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# Kern County Employees' Retirement Association

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Actuarial Valuation as of December 31, 2002



June 2003



*Actuaries you can understand*



# Table of Contents

<b>HIGHLIGHTS</b>	<b>1</b>
<b>BOARD SUMMARY</b>	<b>2</b>
A. Major Events	2
B. Funded Position	6
C. Contribution Rates	11
<b>ACCOUNTING INFORMATION</b>	<b>15</b>
A. Schedule of Funding Progress	15
B. Schedule of Employer Contributions	16
C. Development of Net Pension Obligation	17
D. Schedule of Employer Cost	18
<b>TECHNICAL INFORMATION</b>	<b>19</b>
A. Asset Information	19
B. Liability Information	27
C. Funded Percentage	40
D. Employer Contribution Rates	52
E. Summary of Major Plan Provisions– General Members	59
F. Member Contribution Rates– General Members	64
G. Summary of Major Plan Provisions– Safety Members	68
H. Member Contribution Rates– Safety Members	73
I. Summary of Actuarial Assumptions and Funding Methods	77
J. Member Information	97
K. Actuarial Certification	109



Section

1

# Highlights

This report presents the results of the December 31, 2002 actuarial valuation of the Kern County Employees' Retirement Association (KCERA). Results from the prior valuation are shown for comparison. All dollar amounts are in millions.

**December 31, 2002      December 31, 2001**

## Recommended Contribution Rates (as a percentage of pay)

General – County	14.56%	13.28%
General – Districts Electing MOU	15.88%	17.82%
General – Districts Not Electing MOU	14.26%	13.68%
Safety	31.83%	27.66%
Total Plan	18.74%	16.96%

## Funded Status – Regular Benefits

Actuarial Accrued Liability	\$1,899.0	\$1,612.0
Actuarial Value of Assets	\$1,570.3	\$1,508.3
UAAL	\$328.8	\$103.7
Funded Percentage	83%	94%

## Funded Status – SRBR

Actuarial Accrued Liability	\$60.0	\$58.0
Actuarial Value of Assets	\$91.6	\$163.6
UAAL	(\$31.6)	(\$105.6)
Funded Percentage	153%	282%

## Key Assumptions

Interest Rate	8.0%	8.0%
Inflation	4.0%	4.0%

Section

# 2 Board Summary

This actuarial valuation report has been prepared primarily to review KCERA's funded status and determine the contributions required of the Plan Members and Participating Employers. This is done annually by taking a snapshot of the Plan on the basis of the plan provisions, plan membership, and investments as of the end of each plan year.

## A. Major Events

The major events affecting the contribution rates and funded position of the Plan primarily fall into four categories:

- Investments,
- Demographics,
- Assumptions and Methodology, and
- Benefits.

### Investments

Empirical evidence suggests that over 90% of the return achieved by a portfolio is due to the allocation of assets within that portfolio. As of December 31, 2002, KCERA's target asset allocation was:

Domestic Equities	40%
International Equities	20%
Fixed Income	35%
Real Estate	5%
Cash & Equivalents	0%

During the past year, Plan investments suffered a loss of approximately 8.37% (\$126.5 million) on a market value basis. The impact of the investment loss on the employer contribution rates and on the funded position of Regular Benefits was reduced by the use of an asset smoothing technique.

Due to the asset smoothing technique, the return on valuation assets on an actuarial basis was a loss of approximately 0.8%. This was significantly less than the Plan's assumed rate of 8.0%. This resulted in an investment loss on an actuarial basis of approximately \$133.3 million net of expenses. Detailed information regarding plan investments is shown in the Asset Information subsection in the Technical Information section of the report.

## Demographics

The active population remained relatively steady during 2002. The total number of active plan members remained at 8,055 and the total covered payroll increased by 3.3% to \$344.9 million.

Total payments to retirees and beneficiaries increased by approximately 13% during 2002. The number of retired members and beneficiaries receiving pension checks increased by 3.3% from 4,372 to 4,516. The average monthly benefit check increased by 9.9% to \$1,457.

## Assumptions and Methodology

Every three years, the actuary reviews plan experience and recommends changes to valuation assumptions to better align with future expectations. This year, we reviewed plan experience for the period from January 1, 2000 through December 31, 2002. As a result of our analysis, we have recommended changes to most of the assumptions used in valuing the plan. The assumptions for which we recommend changes include:

- Economic Assumptions
  - Inflation: Retain the current assumption of 4.00%.
  - Investment Return: Retain the current assumption of 8.00%.
  - Salary Increase: Revise the rates from separate rates for Safety and General Members based on age to separate rates for Safety and General Members based on the employee's service with KCERA.
- Demographic Assumptions
  - Withdrawal: Adjust the rates of withdrawal for both General and Safety Members to reflect increased terminations at later ages. Overall, the new withdrawal rates will be slightly lower for Safety Members and slightly higher for General Members.
  - Deferred Vested. Increase the deferred vested rates for General and Safety Members to reflect plan experience.
  - Disability: Adjustments in the incidence of disabilities at various ages to reflect plan experience. Adjustments in the distribution between service and non-service connected disability rates. For Safety Members, we assume no future non-service connected disabilities. For General Members, we assume that 60% of future disabilities will be service-connected.

- Retirement: A slight change in the retirement rates to better match future expectations.
- Pre-retirement mortality: A decrease in the rate of service connected deaths to 0.02% per year for Safety Members and to 0% for General Members who are male. The rate of service-connected deaths for General Members who are female will remain at 0%.
- Post-retirement mortality: For valuation purposes, change to a newer mortality table (RP-2000) reflecting the impact of the type of work performed by an individual during that person's career on post-retirement life expectancy.

## Methodology

Over the past couple of years, KCERA has reviewed its funding methodology to better align with the Retirement Board's funding objectives. Several changes in the funding methodology were adopted by the Retirement Board during 2002 to take effect with this valuation. Some of the more significant changes include:

- Funding Method. The funding method was changed from Projected Unit Credit to Entry Age.
- Risk Sharing. The calculation of Normal Cost was refined to better share risks between Districts and between the County and Districts.
- Amortization Period. The amortization period for significant benefit changes was increased to 30 years. The amortization period for new Unfunded Actuarial Accrued Liability will not drop below 12 years.

## Benefits

As part of a court settlement, the County has increased the maximum cost-of-living increase that can be provided from Regular Plan reserves from the current level of 2% per year, up to 2.5% per year. This benefit increase will be partly funded using money set aside for this purpose within the Supplemental Retiree Benefit Reserve by the Retirement Board.

## Future Issues

During the early part of 2003, the County took advantage of the low interest rate environment and issued Pension Obligation Bonds (POBs). The proceeds from these bonds (approximately \$285 million) will pay off a significant portion of the County's Unfunded Actuarial Accrued Liability.

To help the County issue POBs for the length of period that it considered optimal, KCERA changed the amortization period for outstanding Unfunded Actuarial Accrued Liability in this valuation to 25 years. In addition, KCERA allowed the amortization



payments related to the change in funding method described above to begin with the December 31, 2003 valuation.

The POB proceeds do not appear in most of our valuation results because they were not Plan assets as of December 31, 2002. But, since the POB proceeds were contributed to KCERA prior to the date that the new contribution rates are scheduled to take effect (July 2003), we have included contribution rates that take the POB proceeds into account.

## B. Funded Position

For purposes of this analysis, we will be distinguishing between several types of benefits provided to KCERA members under the plan provisions adopted by the County and those provided under Article 5.5. In order to limit the repetition of benefit descriptions and sources of payments, we will refer to these benefits by the following names:

- **SRBR Benefits** – These are the Supplemental Retiree Benefit Reserve benefits provided under Article 5.5. These will include both Approved Benefits and Future Benefits.
  - **Approved Benefits** – These are the SRBR benefits that have already been approved by the Retirement Board. They include all Tier I, Tier II and Death Benefits, as well as the Tier III benefits approved through December 31, 2002.
  - **Future Benefits** – These are the SRBR benefits expected to be approved in future years in order to maintain the 80% purchasing power goal.
- **Regular Benefits** - The benefits provided under the non-SRBR section of KCERA. These will include both Basic Benefits and COLA Benefits.
  - **Basic Benefits** – All formula benefits provided under the Regular portion of KCERA. These include service retirement benefits, survivor continuance, disability benefits, and refunds of member contributions. Basic Benefits do not include cost-of-living adjustments.
  - **COLA Benefits** – These are the cost-of-living adjustments provided under the Regular portion of KCERA. They include cost-of-living increases paid on service retirement benefits, disability benefits and survivor benefits.

### Funded Position – Regular Benefits

The primary target liability for KCERA is the Actuarial Accrued Liability for Regular Plan Benefits. The **Actuarial Accrued Liability (AAL)** is the portion of the Present Value of Benefits attributed to the past. In other words,

- If current plan benefits had always been in place, and
- If the current assumptions had always been in place, and
- If the plan had always been funded under the current funding method, and

- If plan experience had always matched the assumptions, then

The Actuarial Value of Assets would be equal to the Actuarial Accrued Liability. It is the value often used as a funding target.

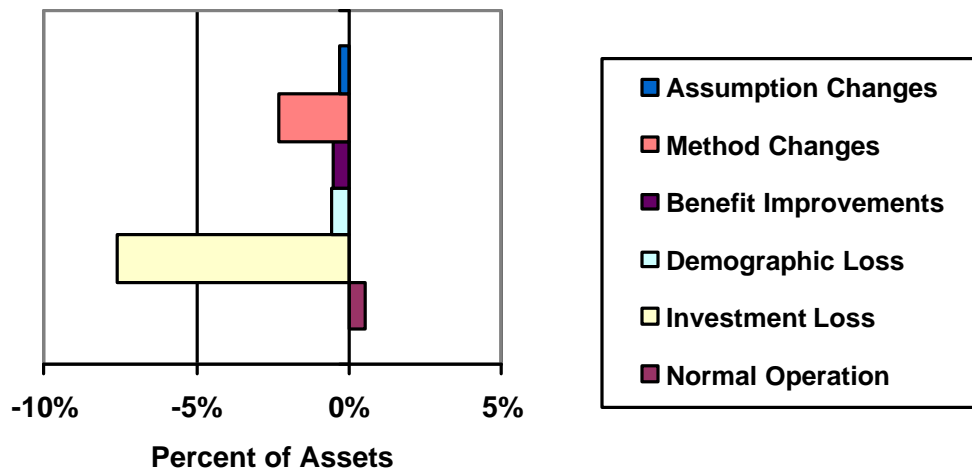
The Plan's funded percentage for Regular Benefits is 82.7%. It is calculated by dividing the Actuarial Value of Assets (\$1,570.3 million) by the Actuarial Accrued Liability (\$1,899.0 million).

### Impact of Major Events

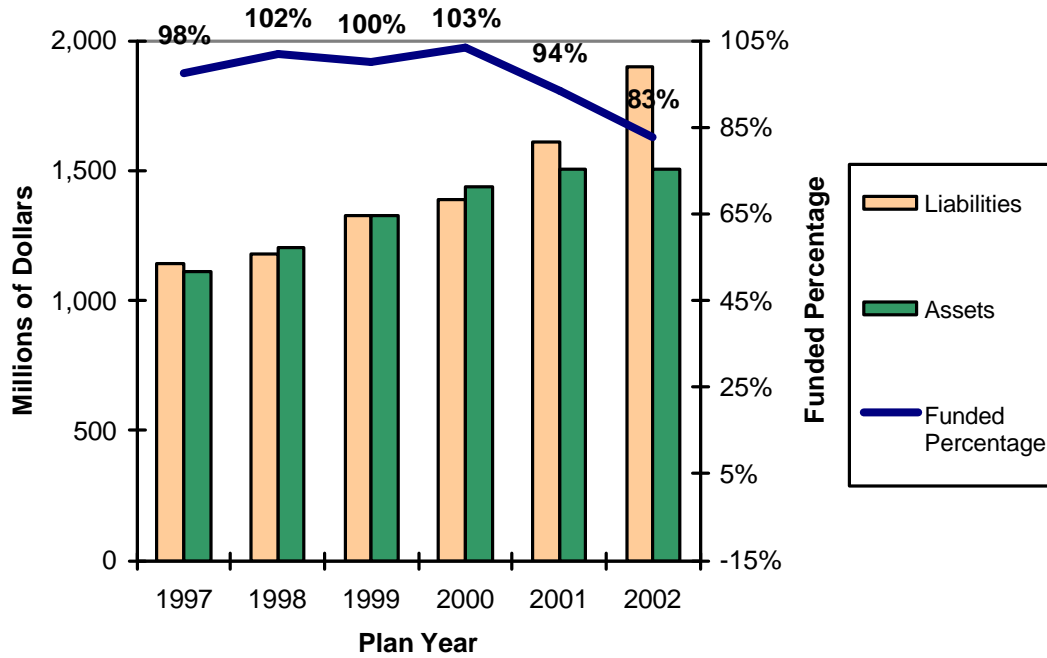
The funded percentage decreased from 93.6% in 2001 to 82.7% in 2002. This decrease can be attributed to the following events.

- Normal operation of plan increased the funded percentage by 0.5%.
- Investment losses decreased the funded percentage by 7.6%.
- Demographic losses decreased the funded percentage by 0.6%.
- Improvement in benefits decreased the funded percentage by 0.5%.
- Changes in funding methodology decreased the funded percentage by 2.3%.
- Changes in actuarial assumptions decreased the funded percentage by 0.3%.

### Impact of Major Events on Funded Percentage



History of Funded Position



History of Funded Position

Dollar amounts in Millions	Actuarial Accrued Liability	Actuarial Value of Assets	Funded Percentage
2002	\$1,899.0	\$1,570.3	82.7%
2001	\$1,612.0	\$1,508.3	93.6%
2000	\$1,389.0	\$1,434.9	103.3%
1999	\$1,324.7	\$1,325.9	100.1%
1998	\$1,179.8	\$1,203.7	102.0%
1997	\$1,140.0	\$1,113.9	97.7%

Background information on the development of these funded percentages is included in the Technical Information section later in this report.

## Impact of Future Changes

In order to assist the County understand the impact of its issuance of Pension Obligation Bonds (POB) on the funded percentages, we calculated this year's funded percentage under an alternative scenario which included the POB proceeds.

	<b>Actuarial Accrued Liability</b>	<b>Actuarial Value of Assets</b>	<b>Funded Percentage</b>
<b>Current Results</b>	\$1,899.0	\$1,570.3	82.7%
<b>With POB Proceeds</b>	\$1,899.0	\$1,855.4	97.7%

### Funded Position – SRBR

When the Ventura Settlement was put into place, it was hoped that the entire cost of the additional benefits provided under that agreement would be paid from Undistributed Earnings. Undistributed Earnings are the amount that remains after earnings have been used to credit interest to the Plan's reserves. They are generally thought of as earnings in excess of those assumed to be earned under the actuarial valuation.

By their very nature, Excess Earnings are produced on an inconsistent basis and cannot be counted on to appear in any single period. Because of this, the funding for SRBR Benefits is set up differently than funding for Regular Benefits. Excess Earnings become the primary source of funding for these benefits. For this reason, the long-term funding target for Settlement Benefits is the Present Value of Benefits.

The **Present Value of Benefits (PVB)** represents the amount of money, at the valuation date, which would be sufficient to pay for all SRBR Benefits for all current Plan Members if all plan assumptions are met in future years. In other words,

- If Plan Assets are equal to the Present Value of Benefits, and
- If current plan benefits remain in place, and
- If there are no new Plan Members, and
- If plan experience in all future years matches the assumptions, then

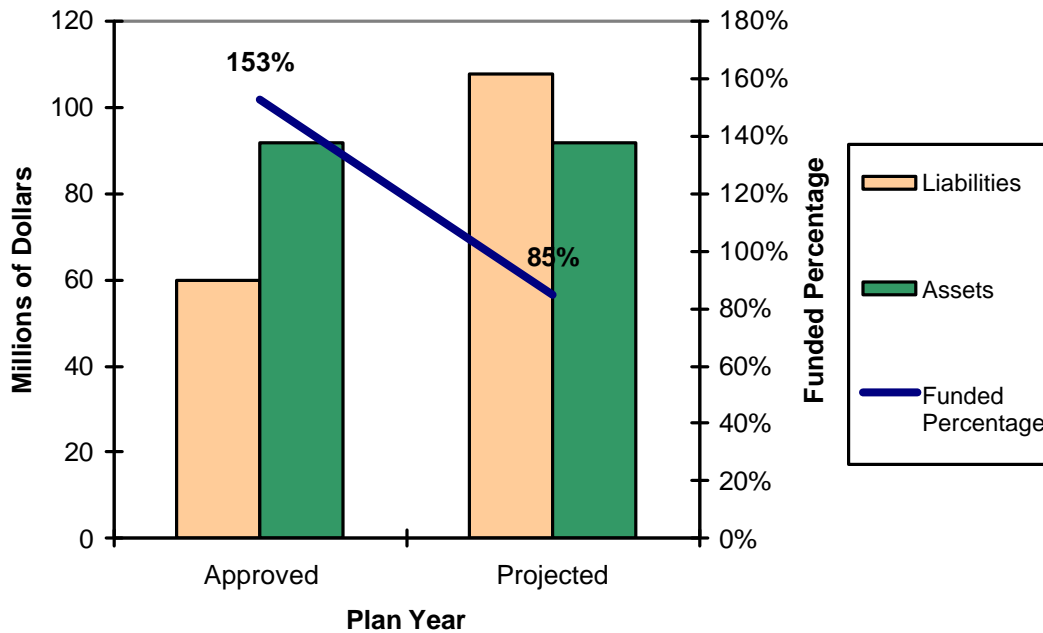
There will be enough money to pay for all promised SRBR benefits for all Plan Members and their beneficiaries for the rest of their lives without another dollar being contributed to the Retirement System by Plan Members, the County, or other Participating Employers.



The Plan's funded percentage for Approved SRBR Benefits is 152.7%. It is calculated by dividing the Actuarial Value of Assets (\$91.6 million) by the Present Value of Approved SRBR Benefits (\$60.0 million).

The Plan's funded percentage for Projected SRBR Benefits is 85.0%. It is calculated by dividing the Actuarial Value of Assets (\$91.6 million) by the Present Value of Projected SRBR Benefits (\$107.8 million). Projected Benefits are a combination of the Approved SRBR Benefits and the Future SRBR Benefits.

Comparison of Funded Position



The funded percentage Approved SRBR Benefits decreased from 282.1% in 2001 to 152.7% in 2002. This decrease is primarily due to the allocation of \$64.7 million to a separate account within the SRBR dedicated to help fund the increase in the annual cost of living adjustment from the prior level of 2.0% per year to the revised level of 2.5% per year.

## C. Contribution Rates

Each year, recommended contribution rates are determined separately for members and employers. Member contribution rates are calculated as a percentage of the member's pay, on the basis of the member's age at entry into System, the classification of the member, the Plan's economic assumptions and the member's life expectancy at the retirement age specified for this purpose in the County Employees Retirement Law of 1937 (1937 Act). Due to changes in the Plan's economic assumptions this year, we are recommending a corresponding change to the member contribution rates for the coming year. A list of the member rates by age at entry for each of the classifications is included in the Technical Information section at the back of this report.

Employer contributions are determined as the sum of two elements: the Normal Cost and an Amortization of the Unfunded Actuarial Accrued Liability.

The **Normal Cost (NC)** is the portion of the Present Value of Benefits attributed to the current year. In other words,

- If current plan benefits had always been in place, and
- If the current assumptions had always been in place, and
- If plan experience had always matched the assumptions, then

A contribution equal to the Normal Cost would be sufficient to keep the plan right on target, at 100% funding.

In the normal course of operating a retirement plan, there are a number of reasons why the plan may be someplace other than at 100% funding.

- **Plan Amendments** – These are changes in the benefits that are to be paid to plan members, such as the improvement to the 2.5% COLA.
- **Assumption Changes** – Periodically, the plan actuaries and trustees adjust their expectation for the future. This has occurred this year when they changed the demographic assumptions.
- **Methodology Changes** – Every few years, the actuary recommends a refinement in its actuarial methodology. This occurred this year with a change in the method used to allocate plan liabilities and a refinement in the smoothing method used to determine the actuarial value of assets.
- **Gain or Loss** – Each year actual plan experience is different than the experience expected under the plan assumptions. When actual experience reduces the Unfunded Actuarial Accrued Liability, it is called a gain. When plan experience increases the Unfunded Actuarial Accrued Liability, it is called a loss.

The amount that the funding is off target is added to the NC (when behind target) or reduced from the NC (when ahead of target) over a series of years.

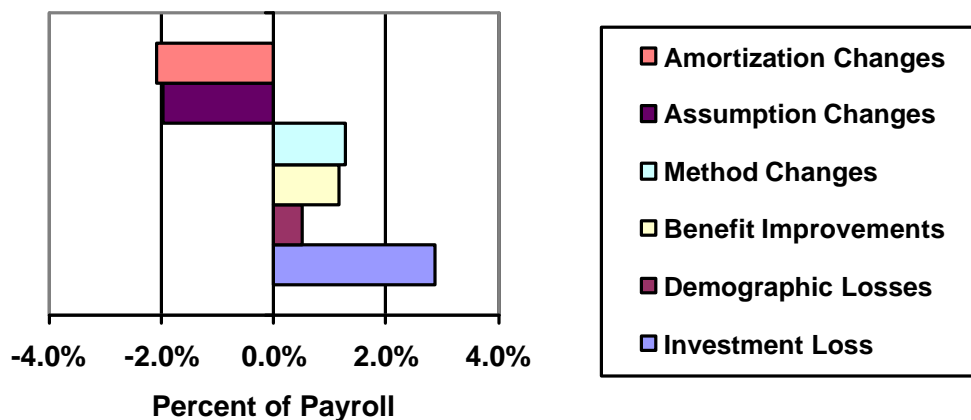
Changes in the UAAL due to the change in funding methodology are amortized as a level percentage of payroll over a 25-year period beginning with the December 31, 2003 valuation. All other changes in UAAL are amortized as a level percentage of payroll over a 25-year period beginning with this valuation.

## Impact of Major Events

The average Employer Contribution rate increased from 16.96% of pay in 2001 to 18.74% of pay in 2002. This increase can be roughly attributed to the following events.

- Investment losses raised the contributions by 2.9% of pay.
- Demographic losses raised the contribution rate by 0.5% of pay.
- Benefit improvements increased the contribution rate by 1.2% of pay.
- Changes in funding methodology increased the contribution rate by 1.3% of pay.
- Changes in actuarial assumptions decreased the contribution rate by 2.0% of pay.
- Changes in the amortization period connected with the expected issuance of Pension Obligation Bonds decreased the contribution rate by 2.1% of pay.

### Impact of Major Events on Employer Contribution Rate

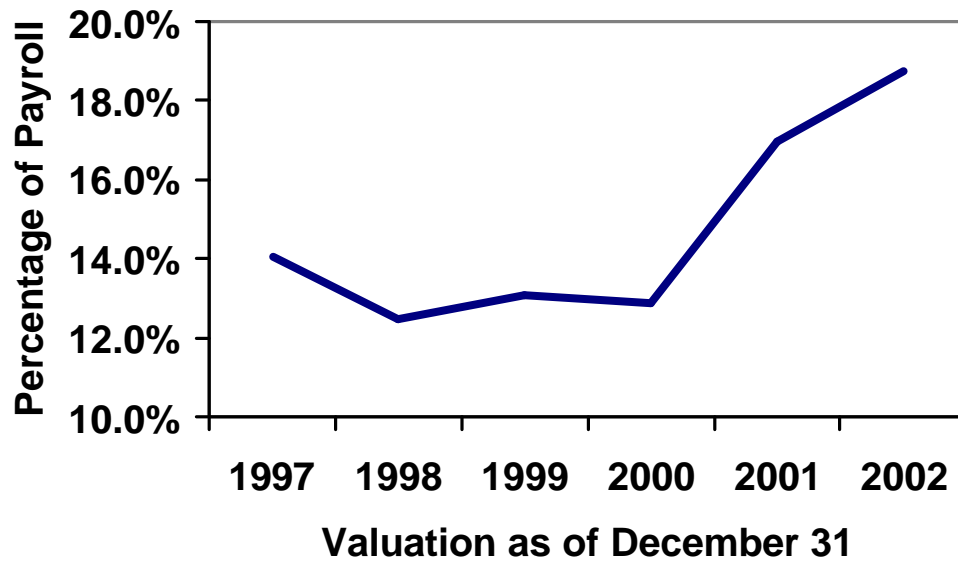




## History of Contribution Rates

Between 1997 and 2000, the contribution rate remained relatively steady thanks to the strong investment performance. The increase in 2001 is primarily due to a combination of salary increases and an improvement in the benefits available to Safety members. The average contribution rate continued to increase in 2002 primarily due to investment losses.

### Average Contribution Rates



Background information on the development of these contribution rates is included in the Technical Information section later in this report.

## History of Contribution Rates

<b>Valuation as of 12/31</b>	<b>General – County</b>	<b>General – District Electing MOU</b>	<b>General – District Not Electing MOU</b>	<b>Safety</b>	<b>All Members</b>
2002	14.56%	15.88%	14.26%	31.83%	18.74%
2001	13.28%	17.82%	13.68%	27.66%	16.96%
2000	12.29%	15.04%	9.51%	14.66%	12.89%
1999	11.60%	13.92%	9.90%	17.05%	13.09%
1998	11.62%	13.50%	9.39%	14.69%	12.45%
1997	13.02%	15.35%	10.78%	16.93%	14.06%

The County's required contribution for 2002 shown above will be reduced by \$77,514 due to maximum benefit limitations imposed by Section 415 of the Internal Revenue Code.

## Impact of Future Changes

In order to assist the County understand the impact of its issuance of Pension Obligation Bonds (POB) on contribution rates, we calculated this year's contribution rates under an alternative scenario which included the POB proceeds.

<b>Valuation as of 12/31</b>	<b>General – County</b>	<b>General – District Electing MOU</b>	<b>General – District Not Electing MOU</b>	<b>Safety</b>	<b>All Members</b>
<i>Without POB Proceeds</i>	14.56%	15.88%	14.26%	31.83%	18.74%
<i>With POB Proceeds</i>	10.96%	15.88%	14.26%	21.03%	13.60%

Section  
**3** **Accounting Information**

Accounting standards for governmental entities are set by the Governmental Accounting Standards Board (GASB). Statement Number 25 (GAS25) describes the disclosure requirements for the financial statements of the Kern County Employees' Retirement Association (KCERA). These include a Schedule of Funding Progress and a Schedule of Employer Contributions.

The disclosure requirements for the County's financial statements are described in Statement Number 27 (GAS27). These include the development of the Annual Pension Cost and the Net Pension Obligation.

**A. Schedule of Funding Progress**

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / (c))
12/31/95	\$ 920,750	\$ 952,880	\$ 32,130	96.6%	\$ 270,454	11.9%
12/31/96	1,003,076	1,029,574	26,498	97.4%	273,351	9.7%
12/31/97	1,113,914	1,140,019	26,105	97.7%	266,640	9.8%
12/31/98	1,203,670	1,179,753	(23,917)	102.0%	282,251	-8.5%
12/31/99	1,325,928	1,324,662	(1,266)	100.1%	297,738	-0.4%
12/31/00	1,434,873	1,388,984	(45,889)	103.3%	283,283	-16.2%
12/31/01	1,508,291	1,611,960	103,669	93.6%	333,791	31.1%
12/31/02	1,570,278	1,899,031	328,753	82.7%	344,871	95.3%

Information in the above schedule for Plan Years ended December 31, 1999 and before is based on information prepared by Watson Wyatt Worldwide. All dollar amounts are in thousands.

## B. Schedule of Employer Contributions

<b>Fiscal Year Ended June 30</b>	<b>Annual Required Contribution (ARC)</b>	<b>Percentage Contributed</b>
2002	\$ 53,169,166	100%
2001	41,067,487	100%
2000	37,575,583	100%
1999	40,159,103	100%
1998	35,420,517	100%
1997	27,902,854	100%

The table below summarized certain information used in the calculation of the schedules in subsections A and B:

<b>Valuation date</b>	December 31, 2002
<b>Actuarial cost method</b>	Entry Age
<b>Amortization method</b>	Level percent closed
<b>Remaining amortization period</b>	25 years
<b>Asset valuation method</b>	5-year smoothed market
<b>Actuarial assumptions</b>	
<b>Investment rate of return*</b>	8.0%
<b>Projected salary increases*</b>	4.75 – 8.0%
<b>* Includes inflation at</b>	4.0%
<b>Cost of living adjustments</b>	2.5%

Information in the above schedule for the Fiscal Years ended June 30, 2001 and before are based on information appearing in the June 30, 2001 Comprehensive Annual Financial Report prepared by KCERA.

## C. Development of Net Pension Obligation

	Year Ended June 30, 2001	Year Ended June 30, 2002
1. Beginning of year NPO	\$ 0	\$ 0
2. Employer Contributions	(41,067,487)	(53,169,166)
3. Pension Cost	<u>41,067,487</u>	<u>53,169,166</u>
4. End of year NPO	0	0

## D. Schedule of Employer Cost

<b>Fiscal Year Ended June 30</b>	<b>Annual Pension Cost (APC)</b>	<b>Percentage of APC Contributed</b>	<b>Net Pension Obligation</b>
2002	\$ 53,169,166	100%	\$ 0
2001	41,067,487	100%	\$ 0
2000	37,575,583	100%	0
1999	40,159,103	100%	0
1998	35,420,517	100%	0
1997	27,902,854	100%	0

Information in the above schedule for the Fiscal Years ended June 30, 2000 and before is based on information prepared by Watson Wyatt Worldwide.

The Annual Pension Costs for the years beginning July 1, 2000 and 2001 are developed as follows:

	<b>Year Beginning July 1, 2000</b>	<b>Year Beginning July 1, 2001</b>
<b>1. Annual Required Contribution</b>	\$ 41,067,487	\$ 53,169,166
<b>2. Interest on NPO</b>	0	0
<b>3. Amortization of NPO</b>	0	0
<b>4. Pension Cost</b>	41,067,487	53,169,166

# Section 4 Technical Information

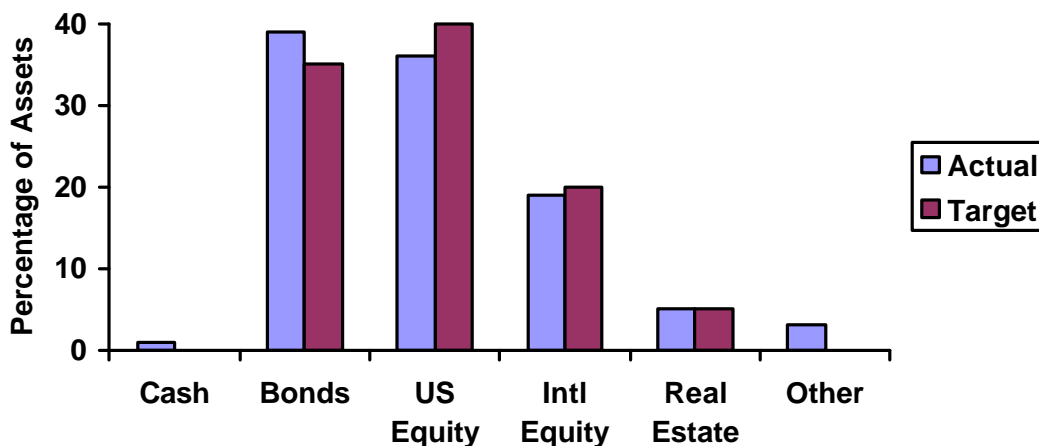
## A. Asset Information

### Net Plan Assets at Market Value as of December 31, 2002

Amounts may not add exactly due to rounding.

	Actual		Target	
	\$000's	%	\$000's	%
Cash and Cash Equivalents	\$ 9,304	1%	\$ 0	0%
Fixed Income	535,155	39%	484,709	35%
Domestic Equity	478,421	36%	553,953	40%
International Equity	256,496	19%	276,976	20%
Real Estate	66,667	5%	69,244	5%
Other Assets	38,839	3	0	0%
<b>Net Assets</b>	<b>\$1,384,882</b>	<b>100%</b>	<b>\$1,384,882</b>	<b>100%</b>

### Asset Allocation



## Development of Actuarial Value of Assets

Development of Unexpected Gain (Loss) for the Six-Month Periods Ended in 2002

For the Six-Month Period Ended	June 30, 2002	December 31, 2002
1. Market Value of Assets - Beginning of Period	\$ 1,511,318,766	\$ 1,436,172,964
2. Contributions	26,550,714	60,952,148
3. Benefit Payments	(41,384,998)	(46,026,227)
4. Assumed Interest on items (1), (2) and (3)	<u>60,156,065</u>	<u>57,745,437</u>
5. Expected Value of Assets at End of Year	1,556,640,548	1,508,844,323
6. Actual Market Value of Assets at End of Year	<u>1,436,172,964</u>	<u>1,384,882,245</u>
7. Gain (Loss) for Plan Year = (6) - (5)	(120,467,583)	(123,962,078)

*Amounts may not add due to rounding*

Development of Unrecognized Gain (Loss)

Six-Month Period Ended	Unexpected Gain (Loss)	Percent Not Yet Phased In	Gain (Loss) Excluded
12/31/02	\$ (123,962,078)	90%	\$ (111,565,870)
6/30/02	(120,467,583)	80%	(96,374,067)
12/31/01	(79,583,764)	70%	(55,708,635)
6/30/01	(111,199,696)	60%	(66,719,818)
12/31/00	N/A	50%	N/A
6/30/00	N/A	40%	N/A
12/31/99	N/A	30%	N/A
6/30/99	N/A	20%	N/A
12/31/98	N/A	10%	N/A
<i>Total</i>			<i>\$ (330,368,389)</i>



Development of Actuarial Value of Assets

1. Market Value of Assets as December 31	\$	1,384,882,245
2. Unrecognized Gain (Loss)		<u>(330,368,389)</u>
3. Preliminary Actuarial Value: (1) – (2)		1,715,250,634
4. Corridor Around Market Value		
(a) Minimum = 80% of Market		1,107,905,796
(b) Maximum = 120% of Market		1,661,858,694
5. Gross Actuarial Value of Assets		1,661,858,694

## Allocation of Actuarial Value of Assets for Valuation Purposes

	<b>Adjusted for Negative Contingency Reserve</b>		
	<b>December 31, 2002</b>	<b>December 31, 2002</b>	<b>December 31, 2001</b>
<b>Basic</b>			
General Members	683,398,798	696,490,054	679,757,132
District Members	30,717,017	31,305,435	30,697,389
Safety Members	<u>471,957,524</u>	<u>480,998,389</u>	<u>473,685,489</u>
Subtotal	1,186,073,338	1,208,793,877	1,184,140,010
<b>Cost-of-Living</b>			
General Members	178,794,592	182,219,599	180,765,521
District Members	7,670,898	7,817,843	7,268,353
Safety Members	<u>134,529,420</u>	<u>137,106,479</u>	<u>136,117,600</u>
Subtotal	320,994,911	327,143,922	324,151,474
<b>Total</b>			
<b>Valuation Reserves</b>	1,507,068,249	1,535,937,799	1,508,291,483
<b>SRBR</b>			
Special 1/2% Allocation	63,209,408	64,420,254	163,612,428
Remaining SRBR	<u>91,581,037</u>	<u>93,335,372</u>	0
Subtotal	154,790,445	157,755,626	163,612,428
Contingency Reserve	0	(31,834,731)	0
<b>Total Actuarial</b>			
<b>Value of Assets</b>	1,661,858,694	1,661,858,694	1,671,903,911

Amounts may not add exactly due to rounding.

**Reconciliation of Assets for the Year Ended December 31, 2002**

	<b>Market Value</b>	<b>Actuarial Value</b>
<b>Beginning of Year</b>	<b>\$1,511,318,766</b>	<b>\$1,508,291,483</b>
Contributions – Employers	74,797,529	74,797,529
Contributions – Members	12,705,333	12,705,333
Gross Investment Income	(120,566,292)	(9,959,464)
Investment Expenses	(3,726,551)	n/a
Benefits paid to participants	(87,411,224)	(76,531,317)
Administrative Expenses	(2,235,315)	(2,235,315)
<b>End of Year</b>	<b>\$1,384,882,245</b>	<b>\$1,507,068,249</b>
Estimated Return (net of expenses)	-8.37%	-0.81%

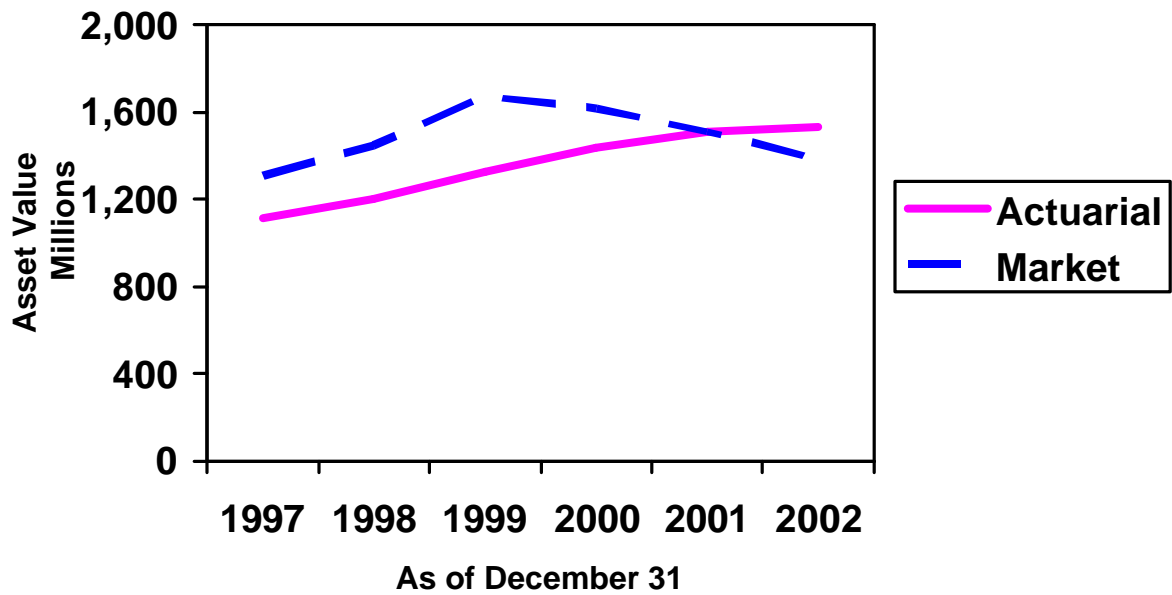
Amounts may not add exactly due to rounding.

## Historical Asset Values

Asset Values as of December 31

Year	Market Value	Actuarial Value
2002	\$1,384,882,245	\$ 1,535,937,799
2001	\$1,511,318,766	\$ 1,508,291,483
2000	\$1,618,685,190	\$ 1,434,872,718
1999	\$1,673,422,215	\$ 1,325,928,243
1998	\$1,449,358,816	\$ 1,203,670,449
1997	\$1,306,925,405	\$ 1,113,914,418

Comparison of Asset Values



The Market Value of Assets includes all plan assets including those allocated to the Supplemental Retiree Benefit Reserve and the Contingency Reserve. The Actuarial Value of Assets includes only those assets that are taken into account in determining employer contribution rates. These exclude the Supplemental Retiree Benefit Reserve and the Contingency Reserve.

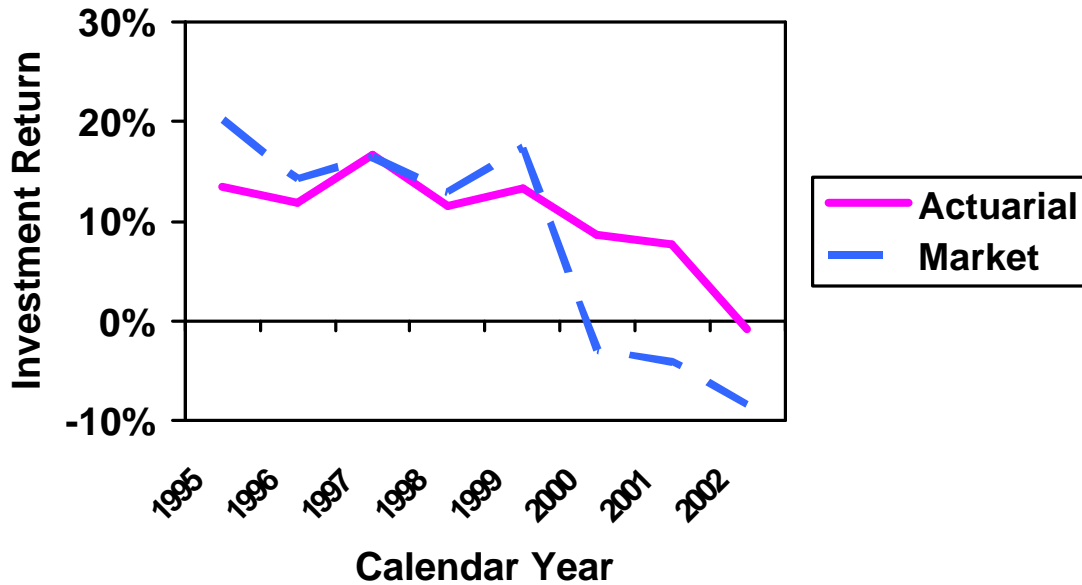


## Historical Rates of Investment Return

Estimated Investment Return for the Year Ended December 31

Year	Market Value	Actuarial Value
2002	-8.37%	-0.81%
2001	-4.08%	7.67%
2000	-2.92%	8.69%
1999	17.41%	13.29%
1998	12.93%	11.54%
1997	16.46%	16.75%
1996	14.26%	11.95%
1995	20.24%	13.46%

Comparison of Investment Return



The estimated rates of investment return for the years 1995 through 1999 are taken from the reports of the prior actuary, and have been calculated gross of investment expenses. The rates of return for the years 2000 through 2002 have been calculated net of investment fees.

## Statement of Reserves and Fund Balances

	December 31, 2002	December 31, 2001
Member Deposit Reserves		
General Members	116,698,430	110,078,634
District Members	9,734,782	9,167,010
Safety Members	<u>57,879,851</u>	<u>60,658,734</u>
Subtotal	184,313,063	179,904,379
Employers Advance Reserves		
General Members	251,950,842	244,265,164
District Members	10,430,142	10,472,356
Safety Members	<u>187,812,755</u>	<u>210,086,484</u>
Subtotal	450,193,739	464,824,004
Cost-of-Living Reserves		
General Members	182,219,599	180,765,521
District Members	7,817,843	7,268,353
Safety Members	<u>137,106,479</u>	<u>136,117,600</u>
Subtotal	327,143,922	324,151,474
Retired Member Reserves		
General Members*	327,840,782	325,413,333
District Members*	11,140,510	11,058,022
Safety Members	<u>235,305,783</u>	<u>202,940,271</u>
Subtotal	574,287,075	539,411,627
Supplemental Retiree Benefit Reserves		
Remaining SRBR	93,335,372	163,612,428
Special 1/2% Account	<u>64,420,254</u>	<u>0</u>
Subtotal	157,755,626	163,612,428
Contingency Reserve	(31,834,731)	0
Market Stabilization Reserve	(276,976,449)	(160,585,145)
<b>Total Fund Balance</b>	<b>1,384,882,245</b>	<b>1,511,318,766</b>

\* The allocation of Member Deposit Reserves, Employers Advance Reserves and Cost of Living Reserves was supplied by KCERA. KCERA also split the Retired Member Reserves between General and Safety Members. The allocation of Retired Member Reserves between General and District Members for 1999 was performed by the prior actuary. The allocation of Retired Member Reserves between General and District Members for 2001 was calculated to be the same ratio as the 1999 split.

## B. Liability Information

### Present Value of Projected Benefits

Prior Assumptions

2.0% COLA	Basic	COLA	Total
<b>1. Retirees and Beneficiaries</b>			
A. General			
i. County			
a. Regular Benefits	327,912,576	119,093,724	447,006,300
b. Golden Handshake	818,220	164,904	983,124
c. All Benefits	328,730,796	119,258,628	447,989,424
ii. Districts	14,740,848	4,555,716	19,296,564
iii. Total	343,471,644	123,814,344	467,285,988
B. Safety			
a. Regular Benefits	266,341,980	101,325,684	367,667,664
b. Golden Handshake	185,400	41,076	226,476
c. All Benefits	266,527,380	101,366,760	367,894,140
C. All Retirees and Beneficiaries	609,999,024	225,181,104	835,180,128
<b>2. Deferred Vested Members</b>			
A. General			
i. County	34,472,997	6,271,282	40,744,279
ii. Districts*	0	0	0
iii. Total	34,472,997	6,271,282	40,744,279
B. Safety	5,507,429	1,129,728	6,637,157
C. All Deferred Vested	39,980,426	7,401,010	47,381,436
<b>3. Active Members</b>			
A. General			
i. County	647,257,725	124,574,279	771,832,004
ii. Districts	45,675,504	9,067,716	54,743,220
iii. Total	692,933,229	133,641,995	826,575,224
B. Safety	438,090,369	93,415,915	531,506,284
C. All Active Members	1,131,023,598	227,057,910	1,358,081,508
<b>4. All Members</b>			
A. General			
i. County			
a. Regular Benefits	1,009,643,298	249,939,285	1,259,582,583
b. Golden Handshake	818,220	164,904	983,124
c. All Benefits	1,010,461,518	250,104,189	1,260,565,707
ii. Districts	60,416,352	13,623,432	74,039,784
iii. Total	1,070,877,870	263,727,621	1,334,605,491
B. Safety			
a. Regular Benefits	709,939,778	195,871,327	905,811,105
b. Golden Handshake	185,400	41,076	226,476
c. All Benefits	710,125,178	195,912,403	906,037,581
C. All Retirees and Beneficiaries	1,781,003,048	459,640,024	2,240,643,072

## Prior Assumptions

2.5% COLA	Basic	COLA	Total
<b>1. Retirees and Beneficiaries</b>			
A. General			
i. County			
a. Regular Benefits	327,912,576	139,188,744	467,101,320
b. Golden Handshake	818,220	211,896	1,030,116
c. All Benefits	328,730,796	139,400,640	468,131,436
ii. Districts	14,740,848	5,404,800	20,145,648
iii. Total	343,471,644	144,805,440	488,277,084
B. Safety			
a. Regular Benefits	266,341,980	101,325,684	367,667,664
b. Golden Handshake	185,400	53,748	239,148
c. All Benefits	266,527,380	120,752,208	387,279,588
C. All Retirees and Beneficiaries	609,999,024	265,557,648	875,556,672
<b>2. Deferred Vested Members</b>			
A. General			
i. County			
ii. Districts*	0	0	0
iii. Total	34,472,997	8,131,033	42,604,030
B. Safety	5,507,429	1,472,151	6,979,580
C. All Deferred Vested	39,980,426	9,603,184	49,583,610
<b>3. Active Members</b>			
A. General			
i. County			
ii. Districts	45,675,504	11,616,373	57,291,877
iii. Total	692,933,229	171,452,726	864,385,955
B. Safety	438,090,369	121,663,459	559,753,828
C. All Active Members	1,131,023,598	293,116,185	1,424,139,783
<b>4. All Members</b>			
A. General			
i. County			
a. Regular Benefits	1,009,643,298	307,156,130	1,316,799,428
b. Golden Handshake	818,220	211,896	1,030,116
c. All Benefits	1,010,461,518	307,368,026	1,317,829,544
ii. Districts	60,416,352	17,021,173	77,437,525
iii. Total	1,070,877,870	324,389,199	1,395,267,069
B. Safety			
a. Regular Benefits	709,939,778	243,834,070	953,773,848
b. Golden Handshake	185,400	53,748	239,148
c. All Benefits	710,125,178	243,887,818	954,012,996
C. All Retirees and Beneficiaries	1,781,003,048	568,277,017	2,349,280,065



Proposed Assumptions

2.0% COLA	Basic	COLA	Total
<b>1. Retirees and Beneficiaries</b>			
A. General			
i. County			
a. Regular Benefits	343,290,936	128,874,816	472,165,752
b. Golden Handshake	847,500	179,544	1,027,044
c. All Benefits	344,138,436	129,054,360	473,192,796
ii. Districts	15,548,940	5,002,332	20,551,272
iii. Total	359,687,376	134,056,692	493,744,068
B. Safety			
a. Regular Benefits	266,341,980	101,325,684	367,667,664
b. Golden Handshake	186,732	42,324	229,056
c. All Benefits	270,458,820	104,759,592	375,218,412
C. All Retirees and Beneficiaries	630,146,196	238,816,284	868,962,480
<b>2. Deferred Vested Members</b>			
A. General			
i. County			
ii. Districts*	0	0	0
iii. Total	35,879,049	6,881,373	42,760,422
B. Safety	5,552,637	1,167,407	6,720,044
C. All Deferred Vested	41,431,686	8,048,780	49,480,466
<b>3. Active Members</b>			
A. General			
i. County			
ii. Districts	37,359,849	7,672,925	45,032,774
iii. Total	604,425,435	121,702,363	726,127,798
B. Safety	417,039,236	90,808,151	507,847,387
C. All Active Members	1,021,464,671	212,510,514	1,233,975,185
<b>4. All Members</b>			
A. General			
i. County			
a. Regular Benefits	946,235,571	249,785,627	1,196,021,198
b. Golden Handshake	847,500	179,544	1,027,044
c. All Benefits	947,083,071	249,965,171	1,197,048,242
ii. Districts	52,908,789	12,675,257	65,584,046
iii. Total	999,991,860	262,640,428	1,262,632,288
B. Safety			
a. Regular Benefits	692,863,961	196,692,826	889,556,787
b. Golden Handshake	186,732	42,324	229,056
c. All Benefits	693,050,693	196,735,150	889,785,843
C. All Retirees and Beneficiaries	1,693,042,553	459,375,578	2,152,418,131

## Proposed Assumptions

2.5% COLA	Basic	COLA	Total
<b>1. Retirees and Beneficiaries</b>			
A. General			
i. County			
a. Regular Benefits	343,290,936	151,132,260	494,423,196
b. Golden Handshake	847,500	231,276	1,078,776
c. All Benefits	344,138,436	151,363,536	495,501,972
ii. Districts	15,548,940	5,956,392	21,505,332
iii. Total	359,687,376	157,319,928	517,007,304
B. Safety			
a. Regular Benefits	266,341,980	101,325,684	367,667,664
b. Golden Handshake	186,732	55,452	242,184
c. All Benefits	270,458,820	125,032,980	395,491,800
C. All Retirees and Beneficiaries	630,146,196	282,352,908	912,499,104
<b>2. Deferred Vested Members</b>			
A. General			
i. County	35,879,049	8,939,602	44,818,651
ii. Districts*	0	0	0
iii. Total	35,879,049	8,939,602	44,818,651
B. Safety	5,552,637	1,523,265	7,075,902
C. All Deferred Vested	41,431,686	10,462,867	51,894,553
<b>3. Active Members</b>			
A. General			
i. County	567,065,586	145,909,499	712,975,085
ii. Districts	37,359,849	9,788,386	47,148,235
iii. Total	604,425,435	155,697,885	760,123,320
B. Safety	417,039,236	118,068,147	535,107,383
C. All Active Members	1,021,464,671	273,766,032	1,295,230,703
<b>4. All Members</b>			
A. General			
i. County			
a. Regular Benefits	946,235,571	305,981,361	1,252,216,932
b. Golden Handshake	847,500	231,276	1,078,776
c. All Benefits	947,083,071	306,212,637	1,253,295,708
ii. Districts	52,908,789	15,744,778	68,653,567
iii. Total	999,991,860	321,957,415	1,321,949,275
B. Safety			
a. Regular Benefits	692,863,961	244,568,940	937,432,901
b. Golden Handshake	186,732	55,452	242,184
c. All Benefits	693,050,693	244,624,392	937,675,085
C. All Retirees and Beneficiaries	1,693,042,553	566,581,807	2,259,624,360

\* Liabilities for Deferred Vested Members who were previously employed at the Districts are included with Deferred Vested Liabilities for former County employees. These amounts will be separated in future valuations.

## Actuarial Accrued Liability

Projected Unit Credit

Prior Assumptions

2.0% COLA

**Basic**

**COLA**

**Total**

### 1. Retirees and Beneficiaries

A. General

i. County

a. Regular Benefits

327,912,576

119,093,724

447,006,300

b. Golden Handshake

818,220

164,904

983,124

c. All Benefits

328,730,796

119,258,628

447,989,424

ii. Districts

14,740,848

4,555,716

19,296,564

iii. Total

343,471,644

123,814,344

467,285,988

B. Safety

a. Regular Benefits

266,341,980

101,325,684

367,667,664

b. Golden Handshake

185,400

41,076

226,476

c. All Benefits

266,527,380

101,366,760

367,894,140

C. All Retirees and Beneficiaries

609,999,024

225,181,104

835,180,128

### 2. Deferred Vested Members

A. General

i. County

34,472,997

6,271,282

40,744,279

ii. Districts\*

0

0

0

iii. Total

34,472,997

6,271,282

40,744,279

B. Safety

5,507,429

1,129,728

6,637,157

C. All Deferred Vested

39,980,426

7,401,010

47,381,436

### 3. Active Members

A. General

i. County

408,528,640

79,195,969

487,724,609

ii. Districts

25,959,959

5,217,388

31,177,347

iii. Total

434,488,599

84,413,357

518,901,956

B. Safety

291,890,061

61,876,663

353,766,724

C. All Active Members

726,378,660

146,290,020

872,668,680

### 4. All Members

A. General

i. County

a. Regular Benefits

770,914,213

204,560,975

975,475,188

b. Golden Handshake

818,220

164,904

983,124

c. All Benefits

771,732,433

204,725,879

976,458,312

ii. Districts

40,700,807

9,773,104

50,473,911

iii. Total

812,433,240

214,498,983

1,026,932,223

B. Safety

a. Regular Benefits

563,739,470

164,332,075

728,071,545

b. Golden Handshake

185,400

41,076

226,476

c. All Benefits

563,924,870

164,373,151

728,298,021

C. All Retirees and Beneficiaries

1,376,358,110

378,872,134

1,755,230,244

## Projected Unit Credit

## Prior Assumptions

## 2.5% COLA

	Basic	COLA	Total
<b>1. Retirees and Beneficiaries</b>			
A. General			
i. County			
a. Regular Benefits	327,912,576	139,188,744	467,101,320
b. Golden Handshake	818,220	211,896	1,030,116
c. All Benefits	328,730,796	139,400,640	468,131,436
ii. Districts	14,740,848	5,404,800	20,145,648
iii. Total	343,471,644	144,805,440	488,277,084
B. Safety			
a. Regular Benefits	266,341,980	101,325,684	367,667,664
b. Golden Handshake	185,400	53,748	239,148
c. All Benefits	266,527,380	120,752,208	387,279,588
C. All Retirees and Beneficiaries	609,999,024	265,557,648	875,556,672
<b>2. Deferred Vested Members</b>			
A. General			
i. County			
	34,472,997	8,131,033	42,604,030
ii. Districts*	0	0	0
iii. Total	34,472,997	8,131,033	42,604,030
B. Safety	5,507,429	1,472,151	6,979,580
C. All Deferred Vested	39,980,426	9,603,184	49,583,610
<b>3. Active Members</b>			
A. General			
i. County			
	408,528,640	101,593,339	510,121,979
ii. Districts	25,959,959	6,679,426	32,639,385
iii. Total	434,488,599	108,272,765	542,761,364
B. Safety	291,890,061	80,617,045	372,507,106
C. All Active Members	726,378,660	188,889,810	915,268,470
<b>4. All Members</b>			
A. General			
i. County			
a. Regular Benefits	770,914,213	248,913,116	1,019,827,329
b. Golden Handshake	818,220	211,896	1,030,116
c. All Benefits	771,732,433	249,125,012	1,020,857,445
ii. Districts	40,700,807	12,084,226	52,785,033
iii. Total	812,433,240	261,209,238	1,073,642,478
B. Safety			
a. Regular Benefits	563,739,470	202,787,656	766,527,126
b. Golden Handshake	185,400	53,748	239,148
c. All Benefits	563,924,870	202,841,404	766,766,274
C. All Retirees and Beneficiaries	1,376,358,110	464,050,642	1,840,408,752

Projected Unit Credit  
 Proposed Assumptions

2.0% COLA	Basic	COLA	Total
<b>1. Retirees and Beneficiaries</b>			
A. General			
i. County			
a. Regular Benefits	343,290,936	128,874,816	472,165,752
b. Golden Handshake	847,500	179,544	1,027,044
c. All Benefits	344,138,436	129,054,360	473,192,796
ii. Districts	15,548,940	5,002,332	20,551,272
iii. Total	359,687,376	134,056,692	493,744,068
B. Safety			
a. Regular Benefits	266,341,980	101,325,684	367,667,664
b. Golden Handshake	186,732	42,324	229,056
c. All Benefits	270,458,820	104,759,592	375,218,412
C. All Retirees and Beneficiaries	630,146,196	238,816,284	868,962,480
<b>2. Deferred Vested Members</b>			
A. General			
i. County	35,879,049	6,881,373	42,760,422
ii. Districts*	0	0	0
iii. Total	35,879,049	6,881,373	42,760,422
B. Safety	5,552,637	1,167,407	6,720,044
C. All Deferred Vested	41,431,686	8,048,780	49,480,466
<b>3. Active Members</b>			
A. General			
i. County	381,970,131	77,413,689	459,383,820
ii. Districts	23,631,235	4,906,889	28,538,124
iii. Total	405,601,366	82,320,578	487,921,944
B. Safety	281,508,606	60,752,682	342,261,288
C. All Active Members	687,109,972	143,073,260	830,183,232
<b>4. All Members</b>			
A. General			
i. County			
a. Regular Benefits	759,734,064	214,419,538	974,153,602
b. Golden Handshake	847,500	179,544	1,027,044
c. All Benefits	760,581,564	214,599,082	975,180,646
ii. Districts	39,180,175	9,909,221	49,089,396
iii. Total	799,761,739	224,508,303	1,024,270,042
B. Safety			
a. Regular Benefits	557,288,123	166,942,101	724,230,224
b. Golden Handshake	186,732	42,324	229,056
c. All Benefits	557,474,855	166,984,425	724,459,280
C. All Retirees and Beneficiaries	1,357,236,594	391,492,728	1,748,729,322

Projected Unit Credit  
Proposed Assumptions  
2.5% COLA

	Basic	COLA	Total
<b>1. Retirees and Beneficiaries</b>			
A. General			
i. County			
a. Regular Benefits	343,290,936	151,132,260	494,423,196
b. Golden Handshake	847,500	231,276	1,078,776
c. All Benefits	344,138,436	151,363,536	495,501,972
ii. Districts	15,548,940	5,956,392	21,505,332
iii. Total	359,687,376	157,319,928	517,007,304
B. Safety			
a. Regular Benefits	266,341,980	101,325,684	367,667,664
b. Golden Handshake	186,732	55,452	242,184
c. All Benefits	270,458,820	125,032,980	395,491,800
C. All Retirees and Beneficiaries	630,146,196	282,352,908	912,499,104
<b>2. Deferred Vested Members</b>			
A. General			
i. County			
ii. Districts*	0	0	0
iii. Total	35,879,049	8,939,602	44,818,651
B. Safety	5,552,637	1,523,265	7,075,902
C. All Deferred Vested	41,431,686	10,462,867	51,894,553
<b>3. Active Members</b>			
A. General			
i. County			
ii. Districts	23,631,235	6,254,411	29,885,646
iii. Total	405,601,366	105,286,848	510,888,214
B. Safety	281,508,606	79,068,425	360,577,031
C. All Active Members	687,109,972	184,355,273	871,465,245
<b>4. All Members</b>			
A. General			
i. County			
a. Regular Benefits	761,140,116	257,046,070	1,018,186,186
b. Golden Handshake	847,500	231,276	1,078,776
c. All Benefits	761,987,616	257,277,346	1,019,264,962
ii. Districts	39,180,175	12,210,803	51,390,978
iii. Total	801,167,791	269,488,149	1,070,655,940
B. Safety			
a. Regular Benefits	557,333,331	205,213,360	762,546,691
b. Golden Handshake	186,732	55,452	242,184
c. All Benefits	557,520,063	205,268,812	762,788,875
C. All Retirees and Beneficiaries	1,358,687,854	474,756,961	1,833,444,815

Entry Age

Prior Assumptions

2.0% COLA

**Basic**

**COLA**

**Total**

**1. Retirees and Beneficiaries**

A. General

i. County

a. Regular Benefits

327,912,576

119,093,724

447,006,300

b. Golden Handshake

818,220

164,904

983,124

c. All Benefits

328,730,796

119,258,628

447,989,424

ii. Districts

14,740,848

4,555,716

19,296,564

iii. Total

343,471,644

123,814,344

467,285,988

B. Safety

a. Regular Benefits

266,341,980

101,325,684

367,667,664

b. Golden Handshake

185,400

41,076

226,476

c. All Benefits

266,527,380

101,366,760

367,894,140

C. All Retirees and Beneficiaries

609,999,024

225,181,104

835,180,128

**2. Deferred Vested Members**

A. General

i. County

34,472,997

6,271,282

40,744,279

ii. Districts\*

0

0

0

iii. Total

34,472,997

6,271,282

40,744,279

B. Safety

5,507,429

1,129,728

6,637,157

C. All Deferred Vested

39,980,426

7,401,010

47,381,436

**3. Active Members**

A. General

i. County

438,671,100

86,743,116

525,414,216

ii. Districts

28,487,541

5,615,706

34,103,247

iii. Total

467,158,641

92,358,822

559,517,463

B. Safety

298,196,677

62,935,484

361,132,161

C. All Active Members

765,355,318

155,294,306

920,649,624

**4. All Members**

A. General

i. County

a. Regular Benefits

801,056,673

212,108,122

1,013,164,795

b. Golden Handshake

818,220

164,904

983,124

c. All Benefits

801,874,893

212,273,026

1,014,147,919

ii. Districts

43,228,389

10,171,422

53,399,811

iii. Total

845,103,282

222,444,448

1,067,547,730

B. Safety

a. Regular Benefits

570,046,086

165,390,896

735,436,982

b. Golden Handshake

185,400

41,076

226,476

c. All Benefits

570,231,486

165,431,972

735,663,458

C. All Retirees and Beneficiaries

1,415,334,768

387,876,420

1,803,211,188

Entry Age

Prior Assumptions

2.5% COLA

**Basic****COLA****Total****1. Retirees and Beneficiaries**

## A. General

## i. County

a. Regular Benefits

327,912,576 139,188,744 467,101,320

b. Golden Handshake

818,220 211,896 1,030,116

c. All Benefits

328,730,796 139,400,640 468,131,436

## ii. Districts

14,740,848 5,404,800 20,145,648

## iii. Total

343,471,644 144,805,440 488,277,084

## B. Safety

a. Regular Benefits

266,341,980 101,325,684 367,667,664

b. Golden Handshake

185,400 53,748 239,148

c. All Benefits

266,527,380 120,752,208 387,279,588

## C. All Retirees and Beneficiaries

609,999,024 265,557,648 875,556,672

**2. Deferred Vested Members**

## A. General

## i. County

34,472,997 8,131,033 42,604,030

## ii. Districts\*

0 0 0

## iii. Total

34,472,997 8,131,033 42,604,030

## B. Safety

5,507,429 1,472,151 6,979,580

## C. All Deferred Vested

39,980,426 9,603,184 49,583,610

**3. Active Members**

## A. General

## i. County

438,671,100 112,245,886 550,916,986

## ii. Districts

28,487,541 7,268,471 35,756,012

## iii. Total

467,158,641 119,514,357 586,672,998

## B. Safety

298,196,677 82,119,493 380,316,170

## C. All Active Members

765,355,318 201,633,850 966,989,168

**4. All Members**

## A. General

## i. County

a. Regular Benefits

801,056,673 259,565,663 1,060,622,336

b. Golden Handshake

818,220 211,896 1,030,116

c. All Benefits

801,874,893 259,777,559 1,061,652,452

## ii. Districts

43,228,389 12,673,271 55,901,660

## iii. Total

845,103,282 272,450,830 1,117,554,112

## B. Safety

a. Regular Benefits

570,046,086 204,290,104 774,336,190

b. Golden Handshake

185,400 53,748 239,148

c. All Benefits

570,231,486 204,343,852 774,575,338

## C. All Retirees and Beneficiaries

1,415,334,768 476,794,682 1,892,129,450



Entry Age

Proposed Assumptions

2.0% COLA

	Basic	COLA	Total
<b>1. Retirees and Beneficiaries</b>			
A. General			
i. County			
a. Regular Benefits	343,290,936	128,874,816	472,165,752
b. Golden Handshake	847,500	179,544	1,027,044
c. All Benefits	344,138,436	129,054,360	473,192,796
ii. Districts	15,548,940	5,002,332	20,551,272
iii. Total	359,687,376	134,056,692	493,744,068
B. Safety			
a. Regular Benefits	266,341,980	101,325,684	367,667,664
b. Golden Handshake	186,732	42,324	229,056
c. All Benefits	270,458,820	104,759,592	375,218,412
C. All Retirees and Beneficiaries	630,146,196	238,816,284	868,962,480
<b>2. Deferred Vested Members</b>			
A. General			
i. County	35,879,049	6,881,373	42,760,422
ii. Districts*	0	0	0
iii. Total	35,879,049	6,881,373	42,760,422
B. Safety	5,552,637	1,167,407	6,720,044
C. All Deferred Vested	41,431,686	8,048,780	49,480,466
<b>3. Active Members</b>			
A. General			
i. County	419,022,204	84,939,976	503,962,180
ii. Districts	26,243,038	5,393,244	31,636,282
iii. Total	445,265,242	90,333,220	535,598,462
B. Safety	293,229,156	62,510,761	355,739,917
C. All Active Members	738,494,398	152,843,981	891,338,379
<b>4. All Members</b>			
A. General			
i. County			
a. Regular Benefits	796,786,137	221,945,825	1,018,731,962
b. Golden Handshake	847,500	179,544	1,027,044
c. All Benefits	797,633,637	222,125,369	1,019,759,006
ii. Districts	41,791,978	10,395,576	52,187,554
iii. Total	839,425,615	232,520,945	1,071,946,560
B. Safety			
a. Regular Benefits	569,008,673	168,700,180	737,708,853
b. Golden Handshake	186,732	42,324	229,056
c. All Benefits	569,195,405	168,742,504	737,937,909
C. All Retirees and Beneficiaries	1,408,621,020	401,263,449	1,809,884,469

## Entry Age

## Proposed Assumptions

## 2.5% COLA

	Basic	COLA	Total
<b>1. Retirees and Beneficiaries</b>			
A. General			
i. County			
a. Regular Benefits	343,290,936	151,132,260	494,423,196
b. Golden Handshake	847,500	231,276	1,078,776
c. All Benefits	344,138,436	151,363,536	495,501,972
ii. Districts	15,548,940	5,956,392	21,505,332
iii. Total	359,687,376	157,319,928	517,007,304
B. Safety			
a. Regular Benefits	266,341,980	101,325,684	367,667,664
b. Golden Handshake	186,732	55,452	242,184
c. All Benefits	270,458,820	125,032,980	395,491,800
C. All Retirees and Beneficiaries	630,146,196	282,352,908	912,499,104
<b>2. Deferred Vested Members</b>			
A. General			
i. County			
ii. Districts*	0	0	0
iii. Total	35,879,049	8,939,602	44,818,651
B. Safety	5,552,637	1,523,265	7,075,902
C. All Deferred Vested	41,431,686	10,462,867	51,894,553
<b>3. Active Members</b>			
A. General			
i. County			
ii. Districts	26,243,038	6,969,244	33,212,282
iii. Total	445,265,242	116,843,108	562,108,350
B. Safety	293,229,156	81,713,978	374,943,134
C. All Active Members	738,494,398	198,557,086	937,051,484
<b>4. All Members</b>			
A. General			
i. County			
a. Regular Benefits	798,192,189	267,887,497	1,066,079,686
b. Golden Handshake	847,500	231,276	1,078,776
c. All Benefits	799,039,689	268,118,773	1,067,158,462
ii. Districts	41,791,978	12,925,636	54,717,614
iii. Total	840,831,667	281,044,409	1,121,876,076
B. Safety			
a. Regular Benefits	569,053,881	207,858,913	776,912,794
b. Golden Handshake	186,732	55,452	242,184
c. All Benefits	569,240,613	207,914,365	777,154,978
C. All Retirees and Beneficiaries	1,410,072,280	488,958,774	1,899,031,054

\* Liabilities for Deferred Vested Members who were previously employed at the Districts are included with Deferred Vested Liabilities for former County employees. These amounts will be separated in future valuations.

**Normal Cost**

In Dollars	<b>Basic</b>	<b>COLA</b>	<b>Total</b>
<b>1. General</b>			
A. County	22,809,651	5,507,391	28,317,042
B. District			
i. Electing MOU	799,735	179,084	978,819
ii. Not Electing MOU	<u>830,559</u>	<u>231,876</u>	<u>1,062,435</u>
iii. Total	<u>1,630,294</u>	<u>410,960</u>	<u>2,041,254</u>
C. All General Members	24,439,945	5,918,351	30,358,296
<b>2. Safety</b>			
	15,204,879	3,562,168	18,767,047
<b>3. All Members</b>			
A. County	38,014,530	9,069,559	47,084,089
B. District			
i. Electing MOU	799,735	179,084	978,819
ii. Not Electing MOU	<u>830,559</u>	<u>231,876</u>	<u>1,062,435</u>
iii. Total	<u>1,630,294</u>	<u>410,960</u>	<u>2,041,254</u>
C. All Members	39,644,824	9,480,519	49,125,343
As a Percent of Pay	<b>Basic</b>	<b>COLA</b>	<b>Total</b>
<b>1. General</b>			
A. County	9.74%	2.35%	12.10%
B. District			
i. Electing MOU	12.09%	2.71%	14.80%
ii. Not Electing MOU	8.33%	2.33%	10.65%
iii. Total	9.83%	2.48%	12.31%
C. All General Members	9.75%	2.36%	12.11%
<b>2. Safety</b>			
	18.29%	4.29%	22.58%
<b>3. All Members</b>			
A. County	11.98%	2.86%	14.84%
B. District			
i. Electing MOU	12.09%	2.71%	14.80%
ii. Not Electing MOU	8.33%	2.33%	10.65%
iii. Total	9.83%	2.48%	12.31%
C. All Members	11.88%	2.84%	14.72%

## C. Funded Percentage

### Basic Benefits

Projected Unit Credit Prior Assumptions	General – County	General – Districts	Safety
1. Actuarial Accrued Liability			
a. Regular Benefits	770,914,213	40,700,807	563,739,470
b. Golden Handshakes	818,220	-	185,400
c. Total	771,732,433	40,700,807	563,924,870
2. Actuarial Value of Assets	683,398,798	30,717,017	471,957,524
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	87,515,415	9,983,790	91,781,946
b. Golden Handshakes	818,220	-	185,400
c. Total	88,333,635	9,983,790	91,967,346
4. Funded Percentage	88.6%	75.5%	83.7%

Projected Unit Credit Proposed Assumptions	General – County	General – Districts	Safety
1. Actuarial Accrued Liability			
a. Regular Benefits	759,734,064	39,180,175	557,288,123
b. Golden Handshakes	847,500	-	186,732
c. Total	760,581,564	39,180,175	557,474,855
2. Actuarial Value of Assets	683,398,798	30,717,017	471,957,524
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	76,335,266	8,463,158	85,330,599
b. Golden Handshakes	847,500	-	186,732
c. Total	77,182,766	8,463,158	85,517,331
4. Funded Percentage	89.9%	78.4%	84.7%



Entry Age Prior Assumptions	General – County	General – Districts	Safety
1. Actuarial Accrued Liability			
a. Regular Benefits	801,056,673	43,228,389	570,046,086
b. Golden Handshakes	818,220	-	185,400
c. Total	801,874,893	43,228,389	570,231,486
2. Actuarial Value of Assets	683,398,798	30,717,017	471,957,524
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	117,657,875	12,511,372	98,088,562
b. Golden Handshakes	818,220	-	185,400
c. Total	118,476,095	12,511,372	98,273,962
4. Funded Percentage	85.2%	71.1%	82.8%

Entry Age Proposed Assumptions	General – County	General – Districts	Safety
1. Actuarial Accrued Liability			
a. Regular Benefits	796,786,137	41,791,978	569,008,673
b. Golden Handshakes	847,500	-	186,732
c. Total	797,633,637	41,791,978	569,195,405
2. Actuarial Value of Assets	683,398,798	30,717,017	471,957,524
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	113,387,339	11,074,961	97,051,149
b. Golden Handshakes	847,500	-	186,732
c. Total	114,234,839	11,074,961	97,237,881
4. Funded Percentage	85.7%	73.5%	82.9%

## COL Benefits

Projected Unit Credit Prior Assumptions 2.0% COLA	General – County	General – Districts	Safety
1. Actuarial Accrued Liability			
a. Regular Benefits	204,560,975	9,773,104	164,332,075
b. Golden Handshakes	164,904	-	41,076
c. Total	204,725,879	9,773,104	164,373,151
2. Actuarial Value of Assets	178,794,592	7,670,898	134,529,420
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	25,766,383	2,102,206	29,802,655
b. Golden Handshakes	164,904	-	41,076
c. Total	25,931,287	2,102,206	29,843,731
4. Funded Percentage	87.3%	78.5%	81.8%
Projected Unit Credit Proposed Assumptions 2.0% COLA	General – County	General – Districts	Safety
1. Actuarial Accrued Liability			
a. Regular Benefits	214,419,538	9,909,221	166,942,101
b. Golden Handshakes	179,544	-	42,324
c. Total	214,599,082	9,909,221	166,984,425
2. Actuarial Value of Assets	178,794,592	7,670,898	134,529,420
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	35,624,946	2,238,323	32,412,681
b. Golden Handshakes	179,544	-	42,324
c. Total	35,804,490	2,238,323	32,455,005
4. Funded Percentage	83.3%	77.4%	80.6%

Entry Age Prior Assumptions 2.0% COLA	<b>General – County</b>	<b>General – Districts</b>	<b>Safety</b>
1. Actuarial Accrued Liability			
a. Regular Benefits	212,108,122	10,171,422	165,390,896
b. Golden Handshakes	164,904	-	41,076
c. Total	212,273,026	10,171,422	165,431,972
2. Actuarial Value of Assets	178,794,592	7,670,898	134,529,420
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	33,313,530	2,500,524	30,861,476
b. Golden Handshakes	164,904	-	41,076
c. Total	33,478,434	2,500,524	30,902,552
4. Funded Percentage	84.2%	75.4%	81.3%

Entry Age Proposed Assumptions 2.0% COLA	<b>General – County</b>	<b>General – Districts</b>	<b>Safety</b>
1. Actuarial Accrued Liability			
a. Regular Benefits	221,945,825	10,395,576	168,700,180
b. Golden Handshakes	179,544	-	42,324
c. Total	222,125,369	10,395,576	168,742,504
2. Actuarial Value of Assets	178,794,592	7,670,898	134,529,420
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	43,151,233	2,724,678	34,170,760
b. Golden Handshakes	179,544	-	42,324
c. Total	43,330,777	2,724,678	34,213,084
4. Funded Percentage	80.5%	73.8%	79.7%



Projected Unit Credit Prior Assumptions 2.5% COLA	<b>General – County</b>	<b>General – Districts</b>	<b>Safety</b>
1. Actuarial Accrued Liability			
a. Regular Benefits	248,913,116	12,084,226	202,787,656
b. Golden Handshakes	211,896	-	53,748
c. Total	249,125,012	12,084,226	202,841,404
2. Actuarial Value of Assets	211,742,374	9,385,939	163,076,005
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	37,170,742	2,698,287	39,711,651
b. Golden Handshakes	211,896	-	53,748
c. Total	37,382,638	2,698,287	39,765,399
4. Funded Percentage	85.0%	77.7%	80.4%

Projected Unit Credit Proposed Assumptions 2.5% COLA	<b>General – County</b>	<b>General – Districts</b>	<b>Safety</b>
1. Actuarial Accrued Liability			
a. Regular Benefits	257,046,070	12,210,803	205,213,360
b. Golden Handshakes	231,276	-	55,452
c. Total	257,277,346	12,210,803	205,268,812
2. Actuarial Value of Assets	211,193,471	9,418,127	163,592,721
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	45,852,599	2,792,676	41,620,639
b. Golden Handshakes	231,276	-	55,452
c. Total	46,083,875	2,792,676	41,676,091
4. Funded Percentage	82.1%	77.1%	79.7%



Entry Age Prior Assumptions 2.5% COLA	<b>General – County</b>	<b>General – Districts</b>	<b>Safety</b>
1. Actuarial Accrued Liability			
a. Regular Benefits	259,565,663	12,673,271	204,290,104
b. Golden Handshakes	211,896	-	53,748
c. Total	259,777,559	12,673,271	204,343,852
2. Actuarial Value of Assets	212,564,184	9,449,390	162,190,745
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	47,001,479	3,223,881	42,099,359
b. Golden Handshakes	211,896	-	53,748
c. Total	47,213,375	3,223,881	42,153,107
4. Funded Percentage	81.8%	74.6%	79.4%

Entry Age Proposed Assumptions 2.5% COLA	<b>General – County</b>	<b>General – Districts</b>	<b>Safety</b>
1. Actuarial Accrued Liability			
a. Regular Benefits	267,887,497	12,925,636	207,858,913
b. Golden Handshakes	231,276	-	55,452
c. Total	268,118,773	12,925,636	207,914,365
2. Actuarial Value of Assets	211,945,912	9,494,526	162,763,880
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	55,941,585	3,431,110	45,095,033
b. Golden Handshakes	231,276	-	55,452
c. Total	56,172,861	3,431,110	45,150,485
4. Funded Percentage	79.0%	73.5%	78.3%

## Total Regular Benefits

Projected Unit Credit Prior Assumptions 2.0% COLA	General – County	General – Districts	Safety
1. Actuarial Accrued Liability			
a. Regular Benefits	975,475,188	50,473,911	728,071,545
b. Golden Handshakes	983,124	-	226,476
c. Total	976,458,312	50,473,911	728,298,021
2. Actuarial Value of Assets	862,193,390	38,387,915	606,486,945
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	113,281,798	12,085,996	121,584,600
b. Golden Handshakes	983,124	-	226,476
c. Total	114,264,922	12,085,996	121,811,076
4. Funded Percentage	88.3%	76.1%	83.3%
Projected Unit Credit Proposed Assumptions 2.0% COLA	General – County	General – Districts	Safety
1. Actuarial Accrued Liability			
a. Regular Benefits	974,153,602	49,089,396	724,230,224
b. Golden Handshakes	1,027,044	-	229,056
c. Total	975,180,646	49,089,396	724,459,280
2. Actuarial Value of Assets	862,193,390	38,387,915	606,486,945
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	111,960,212	10,701,481	117,743,279
b. Golden Handshakes	1,027,044	-	229,056
c. Total	112,987,256	10,701,481	117,972,335
4. Funded Percentage	88.4%	78.2%	83.7%



Entry Age Prior Assumptions 2.0% COLA	<b>General – County</b>	<b>General – Districts</b>	<b>Safety</b>
1. Actuarial Accrued Liability			
a. Regular Benefits	1,013,164,795	53,399,811	735,436,982
b. Golden Handshakes	983,124	-	226,476
c. Total	1,014,147,919	53,399,811	735,663,458
2. Actuarial Value of Assets	862,193,390	38,387,915	606,486,945
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	150,971,405	15,011,896	128,950,037
b. Golden Handshakes	983,124	-	226,476
c. Total	151,954,529	15,011,896	129,176,513
4. Funded Percentage	85.0%	71.9%	82.4%

Entry Age Proposed Assumptions 2.0% COLA	<b>General – County</b>	<b>General – Districts</b>	<b>Safety</b>
1. Actuarial Accrued Liability			
a. Regular Benefits	1,018,731,962	52,187,554	737,708,853
b. Golden Handshakes	1,027,044	-	229,056
c. Total	1,019,759,006	52,187,554	737,937,909
2. Actuarial Value of Assets	862,193,390	38,387,915	606,486,945
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	156,538,572	13,799,639	131,221,908
b. Golden Handshakes	1,027,044	-	229,056
c. Total	157,565,616	13,799,639	131,450,964
4. Funded Percentage	84.5%	73.6%	82.2%



Projected Unit Credit Prior Assumptions 2.5% COLA	<b>General – County</b>	<b>General – Districts</b>	<b>Safety</b>
1. Actuarial Accrued Liability			
a. Regular Benefits	1,019,827,329	52,785,033	766,527,126
b. Golden Handshakes	1,030,116	-	239,148
c. Total	1,020,857,445	52,785,033	766,766,274
2. Actuarial Value of Assets	895,141,172	40,102,956	635,033,529
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	124,686,157	12,682,077	131,493,597
b. Golden Handshakes	1,030,116	-	239,148
c. Total	125,716,273	12,682,077	131,732,745
4. Funded Percentage	87.7%	76.0%	82.8%

Projected Unit Credit Proposed Assumptions 2.5% COLA	<b>General – County</b>	<b>General – Districts</b>	<b>Safety</b>
1. Actuarial Accrued Liability			
a. Regular Benefits	1,018,186,186	51,390,978	762,546,691
b. Golden Handshakes	1,078,776	-	242,184
c. Total	1,019,264,962	51,390,978	762,788,875
2. Actuarial Value of Assets	894,592,268	40,135,143	635,550,245
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	123,593,918	11,255,835	126,996,446
b. Golden Handshakes	1,078,776	-	242,184
c. Total	124,672,694	11,255,835	127,238,630
4. Funded Percentage	87.8%	78.1%	83.3%

Entry Age Prior Assumptions 2.5% COLA	<b>General – County</b>	<b>General – Districts</b>	<b>Safety</b>
1. Actuarial Accrued Liability			
a. Regular Benefits	1,060,622,336	55,901,660	774,336,190
b. Golden Handshakes	1,030,116	-	239,148
c. Total	1,061,652,452	55,901,660	774,575,338
2. Actuarial Value of Assets	895,962,981	40,166,407	634,148,269
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	164,659,355	15,735,253	140,187,921
b. Golden Handshakes	1,030,116	-	239,148
c. Total	165,689,471	15,735,253	140,427,069
4. Funded Percentage	84.4%	71.9%	81.9%

Entry Age Proposed Assumptions 2.5% COLA	<b>General – County</b>	<b>General – Districts</b>	<b>Safety</b>
1. Actuarial Accrued Liability			
a. Regular Benefits	1,066,079,686	54,717,614	776,912,794
b. Golden Handshakes	1,078,776	-	242,184
c. Total	1,067,158,462	54,717,614	777,154,978
2. Actuarial Value of Assets	895,344,710	40,211,542	634,721,405
3. Unfunded Actuarial Accrued Liability			
a. Regular Benefits	170,734,976	14,506,072	142,191,389
b. Golden Handshakes	1,078,776	-	242,184
c. Total	171,813,752	14,506,072	142,433,573
4. Funded Percentage	83.9%	73.5%	81.7%

## Changes in Funded Percentage

**As of Prior Valuation** **93.6%**

**Changes in Funded Percentage due to:**

<i>Normal Operation</i>	<i>0.5%</i>
<i>Demographic Losses</i>	<i>-0.6%</i>
<i>Investment Losses</i>	<i>-7.6%</i>
<i>Benefit Increase</i>	<i>-0.5%</i>
<i>Method Changes</i>	<i>-2.3%</i>
<i>Assumption Changes</i>	<i><u>-0.3%</u></i>
<b>Total Changes</b>	<b>-10.9%</b>

**As of Current Valuation** **82.7%**

The funded percentage shown above excludes \$ 285,092,130 in Pension Obligation Bond (POB) proceeds. The POB proceeds were not available as of December 31, 2002, but were expected to be contributed to KCERA prior to July 1, 2003, when the new contribution rates would take effect. Funding from the POBs would increase the funded percentage by 15.0% to 97.7%.

## Supplemental Retiree Benefit Reserve

	<b><i>Approved Liabilities</i></b>	<b><i>Projected Liabilities</i></b>
Retirees and Beneficiaries	49,935,396	60,192,624
Active and Deferred Members	<u>10,041,634</u>	<u>47,583,593</u>
All Members	59,977,030	107,776,217
<b><i>Available Reserves</i></b>		
Total SRBR	154,790,445	154,790,445
Additional 0.5% COLA Account	<u>63,209,408</u>	<u>63,209,408</u>
Available SRBR	91,581,037	91,581,037
<b><i>Funded Percentage</i></b>	152.7%	85.0%

As part of a court settlement, the County has increased the maximum cost-of-living increase that can be provided from Regular Plan reserves from the current level of 2% per year, up to 2.5% per year. This benefit increase will be partly funded using money set aside for this purpose within the Supplemental Retiree Benefit Reserve by the Retirement Board.

## D. Employer Contribution Rates

### Basic Benefits

Without POBs	<b>General – County</b>	<b>General – Districts Electing MOU</b>	<b>General – District Not Electing MOU</b>	<b>Safety</b>
1. Total Normal Cost				
a. Dollars	25,330,875	736,500	1,152,075	15,027,359
b. Percent of Pay	10.47%	10.47%	10.47%	18.20%
2. Projected Employee Contributions				
a. Dollars	4,322,562	74,032	294,365	1,342,688
b. Percent of Pay	1.79%	1.05%	2.67%	1.63%
3. Employer Normal Cost				
a. Dollars	21,008,313	662,468	857,710	13,684,671
b. Percent of Pay	8.68%	9.41%	7.79%	16.57%
4. Amortization of Unfunded Actuarial Accrued Liability				
a. Dollars	5,199,596	206,103	322,398	5,622,457
b. Percent of Pay	2.15%	2.93%	2.93%	6.81%
5. Employer Contribution				
a. Dollars	26,207,909	868,571	1,180,108	19,307,128
b. Percent of Pay	10.83%	12.34%	10.72%	23.38%

Overall Average Rate = 13.88%



	<b>General – County</b>	<b>General – Districts Electing MOU</b>	<b>General – District Not Electing MOU</b>	<b>Safety</b>
With POBs				
1. Total Normal Cost				
a. Dollars	25,330,875	736,500	1,152,075	15,027,359
b. Percent of Pay	10.47%	10.47%	10.47%	18.20%
2. Projected Employee Contributions				
a. Dollars	4,322,562	74,032	294,365	1,342,688
b. Percent of Pay	1.79%	1.05%	2.67%	1.63%
3. Employer Normal Cost				
a. Dollars	21,008,313	662,468	857,710	13,684,671
b. Percent of Pay	8.68%	9.41%	7.79%	16.57%
4. Amortization of Unfunded Actuarial Accrued Liability				
a. Dollars	5,199,596	206,103	322,398	5,622,457
b. Percent of Pay	2.15%	2.93%	2.93%	6.81%
5. Amortization of Estimated POB Proceeds				
a. Dollars	-5,612,282	0	0	-6,068,705
b. Percent of Pay	-2.32%	0.00%	0.00%	-7.35%
6. Employer Contribution				
a. Dollars	20,595,627	868,571	1,180,108	13,238,423
b. Percent of Pay	8.51%	12.34%	10.72%	16.03%

Overall Average Rate = 10.47%

## COL Benefits

Without POBs	<b>General – County</b>	<b>General – Districts Electing MOU</b>	<b>General – District Not Electing MOU</b>	<b>Safety</b>
1. Total Normal Cost				
a. Dollars	6,158,654	179,064	280,102	4,339,013
b. Percent of Pay	2.54%	2.54%	2.54%	5.25%
2. Projected Employee Contributions				
a. Dollars	0	0	0	0
b. Percent of Pay	0.00%	0.00%	0.00%	0.00%
3. Employer Normal Cost				
a. Dollars	6,158,654	179,064	280,102	4,339,013
b. Percent of Pay	2.54%	2.54%	2.54%	5.25%
4. Amortization of Unfunded Actuarial Accrued Liability				
a. Dollars	2,865,423	70,060	109,593	2,644,106
b. Percent of Pay	1.18%	1.00%	1.00%	3.20%
5. Employer Contribution				
a. Dollars	9,024,077	249,124	389,695	6,983,119
b. Percent of Pay	3.73%	3.54%	3.54%	8.46%

Overall Average Rate = 4.86%

	<b>General – County</b>	<b>General – Districts Electing MOU</b>	<b>General – District Not Electing MOU</b>	<b>Safety</b>
With POBs				
1. Total Normal Cost				
a. Dollars	6,158,654	179,064	280,102	4,339,013
b. Percent of Pay	2.54%	2.54%	2.54%	5.25%
2. Projected Employee Contributions				
a. Dollars	0	0	0	0
b. Percent of Pay	0.00%	0.00%	0.00%	0.00%
3. Employer Normal Cost				
a. Dollars	6,158,654	179,064	280,102	4,339,013
b. Percent of Pay	2.54%	2.54%	2.54%	5.25%
4. Amortization of Unfunded Actuarial Accrued Liability				
a. Dollars	2,865,423	70,060	109,593	2,644,106
b. Percent of Pay	1.18%	1.00%	1.00%	3.20%
5. Amortization of Estimated POB Proceeds				
a. Dollars	-3,092,848	0	0	-2,853,966
b. Percent of Pay	-1.28%	0.00%	0.00%	-3.46%
6. Employer Contribution				
a. Dollars	5,931,229	249,124	389,695	4,129,153
b. Percent of Pay	2.45%	3.54%	3.54%	5.00%

Overall Average Rate = 3.12%

## Total Contribution Rates

Without POBs	General – County	General – Districts Electing MOU	General – District Not Electing MOU	Safety
1. Total Normal Cost				
a. Dollars	31,489,529	915,564	1,432,177	19,366,372
b. Percent of Pay	13.01%	13.01%	13.01%	23.45%
2. Projected Employee Contributions				
a. Dollars	4,322,562	74,032	294,365	1,342,688
b. Percent of Pay	1.79%	1.05%	2.67%	1.63%
3. Employer Normal Cost				
a. Dollars	27,166,967	841,532	1,137,812	18,023,684
b. Percent of Pay	11.23%	11.96%	10.34%	21.82%
4. Amortization of Unfunded Actuarial Accrued Liability				
a. Dollars	8,065,019	276,163	431,991	8,266,563
b. Percent of Pay	3.33%	3.92%	3.92%	10.01%
5. Employer Contribution				
a. Dollars	35,231,986	1,117,695	1,569,803	26,290,247
b. Percent of Pay	14.56%	15.88%	14.26%	31.83%

Overall Average Rate = 18.74%

The County's required contribution for 2002 shown above will be reduced by \$77,514 due to maximum benefit limitations imposed by Section 415 of the Internal Revenue Code.

	<b>General – County</b>	<b>General – Districts Electing MOU</b>	<b>General – District Not Electing MOU</b>	<b>Safety</b>
With POBs				
1. Total Normal Cost				
a. Dollars	31,489,529	915,564	1,432,177	19,366,372
b. Percent of Pay	13.01%	13.01%	13.01%	23.45%
2. Projected Employee Contributions				
a. Dollars	4,322,562	74,032	294,365	1,342,688
b. Percent of Pay	1.79%	1.05%	2.67%	1.63%
3. Employer Normal Cost				
a. Dollars	27,166,967	841,532	1,137,812	18,023,684
b. Percent of Pay	11.23%	11.96%	10.34%	21.82%
4. Amortization of Unfunded Actuarial Accrued Liability				
a. Dollars	8,065,019	276,163	431,991	8,266,563
b. Percent of Pay	3.33%	3.92%	3.92%	10.01%
5. Amortization of Estimated POB Proceeds				
a. Dollars	-8,705,130	0	0	-8,922,671
b. Percent of Pay	-3.60%	0.00%	0.00%	-10.80%
6. Employer Contribution				
a. Dollars	26,526,856	1,117,695	1,569,803	17,367,576
b. Percent of Pay	10.96%	15.88%	14.26%	21.03%

Overall Average Rate = 13.60%

The County's required contribution for 2002 shown above will be reduced by \$77,514 due to maximum benefit limitations imposed by Section 415 of the Internal Revenue Code.

**Changes in Average Contribution Rate**

**As of Prior Valuation** **16.96%**

**Changes in Average Contribution Rate due to:**

<b>Demographic Losses</b>	0.52%
<b>Investment Losses</b>	2.87%
<b>Benefit Increase</b>	1.17%
<b>Method Changes</b>	1.27%
<b>Assumption Changes</b>	(1.97%)
<b>Amortization Changes</b>	(2.08%)
<b>Pension Obligation Bond</b>	<u>(5.14%)</u>
<b>Total Changes</b>	(3.36%)

**As of Current Valuation** **13.60%**

## E. Summary of Major Plan Provisions – General Members

<b>Membership:</b>	Employment (at least 50% of full-time) with County or participating District. Enter on first day of the first pay period after entrance into service.
<b>Final Average Salary (FAS):</b>	Highest one-year average

### Service Retirement

<b>Code Section:</b>	31676.14										
<b>Eligibility:</b>	10 years of service and age 50, or 30 years of service regardless of age, or age 70 regardless of service.										
<b>Benefit:</b>	1.667% of FAS per year of service times RAF										
<b>Retirement Age Factor (RAF):</b>	Adjustment factor for benefit commencing at age other than 52. Sample factors: <table><thead><tr><th>Age</th><th>Factor</th></tr></thead><tbody><tr><td>50</td><td>.8850</td></tr><tr><td>55</td><td>1.1686</td></tr><tr><td>60</td><td>1.4638</td></tr><tr><td>65</td><td>1.5668</td></tr></tbody></table>	Age	Factor	50	.8850	55	1.1686	60	1.4638	65	1.5668
Age	Factor										
50	.8850										
55	1.1686										
60	1.4638										
65	1.5668										
<b>Integration with Social Security:</b>	Benefits based on first \$350 of monthly FAS are reduced by 1/3. Benefits for some District members are not integrated with Social Security.										
<b>Maximum Benefit:</b>	100% of FAS										
<b>Normal Form of Benefit:</b>	Life annuity; 60% continuance to spouse after death of member. If there is no surviving spouse, the benefit is paid to eligible children.										

### Nonservice Connected Disability

<b>Eligibility:</b>	5 years of service.
<b>Disabled Definition:</b>	Unable to perform their own job.
<b>Benefit:</b>	20% of FAS, plus 2% of FAS for each year of service in excess of 5, but not more than 40% of FAS
<b>Normal Form of Benefit:</b>	Life annuity; 60% continuance to spouse after death of member. If there is no surviving spouse, the benefit is paid to eligible children.

### Service Connected Disability

<b>Eligibility:</b>	First day of work
<b>Disabled Definition:</b>	Disability is substantially caused by employment and unable to perform their own job.
<b>Benefit:</b>	50% of salary, but not less than Service Retirement benefit (if eligible at time of commencement).
<b>Normal Form of Benefit:</b>	Life annuity; 100% continuance to spouse after death of member. If there is no surviving spouse, the benefit is paid to eligible children.

### Nonservice Connected Death

<b>Before eligible for Nonservice Connected Disability or Service Retirement:</b>	Refund of employee contributions with interest, plus 1 month's salary for each year of service (maximum 6 months'
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salary).

***After eligible for Nonservice  
Connected Disability or Service  
Retirement:***

60% of Nonservice Connected Disability Benefit or Service Retirement Benefit the member would have received for retirement on day of death payable to surviving eligible spouse for the life of the spouse. If there is no surviving spouse, the benefit is paid to eligible children.

### Service Connected Death

***Eligibility:***

First day of work

***Benefit:***

50% of salary, but not less than Service Retirement benefit (if eligible at time of commencement).

***Normal Form of Benefit:***

Life annuity to spouse after death of member. If there is no surviving spouse, the benefit is paid to eligible children.

### Deferred Service Retirement

***Eligibility:***

5 years of service

***Additional requirement:***

Must leave contributions on deposit

***Benefit:***

Same as service retirement benefit

***FAS:***

If reciprocity provisions apply, includes compensation earned at reciprocal agency.

***Normal Form of Benefit:***

Same as service retirement benefit

## Withdrawal

<b>Eligibility:</b>	First day of work
<b>Other Requirement:</b>	Forfeits right to receive other benefit from retirement system.
<b>Benefit:</b>	Accumulated contributions with interest
<b>Form of Benefit:</b>	Lump sum

## Cost of Living Benefits

<b>Timing:</b>	Annually, effective April 1 based on change in Consumer Price Index for the preceding calendar year.
<b>Maximum:</b>	2.5% per year. This has been increased by 0.5% this year.

## Member Contributions

<b>Basic:</b>	Contribution is set by a table adopted by the Retirement Board designed to be sufficient to provide an average annuity, at age 55, equal to 1/120 of the final compensation of members.
<b>COLA:</b>	None
<b>Percentage of Full Contribution Payable by Member:</b>	<p>For County employees (and employees of Districts adopting the MOU) hired on or after Payroll Period 97-14:</p> <ul style="list-style-type: none"> <li>• 100% of the Full Contribution Rate for their first 5 years of service.</li> <li>• No employee contributions are required after attaining 5 years of</li> </ul>

service.

For County employees (and employees of Districts adopting the MOU) hired before Payroll Period 97-14:

- 50% of the Full Contribution Rate for their first 5 years of service.
- No employee contributions are required after attaining 5 years of service.

For employees of Districts not adopting the MOU, 50% of Full Contribution Rate for first 30 years of service.

***Integration with Social Security:***

Members integrated with Social Security pay 2/3 of the full rate on first \$350 of pay each month.

***Other Provisions:***

Rates based on age at entry into System.

## F. Member Contribution Rates – General Members

Member contribution rates are calculated as a percentage of the member's pay, on the basis of the member's age at entry into System, the classification of the member, the Plan's economic assumptions and the member's life expectancy at the retirement age specified for this purpose in the County Employees Retirement Law of 1937 (1937 Act). Due to the changes in the Plan's mortality and salary increase assumptions, the member contribution rates have been recalculated. The recommended contribution rates for General Members are presented below.

### Proposed Full Member Contribution Rates (Integrated)

Age	Rate on First \$350 of Monthly Compensation	Rate on Compensation in Excess of \$350 per Month	Age	Rate on First \$350 of Monthly Compensation	Rate on Compensation in Excess of \$350 per Month
20	3.44%	5.16%	38	4.77%	7.16%
21	3.50%	5.25%	39	4.86%	7.30%
22	3.57%	5.35%	40	4.96%	7.43%
23	3.63%	5.45%	41	5.05%	7.58%
24	3.70%	5.55%	42	5.15%	7.73%
25	3.77%	5.65%	43	5.26%	7.88%
26	3.84%	5.76%	44	5.37%	8.05%
27	3.91%	5.86%	45	5.48%	8.22%
28	3.98%	5.97%	46	5.61%	8.41%
29	4.05%	6.08%	47	5.75%	8.62%
30	4.13%	6.19%	48	5.90%	8.85%
31	4.20%	6.30%	49	5.90%	8.85%
32	4.28%	6.42%	50	5.90%	8.85%
33	4.36%	6.53%	51	5.90%	8.85%
34	4.44%	6.65%	52	5.90%	8.85%
35	4.52%	6.78%	53	5.90%	8.85%
36	4.60%	6.90%	54	5.90%	8.85%
37	4.69%	7.03%			

**Proposed Full Member Contribution Rates (Non-Integrated)**

<b>Contribution</b>		<b>Contribution</b>	
<b>Age</b>	<b>Rate</b>	<b>Age</b>	<b>Rate</b>
20	5.16%	38	7.16%
21	5.25%	39	7.30%
22	5.35%	40	7.43%
23	5.45%	41	7.58%
24	5.55%	42	7.73%
25	5.65%	43	7.88%
26	5.76%	44	8.05%
27	5.86%	45	8.22%
28	5.97%	46	8.41%
29	6.08%	47	8.62%
30	6.19%	48	8.85%
31	6.30%	49	8.85%
32	6.42%	50	8.85%
33	6.53%	51	8.85%
34	6.65%	52	8.85%
35	6.78%	53	8.85%
36	6.90%	54	8.85%
37	7.03%		

The prior year contribution rates for General Members have been calculated by the prior actuary and presented here without audit by Public Pension Professionals.

### Prior Full Member Contribution Rates (Integrated)

Age	Rate on First \$350 of Monthly Compensation	Rate on Compensation in Excess of \$350 per Month	Age	Rate on First \$350 of Monthly Compensation	Rate on Compensation in Excess of \$350 per Month
20	4.85%	7.28%	38	5.91%	8.86%
21	4.89%	7.33%	39	5.99%	8.99%
22	4.92%	7.38%	40	6.08%	9.12%
23	4.95%	7.42%	41	6.17%	9.26%
24	4.98%	7.47%	42	6.27%	9.41%
25	5.01%	7.52%	43	6.37%	9.55%
26	5.07%	7.60%	44	6.47%	9.70%
27	5.12%	7.68%	45	6.56%	9.84%
28	5.17%	7.76%	46	6.65%	9.98%
29	5.23%	7.84%	47	6.75%	10.13%
30	5.28%	7.92%	48	6.85%	10.27%
31	5.35%	8.03%	49	6.95%	10.42%
32	5.43%	8.14%	50	7.04%	10.56%
33	5.51%	8.26%	51	7.14%	10.71%
34	5.58%	8.37%	52	7.24%	10.86%
35	5.65%	8.48%	53	7.34%	11.01%
36	5.74%	8.61%	54	7.44%	11.16%
37	5.83%	8.74%			

**Prior Full Member Contribution Rates (Non-Integrated)**

<b>Contribution</b>		<b>Contribution</b>	
<b>Age</b>	<b>Rate</b>	<b>Age</b>	<b>Rate</b>
20	7.28%	38	8.86%
21	7.33%	39	8.99%
22	7.38%	40	9.12%
23	7.42%	41	9.26%
24	7.47%	42	9.41%
25	7.52%	43	9.55%
26	7.60%	44	9.70%
27	7.68%	45	9.84%
28	7.76%	46	9.98%
29	7.84%	47	10.13%
30	7.92%	48	10.27%
31	8.03%	49	10.42%
32	8.14%	50	10.56%
33	8.26%	51	10.71%
34	8.37%	52	10.86%
35	8.48%	53	11.01%
36	8.61%	54	11.16%
37	8.74%		

## G. Summary of Major Plan Provisions – Safety Members

**Membership:** Employment (at least 50% of full-time) with County. Enter on first day of the first pay period after entrance into service.

**Final Average Salary (FAS):** Highest one-year average

### Service Retirement

**Code Section:** 31664.1 effective January 1, 2001.

**Eligibility:** 10 years of service and age 50, or 20 years of service regardless of age.

**Benefit:** 3.000% of FAS per year of service times RAF

**Retirement Age Factor (RAF):** Adjustment factor for benefit commencing at age other than 50.  
Sample factors:

Age	Factor
45	.7805
50	1.0000
55	1.0000

**Integration with Social Security:** Benefits based on first \$350 of monthly FAS are reduced by 1/3.

**Maximum Benefit:** 100% of FAS

**Normal Form of Benefit:** Life annuity; 60% continuance to spouse after death of member. If there is no surviving spouse, the benefit is paid to eligible children.



## Nonservice Connected Disability

<b>Eligibility:</b>	5 years of service.
<b>Disabled Definition:</b>	Unable to perform their own job.
<b>Benefit:</b>	20% of FAS, plus 2% of FAS for each year of service in excess of 5, but not more than 40% of FAS
<b>Normal Form of Benefit:</b>	Life annuity; 60% continuance to spouse after death of member. If there is no surviving spouse, the benefit is paid to eligible children.

## Service Connected Disability

<b>Eligibility:</b>	First day of work
<b>Disabled Definition:</b>	Disability is substantially caused by employment and unable to perform their own job.
<b>Benefit:</b>	50% of salary, but not less than Service Retirement benefit (if eligible at time of commencement).
<b>Normal Form of Benefit:</b>	Life annuity; 100% continuance to spouse after death of member. If there is no surviving spouse, the benefit is paid to eligible children.

## Nonservice Connected Death

<b>Before eligible for Nonservice Connected Disability or Service Retirement:</b>	Refund of employee contributions with interest, plus 1 month's salary for each year of service (maximum 6 months'
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salary).

***After eligible for Nonservice  
Connected Disability or Service  
Retirement:***

60% of Nonservice Connected Disability Benefit or Service Retirement Benefit the member would have received for retirement on day of death payable to surviving eligible spouse for the life of the spouse. If there is no surviving spouse, the benefit is paid to eligible children.

### Service Connected Death

***Eligibility:***

First day of work

***Benefit:***

50% of salary, but not less than Service Retirement benefit (if eligible at time of commencement).

***Normal Form of Benefit:***

Life annuity to spouse after death of member. If there is no surviving spouse, the benefit is paid to eligible children.

### Deferred Service Retirement

***Eligibility:***

5 years of service

***Additional requirement:***

Must leave contributions on deposit

***Benefit:***

Same as service retirement benefit

***FAS:***

If reciprocity provisions apply, includes compensation earned at reciprocal agency.

***Normal Form of Benefit:***

Same as service retirement benefit

## Withdrawal

<b>Eligibility:</b>	First day of work
<b>Other Requirement:</b>	Forfeits right to receive other benefit from retirement system.
<b>Benefit:</b>	Accumulated contributions with interest
<b>Form of Benefit:</b>	Lump sum

## Cost of Living Benefits

<b>Timing:</b>	Annually, effective April 1 based on change in Consumer Price Index for the preceding calendar year.
<b>Maximum:</b>	2.5% per year. This has increased 0.5% this year.

## Member Contributions

<b>Basic:</b>	Contribution is set by a table adopted by the Retirement Board designed to be sufficient to provide an average annuity, at age 50, equal to 1/100 of the final compensation of members.
<b>COLA:</b>	None
<b>Percentage of Full Contribution Payable by Member:</b>	For County employees hired on or after Payroll Period 97-14: <ul style="list-style-type: none"><li>• 100% of the Full Contribution Rate for their first 5 years of service.</li><li>• No employee contributions are required after attaining 5 years of service.</li></ul>

For County employees hired before  
Payroll Period 97-14:

- 50% of the Full Contribution Rate for their first 5 years of service.
- No employee contributions are required after attaining 5 years of service.

***Integration with Social Security:***

Members integrated with Social Security pay 2/3 of the full rate on first \$350 of pay each month.

***Other Provisions:***

Rates based on age at entry into System.

## H. Member Contribution Rates – Safety Members

Member contribution rates are calculated as a percentage of the member's pay, on the basis of the member's age at entry into System, the classification of the member, the Plan's economic assumptions and the member's life expectancy at the retirement age specified for this purpose in the County Employees Retirement Law of 1937 (1937 Act). Due to the changes in the Plan's mortality and salary increase assumptions, the member contribution rates have been recalculated. The recommended contribution rates for Safety Members are presented below.

### Proposed Full Member Contribution Rates (Integrated)

Age	Rate on First \$350 of Monthly Compensation	Rate on Compensation in Excess of \$350 per Month	Age	Rate on First \$350 of Monthly Compensation	Rate on Compensation in Excess of \$350 per Month
20	5.06%	7.59%	35	6.47%	9.71%
21	5.14%	7.71%	36	6.60%	9.90%
22	5.22%	7.83%	37	6.73%	10.09%
23	5.30%	7.96%	38	6.87%	10.30%
24	5.39%	8.08%	39	7.02%	10.53%
25	5.48%	8.21%	40	7.03%	10.55%
26	5.56%	8.35%	41	7.05%	10.58%
27	5.65%	8.48%	42	7.07%	10.60%
28	5.75%	8.62%	43	7.08%	10.63%
29	5.84%	8.76%	44	7.10%	10.65%
30	5.94%	8.91%	45	7.12%	10.68%
31	6.04%	9.06%	46	7.13%	10.70%
32	6.14%	9.21%	47	7.15%	10.73%
33	6.25%	9.37%	48	7.17%	10.75%
34	6.36%	9.54%	49	7.18%	10.78%

**Proposed Full Member Contribution Rates (Non-Integrated)**

<b>Contribution</b>		<b>Contribution</b>	
<b>Age</b>	<b>Rate</b>	<b>Age</b>	<b>Rate</b>
20	7.59%	35	9.71%
21	7.71%	36	9.90%
22	7.83%	37	10.09%
23	7.96%	38	10.30%
24	8.08%	39	10.53%
25	8.21%	40	10.55%
26	8.35%	41	10.58%
27	8.48%	42	10.60%
28	8.62%	43	10.63%
29	8.76%	44	10.65%
30	8.91%	45	10.68%
31	9.06%	46	10.70%
32	9.21%	47	10.73%
33	9.37%	48	10.75%
34	9.54%	49	10.78%

The prior year contribution rates for Safety Members have been calculated by the prior actuary and presented here without audit by Public Pension Professionals.

**Prior Full Member Contribution Rates (Integrated)**

<b>Age</b>	<b>Rate on First \$350 of Monthly Compensation</b>	<b>Rate on Compensation in Excess of \$350 per Month</b>	<b>Age</b>	<b>Rate on First \$350 of Monthly Compensation</b>	<b>Rate on Compensation in Excess of \$350 per Month</b>
20	5.44%	8.16%	35	6.45%	9.68%
21	5.49%	8.24%	36	6.55%	9.83%
22	5.55%	8.32%	37	6.65%	9.98%
23	5.60%	8.40%	38	6.76%	10.14%
24	5.65%	8.48%	39	6.86%	10.29%
25	5.71%	8.56%	40	6.96%	10.44%
26	5.77%	8.66%	41	7.07%	10.60%
27	5.85%	8.77%	42	7.17%	10.76%
28	5.91%	8.87%	43	7.28%	10.92%
29	5.99%	8.98%	44	7.39%	11.08%
30	6.05%	9.08%	45	7.49%	11.24%
31	6.13%	9.20%	46	7.61%	11.41%
32	6.21%	9.32%	47	7.72%	11.58%
33	6.29%	9.44%	48	7.83%	11.75%
34	6.37%	9.56%	49	7.95%	11.92%

**Prior Full Member Contribution Rates (Non-Integrated)**

<b>Contribution</b>		<b>Contribution</b>	
<b>Age</b>	<b>Rate</b>	<b>Age</b>	<b>Rate</b>
20	8.16%	35	9.68%
21	8.24%	36	9.83%
22	8.32%	37	9.98%
23	8.40%	38	10.14%
24	8.48%	39	10.29%
25	8.56%	40	10.44%
26	8.66%	41	10.60%
27	8.77%	42	10.76%
28	8.87%	43	10.92%
29	8.98%	44	11.08%
30	9.08%	45	11.24%
31	9.20%	46	11.41%
32	9.32%	47	11.58%
33	9.44%	48	11.75%
34	9.56%	49	11.92%



# I. Summary of Actuarial Assumptions and Funding Methods

This actuarial valuation report has been prepared in accordance with generally accepted actuarial principles and practices. The major assumptions and methods used in this valuation are as follows:

## Economic Assumptions

<b>Interest:</b>	8.0% per year.
<b>Salary Increase – Total Payroll:</b>	4.0 % per year
<b>Salary Increase – Individual:</b>	Rates varying by service, as shown in Schedule 1. This is a change from the prior valuation, where rates varied by age, as shown in Schedule 2.
<b>Inflation:</b>	4.0% per year.
<b>Employee Contribution Interest Crediting Rate:</b>	8.0% per year.

## Demographic Assumptions

### Post-retirement mortality:

- **Service Retirement - General:** RP-2000 Healthy Annuitant Mortality, with adjustment for white collar workers. Life expectancies are shown in Schedules 3. This is a change from the prior valuation, which used 1994 Group Annuity Mortality, with ages set forward two years for male and female members. Life Expectancies are shown in Schedules 4.
- **Service Retirement - Safety:** RP-2000 Healthy Annuitant Mortality, with adjustment for blue collar workers. Life expectancies are shown in Schedules 5. This is a change from the prior valuation, which used 1994 Group

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	<p>Annuity Mortality for males, with no age adjustment. Life Expectancies are shown in Schedules 6.</p>
<ul style="list-style-type: none"><li>• <b>Disability Retirement:</b></li></ul>	<p>RP-2000 Disabled Annuitant Mortality. Life expectancies are shown in Schedules 7. This is a change from the prior valuation, which used 1981 Disability Mortality. Life Expectancies are shown in Schedules 8.</p>
<ul style="list-style-type: none"><li>• <b>Spouse:</b></li></ul>	<p>RP-2000 Healthy Annuitant Mortality, with adjustment for white collar workers. This is a change from the prior valuation, which used 1994 Group Annuity Mortality, with ages set forward two years for male and female beneficiaries.</p>
<b>Withdrawal (termination with refund of member contributions):</b>	<p>Rates varying by age, as shown in Schedule 9 (for General males), 11 (for General females) and 13 (for Safety). These are all changes from the prior valuation, as shown in Schedule 10 (for General males), 12 (for General females) and 14 (for Safety).</p>
<b>Vested Termination (termination with retirement pension deferred to age 60):</b>	<p>Rates varying by age, as shown in Schedule 9 (for General males), 11 (for General females) and 13 (for Safety). These are all changes from the prior valuation, as shown in Schedule 10 (for General males), 12 (for General females) and 14 (for Safety). Members are assumed to join a reciprocal agency immediately after termination.</p>
<b>Pre-retirement mortality:</b>	<p>Rates varying by age, as shown in Schedule 9 (for General males), 11 (for General females) and 13 (for Safety). These are all changes from the prior valuation, as shown in Schedule 10 (for General males), 12 (for General females) and 14 (for Safety). Separate rates for ordinary death, service related death, and death while eligible.</p>

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<b>Service Disability:</b>	Rates varying by age, as shown in Schedule 9 (for General males), 11 (for General females) and 13 (for Safety). These are all changes from the prior valuation, as shown in Schedule 10 (for General males), 12 (for General females) and 14 (for Safety).
<b>Ordinary Disability:</b>	Rates varying by age, as shown in Schedule 9 (for General males), 11 (for General females) and 13 (for Safety). These are all changes from the prior valuation, as shown in Schedule 10 (for General males), 12 (for General females) and 14 (for Safety).
<b>Service Retirement:</b>	Rates varying by age, as shown in Schedule 9 (for General males), 11 (for General females) and 13 (for Safety). These are all changes from the prior valuation, as shown in Schedule 10 (for General males), 12 (for General females) and 14 (for Safety).
<b>Form of Payment:</b>	Life annuity for single members. 60% contingent annuity for married members (100% contingent annuity if receiving service-related disability).  SRBR benefits for married members are all assumed to be paid as a 60% contingent annuity.
<b>Percentage Married at Retirement:</b>	80% of male active members and 50% of female active members assumed married at retirement.

**Benefit Eligibility:**

For decrement purposes, all active members are considered potentially eligible for all benefits without regard to service requirements. The demographic decrements take the eligibility requirements into account.

**Spouse Ages**

For active members reaching retirement, wives are assumed to be four years younger than husbands.

Where spousal information was included for retirees, that information was used. If the age of the spouse was not provided, we have assumed that all spouses are still alive, and that female spouses are four years younger than their husbands.

**Actuarial Methods****Funding Method:**

Entry Age Funding Method, with costs allocated as a level percent of salary. This is a change from the prior valuation, which was the Projected Unit Credit Funding Method.

**Amortization Period:**

The Unfunded Actuarial Accrued Liability due to the change in funding method is amortized as a level percentage of payroll over a 25-year period beginning with the December 31, 2003 valuation.

The Unfunded Actuarial Accrued Liability due to all other sources is amortized as a level percentage of payroll over a 25-year period beginning with the December 31, 2002 valuation.

This is a change from the prior valuation, in which the Unfunded Actuarial Accrued Liability for all sources other than Golden Handshakes were amortized as a level percentage of payroll over a 29-year period beginning in 1992. The

amortization period for the prior valuation was 19 years.

Additional UAAL incurred through the granting of Golden Handshake agreements was amortized over a three-year period from the year in which they were granted.

**Actuarial Value of Assets:**

The market value of assets is adjusted to recognize, over a five-year period, investment earnings greater than (or less than) the assumed investment return. Details are shown in the Asset Information Section of the report.

The actuarial value, market value and book value are net of amounts allocated to the Supplemental Retiree Benefit Reserve and the Contingency Reserve.

**Data Sources****Asset Data:**

The asset information is taken directly from statements furnished by the Retirement Office and used without audit.

**Member Data:**

The member data is supplied by the Retirement Office. It is reviewed for reasonableness and consistency, but no audit was performed. Public Pension Professionals is not aware of any errors or omissions in the data that would have a significant effect on the results of our calculations.

Schedule 1

**Assumed Rate of Salary Increase**

<b>Years of Service</b>	<b>General Members</b>	<b>Safety Members</b>
0	8.00%	7.50%
1	8.00%	7.50%
2	8.00%	7.50%
3	8.00%	7.50%
4	8.00%	7.50%
5	8.00%	7.50%
6	4.75%	7.50%
7	4.75%	7.50%
8	4.75%	7.50%
9	4.75%	7.50%
10 or more	4.75%	5.25%

## Schedule 2

**Prior Year Assumed Rate of Salary Increase**

<b>Age</b>	<b>General Members</b>	<b>Safety Members</b>
20	10.0%	8.0%
21	10.0%	7.5%
22	10.0%	7.5%
23	8.0%	7.0%
24	8.0%	7.0%
25	8.0%	7.0%
26	8.0%	6.5%
27	8.0%	6.5%
28	8.0%	6.0%
29	7.0%	6.0%
30	7.0%	6.0%
31	7.0%	6.0%
32	7.0%	6.0%
33	5.5%	6.0%
34	5.5%	6.0%
35	5.5%	5.0%
36	5.5%	5.0%
37	5.5%	5.0%
38	5.0%	5.0%
39	5.0%	5.0%
40	5.0%	5.0%
41	5.0%	5.0%
42	5.0%	5.0%
43	5.0%	5.0%
44	5.0%	5.0%
45	5.0%	5.0%
46	5.0%	5.0%
47	5.0%	5.0%
48	5.0%	5.0%
49	5.0%	5.0%
50	5.0%	5.0%
51	5.0%	5.0%
52	5.0%	5.0%
53	5.0%	5.0%
54	5.0%	5.0%
55	5.0%	5.0%
56	5.0%	5.0%
57	5.0%	5.0%
58	5.0%	5.0%
59	5.0%	5.0%
60	5.0%	
61	5.0%	
62	5.0%	
63	5.0%	
64	5.0%	
65	5.0%	
66	5.0%	
67	5.0%	
68	5.0%	
69	5.0%	



Schedule 3  
**Life Expectancies at Sample Ages**  
**Nondisabled General Members**

Age	Male	Female	Age	Male	Female
20	58.04	63.01	70	14.48	16.98
21	57.09	62.03	71	13.76	16.23
22	56.15	61.05	72	13.04	15.26
23	55.21	60.06	73	12.35	14.54
24	54.26	59.08	74	11.67	13.84
25	53.32	58.10	75	11.02	13.16
26	52.38	57.12	76	10.38	12.49
27	51.43	56.13	77	9.77	11.84
28	50.49	55.15	78	9.18	11.21
29	49.54	54.17	79	8.61	10.59
30	48.60	53.19	80	8.06	10.00
31	47.66	52.21	81	7.54	9.43
32	46.72	51.23	82	7.04	8.87
33	45.80	50.26	83	6.56	8.34
34	44.88	49.29	84	6.11	7.84
35	43.96	48.32	85	5.69	7.35
36	43.06	47.35	86	5.29	6.90
37	42.16	46.39	87	4.92	6.47
38	41.26	45.42	88	4.58	6.08
39	40.37	44.46	89	4.26	5.72
40	39.49	43.51	90	3.97	5.38
41	38.61	42.55	91	3.72	5.08
42	37.73	41.60	92	3.49	4.81
43	36.85	40.65	93	3.28	4.57
44	35.99	39.70	94	3.09	4.36
45	35.13	38.76	95	2.93	4.17
46	34.27	37.83	96	2.78	4.01
47	33.43	36.89	97	2.65	3.86
48	32.59	35.96	98	2.53	3.72
49	31.75	35.04	99	2.43	3.59
50	30.93	34.12	100	2.33	3.47
51	30.11	33.20	101	2.25	3.33
52	29.29	32.28	102	2.19	3.19
53	28.46	31.37	103	2.14	3.05
54	27.62	30.46	104	2.11	2.91
55	26.77	29.55	105	2.09	2.78
56	25.91	28.65	106	2.08	2.65
57	25.05	27.76	107	2.08	2.54
58	24.19	26.88	108	2.08	2.44
59	23.32	26.00	109	2.08	2.35
60	22.46	25.13	110	2.07	2.28
61	21.61	24.27	111	2.07	2.21
62	20.76	23.42	112	2.05	2.16
63	19.93	22.57	113	2.04	2.11
64	19.11	21.74	114	2.01	2.06
65	18.30	20.91	115	1.96	2.00
66	17.51	20.10	116	1.87	1.91
67	16.74	19.30	117	1.74	1.77
68	15.97	18.51	118	1.52	1.54
69	15.22	17.74	119	1.15	1.16

General Members – RP-2000 Healthy Mortality, with adjustment for white collar

## Schedule 4

**Prior Year Life Expectancies at Sample Ages**  
**Nondisabled General Members**

Age	Male	Female	Age	Male	Female
20	57.21	61.94	70	12.98	15.76
21	56.25	60.96	71	12.35	15.03
22	55.28	59.97	72	11.75	14.31
23	54.32	58.99	73	11.16	13.61
24	53.36	58.01	74	10.58	12.93
25	52.39	57.03	75	10.02	12.26
26	51.43	56.05	76	9.48	11.61
27	50.48	55.07	77	8.96	10.99
28	49.52	54.08	78	8.47	10.38
29	48.56	53.10	79	8.01	9.80
30	47.60	52.13	80	7.57	9.24
31	46.64	51.15	81	7.15	8.70
32	45.68	50.17	82	6.74	8.18
33	44.73	49.19	83	6.36	7.68
34	43.77	48.22	84	5.98	7.21
35	42.81	47.24	85	5.62	6.75
36	41.85	46.27	86	5.28	6.33
37	40.89	45.30	87	4.95	5.92
38	39.93	44.33	88	4.65	5.55
39	38.97	43.37	89	4.37	5.20
40	38.02	42.40	90	4.11	4.87
41	37.07	41.44	91	3.87	4.57
42	36.12	40.48	92	3.65	4.29
43	35.18	39.51	93	3.45	4.03
44	34.24	38.56	94	3.27	3.78
45	33.30	37.60	95	3.11	3.56
46	32.37	36.64	96	2.96	3.35
47	31.44	35.69	97	2.83	3.15
48	30.51	34.74	98	2.71	2.98
49	29.59	33.79	99	2.59	2.81
50	28.68	32.84	100	2.48	2.66
51	27.78	31.90	101	2.37	2.52
52	26.88	30.97	102	2.27	2.39
53	25.99	30.03	103	2.18	2.28
54	25.11	29.11	104	2.12	2.20
55	24.24	28.18	105	2.07	2.13
56	23.38	27.27	106	2.04	2.08
57	22.54	26.36	107	2.02	2.04
58	21.70	25.47	108	2.01	2.02
59	20.88	24.59	109	2.00	2.00
60	20.07	23.72	110	2.00	2.00
61	19.28	22.86	111	1.99	1.99
62	18.51	22.02	112	1.98	1.98
63	17.76	21.19	113	1.97	1.97
64	17.03	20.38	114	1.94	1.94
65	16.31	19.59	115	1.88	1.88
66	15.61	18.80	116	1.75	1.75
67	14.93	18.03	117	1.50	1.50
68	14.27	17.27	118	1.00	1.00
69	13.61	16.51			

General Members – 1994 Group Annuity Mortality, set forward 2 years

Schedule 5  
**Life Expectancies at Sample Ages**  
**Nondisabled Safety Members**

Age	Male	Female	Age	Male	Female
20	56.26	61.99	70	13.31	15.77
21	55.31	61.00	71	12.66	15.05
22	54.36	60.02	72	12.03	14.36
23	53.42	59.03	73	11.41	13.69
24	52.47	58.04	74	10.81	13.03
25	51.52	57.06	75	10.23	12.40
26	50.57	56.07	76	9.66	11.77
27	49.62	55.08	77	9.12	11.17
28	48.67	54.10	78	8.60	10.57
29	47.72	53.11	79	8.09	10.00
30	46.77	52.13	80	7.61	9.43
31	45.82	51.15	81	7.15	8.89
32	44.88	50.16	82	6.71	8.37
33	43.95	49.19	83	6.29	7.87
34	43.02	48.21	84	5.89	7.40
35	42.10	47.23	85	5.52	6.95
36	41.18	46.26	86	5.17	6.53
37	40.27	45.29	87	4.83	6.14
38	39.36	44.32	88	4.53	5.78
39	38.46	43.35	89	4.24	5.45
40	37.56	42.38	90	3.98	5.15
41	36.67	41.42	91	3.74	4.88
42	35.78	40.45	92	3.52	4.64
43	34.89	39.49	93	3.32	4.42
44	34.01	38.54	94	3.14	4.23
45	33.13	37.58	95	2.97	4.05
46	32.26	36.63	96	2.82	3.89
47	31.39	35.69	97	2.69	3.75
48	30.53	34.74	98	2.57	3.62
49	29.68	33.80	99	2.47	3.49
50	28.83	32.86	100	2.37	3.37
51	27.99	31.93	101	2.29	3.24
52	27.16	30.99	102	2.23	3.10
53	26.32	30.05	103	2.18	2.96
54	25.49	29.12	104	2.14	2.82
55	24.67	28.19	105	2.12	2.69
56	23.84	27.27	106	2.12	2.57
57	23.02	26.36	107	2.12	2.46
58	22.21	25.45	108	2.11	2.36
59	21.40	24.56	109	2.11	2.28
60	20.61	23.69	110	2.11	2.20
61	19.82	22.83	111	2.10	2.14
62	19.05	21.98	112	2.09	2.09
63	18.28	21.16	113	2.07	2.04
64	17.53	20.34	114	2.04	2.00
65	16.79	19.55	115	1.98	1.94
66	16.06	18.76	116	1.90	1.86
67	15.35	17.99	117	1.76	1.73
68	14.65	17.24	118	1.53	1.51
69	13.97	16.49	119	1.15	1.15

Safety Members – RP-2000 Healthy Mortality, with adjustment for blue collar

## Schedule 6

**Prior Year Life Expectancies at Sample Ages  
Nondisabled Safety Members**

<b>Age</b>	<b>Male</b>	<b>Age</b>	<b>Male</b>
20	59.15	70	14.27
21	58.18	71	13.61
22	57.21	72	12.98
23	56.25	73	12.35
24	55.28	74	11.75
25	54.32	75	11.16
26	53.36	76	10.58
27	52.39	77	10.02
28	51.43	78	9.48
29	50.48	79	8.96
30	49.52	80	8.47
31	48.56	81	8.01
32	47.60	82	7.57
33	46.64	83	7.15
34	45.68	84	6.74
35	44.73	85	6.36
36	43.77	86	5.98
37	42.81	87	5.62
38	41.85	88	5.28
39	40.89	89	4.95
40	39.93	90	4.65
41	38.97	91	4.37
42	38.02	92	4.11
43	37.07	93	3.87
44	36.12	94	3.65
45	35.18	95	3.45
46	34.24	96	3.27
47	33.30	97	3.11
48	32.37	98	2.96
49	31.44	99	2.83
50	30.51	100	2.71
51	29.59	101	2.59
52	28.68	102	2.48
53	27.78	103	2.37
54	26.88	104	2.27
55	25.99	105	2.18
56	25.11	106	2.12
57	24.24	107	2.07
58	23.38	108	2.04
59	22.54	109	2.02
60	21.70	110	2.01
61	20.88	111	2.00
62	20.07	112	2.00
63	19.28	113	1.99
64	18.51	114	1.98
65	17.76	115	1.97
66	17.03	116	1.94
67	16.31	117	1.88
68	15.61	118	1.75
69	14.93	119	1.50

Safety Members – 1994 Group Annuity Mortality, males

Schedule 7

**Life Expectancies at Sample Ages**  
**Disabled General and Safety Members**

Age	Male	Female	Age	Male	Female
20	30.81	46.81	70	9.81	12.98
21	30.51	46.16	71	9.43	12.46
22	30.20	45.50	72	9.05	11.96
23	29.89	44.84	73	8.69	11.47
24	29.57	44.17	74	8.33	11.00
25	29.24	43.50	75	7.99	10.53
26	28.90	42.82	76	7.65	10.09
27	28.55	42.14	77	7.33	9.65
28	28.20	41.45	78	7.02	9.23
29	27.84	40.76	79	6.72	8.81
30	27.47	40.06	80	6.43	8.42
31	27.09	39.36	81	6.16	8.03
32	26.70	38.65	82	5.89	7.66
33	26.31	37.93	83	5.63	7.29
34	25.90	37.22	84	5.38	6.94
35	25.49	36.49	85	5.14	6.61
36	25.07	35.76	86	4.90	6.28
37	24.63	35.03	87	4.66	5.97
38	24.19	34.28	88	4.41	5.67
39	23.73	33.54	89	4.16	5.39
40	23.27	32.78	90	3.90	5.12
41	22.79	32.03	91	3.65	4.87
42	22.31	31.26	92	3.43	4.63
43	21.81	30.49	93	3.23	4.40
44	21.30	29.72	94	3.04	4.20
45	20.78	28.94	95	2.88	4.02
46	20.25	28.15	96	2.73	3.85
47	19.73	27.38	97	2.60	3.71
48	19.23	26.62	98	2.49	3.58
49	18.73	25.88	99	2.38	3.46
50	18.25	25.15	100	2.29	3.33
51	17.78	24.44	101	2.21	3.20
52	17.32	23.74	102	2.15	3.07
53	16.86	23.06	103	2.10	2.93
54	16.42	22.39	104	2.06	2.79
55	15.98	21.73	105	2.05	2.66
56	15.55	21.09	106	2.04	2.54
57	15.12	20.46	107	2.04	2.43
58	14.69	19.83	108	2.04	2.34
59	14.27	19.22	109	2.04	2.25
60	13.86	18.62	110	2.03	2.18
61	13.44	18.02	111	2.03	2.11
62	13.03	17.43	112	2.02	2.06
63	12.61	16.85	113	2.00	2.02
64	12.20	16.27	114	1.97	1.98
65	11.80	15.70	115	1.93	1.93
66	11.39	15.14	116	1.85	1.85
67	10.99	14.58	117	1.72	1.72
68	10.59	14.04	118	1.50	1.50
69	10.20	13.50	119	1.14	1.14

Disabled Members – RP-2000 Disabled Mortality

## Schedule 8

**Prior Year Life Expectancies at Sample Ages  
Disabled Members**

<b>Age</b>	<b>General Members</b>	<b>Safety Members</b>
20	35.69	49.79
21	35.03	48.89
22	34.37	47.98
23	33.73	47.08
24	33.10	46.18
25	32.48	45.29
26	31.87	44.39
27	31.26	43.51
28	30.67	42.62
29	30.08	41.74
30	29.50	40.86
31	28.93	39.98
32	28.37	39.11
33	27.81	38.24
34	27.26	37.38
35	26.71	36.52
36	26.17	35.66
37	25.64	34.81
38	25.11	33.95
39	24.59	33.11
40	24.07	32.27
41	23.56	31.43
42	23.06	30.59
43	22.56	29.76
44	22.07	28.93
45	21.58	28.11
46	21.09	27.30
47	20.61	26.48
48	20.13	25.68
49	19.66	24.88
50	19.18	24.09
51	18.71	23.30
52	18.25	22.53
53	17.79	21.76
54	17.33	21.00
55	16.87	20.27
56	16.41	19.56
57	15.95	18.90
58	15.49	18.28
59	15.03	17.70
60	14.57	17.14
61	14.10	16.61
62	13.63	16.09
63	13.16	15.58
64	12.68	15.08
65	12.20	14.59
66	11.71	14.11
67	11.22	13.63
68	10.72	13.16
69	10.23	12.68

General Members – 1981 Disability Mortality

Safety Members – 1981 Disability Mortality for Safety

Schedule 9

**Probability of Separation from Active Service**  
 (Number separating at each age per 10,000 working at that age)

**General Members - Male**

Age	Ordinary Withdrawal (Refund)	Vested Termination	Ordinary Death	Service Death	Death While Eligible	Ordinary Disability	Service Disability	Service Retirement
20	1,050	200	10	-	-	-	-	-
21	1,087	200	10	-	-	-	-	-
22	1,122	200	10	-	-	-	-	-
23	1,156	200	10	-	-	-	-	-
24	1,188	200	11	-	-	-	-	-
25	1,217	200	11	-	-	2	3	-
26	1,245	200	11	-	-	2	3	-
27	1,269	200	11	-	-	2	3	-
28	1,292	200	11	-	-	2	3	-
29	1,311	200	12	-	-	2	3	-
30	1,327	200	12	-	-	2	3	-
31	1,341	200	14	-	-	3	5	-
32	1,351	200	16	-	-	3	5	-
33	1,358	200	18	-	-	3	5	-
34	1,361	200	20	-	-	4	6	-
35	1,361	200	22	-	-	4	6	-
36	1,358	200	24	-	-	5	8	-
37	1,351	200	25	-	-	5	8	-
38	1,341	200	27	-	-	6	9	-
39	1,327	200	29	-	-	7	11	-
40	1,311	200	30	-	-	8	13	-
41	1,291	200	32	-	-	10	14	-
42	1,268	200	34	-	-	11	17	-
43	1,243	200	36	-	-	13	19	-
44	1,215	200	39	-	-	14	22	-
45	1,185	200	42	-	-	16	24	-
46	1,152	200	45	-	-	18	27	-
47	1,118	200	49	-	-	20	30	-
48	1,081	200	52	-	-	22	33	-
49	1,043	200	56	-	-	24	36	-
50	1,004	200	60	-	-	26	39	500
51	964	200	60	-	-	28	42	400
52	923	200	59	-	-	30	45	400
53	882	200	57	-	-	34	51	400
54	840	200	56	-	-	38	57	400
55	798	200	54	-	-	42	63	1,200
56	756	200	54	-	-	47	71	900
57	714	200	55	-	-	52	78	1,200
58	673	200	57	-	-	57	86	1,400
59	633	200	61	-	-	61	92	1,600
60	593	200	66	-	-	65	98	2,000
61	555	200	73	-	-	70	105	2,500
62	517	200	82	-	-	74	111	2,500
63	481	200	92	-	-	77	116	2,500
64	446	200	104	-	-	81	122	2,500
65	-	-	116	-	-	-	-	3,000
66	-	-	130	-	-	-	-	3,000
67	-	-	144	-	-	-	-	3,000
68	-	-	158	-	-	-	-	3,000
69	-	-	174	-	-	-	-	3,000
70	-	-	-	-	-	-	-	10,000

## Schedule 10

**Prior Year Probability of Separation from Active Service****(Number separating at each age per 10,000 working at that age)****General Members - Male**

Age	Ordinary	Vested	Ordinary	Service	Death	Ordinary	Service	Service
	Withdrawal				While			
	(Refund)	Termination	Death	Death	Eligible	Disability	Disability	Retirement
20	2,340	125	3	1	-	-	1	-
21	2,025	125	3	1	-	-	1	-
22	1,755	125	3	1	-	-	1	-
23	1,530	125	3	1	-	-	1	-
24	1,440	125	3	1	-	-	1	-
25	1,350	125	3	1	1	2	1	-
26	1,269	125	3	1	1	2	1	-
27	1,197	125	3	1	1	2	1	-
28	1,134	125	3	1	1	2	1	-
29	1,080	125	3	1	1	2	1	-
30	1,026	125	4	1	1	2	2	-
31	963	125	4	1	1	3	2	-
32	900	125	4	1	1	3	2	-
33	837	125	4	1	1	3	2	-
34	783	125	4	1	1	4	2	-
35	738	125	5	1	2	4	2	-
36	711	125	5	1	2	5	4	-
37	684	125	5	1	2	5	6	-
38	657	125	6	1	2	6	8	-
39	630	125	6	1	3	7	10	-
40	585	125	7	1	3	12	12	-
41	531	125	8	1	3	14	14	-
42	477	125	9	1	3	16	17	-
43	432	125	10	1	4	17	19	-
44	396	125	11	1	4	18	22	-
45	360	125	12	2	5	19	24	-
46	350	125	13	2	6	19	27	-
47	338	125	14	2	8	20	30	-
48	317	125	15	2	10	22	33	-
49	300	125	16	2	12	24	35	-
50	300	125	17	2	14	26	38	500
51	300	125	19	2	16	28	39	400
52	300	125	20	2	18	30	42	400
53	300	125	21	2	20	34	44	400
54	300	125	23	2	22	38	46	400
55	300	125	25	3	24	42	49	1,200
56	270	125	27	3	27	47	51	900
57	240	125	29	3	30	52	54	1,200
58	210	125	31	3	33	57	56	1,400
59	180	125	33	3	36	61	59	1,600
60	150	125	35	4	39	65	62	2,000
61	120	125	37	4	42	70	66	2,500
62	90	125	39	5	46	74	69	3,500
63	60	125	41	5	50	77	72	2,500
64	30	125	43	6	54	81	75	2,500
65	-	-	45	6	58	-	80	4,000
66	-	-	47	7	62	-	-	3,000
67	-	-	49	8	66	-	-	3,000
68	-	-	51	9	70	-	-	3,000
69	-	-	53	10	74	-	-	3,000
70	-	-	-	-	-	-	-	10,000



Schedule 11

**Probability of Separation from Active Service**  
 (Number separating at each age per 10,000 working at that age)

**General Members - Female**

Age	Ordinary Withdrawal (Refund)	Vested Termination	Ordinary Death	Service Death	Death While Eligible	Ordinary Disability	Service Disability	Service Retirement
20	930	190	3	-	-	1	1	-
21	965	190	3	-	-	1	1	-
22	1,000	190	3	-	-	1	1	-
23	1,034	190	3	-	-	1	1	-
24	1,067	190	3	-	-	1	1	-
25	1,099	190	3	-	-	2	2	-
26	1,130	190	3	-	-	2	2	-
27	1,159	190	3	-	-	2	2	-
28	1,187	190	3	-	-	2	2	-
29	1,213	190	4	-	-	2	2	-
30	1,238	190	4	-	-	2	3	-
31	1,260	190	4	-	-	2	3	-
32	1,280	190	5	-	-	2	3	-
33	1,298	190	6	-	-	2	3	-
34	1,313	190	6	-	-	2	3	-
35	1,327	190	7	-	-	4	6	-
36	1,337	190	8	-	-	6	8	-
37	1,345	190	8	-	-	7	11	-
38	1,351	190	9	-	-	9	13	-
39	1,353	190	9	-	-	10	16	-
40	1,353	190	10	-	-	12	18	-
41	1,351	190	11	-	-	13	20	-
42	1,345	190	12	-	-	14	22	-
43	1,337	190	14	-	-	16	23	-
44	1,326	190	15	-	-	17	25	-
45	1,313	190	16	-	-	18	27	-
46	1,297	190	18	-	-	19	29	-
47	1,279	190	19	-	-	20	31	-
48	1,259	190	21	-	-	22	32	-
49	1,236	190	23	-	-	23	34	-
50	1,211	190	24	-	-	24	36	500
51	1,185	190	25	-	-	24	37	500
52	1,156	190	27	-	-	25	37	500
53	1,126	190	29	-	-	25	38	500
54	1,095	190	32	-	-	26	38	500
55	1,062	190	35	-	-	26	39	600
56	1,028	190	39	-	-	26	40	800
57	993	190	43	-	-	27	40	1,000
58	957	190	47	-	-	27	41	1,200
59	921	190	51	-	-	28	41	1,400
60	884	190	56	-	-	28	42	1,700
61	847	190	61	-	-	28	43	2,000
62	810	190	67	-	-	29	43	3,000
63	772	190	74	-	-	29	44	3,000
64	735	190	82	-	-	30	44	3,000
65	-	-	91	-	-	30	45	3,000
66	-	-	101	-	-	-	-	3,000
67	-	-	112	-	-	-	-	3,000
68	-	-	124	-	-	-	-	3,000
69	-	-	137	-	-	-	-	3,000
70	-	-	-	-	-	-	-	10,000

## Schedule 12

**Prior Year Probability of Separation from Active Service**

(Number separating at each age per 10,000 working at that age)

**General Members - Female**

Age	Ordinary Withdrawal (Refund)	Vested Termination	Ordinary Death	Service Death	Death While Eligible	Ordinary Disability	Service Disability	Service Retirement
20	2,385	125	2	-	-	-	2	-
21	2,205	125	2	-	-	-	2	-
22	2,070	125	2	-	-	-	2	-
23	1,935	125	2	-	-	-	2	-
24	1,800	125	2	-	-	-	2	-
25	1,710	125	2	-	1	3	2	-
26	1,620	125	2	-	1	3	2	-
27	1,530	125	2	-	1	3	2	-
28	1,440	125	2	-	1	4	2	-
29	1,350	125	3	-	1	4	2	-
30	1,269	125	3	-	1	4	2	-
31	1,197	125	3	-	1	5	2	-
32	1,125	125	3	-	1	5	2	-
33	1,062	125	3	-	1	6	2	-
34	999	125	3	-	1	7	2	-
35	945	125	3	-	1	8	2	-
36	900	125	4	-	1	9	2	-
37	855	125	4	-	1	10	4	-
38	819	125	4	-	1	11	4	-
39	774	125	4	-	1	12	6	-
40	729	125	4	-	1	14	6	-
41	684	125	5	-	1	16	6	-
42	639	125	6	-	1	18	8	-
43	594	125	7	-	1	20	10	-
44	549	125	8	-	1	23	14	-
45	504	125	9	-	2	25	14	-
46	469	125	10	-	2	27	17	-
47	432	125	12	-	2	29	20	-
48	394	125	14	-	2	31	24	-
49	300	125	15	-	2	34	27	-
50	300	125	17	-	2	38	29	500
51	300	125	19	-	2	42	30	400
52	300	125	20	-	3	48	34	400
53	300	125	22	-	3	55	38	400
54	300	125	24	-	4	63	40	400
55	300	125	26	-	4	71	41	1,200
56	270	125	27	-	5	79	43	900
57	240	125	29	-	6	86	44	1,200
58	210	125	31	-	7	93	48	1,400
59	180	125	32	-	8	99	51	1,600
60	150	125	34	-	9	106	54	1,700
61	120	125	36	-	10	111	57	1,900
62	90	125	37	-	11	116	59	3,000
63	60	125	39	-	12	119	62	2,500
64	30	125	41	-	13	122	64	2,500
65	-	-	43	-	14	-	67	4,000
66	-	-	44	-	15	-	-	3,000
67	-	-	46	-	16	-	-	3,000
68	-	-	48	-	17	-	-	3,000
69	-	-	50	-	18	-	-	3,000
70	-	-	-	-	-	-	-	10,000

Schedule 13

**Probability of Separation from Active Service**  
 (Number separating at each age per 10,000 working at that age)

**Safety Members**

Age	Ordinary Withdrawal (Refund)	Vested Termination	Ordinary Death	Service Death	Death While Eligible	Ordinary Disability	Service Disability	Service Retirement
20	300	70	9	2	-	-	3	-
21	305	70	9	2	-	-	5	-
22	309	70	10	2	-	-	7	-
23	314	70	10	2	-	-	9	-
24	318	70	10	2	-	-	11	-
25	323	70	10	2	-	-	13	-
26	328	70	10	2	-	-	16	-
27	333	70	10	2	-	-	19	-
28	338	70	10	2	-	-	22	-
29	343	70	11	2	-	-	25	-
30	348	70	12	2	-	-	28	-
31	353	70	13	2	-	-	32	-
32	359	70	15	2	-	-	36	-
33	364	70	17	2	-	-	40	-
34	370	70	18	2	-	-	44	-
35	375	70	20	2	-	-	48	-
36	381	70	22	2	-	-	54	-
37	386	70	24	2	-	-	60	-
38	392	70	25	2	-	-	66	-
39	398	70	27	2	-	-	72	-
40	404	70	28	2	-	-	78	-
41	410	70	30	2	-	-	90	-
42	416	70	32	2	-	-	102	-
43	423	70	34	2	-	-	114	-
44	429	70	37	2	-	-	126	-
45	435	70	39	2	-	-	138	100
46	442	70	42	2	-	-	150	50
47	448	70	45	2	-	-	162	50
48	455	70	49	2	-	-	174	100
49	462	70	52	2	-	-	186	200
50	469	70	56	2	-	-	198	1,000
51	476	70	59	2	-	-	216	600
52	483	70	63	2	-	-	234	700
53	490	70	66	2	-	-	252	800
54	498	70	69	2	-	-	270	1,500
55	-	-	72	2	-	-	288	2,500
56	-	-	77	2	-	-	306	2,500
57	-	-	82	2	-	-	324	2,500
58	-	-	89	2	-	-	342	2,500
59	-	-	97	2	-	-	360	2,500
60	-	-	-	-	-	-	-	10,000

## Schedule 14

**Prior Year Probability of Separation from Active Service****(Number separating at each age per 10,000 working at that age)****Safety Members**

<b>Age</b>	<b>Ordinary Withdrawal (Refund)</b>	<b>Vested Termination</b>	<b>Ordinary Death</b>	<b>Service Death</b>	<b>Death While Eligible</b>	<b>Ordinary Disability</b>	<b>Service Disability</b>	<b>Service Retirement</b>
20	1,000	35	2	2	-	-	10	-
21	900	35	2	2	1	-	11	-
22	800	35	2	2	1	-	12	-
23	700	35	2	2	1	-	13	-
24	600	35	2	2	1	-	14	-
25	550	35	2	2	1	10	16	-
26	500	35	2	2	1	10	18	-
27	450	35	2	2	1	10	20	-
28	400	35	2	3	1	10	22	-
29	350	35	2	3	1	10	25	-
30	348	35	3	3	2	10	30	-
31	338	35	3	3	2	10	36	-
32	328	35	3	3	2	10	44	-
33	318	35	3	3	2	15	51	-
34	308	35	3	4	2	15	58	-
35	296	35	3	4	3	20	65	-
36	285	35	3	4	3	20	71	-
37	273	35	3	4	4	25	77	-
38	262	35	3	4	4	25	84	-
39	250	35	3	5	4	27	91	-
40	238	35	4	5	5	29	74	-
41	227	35	4	5	5	31	79	-
42	215	35	4	5	6	33	85	-
43	204	35	4	5	6	35	93	-
44	192	35	4	5	7	35	100	-
45	180	35	5	6	7	37	105	100
46	169	35	5	6	8	37	110	50
47	157	35	5	6	8	40	115	50
48	146	35	6	6	9	43	119	100
49	134	35	6	6	11	45	124	250
50	122	35	7	6	13	48	128	800
51	116	35	8	7	16	50	133	600
52	110	35	9	7	19	55	137	700
53	105	35	10	8	22	58	141	800
54	100	35	11	8	25	60	146	900
55	-	-	12	8	29	65	150	3,500
56	-	-	13	9	34	68	154	1,750
57	-	-	14	10	39	70	158	3,000
58	-	-	15	10	44	73	161	3,250
59	-	-	16	11	49	78	165	3,750
60	-	-	-	-	-	-	-	10,000

## J. Member Information

### Active Participants

#### General Members

<b>County</b>	<b>December 31, 2002</b>	<b>December 31, 2001</b>
Number	6,042	6,043
Average Age	44.8	44.4
Average Service	9.7	9.4
Percent Male	29.9%	30.2%
Average Annual Pay	\$40,217	\$38,736
Total Covered Payroll	\$242,991,199	\$234,082,912

#### **Districts Electing MOU**

	<b>December 31, 2002</b>	<b>December 31, 2001</b>
Number	137	136
Average Age	46.3	45.8
Average Service	10.5	10.4
Percent Male	73.7%	74.3%
Average Annual Pay	\$51,360	\$48,644
Total Covered Payroll	\$7,036,417	\$6,615,579

#### **Districts Not Electing MOU**

	<b>December 31, 2002</b>	<b>December 31, 2001</b>
Number	235	218
Average Age	41.4	41.7
Average Service	6.1	6.0
Percent Male	66.0%	67.4%
Average Annual Pay	\$46,954	\$45,744
Total Covered Payroll	\$11,034,188	\$9,972,275

<b>Total General</b>	<b>December 31, 2002</b>	<b>December 31, 2001</b>
Number	6,414	6,397
Average Age	44.7	44.3
Average Service	9.6	9.3
Percent Male	32.2%	32.4%
Average Annual Pay	\$40,702	\$39,186
Total Covered Payroll	\$261,061,804	\$250,670,766

### Safety Members

	<b>December 31, 2002</b>	<b>December 31, 2001</b>
Number	1,641	1,658
Average Age	40.5	40.8
Average Service	12.2	12.5
Percent Male	82.8%	82.2%
Average Annual Pay	\$51,072	\$50,133
Total Covered Payroll	\$83,809,133	\$83,120,619

### Total Active Members

	<b>December 31, 2002</b>	<b>December 31, 2001</b>
Number	8,055	8,055
Average Age	43.9	43.6
Average Service	10.2	9.9
Percent Male	42.5%	42.6%
Average Annual Pay	\$42,815	\$41,439
Total Covered Payroll	\$344,870,937	\$333,791,385

## Terminated Vested Participants

### General Members

	<i>December 31, 2002</i>	<i>December 31, 2001</i>
Number	759	738
Average Age	46.6	46.2
Percent Male	42.2%	42.3%

### Safety Members

	<i>December 31, 2002</i>	<i>December 31, 2001</i>
Number	93	85
Average Age	43.3	43.2
Percent Male	76.3%	75.3%

### All Members

	<i>December 31, 2002</i>	<i>December 31, 2001</i>
Number	852	823
Average Age	46.2	45.9
Percent Male	45.9%	45.7%

## Retired Participants

### General Members

#### ***Service Retirements and Beneficiaries***      ***December 31, 2002***      ***December 31, 2001***

Number	2,947	2,910
Average Age	71.2	71.2
Percent Male	35.2%	35.7%
Average Monthly Benefit	\$1,141	\$1,065

#### ***Disabled***      ***December 31, 2002***      ***December 31, 2001***

Number	551	525
Average Age	61.4	60.8
Percent Male	35.8%	36.2%
Average Monthly Benefit	\$1,087	\$1,049

#### ***Total General***      ***December 31, 2002***      ***December 31, 2001***

Number	3,498	3,435
Average Age	69.6	69.6
Percent Male	35.3%	35.7%
Average Monthly Benefit	\$1,132	\$1,062



## Safety Members

### ***Service Retirements and Beneficiaries***      ***December 31, 2002***      ***December 31, 2001***

Number	647	585
Average Age	65.4	65.9
Percent Male	74.5%	73.7%
Average Monthly Benefit	\$2,759	\$2,411

### ***Disabled***      ***December 31, 2002***      ***December 31, 2001***

Number	371	352
Average Age	58.2	57.8
Percent Male	72.5%	73.0%
Average Monthly Benefit	\$2,243	\$2,095

### ***Total Safety***      ***December 31, 2002***      ***December 31, 2001***

Number	1,018	937
Average Age	62.8	62.9
Percent Male	73.8%	73.4%
Average Monthly Benefit	\$2,571	\$2,292

## Total Members

### ***Service Retirements and Beneficiaries***      ***December 31, 2002***      ***December 31, 2001***

Number	3,594	3,495
Average Age	70.2	70.3
Percent Male	42.3%	42.0%
Average Monthly Benefit	\$1,432	\$1,290

### ***Disabled***      ***December 31, 2002***      ***December 31, 2001***

Number	922	877
Average Age	60.1	59.6
Percent Male	50.5%	51.0%
Average Monthly Benefit	\$1,552	\$1,469

### ***Total Retirees***      ***December 31, 2002***      ***December 31, 2001***

Number	4,516	4,372
Average Age	68.1	68.2
Percent Male	44.0%	43.8%
Average Monthly Benefit	\$1,457	\$1,326

## Reconciliation of Participants

### General Members

	<u>Actives</u>	<u>Terminated Vested</u>	<u>Service Retirees and Beneficiaries</u>	<u>Disability Retirees and Beneficiaries</u>
<b>As of December 31, 2001</b>	<b>6,397</b>	<b>738</b>	<b>2,910</b>	<b>525</b>
New Hires/Rehires	510	(6)		
Net Transfers to Safety	(8)			
Terminated Non-vested / Refund	(297)			
Vested Terminations	(45)	45		
Suspended	(15)	(1)		
Service Retirements	(106)	(20)	126	
Disability Retirements	(18)		(13)	30
Active Deaths	(3)		3	
Deaths Or Ceased Payments			(119)	(11)
Beneficiaries Of Retirees Who Died			32	4
Other	(1)	3	8	3
<b>As of December 31, 2002</b>	<b>6,414</b>	<b>759</b>	<b>2,947</b>	<b>551</b>

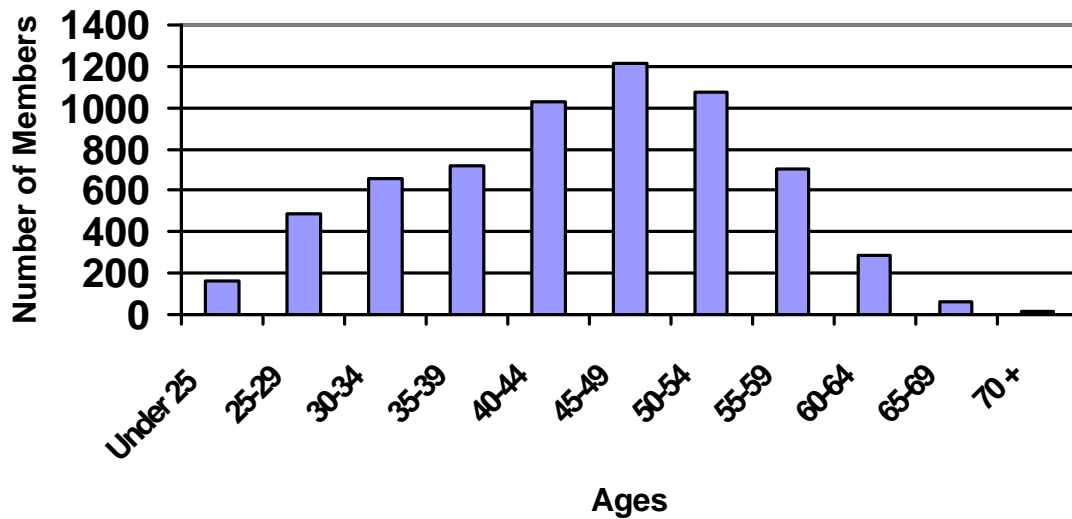
**Safety Members**

	<u>Actives</u>	<u>Terminated Vested</u>	<u>Service Retirees and Beneficiaries</u>	<u>Disability Retirees and Beneficiaries</u>
<b>As of December 31, 2001</b>	<b>1,658</b>	<b>85</b>	<b>585</b>	<b>352</b>
New Hires/Rehires	97			
Net Transfers From General	8			
Terminated Non-vested / Refund	(21)			
Vested Terminations	(6)	6		
Service Retirements	(67)	(1)	67	
Disability Retirements	(18)			18
Active Deaths				
Deaths Or Ceased Payments			(19)	(3)
Beneficiaries Of Retirees Who Died			9	3
Other	(10)	3	5	1
<b>As of December 31, 2002</b>	<b>1,641</b>	<b>93</b>	<b>647</b>	<b>371</b>

### Active General Members by Age and Service as of December 31, 2002

Service >>	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30 +	Total
<b>Age Under</b>									
<b>25</b>	61	101	0	0	0	0	0	0	162
<b>25-29</b>	97	358	30	1	0	0	0	0	486
<b>30-34</b>	76	408	129	43	2	0	0	0	658
<b>35-39</b>	73	288	167	135	54	3	0	0	720
<b>40-44</b>	60	298	199	225	169	77	2	0	1,030
<b>45-49</b>	54	259	223	266	172	179	57	3	1,213
<b>50-54</b>	40	237	182	202	157	129	91	37	1,075
<b>55-59</b>	17	134	118	142	99	73	63	59	705
<b>60-64</b>	7	57	57	69	39	24	13	18	284
<b>65-69</b>	2	6	17	12	8	10	5	1	61
<b>70 +</b>	1	2	0	5	4	1	4	3	20
<b>Total</b>	488	2,148	1,122	1,100	704	496	235	121	6,414

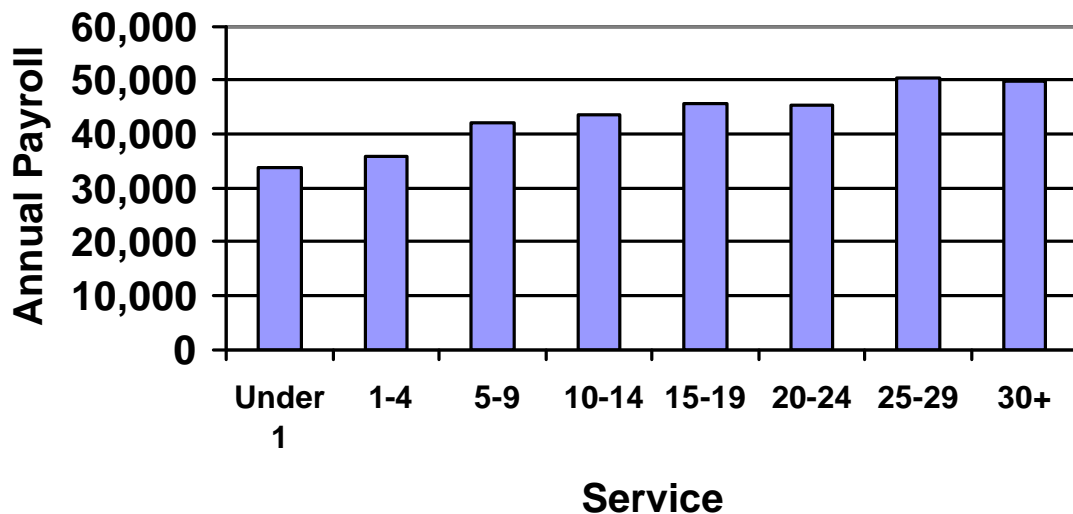
### Active General Members by Age



### Average Annual Compensation for General Members by Age and Service as of December 31, 2002

<b>Service</b> <b>&gt;&gt;</b>	<b>Under 1</b>	<b>1-4</b>	<b>5-9</b>	<b>10-14</b>	<b>15-19</b>	<b>20-24</b>	<b>25-29</b>	<b>30 +</b>	<b>Total</b>
<b>Age Under</b>									
<b>25</b>	26,924	26,528	0	0	0	0	0	0	26,677
<b>25-29</b>	33,123	33,404	32,452	30,049	0	0	0	0	33,283
<b>30-34</b>	35,014	36,502	42,845	36,609	26,397	0	0	0	37,550
<b>35-39</b>	33,038	36,659	39,437	42,822	39,669	30,976	0	0	38,294
<b>40-44</b>	30,535	36,162	41,699	44,801	45,247	38,720	34,382	0	40,470
<b>45-49</b>	37,361	36,787	43,617	43,175	48,987	46,205	49,456	35,788	43,182
<b>50-54</b>	41,050	37,856	42,484	45,520	46,491	46,364	52,507	42,221	43,871
<b>55-59</b>	33,029	36,566	46,802	42,661	46,184	52,199	51,034	53,621	45,111
<b>60-64</b>	52,133	37,810	38,805	42,897	40,725	44,076	37,841	55,543	41,654
<b>65-69</b>	53,667	47,689	41,765	45,719	38,784	31,563	50,569	31,586	42,007
<b>70 +</b>	20,911	33,400	0	35,638	37,445	25,615	58,843	54,677	42,035
<b>Total</b>	33,759	35,741	42,146	43,536	45,720	45,435	50,473	49,823	40,698

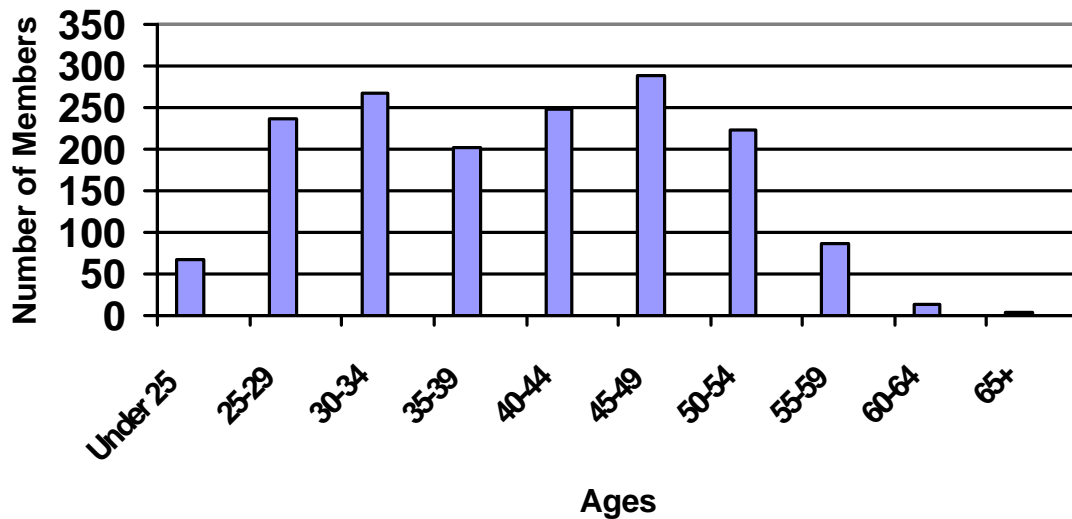
### General Member Pay by Service



### Active Safety Members by Age and Service as of December 31, 2002

<b>Service</b> >>>	<b>Under</b> 1	<b>1-4</b>	<b>5-9</b>	<b>10-14</b>	<b>15-19</b>	<b>20-24</b>	<b>25-29</b>	<b>30 +</b>	<b>Total</b>
<b>Age</b>									
<b>Under</b> 25	22	45	0	0	0	0	0	0	67
<b>25-29</b>	26	174	36	1	0	0	0	0	237
<b>30-34</b>	18	137	87	26	0	0	0	0	268
<b>35-39</b>	9	51	45	64	32	1	0	0	202
<b>40-44</b>	3	25	27	50	107	36	0	0	248
<b>45-49</b>	2	10	14	27	67	111	58	0	289
<b>50-54</b>	1	5	18	21	37	47	86	9	224
<b>55-59</b>	1	2	6	13	19	13	21	12	87
<b>60-64</b>	1	3	3	0	1	0	3	3	14
<b>65-69</b>	0	0	1	3	0	0	0	0	4
<b>70 +</b>	0	0	0	0	0	0	1	0	1
<b>Total</b>	83	452	237	205	263	208	169	24	1,641

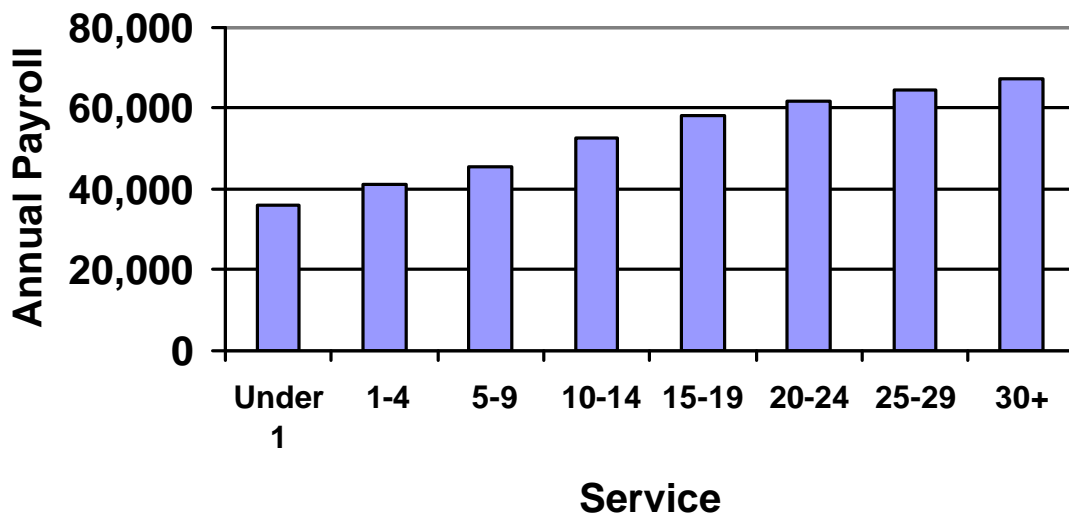
### Active Safety Members by Age



### Average Annual Compensation for Safety Members by Age and Service as of December 31, 2002

<b>Service</b> <b>&gt;&gt;</b>	<b>Under 1</b>	<b>1-4</b>	<b>5-9</b>	<b>10-14</b>	<b>15-19</b>	<b>20-24</b>	<b>25-29</b>	<b>30 +</b>	<b>Total</b>
<b>Age Under</b>									
<b>25</b>	35,756	38,485	0	0	0	0	0	0	37,589
<b>25-29</b>	33,917	40,445	44,190	47,062	0	0	0	0	40,325
<b>30-34</b>	36,602	42,027	46,464	49,548	0	0	0	0	43,833
<b>35-39</b>	42,096	43,623	45,792	54,607	58,564	79,185	0	0	50,061
<b>40-44</b>	40,283	42,243	45,042	52,945	58,593	61,515	0	0	54,533
<b>45-49</b>	37,747	43,154	46,098	52,878	57,877	61,629	66,252	0	59,313
<b>50-54</b>	29,797	41,838	43,638	52,821	59,948	60,801	64,610	66,025	59,644
<b>55-59</b>	28,347	40,201	44,830	46,265	53,738	61,952	59,971	69,690	56,336
<b>60-64</b>	38,620	45,879	43,921	0	43,883	0	63,072	62,588	52,063
<b>65-69</b>	0	0	34,331	45,388	0	0	0	0	42,624
<b>70 +</b>	0	0	0	0	0	0	47,545	0	47,545
<b>Total</b>	36,136	41,298	45,468	52,449	58,191	61,527	64,469	67,428	51,072

### Safety Member Pay by Service






## K. Actuarial Certification

The valuation has been conducted in accordance with generally accepted actuarial principles and practices.

The actuarial assumptions employed in the development of the recommended contribution rates were selected to be individually reasonable (taking into account the experience of the Plan and reasonable expectations) and which, in combination, offer the actuary's best estimate of anticipated experience under the Plan.



Ira M. Summer, F.S.A, E.A.  
Public Pension Professionals, Inc.



Deanna Van Valer, A.S.A, E.A.  
Public Pension Professionals, Inc.

June 2003