



buck

The Retirement Plan of the City of Albany

**Report on the Actuarial
Valuation as of June 30, 2009**

December 15, 2009

Board of Trustees
City of Albany
Police and Fire Relief and Pension Fund
1000 San Pablo Avenue
Albany, California 94706-2295

Members of the Board:

We are pleased to present our report on the actuarial valuation of the Police and Fire Relief and Pension Fund as of June 30, 2009 for determining contribution rates and the funded status of the Plan.

We hereby certify that the valuation was performed in accordance with generally accepted actuarial principles and practices consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board of the American Academy of Actuaries. All liabilities and costs are based on actuarial assumptions and methods that are reasonable and offer our best estimate of anticipated experience under the Plan.

I am a Member of the American Academy of Actuaries and meet the qualification standards of the Academy to render the actuarial opinions expressed in this report.

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

Respectfully submitted,



Harold Loeb, A.S.A., E.A.
Principal and Consulting Actuary

TABLE OF CONTENTS

<u>SECTION</u>		<u>PAGE</u>
I	INTRODUCTION	1
II	STATISTICAL HIGHLIGHTS	2
III	SUMMARY OF ACTUARIAL ASSUMPTIONS	3
	Noneconomic Assumptions	3
	Economic Assumptions.....	4
IV	ASSETS AND LIABILITIES	10
	Actuarial Value of Assets	10
	Liabilities	11
	Contribution Amounts	11
	Funding Ratio -- GASB 25	15
V	APPENDIX.....	16
	Schedule 1 - Summary of Actuarial Assumptions.....	17
	Schedule 2 - Summary of Major Plan Provisions.....	18
	Schedule 3 - Retired Age and Years Retired Distributions.....	19
	Schedule 4 - Years of Life Expectancy After Retirement.....	21

SECTION I: INTRODUCTION

We were commissioned by the Board to perform an actuarial valuation of the Police and Fire Relief and Pension Fund as of June 30, 2009, using the statistical information available for the retired membership and unaudited financial statements as of June 30, 2009.

The results presented herein are based upon the unaudited data supplied by the Retirement Office and the benefits for Police and Fire members under Sections 9.01(a)-(s) of the City Charter.

In addition to providing information required by GASB Statement #25, we have also projected fund balances and unfunded liabilities as a part of the study.

Recommended Contributions

The recommended contribution is comprised of the amortization of the Unfunded Actuarial Accrued Liability (UAAL) (the liability for benefits earned in all years prior to the valuation date in excess of plan assets), as a level dollar amount over a period of 15 years beginning July 1, 2009. The recommended contribution for the period beginning July 1, 2009 is \$194,852.

SECTION II: STATISTICAL HIGHLIGHTS

Our June 30, 2009 actuarial valuation of your System was based on the following data. For comparison, we also show a summary of the June 30, 2006 statistical information.

	June 30, 2006		June 30, 2009		Percentage Change During 3-Year Period
Active Members					
Number		0		0	0%
Annual Payroll	\$	0	\$	0	0%
Average Monthly Salary	\$	0	\$	0	0%
Retired Members					
Number		29		29	0%
Annual Benefits	\$	1,262,915	\$	1,395,016	10.5%
Average Monthly Benefits	\$	3,629	\$	4,009	10.5%
Assets					
Total Assets at:					
Market Value	\$	14,548,000	\$	10,034,000	(31.0)%
Actuarial Value	\$	14,479,000	\$	12,684,000	(12.4)%

Distributions of retired members and survivors by age and years retired are shown in Schedule 3 of the Appendix.

SECTION III: SUMMARY OF ACTUARIAL ASSUMPTIONS

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

Noneconomic assumptions

- The mortality rates to be experienced among retired persons.

Economic assumptions

- Investment earnings to be realized on the funds over many years in the future, and
- The relative increases in members' pension override amounts.

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

NONECONOMIC ASSUMPTIONS

Mortality After Retirement

The current tables used to predict mortality after retirement are as follows:

Males	1994 Group Annuity Mortality Table for Males, set forward 2 years
Females	1994 Group Annuity Mortality Table for Females, with no adjustment

Due to the small size of the System's population, there is insufficient data available to thoroughly test the mortality experience of the group. Based on the experience of other public system we serve, we recommend the continued use of the current mortality tables.

Life expectancies based on these tables are shown in Schedule 4 of the Appendix.

ECONOMIC ASSUMPTIONS

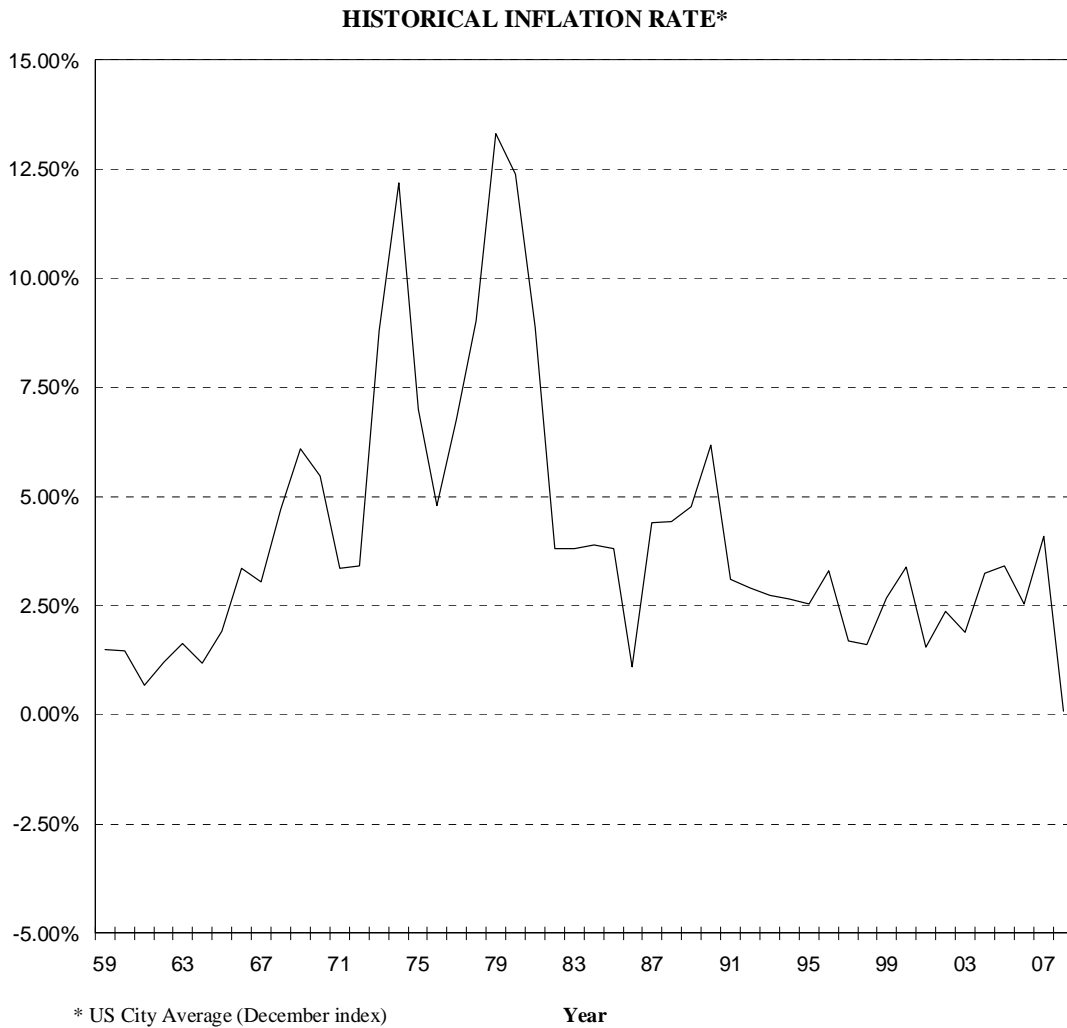
In setting the economic assumptions, we take a building block approach. Specifically, we first look at the rate of inflation which underlies the total rate of return and the tax override. To aid us in determining an appropriate inflation rate for your System, we have reviewed long term historical inflation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

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

Inflation

One of the most important assumptions used in valuing the System’s liabilities is the rate of inflation. This assumption underlies the investment return assumption.

If the pattern of inflation during the last 50-year period is analyzed, it may be extrapolated that the current low rates will not continue into the future indefinitely. Inflation appears to move in a cyclical fashion as may be seen in the following graph.



From	To	Years	Average
1999	2008	10	2.53%
1989	2008	20	2.84%
1979	2008	30	3.89%
1969	2008	40	4.59%
1959	2008	50	4.09%

Because of the cyclical nature of inflation and the long term nature of the System’s liabilities, we believe that it is appropriate to assume that the average inflation rate to be experienced over the next 20 to 30 years (which is approximately the lifetime of the present obligations of the System) will be between 3.00% and 4.50%.

Based on the information discussed above, we believe that it is appropriate to continue using a 4.00% inflation rate assumption.

A recent survey of funding assumptions at 40 California public retirement plans reported that 16 plans assumed a 4.00% inflation rate, with 13 plans using a higher rate, and 11 plans using a lower rate.

Real Rate of Return

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

Asset Allocation as of June 30, 2009 (Market Value)		
	Target	Actual
Equity	50%	56%
Fixed Income/Bonds	50%	44%
Short Term and Receivables	0%	0%

Numerous studies have been performed which analyze the expected long-term real rates of return for use in asset allocation models. Roger Ibbotson and Rex A. Sinquefeld produced a study for the period 1926-2005 called Stocks, Bonds and Inflation: Simulations of the Future. The results of this study are presented below.

IBBOTSON-SINQUEFIELD REAL RATES OF RETURN (1926 – 2005)	
Equity	7.1%
Long-term government bonds	2.4%
Long-term corporate bonds	2.8%
Real Estate	4.0%
Treasury bills	0.7%

Applying the Systems' target asset allocation to the real rates of return in the table above produces a real rate of return of approximately 4.85% (assuming an equal proportion of government and corporate bonds). Based on the current asset allocation, the real rate of return would be 5.12%.

The investment return rate should then be adjusted to reflect the following:

- the Fund's administrative expenses that are paid from the earnings, and
- potential future adverse experience, and
- as the ratio of benefit payments to assets increases in the future, we would expect a more conservative asset allocation mix.

After making these adjustments, we believe that a real rate of return of 2.75% is reasonable to use with the recommended 4.00% inflation rate. Thus, we recommend that the current 6.75% long-term investment return assumption be continued.

The return on assets, net of expenses, experienced by the Fund since 1993 is shown on the following page. The increase in the Consumer Price Index is also shown for comparative purposes.

**Net Return on Assets
vs.
Increase in Consumer Price Index**

Year Ended	Net Return at:		Increase in Consumer Price Index *
	Market Value	Actuarial Value	
June 30, 1993	14.6%	9.4%	3.0%
June 30, 1994	0.4%	7.6%	2.5%
June 30, 1995	16.5%	9.9%	3.0%
June 30, 1996	9.1%	8.4%	2.8%
June 30, 1997	16.4%	10.0%	2.3%
June 30, 1998	13.1%	11.1%	1.7%
June 30, 1999	6.4%	11.8%	2.0%
June 30, 2000	0.8%	8.9%	3.7%
June 30, 2001	16.1%	10.3%	3.2%
June 30, 2002	4.6%	8.3%	1.1%
June 30, 2003	6.1%	7.0%	2.1%
June 30, 2004	10.0%	7.6%	3.3%
June 30, 2005	8.1%	8.7%	2.5%
June 30, 2006	6.5%	7.2%	4.3%
June 30, 2007	11.7%	8.3%	2.7%
June 30, 2008	-8.1%	4.3%	5.0%
June 30, 2009	-8.8%	4.4%	-1.4%
17-year compound average	7.0%	8.4%	2.6%

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

Tax Override

Increases in secured assessed values over the last twenty years have been as follows:

Increases in Secured Assessed Values			
Fiscal Year	Increase Over Prior Year	Fiscal Year	Increase Over Prior Year
1982-83	7.2%	1996-97	4.6%
1983-84	6.9%	1997-98	0.8%
1984-85	8.2%	1998-99	9.7%
1985-86	7.5%	1999-00	10.7%
1986-87	7.3%	2000-01	5.5%
1987-88	15.7%	2001-02	5.7%
1988-89	7.7%	2002-03	5.2%
1989-90*	5.5%	2003-04	(56.4)%
1990-91	27.5%	2004-05	0%
1991-92	14.9%	2005-06	0%
1992-93	10.2%	2006-07	0%
1993-94	2.4%	2007-08	0%
1994-95	1.1%	2008-09	0%
1995-96	4.2%		

* Starting fiscal year 89-90, based on increase in pension override amount.

For purposes of our study, we have assumed there are no future increases in the tax override contribution. We will continue to monitor the actual increases over the next couple of years to see if this assumption is still appropriate.

SECTION IV: ASSETS AND LIABILITIES

ACTUARIAL VALUE OF ASSETS

The method for determining the actuarial value of assets adjusts market value to recognize, over a five-year period, differences between assumed and actual investment returns.

The resulting actuarial value of assets is shown below:

1. Actuarial Value of Assets as of 6/30/04							\$ 14,754,902
2. Additions							
FY End 6/30	(a) Contributions	(b) Benefit Payments	(c) Expected Investment Return	(d) Actual Investment Return (Net of Expenses)	(e) Additional Earnings ((d) - (c))	(f) Recognized Additional Earnings .20 x (e)	(g) Actuarial Value @ FY End
2005	0	1,289,017	1,058,280	1,165,724	107,444	21,489	
2006	0	1,233,644	1,044,662	923,086	(121,576)	(24,315)	
2007	0	1,274,936	1,027,117	1,627,973	600,856	120,171	
2008	0	1,319,843	1,015,859	(1,154,609)	(2,170,468)	(434,094)	
2009	0	1,343,966	959,599	(1,030,793)	(1,990,392)	(398,078)	
Total	0	\$ 6,461,406	\$ 5,105,517			\$ (714,827)	
Total Additions = (a) - (b) + (c) + (f)							\$ (2,070,716)
3. Actuarial Value of Assets as of 6/30/09 = (1) + (2g)							\$ 12,684,186
4. Market Value of Assets as of 6/30/09							\$ 10,033,919

LIABILITIES

Total plan liabilities as of June 30, 2009, based on the recommended economic assumptions, are shown below:

Total Plan Liabilities as of June 30, 2009		
1. Actuarial Present Value of Liabilities:		
Current Retired Members and Beneficiaries	\$	14,570,549
Active Members		0
Total	\$	14,570,549
2. Assets at Actuarial Value	\$	12,684,186
3. Unfunded Actuarial Liabilities (1) - (2)	\$	1,886,363
4. Funded Ratio (2) / (1)		87%

The funded ratio decreased from 103% to 87%, or by 16%, over the last three years.

CONTRIBUTION AMOUNTS

The difference between the Actuarial Accrued Liability and the actuarial value of plan assets is called the Unfunded Actuarial Accrued Liability and is funded (amortized) as a level dollar amount over a 15-year period from July 1, 2009.

Total Contribution		
	Unfunded Actuarial Liability	Annual Amount
6/30/06 Valuation	\$(403,939)	\$0
6/30/09 Valuation	\$1,886,363	\$194,852

The increase in the contributions was due to the negative investment return in the last two years and the reduction of the funding interest rate to 6.75%

PROJECTED ASSETS AND LIABILITIES

Projected asset values and liabilities are shown in Exhibits 1 and 2 at the end of this section. Based on our assumptions which include employer contributions, these projections indicate that the Plan's liabilities will be covered by the assets. This means that, based on our recommended assumptions, sufficient assets will be able to pay all pensions due to retired members and their beneficiaries.

In the June 30, 2006 study, this "crossover point" was not projected to occur during the 20 year study period. The actual "crossover point" will, of course, depend on the future level of investment earnings, assessed values, mortality rates, and inflation. In addition, the accumulation of assets sufficient to cover liabilities at any point in time is no guarantee that future benefit payments (which may continue for as many as 50 years beyond the current projected crossover point) will be covered by the plan's assets.

It will be necessary to modify the override assumption at the "crossover point" to prevent overfunding without sacrificing the plan's financial integrity. The modification will necessarily involve consideration of the impact of future actuarial losses or gains, which could increase or decrease liabilities. Decisions in these areas can be delayed to reflect conditions as we approach the crossover point.

EXHIBIT 1

PROJECTED PENSION FUND CASH FLOW

<u>Fiscal Year Beginning July 1</u>	<u>Actuarial Value of Assets at 7/1</u>	<u>Employee Contributions</u>	<u>Employer Contributions</u>	<u>Tax Override</u>	<u>Investment Earnings *</u>	<u>Benefit Payouts</u>	<u>Net Cash Flow</u>	<u>Actuarial Value of Assets at End of Fiscal Year</u>
2009	\$ 12,684,186	\$ 0	\$ 194,852	\$ 0	\$ 785,126	\$ 1,442,144	\$ (462,166)	\$ 12,222,020
2010	12,222,020	0	194,852	0	815,779	1,432,525	(421,894)	11,800,126
2011	11,800,126	0	194,852	0	755,268	1,416,782	(466,662)	11,333,464
2012	11,333,464	0	196,139	0	724,522	1,395,758	(475,097)	10,858,367
2013	10,858,367	0	196,139	0	693,316	1,370,191	(480,736)	10,377,631
2014	10,377,631	0	196,139	0	661,861	1,340,709	(482,709)	9,894,922
2015	9,894,922	0	199,649	0	630,506	1,307,823	(477,668)	9,417,254
2016	9,417,254	0	199,649	0	599,474	1,271,967	(472,844)	8,944,410
2017	8,944,410	0	199,649	0	568,855	1,233,515	(465,011)	8,479,399
2018	8,479,399	0	204,648	0	539,009	1,192,808	(449,151)	8,030,248
2019	8,030,248	0	204,648	0	510,131	1,150,144	(435,365)	7,594,882
2020	7,594,882	0	204,648	0	482,241	1,105,782	(418,893)	7,175,989
2021	7,175,989	0	188,335	0	454,963	1,059,924	(416,626)	6,759,363
2022	6,759,363	0	188,335	0	428,435	1,012,693	(395,923)	6,363,440
2023	6,363,440	0	188,335	0	403,350	964,116	(372,431)	5,991,009

* Includes recognized gains and losses.

EXHIBIT 2**PLAN LIABILITY PROJECTION**

<u>As of June 30,</u>	<u>Plan Liability</u>	<u>Actuarial Value of Assets</u>	<u>Unfunded Liability</u>
2009	\$ 14,570,549	\$ 12,684,186	\$ 1,886,363
2010	14,054,292	12,222,020	1,832,272
2011	13,522,874	11,800,126	1,722,748
2012	12,971,850	11,333,464	1,638,386
2013	12,405,354	10,858,367	1,546,987
2014	11,827,036	10,377,631	1,449,405
2015	11,240,142	9,894,922	1,345,220
2016	10,647,610	9,417,254	1,230,356
2017	10,052,129	8,944,410	1,107,719
2018	9,456,181	8,479,399	976,782
2019	8,862,065	8,030,248	831,818
2020	8,271,927	7,594,882	677,045
2021	7,687,789	7,175,989	511,800
2022	7,111,603	6,759,363	352,240
2023	6,545,323	6,363,440	181,883
2024	5,991,009	5,991,009	0

FUNDING RATIO -- GASB 25

SCHEDULE OF FUNDING PROGRESS GASB 25						
Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL as a Percent of Covered Payroll
7/1/06	\$ 14,479,158	\$ 14,075,219	\$ (403,939)	103%	\$0	N/A
7/1/09	\$ 12,684,186	\$ 14,570,549	\$ 1,886,363	87%	\$0	N/A

SCHEDULE OF EMPLOYER CONTRIBUTIONS GASB 25		
Year Ended	Annual Required Contribution	Percentage Contributed
6/30/06	\$0	0%
6/30/09	\$0	0%

SECTION V

Appendix

SCHEDULE 1

SUMMARY OF ACTUARIAL ASSUMPTIONS

Investment Return	6.75% per annum
Inflation	4.00% per annum
Asset Value	Actuarial Value
Post-Retirement Mortality	
Males	1994 Group Annuity Mortality Table for Males, set forward two years
Females	1994 Group Annuity Mortality Table for Females, with no setback
Years of Life Expectancy After Retirement	See Schedule 4
Rate of Tax Override Increase	4.50% per annum

SCHEDULE 2

SUMMARY OF MAJOR PLAN PROVISIONS

1. MEMBERSHIP

Employees of the Police and Fire Departments hired before July 1, 1971.

2. RETURN OF CONTRIBUTIONS

If a member should resign or die with no other benefits payable from the Plan, his or her contributions plus interest, credited at 3-1/2% per annum, will be refunded.

3. DEATH BENEFIT - AFTER RETIREMENT

If a member dies after retirement leaving a spouse to whom he was married for at least 5 years at retirement, 50% of the member's allowance is continued to the surviving spouse until death or remarriage. If the member was married for less than 5 years at retirement, one-sixth of the member's allowance is continued to the spouse. Benefits are payable to eligible children if there is no spouse eligible for death benefits.

4. SERVICE RETIREMENT BENEFIT

Members with 25 years of service, who have attained the age of 50, are eligible to retire. Members with 30 years of service, regardless of age, are eligible to retire.

The benefit expressed as a percentage of average yearly salary for the rank in the three years prior to retirement is shown below:

<u>Years of Service</u>	<u>Percentage of Average Yearly Salary</u>
25	50.00%
26	53.33%
27	56.67%
28	60.00%
29	63.33%
30	66.67%

5. COST OF LIVING

Pensions for service retirement and duty related disability increase during the member's lifetime with the salaries for the ranks used in the benefit calculations.

SCHEDULE 3

**AVERAGE ANNUAL BENEFIT AND MEMBERSHIP DISTRIBUTION
OF RETIRED MALE MEMBERS
AS OF JUNE 30, 2009**

CURRENT AGE	YEARS SINCE RETIREMENT							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 19	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
55-59	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
60-64	0	3	1	1	1	0	0	6
	0	68,188	65,616	43,250	51,470	0	0	60,817
65-69	0	0	0	1	1	1	0	3
	0	0	0	100,785	67,784	51,470	0	73,346
70 & Over	0	0	0	3	1	5	2	11
	0	0	0	54,767	45,972	61,624	45,112	55,329
TOTAL	0	3	1	5	3	6	2	20
	0	68,189	65,616	61,667	55,075	59,932	45,112	59,678

SCHEDULE 3

**AVERAGE ANNUAL BENEFIT AND MEMBERSHIP DISTRIBUTION
OF RETIRED FEMALE MEMBERS
AS OF JUNE 30, 2009**

CURRENT AGE	YEARS SINCE RETIREMENT							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 19	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0
55-59	0	0	0	0	0	0	0	0
60-64	0	0	0	0	0	0	0	0
65-69	0	0	0	1	0	0	0	1
70 & Over	0	0	0	45,212	0	0	0	45,212
	0	0	0	1	1	1	5	8
	0	0	0	30,689	25,948	15,301	16,862	19,531
TOTAL	0	0	0	2	1	1	5	9
	0	0	0	37,951	25,948	15,301	16,862	22,385

SCHEDULE 4

YEARS OF LIFE EXPECTANCY AFTER RETIREMENT

Age	Male	Female	Age	Male	Female
50	28.85	34.89	80	7.44	10.31
51	27.95	33.94	81	7.00	9.71
52	27.04	32.99	82	6.59	9.14
53	26.15	32.05	83	6.19	8.58
54	25.27	31.11	84	5.80	8.05
55	24.39	30.17	85	5.43	7.54
56	23.52	29.24	86	5.07	7.06
57	22.67	28.31	87	4.73	6.59
58	21.83	27.40	88	4.42	6.15
59	21.00	26.49	89	4.13	5.73
60	20.18	25.59	90	3.86	5.34
61	19.39	24.70	91	3.61	4.98
62	18.60	23.82	92	3.37	4.64
63	17.84	22.96	93	3.16	4.33
64	17.10	22.11	94	2.98	4.04
65	16.37	21.28	95	2.81	3.76
66	15.66	20.46	96	2.66	3.51
67	14.97	19.65	97	2.52	3.28
68	14.29	18.86	98	2.39	3.06
69	13.63	18.08	99	2.26	2.86
70	12.98	17.31	100	2.15	2.67
71	12.34	16.54	101	2.03	2.50
72	11.72	15.78	102	1.93	2.34
73	11.12	15.04	103	1.84	2.19
74	10.53	14.31	104	1.75	2.06
75	9.96	13.60	105	1.68	1.94
76	9.40	12.90	106	1.62	1.83
77	8.88	12.22	107	1.56	1.74
78	8.37	11.57	108	1.52	1.65
79	7.89	10.93	109	1.48	1.57
			110	1.45	1.49

1994 GA (x + 2, y)