Contra Costa County Employees' Retirement Association

ACTUARIAL EXPERIENCE STUDY

Analysis of Actuarial Experience During the Period January 1, 2004 through December 31, 2006

SEGAL

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June 1, 2007

Board of Retirement
Contra Costa County Employees' Retirement Association
1355 Willow Way, Suite 221
Concord, CA 94520

Re: Review of Non-economic Actuarial Assumptions for the December 31, 2006 Actuarial Valuation

Dear Members of the Board:

We are pleased to submit this report of our review of the actuarial experience of the Contra Costa County Employees' Retirement Association. This study utilizes the census data of the last three actuarial valuations and includes the proposed actuarial assumptions to be used in future actuarial valuations.

Please note that we have also reviewed the economic assumptions. The economic actuarial assumption recommendations for the December 31, 2006 valuation were provided in a separate report issued on February 2, 2007.

We look forward to reviewing this report with you and answering any questions you may have.

Sincerely,

Paul Angelo, FSA, EA, MAAA, FCA
Senior Vice President and Actuary

John Monroe, ASA, EA, MAAA
Associate Actuary

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I. INTRODUCTION, SUMMARY, AND RECOMMENDATIONS

To project the cost and liabilities of the Pension Fund, assumptions are made about all future events that could affect the amount and timing of the benefits to be paid and the assets to be accumulated. Each year actual experience is compared against the projected experience, and to the extent there are differences, the future contribution requirement is adjusted.

If assumptions are modified, contribution requirements are adjusted to take into account a change in the projected experience in all future years. There is a great difference in both philosophy and cost impact between recognizing the actuarial deviations as they occur annually and changing the actuarial assumptions. Taking into account one year's gains or losses without making a change in the assumptions means that that year's experience was temporary and that, over the long run, experience will return to what was originally assumed. Changing assumptions reflects a basic change in thinking about the future, and it has a much greater effect on the current contribution requirements than recognizing gain or losses as they occur.

The use of realistic actuarial assumptions is important in maintaining adequate funding, while paying promised benefit amounts to participants already retired and to those near retirement. The actuarial assumptions used do not determine the "actual cost" of the plan. The actual cost is determined solely by the benefits and administrative expenses paid out, offset by investment income received. However, it is desirable to estimate as closely as possible what the actual cost will be so as to permit an orderly method for setting aside contributions today to provide benefits in the future, and to maintain equity among generations of participants and taxpayers.

This study was undertaken in order to review the demographic actuarial assumptions and to compare the actual experience with that expected under the current assumptions during the three year experience period from January 1, 2004 through December 31, 2006. The study was performed in accordance with Actuarial Standard of Practice (ASOP) No. 35, "Selection of Demographic and Other Non-economic Assumptions for Measuring Pension Obligations" and ASOP No. 27 "Selection of Economic Assumptions for Measuring Pension Obligations." These Standards of Practice put forth guidelines for the selection of the various actuarial assumptions utilized in a pension plan actuarial valuation. Based on the study's results and expected near-term experience, we are recommending various changes in the current actuarial assumptions.

We are recommending changes in the assumptions for retirement from active employment, pre-retirement mortality, healthy life mortality, disabled life mortality, turnover, disability (ordinary and duty), salary increases, terminal pay, service from unused sick leave conversion and Tier 3 members converting prior Tier 2 service.

In some cases, we have changed the structure of the assumption. For example, we observed that promotional and merit salary increases correlate better with an employee's years of service than with age, which was the previous practice.

Our recommendations for the actuarial assumption categories are as follows:

Retirement Rates - The probability of retirement at each age at which participants are eligible to retire.
Recommendation: Adjust the current retirement rates to those developed in Section III(B). All Enhanced members are assumed to retire slightly later with the most significant changes being made to the retirement rates for Safety Enhanced members. For Non-enhanced members the current rates were left unchanged.

Mortality Rates - The probability of dying at each age. Mortality rates are used to project life expectancies.
Recommendation: All pre- and post-retirement mortality rates for General and Safety members have been decreased as developed in Sections III(C) and III(D).

Termination Rates - The probability of leaving employment at each age and receiving either a refund of contributions or a deferred vested retirement benefit.
Recommendation: Increase the current termination rates overall for both General and Safety members to those developed in Section III(E).

Disability Incidence Rates - The probability of becoming disabled at each age.
Recommendation: Decrease the current disability rates overall for both General and Safety members to those developed in Section III(F).

Individual Salary Increases - Increases in the salary of a member between the date of the valuation to the date of separation from active service.
Recommendation: Change the promotional and merit increases to those developed in Section III(G), including a change from age based increases to service based increases. Overall, future salary increases are smaller under the new assumptions.

Terminal Pay – Additional pay elements that are expected to be received during the member's final average earnings period.
Recommendation: Decrease the current terminal pay assumptions for General Tier 3 and Safety to those developed in Section III(H).

Service From Unused Sick Leave Conversion – Additional service that is expected to be received when the member retires due to conversion of unused sick leave.
Recommendation: Increase the current assumption for all members as described in Section III(I).

Tier 3 Members Converting Prior Tier 2 Service – Conversion of Tier 2 service to Tier 3 service for Tier 3 members who transferred from Tier 2.
Recommendation: Eliminate the current assumption with regard to future conversion elections, as discussed in Section III(J).

Section II provides some background on basic principles and the methodology used for the experience study and for the review of the demographic actuarial assumptions. A detailed discussion of each assumption and reasons for the proposed changes is found in Section III. Section IV shows the cost impact of the proposed assumption changes.

II. BACKGROUND AND METHODOLOGY

In this report, we analyzed the "demographic" or "non-economic" assumptions only. Our analysis of the "economic" assumptions for the December 31, 2006 valuation is provided in a separate report. Demographic assumptions include the probabilities of certain events occurring in the population of members, referred to as "decrements," e.g., termination from service, disability retirement, service retirement, and death after retirement. We also review the individual salary increases net of inflation (i.e., the promotional and merit assumptions) in this report.

Demographic Assumptions

In order to determine the probability of an event occurring, we examine the "decrements" and "exposures" of that event. For example, taking termination from service, we compare the number of employees who actually terminate in a certain age and/or service category (i.e., the number of "decrements") with those who could have terminated (i.e., the number of "exposures"). For example, if there were 500 active employees in the 20-24 age group at the beginning of the year and 50 of them terminate during the year, we would say the probability of termination in that age group is 50 ÷ 500 or 10%.

The reliability of the resulting probability is highly dependent on both the number of decrements and the number of exposures. For example, if there are only a few people in a high age category at the beginning of the year (number of exposures), we would not lend as much credence to the probability of termination developed for that age category, especially if it is out of line with the pattern shown for the other age groups. Similarly, if we are considering the death decrement, there may be a large number of exposures in, say, the age 20-24 category, but very few decrements (actual deaths); therefore, we would not be able to rely heavily on the probability developed for that category.

One reason we use several years of experience for such a study is to have more exposures and decrements, and therefore more statistical reliability. Another reason for using several years of data is to smooth out fluctuations that may occur from one year to the next. However, we also calculate the rates on a year-to-year basis to check for any trend that may be developing in the later years.

III. ACTUARIAL ASSUMPTIONS

A. ECONOMIC ASSUMPTIONS

The economic assumptions have historically been reviewed on an annual basis. In the course of our most recent review we recommended and the Board adopted a policy that those assumptions be reviewed only once every three years unless there are extraordinary events which prompt a more frequent review. See the separate reported titled "Review of Economic Actuarial Assumptions for the December 31, 2006 Actuarial Valuation" that was issued on February 2, 2007.

B. RETIREMENT RATES

The age at which a member retires from service (i.e. who did not retire on a disability pension) will affect both the amount of the benefits that will be paid to that member as well as the period over which funding must take place.

The table on the following page shows the observed service retirement rates for General Enhanced Tier 1 members based on the actual experience over the three year period. The observed service retirement rates were determined by comparing those members who actually retired from service to those eligible to retire from service. This same methodology is followed throughout this report and was described in Section II. Also shown are the current rates assumed and the rates we propose:

General Enhanced Tier 1

Age	Current Rate of Retirement	Actual Rate of Retirement	Proposed Rate of Retirement
Under 50	0.00%	45.45%	0.00%
50	3.00	2.82	3.00
51	3.00	5.13	3.00
52	5.00	4.76	5.00
53	10.00	4.42	8.00
54	15.00	14.14	15.00
55	20.00	17.49	20.00
56	20.00	14.65	20.00
57	25.00	16.67	25.00
58	25.00	28.69	25.00
59	25.00	23.23	25.00
60	25.00	28.26	25.00
61	30.00	39.19	30.00
62	30.00	47.37	30.00
63	30.00	33.33	30.00
64	30.00	50.00	30.00
65	35.00	28.57	35.00
66	35.00	75.00	35.00
67	35.00	50.00	35.00
68	35.00	100.00	35.00
69	35.00	0.00	35.00
70 & Over	100.00	36.36	100.00

As shown above, we are only recommending a change in the retirement rate at age 53 for General Enhanced Tier 1 members.

Chart 1 that follows later in this section compares actual experience with the current and proposed rates of retirement for General Enhanced Tier 1 members.

The following table shows the observed retirement rates for General Enhanced Tier 3 members over the three year period. Also shown are the current rates assumed and the rates that we propose:

General Enhanced Tier 3

Age	Current Rate of Retirement	Actual Rate of Retirement	Proposed Rate of Retirement
Under 50	0.00%	100.00%	0.00%
50	3.00	2.82	3.00
51	3.00	1.38	3.00
52	5.00	2.50	3.00
53	5.00	2.00	3.00
54	10.00	6.53	5.00
55	10.00	10.56	10.00
56	10.00	5.47	10.00
57	10.00	8.82	10.00
58	10.00	10.13	10.00
59	10.00	13.46	10.00
60	15.00	17.54	15.00
61	15.00	24.85	20.00
62	25.00	29.66	25.00
63	25.00	15.85	25.00
64	30.00	26.76	30.00
65	35.00	56.25	35.00
66	35.00	22.22	35.00
67	35.00	29.17	35.00
68	35.00	28.57	35.00
69	35.00	42.11	35.00
70 & Over	100.00	26.09	100.00

Please note that this includes the actual retirement experience related to Tier 2 members since all Tier 2 active members transferred to Tier 3 during the experience period. As shown above, we are only recommending changes in the retirement rates at ages 52-54 and 61 for General Enhanced Tier 3 members.

Chart 2 compares actual experience with the current and proposed rates of retirement for General Enhanced Tier 3 members.

The following table shows the observed retirement rates for Safety Enhanced Tier A members over the three year period. Also shown are the current rates assumed and the rates we propose:

Safety Enhanced Tier A

Age	Current Rate of Retirement	Actual Rate of Retirement	Proposed Rate of Retirement
Under 45	0.00%	0.00%	0.00%
45	0.00	2.56	2.00
46	0.00	2.00	2.00
47	0.00	0.00	2.00
48	0.00	6.85	2.00
49	0.00	22.47	10.00
50	30.00	22.43	25.00
51	25.00	16.47	20.00
52	25.00	18.75	20.00
53	25.00	17.33	20.00
54	30.00	20.51	25.00
55	45.00	17.39	30.00
56	45.00	32.69	30.00
57	50.00	33.33	40.00
58	50.00	29.41	40.00
59	50.00	20.00	40.00
60 & over	100.00	32.26	100.00

We recommend reducing retirement rates for most ages as well as introducing rates under age 50 for Safety Enhanced Tier A members.

Chart 3 compares actual experience with the current and proposed rates of retirement for Safety Enhanced Tier A members.

The following table shows the current rates assumed and the rates we propose for Safety Enhanced Tier C members:

Safety Enhanced Tier C

Age	Current Rate of Retirement	Proposed Rate of Retirement
Under 45	0.00%	0.00%
45	0.00	1.00
46	0.00	1.00
47	0.00	1.00
48	0.00	1.00
49	0.00	5.00
50	20.00	15.00
51	15.00	12.00
52	15.00	12.00
53	15.00	12.00
54	20.00	15.00
55	35.00	20.00
56	35.00	20.00
57	35.00	25.00
58	35.00	25.00
59	40.00	30.00
60 & over	100.00	100.00

We recommend reducing retirement rates for most ages as well as introducing non-zero rates under age 50 for Safety Enhanced Tier C members. The current assumptions are from our Safety Tiers Benefit Cost Study. There is no actual experience during this period for members in this tier since this tier was created on January 1, 2007. We have based our recommended rates on a combination of the assumption used in the cost study and the less than expected actual retirement experience that occurred for Safety Enhanced Tier A members.

Chart 4 compares the current rates with the proposed rates of retirement for Safety Enhanced Tier C members.

For those members not covered under the enhanced benefit formulas, we are recommending that the current retirement rates be left unchanged. There is only a small group of members covered by the non-enhanced formulas and there is insufficient data to support a modification of the rates.

The following table shows the current and proposed rates for non-enhanced members:

Age	General Non-enhanced Current and Proposed Rate of Retirement	Safety Non-enhanced Current and Proposed Rate of Retirement
Under 50	0.00%	0.00%
50	3.00	1.00
51	3.00	1.00
52	3.00	1.00
53	3.00	1.00
54	3.00	1.00
55	10.00	2.00
56	10.00	2.00
57	10.00	3.00
58	10.00	4.00
59	10.00	20.00
60	25.00	17.00
61	15.00	17.00
62	40.00	18.00
63	25.00	20.00
64	30.00	100.00
65	40.00	100.00
66	35.00	100.00
67	35.00	100.00
68	35.00	100.00
69	35.00	100.00
70 & Over	100.00	100.00

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In prior valuations, deferred vested General and Safety members were assumed to retire at age 58 and 55, respectively. The average age at retirement over the prior three years was 58 for General and 55 for Safety. We recommend leaving the General assumption at age 58 and the Safety assumption at age 55.

It was also assumed that 50% of inactive General and Safety deferred vested members would be covered under a reciprocal retirement system and receive 6.25% salary increases from termination until their date of retirement. Based on the actual experience that 37% of General and 60% of Safety members went on to be covered by a reciprocal retirement system during the last three years, we recommend a 40% reciprocal assumption be utilized for General members and a 60% reciprocal assumption be utilized for Safety members. Based on our recommended merit and promotional salary increase assumptions, we propose that the 6.25% salary increase assumption be left unchanged and used to anticipate salary increases from termination from CCCERA to the expected date of retirement.

In prior valuations, it was assumed that 80% of all active male members and 55% of all active female members would be married or have an eligible domestic partner when they retired. We reviewed new retirees during the three year period and determined the actual percentage of these new retirees that had an eligible spouse or eligible domestic partner at the time of retirement. The results of that analysis are shown below:

New Retirees – Actual Percent with Eligible Spouse or Domestic Partner

Year Ending December 31	Male	Female
2004	81%	44%
2005	70%	51%
2006	71%	57%
Total	73%	51%

According to experience of members who retired during the last three years, about 73% of all male members and 51% of all female members were married or had a domestic partner at retirement. However, we recommend no change at this time due to the following two reasons:

1) Starting January 1, 2000, spouses of members who marry for the first time or remarry after retirement are eligible for survivor continuance benefits as defined in Section 31760.2; and

2) Starting January 1, 2005, surviving domestic partners became eligible for this benefit, and we believe that more experience needs to be collected on those that retire and have a domestic partner.

Since the value of the survivor's benefit is dependent on the survivor's age and sex, we must also have assumptions for the age and sex of the survivor. Based on the experience during the three year period and studies done for other retirement systems, we believe that it is reasonable to maintain the current assumptions. Since the majority of survivors are expected to be of the opposite sex, even with the inclusion of domestic partners, we will continue to assume that the survivor's sex is the opposite of the member.

The current assumption for the age of the survivor and recommended assumption are shown below. These assumptions will continue to be monitored in future experience studies.

Survivor Ages – Current Assumptions

	Survivor's Age as Compared to Member's Age	
Beneficiary Sex	Current Assumption	Recommended Assumption
Male	3 years older	No change
Female	3 years younger	No change

Chart 1
Retirement Rates - General Enhanced Tier 1 Members

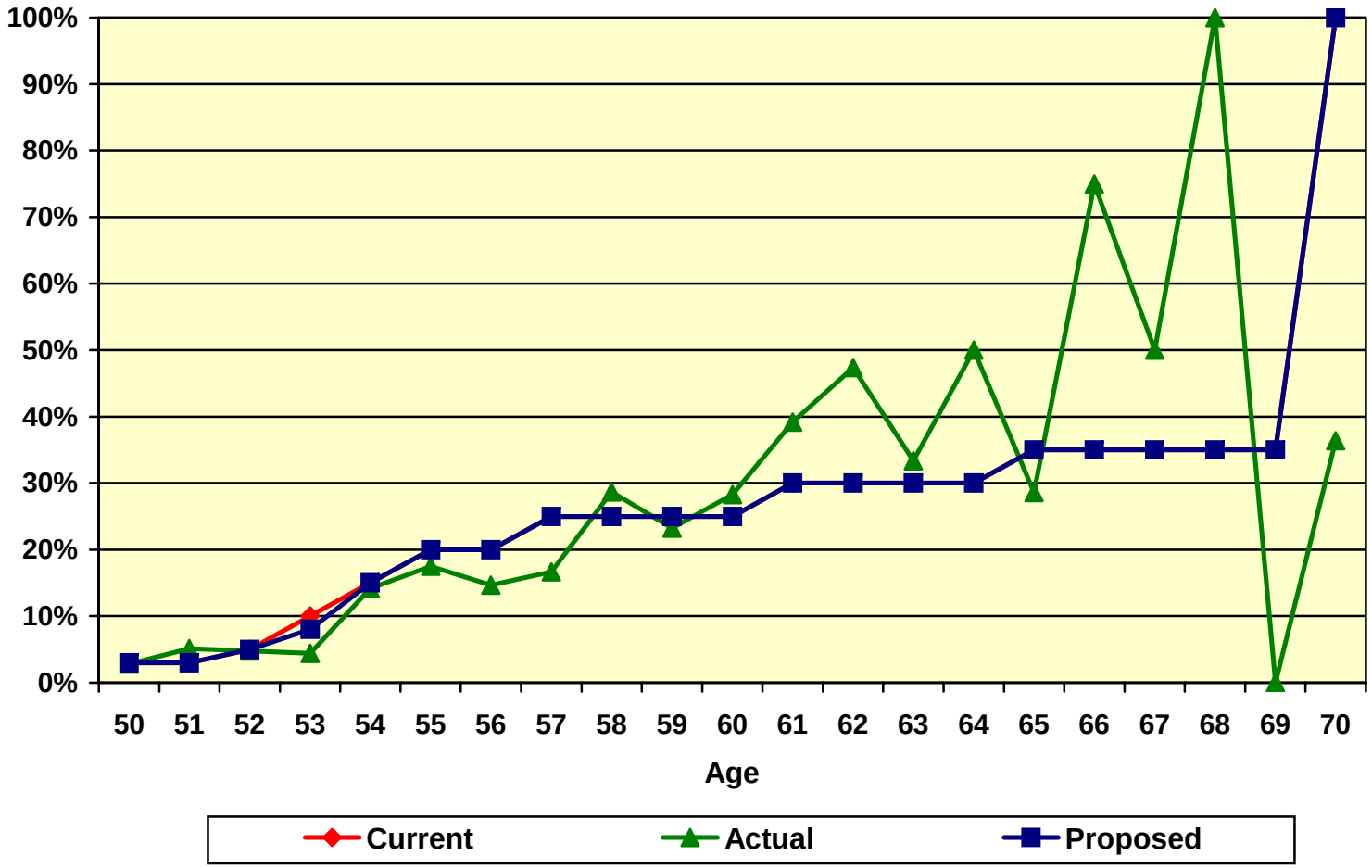


Chart 2
Retirement Rates - General Enhanced Tier 3 Members

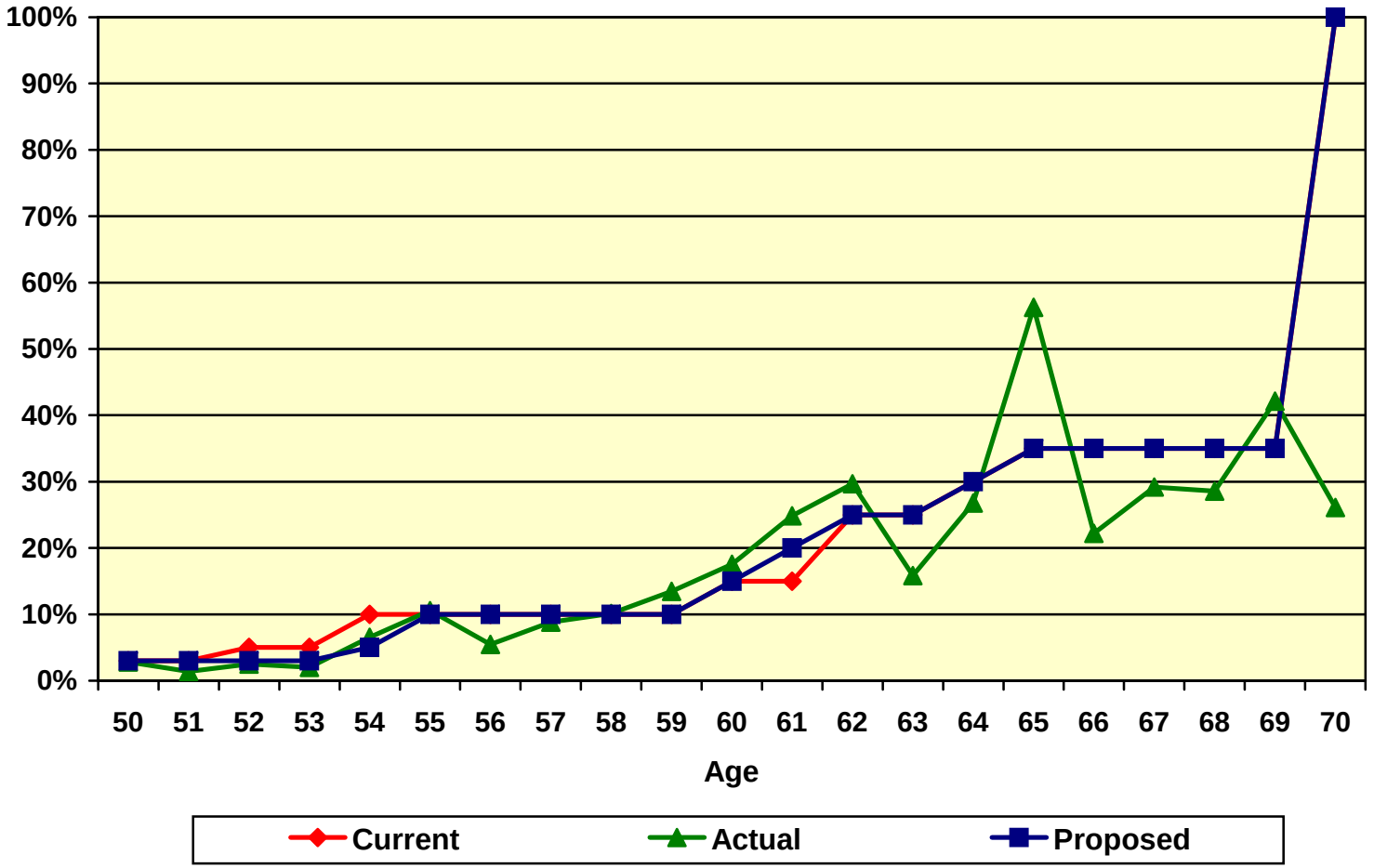


Chart 3
Retirement Rates - Safety Enhanced Tier A Members

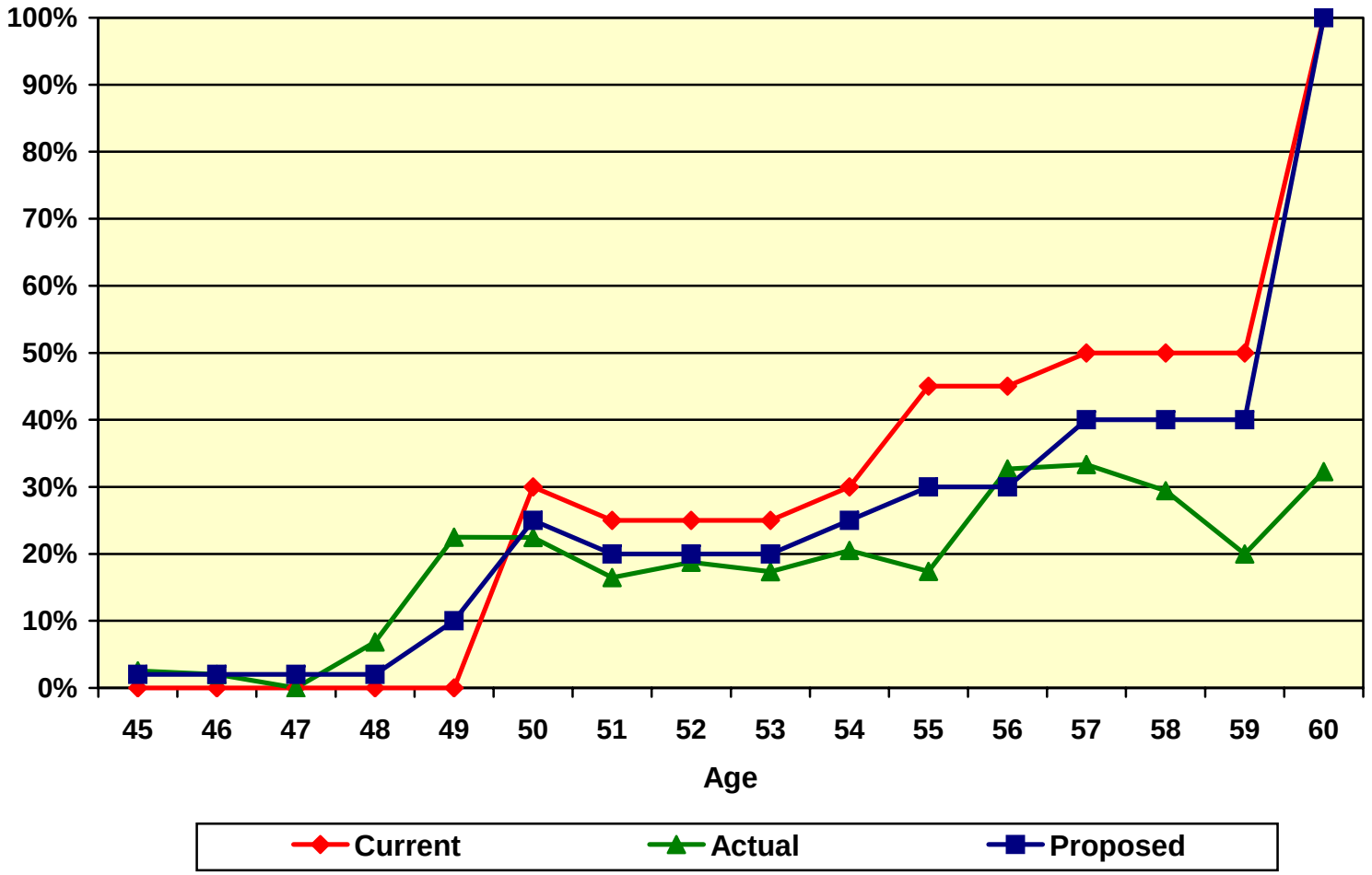
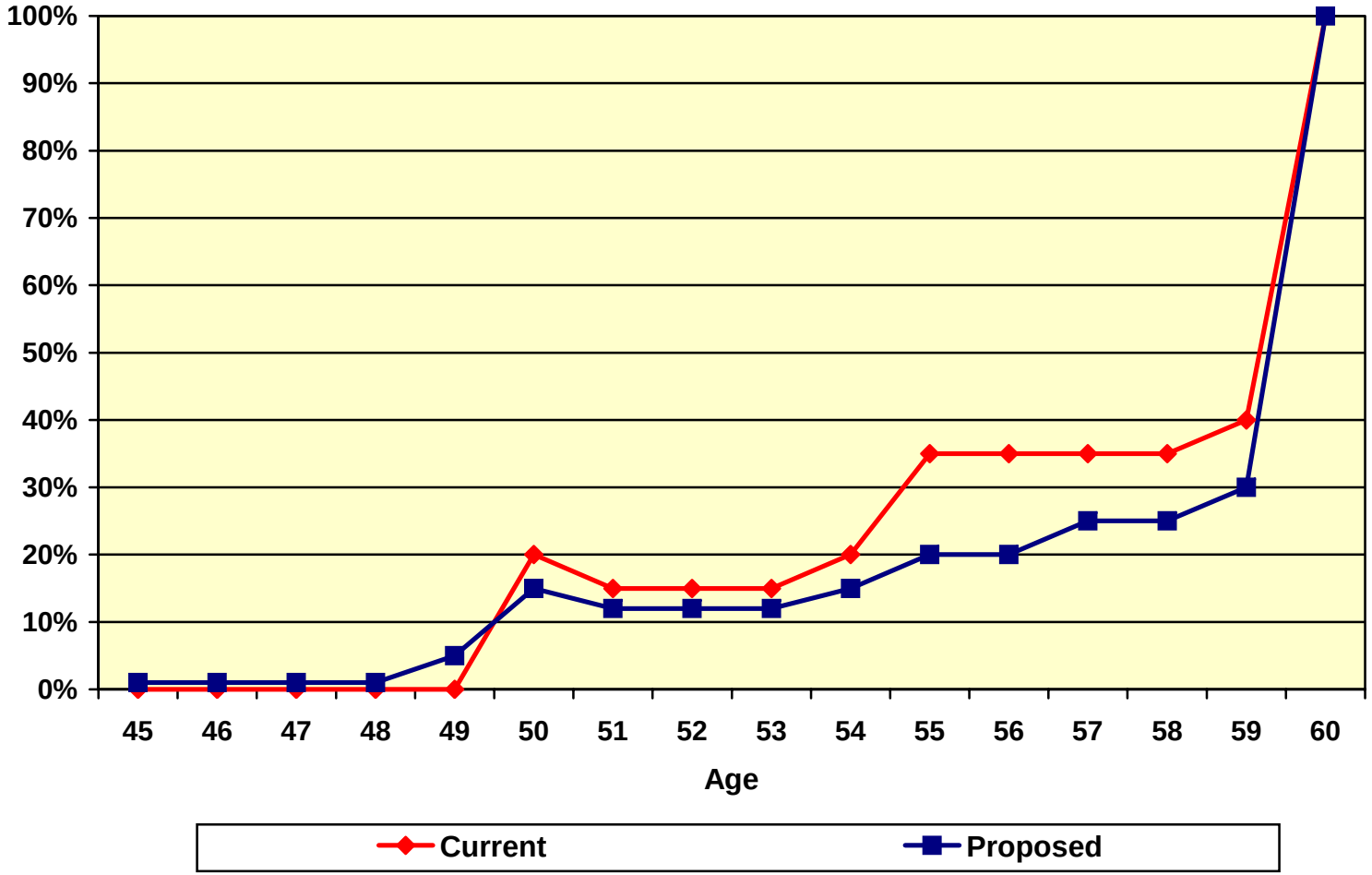


Chart 4
Retirement Rates - Safety Enhanced Tier C Members



C. MORTALITY RATES - HEALTHY

The "healthy" mortality rates project what proportion of members will die before retirement as well as the life expectancy of a member who retires from service (i.e., who did not retire on a disability pension). The table currently being used for post-service retirement mortality rates is the 1994 Group Annuity Mortality Table for males and females. For General members the tables are set forward one year. For Safety members the tables are set forward two years.

Pre-Retirement Mortality

The number of deaths among active members is not large enough to provide statistics credible enough to develop a unique table. Therefore, we continue to propose that pre-retirement mortality follow the same tables used for post-retirement mortality. All pre-retirement deaths are assumed to be ordinary (non-duty). This is based on recent experience and discussions with staff at the Association office.

Post-Retirement Mortality (Service Retirements)

Among service retired members, the actual deaths compared to the expected deaths under the current assumption for the last three years is as follows:

	General - Healthy			**Safety – Healthy**		
Year	Expected Deaths	Actual Deaths	Proposed Expected Deaths	Expected Deaths	Actual Deaths	Proposed Expected Deaths
2004	114	100	93	15	14	10
2005	122	135	100	17	12	11
2006	127	82	103	18	9	12
Total	363	317	296	50	35	33
Actual / Expected	87%		107%	70%		106%

Chart 5 compares actual to expected deaths for General members under the current and proposed assumptions over the last three years. Experience shows that there were fewer deaths than predicted by the current table.

Chart 6 has the same comparison for Safety members. Experience shows that there were also fewer deaths than predicted by the current table.

For General service retirees the ratio of actual to expected deaths was 87%. We recommend changing to the RP-2000 Combined Tables (separate tables for males and females) with a two year set back. This will bring the actual to expected ratio to 107%. This is consistent with standard actuarial practice to include some margin in the rates to anticipate expected future improvement in life expectancy. Generally, preferable practice is to have a margin of around 10%; that is, the actual deaths among current retirees are around 10% greater than the expected deaths during the study period.

For Safety service retirees the ratio of actual to expected deaths was 70%. We also recommend changing to the RP-2000 Combined Table (separate tables for males and females) with a two year set back. This will bring the actual to expected ratio to 106%. We will continue to monitor this assumption closely in future studies.

Chart 7 shows the life expectancies under the current and the proposed tables for General members.

Chart 8 has the same information for Safety members.

Mortality Table for Member Contributions

We recommend that the mortality table used for determining contributions for General members be updated from the 1994 Group Annuity Mortality Table set forward one year weighted 30% male and 70% female to the RP-2000 Combined Table set back two years weighted 30% male and 70% female. This is based on the proposed valuation mortality table for General members and the actual sex distribution of General members.

For Safety members, we recommend the mortality table be changed from the 1994 Group Annuity Mortality Table with a two year set forward weighted 85% male and 15% female to the RP-2000 Combined Table set back two years weighted 85% male and 15% female. This is based on the proposed valuation mortality table for Safety members and the actual sex distribution of Safety members.

Chart 5
Post - Retirement Deaths
Non - Disabled General Members

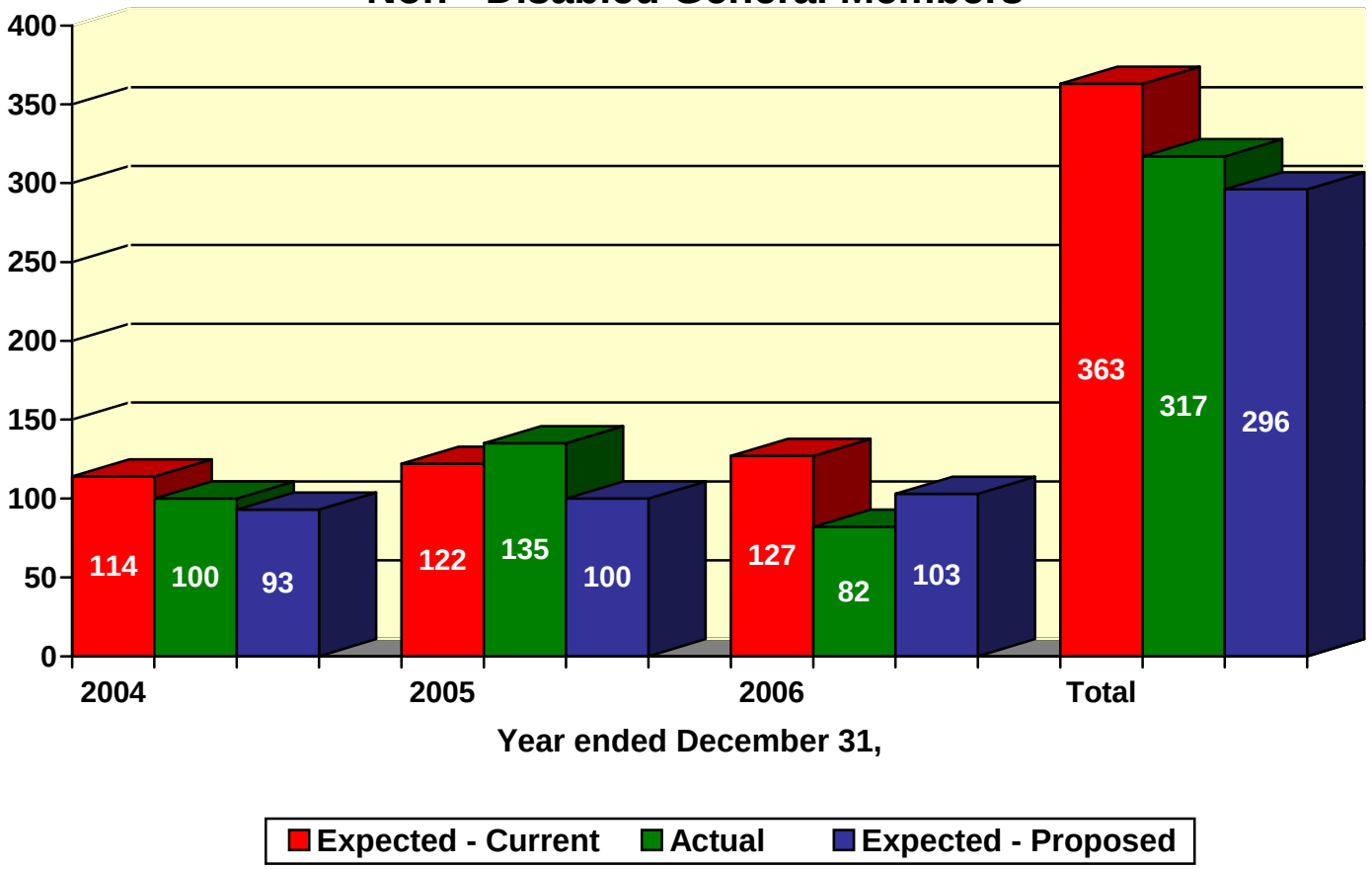


Chart 6
Post - Retirement Deaths
Non - Disabled Safety Members

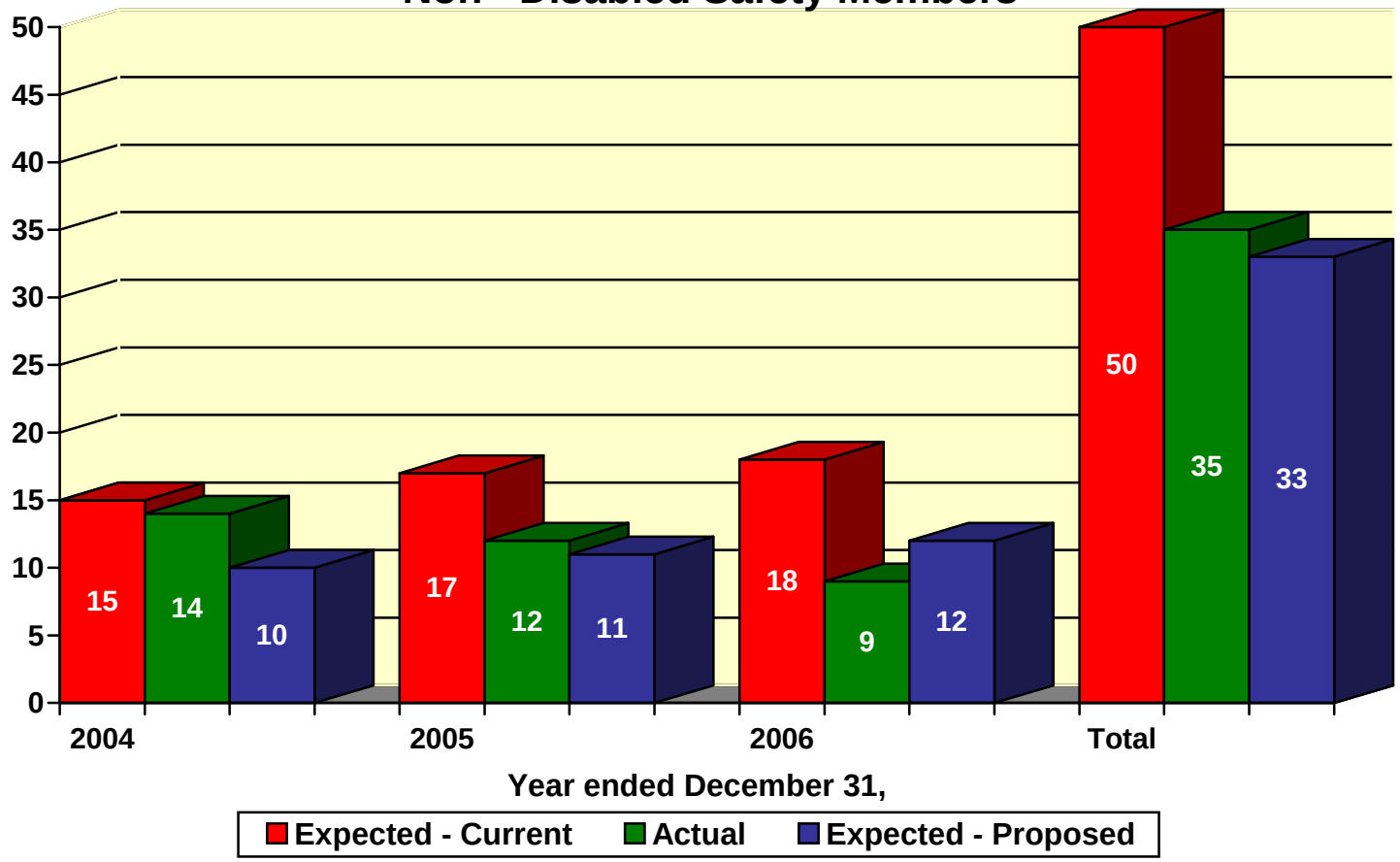


Chart 7
Life Expectancies
Non - Disabled General Members

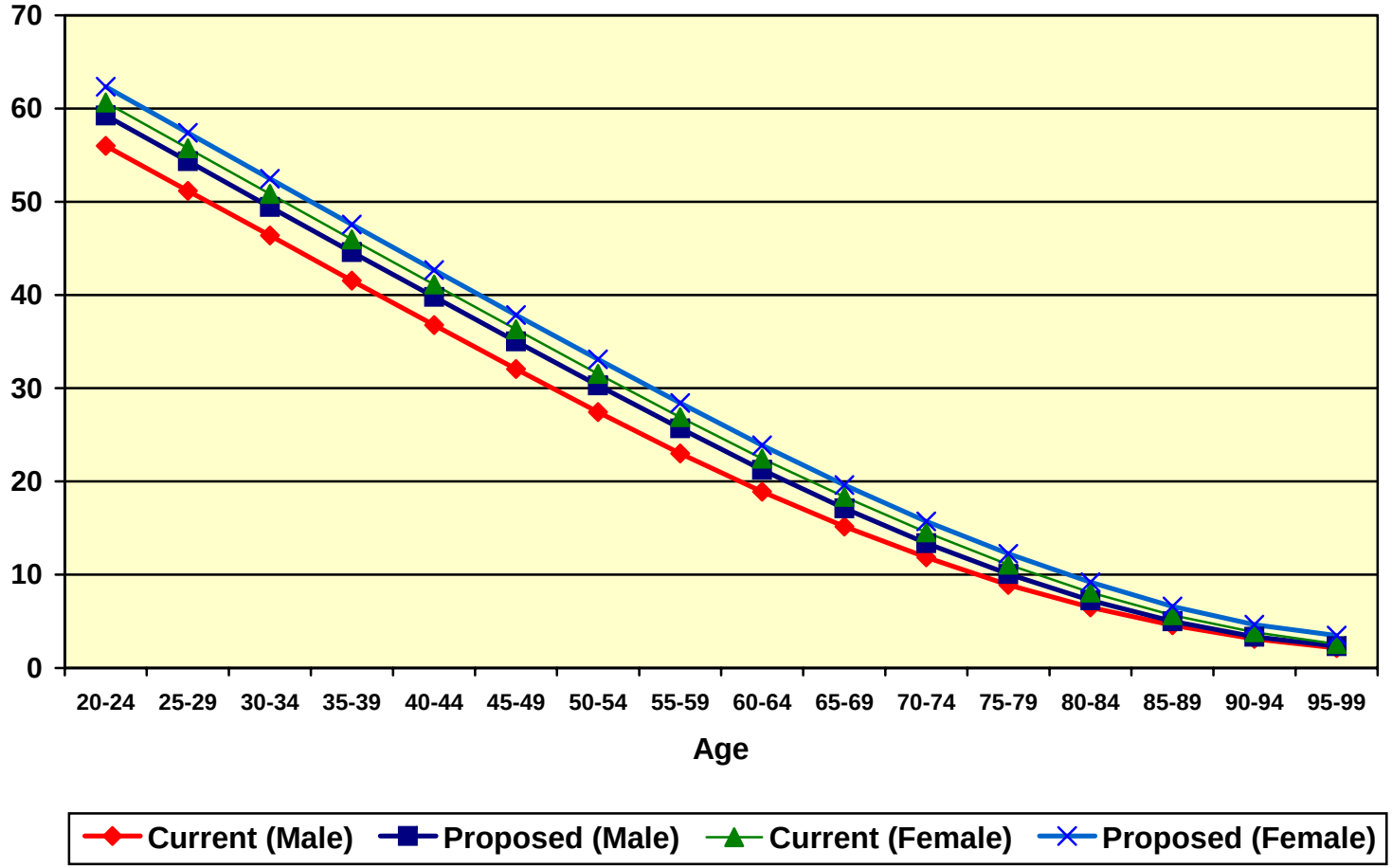
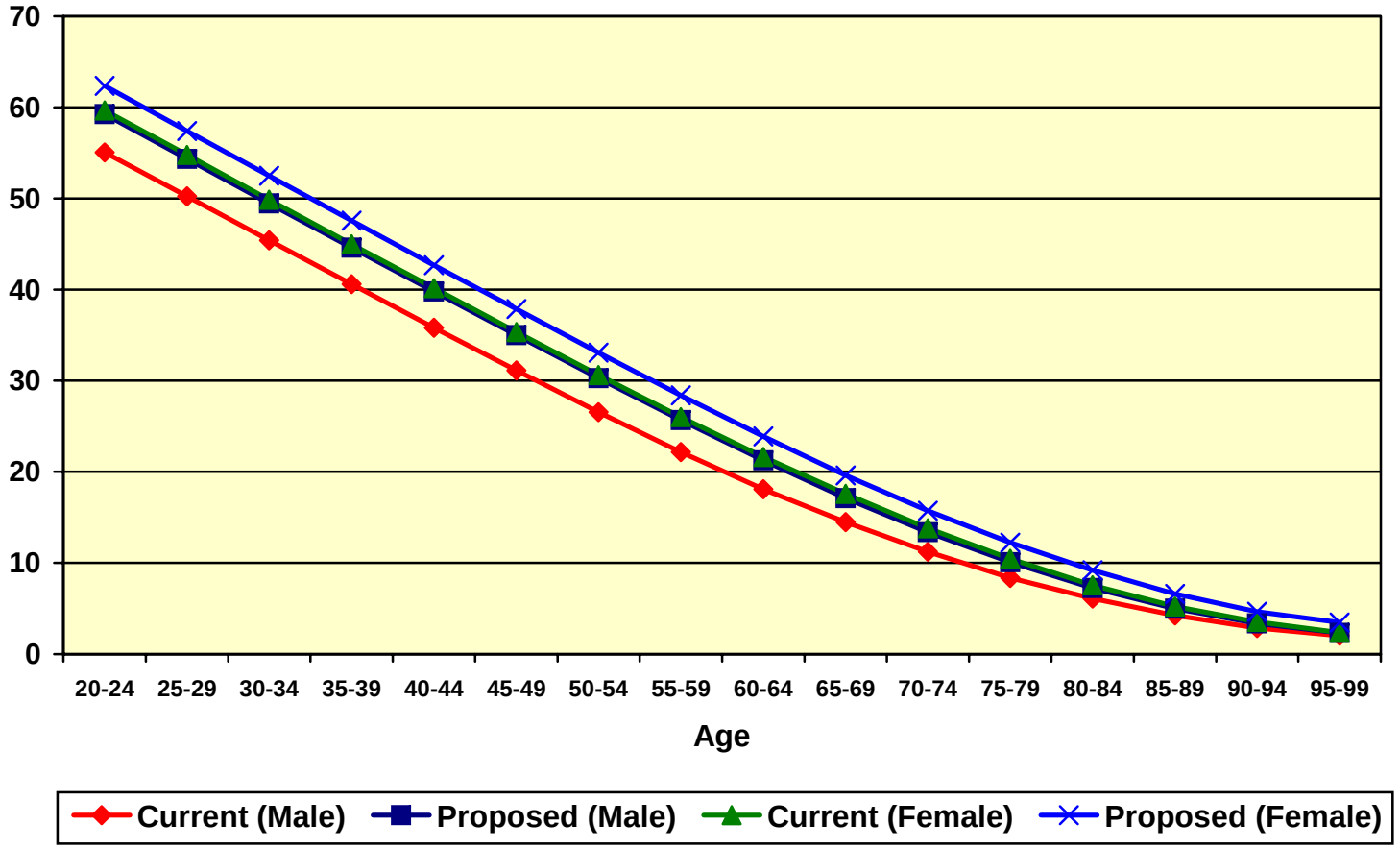


Chart 8
Life Expectancies
Non - Disabled Safety Members



D. MORTALITY RATES - DISABLED

Since mortality rates for disabled members can vary from those of healthy members, a different mortality assumption is often used. The table currently being used for General members is the 1981 Disability Mortality Table (General) set back three years. For Safety members, the 1994 Group Annuity Mortality Table set forward two years is used.

The number of actual deaths compared to the number expected for the last three years has been as follows:

	General – Disabled			Safety – Disabled		
	Expected Deaths	Actual Deaths	Proposed Expected Deaths	Expected Deaths	Actual Deaths	Proposed Expected Deaths
2004	19	20	15	5	9	4
2005	19	19	16	6	3	4
2006	19	17	17	6	2	5
Total	57	56	48	17	14	13
Actual / Expected	98%		117%	82%		108%

Based on this experience, we recommend that the mortality table for General members be changed to the RP-2000 Combined Table (separate tables for males and females) with a six year set forward and for Safety members be changed to the RP-2000 Combined Table (separate tables for males and females) with no adjustments.

Chart 9 compares actual to expected deaths under both the current and proposed assumptions for disabled General members over the last three years. Experience shows that there were about the same number of deaths as predicted by the current table. Our recommendation incorporates a margin for future mortality improvement. This margin is somewhat greater than the 10% standard discussed above because of the relatively small amount of data available.

Chart 10 has the same comparison for Safety members. Experience shows that there were less deaths than predicted by the current table. Our recommended assumption adjusts for this difference, plus a margin for future mortality improvement.

Chart 11 shows the life expectancies under both the current and proposed tables for General members.

Chart 12 shows the same information for Safety members.

Chart 9
Post - Retirement Deaths
Disabled General Members

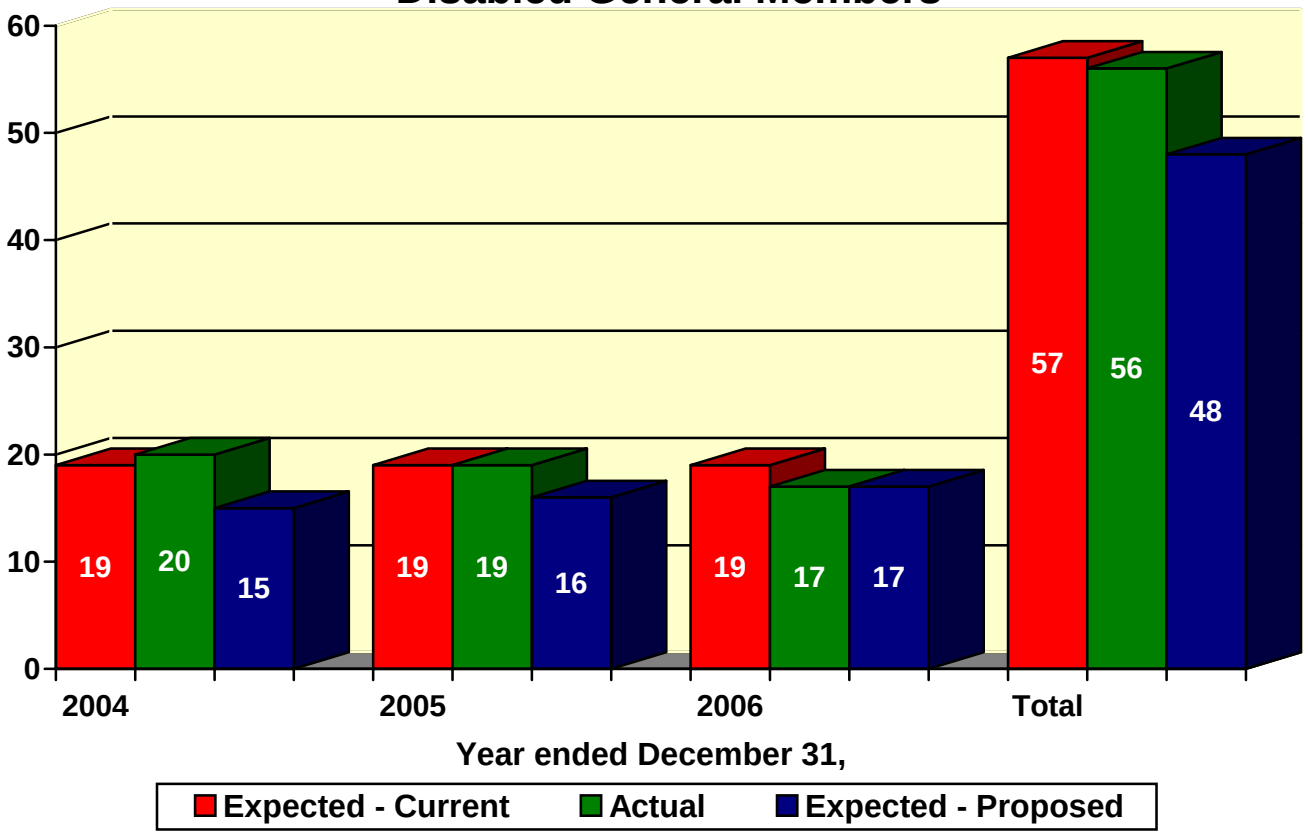


Chart 10
Post - Retirement Deaths
Disabled Safety Members

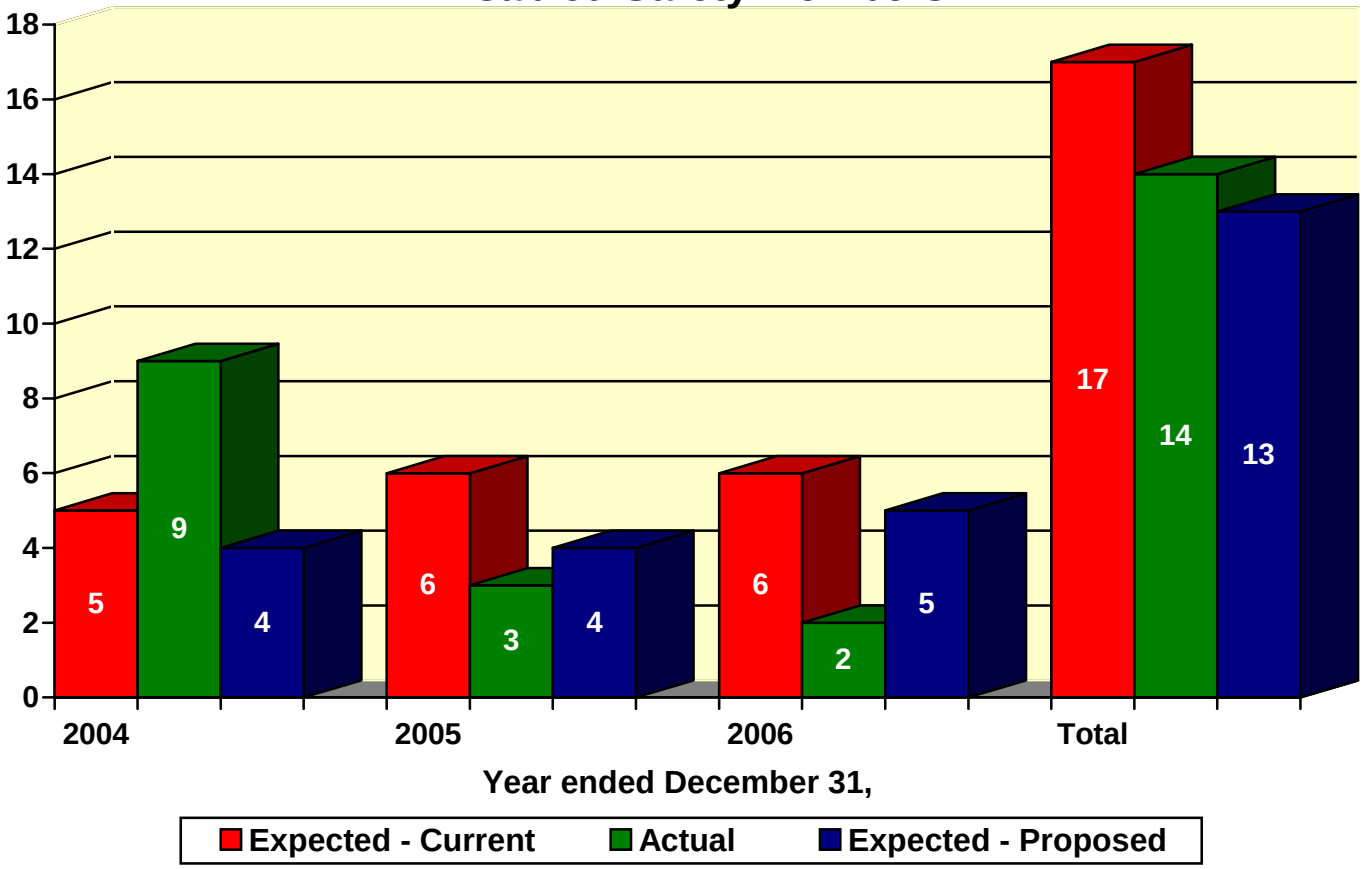


Chart 11
Life Expectancies
Disabled General Members

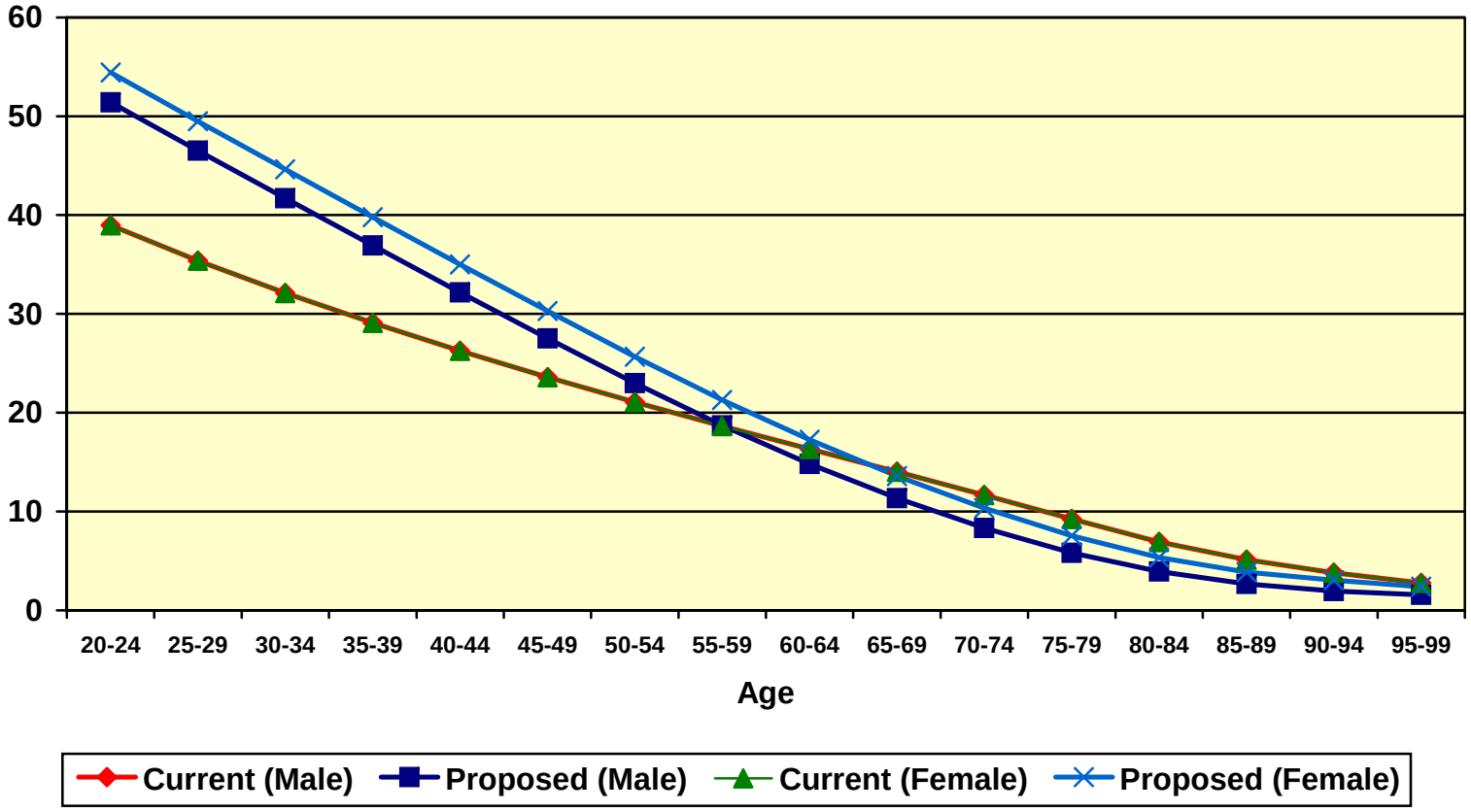
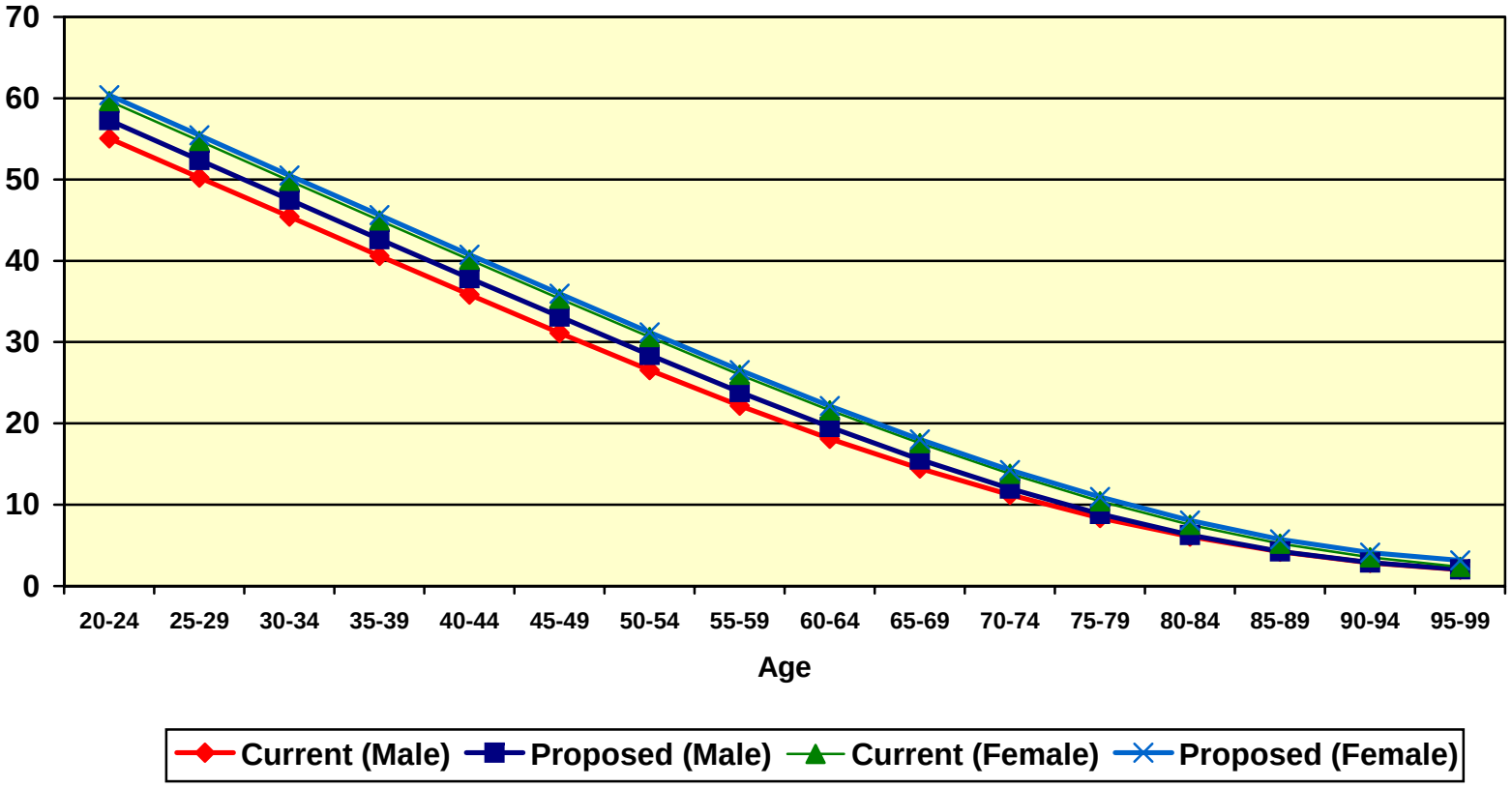


Chart 12
Life Expectancies
Disabled Safety Members



E. TERMINATION RATES

Termination rates include all terminations for reasons other than death, disability, or retirement. Under the current assumptions there is an overall incidence of termination assumed combined with an assumption that a member will choose between a refund of contributions and deferred vested benefit based on which option is more valuable. With this study, we continue to recommend that this same assumption structure be used. The termination experience over the last three years for General and Safety members, separated between those employees with under five years of service and those with five or more years of service, is as follows:

Rates of Termination (General)
(Less than Five Years of Service)

Years of Service	Current Rate	Observed Rate	Proposed Rate
0	13.00%	15.68%	14.00%
1	7.00	10.49	9.00
2	6.00	10.96	8.00
3	5.00	6.46	6.00
4	4.00	5.34	5.00

Rates of Termination (Safety)
(Less than Five Years of Service)

Years of Service	Current Rate	Observed Rate	Proposed Rate
0	9.00%	13.81%	11.00%
1	6.00	8.68	7.00
2	5.00	4.14	5.00
3	4.00	4.05	4.00
4	3.00	2.38	3.00

Rates of Termination (General)
(Five or More Years of Service)

Age	Current Rate	Observed Rate	Proposed Rate
20 – 24	4.00%	0.00%	5.00%
25 – 29	4.00	6.32	5.00
30 – 34	4.00	5.53	5.00
35 – 39	4.00	5.57	4.66
40 – 44	3.61	4.14	3.97
45 – 49	2.71	3.09	2.98
50 – 54	0.91	1.24	1.00
55 – 59	0.12	1.23	0.13
60 – 64	0.00	2.17	0.00
65 – 69	0.00	3.02	0.00

Rates of Termination (Safety)
(Five or More Years of Service)

Age	Current Rate	Observed Rate	Proposed Rate
20 – 24	3.00%	0.00%	3.00%
25 – 29	3.00	5.88	3.00
30 – 34	2.43	2.83	2.68
35 – 39	1.75	2.53	1.93
40 – 44	1.30	1.66	1.43
45 – 49	0.64	0.72	0.71
50 – 54	0.00	0.90	0.00
55 – 59	0.00	1.24	0.00
60 – 64	0.00	3.85	0.00

Chart 13 compares actual to expected terminations over the past three years for both the current and proposed assumptions for General members.

Chart 14 graphs the same information as Chart 13, but for Safety members.

Chart 15 shows the current, along with the proposed termination rates for General members with less than five years of service.

Chart 16 shows the same information as Chart 15, but for Safety members.

Chart 17 shows the current, along with the proposed termination rates for General members with five or more years of service.

Chart 18 shows the same information as Chart 17, but for Safety members.

Based upon the recent experience, the termination rates for both General and Safety members have been slightly increased. We will also continue to assume that all termination rates are zero at any age where members are assumed to retire. That is, the members will either retire (and commence receiving a benefit) or continue working.

Chart 13
Actual Number of Terminations Compared to Expected - General Members

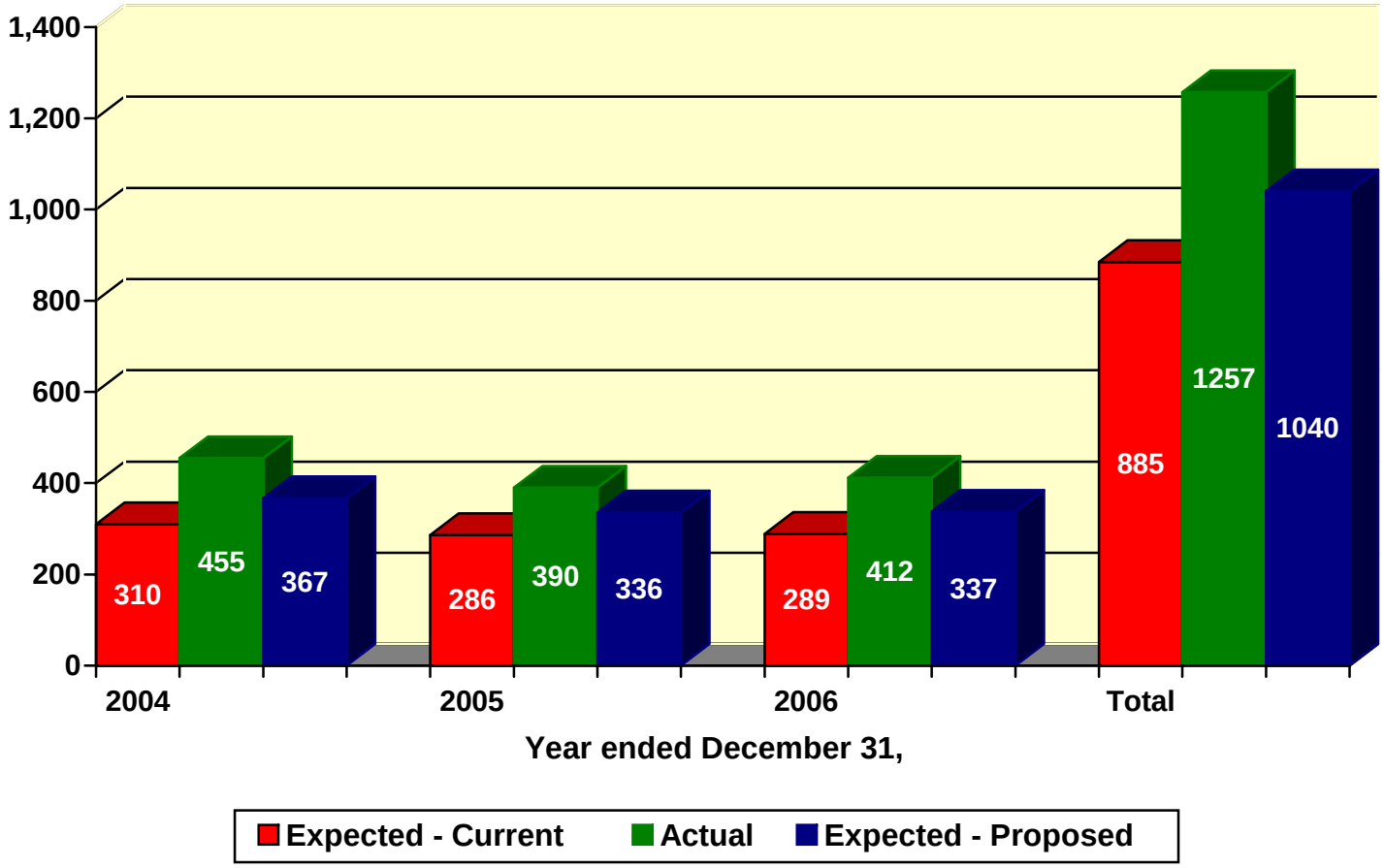


Chart 14
Actual Number of Terminations Compared to Expected - Safety Members

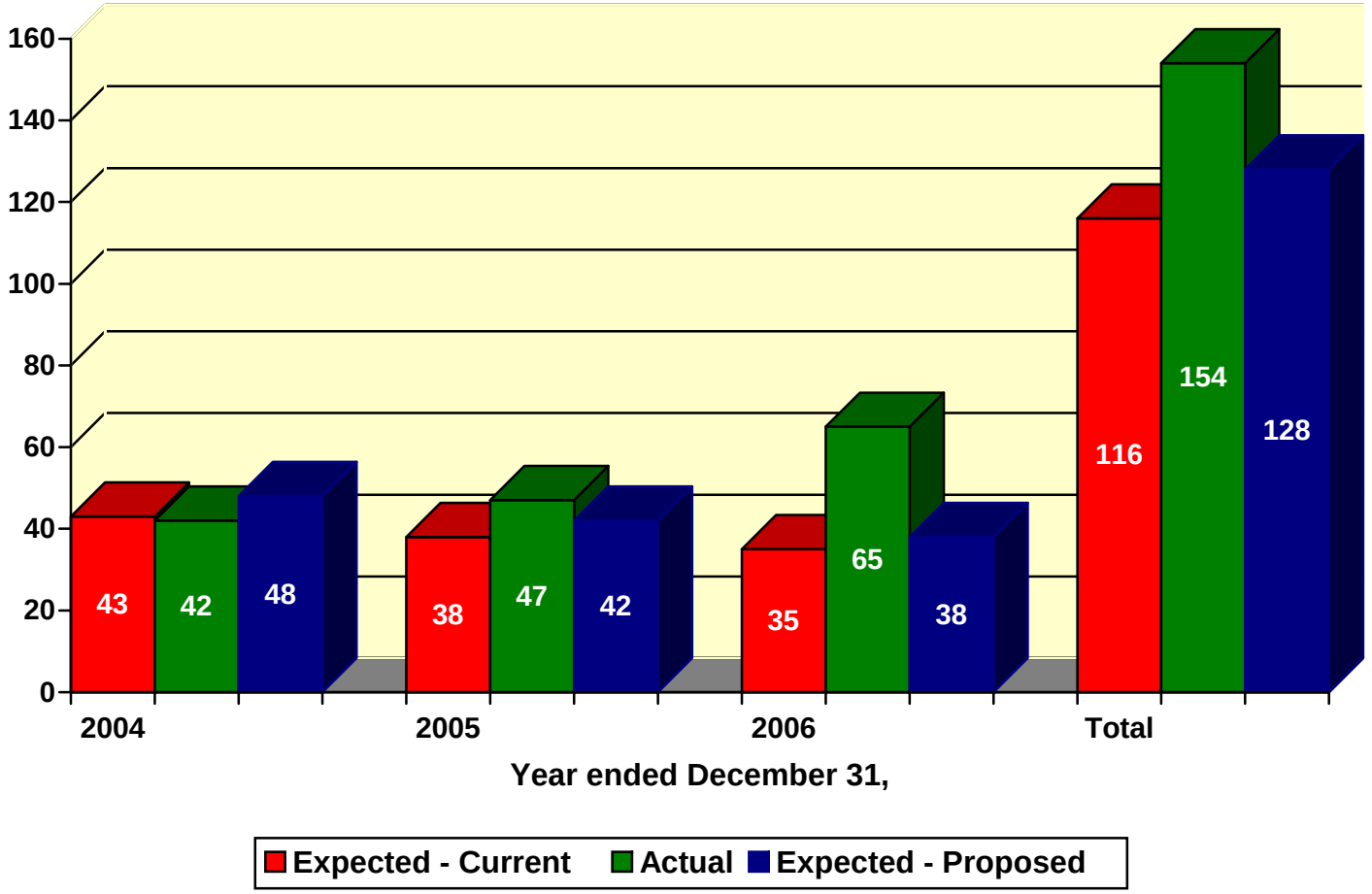


Chart 15
Termination Rates - General Members
(Less than Five Years of Service)

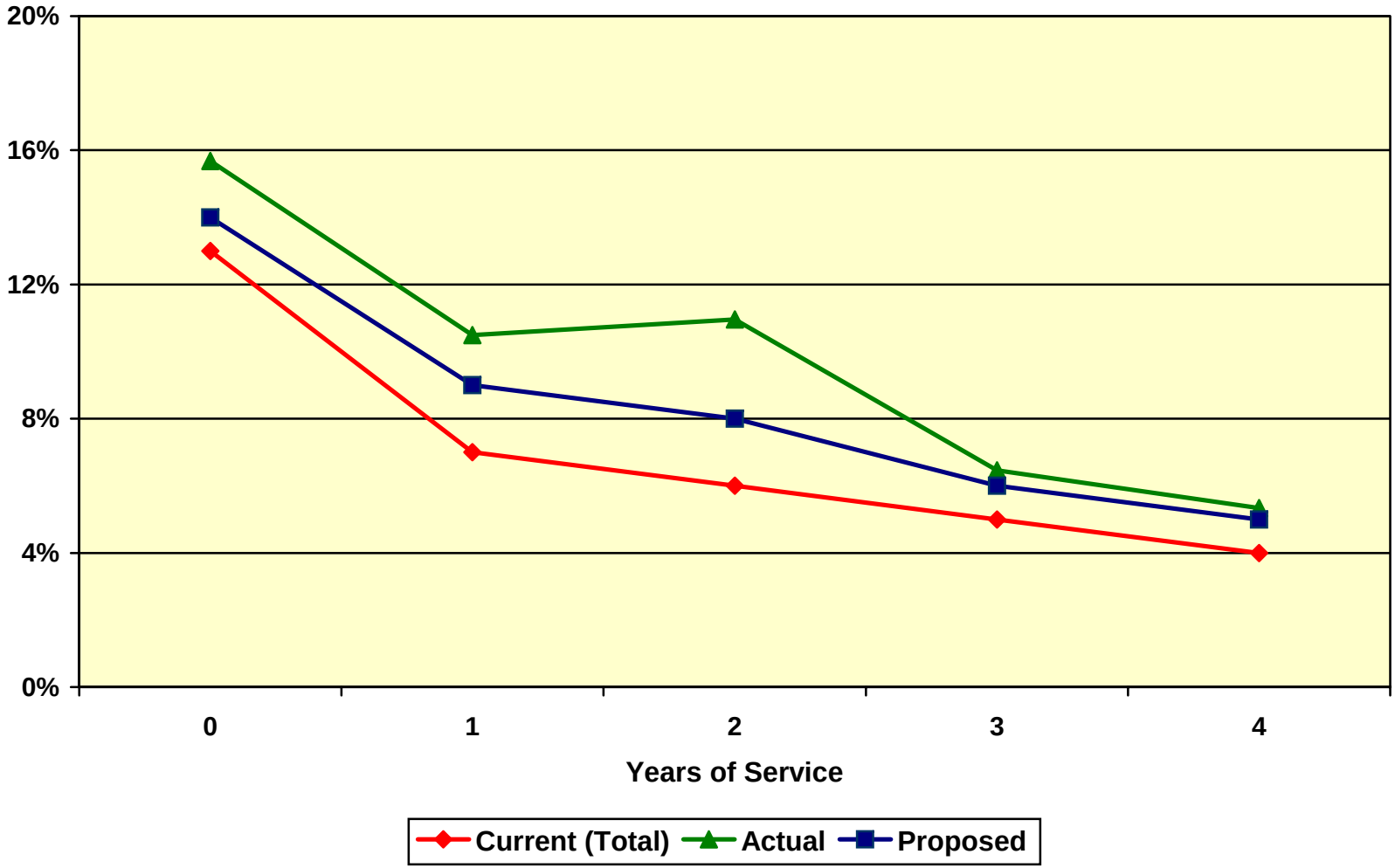


Chart 16
Termination Rates - Safety Members
(Less Than Five Years of Service)

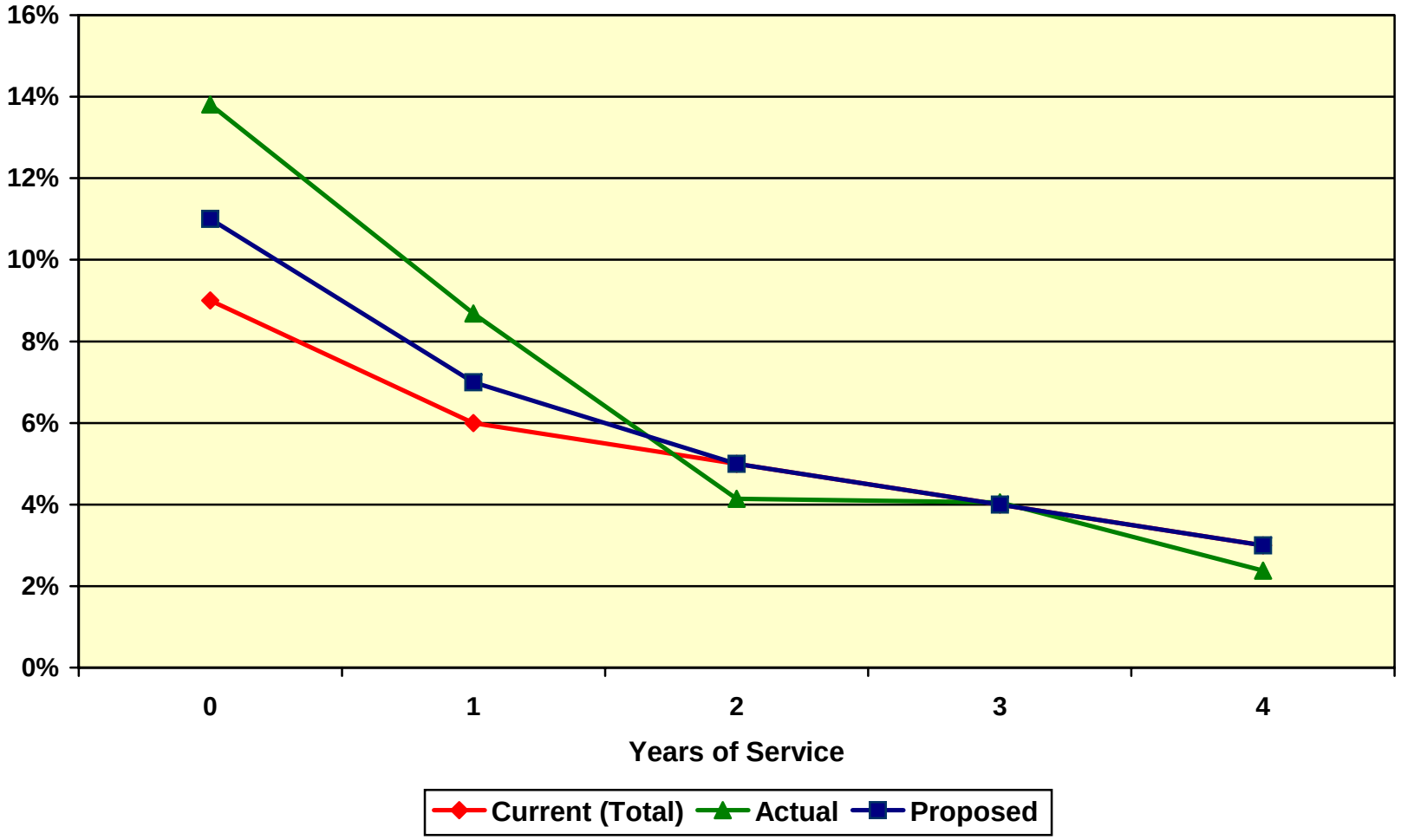


Chart 17
Termination Rates - General Members
(Five or More Years of Service)

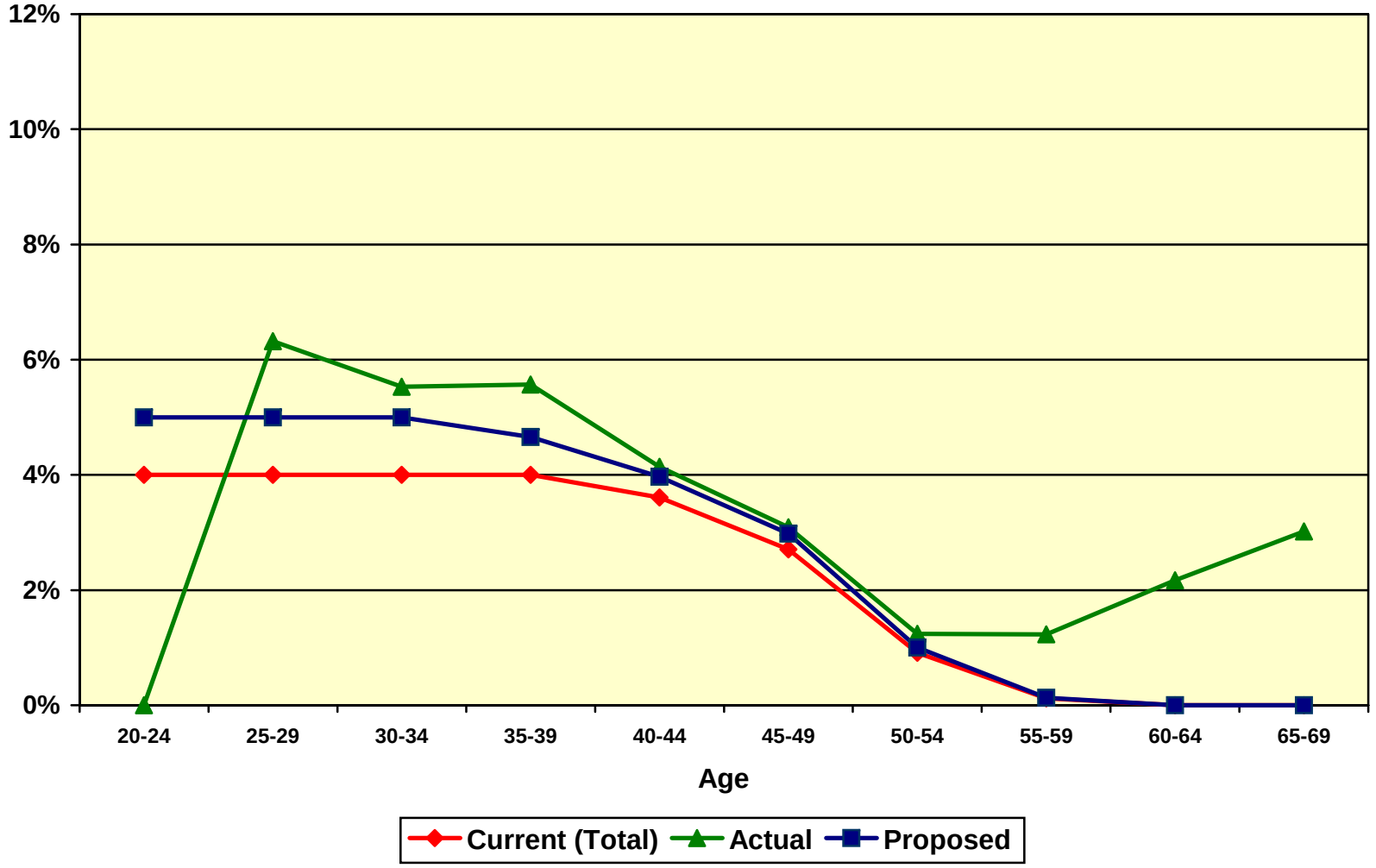
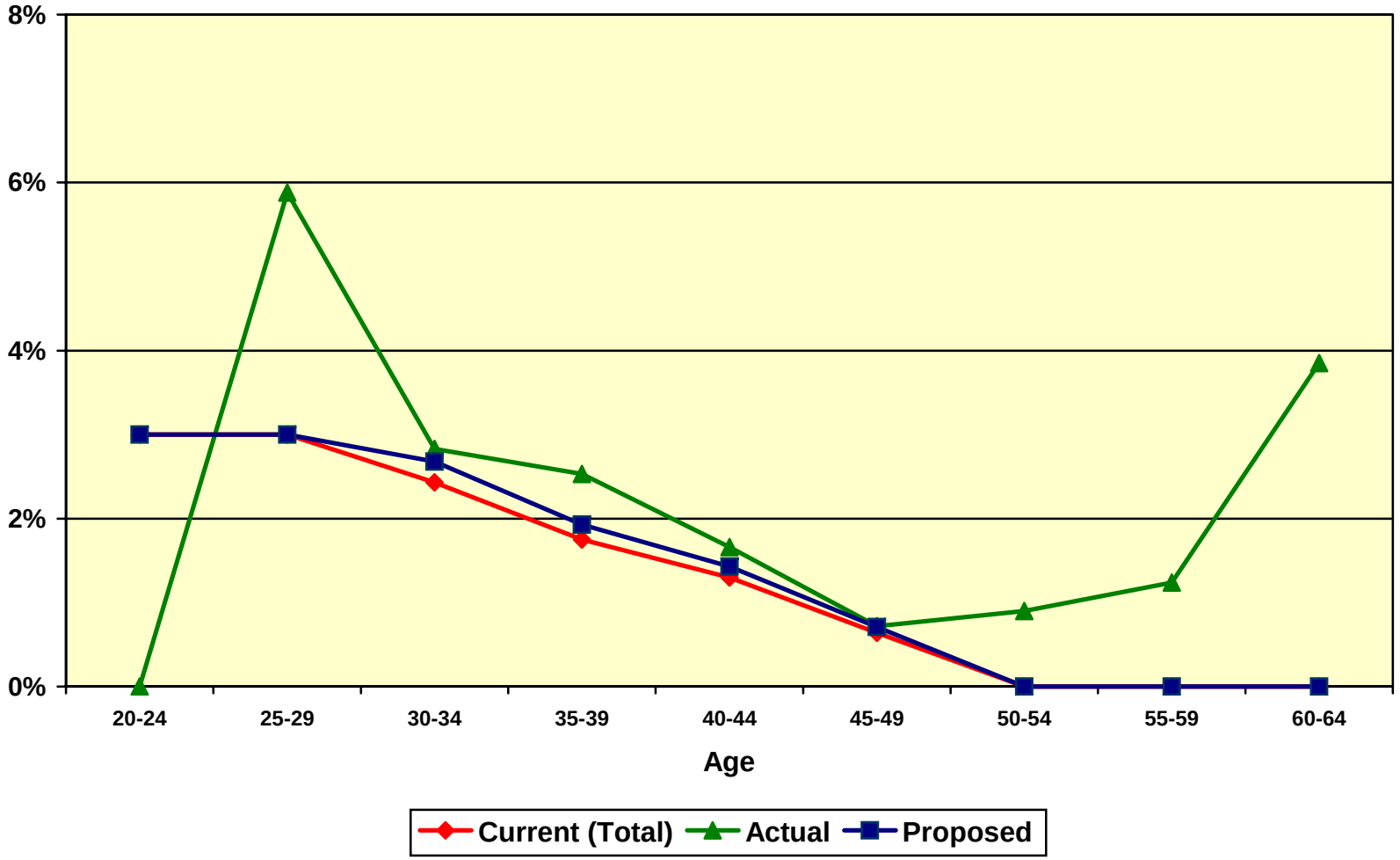


Chart 18
Withdrawal Rates - Safety Members
(Five or More Years of Service)



F. DISABILITY INCIDENCE RATES

When a member becomes disabled, he or she may be entitled to at least a 50% pension (service connected disability), or a pension that depends upon the member's years of service (non-service connected disability). The following summarizes the actual incidence of combined service and non-service connected disabilities over the past three years compared to the current and proposed assumptions for both service-connected and non-service connected disability incidence:

Rates of Disability Incidence (General Tier 1)

Age	Current Rate*	Observed Rate	Proposed Rate
20 – 24	0.07%	0.00%	0.05%
25 – 29	0.14	0.00	0.10
30 – 34	0.30	0.48	0.30
35 – 39	0.40	0.00	0.40
40 – 44	0.60	0.48	0.50
45 – 49	0.70	0.27	0.60
50 – 54	0.85	0.69	0.75
55 – 59	1.00	0.61	0.90
60 – 64	1.25	0.37	1.00
65 – 69	1.50	0.00	1.25

*Total current rate for service and non-service connected disabilities.

Rates of Disability Incidence (General Tier 3)

Age	Current Rate*	Observed Rate	Proposed Rate
20 – 24	0.01%	0.00%	0.01%
25 – 29	0.03	0.00	0.03
30 – 34	0.05	0.00	0.05
35 – 39	0.10	0.00	0.07
40 – 44	0.12	0.03	0.10
45 – 49	0.21	0.13	0.20
50 – 54	0.43	0.19	0.30
55 – 59	0.65	0.04	0.40
60 – 64	0.90	0.25	0.50
65 – 69	1.20	0.00	0.75

*Total current rate for service and non-service connected disabilities. Includes Tier 2 members during the experience period since all Tier 2 active members have transferred to Tier 3.

Rates of Disability Incidence (Safety)

Age	Current Rate*	Observed Rate	Proposed Rate
20 – 24	0.10%	0.00%	0.10%
25 – 29	0.20	0.40	0.30
30 – 34	0.60	0.34	0.45
35 – 39	1.00	0.29	0.75
40 – 44	1.20	0.33	1.00
45 – 49	1.80	0.67	1.50
50 – 54	2.50	3.70	3.00
55 – 59	2.50	4.69	3.50
60 – 64	0.00	1.56	0.00

*Total current rate for service and non-service connected disabilities.

Chart 19 compares the actual number of non-service connected and service connected disabilities over the past three years to that expected under both the current and proposed assumptions. The proposed disability rates were adjusted to reflect the past three years experience. There are decreases proposed for all tiers with the most significant being for General Tier 3.

Chart 20 shows actual disablement rates, compared to the assumed and proposed rates for General Tier 1 members.

Since 78% of disabled General Tier 1 members received a service connected disability, we recommend increasing the assumed proportion of members who will receive a service connected disability from 70% to 75%. The remaining 25% of General Tier 1 disabled members will be assumed to receive a non-service connected disability.

Chart 21 graphs the same information as Chart 20, but for General Tier 3 members. Since 13% of disabled General Tier 2 and Tier 3 members received a service connected disability, we recommend decreasing the assumed proportion of members who will receive a service connected disability from 25% to 20%. The remaining 80% of such disabled members will be assumed to receive a non-service connected disability.

Chart 22 graphs the same information as Charts 20 and 21, but for Safety members. Since 98% of disabled Safety members received a service connected disability, we recommend maintaining the current assumption that 100% of disabilities will receive a service connected disability retirement. This means that no non-service connected disabilities will be assumed for Safety members.

Chart 19
Actual Number of Disabilities Compared to Expected

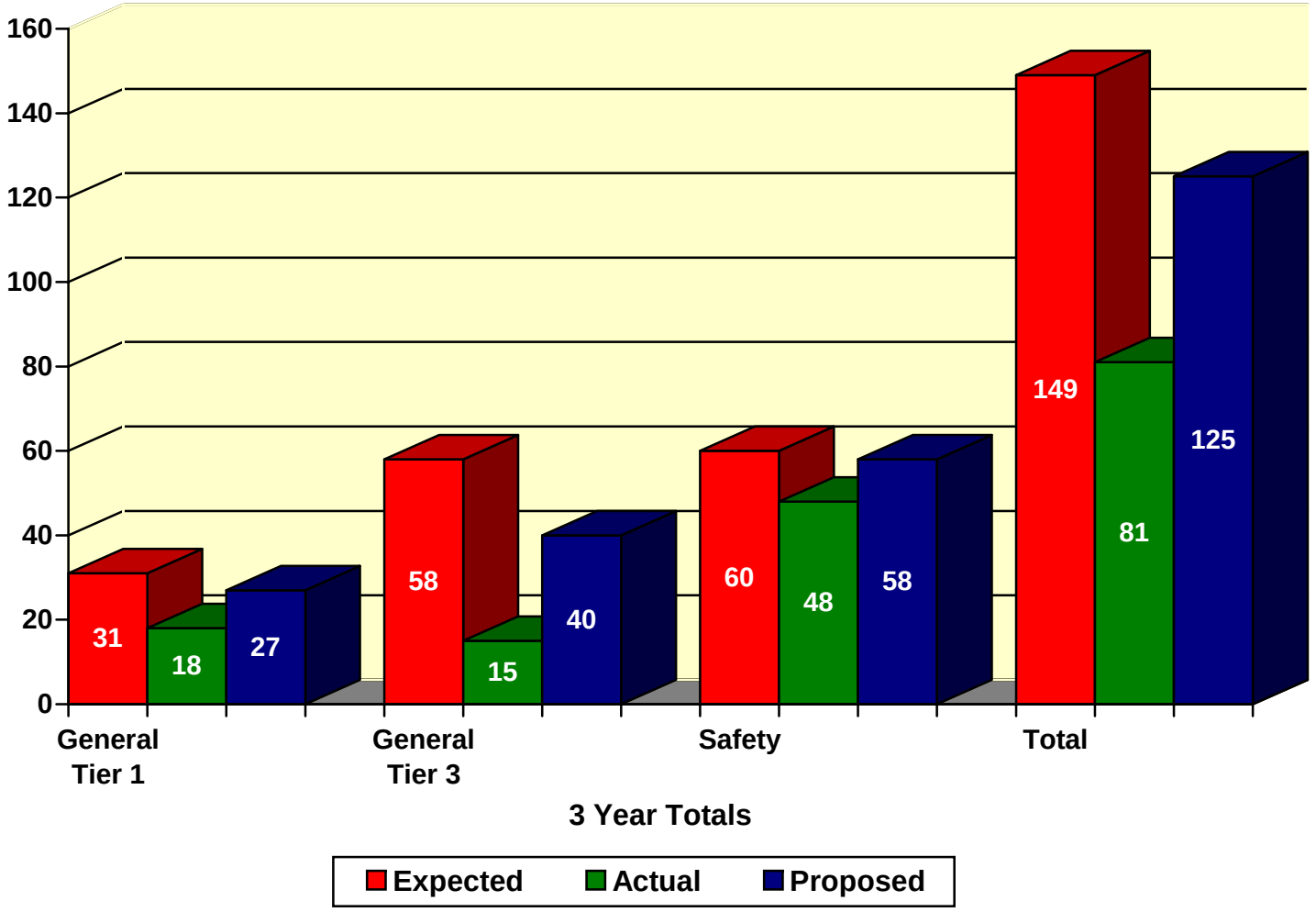


Chart 20
Disablement Rates for General Tier 1 Members

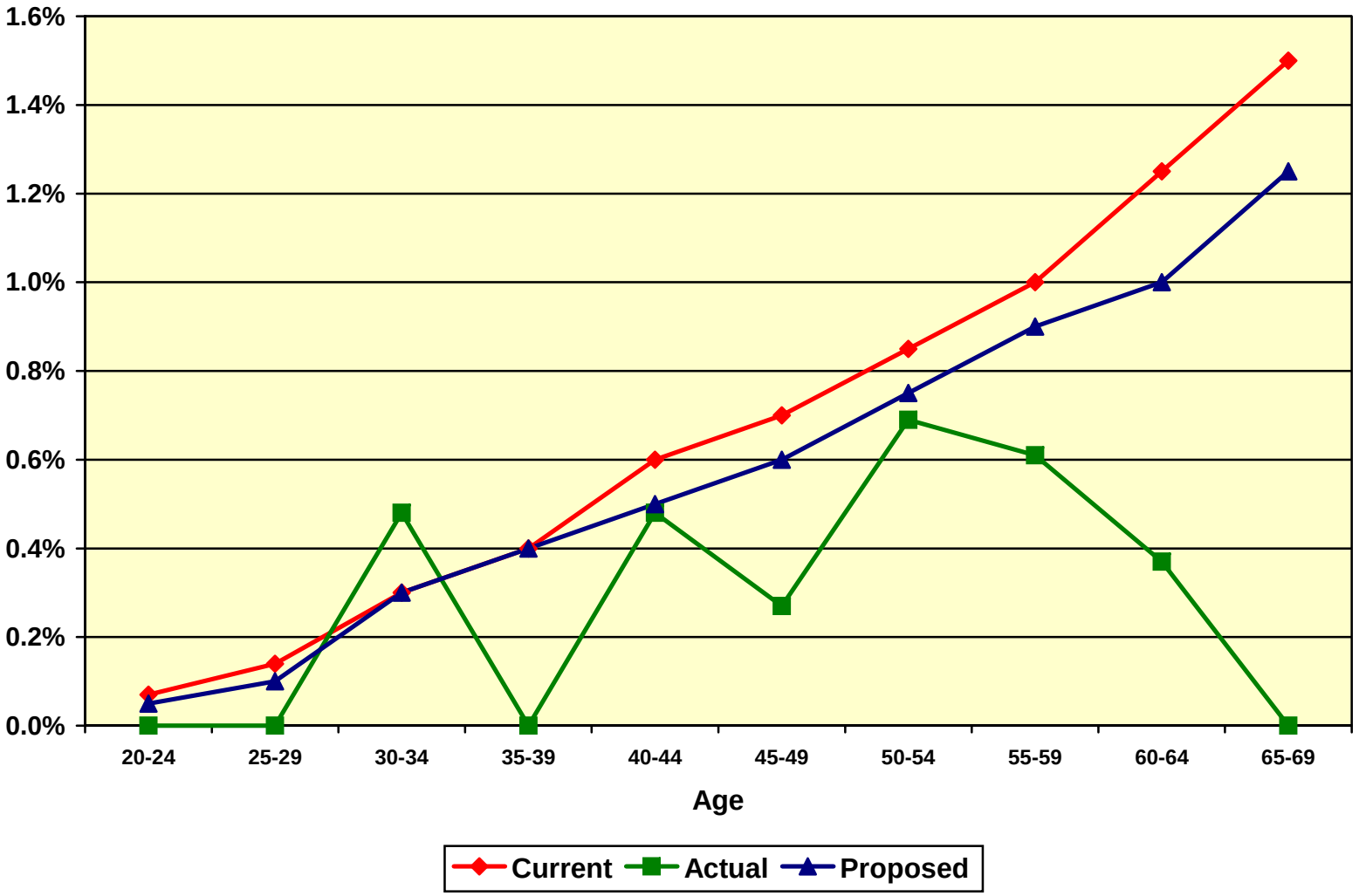


Chart 21
Disablement Rates for General Tier 3 Members

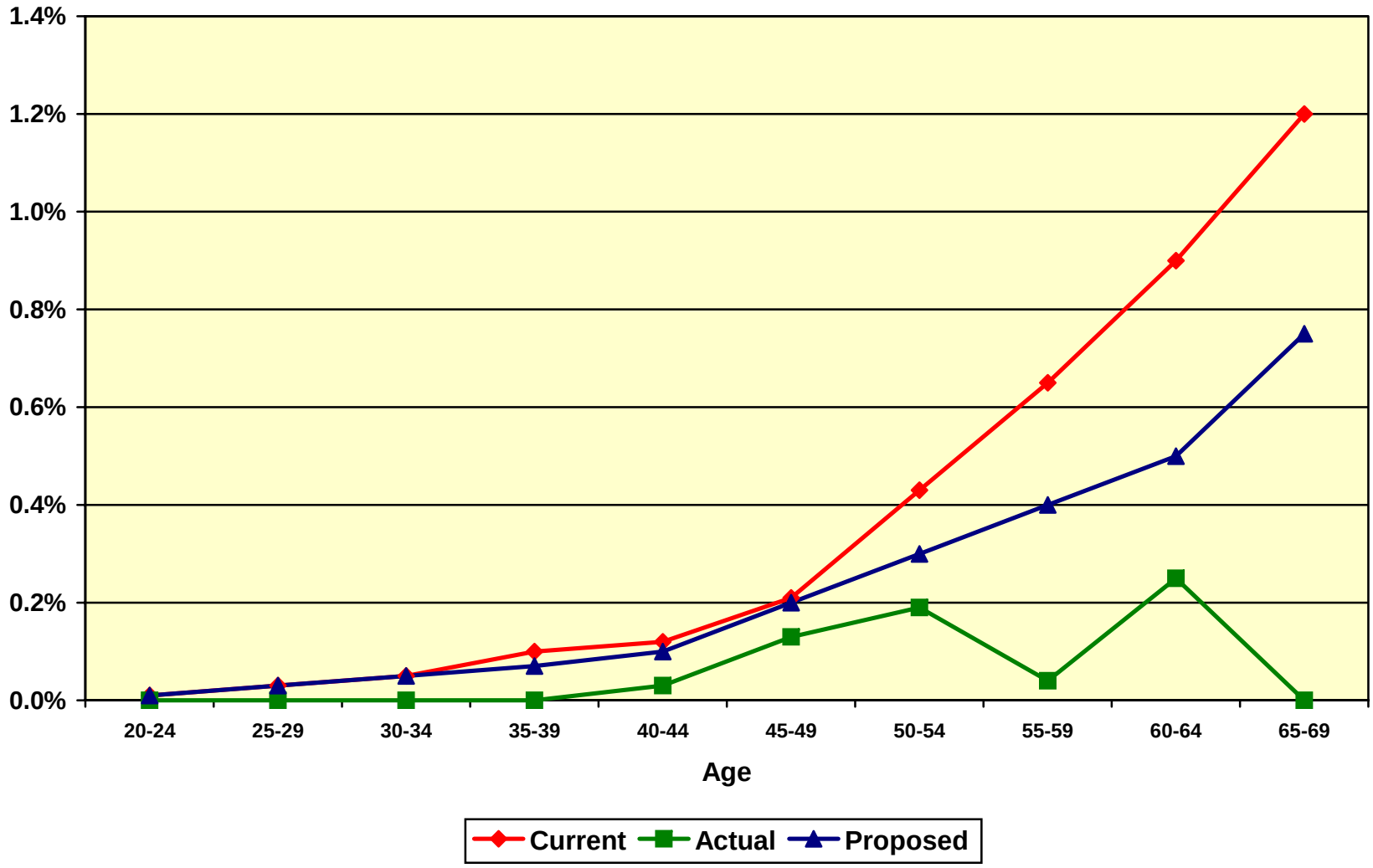
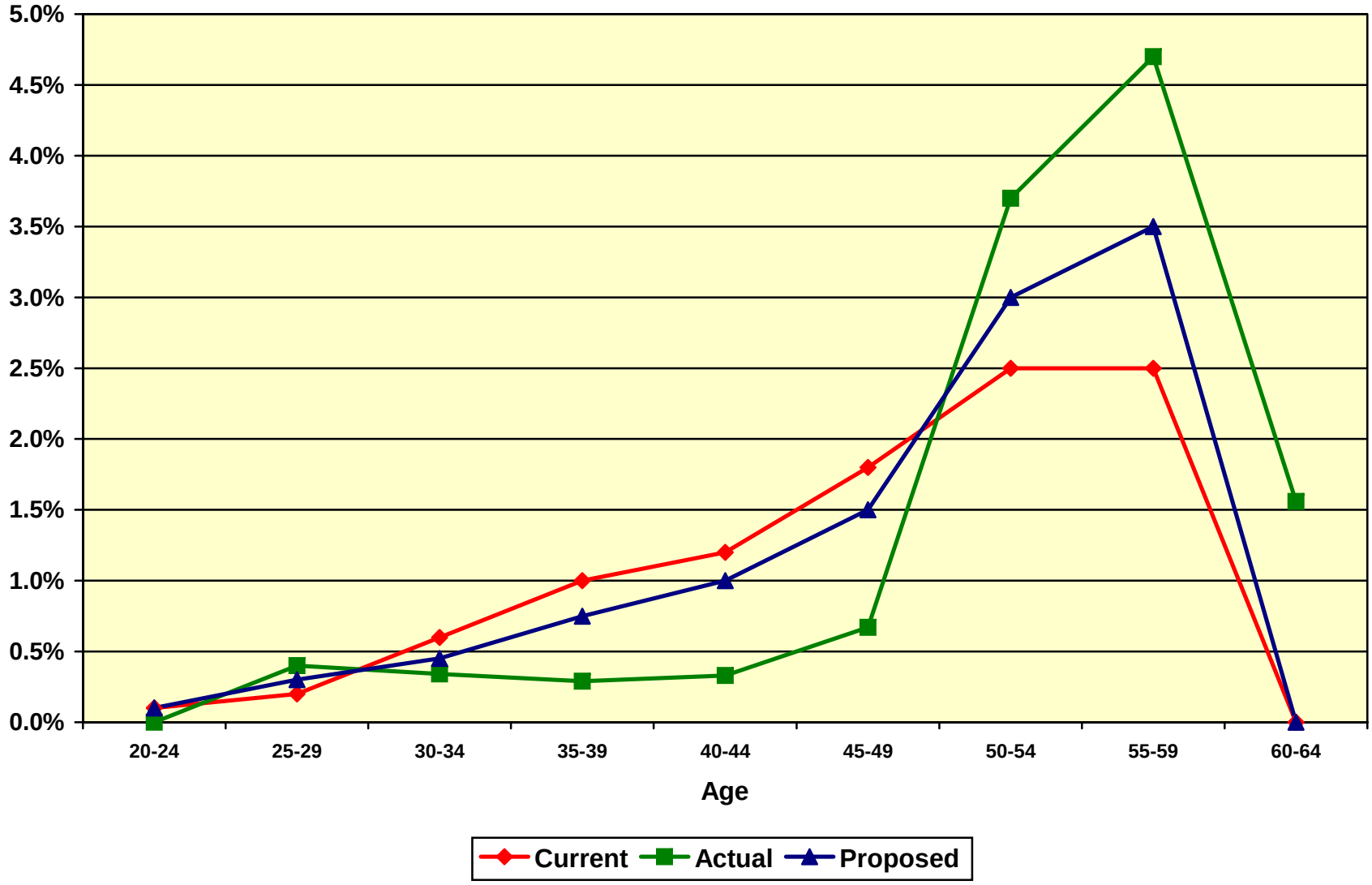


Chart 22
Disablement Rates for Safety Members



G. PROMOTIONAL AND MERIT SALARY INCREASES

The Association's retirement benefits are determined in large part by a member's compensation just prior to retirement. For that reason it is important to anticipate salary increases that employees will receive over their careers. These salary increases are made up of three components:

- Inflationary increases;
- Real "across the board" increases; and
- Promotional and merit increases.

The inflationary increases are assumed to follow the general inflation assumption discussed in our separate economic assumption report, where we recommended a 3.75% inflation assumption. We also discussed in that report our recommended assumption of 0.50% annual "across the board" pay increases. Therefore, the total assumed inflation and real "across the board" pay increase (i.e. wage inflation) is 4.25%; this is used as the assumed annual rate of payroll growth at which payments to the UAAL are assumed to increase.

The annual promotional and merit increases are determined by measuring the actual increases received by members over the experience period, net of the inflationary and real "across the board" pay increases. Increases are measured separately for General and Safety members. This is accomplished by:

- Measuring each member's actual salary increase over each year of the experience period;
- Categorizing these increases according to member demographics;
- Removing the wage inflation component from these increases (equal to the increase in the members' average salary during the year);
- Averaging these annual increases over the three year experience period; and
- Modifying current assumptions to reflect some portion of these measured increases reflective of their "credibility."

Currently, the assumed rates of future promotional and merit increases are a function of an employee's age. Our experience review analyzed recent years' promotional and merit increases independently for General and Safety members, both as a function of age and also as a function of years of service. Our review concluded:

- There continue to be differences between General and Safety promotional and merit salary increase patterns.

- We observed that salary increases correlated better with years of service than with age. This was the case for both General and Safety members.

As a result of these observations, we recommend that promotional and merit increase assumptions:

1. Continue to be separately established for General and Safety members; and

2. Structured as a function of years of service instead of age.

The following table shows the current assumptions for promotional and merit increases for General and Safety members at sample ages.

Promotional and Merit Increase
Current Assumptions

Age	General	Safety
20	11.80%	9.20%
25	6.40	7.60
30	4.70	5.00
35	3.50	3.00
40	2.80	2.20
45	2.10	1.80
50	1.80	1.30
55	1.50	1.00
60	1.40	0.00

The following table compares General members' actual average promotional and merit increases by years of service over the three year experience period from January 1, 2004 through December 31, 2006. The actual increases were reduced by 3.08%, the actual average inflation plus "across the board" increase (i.e. wage inflation) over the three year experience period.

General

Years of Service	January 1, 2004 Through December 31, 2006 Average General Promotional and Merit Increases	Proposed Assumptions
Less than 1	20.48%	7.50%
1	6.27	6.50
2	4.86	5.00
3	3.90	4.00
4	2.89	3.00
5	2.11	2.00
6	1.56	1.75
7	1.01	1.50
8	0.73	1.25
9	1.28	1.00
10	0.84	0.75
11	1.28	0.75
12	0.70	0.75
13	0.99	0.75
14	0.61	0.75
15	0.45	0.75
16	0.45	0.75
17	0.57	0.75
18	0.67	0.75
19	0.67	0.75
20 & over	0.63	0.75

The following table provides the same information for Safety members. The actual average promotional and merit increases were determined by reducing the actual average total salary increases by 4.16%, which was the actual average inflation plus real "across the board" increase (i.e. wage inflation) over the three year period.

	Safety	
Years of Service	**January 1, 2004 Through December 31, 2006 Average Safety Promotional and Merit Increases**	**Proposed Assumptions**
Less than 1	25.28%	8.00%
1	6.58	6.50
2	5.86	5.50
3	4.64	4.50
4	2.19	2.25
5	0.78	0.75
6	0.97	0.75
7	0.98	0.75
8	0.21	0.75
9	0.88	0.75
10	0.15	0.75
11	1.26	0.75
12	0.16	0.75
13	0.57	0.75
14	0.94	0.75
15	0.99	0.75
16	1.07	0.75
17	0.86	0.75
18	0.22	0.75
19	0.45	0.75
20 and over	0.91	0.75

Charts 23 and 24 provide a graphical comparison of the actual promotional and merit increases, compared to the proposed assumptions. Chart 23 shows this information for General members and Chart 24 is for Safety members.

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Chart 23
Promotional and Merit Salary Increase Rates - General Members

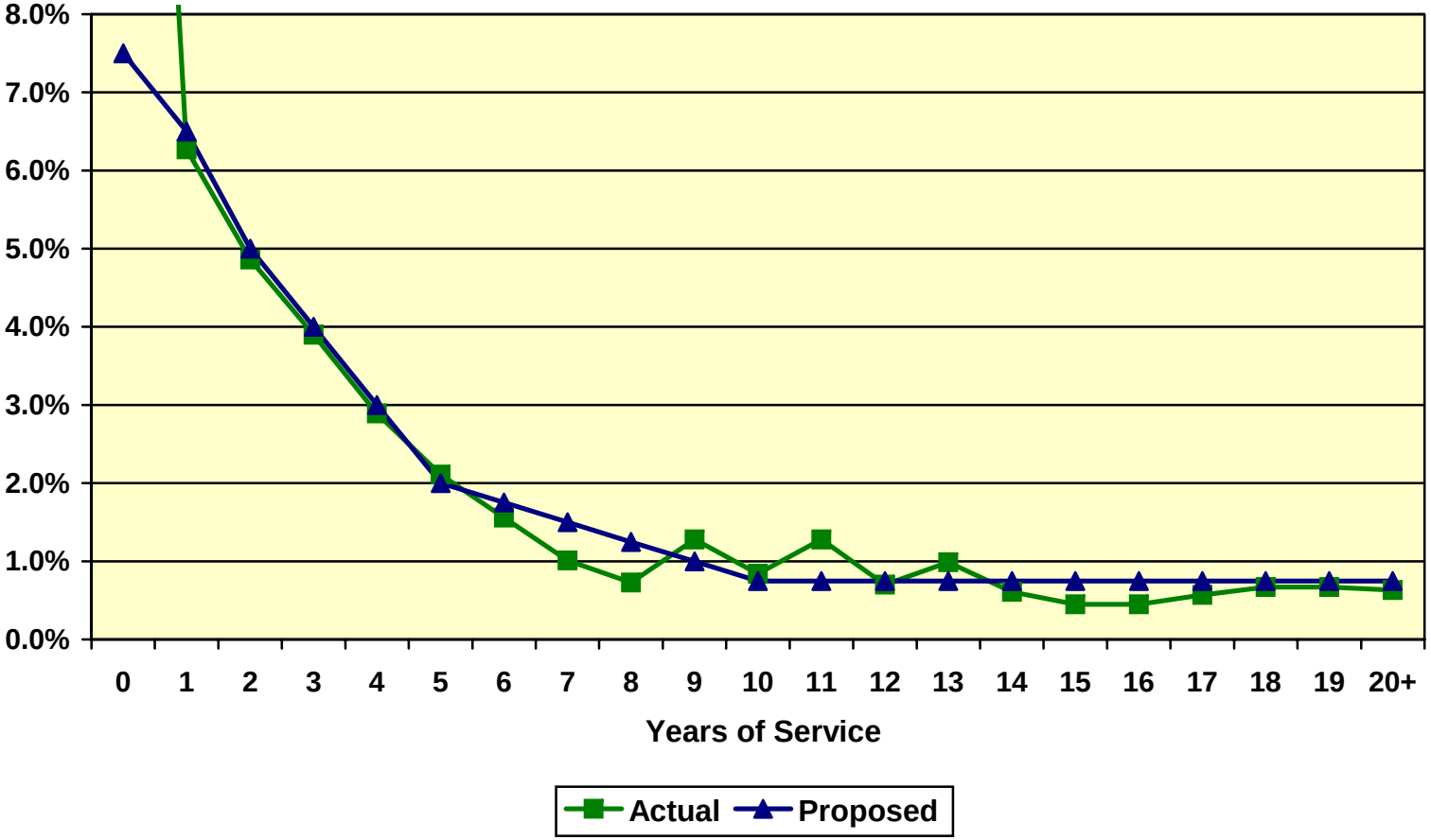
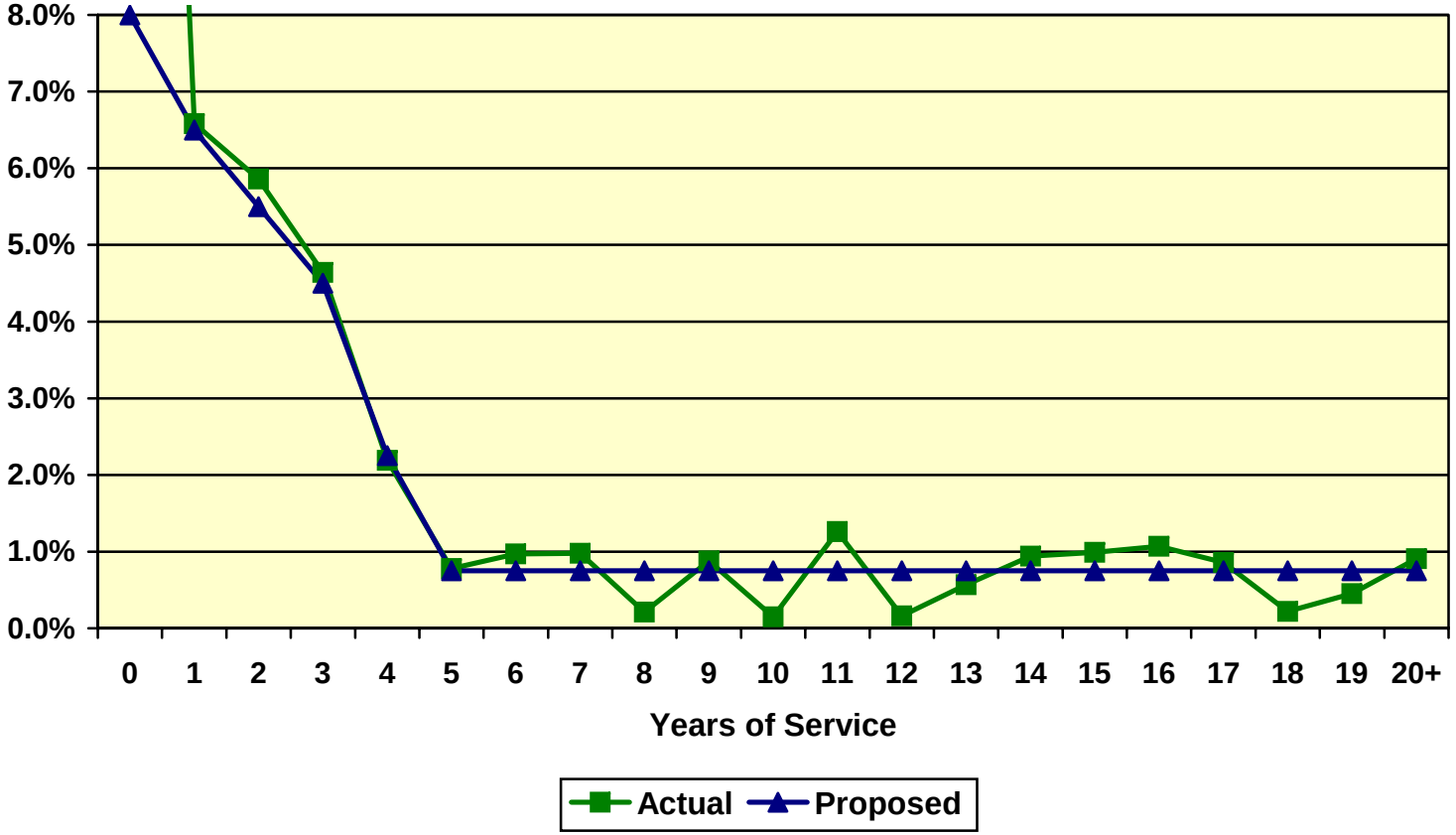


Chart 24
Promotional and Merit Salary Increase Rates - Safety Members



H. TERMINAL PAY

In 1998, the Board of Retirement, in the course of actions related to the Paulson Settlement, determined that several additional pay elements should be included as Earnable Compensation. These additional pay elements fall into two categories:

- Ongoing Pay Elements – Those that are expected to be received relatively uniformly over a member's employment years; and

- Terminal Pay Elements – Those that are expected to be received only during the member's final average earnings pay period.

The first category is recognized in the actuarial calculations by virtue of being included in the current pay of active members. The second category requires a separate actuarial assumption to anticipate its impact on a member's retirement benefit.

In this study, we have collected data for the last three years to estimate terminal pay for active members as a percentage of current pay. The results are summarized in the following table:

	General Tier 1	**General Tier 3**	**Safety Tier A**	**Safety Tier C**
Year	Actual Average Terminal Pay	Actual Average Terminal Pay	Actual Average Terminal Pay	Actual Average Terminal Pay
2004	12.20%	6.29%	10.84%	N/A
2005	10.03%	5.89%	10.30%	N/A
2006	11.48%	6.45%	10.72%	N/A
Average	11.21%	6.20%	10.60%	N/A
Current Assumptions	11.50%	8.50%	11.50%	4.00%
Proposed Assumption	11.50%	7.00%	11.00%	3.75%

There is no actual experience during the period for members in Safety Tier C since this tier was created on January 1, 2007. We have based our recommendation on the combination of the current assumption used in the Safety Tiers Benefit Cost Study and the decrease that occurred for Safety Tier A.

Based on the data in the above table, we are recommending decreases in the terminal pay assumptions for the December 31, 2006 valuation for all tiers except General Tier 1.

Even though the proposed assumption for terminal pay percentage is higher than the actual experience for General Tier 3, we recommend not decreasing the assumption further to match the actual experience. General Tier 3 members have the same service retirement formula and terminal pay elements as General Tier 1 so it is reasonable to expect that General Tier 3 terminal pay percentages will eventually become somewhat closer to those of General Tier 1.

For determining the cost of the basic benefit (i.e., non-COLA component), the cost of this pay element is currently recognized in the valuation as an employer only cost and does not affect member contribution rates.

I. SERVICE FROM UNUSED SICK LEAVE CONVERSION

At retirement, members can convert their unused sick leave to increase the service credit used in the calculation of their retirement benefit. The actuarial valuation anticipates this additional benefit using an assumption to estimate the proportional increase in service that will occur due to unused sick leave conversions.

We collected information on the actual amount of sick leave converted to service credit for retirees during the three year period studied. Consistent with the format of the current assumption, the actual converted sick leave was expressed as a percentage of members' total service credit (before including the unused sick leave credit).

The tables below show the actual sick leave converted to service credit as a percentage of total service credit (before including the sick leave converted to service credit) at retirement separately for General and Safety members as well as non-disabled and disabled members.

General New Retirees (Non-Disabled)

Year of Retirement	Current Assumption	Actual Rate	Proposed Assumption
2004 - 2006	1.00%	1.47%	1.25%

Safety New Retirees (Non-Disabled)

Year of Retirement	Current Assumption	Actual Rate	Proposed Assumption
2004 - 2006	2.00%	2.44%	2.25%

General New Retirees (Disabled)

Year of Retirement	Current Assumption	Actual Rate	Proposed Assumption
2004 - 2006	0.00%	0.25%	0.25%

Safety New Retirees (Disabled)

Year of Retirement	Current Assumption	Actual Rate	Proposed Assumption
2004 - 2006	1.00%	1.21%	1.25%

Based on this experience we recommend increasing the assumption to 1.25% for General healthy retirees and 2.25% for Safety healthy retirees. For disableds, we recommend increasing the assumption to 0.25% for General and 1.25% for Safety. We are also recommending that the disabled assumption apply to those members that are expected to die before retirement.

Pursuant to Section 31641.01, the cost of this benefit will be charged only to employers and will not affect member contribution rates.

J. TIER 3 MEMBERS CONVERTING PRIOR TIER 2 SERVICE

There is an additional cost included in the valuation to account for Tier 3 members converting their prior Tier 2 service to Tier 3. It is currently assumed that 10 percent of current Tier 3 County members will convert their prior Tier 2 service to Tier 3.

We recommend eliminating this assumption due to the relatively small impact on the valuation and the difficulty involved with predicting this action. As prior Tier 2 service is converted to Tier 3 it will be recognized in future actuarial valuations as it occurs.

IV. COST IMPACT OF ASSUMPTION CHANGES

The table on the following page shows the changes in key valuation results due to the recommended assumption changes as if they were applied in the December 31, 2005 actuarial valuation. If all of the proposed assumption changes were implemented, the Plan's average employer rate would have increased by 0.74% of compensation. The average member rate would have decreased by 0.72% of compensation. The Plan's Unfunded Actuarial Accrued Liability would have increased by $191 million, causing the funded rate to decrease from 84.8% to 81.5%.

Of the various assumption changes, the most significant cost impacts are from the mortality assumption change, which increases costs and liabilities, and from the salary increase assumption, which decreases costs and liabilities.

Charts 25 through 29 show the member contribution rates from the December 31, 2005 actuarial valuation along with the member rates based on the proposed assumptions.

Summary of Key Valuation Results as of December 31, 2005

	Current Assumptions		Proposed Assumptions	
Employer Contribution Rates (County and District combined) [(1)]:		Estimated		Estimated
	Total Rate	Annual Amount	Total Rate	Annual Amount
General Tier 1 Non-enhanced	30.79%	$1,802,537	31.50%	$1,849,057
General Tier 1 Enhanced	27.60%	22,721,842	27.74%	22,667,919
General Tier 3 Enhanced	23.06%	90,344,445	23.62%	92,456,461
Safety Non-enhanced	36.79%	698,430	42.89%	805,322
Safety Enhanced	44.03%	64,126,320	45.64%	65,887,556
All Employers combined	28.63%	$179,693,574	29.37%	$183,666,315
Average Member Contribution Rates[(1)]:		Estimated		Estimated
	Total Rate	Annual Amount	Total Rate	Annual Amount
General Tier 1 Non-enhanced	11.24%	$658,022	10.81%	$634,549
General Tier 1 Enhanced	10.01%	8,240,059	9.14%	7,468,810
General Tier 3 Enhanced	9.97%	39,066,692	9.46%	37,029,556
Safety Non-enhanced	14.12%	268,058	12.82%	240,714
Safety Enhanced	16.10%	23,446,910	14.92%	21,539,052
All Categories Combined	11.42%	$71,679,741	10.70%	$66,912,681
Funded Status:				
Actuarial accrued liability	$4,792,428,024		$4,983,214,329	
Valuation value of assets	$4,062,057,143		$4,062,057,143	
Funded percentage	84.8%		81.5%	
Unfunded Actuarial Accrued Liability (UAAL)	$730,370,881		$921,157,187	

[(1)] Based on projected payroll of $627,546,408 under the current assumptions and $625,259,871 under the proposed assumptions. These rates do not include any employer subvention of member contributions or any member subvention of employer contributions.

Chart 25
General Non-enhanced Tier 1 Member Contribution Rates

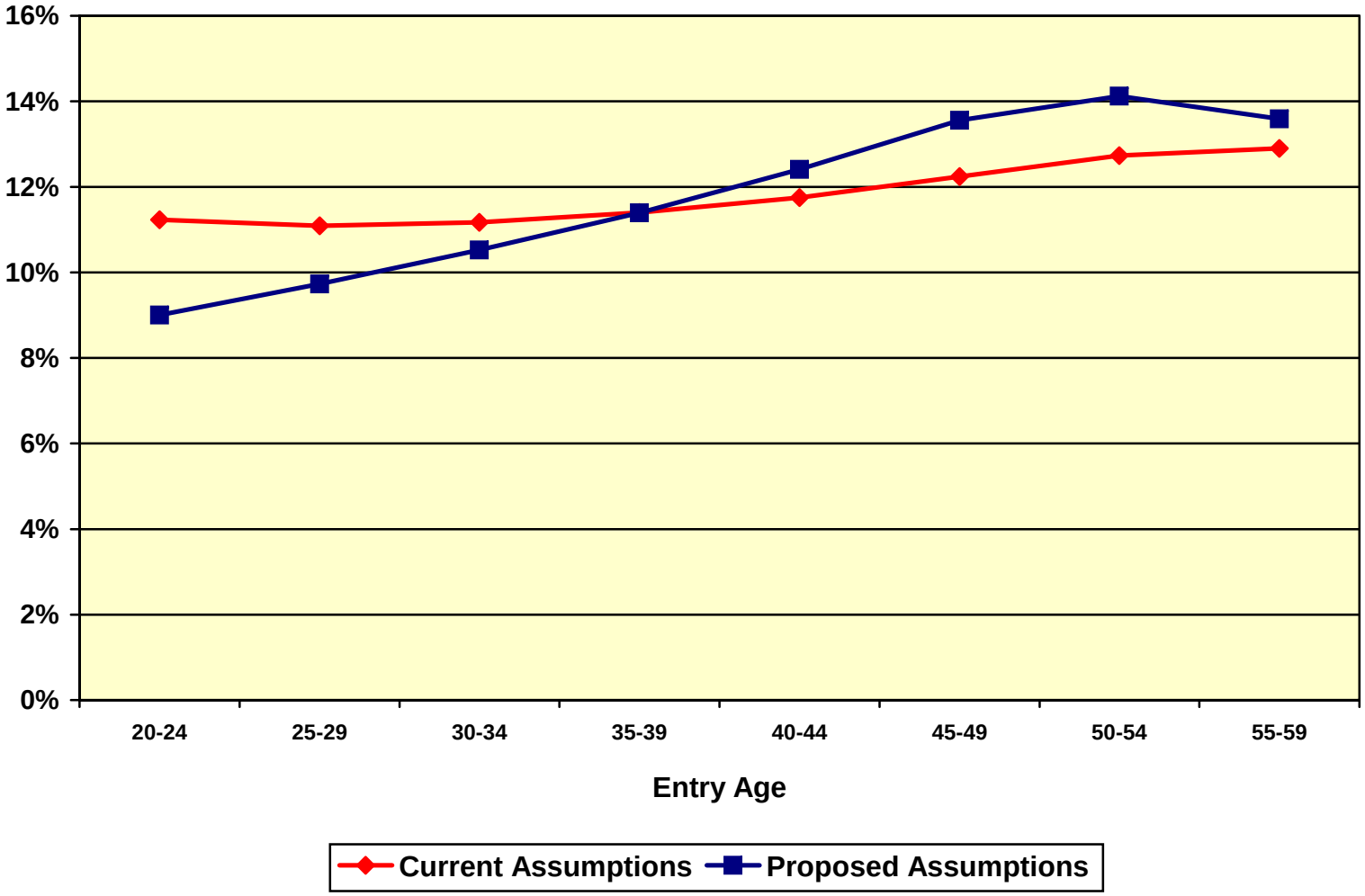


Chart 26
General Enhanced Tier 1 Member Contribution Rates

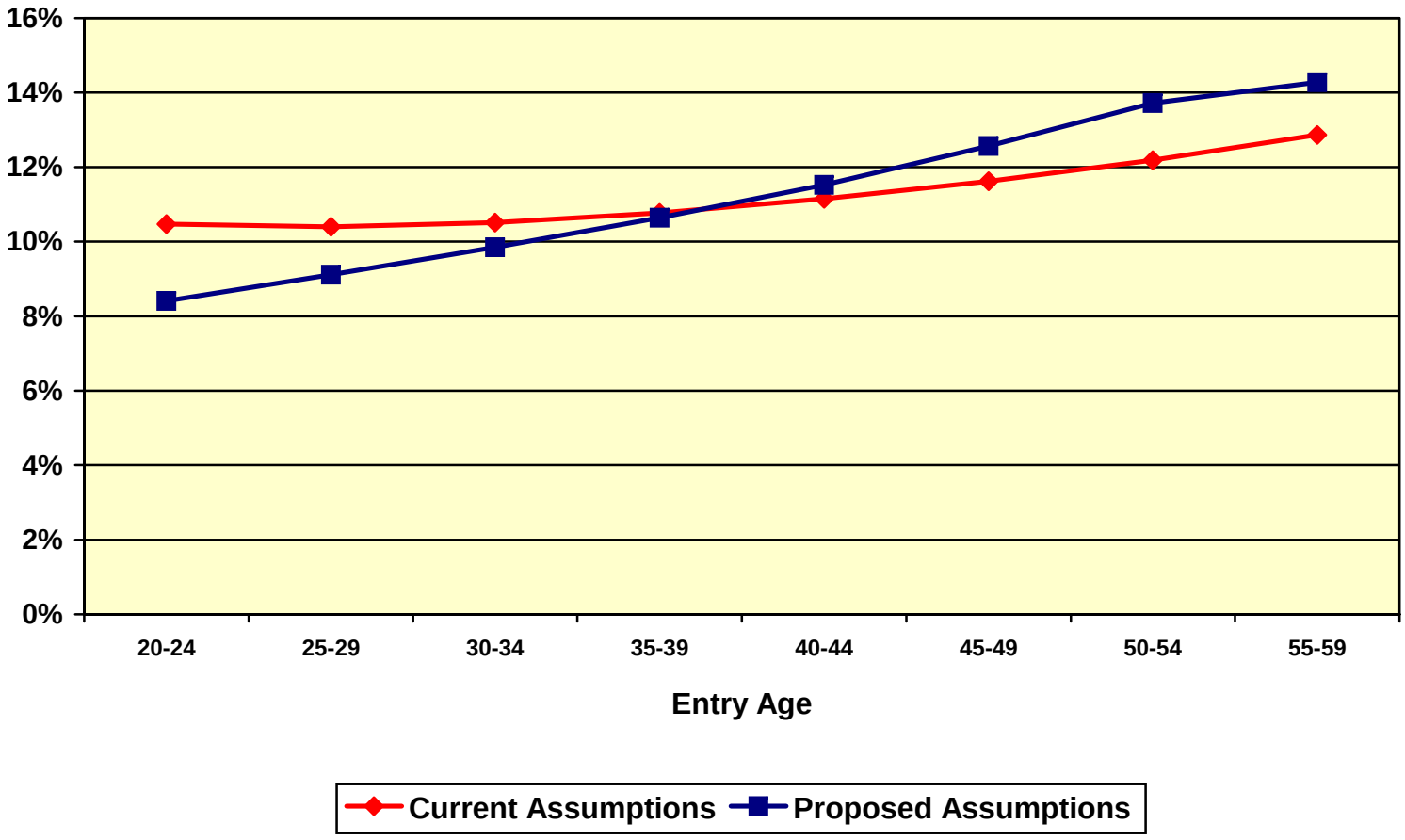


Chart 27
General Enhanced Tier 3 Member Contribution Rates

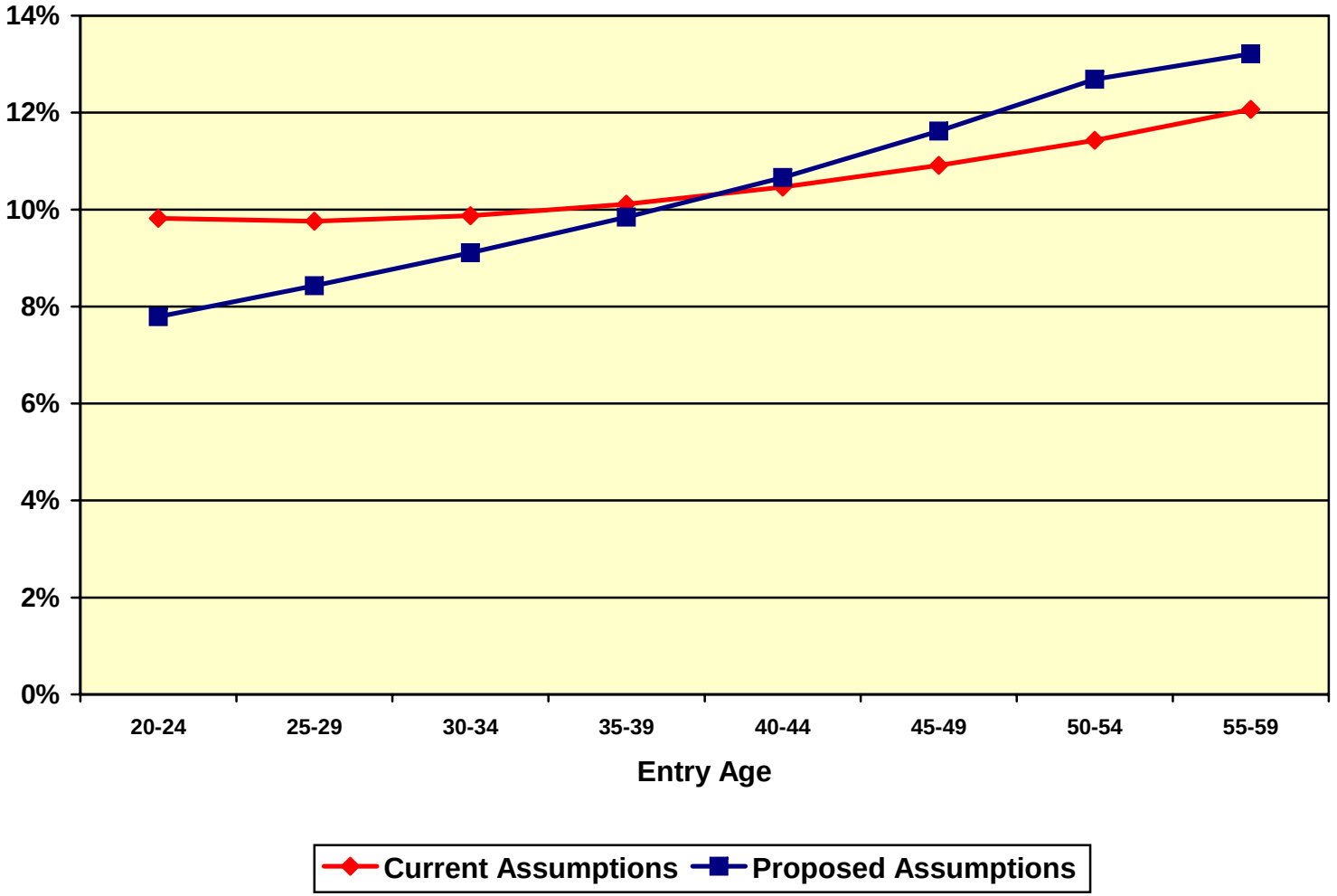


Chart 28
Safety Non-enhanced Member Contribution Rates

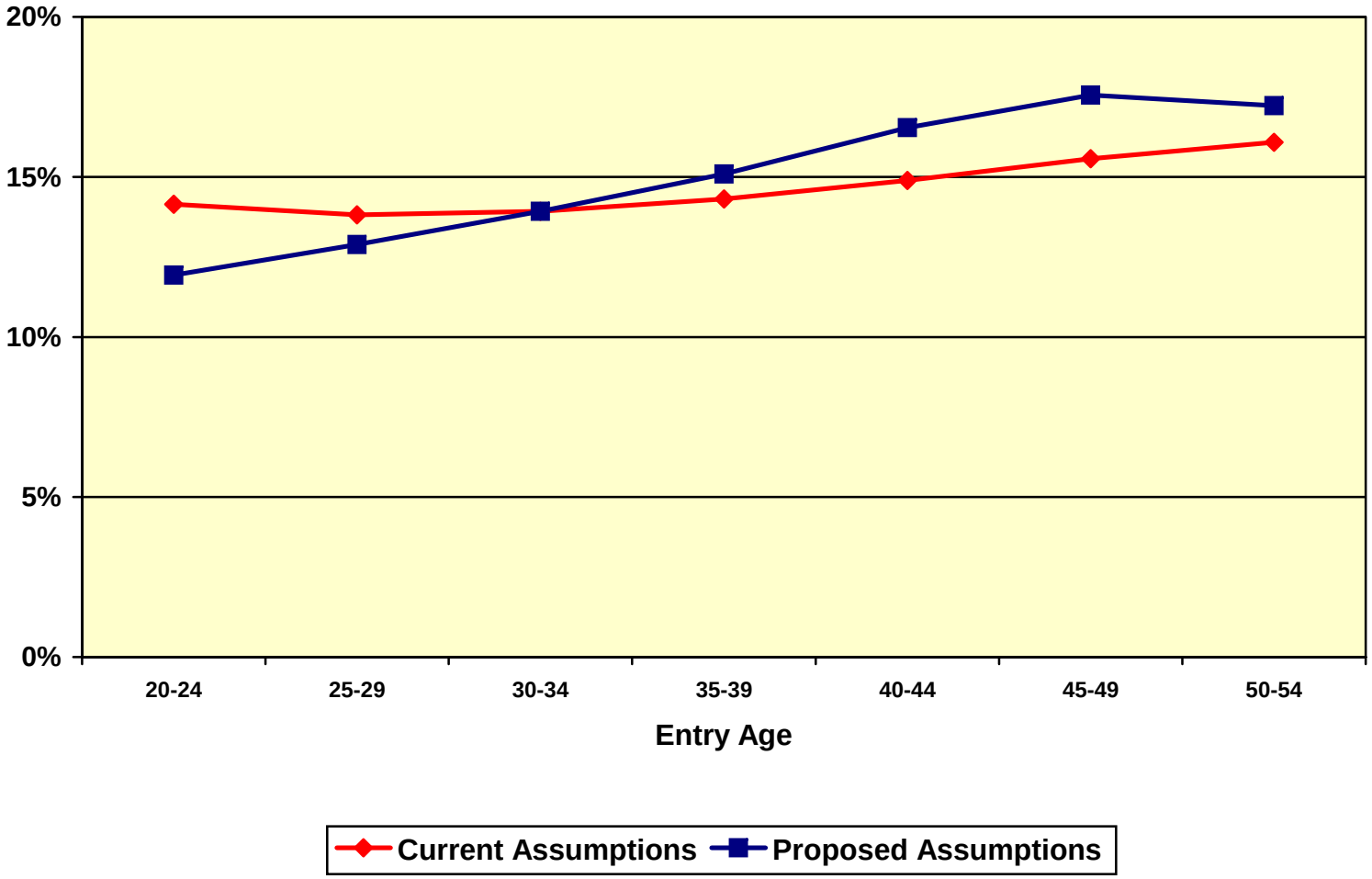
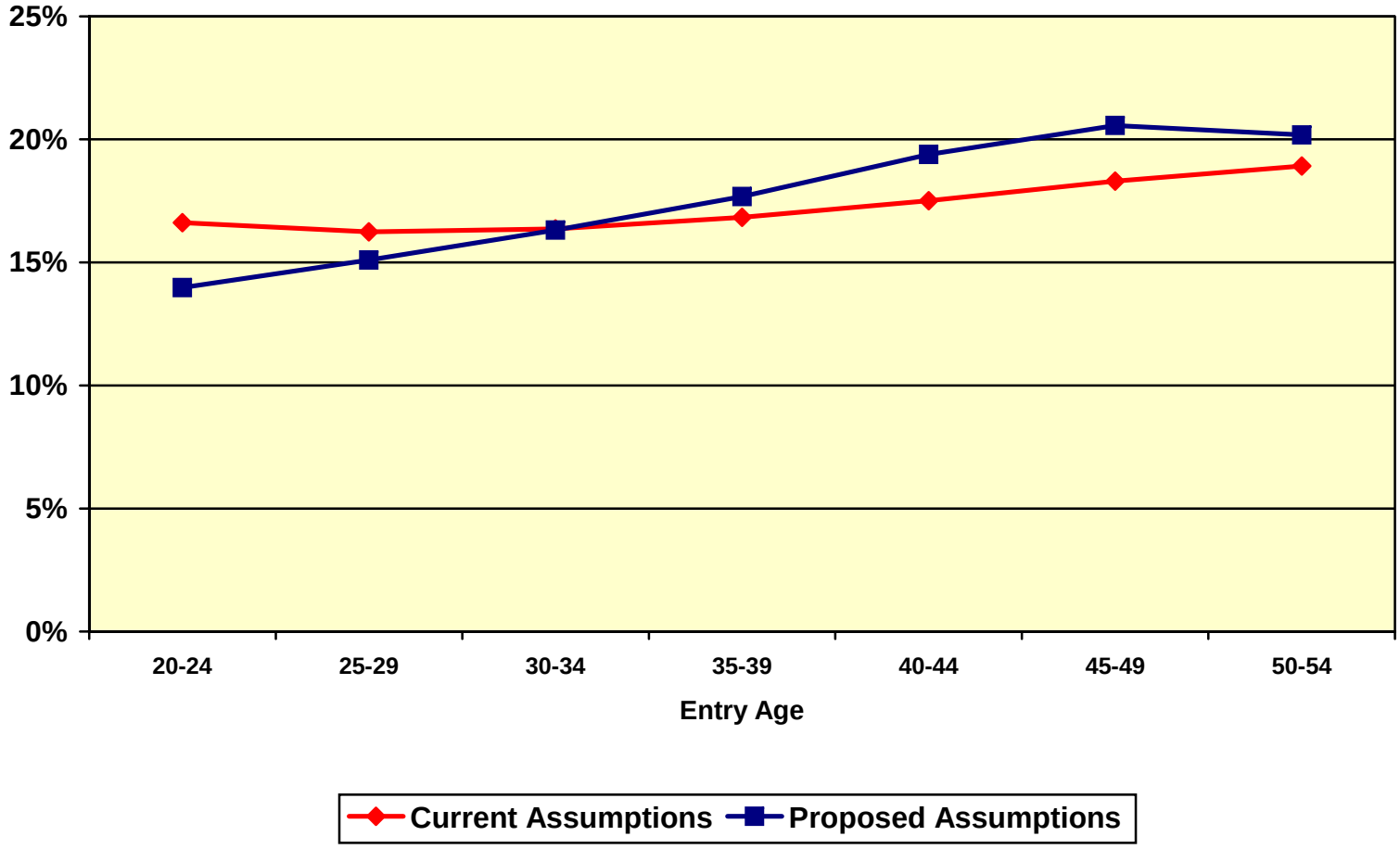


Chart 29
Safety Enhanced Tier A Member Contribution Rates



APPENDIX A

CURRENT ACTUARIAL ASSUMPTIONS

Mortality Rates:

Healthy: For General Members: 1994 Group Annuity Mortality Table set forward one year.

For Safety Members: 1994 Group Annuity Mortality Table set forward two years.

Disabled: For General Members: 1981 Disability Mortality Table (General) set back three years.

For Safety Members: 1994 Group Annuity Mortality Table set forward two years.

Member Contribution Rates: For General Members: 1994 Group Annuity Mortality Table set forward one year weighted 30% male and 70% female.

For Safety Members: 1994 Group Annuity Mortality Table set forward two years weighted 85% male and 15% female.

Termination Rates Before Retirement:

Rate (%)

Mortality

	General		Safety	
Age	**Male**	**Female**	**Male**	**Female**
25	0.07	0.03	0.07	0.03
30	0.08	0.04	0.08	0.04
35	0.09	0.05	0.09	0.06
40	0.12	0.08	0.13	0.08
45	0.17	0.10	0.19	0.11
50	0.29	0.16	0.32	0.17
55	0.49	0.26	0.56	0.29
60	0.90	0.51	1.01	0.58
65	1.62	0.97	1.80	1.08

All pre-retirement deaths are assumed to be non-service connected.

Termination Rates Before Retirement (continued):

	Rate (%)		
	Disability		
Age	General Tier 1[(1)]	General Tier 3[(2)]	Safety[(3)]
20	0.04	0.00	0.06
25	0.11	0.02	0.16
30	0.24	0.04	0.44
35	0.36	0.08	0.84
40	0.52	0.11	1.12
45	0.66	0.17	1.56
50	0.79	0.34	2.22
55	0.94	0.56	2.50
60	1.15	0.80	0.00

(1) 70% of General Tier 1 disabilities are assumed to be duty disabilities. The other 30% are assumed to be ordinary disabilities.

(2) 25% of General Tier 3 disabilities are assumed to be duty disabilities. The other 75% are assumed to be ordinary disabilities.

(3) 100% of Safety disabilities are assumed to be duty disabilities.

Termination Rates Before Retirement (continued):

Rate (%)

Withdrawal (Less than Five Years of Service)

Years of Service	General	Safety
0	13.00	9.00
1	7.00	6.00
2	6.00	5.00
3	5.00	4.00
4	4.00	3.00

Withdrawal (Five or More Years of Service)*

Age	General	Safety
20	4.00	3.00
25	4.00	3.00
30	4.00	2.78
35	4.00	2.00
40	3.84	1.46
45	3.21	0.95
50	1.52	0.00
55	0.33	0.00
60	0.00	0.00

* The member is assumed to receive the greater of the member's contribution balance or a deferred retirement benefit. No withdrawal is assumed after a member is assumed to retire.

Retirement Rates (Enhanced):

For those members covered under the enhanced benefit formulas the following rates apply:

	Rate (%)			
Age	**General Tier 1**	**General Tier 3**	**Safety Tier A**	**Safety Tier C**
50	3.00	3.00	30.00	20.00
51	3.00	3.00	25.00	15.00
52	5.00	5.00	25.00	15.00
53	10.00	5.00	25.00	15.00
54	15.00	10.00	30.00	20.00
55	20.00	10.00	45.00	35.00
56	20.00	10.00	45.00	35.00
57	25.00	10.00	50.00	35.00
58	25.00	10.00	50.00	35.00
59	25.00	10.00	50.00	40.00
60	25.00	15.00	100.00	100.00
61	30.00	15.00	100.00	100.00
62	30.00	25.00	100.00	100.00
63	30.00	25.00	100.00	100.00
64	30.00	30.00	100.00	100.00
65	35.00	35.00	100.00	100.00
66	35.00	35.00	100.00	100.00
67	35.00	35.00	100.00	100.00
68	35.00	35.00	100.00	100.00
69	35.00	35.00	100.00	100.00
70	100.00	100.00	100.00	100.00

Retirement Rates (Non-enhanced) (continued):

For those members covered under the non-enhanced benefit formulas the following rates apply:

	Rate (%)	
Age	**General Tier 1**	**Safety**
50	3.00	1.00
51	3.00	1.00
52	3.00	1.00
53	3.00	1.00
54	3.00	1.00
55	10.00	2.00
56	10.00	2.00
57	10.00	3.00
58	10.00	4.00
59	10.00	20.00
60	25.00	17.00
61	15.00	17.00
62	40.00	18.00
63	25.00	20.00
64	30.00	100.00
65	40.00	100.00
66	35.00	100.00
67	35.00	100.00
68	35.00	100.00
69	35.00	100.00
70	100.00	100.00

Retirement Age and Benefit for Deferred Vested Members:

For deferred vested members, we make the following retirement assumption:

General Age:	Age 58
Safety Age:	Age 55

We assume that 50% of future General and Safety deferred vested members will continue to work for a reciprocal employer. For those that continue to work for a reciprocal employer, we assume 6.25% compensation increases per annum.

Future Benefit Accruals:

1.0 year of service per year for the full-time employees. Continuation of current partial service accrual for part-time employees.

Unknown Data for Members:

Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.

Percent Married:

80% of male members and 55% of female members are assumed to be married at pre-retirement death or retirement.

Age of Spouse:

Females are 3 years younger than their spouses.

Tier 3 Members Converting Prior Tier 2 Service:

10% of all eligible Tier 3 members will convert their prior Tier 2 service to Tier 3 service.

Offsets by Other Plans of the Employer for Disability Benefits:

The Plan requires members who retire because of disability from General Tier 3 to offset the Plan's disability benefits with other Plans of the employer. We have not assumed any offsets in this valuation.

Terminal Pay Assumptions:

The following assumptions for terminal pay as a percentage of final average pay are used:

General Tier 1:	11.50%
General Tier 3:	8.50%
Safety Tier A:	11.50%
Safety Tier C:	4.00%

For determining the cost of the basic benefit (i.e., non-COLA component), the cost of this pay element is currently recognized in the valuation as an employer only cost and does not affect member contribution rates.

Service From Unused Sick Leave Conversion:

The following assumptions for service converted from unused sick leave as a percentage of service at retirement are used:

Service Retirements:

General:	1.00%
Safety:	2.00%

Disability Retirements:

General:	0.00%
Safety:	1.00%

Pursuant to Section 31641.01, the cost of this benefit will be charged only to employers and will not affect member contribution rates.

Net Investment Return: 7.90%, net of adminstration and investment expenses

Employee Contribution Crediting Rate: 7.90%, compounded semi-annually

Consumer Price Index: Increase of 3.75% per year; retiree COLA increases due to CPI subject to a 3.00% maximum change per year except for Tier 3 disability benefits and Tier 2 benefits which are subject to a 4.00% (valued as a 3.75% increase) maximum change per year.

Salary Increases:

Annual Rate of Compensation Increase

Inflation: 3.75%; plus "across the board" salary increases of 0.50% per year; plus the following merit and promotional increases.

Age	General	Safety
20	11.80%	9.20%
25	6.40%	7.60%
30	4.70%	5.00%
35	3.50%	3.00%
40	2.80%	2.20%
45	2.10%	1.80%
50	1.80%	1.30%
55	1.50%	1.00%
60	1.40%	0.00%

Actuarial Value of Assets:	Market value of assets less unrecognized returns in each of the last nine semi-annual accounting periods. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized semi-annually over a five-year period.
Valuation Value of Assets:	Actuarial Value of Assets reduced by the value of the non-valuation reserves and designations.
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method. Entry Age is age minus years of service. Actuarial Accrued Liability is calculated on an individual basis and is based on costs allocated as a level percent of compensation. The Normal Cost is calculated on an aggregate basis by taking the Present Value of Future Normal Costs divided by Present Value of Future Salaries to obtain a normal cost rate for each rate group of employees. This normal cost rate is then multiplied by the total of current salaries for that rate group. The Present Value of Future Normal Costs is determined as if the current benefit accrual rate had always been in effect.

APPENDIX B

PROPOSED ACTUARIAL ASSUMPTIONS

Mortality Rates:

Healthy: For General Members: RP-2000 Combined Healthy Mortality Table set back two years.

For Safety Members: RP-2000 Combined Healthy Mortality Table set back two years.

Disabled: For General Members: RP-2000 Combined Healthy Mortality Table set forward six years.

For Safety Members: RP-2000 Combined Healthy Mortality Table.

Member Contribution Rates: For General Members: RP-2000 Combined Healthy Mortality Table set back two years weighted 30% male and 70% female.

For Safety Members: RP-2000 Combined Healthy Mortality Table set back two years weighted 85% male and 15% female.

Termination Rates Before Retirement:

Rate (%)

Mortality

	General		Safety	
Age	**Male**	**Female**	**Male**	**Female**
25	0.04	0.02	0.04	0.02
30	0.04	0.02	0.04	0.02
35	0.06	0.04	0.06	0.04
40	0.10	0.06	0.10	0.06
45	0.13	0.09	0.13	0.09
50	0.19	0.14	0.19	0.14
55	0.29	0.22	0.29	0.22
60	0.53	0.39	0.53	0.39
65	1.00	0.76	1.00	0.76

All pre-retirement deaths are assumed to be non-service connected.

Termination Rates Before Retirement (continued):

	Rate (%)		
	Disability		
Age	General Tier 1[(1)]	General Tier 3[(2)]	Safety[(3)]
20	0.03	0.00	0.06
25	0.08	0.02	0.22
30	0.22	0.04	0.39
35	0.36	0.06	0.63
40	0.46	0.09	0.90
45	0.56	0.16	1.30
50	0.69	0.26	2.40
55	0.84	0.36	3.30
60	0.96	0.46	0.00

(1) 75% of General Tier 1 disabilities are assumed to be duty disabilities. The other 25% are assumed to be ordinary disabilities.

(2) 20% of General Tier 3 disabilities are assumed to be duty disabilities. The other 80% are assumed to be ordinary disabilities.

(3) 100% of Safety disabilities are assumed to be duty disabilities.

Termination Rates Before Retirement (continued):

Rate (%)

Withdrawal (Less than Five Years of Service)

Years of Service	General	Safety
0	14.00	11.00
1	9.00	7.00
2	8.00	5.00
3	6.00	4.00
4	5.00	3.00

Withdrawal (Five or more Years of Service)*

Age	General	Safety
20	5.00	3.00
25	5.00	3.00
30	5.00	3.00
35	4.92	2.20
40	4.23	1.61
45	3.54	1.05
50	1.68	0.00
55	0.37	0.00
60	0.00	0.00

* The member is assumed to receive the greater of the member's contribution balance or a deferred retirement benefit. No withdrawal is assumed after a member is assumed to retire.

Retirement Rates (Enhanced):

For those members covered under the enhanced benefit formulas the following rates apply:

	Rate (%)			
Age	**General Tier 1**	**General Tier 3**	**Safety Tier A**	**Safety Tier C**
45	0.00	0.00	2.00	1.00
46	0.00	0.00	2.00	1.00
47	0.00	0.00	2.00	1.00
48	0.00	0.00	2.00	1.00
49	0.00	0.00	10.00	5.00
50	3.00	3.00	25.00	15.00
51	3.00	3.00	20.00	12.00
52	5.00	3.00	20.00	12.00
53	8.00	3.00	20.00	12.00
54	15.00	5.00	25.00	15.00
55	20.00	10.00	30.00	20.00
56	20.00	10.00	30.00	20.00
57	25.00	10.00	40.00	25.00
58	25.00	10.00	40.00	25.00
59	25.00	10.00	40.00	30.00
60	25.00	15.00	100.00	100.00
61	30.00	20.00	100.00	100.00
62	30.00	25.00	100.00	100.00
63	30.00	25.00	100.00	100.00
64	30.00	30.00	100.00	100.00
65	35.00	35.00	100.00	100.00
66	35.00	35.00	100.00	100.00
67	35.00	35.00	100.00	100.00
68	35.00	35.00	100.00	100.00
69	35.00	35.00	100.00	100.00
70	100.00	100.00	100.00	100.00

Retirement Rates (Non-Enhanced) (continued):

For those members covered under the non-enhanced benefit formulas the following rates apply:

	Rate (%)	
Age	**General Tier 1**	**Safety**
50	3.00	1.00
51	3.00	1.00
52	3.00	1.00
53	3.00	1.00
54	3.00	1.00
55	10.00	2.00
56	10.00	2.00
57	10.00	3.00
58	10.00	4.00
59	10.00	20.00
60	25.00	17.00
61	15.00	17.00
62	40.00	18.00
63	25.00	20.00
64	30.00	100.00
65	40.00	100.00
66	35.00	100.00
67	35.00	100.00
68	35.00	100.00
69	35.00	100.00
70	100.00	100.00

Retirement Age and Benefit for Deferred Vested Members:

For deferred vested members, we make the following retirement assumption:

General Age:	Age 58
Safety Age:	Age 55

We assume that 40% and 60% of future General and Safety deferred vested members, respectively, will continue to work for a reciprocal employer. For reciprocals, we assume 6.25% compensation increases per annum.

Future Benefit Accruals:

1.0 year of service per year for the full-time employees. Continuation of current partial service accrual for part-time employees.

Unknown Data for Members:

Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.

Percent Married:

80% of male members and 55% of female members are assumed to be married at pre-retirement death or retirement.

Age of Spouse:

Female are 3 years younger than their spouses.

Offsets by Other Plans of the Employer for Disability Benefits:

The Plan requires members who retire because of disability from General Tier 3 to offset the Plan's disability benefits with other Plans of the employer. We have not assumed any offsets in this valuation.

Terminal Pay Assumptions:

The following assumptions for terminal pay as a percentage of final average pay are used:

General Tier 1:	11.50%
General Tier 3:	7.00%
Safety Tier A:	11.00%
Safety Tier C:	3.75%

For determining the cost of the basic benefit (i.e. non-COLA component), the cost of this pay element is currently recognized in the valuation as an employer only cost and does not affect member contribution rates.

Service From Unused Sick Leave Conversion:

General and Safety deferred vested members: We assumed that 40% and 60% of future deferred vested members, respectively will continue to work for a reciprocal employer.

For deferred vested members, we make the following retirement assumption:

Service Retirements:

General Age:	1.25%
Safety:	2.25%

Disability Retirements:

General:	0.25%
Safety:	1.25%

Pursuant to Section 31641.01, the cost of this benefit will be charged only to employers and will not affect member contribution rates.

Net Investment Return: 7.80%, net of administration and investment expenses

Employee Contribution Crediting Rate: 7.80%, compounded semi-annually

Consumer Price Index: Increase of 3.75% per year; retiree COLA increases due to CPI subject to a 3.00% maximum change per year except for Tier 3 disability benefits and Tier 2 benefits which are subject to a 4.00% (valued as a 3.75% increase) maximum change per year.

Salary Increases:

Annual Rate of Compensation Increase

Inflation: 3.75% per year, plus "across the board" salary increases of 0.50% per year, plus the following merit and promotional increases:

Years of Service	General	Safety
Less than 1	7.50%	8.00%
1	6.50%	6.50%
2	5.00%	5.50%
3	4.00%	4.50%
4	3.00%	2.25%
5	2.00%	0.75%
6	1.75%	0.75%
7	1.50%	0.75%
8	1.25%	0.75%
9	1.00%	0.75%
10	0.75%	0.75%
11	0.75%	0.75%
12	0.75%	0.75%
13	0.75%	0.75%
14	0.75%	0.75%
15	0.75%	0.75%
16	0.75%	0.75%
17	0.75%	0.75%
18	0.75%	0.75%
19	0.75%	0.75%
20 & over	0.75%	0.75%

Actuarial Value of Assets:	Market value of assets less unrecognized returns in each of the last nine semi-annual accounting periods. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized semi-annually over a five-year period.
Valuation Value of Assets:	Actuarial Value of Assets reduced by the value of the non-valuation reserves and designations.
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method. Entry Age is age minus years of service. Actuarial Accrued Liability is calculated on an individual basis and is based on costs allocated as a level percent of compensation. The Normal Cost is calculated on an aggregate basis by taking the Present Value of Future Normal Costs divided by Present Value of Future Salaries to obtain a normal cost rate for each rate group of employees. This normal cost rate is then multiplied by the total of current salaries for that rate group. The Present Value of Future Normal Costs is determined as if the current benefit accrual rate had always been in effect.