	4.05%
Basic Annual Allowance	\$ 36,770,000	\$ 40,607,000	10.44%
Average Basic Monthly Allowance	\$ 1,307	\$ 1,387	6.12%
Total Annual Allowance	\$ 47,280,000	\$ 52,268,000	10.55%
Average Total Monthly Allowance	\$ 1,680	\$ 1,785	6.25%
Average Age	70.26	69.77	(0.70)%

**EXHIBIT 9.2 - SUMMARY OF INACTIVE MEMBERSHIP**

	<u>June 30, 2003</u>	<u>June 30, 2004</u>	<u>Percentage Change During the Period</u>
<b>TOTAL</b>			
Number*	660	717	8.64%

\*Excludes pending withdrawals.

**EXHIBIT 9.3 - SUMMARY OF ACTIVE MEMBERSHIP**

	<u>June 30, 2003</u>	<u>June 30, 2004</u>	<u>Percentage Change During the Period</u>
Number	4,573	4,503	(1.53)%
Annual Payroll*	\$ 257,237,000	\$ 266,961,000	3.78%
Average Monthly Salary	\$ 4,688	\$ 4,940	5.38%
Average Age	43.91	44.26	0.80%
Average Service	9.70	10.17	4.85%

## Section 9: Member Data

### EXHIBIT 9.4 - SUMMARY OF ACTIVE MEMBERSHIP

	<u>June 30, 2003</u>	<u>June 30, 2004</u>	<u>Percentage Change During the Period</u>
<b>GENERAL PLAN 5A</b>			
Number	1,554	1,454	(6.44)%
Annual Payroll*	\$ 90,825,000	\$ 88,872,000	(2.15)%
Average Monthly Salary	\$ 4,870	\$ 5,094	4.60%
Average Age	49.32	49.89	1.18%
Average Service	15.90	16.73	5.22%
<b>GENERAL PLAN 2</b>			
Number	38	36	(5.26)%
Annual Payroll*	\$ 1,886,000	\$ 1,885,000	(0.05)%
Average Monthly Salary	\$ 4,135	\$ 4,363	5.51%
Average Age	48.61	48.69	0.16%
Average Service	13.59	14.64	7.73%
<b>GENERAL PLAN 5B</b>			
Number	1,970	2,012	2.13%
Annual Payroll*	\$ 96,563,000	\$ 104,907,000	8.64%
Average Monthly Salary	\$ 4,085	\$ 4,345	6.36%
Average Age	40.72	41.39	1.65%
Average Service	3.84	4.61	20.05%
<b>SAFETY PLAN 4A</b>			
Number	421	398	(5.46)%
Annual Payroll*	\$ 32,591,000	\$ 32,799,000	0.64%
Average Monthly Salary	\$ 6,451	\$ 6,867	6.45%
Average Age	45.50	46.03	1.16%
Average Service	17.68	18.38	3.96%
<b>SAFETY PLAN 4B</b>			
Number	529	546	3.21%
Annual Payroll*	\$ 31,544,000	\$ 34,797,000	10.31%
Average Monthly Salary	\$ 4,969	\$ 5,311	6.88%
Average Age	37.90	37.86	(0.11)%
Average Service	6.50	6.71	3.23%
<b>APCD PLAN 1</b>			
Number	42	38	(9.52)%
Annual Payroll*	\$ 2,873,000	\$ 2,652,000	(7.69)%
Average Monthly Salary	\$ 5,700	\$ 5,816	2.04%
Average Age	49.19	49.76	1.16%
Average Service	15.09	15.50	2.72%
<b>APCD PLAN 2</b>			
Number	19	19	0.00%
Annual Payroll*	\$ 955,000	\$ 1,049,000	9.84%
Average Monthly Salary	\$ 4,189	\$ 4,601	9.84%
Average Age	43.68	44.68	2.29%
Average Service	2.93	4.21	43.69%

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

Section 9: Member Data

**EXHIBIT 9.5 - AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY  
OF ACTIVE GENERAL MEMBERS  
AS OF JUNE 30, 2004**

**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	2	1	2	0	0	0	0	5
	45,129	39,848	46,079	0	0	0	0	44,453
30-34	1	10	28	1	0	0	0	40
	28,101	44,258	44,375	59,633	0	0	0	44,320
35-39	6	8	88	27	1	0	0	130
	68,093	51,784	54,037	52,643	54,173	0	0	54,259
40-44	2	12	111	81	22	1	0	229
	66,474	60,120	56,553	59,042	55,328	42,218	0	57,527
45-49	4	9	117	100	69	18	1	318
	54,810	69,320	58,358	61,119	61,223	52,001	48,842	59,724
50-54	0	7	116	87	58	44	5	317
	0	92,134	61,144	60,692	70,025	72,259	57,448	64,814
55-59	2	9	91	71	54	27	25	279
	44,667	69,975	55,788	71,345	69,417	77,168	71,484	66,238
60-64	1	4	34	28	14	7	11	99
	41,602	65,392	58,080	75,627	60,109	61,973	70,897	65,158
65-69	0	3	10	6	1	2	2	24
	0	43,230	51,979	65,824	86,544	86,471	38,954	57,576
70 & Over	0	1	7	0	1	1	3	13
	0	113,611	50,803	0	38,740	151,481	46,478	61,453
Total	18	64	604	401	220	100	47	1,454
	56,113	62,838	56,647	62,926	64,875	69,994	66,391	61,123

Section 9: Member Data

**EXHIBIT 9.6 - AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY  
OF ACTIVE GENERAL MEMBERS  
AS OF JUNE 30, 2004**

**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	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
25-29	0	2	0	0	0	0	0	2
	0	49,060	0	0	0	0	0	49,060
30-34	0	1	0	0	0	0	0	1
	0	63,606	0	0	0	0	0	63,606
35-39	0	6	0	0	0	0	0	6
	0	52,740	0	0	0	0	0	52,740
40-44	0	2	3	0	3	0	0	8
	0	59,018	41,258	0	56,229	0	0	51,312
45-49	0	1	1	2	0	0	0	4
	0	48,376	38,740	61,652	0	0	0	52,605
50-54	0	0	0	1	2	2	0	5
	0	0	0	33,249	57,259	54,024	0	51,163
55-59	0	2	0	0	0	0	1	3
	0	53,149	0	0	0	0	61,002	55,767
60-64	0	1	0	1	1	0	0	3
	0	38,740	0	54,498	113,183	0	0	68,807
65-69	0	1	0	0	0	1	0	2
	0	28,457	0	0	0	40,302	0	34,380
70 & Over	0	0	0	2	0	0	0	2
	0	0	0	43,761	0	0	0	43,761
Total	0	16	4	6	6	3	1	36
	0	51,130	40,629	49,762	66,065	49,450	61,002	52,358

Section 9: Member Data

**EXHIBIT 9.7 - AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY  
OF ACTIVE GENERAL MEMBERS  
AS OF JUNE 30, 2004**

**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	74	2	0	0	0	0	0	76
	35,425	41,817	0	0	0	0	0	35,593
25-29	196	49	0	0	0	0	0	245
	43,581	46,260	0	0	0	0	0	44,117
30-34	214	128	4	0	0	0	0	346
	51,022	49,581	53,666	0	0	0	0	50,519
35-39	173	120	0	1	0	0	0	294
	53,678	50,305	0	43,451	0	0	0	52,266
40-44	158	125	4	3	2	0	0	292
	52,158	55,315	51,590	41,990	49,167	0	0	53,377
45-49	154	124	2	2	3	1	0	286
	55,637	52,982	43,472	79,718	50,956	65,093	0	54,553
50-54	126	100	1	2	3	0	0	232
	58,673	57,504	33,808	37,872	66,121	0	0	57,979
55-59	78	76	0	2	0	1	0	157
	57,972	56,388	0	62,623	0	38,580	0	57,141
60-64	27	34	1	0	0	0	0	62
	58,536	58,991	40,302	0	0	0	0	58,491
65-69	4	13	0	0	0	0	0	17
	60,279	60,675	0	0	0	0	0	60,582
70 & Over	3	1	0	1	0	0	0	5
	59,636	60,742	0	40,302	0	0	0	55,990
Total	1,207	772	12	11	8	2	0	2,012
	51,444	53,249	48,507	51,832	56,196	51,837	0	52,140



Section 9: Member Data

**EXHIBIT 9.8 - AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY  
OF ACTIVE SAFETY MEMBERS  
AS OF JUNE 30, 2004**

**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
	57,810	0	0	0	0	0	0	57,810
30-34	5	1	14	1	0	0	0	21
	68,262	81,231	73,126	60,055	0	0	0	71,731
35-39	2	5	37	18	0	0	0	62
	57,242	76,767	71,302	75,895	0	0	0	72,623
40-44	1	3	34	35	19	0	0	92
	67,055	69,958	72,731	79,815	87,833	0	0	78,393
45-49	1	2	18	35	30	26	0	112
	70,207	79,671	80,563	83,402	88,532	97,484	0	87,404
50-54	0	2	5	11	18	26	7	69
	0	70,216	70,111	73,792	93,807	97,470	95,887	89,807
55-59	0	0	6	5	9	7	8	35
	0	0	74,829	69,525	83,199	99,430	95,486	85,865
60-64	0	0	0	2	2	0	2	6
	0	0	0	69,494	100,196	0	94,809	88,166
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	10	13	114	107	78	59	17	398
	65,087	74,978	73,548	78,851	89,263	97,709	95,571	82,410

Section 9: Member Data

**EXHIBIT 9.9 - AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY  
OF ACTIVE SAFETY MEMBERS  
AS OF JUNE 30, 2004**

**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	15	0	0	0	0	0	0	15
	57,366	0	0	0	0	0	0	57,366
25-29	87	122	0	0	0	0	0	109
	60,556	67,442	0	0	0	0	0	61,946
30-34	74	69	5	0	0	0	0	148
	61,972	66,594	58,686	0	0	0	0	64,016
35-39	35	45	8	2	0	0	0	90
	61,491	65,961	66,157	64,287	0	0	0	64,203
40-44	15	20	6	9	2	0	0	52
	63,112	63,331	58,843	60,953	74,185	0	0	62,756
45-49	15	19	4	5	10	0	0	53
	56,352	64,632	57,763	64,328	72,669	0	0	63,258
50-54	7	12	5	4	10	3	0	41
	60,206	58,274	55,496	83,416	70,425	69,824	0	64,527
55-59	8	7	4	1	1	3	2	26
	71,942	62,371	57,917	62,377	55,409	87,413	188,685	76,969
60-64	2	4	2	1	0	1	0	10
	51,761	63,600	28,206	54,949	0	89,922	0	55,921
65-69	0	0	1	0	0	0	0	1
	0	0	54,072	0	0	0	0	54,072
70 & Over	0	1	0	0	0	0	0	1
	0	55,368	0	0	0	0	0	55,368
Total	258	199	35	22	23	7	2	546
	61,083	65,262	57,898	65,899	71,075	80,233	188,685	63,730

Section 9: Member Data

EXHIBIT 9.10 - AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY  
OF ACTIVE APCD MEMBERS  
AS OF JUNE 30, 2004

PLAN 1

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	2	1	0	0	0	3
	0	0	60,804	48,534	0	0	0	56,714
35-39	0	0	5	4	0	0	0	9
	0	0	64,611	71,079	0	0	0	67,486
40-44	0	0	1	3	0	0	0	4
	0	0	68,272	76,488	0	0	0	74,434
45-49	0	0	4	6	2	0	0	12
	0	0	59,203	81,757	80,328	0	0	74,001
50-54	0	0	5	3	0	0	0	8
	0	0	65,995	69,392	0	0	0	67,269
55-59	0	0	1	1	0	0	0	2
	0	0	75,111	75,111	0	0	0	75,111
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	0	0	18	18	2	0	0	38
	0	0	64,157	74,230	80,328	0	0	69,780

Section 9: Member Data

**EXHIBIT 9.11 - AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY  
OF ACTIVE APCD MEMBERS  
AS OF JUNE 30, 2004**

**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
	57,847	0	0	0	0	0	0	57,847
25-29	2	0	0	0	0	0	0	2
	47,614	0	0	0	0	0	0	47,614
30-34	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
35-39	3	0	0	0	0	0	0	3
	58,196	0	0	0	0	0	0	58,196
40-44	1	0	0	0	0	0	0	1
	58,687	0	0	0	0	0	0	58,687
45-49	1	2	0	0	0	0	0	3
	71,265	57,466	0	0	0	0	0	62,066
50-54	2	1	0	0	0	0	0	3
	54,560	81,351	0	0	0	0	0	63,490
55-59	2	2	0	0	0	0	0	4
	48,394	46,948	0	0	0	0	0	47,671
60-64	0	1	0	0	0	0	0	1
	0	37,854	0	0	0	0	0	37,854
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	13	6	0	0	0	0	0	19
	55,490	54,672	0	0	0	0	0	55,232

Section 9: Member Data

**EXHIBIT 9.12 - AVERAGE ANNUAL BENEFIT AND MEMBERSHIP DISTRIBUTION  
OF RETIRED GENERAL MEMBERS  
AS OF JUNE 30, 2004**

**MALES**

Current Age	Years of Retirement							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 45	7	3	0	0	0	0	0	10
	9,793	15,308	0	0	0	0	0	11,448
45-49	2	2	1	0	0	0	0	5
	14,548	9,959	19,332	0	0	0	0	13,669
50-54	27	1	0	1	0	0	0	29
	13,936	23,795	0	17,003	0	0	0	14,382
55-59	46	15	2	1	0	0	0	64
	25,034	14,167	17,822	35,561	0	0	0	22,426
60-64	72	25	18	2	1	1	0	119
	32,377	19,807	15,958	7,396	15,787	16,144	0	26,557
65-69	38	46	30	11	1	2	0	128
	30,014	27,495	20,268	9,522	10,306	10,884	0	24,611
70-74	13	25	39	20	12	2	1	112
	21,818	22,059	28,736	16,317	8,453	13,474	12,655	21,636
75-79	8	10	29	42	19	13	1	122
	6,971	10,637	27,503	18,951	14,903	8,859	999	17,664
80-84	12	4	6	19	33	26	3	103
	6,329	15,186	17,883	25,220	20,626	10,402	13,043	16,635
85 & Over	6	5	1	3	28	30	17	90
	4,352	7,737	6,428	26,666	13,059	14,222	10,596	12,485
Total	231	136	126	99	94	74	22	782
	23,977	20,731	23,669	18,723	15,500	11,853	10,587	20,155

Section 9: Member Data

**EXHIBIT 9.13 - AVERAGE ANNUAL BENEFIT AND MEMBERSHIP DISTRIBUTION  
OF RETIRED GENERAL MEMBERS  
AS OF JUNE 30, 2004**

**FEMALES**

Current Age	Years of Retirement							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 45	6	3	2	0	0	0	0	11
	7,551	14,408	6,668	0	0	0	0	9,261
45-49	6	6	0	1	0	0	0	13
	23,223	15,561	0	16,742	0	0	0	19,188
50-54	38	6	1	1	1	0	0	47
	10,513	24,927	15,197	26,154	10,258	0	0	12,780
55-59	75	48	1	3	1	0	0	128
	21,207	10,087	9,924	11,062	11,885	0	0	16,638
60-64	76	44	21	1	2	2	0	146
	22,240	10,505	10,192	14,884	13,834	6,339	0	16,587
65-69	69	53	32	14	3	2	1	174
	20,994	15,471	11,634	8,452	10,068	10,801	16,430	16,249
70-74	37	58	47	22	10	2	3	179
	14,481	17,701	18,152	10,456	9,091	5,346	6,379	15,455
75-79	22	16	43	49	26	25	0	181
	10,034	11,156	15,740	13,455	9,408	6,217	0	11,798
80-84	12	7	11	34	42	24	11	141
	7,548	17,183	13,796	17,350	9,005	6,558	8,990	11,255
85 & Over	15	3	1	8	31	49	32	139
	9,764	2,812	21,128	16,859	9,818	8,905	9,210	9,686
Total	356	244	159	133	116	104	47	1,159
	17,716	13,879	14,639	13,710	9,466	7,636	9,131	13,948

Section 9: Member Data

**EXHIBIT 9.14 - AVERAGE ANNUAL BENEFIT AND MEMBERSHIP DISTRIBUTION  
OF RETIRED SAFETY MEMBERS  
AS OF JUNE 30, 2004**

**TOTAL**

Current Age	Years of Retirement							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
	22,841	25,588	0	0	0	0	0	23,626
45-49	9	5	0	0	0	0	0	14
	30,628	25,293	0	0	0	0	0	28,723
50-54	25	1	0	3	2	0	0	31
	31,286	27,423	0	25,104	22,862	0	0	30,020
55-59	89	20	5	4	3	5	0	126
	60,047	30,158	33,456	23,882	21,471	17,502	0	50,493
60-64	42	73	15	2	9	10	4	155
	58,271	55,702	29,133	30,026	20,229	16,767	13,262	47,829
65-69	5	21	23	13	9	11	2	84
	27,819	40,435	46,453	29,413	19,353	18,467	17,267	33,939
70-74	3	9	7	10	6	2	0	37
	10,848	26,090	42,402	33,199	28,249	20,574	0	29,914
75-79	5	0	2	2	2	5	6	22
	19,470	0	74,645	40,508	37,671	19,521	14,511	26,712
80-84	0	0	0	0	3	3	10	16
	0	0	0	0	39,365	21,887	19,310	23,554
85 & Over	0	0	0	1	0	2	4	7
	0	0	0	13,287	0	34,339	15,866	20,776
Total	183	131	52	35	34	38	26	499
	50,451	45,484	40,746	29,702	24,391	19,248	16,585	40,764

Section 9: Member Data

**EXHIBIT 9.15 - SUMMARY OF ANNUAL RETIREMENT ALLOWANCES**

**AS OF JUNE 30, 2004**

**GENERAL MEMBERS**

		<u>Number</u>		<u>Annual Allowance</u>
Service	Males	662	\$	14,401,072
	Females	850		12,385,268
	Total	<u>1,512</u>	\$	<u>26,786,340</u>
Disability	Males	53	\$	930,256
	Females	68		1,289,753
	Total	<u>121</u>	\$	<u>2,220,009</u>
Beneficiaries	Males	67	\$	429,471
	Females	241		2,490,877
	Total	<u>308</u>	\$	<u>2,920,348</u>
Total		<u>1,941</u>	\$	<u>31,926,697</u>

**SAFETY MEMBERS**

		<u>Number</u>		<u>Annual Allowance</u>
Service	Males	306	\$	15,676,290
	Females	39		1,109,116
	Total	<u>345</u>	\$	<u>16,785,406</u>
Disability	Males	86	\$	2,156,997
	Females	16		394,021
	Total	<u>102</u>	\$	<u>2,551,018</u>
Beneficiaries	Males	3	\$	52,793
	Females	49		952,053
	Total	<u>52</u>	\$	<u>1,004,846</u>
Total		<u>499</u>	\$	<u>20,341,270</u>



## Section 10: Summary of Major Plan Provisions

### General Plan 5, APCD and Safety

<b>Eligibility</b>	First pay period following date of employment.
<b>Final Average Salary</b>	Highest 12 consecutive months of compensation earnable for all members.
<b>Service Retirement</b>	<b>Early retirement</b> Age 50 and 10 years or 30 years for General and APCD, and 20 years for Safety.

#### Benefit

General Plan 5 and APCD: 2% of final average salary times years of service times factor in the table below.

Safety Plan 4: 3% of final average salary per year of service for times years of service times factor in the table below.

Benefit Factors	General Plan 5	APCD	Safety
	31676.12	31676.15	31664.2
Age			
41			.4777
42			.5058
43			.5347
44			.5647
45			.5958
46			.6280
47			.6625
48			.6936
49			.7269
50	.6681	.7454	.7634
51	.7056	.7882	.8028
52	.7454	.8346	.8457
53	.7882	.8850	.8926
54	.8346	.9399	.9418
55	.8850	1.000	1.000
56	.9399	1.0447	1.000
57	1.000	1.1048	1.000
58	1.0447	1.1686	1.000
59	1.1048	1.2365	1.000
60	1.1686	1.3093	1.000
61	1.2365	1.3608	1.000
62	1.3093	1.4123	1.000
63	1.3093	1.4638	1.000
64	1.3093	1.5153	1.000
65	1.3093	1.5668	1.000

## Section 10: Summary of Major Plan Provisions

---

<b>Non Service Connected Disability Retirement</b>	1.8% 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).
<b>Service Connected Disability Retirement</b>	Greater of 50% of final average salary or service retirement benefit (if eligible).
<b>Death Before Retirement</b>	<p>If nonservice connected before eligible to retire, this benefit is a refund of contributions plus 1/12 of last years' salary per year of service up to 6 years.</p> <p>If eligible for nonservice connected disability or service retirement the benefit is 60% of member's accrued allowance.</p> <p>If service connected death, the benefit is 50% of salary.</p>
<b>Death After Retirement</b>	<p>\$5,000 lump sum death benefit.</p> <p>For service retirement or nonservice connected disability, the benefit is 60% of member's allowance payable to an eligible.</p> <p>For service connected disability, the benefit is 100% of member's allowance payable to an eligible spouse.</p>
<b>Vesting</b>	<p>Must leave contributions on deposit.</p> <p>Must have five years of service.</p>
<b>Member Contributions</b>	<p>Based on entry age.</p> <p>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.</p>
<b>Maximum Benefit</b>	100% of final average salary.
<b>Cost-Of-Living</b>	Up to 3% cost-of-living adjustment.

## Section 10: Summary of Major Plan Provisions

---

### General Plan 2 Only

<b>Eligibility</b>	First pay period following date of Employment.
<b>Final Average Salary</b>	Highest 36 consecutive months of compensation earnable.
<b>Service Retirement</b>	<b>Early retirement</b>  Age 55 and 10.  <b>Benefit</b> 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).
<b>Disability Retirement</b>	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).
<b>Death Before Retirement</b>	1/12 of last years' salary per year of service up to 6 years.
<b>Death After Retirement</b>	50% of member's allowance payable to an eligible spouse.
<b>Vesting</b>	Ten years of service.
<b>Member Contributions</b>	Noncontributory.
<b>Maximum Benefit</b>	Benefit and Social Security combined cannot exceed 70% of final average salary if service is less than 35, otherwise 80.
<b>Cost-Of-Living</b>	None.

## Section 11: Glossary of Terms

---

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

<b>Actuarial Accrued Liability</b>	The portion, as determined by a particular cost method, of the total present value of benefits that is attributable to past service credit.
<b>Actuarial Gain (Loss)</b>	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).
<b>Actuarial Present Value</b>	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.
<b>Amortization or UAAL Payment</b>	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.
<b>Annual Amount</b>	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.
<b>Entry Age Actuarial Cost Method</b>	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.
<b>Final Average Salary</b>	The average amount of compensation earned over a specified number of consecutive months preceding retirement during which compensation was highest.
<b>Funding Policy</b>	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.
<b>Noneconomic Actuarial Assumptions</b>	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.

## Section 11: Glossary of Terms

---

**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.

## Section 12: Valuation Summary

### Summary of Valuation Results

	6/30/2003	6/30/2004	Percentage	6/30/2003	6/30/2004	Percentage	6/30/2003	6/30/2004	Percentage	6/30/2003	6/30/2004	Percentage
	General	General	Change	Safety	Safety	Change	APCD	APCD	Change	Totals	Totals	Change
Actives	3,562	3,502	-1.7%	950	944	-0.6%	61	57	-6.6%	4,573	4,503	-1.5%
Inactives	519	557	7.3%	123	140	13.8%	18	20	11.1%	660	717	8.6%
Retirees	1,873	1,933	3.2%	466	499	7.1%	6	8	33.3%	2,345	2,440	4.1%
Totals	5,954	5,992	0.6%	1,539	1,583	2.9%	85	85	0.0%	7,578	7,660	1.1%
Active Payroll	189,273,698	195,663,669	3.4%	64,134,385	67,595,739	5.4%	3,827,600	3,701,016	-3.3%	257,235,683	266,960,424	3.8%
Average	53,137	55,872	5.1%	67,510	71,606	6.1%	62,748	64,930	3.5%	56,251	59,285	5.4%
Retiree Benefits	28,994,538	31,749,518	9.5%	18,186,769	20,341,268	11.8%	98,699	177,178	79.5%	47,280,006	52,267,964	10.5%
Average	15,480	16,425	6.1%	39,027	40,764	4.4%	16,450	22,147	34.6%	20,162	21,421	6.2%
Valuation Value of Assets*	706,678,524	722,632,002	2.3%	492,509,350	504,496,220	2.4%	12,160,174	14,428,392	18.7%	1,211,348,048	1,241,556,614	2.5%
Market Value of Assets	603,275,462	703,686,310	16.6%	420,444,085	491,269,528	16.8%	10,380,865	14,050,114	35.3%	1,169,417,097	1,209,005,952	3.4%
Actuarial Accrued Liability*												
Retirement	760,642,630	830,056,620	9.1%	544,572,036	594,673,780	9.2%	14,332,648	16,425,675	14.6%	1,319,547,314	1,441,156,075	9.2%
Unfunded Actuarial Accrued Liability*												
Retirement	53,964,106	107,424,618	99.1%	52,062,686	90,177,560	73.2%	2,172,474	1,997,283	-8.1%	108,199,266	199,599,461	84.5%
Retirement Contribution Rates												
Normal Cost	9.54%	9.45%	-0.9%	17.50%	17.35%	-0.9%	11.85%	11.56%	-2.4%	11.56%	11.48%	-0.7%
Unfunded Actuarial Accrued Liability	2.48%	4.86%	96.0%	7.03%	11.85%	68.6%	4.92%	4.96%	0.8%	3.65%	6.63%	81.6%
Total	12.02%	14.31%	19.1%	24.53%	29.20%	19.0%	16.77%	16.52%	-1.5%	15.21%	18.11%	19.1%
Valuation Assets Funded Ratios												
Retirement	92.9%	87.1%	-6.2%	90.4%	84.8%	-6.2%	84.8%	87.8%	3.5%	92.6%	86.2%	-6.9%
Market Value of Assets Funded Ratios												
Retirement	79.3%	84.8%	6.9%	77.2%	82.6%	7.0%	72.4%	85.5%	18.0%	78.4%	83.9%	7.1%

\*Excluding Special Reserves