

# **buck**

## **Merced County Employees' Retirement Association**

**Report on the Experience Study  
for the Period  
July 1, 2004 Through June 30, 2007**

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**MERCED COUNTY  
EMPLOYEES' RETIREMENT  
ASSOCIATION**

**REPORT ON THE EXPERIENCE STUDY  
FOR THE PERIOD  
JULY 1, 2004 THROUGH JUNE 30, 2007**

Buck Consultants, LLC  
1801 Century Park East, Suite 500  
Los Angeles, CA 90067

February 14, 2008

Board of Retirement  
Merced County Employees'  
Retirement Association  
3199 'M' Street  
Merced, California 95348

Members of the Board:

We are pleased to present our report on the experience analysis of your Retirement Association for the period from July 1, 2004 through June 30, 2007.

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

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

Respectfully submitted,



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HL/PO:trr

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## **SECTION I: EXECUTIVE SUMMARY**

We were commissioned by the Board to perform an experience study of the Retirement Association as of June 30, 2007, using the unaudited statistical information data supplied by the Retirement Office for the active, inactive and retired membership.

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

### **Section II - Statistical Highlights**

This section shows a summary of the inactive, retired and active membership data used for the experience analysis.

### **Section III - Summary of Actuarial Assumptions**

#### *Noneconomic Assumptions*

We have examined the plan experience during the three-year period from July 1, 2004 through June 30, 2007. We analyzed data for this period regarding service retirement, deaths, disabilities and terminations of employment and compared the number of actual terminations to the incidence expected using the current actuarial assumptions. Where the results differ materially, and the change points to a developing trend, we recommend modifying the assumptions. The summary of our findings and recommendations are incorporated in the body of this report.

#### *Economic Assumptions*

In order to ensure that the same inflationary expectations are consistently included in all of the economic assumptions, we used a building block approach in developing the economic assumptions. That is, we assumed that the investment return earned over the long term is comprised

of inflation and real rate of return and we assumed that future salary increases are comprised of inflation and merit and longevity increases.

The summary of our findings and recommendations are incorporated in the body of this report.

## **Section IV - Appendix**

Detailed information on the current and recommended actuarial assumptions is shown in Section IV.

## **SECTION II: STATISTICAL HIGHLIGHTS**

Our June 30, 2007 experience study of your Association was based on the following data that was collected for the June 30, 2005, June 30, 2006 and June 30, 2007 actuarial valuations.

<b>SUMMARY OF INACTIVE MEMBERSHIP*</b>			
	<b>June 30, 2005</b>	<b>June 30, 2006</b>	<b>June 30, 2007</b>
<b>GENERAL</b>			
Number	453	470	487
<b>SAFETY</b>			
Number	81	81	81
<b>TOTAL</b>			
Number	534	551	568

\*Includes unclaimed accounts.

<b>SUMMARY OF RETIRED MEMBERSHIP</b>			
	<b>June 30, 2005</b>	<b>June 30, 2006</b>	<b>June 30, 2007</b>
<b>GENERAL</b>			
Number	1,260	1,294	1,383
Basic Annual Allowance	\$15,000,000	\$16,553,000	\$20,021,000
Average Basic Monthly Allowance	\$992	\$1,066	\$1,206
Total Annual Allowance	\$19,470,000	\$21,341,000	\$25,435,000
Average Total Monthly Allowance	\$1,288	\$1,374	\$1,533
<b>SAFETY</b>			
Number	217	228	237
Basic Annual Allowance	\$4,038,000	\$4,508,000	\$4,807,000
Average Basic Monthly Allowance	\$1,551	\$1,648	\$1,690
Total Annual Allowance	\$5,397,000	\$5,956,000	\$6,388,000
Average Total Monthly Allowance	\$ 2,073	\$2,177	\$2,246
<b>TOTAL</b>			
Number	1,477	1,522	1,620
Basic Annual Allowance	\$ 19,038,000	\$21,061,000	\$24,828,000
Average Basic Monthly Allowance	\$1,074	\$1,153	\$1,277
Total Annual Allowance	\$24,867,000	\$27,297,000	\$31,823,000
Average Total Monthly Allowance	\$ 1,403	\$1,495	\$1,637

<b>SUMMARY OF ACTIVE MEMBERSHIP</b>			
	<b>June 30, 2005</b>	<b>June 30, 2006</b>	<b>June 30, 2007</b>
<b>GENERAL TIER 1</b>			
Number	607	562	479
Annual Payroll*	\$ 32,249,000	\$31,190,000	\$26,949,000
Average Monthly Salary	\$4,427	\$4,625	\$4,688
Average Age	51.81	52.33	52.39
Average Service	18.80	19.24	19.62
<b>GENERAL TIER 2</b>			
Number	1,285	1,357	1,438
Annual Payroll*	\$50,917,000	\$54,674,000	\$58,359,000
Average Monthly Salary	\$3,302	\$3,358	\$3,382
Average Age	41.84	41.91	41.90
Average Service	4.81	4.90	5.15
<b>SAFETY TIER 1</b>			
Number	110	99	93
Annual Payroll*	\$ 6,421,000	\$6,027,000	\$5,425,000
Average Monthly Salary	\$4,864	\$5,073	\$4,861
Average Age	45.63	45.55	46.17
Average Service	16.95	17.32	18.11
<b>SAFETY TIER 2</b>			
Number	185	211	225
Annual Payroll*	\$7,920,000	\$9,247,000	\$9,856,000
Average Monthly Salary	\$3,568	\$3,652	\$3,650
Average Age	32.28	32.56	32.93
Average Service	3.30	3.56	3.96
<b>TOTAL</b>			
Number	2,183	2,229	2,235
Annual Payroll*	\$97,507,000	\$101,138,000	\$100,589,000
Average Monthly Salary	\$ 3,715	\$3,781	\$3,751
Average Age	43.99	43.81	43.42
Average Service	9.18	8.94	8.67

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

### ***SECTION III: SUMMARY OF ACTUARIAL ASSUMPTIONS***

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

#### *Noneconomic assumptions*

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

#### *Economic assumptions*

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

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

### **NONECONOMIC ASSUMPTIONS**

#### *Rates of Separation from Active Service*

We compared the expected number of terminations from active service to the number actually experienced during the three-year period beginning July 1, 2004 and ending June 30, 2007. Based on this comparison and the trends observed over the prior three years, the probabilities of separation were adjusted accordingly, as identified below.

During the experience study period, the incidence of *withdrawal* was lower than expected for General members, and in line for Safety members. We are recommending a reduction in rates for General males and females for those ages with a significant difference between the actual and expected withdrawals.

During the experience study period, the number of *deaths* was slightly higher than expected for General males and General females, and there were no reported deaths for Safety members. Given the small number of actual and expected deaths, we recommend no changes at this time.

During the experience study period, the incidence of *non-service connected disability* was lower than expected for General males and General females and very close for Safety members. Due to the small number of actual and expected disabilities we recommend no changes at this time.

During the experience study period, the incidence of *service connected disability* was lower than expected for General members and for Safety members. Due to the small number of actual and expected duty disabilities we recommend no changes at this time.

The number of actual separations due to *service retirement* was lower than expected for General members and for Safety members. We are recommending altering the rates for those ages where a significant difference occurs between actual and expected experience.

During the experience study period, the incidence of deferred retirement was greater than expected for certain ages. We are recommending increasing rates at those ages that show a significant difference.

The purpose of the following table is to provide the reader with a shorthand summary of the experience compared with the existing assumptions. A complete list of the current and recommended rates of separation from active service can be found in Schedule 2 of the Appendix. These rates should be viewed in the aggregate rather than examining each of them separately. This is due to the interdependency of the rates. For example, if turnover were to increase, there would be fewer retirements.

“Expected separations” means the number of terminations that would occur if the currently assumed probabilities were applied to your actual work force over the period under investigation.

SUMMARY OF ACTUARIAL INVESTIGATION WITH RESPECT TO RATES OF SEPARATION FROM ACTIVE SERVICE			
	Actual Separations	Expected Separations	Revised Separations
<b>Withdrawal</b>			
General Male	80	105.51	97.67
General Female	171	202.60	196.75
Safety	39	35.47	N/A
<b>Pre-retirement Death</b>			
General Male	2	1.74	N/A
General Female	4	1.86	N/A
Safety	0	1.06	N/A
<b>Non-Service Connected Disability</b>			
General Male	2	3.92	N/A
General Female	2	5.17	N/A
Safety	1	0.50	N/A
<b>Service Connected Disability</b>			
General Male	0	2.97	N/A
General Female	1	3.74	N/A
Safety	1	9.89	N/A
<b>Service Retirement*</b>			
General Male	72	85.61	82.45
General Female	108	155.82	142.46
Safety	18	15.82	17.82
<b>Deferred Retirement</b>			
General Male	41	34.89	N/A
General Female	94	67.10	94.48
Safety	26	12.67	18.55
<b>All Terminations</b>	662	746.34	751.39

\* Excludes General members older than 70 and Safety members older than 60.

### ***Recommendation***

We recommend that the Board adopt the new rates of separation shown in Schedule 2 of the Appendix.

### ***Mortality After Retirement***

We have also analyzed mortality after retirement by comparing the expected number of deaths with the actual incidence of death after service retirement. The comparison was made by utilizing the following mortality tables currently in use:

#### Current Service Retirement Mortality Tables

General Males	1994 Group Annuity Mortality Table for Males, with no setback
General Females	1994 Group Annuity Mortality Table for Females, with no setback
Safety Members	1994 Group Annuity Mortality Table for Males, setback 1 year.

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

The results of the experience analysis are as follows:

NUMBER OF DEATHS AFTER SERVICE RETIREMENT			
	Actual	Expected	Revised
General Males and Male Beneficiaries	47	51.42	N/A
General Females and Female Beneficiaries	62	58.89	N/A
Safety Members	11	9.00	N/A

During the period under investigation, the number of actual deaths was not significantly different than expected for either General or Safety members. Based on these results, we are recommending no change to the assumptions.

#### Recommended Service Retirement Mortality Tables

General Males (no change)	1994 Group Annuity Mortality Table for Males, with no setback
General Females (no change)	1994 Group Annuity Mortality Table for Females, with no setback
Safety	1994 Group Annuity Mortality Table for Males, set back 1 year

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

A full listing of the life expectancies based on these tables is shown in Schedule 3 of the Appendix.

#### ***Mortality After Disability Retirement***

In addition, we analyzed mortality after disability retirement. This comparison was made by utilizing the following mortality tables currently in use:

#### Current Disability Retirement Mortality Tables

General Males	1981 Disability Mortality Table for General Members, no setback
General Females	1981 Disability Mortality Table for General Members, set back 5 years
Safety	1981 Disability Mortality Table for Safety Members, setback 1 year

The results of the experience analysis are as follows:

NUMBER OF DEATHS AFTER DISABILITY RETIREMENT			
	Actual	Expected	Revised
General Males	5	5.87	N/A
General Females	10	7.09	N/A
Safety Members (no change)	6	5.16	N/A

During the period under investigation, the number of actual deaths was not significantly higher or lower than expected for General or Safety members. No change in assumptions.

#### Recommended Disability Retirement Mortality Tables

General Males (no change)	1981 Disability Mortality Table for General Members, no setback
General Females (no change)	1981 Disability Mortality Table for General Members, setback 5 years
Safety (no change)	1981 Disability Mortality Table for Safety Members, setback 1 year

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

A full listing of the life expectancies based on these tables is shown in Schedule 3 of the Appendix.

#### Mortality Tables for Employee Contribution Rates

Member contribution rates are currently based on the following unisex mortality tables:

General	1994 Group Annuity Mortality Table for Males, setback 3 years
Safety	1994 Group Annuity Mortality Table for Males, it back 1-year

Based on the recommended changes to the mortality tables after service retirement remaining unchanged, we are recommending that the mortality basis for the member contribution rates remains unchanged.

## **ECONOMIC ASSUMPTIONS**

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

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

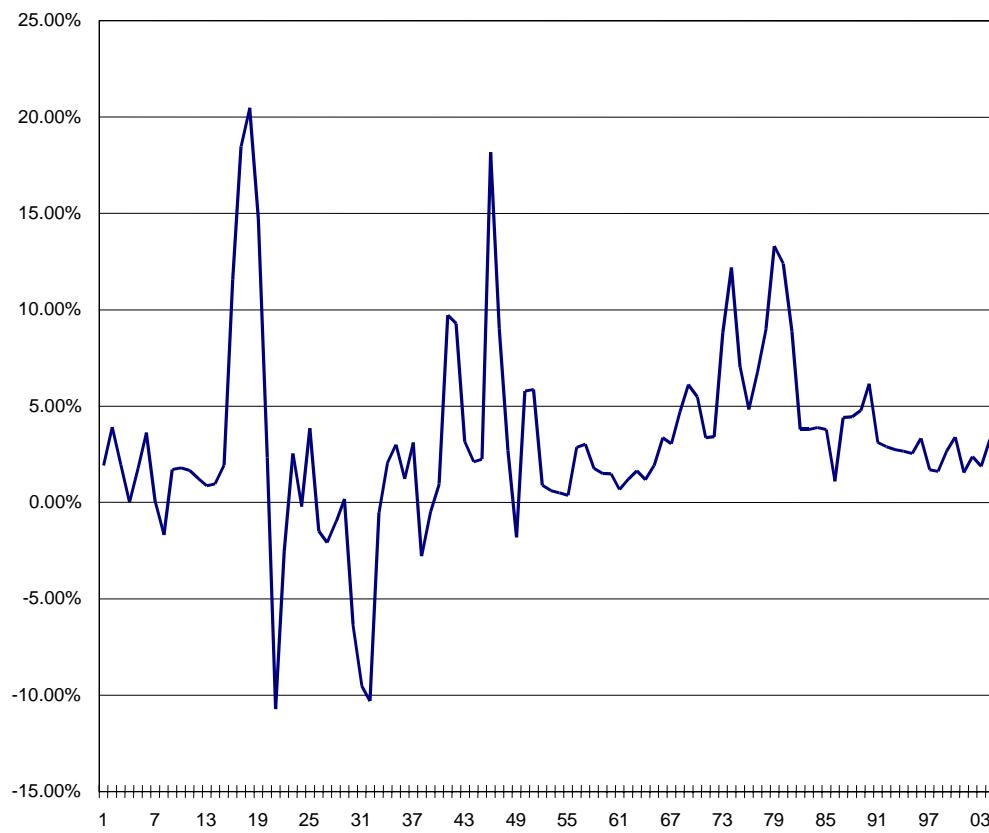
The salary scale assumption is developed in a similar manner. The inflation rate is combined with merit and longevity increases to produce a total salary scale assumption.

### ***Inflation***

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

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

### HISTORICAL INFLATION RATE\*



\* US City Average (December index)

Year

From	To	Years	Average
1998	2007	10	2.68%
1988	2007	20	3.05%
1978	2007	30	4.19%
1968	2007	40	4.71%
1958	2007	50	4.12%
1948	2007	60	3.77%
1938	2007	70	3.96%
1928	2007	80	3.26%
1918	2007	90	3.19%

Because of the cyclical nature of inflation and the long-term nature of the Association's liabilities, we believe that it is appropriate to assume that the average inflation rate to be experienced over the next 30 to 50 years (which is approximately the lifetime of the present obligations of the Association) will be between 4.00% and 4.70%.

The average long-term inflation assumptions adopted by the 1937 act counties is approximately 4.20%.

Based on the information presented in the economic assumption section, we recommend that the current inflation rate assumption of 4.50% continue to be used.

### ***Real Rate of Return***

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

TARGET ASSET ALLOCATION AS OF JUNE 30, 2007 (MARKET VALUE)	
	Target
Equity	63%
Fixed Income/Bonds	30%
Real Estate	6%
Short Term Cash Equivalents	1%

There have been numerous studies performed which analyze the expected long-term real rates of return for use in asset allocation models. Roger Ibbotson and Rex A. Sinquefield produced one of these studies for the period 1926-2006 called Stocks, Bonds and Inflation: Simulations of the Future. The results of this study are presented below.

IBBOTSON-SINQUEFIELD REAL RATES OF RETURN (1926 - 2006)	
Stocks	7.1%
Fixed income/bonds	2.6%
Treasury bills	0.7%

Applying the Association's target asset allocation to the real rates of return in the table above produces a real rate of return of approximately 5.50% (assuming an equal proportion of government and corporate bonds and assuming a return of 4% for real estate). After adjusting for expenses and potential adverse future experience, we believe that a real rate of return of 3.50% provides a

reasonable degree of conservatism when used with a 4.50% inflation rate. Thus, we recommend that the 8.00% investment return assumption be continued. In addition, since the reserves are credited semi-annually, the 8.00% interest rate is compounded to an effective rate of 8.16%.

The return on assets, net of expenses, experienced by the Fund since 1987 is shown below. The increase in the Consumer Price Index is also shown for comparative purposes.

#### **HISTORICAL RETURNS ON ASSOCIATION ASSETS**

<b>Year Ended June 30,</b>	<b>Annualized Rate of Return @ Market Value*</b>	<b>Annualized Rate of Return @ Actuarial Value</b>	<b>Increase in Consumer Price Index**</b>
1987		12.0%	3.7%
1988		8.6%	4.0%
1989		8.7%	5.2%
1990		8.7%	4.7%
1991		9.0%	4.7%
1992		9.1%	3.1%
1993		9.2%	3.0%
1994		6.3%	2.5%
1995		4.4%	3.0%
1996	9.8%	9.8%	2.8%
1997	16.7%	11.6%	2.3%
1998	13.9%	12.7%	1.7%
1999	10.0%	12.3%	2.0%
2000	9.1%	11.5%	3.7%
2001	(3.6)%	8.6%	3.2%
2002	(5.6)%	4.9%	1.1%
2003	4.6%	3.3%	2.1%
2004	12.6%	3.3%	3.3%
2005	8.77%	2.5%	2.5%
2006	7.6%	4.7%	4.3%
2007	16.3%	8.9%	2.7%
Compounded Average*	8.1%	8.1%	3.1%

\* Since 1996

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

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

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

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

### ***Recommendation***

Based on the information presented in this section, we recommend that an 8.00% interest rate assumption (effective rate of 8.16%), a long-term inflation rate assumption of 4.50%, and a total salary scale assumption of 5.50% (approximately) continue to be used to develop the Association's costs.

## **SECTION IV - APPENDIX**

## SCHEDULE 1

### **SUMMARY OF ACTUARIAL ASSUMPTIONS**

The Entry Age Normal Actuarial Cost Method was used in conjunction with the following actuarial assumptions. The UAAL is being funded as a level percentage of payroll over 17 years from the June 30, 2007 valuation date.

1. Interest: 8.00% per annum, compounded to an 8.16% effective rate.
2. Interest Credited to Employee Accounts: Determined annually subject to 6% maximum.
3. Inflation: 4.50% per annum.
4. Asset Valuation: Smoothed actuarial value.
5. Salary Scale: See Schedule 4
6. Spouses and Dependents: 90% of male employees and 50% of female employees assumed married at retirement, with wives assumed three years younger than husbands.
7. Rates of Termination of Employment: See Schedule 2
8. Years of Life Expectancy After Retirement (Schedule 3):
  - General Males - 1994 Group Annuity Mortality Table for Males, with no adjustment
  - General Females - 1994 Group Annuity Mortality Table for Females, with no adjustment
  - Safety - 1994 Group Annuity Mortality Table for Males, with a 1 year setback
9. Years of Life Expectancy After Disability Retirement (Schedule 3):
  - General Males - 1981 Disability Mortality Table for Male Members, with no setback
  - General Females - 1981 Disability Mortality Table for Female Members, with a 5 year setback
  - Safety - 1981 Disability Mortality Table for Safety Members, with a 1 year setback

10. Life Expectancy After Retirement for Employee Contribution Rate Purposes
- ◆ General Members: 1994 Group Annuity Table for Males, set back three years.
  - ◆ Safety Members: 1994 Group Annuity Table for Males, with a 1 year setback
11. Reciprocity Assumption: 50% of members who terminate with a vested benefit are assumed to enter a reciprocal system.
12. Deferral Age for Vested Terminations: 60 for General members; 50 for Safety members.
13. Sex: All Safety members are assumed to be male.

**SCHEDULE 2**  
**PROBABILITIES OF SEPARATION FROM ACTIVE SERVICE**  
**GENERAL MALES**  
**CURRENT ASSUMPTIONS**

Age	Withdrawal	Ordinary Death	Non-Service Connected Disability	Service	Death While Eligible	Duty Death	Service Connected Disability	Terminated Vested
20	0.20900	0.00030	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
21	0.20350	0.00030	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
22	0.19800	0.00030	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
23	0.19250	0.00030	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
24	0.18700	0.00030	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
25	0.18150	0.00030	0.00040	0.00000	0.00010	0.00000	0.00016	0.01130
26	0.17600	0.00030	0.00050	0.00000	0.00010	0.00000	0.00024	0.01300
27	0.17050	0.00040	0.00060	0.00000	0.00010	0.00000	0.00024	0.01430
28	0.16390	0.00040	0.00070	0.00000	0.00010	0.00000	0.00032	0.01550
29	0.15620	0.00040	0.00080	0.00000	0.00010	0.00000	0.00032	0.01690
30	0.14850	0.00040	0.00080	0.00000	0.00010	0.00000	0.00040	0.01850
31	0.14300	0.00040	0.00080	0.00000	0.00010	0.00000	0.00048	0.01990
32	0.13860	0.00040	0.00080	0.00000	0.00010	0.00000	0.00056	0.02150
33	0.13530	0.00040	0.00080	0.00000	0.00010	0.00000	0.00056	0.02290
34	0.12760	0.00050	0.00080	0.00000	0.00010	0.00000	0.00064	0.02360
35	0.11990	0.00050	0.00080	0.00000	0.00020	0.00000	0.00072	0.02410
36	0.11000	0.00050	0.00090	0.00000	0.00020	0.00000	0.00072	0.02400
37	0.10120	0.00050	0.00100	0.00000	0.00020	0.00000	0.00080	0.02350
38	0.09240	0.00060	0.00110	0.00000	0.00020	0.00000	0.00080	0.02260
39	0.08580	0.00060	0.00120	0.00000	0.00020	0.00000	0.00088	0.02270
40	0.08030	0.00060	0.00130	0.00000	0.00030	0.00000	0.00096	0.02270
41	0.07480	0.00070	0.00140	0.00000	0.00030	0.00000	0.00104	0.02300
42	0.07040	0.00070	0.00150	0.00000	0.00030	0.00000	0.00112	0.02320
43	0.06600	0.00080	0.00160	0.00000	0.00040	0.00000	0.00120	0.02320
44	0.06160	0.00090	0.00180	0.00000	0.00040	0.00000	0.00128	0.02350
45	0.05885	0.00090	0.00190	0.00000	0.00050	0.00000	0.00144	0.02340
46	0.05610	0.00090	0.00200	0.00000	0.00050	0.00000	0.00152	0.02350
47	0.05280	0.00100	0.00210	0.00000	0.00060	0.00000	0.00160	0.02340
48	0.04950	0.00100	0.00220	0.00000	0.00070	0.00000	0.00168	0.02340
49	0.04620	0.00100	0.00230	0.00000	0.00090	0.00000	0.00176	0.02290
50	0.04180	0.00100	0.00240	0.09000	0.00110	0.00000	0.00192	0.02320
51	0.03740	0.00100	0.00260	0.06000	0.00120	0.00000	0.00200	0.02280
52	0.03300	0.00100	0.00280	0.06000	0.00140	0.00000	0.00208	0.02230
53	0.02860	0.00110	0.00290	0.06000	0.00160	0.00000	0.00224	0.02090
54	0.02420	0.00110	0.00300	0.06750	0.00180	0.00000	0.00232	0.01940
55	0.02090	0.00120	0.00320	0.07500	0.00200	0.00000	0.00240	0.01810
56	0.01925	0.00130	0.00340	0.07880	0.00220	0.00000	0.00256	0.01740
57	0.01760	0.00140	0.00360	0.08250	0.00240	0.00000	0.00272	0.01630
58	0.01540	0.00150	0.00380	0.08630	0.00260	0.00000	0.00296	0.01510
59	0.01430	0.00160	0.00400	0.09000	0.00280	0.00000	0.00320	0.01450
60	0.01320	0.00170	0.00420	0.16000	0.00310	0.00000	0.00336	0.01480
61	0.01210	0.00180	0.00440	0.16000	0.00330	0.00000	0.00352	0.01380
62	0.01100	0.00190	0.00460	0.34500	0.00360	0.00000	0.00368	0.01280
63	0.00990	0.00190	0.00480	0.25000	0.00390	0.00000	0.00384	0.01220
64	0.00880	0.00200	0.00520	0.30000	0.00420	0.00000	0.00400	0.01160
65	0.00000	0.00220	0.00000	0.40000	0.00450	0.00000	0.00000	0.00000
66	0.00000	0.00240	0.00000	0.50000	0.00490	0.00000	0.00000	0.00000
67	0.00000	0.00260	0.00000	0.60000	0.00530	0.00000	0.00000	0.00000
68	0.00000	0.00280	0.00000	0.70000	0.00570	0.00000	0.00000	0.00000
69	0.00000	0.00310	0.00000	0.80000	0.00610	0.00000	0.00000	0.00000

70	0.00000	0.00000	0.00000	1.00000	0.00000	0.00000	0.00000	0.00000
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**SCHEDULE 2**  
**PROBABILITIES OF SEPARATION FROM ACTIVE SERVICE**  
**GENERAL FEMALES**  
**CURRENT ASSUMPTIONS**

Age	Withdrawal	Ordinary Death	Non-Service Connected Disability	Service	Death While Eligible	Duty Death	Service Connected Disability	Terminated Vested
20	0.17200	0.00015	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
21	0.17040	0.00015	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
22	0.16880	0.00015	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
23	0.16720	0.00015	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
24	0.16560	0.00015	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
25	0.16080	0.00023	0.00010	0.00000	0.00008	0.00000	0.00015	0.01170
26	0.15520	0.00023	0.00010	0.00000	0.00008	0.00000	0.00015	0.01330
27	0.14720	0.00023	0.00010	0.00000	0.00008	0.00000	0.00015	0.01460
28	0.13760	0.00023	0.00010	0.00000	0.00008	0.00000	0.00015	0.01620
29	0.13280	0.00023	0.00010	0.00000	0.00008	0.00000	0.00023	0.01770
30	0.12720	0.00023	0.00020	0.00000	0.00008	0.00000	0.00023	0.01930
31	0.12080	0.00030	0.00020	0.00000	0.00008	0.00000	0.00023	0.02040
32	0.11200	0.00030	0.00020	0.00000	0.00008	0.00000	0.00023	0.02110
33	0.10720	0.00030	0.00020	0.00000	0.00008	0.00000	0.00023	0.02200
34	0.10240	0.00030	0.00020	0.00000	0.00008	0.00000	0.00023	0.02300
35	0.09440	0.00038	0.00030	0.00000	0.00008	0.00000	0.00030	0.02300
36	0.08680	0.00038	0.00030	0.00000	0.00008	0.00000	0.00030	0.02300
37	0.08080	0.00038	0.00040	0.00000	0.00008	0.00000	0.00030	0.02310
38	0.07520	0.00038	0.00040	0.00000	0.00008	0.00000	0.00030	0.02310
39	0.06960	0.00045	0.00040	0.00000	0.00008	0.00000	0.00038	0.02300
40	0.06480	0.00045	0.00040	0.00000	0.00015	0.00000	0.00038	0.02290
41	0.06080	0.00045	0.00050	0.00000	0.00015	0.00000	0.00045	0.02290
42	0.05680	0.00045	0.00060	0.00000	0.00015	0.00000	0.00045	0.02280
43	0.05360	0.00053	0.00070	0.00000	0.00015	0.00000	0.00053	0.02290
44	0.04960	0.00053	0.00080	0.00000	0.00015	0.00000	0.00060	0.02260
45	0.04640	0.00053	0.00090	0.00000	0.00023	0.00000	0.00068	0.02210
46	0.04400	0.00060	0.00100	0.00000	0.00023	0.00000	0.00075	0.02240
47	0.04080	0.00060	0.00120	0.00000	0.00030	0.00000	0.00083	0.02200
48	0.03760	0.00060	0.00140	0.00000	0.00038	0.00000	0.00090	0.02190
49	0.03440	0.00060	0.00160	0.00000	0.00045	0.00000	0.00105	0.02070
50	0.03320	0.00060	0.00180	0.09000	0.00060	0.00000	0.00120	0.01980
51	0.03200	0.00060	0.00200	0.06000	0.00075	0.00000	0.00135	0.01840
52	0.03040	0.00060	0.00220	0.05250	0.00090	0.00000	0.00150	0.01780
53	0.02880	0.00060	0.00240	0.05250	0.00105	0.00000	0.00165	0.01760
54	0.02640	0.00068	0.00260	0.05250	0.00113	0.00000	0.00188	0.01710
55	0.02320	0.00068	0.00280	0.13500	0.00128	0.00000	0.00210	0.01660
56	0.02000	0.00068	0.00310	0.13670	0.00143	0.00000	0.00233	0.01630
57	0.01680	0.00075	0.00340	0.13830	0.00158	0.00000	0.00255	0.01620
58	0.01440	0.00075	0.00380	0.14000	0.00173	0.00000	0.00278	0.01540
59	0.01200	0.00075	0.00420	0.14000	0.00188	0.00000	0.00300	0.01490
60	0.01040	0.00083	0.00460	0.16000	0.00210	0.00000	0.00315	0.01430
61	0.00960	0.00090	0.00500	0.20000	0.00233	0.00000	0.00330	0.01340
62	0.00880	0.00098	0.00550	0.35000	0.00263	0.00000	0.00345	0.01220
63	0.00800	0.00105	0.00600	0.20000	0.00285	0.00000	0.00360	0.01130
64	0.00720	0.00113	0.00650	0.20000	0.00308	0.00000	0.00375	0.01010
65	0.00000	0.00128	0.00000	0.40000	0.00323	0.00000	0.00000	0.00000
66	0.00000	0.00143	0.00000	0.45000	0.00353	0.00000	0.00000	0.00000
67	0.00000	0.00158	0.00000	0.50000	0.00375	0.00000	0.00000	0.00000
68	0.00000	0.00173	0.00000	0.60000	0.00398	0.00000	0.00000	0.00000
69	0.00000	0.00188	0.00000	0.80000	0.00420	0.00000	0.00000	0.00000

70	0.00000	0.00000	0.00000	1.00000	0.00000	0.00000	0.00000	0.00000
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**SCHEDULE 2**  
**PROBABILITIES OF SEPARATION FROM ACTIVE SERVICE**  
**SAFETY MEMBERS – CURRENT ASSUMPTIONS**

Age	Withdrawal	Ordinary Death	Non-Service Connected Disability	Service	Death While Eligible	Duty Death	Service Connected Disability	Terminated Vested
20	0.13000	0.00030	0.00000	0.00000	0.00000	0.00030	0.00650	0.00000
22	0.12000	0.00030	0.00000	0.00000	0.00000	0.00030	0.00660	0.00000
22	0.11500	0.00030	0.00000	0.00000	0.00000	0.00030	0.00680	0.00000
23	0.11000	0.00030	0.00000	0.00000	0.00000	0.00040	0.00690	0.00000
24	0.10500	0.00030	0.00000	0.00000	0.00000	0.00040	0.00700	0.00000
25	0.10000	0.00040	0.00020	0.00000	0.00010	0.00040	0.00730	0.01540
26	0.09500	0.00040	0.00020	0.00000	0.00010	0.00050	0.00740	0.01720
27	0.09100	0.00040	0.00030	0.00000	0.00010	0.00050	0.00760	0.01980
28	0.08700	0.00050	0.00030	0.00000	0.00010	0.00050	0.00780	0.02140
29	0.08300	0.00050	0.00040	0.00000	0.00010	0.00050	0.00800	0.02220
30	0.07800	0.00050	0.00030	0.00000	0.00010	0.00060	0.00840	0.02280
31	0.07200	0.00060	0.00030	0.00000	0.00010	0.00060	0.00880	0.02320
32	0.06600	0.00070	0.00040	0.00000	0.00010	0.00070	0.00890	0.02260
33	0.06000	0.00070	0.00040	0.00000	0.00010	0.00080	0.00940	0.02380
34	0.05400	0.00080	0.00040	0.00000	0.00010	0.00090	0.00990	0.02320
35	0.05000	0.00090	0.00040	0.00000	0.00010	0.00100	0.01030	0.02320
36	0.04600	0.00110	0.00050	0.00000	0.00010	0.00110	0.01080	0.02320
37	0.03900	0.00120	0.00050	0.00000	0.00010	0.00130	0.01130	0.02040
38	0.03500	0.00140	0.00060	0.00000	0.00010	0.00140	0.01180	0.02020
39	0.03000	0.00150	0.00060	0.00000	0.00010	0.00160	0.01230	0.01980
40	0.02500	0.00160	0.00060	0.00000	0.00020	0.00170	0.01280	0.01660
41	0.02200	0.00170	0.00070	0.00000	0.00020	0.00180	0.01330	0.01620
42	0.02000	0.00180	0.00080	0.00000	0.00020	0.00190	0.01380	0.01600
43	0.01900	0.00190	0.00080	0.00000	0.00030	0.00200	0.01440	0.01540
44	0.01750	0.00200	0.00090	0.00000	0.00030	0.00210	0.01490	0.01480
45	0.01600	0.00210	0.00090	0.00050	0.00040	0.00220	0.01560	0.01420
46	0.01500	0.00220	0.00100	0.00750	0.00050	0.00230	0.01630	0.01360
47	0.01400	0.00230	0.00100	0.01125	0.00060	0.00240	0.01730	0.01320
48	0.01200	0.00240	0.00110	0.01688	0.00070	0.00250	0.01790	0.01260
49	0.01000	0.00250	0.00120	0.02531	0.00090	0.00260	0.01880	0.01200
50	0.00900	0.00260	0.00120	0.04500	0.00100	0.00270	0.01990	0.00700
51	0.00800	0.00270	0.00130	0.03000	0.00120	0.00280	0.02090	0.00700
52	0.00700	0.00280	0.00140	0.03000	0.00140	0.00290	0.02180	0.00700
53	0.00600	0.00290	0.00140	0.03750	0.00160	0.00300	0.02300	0.00700
54	0.00500	0.00300	0.00150	0.03750	0.00180	0.00310	0.02410	0.00700
55	0.00000	0.00300	0.00160	0.12500	0.00230	0.00310	0.02530	0.00000
56	0.00000	0.00300	0.00170	0.12500	0.00260	0.00320	0.02650	0.00000
57	0.00000	0.00310	0.00180	0.12500	0.00290	0.00320	0.02780	0.00000
58	0.00000	0.00310	0.00190	0.15000	0.00300	0.00330	0.02900	0.00000
59	0.00000	0.00310	0.00200	0.30000	0.00350	0.00330	0.03030	0.00000
60	0.00000	0.00000	0.00000	1.00000	0.00000	0.00000	0.00000	0.00000

**SCHEDULE 2**  
**PROBABILITIES OF SEPARATION FROM ACTIVE SERVICE**  
**GENERAL MALES**  
**RECOMMENDED ASSUMPTIONS**

Age	Withdrawal	Ordinary Death	Non-Service Connected Disability	Service	Death While Eligible	Duty Death	Service Connected Disability	Terminated Vested
20	0.20900	0.00030	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
21	0.20350	0.00030	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
22	0.19800	0.00030	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
23	0.19250	0.00030	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
24	0.18700	0.00030	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
25	0.18150	0.00030	0.00040	0.00000	0.00010	0.00000	0.00016	0.01130
26	0.17600	0.00030	0.00050	0.00000	0.00010	0.00000	0.00024	0.01300
27	0.17050	0.00040	0.00060	0.00000	0.00010	0.00000	0.00024	0.01430
28	0.16390	0.00040	0.00070	0.00000	0.00010	0.00000	0.00032	0.01550
29	0.15620	0.00040	0.00080	0.00000	0.00010	0.00000	0.00032	0.01690
30	0.14850	0.00040	0.00080	0.00000	0.00010	0.00000	0.00040	0.01850
31	0.14300	0.00040	0.00080	0.00000	0.00010	0.00000	0.00048	0.01990
32	0.13860	0.00040	0.00080	0.00000	0.00010	0.00000	0.00056	0.02150
33	0.13530	0.00040	0.00080	0.00000	0.00010	0.00000	0.00056	0.02290
34	0.12760	0.00050	0.00080	0.00000	0.00010	0.00000	0.00064	0.02360
35	0.11990	0.00050	0.00080	0.00000	0.00020	0.00000	0.00072	0.02410
36	0.11000	0.00050	0.00090	0.00000	0.00020	0.00000	0.00072	0.02400
37	0.10120	0.00050	0.00100	0.00000	0.00020	0.00000	0.00080	0.02350
38	0.09240	0.00060	0.00110	0.00000	0.00020	0.00000	0.00080	0.02260
39	0.08580	0.00060	0.00120	0.00000	0.00020	0.00000	0.00088	0.02270
40	0.06688	0.00060	0.00130	0.00000	0.00030	0.00000	0.00096	0.02270
41	0.06237	0.00070	0.00140	0.00000	0.00030	0.00000	0.00104	0.02300
42	0.05863	0.00070	0.00150	0.00000	0.00030	0.00000	0.00112	0.02320
43	0.05500	0.00080	0.00160	0.00000	0.00040	0.00000	0.00120	0.02320
44	0.05137	0.00090	0.00180	0.00000	0.00040	0.00000	0.00128	0.02350
45	0.04796	0.00090	0.00190	0.00000	0.00050	0.00000	0.00144	0.02340
46	0.04565	0.00090	0.00200	0.00000	0.00050	0.00000	0.00152	0.02350
47	0.04301	0.00100	0.00210	0.00000	0.00060	0.00000	0.00160	0.02340
48	0.04037	0.00100	0.00220	0.00000	0.00070	0.00000	0.00168	0.02340
49	0.03762	0.00100	0.00230	0.00000	0.00090	0.00000	0.00176	0.02290
50	0.03036	0.00100	0.00240	0.06150	0.00110	0.00000	0.00192	0.02320
51	0.02717	0.00100	0.00260	0.04100	0.00120	0.00000	0.00200	0.02280
52	0.02398	0.00100	0.00280	0.04100	0.00140	0.00000	0.00208	0.02230
53	0.02860	0.00110	0.00290	0.06000	0.00160	0.00000	0.00224	0.02090
54	0.02420	0.00110	0.00300	0.03380	0.00180	0.00000	0.00232	0.01940
55	0.02090	0.00120	0.00320	0.07500	0.00200	0.00000	0.00240	0.01810
56	0.01925	0.00130	0.00340	0.07880	0.00220	0.00000	0.00256	0.01740
57	0.01760	0.00140	0.00360	0.16500	0.00240	0.00000	0.00272	0.01630
58	0.01540	0.00150	0.00380	0.08630	0.00260	0.00000	0.00296	0.01510
59	0.01430	0.00160	0.00400	0.18000	0.00280	0.00000	0.00320	0.01450
60	0.01320	0.00170	0.00420	0.16000	0.00310	0.00000	0.00336	0.01480
61	0.01210	0.00180	0.00440	0.16000	0.00330	0.00000	0.00352	0.01380
62	0.01100	0.00190	0.00460	0.34500	0.00360	0.00000	0.00368	0.01280
63	0.00990	0.00190	0.00480	0.18060	0.00390	0.00000	0.00384	0.01220
64	0.00880	0.00200	0.00520	0.22140	0.00420	0.00000	0.00400	0.01160
65	0.00000	0.00220	0.00000	0.25560	0.00450	0.00000	0.00000	0.00000
66	0.00000	0.00240	0.00000	0.25000	0.00490	0.00000	0.00000	0.00000
67	0.00000	0.00260	0.00000	0.40000	0.00530	0.00000	0.00000	0.00000
68	0.00000	0.00280	0.00000	0.70000	0.00570	0.00000	0.00000	0.00000
69	0.00000	0.00310	0.00000	0.80000	0.00610	0.00000	0.00000	0.00000

70	0.00000	0.00000	0.00000	1.00000	0.00000	0.00000	0.00000	0.00000
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**SCHEDULE 2**  
**PROBABILITIES OF SEPARATION FROM ACTIVE SERVICE**  
**GENERAL FEMALES**  
**RECOMMENDED ASSUMPTIONS**

Age	Withdrawal	Ordinary Death	Non-Service Connected Disability	Service	Death While Eligible	Duty Death	Service Connected Disability	Terminated Vested
20	0.17200	0.00015	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
21	0.17040	0.00015	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
22	0.16880	0.00015	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
23	0.16720	0.00015	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
24	0.16560	0.00015	0.00000	0.00000	0.00000	0.00000	0.00008	0.00000
25	0.16080	0.00023	0.00010	0.00000	0.00008	0.00000	0.00015	0.02340
26	0.15520	0.00023	0.00010	0.00000	0.00008	0.00000	0.00015	0.02660
27	0.14720	0.00023	0.00010	0.00000	0.00008	0.00000	0.00015	0.02920
28	0.13760	0.00023	0.00010	0.00000	0.00008	0.00000	0.00015	0.03240
29	0.13280	0.00023	0.00010	0.00000	0.00008	0.00000	0.00023	0.03540
30	0.12720	0.00023	0.00020	0.00000	0.00008	0.00000	0.00023	0.01930
31	0.12080	0.00030	0.00020	0.00000	0.00008	0.00000	0.00023	0.02040
32	0.11200	0.00030	0.00020	0.00000	0.00008	0.00000	0.00023	0.02110
33	0.10720	0.00030	0.00020	0.00000	0.00008	0.00000	0.00023	0.02200
34	0.10240	0.00030	0.00020	0.00000	0.00008	0.00000	0.00023	0.02300
35	0.09440	0.00038	0.00030	0.00000	0.00008	0.00000	0.00030	0.04600
36	0.08680	0.00038	0.00030	0.00000	0.00008	0.00000	0.00030	0.04600
37	0.08080	0.00038	0.00040	0.00000	0.00008	0.00000	0.00030	0.04620
38	0.07520	0.00038	0.00040	0.00000	0.00008	0.00000	0.00030	0.04620
39	0.06960	0.00045	0.00040	0.00000	0.00008	0.00000	0.00038	0.04600
40	0.05208	0.00045	0.00040	0.00000	0.00015	0.00000	0.00038	0.02290
41	0.04888	0.00045	0.00050	0.00000	0.00015	0.00000	0.00045	0.02290
42	0.04568	0.00045	0.00060	0.00000	0.00015	0.00000	0.00045	0.02280
43	0.04312	0.00053	0.00070	0.00000	0.00015	0.00000	0.00053	0.02290
44	0.03992	0.00053	0.00080	0.00000	0.00015	0.00000	0.00060	0.02260
45	0.04640	0.00053	0.00090	0.00000	0.00023	0.00000	0.00068	0.04420
46	0.04400	0.00060	0.00100	0.00000	0.00023	0.00000	0.00075	0.04480
47	0.04080	0.00060	0.00120	0.00000	0.00030	0.00000	0.00083	0.04400
48	0.03760	0.00060	0.00140	0.00000	0.00038	0.00000	0.00090	0.04380
49	0.03440	0.00060	0.00160	0.00000	0.00045	0.00000	0.00105	0.04140
50	0.03320	0.00060	0.00180	0.06530	0.00060	0.00000	0.00120	0.01980
51	0.03200	0.00060	0.00200	0.04360	0.00075	0.00000	0.00135	0.01840
52	0.03040	0.00060	0.00220	0.03810	0.00090	0.00000	0.00150	0.01780
53	0.02880	0.00060	0.00240	0.03910	0.00105	0.00000	0.00165	0.01760
54	0.02640	0.00068	0.00260	0.03710	0.00113	0.00000	0.00188	0.01710
55	0.02320	0.00068	0.00280	0.13500	0.00128	0.00000	0.00210	0.01660
56	0.02000	0.00068	0.00310	0.13670	0.00143	0.00000	0.00233	0.01630
57	0.01680	0.00075	0.00340	0.13830	0.00158	0.00000	0.00255	0.01620
58	0.01440	0.00075	0.00380	0.14000	0.00173	0.00000	0.00278	0.01540
59	0.01200	0.00075	0.00420	0.14000	0.00188	0.00000	0.00300	0.01490
60	0.01040	0.00083	0.00460	0.16000	0.00210	0.00000	0.00315	0.01430
61	0.00960	0.00090	0.00500	0.12880	0.00233	0.00000	0.00330	0.01340
62	0.00880	0.00098	0.00550	0.35000	0.00263	0.00000	0.00345	0.01220
63	0.00800	0.00105	0.00600	0.20000	0.00285	0.00000	0.00360	0.01130
64	0.00720	0.00113	0.00650	0.20000	0.00308	0.00000	0.00375	0.01010
65	0.00000	0.00128	0.00000	0.40000	0.00323	0.00000	0.00000	0.00000
66	0.00000	0.00143	0.00000	0.45000	0.00353	0.00000	0.00000	0.00000
67	0.00000	0.00158	0.00000	0.50000	0.00375	0.00000	0.00000	0.00000
68	0.00000	0.00173	0.00000	0.60000	0.00398	0.00000	0.00000	0.00000
69	0.00000	0.00188	0.00000	0.80000	0.00420	0.00000	0.00000	0.00000

70	0.00000	0.00000	0.00000	1.00000	0.00000	0.00000	0.00000	0.00000
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**SCHEDULE 2**  
**PROBABILITIES OF SEPARATION FROM ACTIVE SERVICE**  
**SAFETY MEMBERS – RECOMMENDED ASSUMPTIONS**

Age	Withdrawal	Ordinary Death	Non-Service Connected Disability	Service	Death While Eligible	Duty Death	Service Connected Disability	Terminated Vested
20	0.13000	0.00030	0.00000	0.00000	0.00000	0.00030	0.00650	0.00000
22	0.12000	0.00030	0.00000	0.00000	0.00000	0.00030	0.00660	0.00000
22	0.11500	0.00030	0.00000	0.00000	0.00000	0.00030	0.00680	0.00000
23	0.11000	0.00030	0.00000	0.00000	0.00000	0.00040	0.00690	0.00000
24	0.10500	0.00030	0.00000	0.00000	0.00000	0.00040	0.00700	0.00000
25	0.10000	0.00040	0.00020	0.00000	0.00010	0.00040	0.00730	0.03080
26	0.09500	0.00040	0.00020	0.00000	0.00010	0.00050	0.00740	0.03440
27	0.09100	0.00040	0.00030	0.00000	0.00010	0.00050	0.00760	0.03960
28	0.08700	0.00050	0.00030	0.00000	0.00010	0.00050	0.00780	0.04280
29	0.08300	0.00050	0.00040	0.00000	0.00010	0.00050	0.00800	0.04440
30	0.07800	0.00050	0.00030	0.00000	0.00010	0.00060	0.00840	0.04560
31	0.07200	0.00060	0.00030	0.00000	0.00010	0.00060	0.00880	0.04640
32	0.06600	0.00070	0.00040	0.00000	0.00010	0.00070	0.00890	0.04520
33	0.06000	0.00070	0.00040	0.00000	0.00010	0.00080	0.00940	0.04760
34	0.05400	0.00080	0.00040	0.00000	0.00010	0.00090	0.00990	0.04640
35	0.05000	0.00090	0.00040	0.00000	0.00010	0.00100	0.01030	0.02320
36	0.04600	0.00110	0.00050	0.00000	0.00010	0.00110	0.01080	0.02320
37	0.03900	0.00120	0.00050	0.00000	0.00010	0.00130	0.01130	0.02040
38	0.03500	0.00140	0.00060	0.00000	0.00010	0.00140	0.01180	0.02020
39	0.03000	0.00150	0.00060	0.00000	0.00010	0.00160	0.01230	0.01980
40	0.02500	0.00160	0.00060	0.00000	0.00020	0.00170	0.01280	0.01660
41	0.02200	0.00170	0.00070	0.00000	0.00020	0.00180	0.01330	0.01620
42	0.02000	0.00180	0.00080	0.00000	0.00020	0.00190	0.01380	0.01600
43	0.01900	0.00190	0.00080	0.00000	0.00030	0.00200	0.01440	0.01540
44	0.01750	0.00200	0.00090	0.00000	0.00030	0.00210	0.01490	0.01480
45	0.01600	0.00210	0.00090	0.05000	0.00040	0.00220	0.01560	0.01420
46	0.01500	0.00220	0.00100	0.07500	0.00050	0.00230	0.01630	0.01360
47	0.01400	0.00230	0.00100	0.01125	0.00060	0.00240	0.01730	0.01320
48	0.01200	0.00240	0.00110	0.01688	0.00070	0.00250	0.01790	0.01260
49	0.01000	0.00250	0.00120	0.02531	0.00090	0.00260	0.01880	0.01200
50	0.00900	0.00260	0.00120	0.04500	0.00100	0.00270	0.01990	0.00700
51	0.00800	0.00270	0.00130	0.03000	0.00120	0.00280	0.02090	0.00700
52	0.00700	0.00280	0.00140	0.03000	0.00140	0.00290	0.02180	0.00700
53	0.00600	0.00290	0.00140	0.03750	0.00160	0.00300	0.02300	0.00700
54	0.00500	0.00300	0.00150	0.03750	0.00180	0.00310	0.02410	0.00700
55	0.00000	0.00300	0.00160	0.25000	0.00230	0.00310	0.02530	0.00000
56	0.00000	0.00300	0.00170	0.12500	0.00260	0.00320	0.02650	0.00000
57	0.00000	0.00310	0.00180	0.12500	0.00290	0.00320	0.02780	0.00000
58	0.00000	0.00310	0.00190	0.15000	0.00300	0.00330	0.02900	0.00000
59	0.00000	0.00310	0.00200	0.30000	0.00350	0.00330	0.03030	0.00000
60	0.00000	0.00000	0.00000	1.00000	0.00000	0.00000	0.00000	0.00000

**SCHEDULE 3**  
**YEARS OF LIFE EXPECTANCY AFTER SERVICE RETIREMENT**  
**CURRENT ASSUMPTIONS**

Age	General			Age	GENERAL		
	Male	Female	Safety		Male	Female	Safety
50	30.69	34.89	31.62	85	6.19	7.54	6.59
51	29.77	33.94	30.69	86	5.80	7.06	6.19
52	28.85	32.99	29.77	87	5.43	6.59	5.80
53	27.95	32.05	28.85	88	5.07	6.15	5.43
54	27.04	31.11	27.95	89	4.73	5.73	5.07
55	26.15	30.17	27.04	90	4.42	5.34	4.73
56	25.27	29.24	26.15	91	4.13	4.98	4.42
57	24.39	28.31	25.27	92	3.86	4.64	4.13
58	23.52	27.40	24.39	93	3.61	4.33	3.86
59	22.67	26.49	23.52	94	3.37	4.04	3.61
60	21.83	25.59	22.67	95	3.16	3.76	3.37
61	21.00	24.70	21.83	96	2.98	3.51	3.16
62	20.18	23.82	21.00	97	2.81	3.28	2.98
63	19.39	22.96	20.18	98	2.66	3.06	2.81
64	18.60	22.11	19.39	99	2.52	2.86	2.66
65	17.84	21.28	18.60	100	2.39	2.67	2.52
66	17.10	20.46	17.84	101	2.26	2.50	2.39
67	16.37	19.65	17.10	102	2.15	2.34	2.26
68	15.66	18.86	16.37	103	2.04	2.19	2.15
69	14.97	18.08	15.66	104	1.93	2.06	2.04
70	14.29	17.31	14.97	105	1.84	1.94	1.93
71	13.63	16.54	14.29	106	1.75	1.83	1.84
72	12.98	15.78	13.63	107	1.68	1.74	1.75
73	12.34	15.04	12.98	108	1.62	1.66	1.68
74	11.72	14.31	12.34	109	1.57	1.59	1.62
75	11.12	13.60	11.72	110	1.52	1.54	1.57
76	10.53	12.90	11.12	111	1.50	1.51	1.52
77	9.96	12.22	10.53	112	1.48	1.49	1.50
78	9.40	11.57	9.96	113	1.47	1.49	1.48
79	8.88	10.93	9.40	114	1.43	1.48	1.47
80	8.37	10.31	8.88	115	1.37	1.46	1.43
81	7.89	9.71	8.37	116	1.23	1.41	1.37
82	7.44	9.14	7.89	117	1.07	1.35	1.23
83	7.00	8.58	7.44	118	0.83	1.21	1.07
84	6.59	8.05	7.00	119	0.50	1.00	0.83
				120		0.50	0.50

1994 GA (x, y) for General Members

1994 GA (x-1) for Safety Members

**SCHEDULE 3**  
**YEARS OF LIFE EXPECTANCY AFTER DISABILITY RETIREMENT**  
**GENERAL MEMBERS – CURRENT ASSUMPTIONS**

Age	Years of Life Expectancy		Age	Years of Life Expectancy		Age	Years of Life Expectancy	
	Male	Female		Male	Female		Male	Female
20	38.73	42.92	50	21.08	23.57	80	7.00	9.24
21	37.98	41.92	51	20.59	23.06	81	6.63	8.76
22	37.26	41.09	52	20.11	22.56	82	6.27	8.28
23	36.56	40.28	53	19.63	22.06	83	5.94	7.83
24	35.87	39.49	54	19.16	21.57	84	5.63	7.41
25	35.19	38.73	55	18.68	21.08	85	5.34	7.00
26	34.53	37.98	56	18.21	20.59	86	5.06	6.63
27	33.87	37.26	57	17.75	20.11	87	4.80	6.27
28	33.23	36.56	58	17.29	19.63	88	4.55	5.94
29	32.60	35.87	59	16.83	19.16	89	4.31	5.63
30	31.98	35.19	60	16.37	18.68	90	4.09	5.34
31	31.37	34.53	61	15.91	18.21	91	3.87	5.06
32	30.76	33.87	62	15.45	17.75	92	3.66	4.80
33	30.17	33.23	63	14.99	17.29	93	3.46	4.55
34	29.58	32.60	64	14.53	16.83	94	3.26	4.31
35	29.00	31.98	65	14.07	16.37	95	3.07	4.09
36	28.43	31.37	66	13.60	15.91	96	2.89	3.87
37	27.87	30.76	67	13.13	15.45	97	2.71	3.66
38	27.31	30.17	68	12.66	14.99	98	2.54	3.46
39	26.76	29.58	69	12.18	14.53	99	2.37	3.26
40	26.21	29.00	70	11.70	14.07	100	2.20	3.07
41	25.67	28.43	71	11.21	13.60	101	2.04	2.89
42	25.14	27.87	72	10.72	13.13	102	1.88	2.71
43	24.61	27.31	73	10.22	12.66	103	1.72	2.54
44	24.09	26.76	74	9.73	12.18	104	1.55	2.37
45	23.57	26.21	75	9.24	11.70	105	1.38	2.20
46	23.06	25.67	76	8.76	11.21	106	1.21	2.04
47	22.56	25.14	77	8.28	10.72	107	1.04	1.88
48	22.06	24.61	78	7.83	10.22	108	.88	1.72
49	21.57	24.09	79	7.41	9.73	109	.71	1.55
						110	.50	1.38

1981 Disability (x, y-5) for General Members

**SCHEDULE 3**  
**YEARS OF LIFE EXPECTANCY AFTER DISABILITY RETIREMENT**  
**SAFETY MEMBERS – CURRENT ASSUMPTIONS**

Age	Years of Life Expectancy	Age	Years of Life Expectancy	Age	Years of Life Expectancy
20	50.20	50	24.38	80	7.41
21	49.29	51	23.59	81	7.00
22	48.39	52	22.80	82	6.63
23	47.48	53	22.03	83	6.27
24	46.58	54	21.26	84	5.94
25	45.68	55	20.50	85	5.63
26	44.79	56	19.77	86	5.34
27	43.89	57	19.06	87	5.06
28	43.01	58	18.40	88	4.80
29	42.12	59	17.78	89	4.55
30	41.24	60	17.20	90	4.31
31	40.36	61	16.64	91	4.09
32	39.48	62	16.11	92	3.87
33	38.61	63	15.59	93	3.66
34	37.74	64	15.08	94	3.46
35	36.88	65	14.58	95	3.26
36	36.02	66	14.09	96	3.07
37	35.16	67	13.61	97	2.89
38	34.31	68	13.13	98	2.71
39	33.45	69	12.66	99	2.54
40	32.61	70	12.18	100	2.37
41	31.77	71	11.70	101	2.20
42	30.93	72	11.21	102	2.04
43	30.09	73	10.72	103	1.88
44	29.26	74	10.22	104	1.72
45	28.43	75	9.73	105	1.55
46	27.61	76	9.24	106	1.38
47	26.80	77	8.76	107	1.21
48	25.98	78	7.28	108	1.04
49	25.18	79	7.83	109	.88
				110	.71

1981 Disability (x-1)

**SCHEDULE 3**  
**YEARS OF LIFE EXPECTANCY AFTER SERVICE RETIREMENT**  
**RECOMMENDED ASSUMPTIONS**

General				General			
Age	Male	Female	Safety	Age	Male	Female	Safety
50	30.69	34.89	31.62	85	6.19	7.54	6.59
51	29.77	33.94	30.69	86	5.80	7.06	6.19
52	28.85	32.99	29.77	87	5.43	6.59	5.80
53	27.95	32.05	28.85	88	5.07	6.15	5.43
54	27.04	31.11	27.95	89	4.73	5.73	5.07
55	26.15	30.17	27.04	90	4.42	5.34	4.73
56	25.27	29.24	26.15	91	4.13	4.98	4.42
57	24.39	28.31	25.27	92	3.86	4.64	4.13
58	23.52	27.40	24.39	93	3.61	4.33	3.86
59	22.67	26.49	23.52	94	3.37	4.04	3.61
60	21.83	25.59	22.67	95	3.16	3.76	3.37
61	21.00	24.70	21.83	96	2.98	3.51	3.16
62	20.18	23.82	21.00	97	2.81	3.28	2.98
63	19.39	22.96	20.18	98	2.66	3.06	2.81
64	18.60	22.11	19.39	99	2.52	2.86	2.66
65	17.84	21.28	18.60	100	2.39	2.67	2.52
66	17.10	20.46	17.84	101	2.26	2.50	2.39
67	16.37	19.65	17.10	102	2.15	2.34	2.26
68	15.66	18.86	16.37	103	2.04	2.19	2.15
69	14.97	18.08	15.66	104	1.93	2.06	2.04
70	14.29	17.31	14.97	105	1.84	1.94	1.93
71	13.63	16.54	14.29	106	1.75	1.83	1.84
72	12.98	15.78	13.63	107	1.68	1.74	1.75
73	12.34	15.04	12.98	108	1.62	1.66	1.68
74	11.72	14.31	12.34	109	1.57	1.59	1.62
75	11.12	13.60	11.72	110	1.52	1.54	1.57
76	10.53	12.90	11.12	111	1.50	1.51	1.52
77	9.96	12.22	10.53	112	1.48	1.49	1.50
78	9.40	11.57	9.96	113	1.47	1.49	1.48
79	8.88	10.93	9.40	114	1.43	1.48	1.47
80	8.37	10.31	8.88	115	1.37	1.46	1.43
81	7.89	9.71	8.37	116	1.23	1.41	1.37
82	7.44	9.14	7.89	117	1.07	1.35	1.23
83	7.00	8.58	7.44	118	0.83	1.21	1.07
84	6.59	8.05	7.00	119	0.50	1.00	0.83
				120	--	0.50	0.50

1994 GA (x, y) for General Members

1994 GA (x-1) for Safety Members

**SCHEDULE 3**  
**YEARS OF LIFE EXPECTANCY AFTER DISABILITY RETIREMENT**  
**GENERAL MEMBERS – RECOMMENDED ASSUMPTIONS**

<b>Age</b>	<b>Years of Life Expectancy</b>		<b>Age</b>	<b>Years of Life Expectancy</b>		<b>Age</b>	<b>Years of Life Expectancy</b>	
	<b>Male</b>	<b>Female</b>		<b>Male</b>	<b>Female</b>		<b>Male</b>	<b>Female</b>
20	38.73	42.92	50	21.08	23.57	80	7.00	9.24
21	37.98	41.92	51	20.59	23.06	81	6.63	8.76
22	37.26	41.09	52	20.11	22.56	82	6.27	8.28
23	36.56	40.28	53	19.63	22.06	83	5.94	7.83
24	35.87	39.49	54	19.16	21.57	84	5.63	7.41
25	35.19	38.73	55	18.68	21.08	85	5.34	7.00
26	34.53	37.98	56	18.21	20.59	86	5.06	6.63
27	33.87	37.26	57	17.75	20.11	87	4.80	6.27
28	33.23	36.56	58	17.29	19.63	88	4.55	5.94
29	32.60	35.87	59	16.83	19.16	89	4.31	5.63
30	31.98	35.19	60	16.37	18.68	90	4.09	5.34
31	31.37	34.53	61	15.91	18.21	91	3.87	5.06
32	30.76	33.87	62	15.45	17.75	92	3.66	4.80
33	30.17	33.23	63	14.99	17.29	93	3.46	4.55
34	29.58	32.60	64	14.53	16.83	94	3.26	4.31
35	29.00	31.98	65	14.07	16.37	95	3.07	4.09
36	28.43	31.37	66	13.60	15.91	96	2.89	3.87
37	27.87	30.76	67	13.13	15.45	97	2.71	3.66
38	27.31	30.17	68	12.66	14.99	98	2.54	3.46
39	26.76	29.58	69	12.18	14.53	99	2.37	3.26
40	26.21	29.00	70	11.70	14.07	100	2.20	3.07
41	25.67	28.43	71	11.21	13.60	101	2.04	2.89
42	25.14	27.87	72	10.72	13.13	102	1.88	2.71
43	24.61	27.31	73	10.22	12.66	103	1.72	2.54
44	24.09	26.76	74	9.73	12.18	104	1.55	2.37
45	23.57	26.21	75	9.24	11.70	105	1.38	2.20
46	23.06	25.67	76	8.76	11.21	106	1.21	2.04
47	22.56	25.14	77	8.28	10.72	107	1.04	1.88
48	22.06	24.61	78	7.83	10.22	108	.88	1.72
49	21.57	24.09	79	7.41	9.73	109	.71	1.55
						110	.50	1.38

1981 Disability (x, y-5) for General Members

**SCHEDULE 3**  
**YEARS OF LIFE EXPECTANCY AFTER DISABILITY RETIREMENT**  
**SAFETY MEMBERS – RECOMMENDED ASSUMPTIONS**

<b>Age</b>	<b>Years of Life Expectancy</b>	<b>Age</b>	<b>Years of Life Expectancy</b>	<b>Age</b>	<b>Years of Life Expectancy</b>
20	50.20	50	24.38	80	7.41
21	49.29	51	23.59	81	7.00
22	48.39	52	22.80	82	6.63
23	47.48	53	22.03	83	6.27
24	46.58	54	21.26	84	5.94
25	45.68	55	20.50	85	5.63
26	44.79	56	19.77	86	5.34
27	43.89	57	19.06	87	5.06
28	43.01	58	18.40	88	4.80
29	42.12	59	17.78	89	4.55
30	41.24	60	17.20	90	4.31
31	40.36	61	16.64	91	4.09
32	39.48	62	16.11	92	3.87
33	38.61	63	15.59	93	3.66
34	37.74	64	15.08	94	3.46
35	36.88	65	14.58	95	3.26
36	36.02	66	14.09	96	3.07
37	35.16	67	13.61	97	2.89
38	34.31	68	13.13	98	2.71
39	33.45	69	12.66	99	2.54
40	32.61	70	12.18	100	2.37
41	31.77	71	11.70	101	2.20
42	30.93	72	11.21	102	2.04
43	30.09	73	10.72	103	1.88
44	29.26	74	10.22	104	1.72
45	28.43	75	9.73	105	1.55
46	27.61	76	9.24	106	1.38
47	26.80	77	8.76	107	1.21
48	25.98	78	8.28	108	1.04
49	25.18	79	7.83	109	.88
				110	.71

1981 Disability (x-1) (Safety)

**SCHEDULE 4**  
**RATIO OF CURRENT COMPENSATION TO**  
**COMPENSATION ANTICIPATED AT RETIREMENT**

<b>Age</b>	<b>General Members</b>	<b>Safety Members</b>	<b>Age</b>	<b>General Members</b>	<b>Safety Members</b>
20	0.063	0.121	45	0.293	0.478
21	0.070	0.129	46	0.308	0.502
22	0.077	0.137	47	0.323	0.528
23	0.084	0.146	48	0.339	0.555
24	0.090	0.155	49	0.356	0.582
25	0.097	0.165	50	0.374	0.612
26	0.103	0.175	51	0.393	0.643
27	0.110	0.186	52	0.413	0.675
28	0.117	0.196	53	0.434	0.708
29	0.125	0.208	54	0.456	0.743
30	0.133	0.220	55	0.480	0.782
31	0.140	0.234	56	0.504	0.822
32	0.149	0.248	57	0.529	0.863
33	0.157	0.262	58	0.555	0.907
34	0.166	0.277	59	0.584	0.952
35	0.176	0.292	60	0.612	1.000
36	0.186	0.307	61	0.643	
37	0.196	0.323	62	0.676	
38	0.206	0.339	63	0.710	
39	0.217	0.357	64	0.745	
40	0.228	0.374	65	0.782	
41	0.241	0.393	66	0.822	
42	0.253	0.413	67	0.863	
43	0.265	0.433	68	0.907	
44	0.279	0.454	69	0.952	
			70	1.000	

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

We include an assumption that members will cash out 90% of the maximum 160 hours annual leave under the Ventures Decision in their final year of employment.