

REPORT ON THE RESULTS OF THE
EXPERIENCE STUDY OF THE
STATE TEACHERS' RETIREMENT
SYSTEM OF VERMONT

PREPARED AS OF JUNE 30, 2002

February 10, 2003

Board of Trustees
State Teachers' Retirement System of Vermont
Montpelier, Vermont 05602

Dear Board Members:

Section 1942, subsection (m), of Title 16, Chapter 55, Vermont Statutes Annotated, provides that at least once in each five-year period the actuary is to make a study of the System's recent experience to assist in setting assumptions. In accordance with this provision, the results of our experience study covering the five-year period ending June 30, 2002 are described in this report, along with our recommendations for changes in the present assumptions.

The Table of Contents, which immediately follows, outlines the information contained in this report.

Respectfully submitted,

David L. Driscoll, FSA, EA
Consulting Actuary

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I. INTRODUCTION

In order to accumulate funds to pay retirement benefits on a reasonable and relatively stable basis, the actuary prepares annual valuations of the System's assets and liabilities to measure the funded status and to ensure that funding is progressing at a rate that is adequate to meet the System's obligations.

The primary purpose of funding is to equitably allocate costs between generations of taxpayers and provide security to members, who view the funds set aside as assurance that their benefits will be paid.

While the ultimate cost of the System is not determinable until all benefits are paid and expenses provided for, each actuarial valuation attempts to estimate costs based on assumptions selected to predict, as accurately as possible, future experience in order to produce stable contribution rates.

Overly conservative or aggressive assumptions will result in actuarial gains or losses each year. When translated into contributions, this will result in decreasing or increasing contribution rates and an inequitable allocation of costs.

The major actuarial assumptions are:

- (a) Active service demographic assumptions,
- (b) Compensation increase assumptions,
- (c) Post-retirement mortality rates,
- (d) Interest rate, and
- (e) Cost-of-living adjustment rates.

Before presenting our analysis of the System's experience and discussion of the proposed assumptions, it is important to outline considerations that should govern the selection of actuarial assumptions. The recommendations of the American Academy of Actuaries are as follows:

- (i) The actuarial assumptions selected should reflect the actuary's best judgement of future events. They should take into account actual experience to the extent possible, but they should also reflect long-term future trends rather than give undue weight to recent past experience.
- (ii) The actuary should consider the impact of inflation in selecting the actuarial assumptions to be used.
- (iii) The actuary should give consideration to the reasonableness of each actuarial assumption independently as well as the combined impact of all the assumptions.
- (iv) The actuary should give careful attention to changes in plan design that may significantly alter expected future experience. For example, a liberalization of early retirement benefits may make advisable a revision in the retirement assumption.
- (v) The actuary, in choosing assumptions, should take into account general or specific information available from other sources, including the plan sponsor, plan administrator, investment managers, accountants, economists, etc.

The purpose of this Report is to provide the information necessary to decide on the appropriate assumptions to be used in future valuations. It should be noted that these decisions cannot be made "in a vacuum" but must reflect the present and expected situation within the State and the System.

The balance of this Report deals in detail with the various assumptions. In each area we have made recommendations as to what we believe are appropriate assumptions. These recommendations reflect our "best estimate" of the likely future experience based on:

- (a) the recent past experience,
- (b) the general economic views prevailing at this time, and
- (c) anticipated trends.

II. ACTIVE SERVICE DEMOGRAPHIC ASSUMPTIONS

The active service demographic assumptions include rates of:

- (a) Termination,
- (b) Disability,
- (c) Death before retirement, and
- (d) Retirement.

Our review of active service demographic assumptions is based on the actuarial valuation data for Group C members of the System, since Group A is closed to new members and relatively few active Group A members remain.

The basis for analysis of the System's experience is a comparison of the actual number of separations from service under each category with those expected based on the assumptions currently in use.

The "expected" values are calculated by applying the various rates or probabilities to the individuals exposed to each respective event. For example, active members under age 55 with less than 30 years of

credited service would be exposed to the probabilities of withdrawal, death and disability. A member age 55 with five years of service would be exposed to disability, death and early retirement. A member who is age 62 or has 30 years of credited service would be exposed to disability, death and normal retirement.

Numerical summaries of the System's experience from July 1, 1997 through June 30, 2002 are presented in Appendix I. The tables show the ratios of the actual experience of the System as compared to that anticipated by the present actuarial assumptions. The results are shown separately by assumption and, where appropriate, by sex.

The ratios of actual to expected experience indicate the extent of deviation from the assumptions. A ratio of 1.0 would mean the experience has been exactly as anticipated.

As an aid to the Trustees in analyzing these results, we have also prepared a series of graphs, which present the statistical data summarized in Appendix I in visual form. Our comments will refer to these graphs, which immediately follow each of the following subsections.

Termination

The graphs that follow present the withdrawal and vesting experience separately for male and female teachers.

Reviewing the withdrawal and vesting experience, it can be seen that there are fewer members leaving before service retirement than expected for both males and females at most ages.

Since the number of members withdrawing without a benefit and the number of vested retirements is less than what is expected, we recommend that the assumed probabilities of withdrawal be decreased by 20% at each age.

We recommend the continued use of separate assumptions for males and females. The graphs presented on page 6 show the current rate, the actual rate and the proposed rate separately for males and females. The proposed rates are set forth in detail in Appendix II.

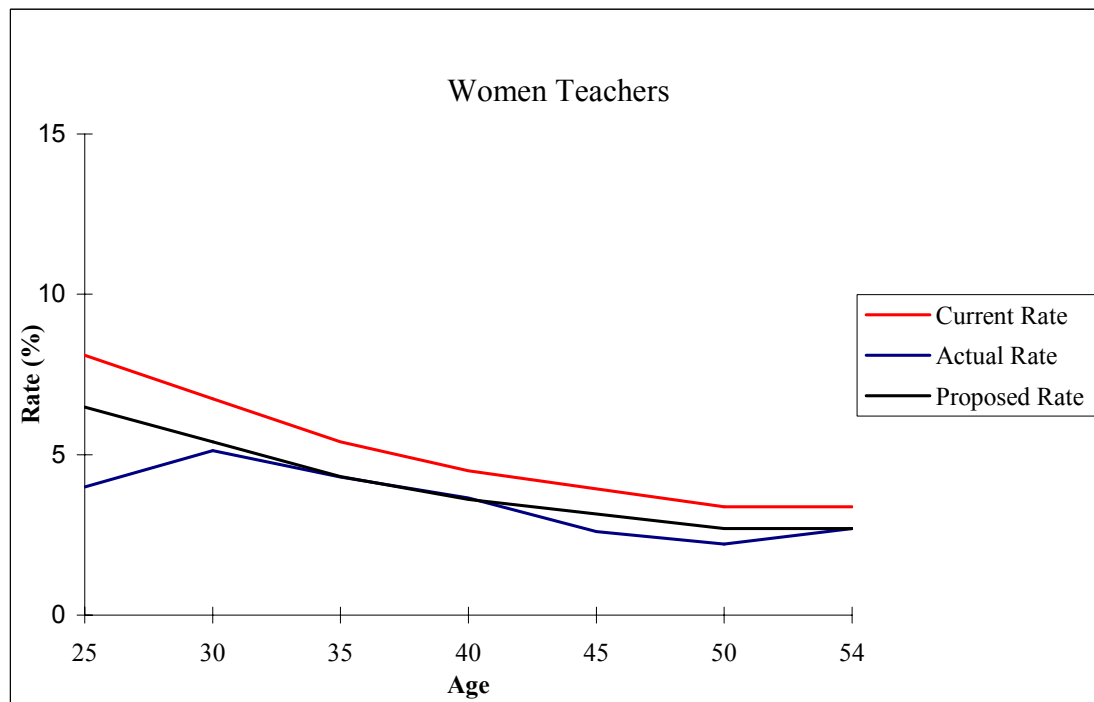
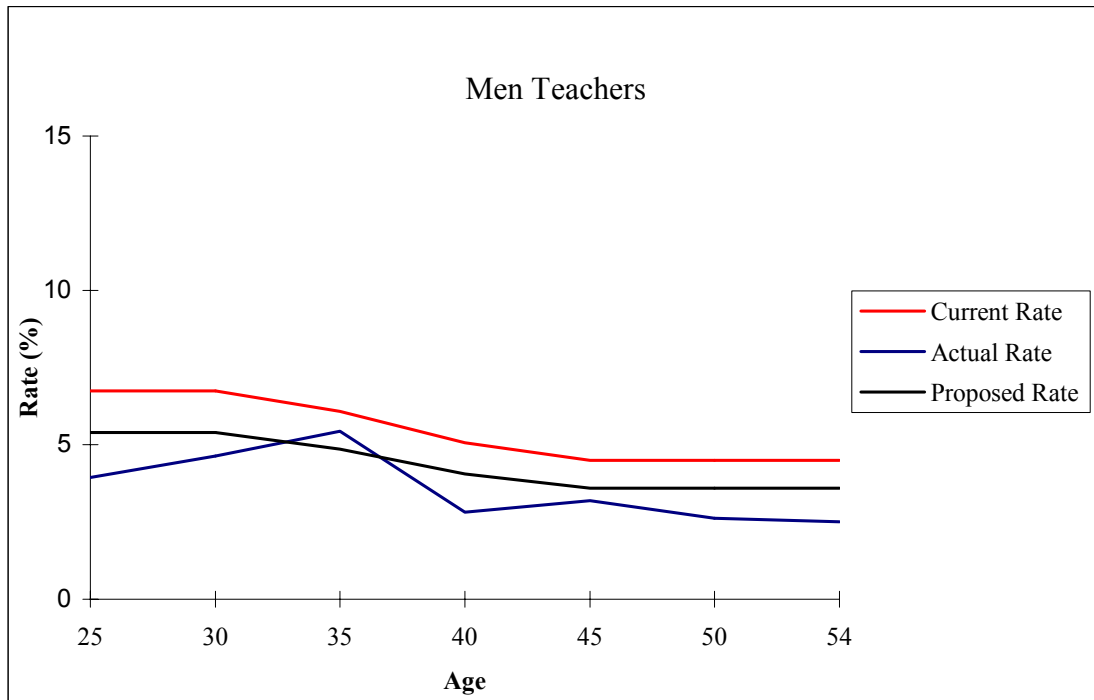
Disability and Death

The graphs that follow show the incidence of disability and active service mortality. The financial impact on the funding of the System as the result of this experience is relatively minor. It should be noted that the low incidence of actual deaths and disabilities makes this experience susceptible to rather large fluctuations from year to year.

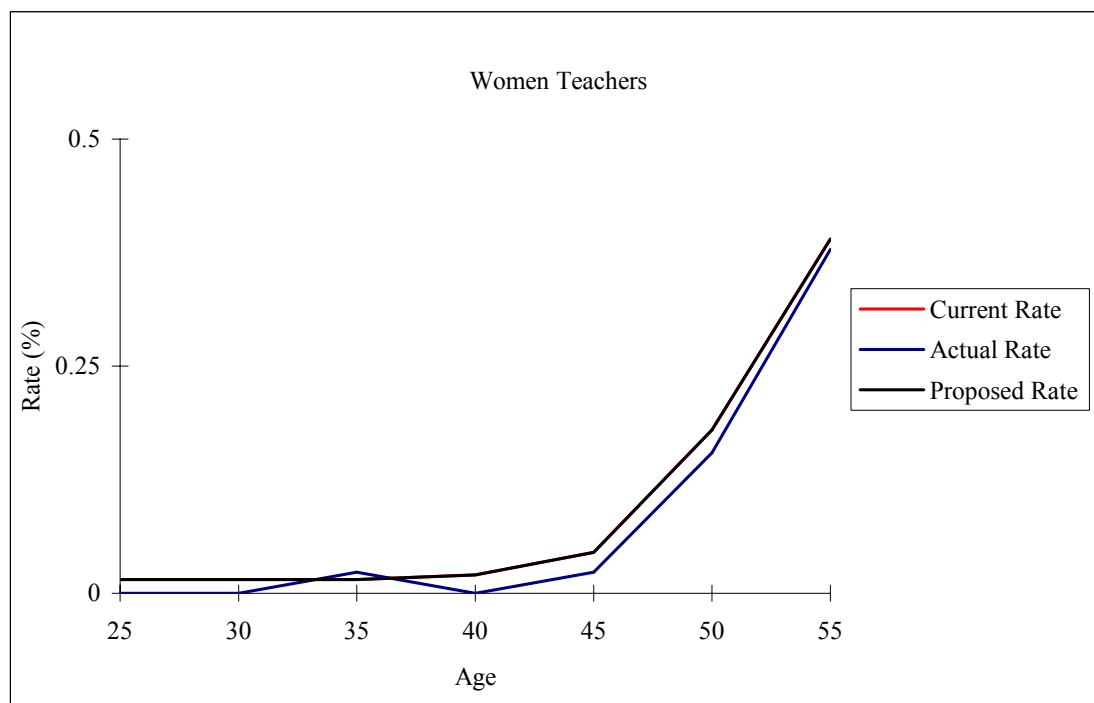
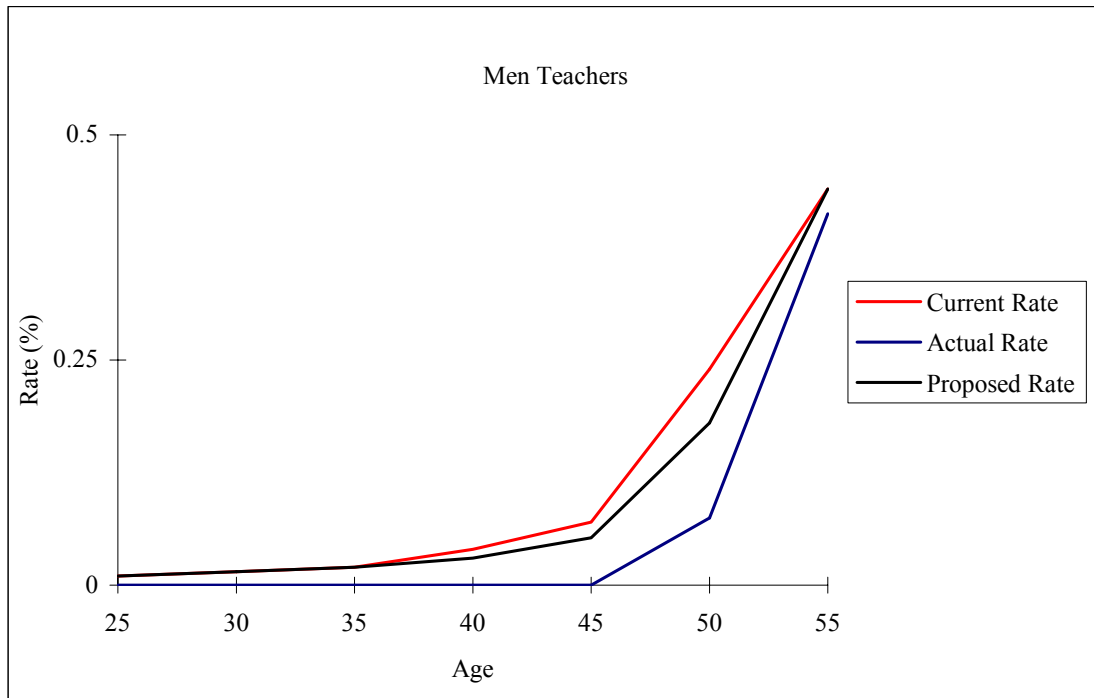
Similar to the results of the previous experience study, the rates of disability for males produce expected disabilities which are larger than the actual number. The largest discrepancy is produced by rates from ages 40 through 50. We therefore recommend that the disability rates for males be reduced 25% for ages 40 through 50. We do not recommend any change in the disability rates for females at this time.

Since the current actuarial assumptions for active service mortality reasonably predicted actual experience over the past five years, we do not recommend any change in the rates of mortality for active participants at this time.

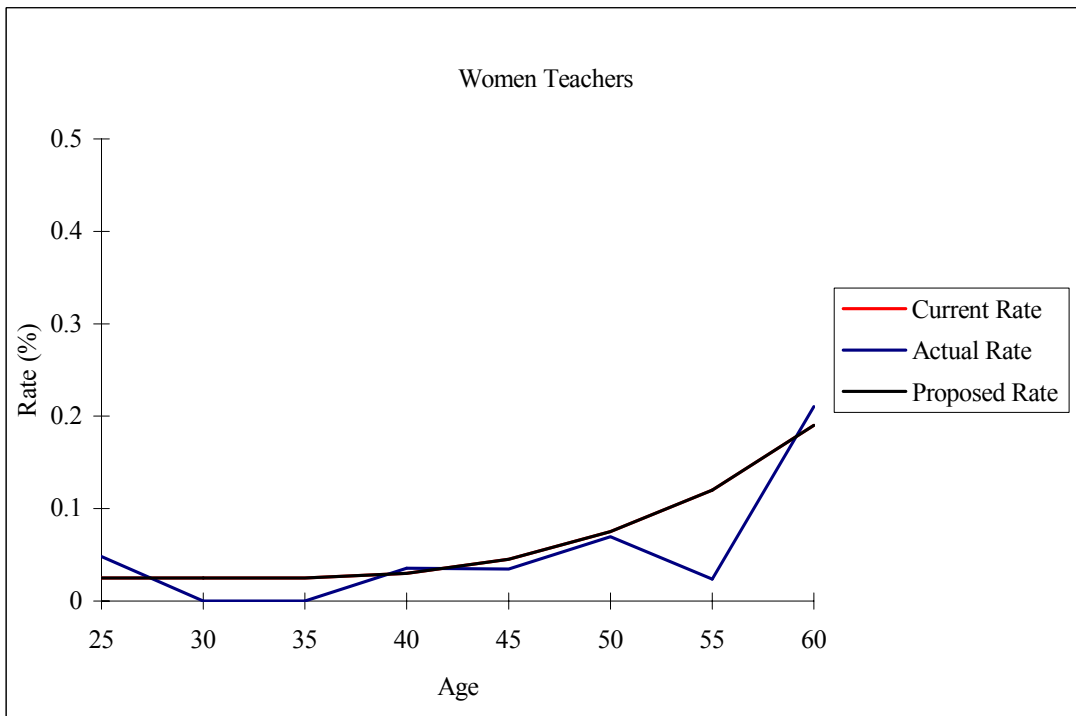
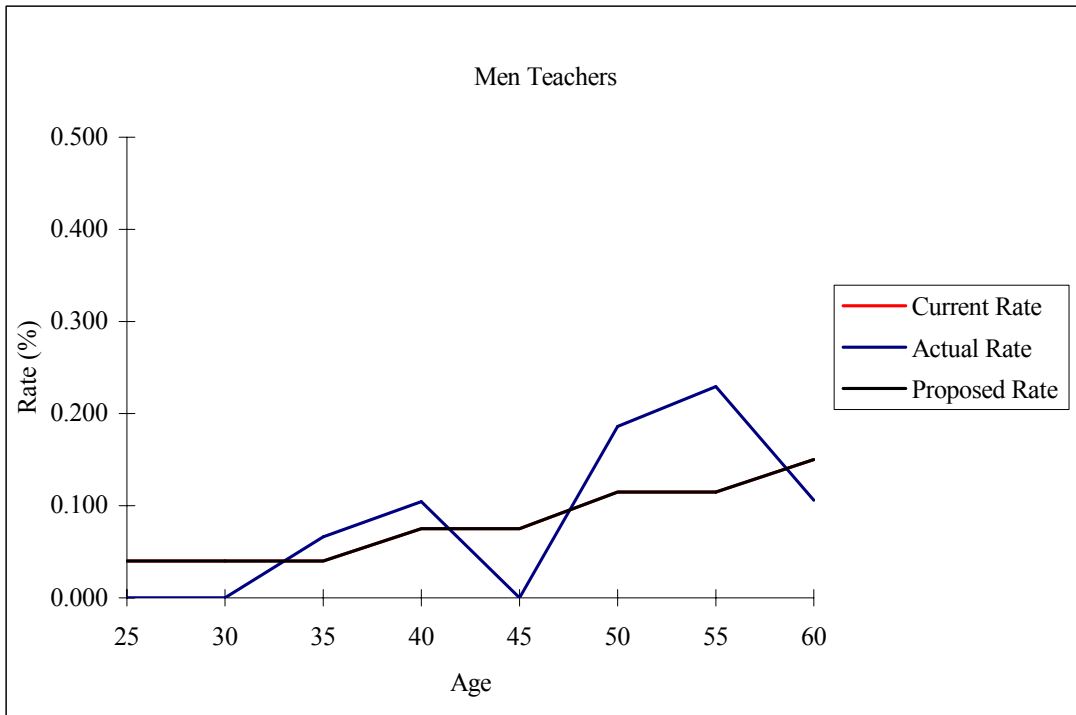
Active Service Experience - Terminations July 1, 1997 through June 30, 2002



Active Service Experience - Disability Retirements July 1, 1997 through June 30, 2002



Active Service Experience - Deaths July 1, 1997 through June 30, 2002



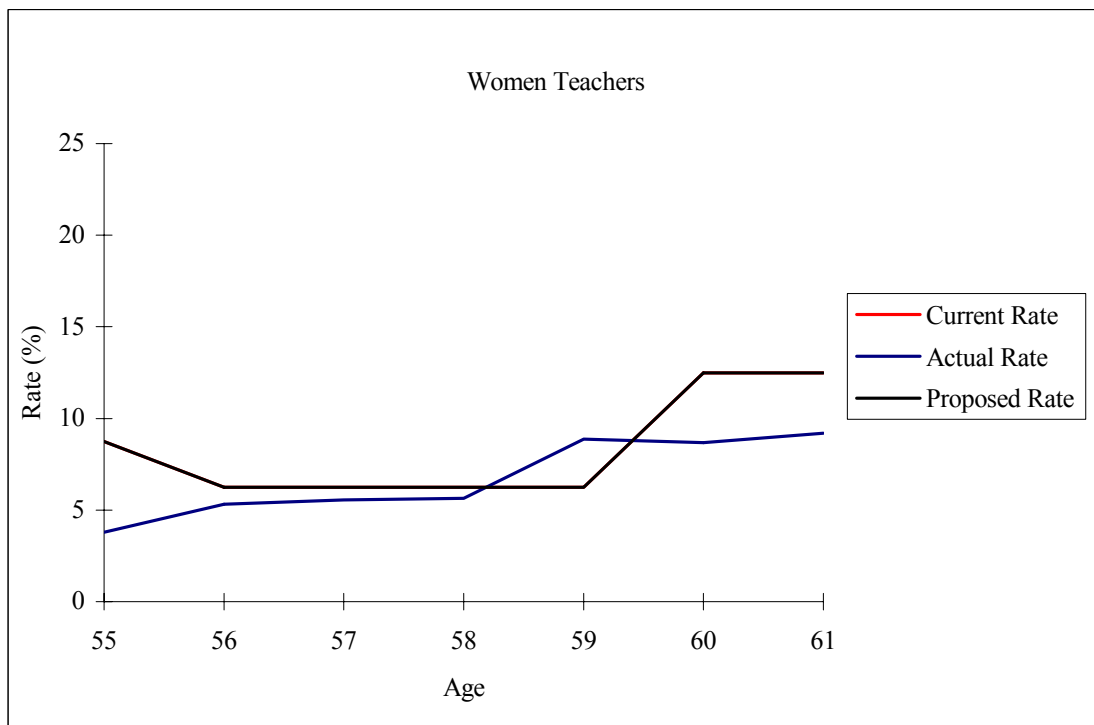
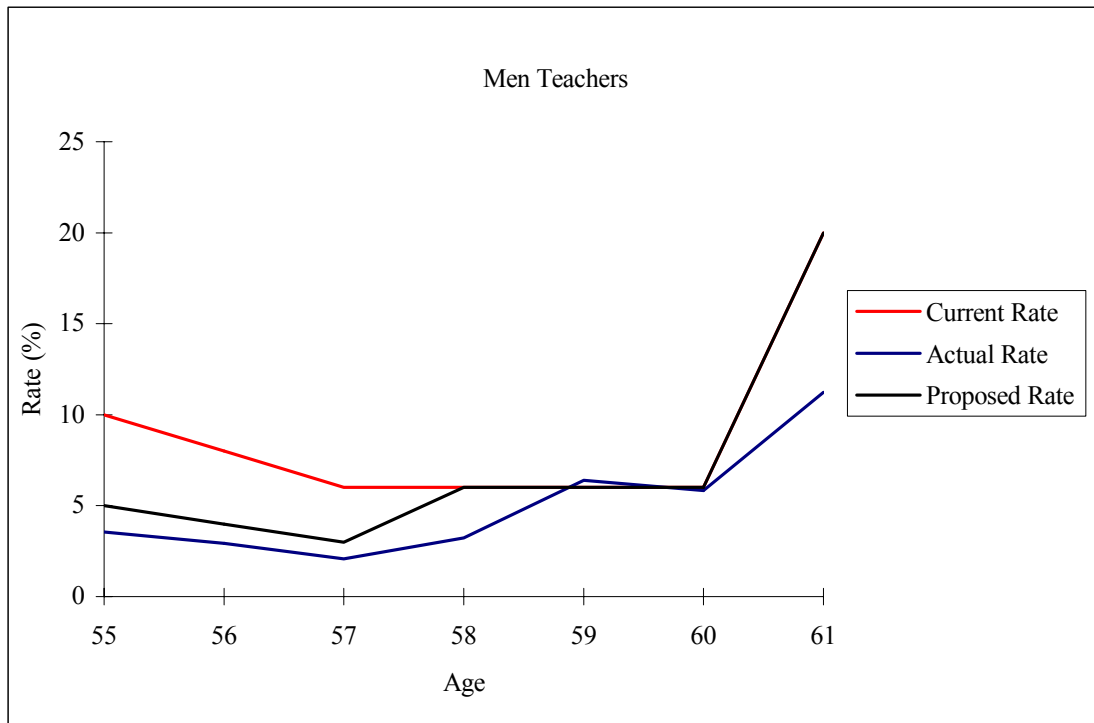
Reduced Early Retirement

The experience with regard to reduced early retirement is shown on the following graphs. For ages 57 and younger, the actual number of early retirements for males is less than the expected number of early retirements. We recommend a 50% decrease in the service retirement probabilities for males at ages 57 and younger. We do not recommend any change in the retirement rates for females at this time.

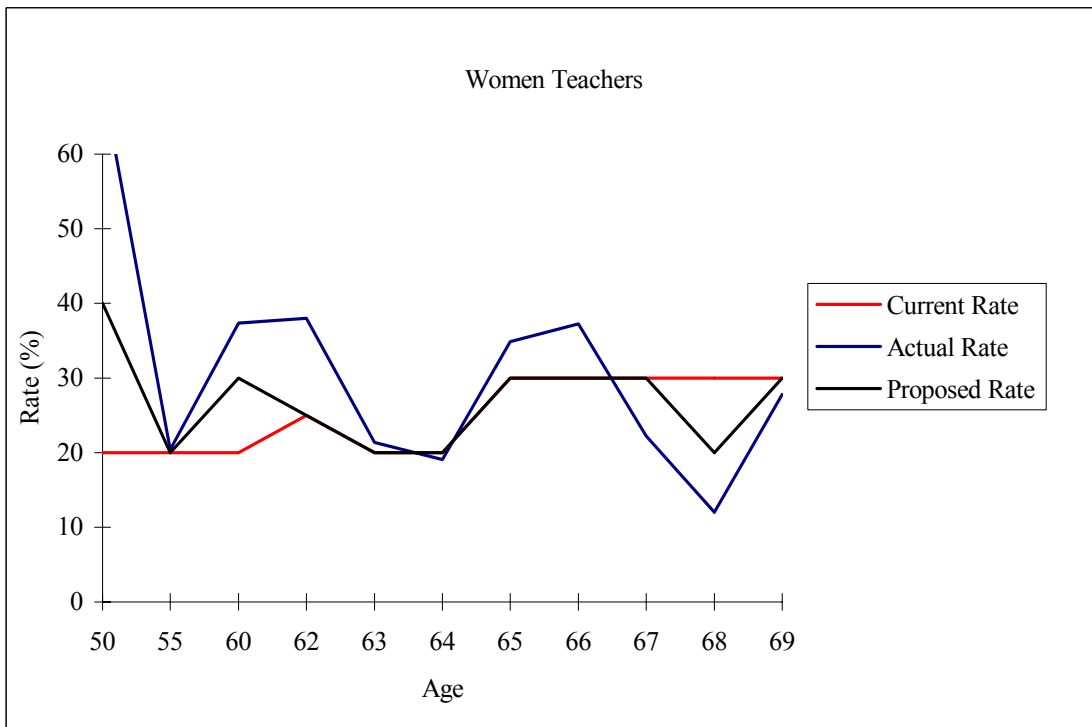
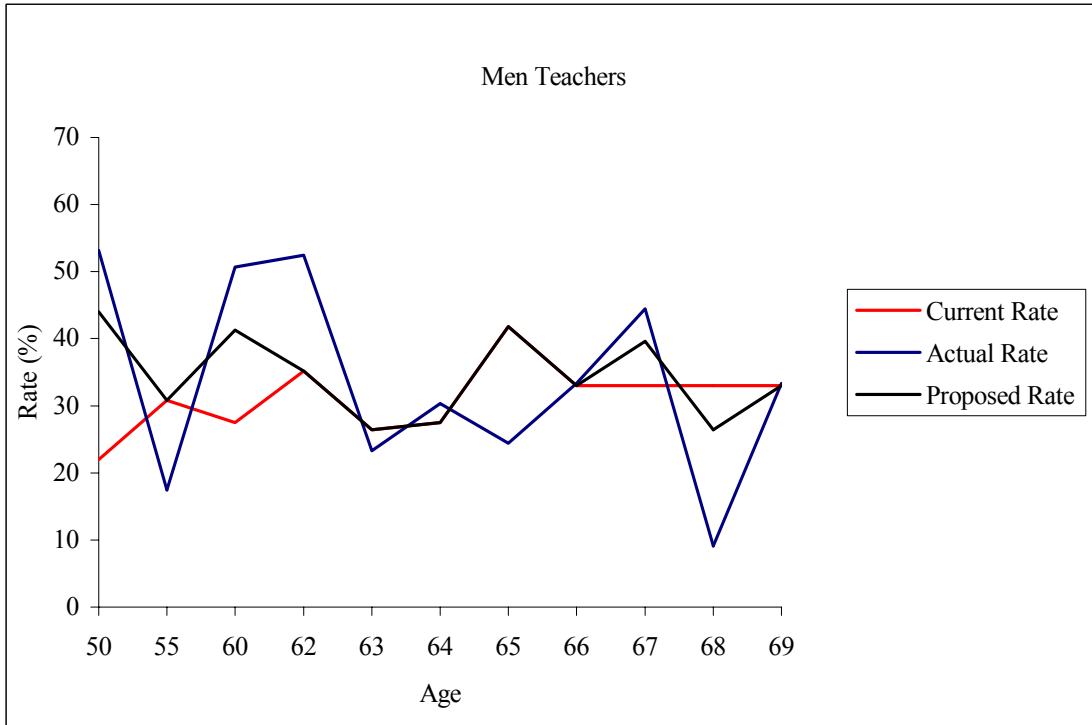
Service Retirement

The graphs on page 11 show that service retirement peak at specific ages for both males and females. This phenomenon of peaks and valleys in service retirements was apparent in the previous experience study as well. We recommend increasing the assumed probabilities of service retirements for males at ages 50, 60 and 67 and decreasing the assumed probability of retirement at age 68. For females, we recommend increasing the assumed probabilities of service retirements at ages 50 and 60 and decreasing the assumed probability of retirement at age 68. Appendix II shows the current and proposed tables of service retirement probabilities.

Active Service Experience - Reduced Early July 1, 1997 through June 30, 2002



Active Service Experience - Service Retirements July 1, 1997 through June 30, 2002



III. POST-RETIREMENT MORTALITY RATES

A review of the statistics with regard to post-retirement mortality for both Group A and C retired members, which are summarized in Table 7 of Appendix I, reveals that retired individuals are living longer than expected. However, the ratio of actual to expected deaths among retirees varies significantly by gender and by category of retirement (i.e., service retirement, disability retirement, receipt of survivor benefits)

Based on this experience, we recommend the following changes be made to the post-retirement mortality tables used in the funding of the System.

- For service pensioners and beneficiaries, we recommend the continued use of the 1995 George B. Buck Mortality Tables for males and females; however, we believe that the tables should be adjusted with a one-year setback.
- For disabled pensioners, we recommend changing the mortality table to the RP-2000 Disability Mortality Tables for males and females.

The revised rates of mortality are shown in Appendix III.

IV. ECONOMIC ASSUMPTIONS

Economic assumptions include:

- (a) rates of compensation increase,
- (b) investment income, and
- (c) post-retirement adjustment in benefits on account of inflation.

Inflation

The System provides annual cost-of-living adjustments (COLAs). For the Group A, the annual adjustment is equal to the increase in the CPI-U, but not more than 5%. For Group C, the adjustment equals one-half the increase in the CPI-U, again limited to 5%.

With regard to the inflation assumption for COLAs, the U.S. Consumer Price Index (CPI-U) indicates that the inflation rate has averaged less than 3% annually since January 1, 1998.

Currently, we assume a 4% annual adjustment in pensions for Group A and a 2% annual adjustment in pensions for Group C members. Over the past five years, this has resulted in experience gains. We recommend that the assumed annual adjustment for Group A be reduced to 3% and for Group C to 1.5%.

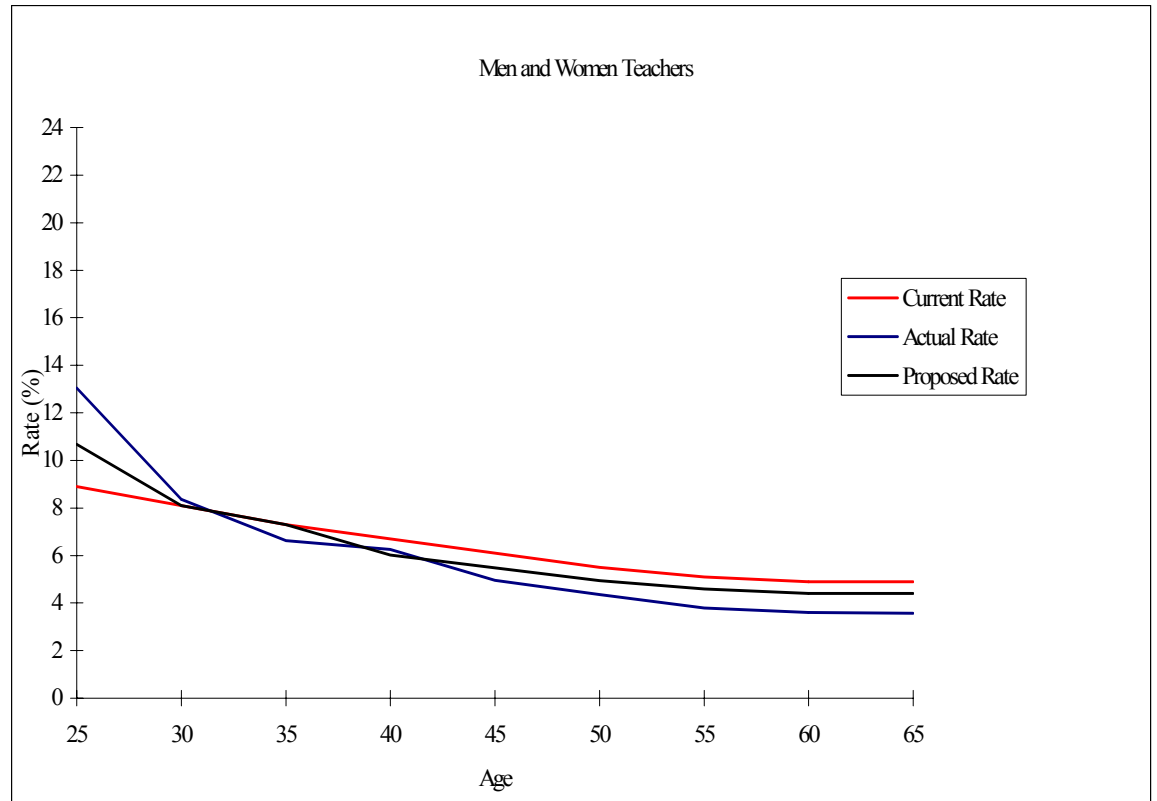
Merit-Promotion Salary Increases

Currently a single compensation scale is used for both male and female members. The overall pattern of compensation increases appears to be generally consistent between males and females. The average annual pay increase produced by the current scale is as follows:

Age at Entry	Average Annual Increase to Age 62
25	8.9%
35	7.3%
45	6.1%
55	5.1%

The graph on page 15 sets forth the levels of total compensation increase during the five-year period. These results include both merit-promotion increases and inflationary increases. The graph shows that pay increases have been lower than expected at most ages except at age 25. We recommend increasing the salary increase assumption at age 25 by 20% and decreasing the salary increase assumption by 10% at ages 40 and over. The statistics are summarized in Appendix I.

Active Service Experience - Salary Experience
July 1, 1997 through June 30, 2002



Interest Rate

The total rates of return earned by the VSTRS assets are shown below.

Year Ending June 30	Rate of Return Based on Actuarial Asset Value
1998	15.59%
1999	14.69%
2000	13.28%
2001	10.25%
2002	6.71%
1998-02	12.06%

The rate of return has been about 12% annually during the past five years

However, as we are recommending a decrease in the assumed annual rate of inflation (as reflected in the assumed annual cost-of-living adjustments), we also recommend a decrease in the expected rate of return from 8.5% to 8.0%.

V. EXPENSES AND NON-PENSION POST-RETIREMENT BENEFITS

In past valuations, no explicit provisions have been made for funding for expenses and post-retirement benefits other than pensions that are paid by the System. For three principal reasons, we recommend that the Board of the System consider the adoption of explicit funding assumptions to address these payments:

1. It is generally considered acceptable to reflect investment-related expenses by setting an investment return assumption that is net of investment expenses. The same cannot be said of non-investment-related expenses.

2. The statutes governing the operation of the System have been changed in the interval since the last experience study was completed to reinforce the commitment to pay a portion of the cost of health and medical benefits of retired members. The portion of such benefits paid by the System is apparently categorized as an "administrative expense."

3. Perhaps most importantly, at this time of the preparation of this report, the Governmental Accounting Standards Board (GASB) was expected within the coming weeks to release its long-awaited exposure draft of a standard for accounting by governmental employers for post-retirement benefits other than pensions. This standard is expected to require the recognition of an annual expense and liability in the financial statements of governmental employers who provide such benefits. Because the liabilities for these benefits are often substantial, the desirability of pre-funding these benefits may be significantly heightened by the implementation of the anticipated accounting standards.

Because the release of the GASB exposure draft is expected imminently, we will refrain at this time from making detailed recommendations for the recognition of these benefits and other non-pension expenses of the System, as we expect considerable discussion in the near future on the subject of how the required expenses and liabilities will be recognized. However, we feel it is timely to advise the Board of the desirability of making an explicit provision for funding such benefits and expenses.

VI. COST ANALYSIS AND CONCLUSION

To assist the Board in selecting and approving the final package of valuation assumptions to be used prospectively from June 30, 2002 we have prepared a valuation of the System as of June 30, 2002 to reflect the potential impact of the revised assumptions.

Based on the revised valuation the normal contribution rate as of June 30, 2002 would have *increased from 4.04% to 5.65%*. These results are summarized in Appendix IV.

We look forward to discussing the results of this experience investigation with the Board of Trustees prior to the preparation of the June 30, 2003 valuation of the System.

APPENDIX I

ACTUAL AND EXPECTED EXPERIENCE

TABLE 1
COMPARISON OF ACTUAL AND EXPECTED SEPARATIONS
FROM ACTIVE SERVICE
TERMINATIONS

Central Age of Group	Men Teachers			Women Teachers		
	Actual	Expected	Ratio of Actual To Expected	Actual	Expected	Ratio of Actual To Expected
25	24	41.05	0.585	83	163.31	0.508
30	69	99.44	0.694	208	272.99	0.762
35	82	92.93	0.882	187	240.72	0.777
40	54	102.59	0.526	205	267.08	0.768
45	99	141.42	0.700	224	337.17	0.664
50	112	192.23	0.583	221	344.88	0.641
53 and 54	35	62.75	0.558	80	100.17	0.799
55 and over	67	15.63	4.287	126	24.83	5.075
Total	542	748	0.725	1,334	1,751	0.762

TABLE 2
COMPARISON OF ACTUAL AND EXPECTED SEPARATIONS
FROM ACTIVE SERVICE
DISABILITY RETIREMENTS

Central Age of Group	Men Teachers			Women Teachers		
	Actual	Expected	Ratio of Actual To Expected	Actual	Expected	Ratio of Actual To Expected
25	0	0.09	0.000	0	0.32	0.000
30	0	0.23	0.000	0	0.61	0.000
35	0	0.32	0.000	1	0.65	1.538
40	0	0.78	0.000	0	1.12	0.000
45	0	2.26	0.000	2	3.88	0.515
50	2	7.23	0.277	9	12.3	0.732
53 and 54	6	5.42	1.107	3	9.55	0.314
55 and over	3	29.54	0.102	13	40.18	0.324
Total	11	45.87	0.240	28	68.61	0.408

TABLE 3
COMPARISON OF ACTUAL AND EXPECTED SEPARATIONS
FROM ACTIVE SERVICE
DEATHS

Central Age of Group	Men Teachers			Women Teachers		
	Actual	Expected	Ratio of Actual To Expected	Actual	Expected	Ratio of Actual To Expected
25	0	0.25	0.000	1	0.52	1.923
30	0	0.59	0.000	0	1.03	0.000
35	1	0.66	1.515	0	1.09	0.000
40	2	1.37	1.460	2	1.76	1.136
45	0	2.52	0.000	3	4.11	0.730
50	8	4.75	1.684	7	7.36	0.951
55	5	3.72	1.344	4	6.98	0.573
60	3	3.23	0.929	7	4.11	1.703
65 and over	1	3.26	0.307	1	1.78	0.562
Total	20	20.35	0.983	25	28.74	0.870

TABLE 4
COMPARISON OF ACTUAL AND EXPECTED SEPARATIONS
FROM ACTIVE SERVICE
REDUCED EARLY RETIREMENTS

Central Age of Group	Men Teachers			Women Teachers		
	Actual	Expected	Ratio of Actual To Expected	Actual	Expected	Ratio of Actual To Expected
55	23	47.90	0.480	43	80.76	0.532
56	11	30.08	0.366	39	45.75	0.852
57	6	17.22	0.348	33	37.18	0.888
58	7	12.96	0.540	27	29.88	0.904
59	11	10.32	1.066	36	25.38	1.418
60	7	7.20	0.972	29	41.75	0.695
61	20	17.80	1.124	55	33.99	1.618
Total	85	143.48	0.592	262	294.69	0.889

TABLE 5
COMPARISON OF ACTUAL AND EXPECTED SEPARATIONS
FROM ACTIVE SERVICE
SERVICE RETIREMENTS

Central Age of Group	Men Teachers			Women Teachers		
	Actual	Expected	Ratio of Actual To Expected	Actual	Expected	Ratio of Actual To Expected
50	17	7.04	2.415	15	4.60	3.261
55	150	99.93	1.501	87	38.70	2.248
60	114	63.93	1.783	63	26.93	2.339
62	37	43.64	0.848	79	67.75	1.166
63	17	19.28	0.882	35	32.80	1.067
64	17	15.42	1.102	21	22.00	0.955
65	10	17.13	0.584	30	25.80	1.163
66	9	8.91	1.010	19	15.30	1.242
67	8	5.94	1.347	6	8.10	0.741
68	1	3.63	0.275	3	7.50	0.400
69	2	1.98	1.010	5	5.40	0.926
70 and over	1	15.00	0.067	8	64.00	0.125
Total	383	301.83	1.269	371	318.88	1.163

TABLE 6
COMPARISON OF ACTUAL AND EXPECTED
ANNUAL SALARIES OF MEMBERS

Central Age of Group	Men Teachers			Women Teachers		
	Annual Salaries			Annual Salaries		
	Actual	Expected	Ratio of Actual To Expected	Actual	Expected	Ratio of Actual To Expected
25	9,849,517	9,459,466	1.041	33,812,717	32,551,589	1.039
30	32,334,509	31,745,575	1.019	73,983,825	74,294,833	0.996
35	37,380,153	37,377,699	1.000	96,598,826	97,450,013	0.991
40	58,838,627	59,336,813	0.992	147,534,705	147,863,835	0.998
45	108,021,740	109,545,860	0.986	265,836,429	268,281,980	0.991
50	163,315,772	166,136,166	0.983	336,510,940	339,300,499	0.992
55	115,279,758	116,952,166	0.986	194,548,637	196,948,060	0.988
60	35,358,842	35,832,380	0.987	61,765,040	62,535,076	0.988
65	4,998,904	5,011,423	0.998	9,251,237	9,467,728	0.977
Total	565,377,822	571,397,548	0.989	1,219,842,356	1,228,693,613	0.993

TABLE 7**SUMMARY OF MORTALITY EXPERIENCE
OF PENSIONERS**

Group	Men Teachers			Women Teachers			Total		
	Actual	Expected	Ratio of Actual To Expected	Actual	Expected	Ratio of Actual To Expected	Actual	Expected	Ratio of Actual To Expected
Service Retirees	127	157.25	0.808	353	362.43	0.974	480	519.68	0.924
Disability Retirees	5	12.85	0.389	16	13.67	1.170	21	26.52	0.792
Dependants of Deceased Members	11	17.41	0.632	24	34.11	0.704	35	51.52	0.679
Total	143	187.51	0.763	393	410.21	0.958	536	597.72	0.897

APPENDIX II

RECOMMENDED ACTIVE SERVICE TABLES

TABLE 1
COMPARISON OF CURRENT AND RECOMMENDED SEPARATIONS
FROM ACTIVE SERVICE
TERMINATIONS

Central Age of Group	Men Teachers				Women Teachers			
	Withdrawal and Vested Retirement		Disability		Withdrawal and Vested Retirement		Disability	
	Current	Recommended	Current	Recommended	Current	Recommended	Current	Recommended
25	6.75%	5.40%	0.010%	0.010%	8.10%	6.48%	0.015%	0.015%
30	6.75%	5.40%	0.015%	0.015%	6.75%	5.40%	0.015%	0.015%
35	6.08%	4.86%	0.020%	0.020%	5.40%	4.32%	0.015%	0.015%
40	5.06%	4.05%	0.040%	0.030%	4.50%	3.60%	0.020%	0.020%
45	4.50%	3.60%	0.070%	0.053%	3.94%	3.15%	0.045%	0.045%
50	4.50%	3.60%	0.240%	0.180%	3.38%	2.70%	0.180%	0.180%
54	4.50%	3.60%	0.440%	0.440%	3.38%	2.70%	0.390%	0.390%

TABLE 2
COMPARISON OF CURRENT AND RECOMMENDED SEPARATIONS
FROM ACTIVE SERVICE
EARLY RETIREMENTS

Central Age of Group	Men Teachers		Women Teachers	
	Current	Recommended	Current	Recommended
55	10.00%	5.00%	8.75%	8.75%
56	8.00%	4.00%	6.25%	6.25%
57	6.00%	3.00%	6.25%	6.25%
58	6.00%	6.00%	6.25%	6.25%
59	6.00%	6.00%	6.25%	6.25%
60	6.00%	6.00%	12.50%	12.50%
61	20.00%	20.00%	12.50%	12.50%

TABLE 3
COMPARISON OF CURRENT AND RECOMMENDED SEPARATIONS
FROM ACTIVE SERVICE
SERVICE RETIREMENTS

Central Age of Group	Men Teachers		Women Teachers	
	Current	Recommended	Current	Recommended
50	22.00%	44.00%	20.00%	40.00%
55	30.80%	30.80%	20.00%	20.00%
60	27.50%	41.25%	20.00%	30.00%
62	35.20%	35.20%	25.00%	25.00%
63	26.40%	26.40%	20.00%	20.00%
64	27.50%	27.50%	20.00%	20.00%
65	41.80%	41.80%	30.00%	30.00%
66	33.00%	33.00%	30.00%	30.00%
67	33.00%	39.60%	30.00%	30.00%
68	33.00%	26.40%	30.00%	20.00%
69	33.00%	33.00%	30.00%	30.00%
70	100.00%	100.00%	100.00%	100.00%

APPENDIX III

RECOMMENDED POST-RETIREMENT MORTALITY

**POST-RETIREMENT MORTALITY RATES
SERVICE RETIREMENTS**

AGE	MALES	FEMALES	AGE	MALES	FEMALES
19	0.00060	0.00019	67	0.01408	0.00779
20	0.00064	0.00019	68	0.01590	0.00913
21	0.00068	0.00019	69	0.01787	0.01062
22	0.00070	0.00019	70	0.02001	0.01222
23	0.00071	0.00019	71	0.02233	0.01389
24	0.00071	0.00019	72	0.02485	0.01562
25	0.00071	0.00018	73	0.02760	0.01740
26	0.00069	0.00018	74	0.03062	0.01927
27	0.00068	0.00018	75	0.03397	0.02124
28	0.00067	0.00019	76	0.03767	0.02335
29	0.00065	0.00020	77	0.04176	0.02566
30	0.00065	0.00021	78	0.04629	0.02820
31	0.00064	0.00024	79	0.05129	0.03105
32	0.00065	0.00027	80	0.05678	0.03427
33	0.00066	0.00031	81	0.06280	0.03789
34	0.00068	0.00036	82	0.06934	0.04195
35	0.00070	0.00040	83	0.07634	0.04649
36	0.00073	0.00044	84	0.08378	0.05152
37	0.00076	0.00047	85	0.09160	0.05710
38	0.00080	0.00050	86	0.09970	0.06329
39	0.00085	0.00052	87	0.10800	0.07012
40	0.00090	0.00055	88	0.11636	0.07758
41	0.00096	0.00058	89	0.12474	0.08568
42	0.00102	0.00062	90	0.13319	0.09425
43	0.00109	0.00067	91	0.14184	0.10316
44	0.00118	0.00074	92	0.15083	0.11249
45	0.00127	0.00082	93	0.16026	0.12230
46	0.00138	0.00090	94	0.17028	0.13267
47	0.00151	0.00099	95	0.18102	0.14370
48	0.00165	0.00109	96	0.19261	0.15548
49	0.00180	0.00119	97	0.20526	0.16809
50	0.00197	0.00131	98	0.21918	0.18168
51	0.00215	0.00143	99	0.23464	0.19640
52	0.00235	0.00155	100	0.25195	0.21246
53	0.00257	0.00169	101	0.27147	0.23013
54	0.00283	0.00182	102	0.29353	0.24979
55	0.00312	0.00196	103	0.31847	0.27189
56	0.00346	0.00211	104	0.34655	0.29697
57	0.00387	0.00226	105	0.37804	0.32556
58	0.00436	0.00242	106	0.41312	0.35819
59	0.00494	0.00262	107	0.45193	0.39528
60	0.00563	0.00287	108	0.49453	0.43713
61	0.00643	0.00319	109	0.54086	0.48387
62	0.00735	0.00360	110	0.59071	0.53538
63	0.00840	0.00413	111	0.64374	0.59129
64	0.00959	0.00479	112	0.69941	0.65094
65	0.01094	0.00562	113	0.75705	0.71342
66	0.01243	0.00661	114	0.81591	0.77769
			115	0.87527	0.84269

Basis: 1995 George B. Buck Mortality Tables for males and females, set back one year.

**POST-RETIREMENT MORTALITY RATES
DISABILITY RETIREMENTS**

AGE	MALES	FEMALES	AGE	MALES	FEMALES
19	0.00000	0.00000	67	0.05445	0.03132
20	0.00000	0.00000	68	0.05691	0.03323
21	0.02257	0.00745	69	0.05961	0.03534
22	0.02257	0.00745	70	0.06258	0.03763
23	0.02257	0.00745	71	0.06584	0.04014
24	0.02257	0.00745	72	0.06941	0.04285
25	0.02257	0.00745	73	0.07329	0.04577
26	0.02257	0.00745	74	0.07751	0.04890
27	0.02257	0.00745	75	0.08207	0.05223
28	0.02257	0.00745	76	0.08695	0.05578
29	0.02257	0.00745	77	0.09215	0.05954
30	0.02257	0.00745	78	0.09764	0.06354
31	0.02257	0.00745	79	0.10339	0.06779
32	0.02257	0.00745	80	0.10937	0.07231
33	0.02257	0.00745	81	0.11554	0.07713
34	0.02257	0.00745	82	0.12188	0.08230
35	0.02257	0.00745	83	0.12834	0.08784
36	0.02257	0.00745	84	0.13492	0.09379
37	0.02257	0.00745	85	0.14160	0.10020
38	0.02257	0.00745	86	0.14837	0.10710
39	0.02257	0.00745	87	0.15523	0.11451
40	0.02257	0.00745	88	0.16219	0.12246
41	0.02257	0.00745	89	0.16923	0.13097
42	0.02257	0.00745	90	0.18341	0.14005
43	0.02257	0.00745	91	0.19977	0.14970
44	0.02257	0.00745	92	0.21661	0.15992
45	0.02257	0.00745	93	0.23366	0.17043
46	0.02385	0.00818	94	0.25069	0.18280
47	0.02512	0.00896	95	0.26749	0.19451
48	0.02640	0.00977	96	0.28391	0.20538
49	0.02769	0.01063	97	0.29985	0.21524
50	0.02898	0.01153	98	0.31530	0.22395
51	0.03027	0.01248	99	0.33021	0.23139
52	0.03156	0.01346	100	0.34456	0.23747
53	0.03286	0.01446	101	0.35863	0.24483
54	0.03415	0.01550	102	0.37169	0.25450
55	0.03544	0.01654	103	0.38304	0.26604
56	0.03673	0.01760	104	0.39200	0.27905
57	0.03803	0.01865	105	0.39789	0.29312
58	0.03933	0.01971	106	0.40000	0.30781
59	0.04067	0.02077	107	0.40000	0.32272
60	0.04204	0.02184	108	0.40000	0.33744
61	0.04347	0.02294	109	0.40000	0.35154
62	0.04498	0.02408	110	0.40000	0.36462
63	0.04658	0.02529	111	0.40000	0.37625
64	0.04831	0.02660	112	0.40000	0.38601
65	0.05017	0.02803	113	0.40000	0.39351
66	0.05221	0.02959	114	0.40000	0.39831
			115	0.40000	0.40000

Basis: RP-2000 Disability Mortality Tables for males and females.

APPENDIX IV

COMPARATIVE VALUATION RESULTS

APPENDIX IV

RESULTS FOR THE ACTUARIAL VALUATION
 PREPARED AS OF JUNE 30, 2002 ON
 CURRENT AND RECOMMENDED ASSUMPTIONS

Item	Current Assumptions	Recommended Assumptions
1. Liabilities:		
Active and Inactive Members	\$ 1,061,822,847	\$1,135,605,685
Retired Members	<u>\$ 501,833,340</u>	<u>\$ 508,219,116</u>
Total	\$ 1,563,656,187	\$1,643,824,801
2. Assets	\$ 1,169,293,733	\$ 1,169,293,733
3. Present Value of Future Member Contributions	\$ 110,149,034	\$ 117,415,758
4. Unfunded Accrued Liability	\$ (137,907,804)	\$ (139,456,544)
5. Future State Contributions = (1) - (2) - (3) + (4)	\$ 146,305,615	\$ 217,658,766
6. Present Value of Future Salaries	\$ 36,210,395	\$ 38,520,619
7. Normal Contribution Rate = (5) / (6)	4.04%	5.65%
8. Annual Compensation	\$ 418,904,021	\$ 418,904,021
9. Normal Contribution = (7) x (8)	\$ 16,923,722	\$ 23,668,077
10. Accrued Liability Contribution	<u>\$ 11,356,088</u>	<u>\$ 11,483,620</u>
11. Total Contribution = (9) + (10)	\$ 28,279,810	\$ 35,151,697