Sacramento County Employees' Retirement System

ACTUARIAL EXPERIENCE STUDY

Analysis of Actuarial Experience During the Period July 1, 2007 through June 30, 2010

SEGAL

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August 9, 2011

Board of Retirement
Sacramento County Employees' Retirement System
980 9th Street, Suite 1900
Sacramento, CA 95814

Re: Review of Non-Economic Actuarial Assumptions for the June 30, 2011 Actuarial Valuation

Dear Members of the Board:

We are pleased to submit this report of our review of the actuarial experience of the Sacramento County Employees' Retirement System. This study utilizes the census data for the period July 1, 2007 to June 30, 2010 and provides the proposed actuarial assumptions to be used in the June 30, 2011 valuation.

The review of the economic assumptions for use in the June 30, 2011 valuation is provided in a separate report.

We are Members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

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

Sincerely,

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

Andy Yeung, ASA, MAAA, FCA, EA
Vice President and 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 assumptions, and to the extent there are differences, the future contribution requirement is adjusted.

If assumptions are changed, 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 gains 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 July 1, 2007 through June 30, 2010. 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, as appropriate, 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, reciprocity, deferred vested retirement age, pre-retirement mortality, post-retirement healthy and disabled life mortality, disability (ordinary and duty), and service from unused sick leave conversion.

Our recommendations for the major actuarial assumption categories are as follows:

Retirement Rates - The probability of retirement at each age at which participants are eligible to retire.
Recommendation: For the Miscellaneous Tiers 1, 2 and 3 and Safety members, we recommend decreasing the current retirement rates.

Mortality Rates - The probability of dying at each age. Mortality rates are used to project life expectancies.
Recommendation: The current post-retirement rates for Miscellaneous and Safety members who retire for service have been adjusted slightly to anticipate future mortality improvement. We recommend a change from the current 1994 Group Annuity Mortality Tables with a one year set back to the RP-2000 Combined Healthy Mortality Tables with a two year set back for Miscellaneous members and a one year set back for Safety members. The recommended pre-retirement mortality assumption is consistent with the table used for post-service retirement mortality. We recommend no change in the assumption that all pre-retirement deaths are ordinary (non-duty) for Miscellaneous members and that 25% of pre-retirement deaths are assumed to be ordinary and the remaining 75% are assumed to be duty for Safety members. The disabled member mortality rates for Miscellaneous members have been slightly increased to reflect an increase in mortality rates. The disabled member mortality rates for Safety members are relatively unchanged pending further review at the next experience study to confirm that the actual number of deaths are indeed much higher than those expected by the current and the proposed assumptions.

Termination Rates - The probability of leaving employment at each age and receiving either a refund of member contributions or a deferred vested retirement benefit.
Recommendation: We recommend maintaining the current termination rates and the current proportion of members expected to elect a refund of member contributions instead of a deferred vested benefit.

Disability Incidence Rates - The probability of becoming disabled at each age.
Recommendation: The rates have been reduced to reflect recent experience.

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: We recommend maintaining the current merit and promotional rates until more stable data on salary increase experience may be available at the next experience study.

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: We recommend increasing the current assumption for Safety members to anticipate a higher level of conversions of unused sick leave at retirement, consistent with recent experience.

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

II. BACKGROUND AND METHODOLOGY

In this report, we analyzed the "demographic" or "non-economic" assumptions only. Our analysis of the "economic" assumptions for the June 30, 2011 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 reviewed the individual salary increases in excess of general salary increases (i.e., the merit and promotional 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 left 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 review of the economic assumptions for use in the June 30, 2011 valuation is provided in a separate report.

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.

This experience study reflects an element of experience not analyzed in previous studies. Beginning in 2007/2008, the employer has provided members with the option to purchase Additional Retirement Credit (ARC) so that the members' benefits would be increased upon retirement. The cost to the member for ARC is intended to be set so that such purchase would not alter the contribution requirements for the System. The cost for the ARC is determined at the time of purchase by a member and so assumptions have to be made as to when the member would eventually retire from the System and start receiving a benefit. For this reason, the purchase price is heavily dependent on the retirement rates used in that calculation. Before this experience study, there was no data to determine whether the purchase of ARC would influence a member's decision on when to retire. With this experience study, we now have the retirement experience for those members who purchased ARC and for those who did not purchase ARC. This experience will be used to set the cost for new ARC purchases and our recommended assumptions for determining such cost will be provided in a separate report. However, for the purpose of determining the contribution requirements in the regular valuation, we have continued to use the retirement experience from all members (whether they have or have ever purchased ARC) to set the retirement rates.

The retirement experience during the current three-year period indicated that there were fewer actual retirements than expected from the Miscellaneous Tiers 1, 2 and 3 and Safety member categories.

In this study, we have adjusted the retirement probabilities to reflect the most recent three-year experience. We have continued balance this recent experience with the current assumptions so as to make sure that the most recent three-year experience was not just a statistical fluctuation.

The following tables show the current, observed and proposed rates for Miscellaneous Tier 1, Miscellaneous Tiers 2 and 3 and Safety members.

Retirement Rates for Miscellaneous Tier 1

Age	Rate (%)		
	Current	Observed	Proposed
45-49	0.00	28.57	0.00
50	6.00	7.69	6.00
51	5.00	3.45	4.00
52	5.00	1.39	4.00
53	5.00	3.77	4.00
54	9.00	4.76	7.00
55	10.00	12.67	10.00
56	12.00	10.64	12.00
57	16.00	14.08	15.00
58	25.00	16.18	20.00
59	27.00	12.93	24.00
60	29.00	28.71	29.00
61	32.00	31.43	32.00
62	41.00	27.91	35.00
63	46.00	29.03	40.00
64	48.00	35.29	45.00
65	52.00	50.00	50.00
66	46.00	42.86	45.00
67	52.00	20.00	45.00
68	60.00	0.00	50.00
69	75.00	0.00	60.00
70	100.00	15.38	100.00

Retirement Rates for Miscellaneous Tiers 2 and 3

Age	Rate (%) Current	Observed	Proposed
45-49	0.00	0.00	0.00
50	3.00	1.76	2.00
51	2.00	1.76	2.00
52	2.00	1.34	2.00
53	4.00	2.12	3.00
54	5.00	2.90	4.00
55	6.00	6.70	6.00
56	8.00	3.14	6.00
57	10.00	5.68	8.00
58	20.00	6.05	13.00
59	20.00	6.88	15.00
60	22.00	9.65	18.00
61	23.00	14.81	20.00
62	41.00	19.10	30.00
63	46.00	20.33	35.00
64	48.00	24.11	40.00
65	52.00	32.04	45.00
66	46.00	38.10	45.00
67	52.00	22.86	45.00
68	60.00	24.24	50.00
69	75.00	14.29	60.00
70	100.00	17.82	100.00

Retirement Rates for Safety

Rate (%)

Age	Current	Observed	Proposed
45	0.00	3.28	2.00
46	0.00	0.00	2.00
47	0.00	2.50	2.00
48	0.00	6.67	2.00
49	0.00	14.89	5.00
50	30.00	15.94	25.00
51	20.00	17.05	20.00
52	20.00	7.29	20.00
53	30.00	17.20	25.00
54	30.00	8.20	25.00
55	30.00	12.07	25.00
56	30.00	32.43	30.00
57	30.00	24.00	30.00
58	30.00	30.00	30.00
59	30.00	32.14	30.00
60	100.00	28.57	50.00
61	100.00	15.00	60.00
62	100.00	50.00	75.00
63	100.00	12.50	75.00
64	100.00	40.00	75.00
65	100.00	0.00	100.00
66	100.00	50.00	100.00
67	100.00	0.00	100.00
68	100.00	0.00	100.00
69	100.00	0.00	100.00
70	100.00	0.00	100.00

Chart 1 compares actual experience with the current and proposed rates of retirement for Miscellaneous Tier 1 members. Chart 2 has the same data for Miscellaneous Tier 2 & 3 members and Chart 3 has the same data for Safety members.

In prior valuations, deferred vested Miscellaneous and Safety members were assumed to retire at age 59 and 54, respectively. The average age at retirement over the prior three years was 59 for Miscellaneous and 53 for Safety. We recommend maintaining the assumed retirement age for deferred vested members for Miscellaneous and changing the assumed retirement age to age 53 for Safety members.

It was also assumed that 55% of future inactive Miscellaneous and 65% of future inactive Safety deferred vested participants would be covered under a reciprocal retirement system and receive 5.65% salary increases from termination until their date of retirement. Based on the actual experience that 46% of Miscellaneous and 56% Safety members went on to be covered by a reciprocal retirement system during the last three years, we recommend decreasing the current 55% reciprocal assumption for Miscellaneous to 50% and decreasing the current 65% reciprocal assumption for Safety to 60%. Based on our recommendation to leave unchanged the current merit and longevity salary increase assumptions, we propose the current 5.65% salary increase assumption be utilized to anticipate salary increases from the date of termination from SCERS 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. According to the experience of members who retired during the last three years, about 78% of all male members and 52% of all female members were married or had a domestic partner at retirement. We recommend no change to the current 80% married or domestic partner assumption for male members and a 55% married or domestic partner assumption for female members.

Based on observed experience from members who retired during the last three years, we also recommend that we maintain the assumption that when active members retire, female spouses are assumed to be three years younger than their male spouses. Spouses will be assumed to be of the opposite sex to the member until we have more actual experience concerning domestic partners.

Chart 1
Retirement Rates - Miscellaneous Tier 1 Members

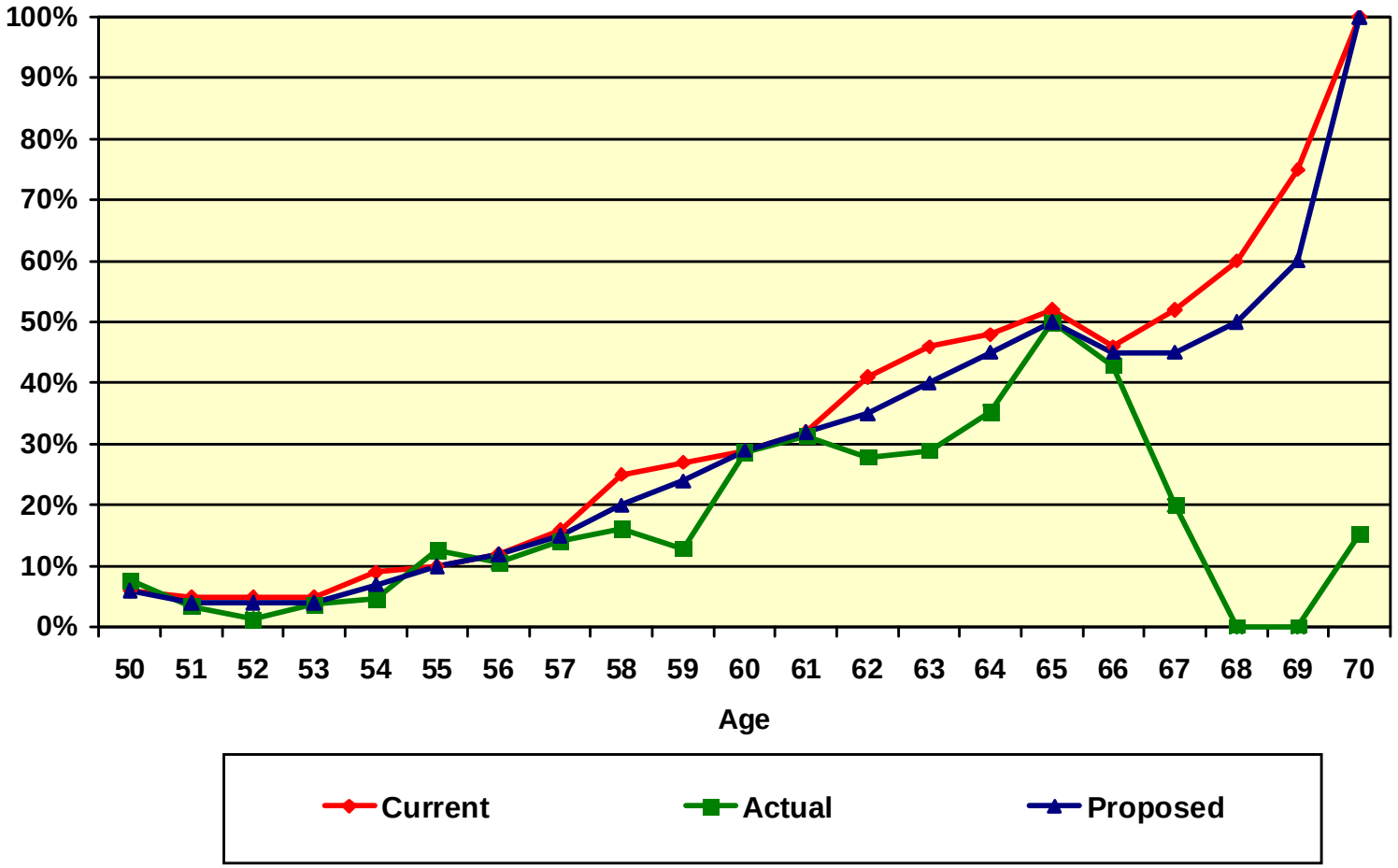


Chart 2
Retirement Rates - Miscellaneous Tier 2 & 3 Members

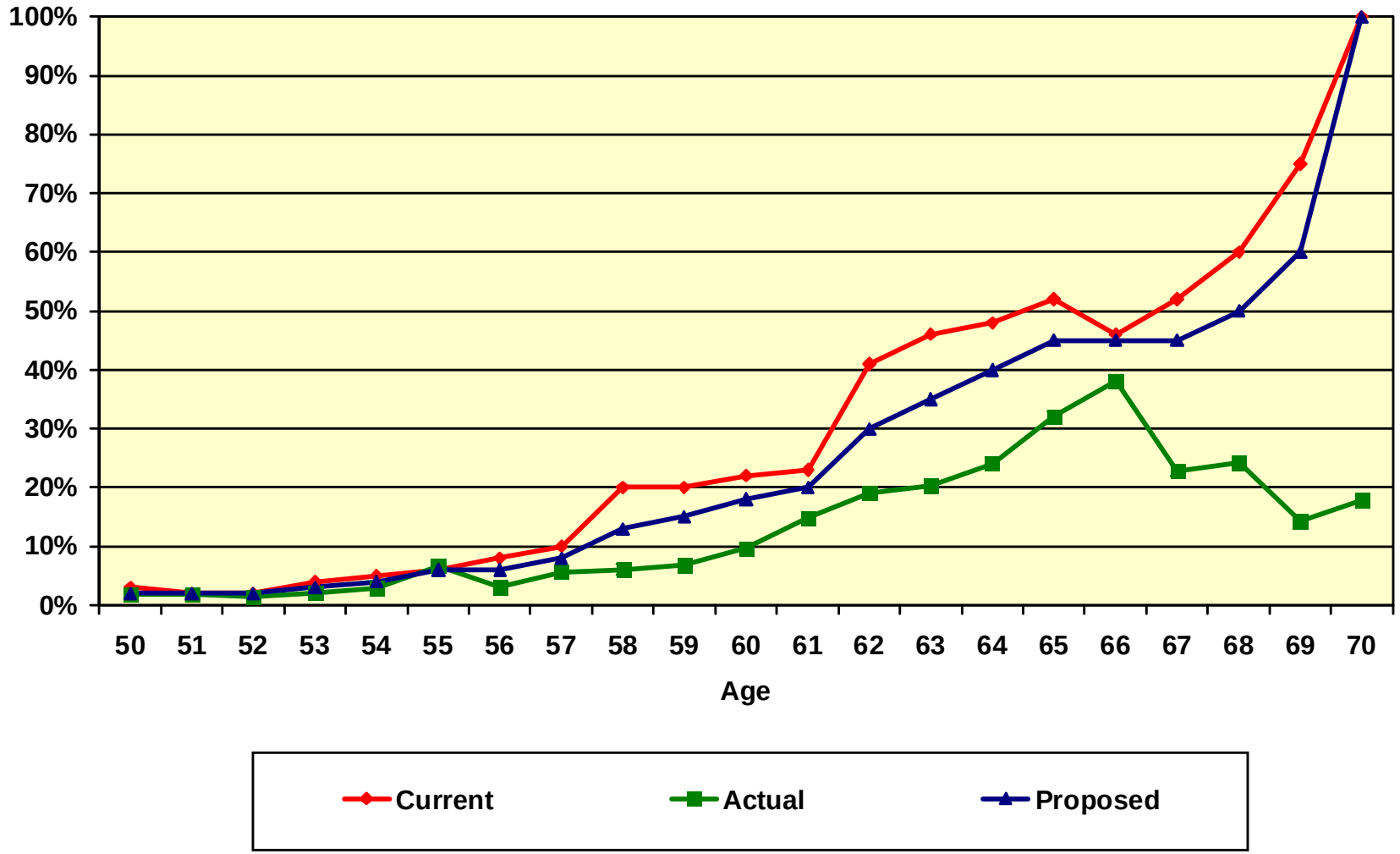
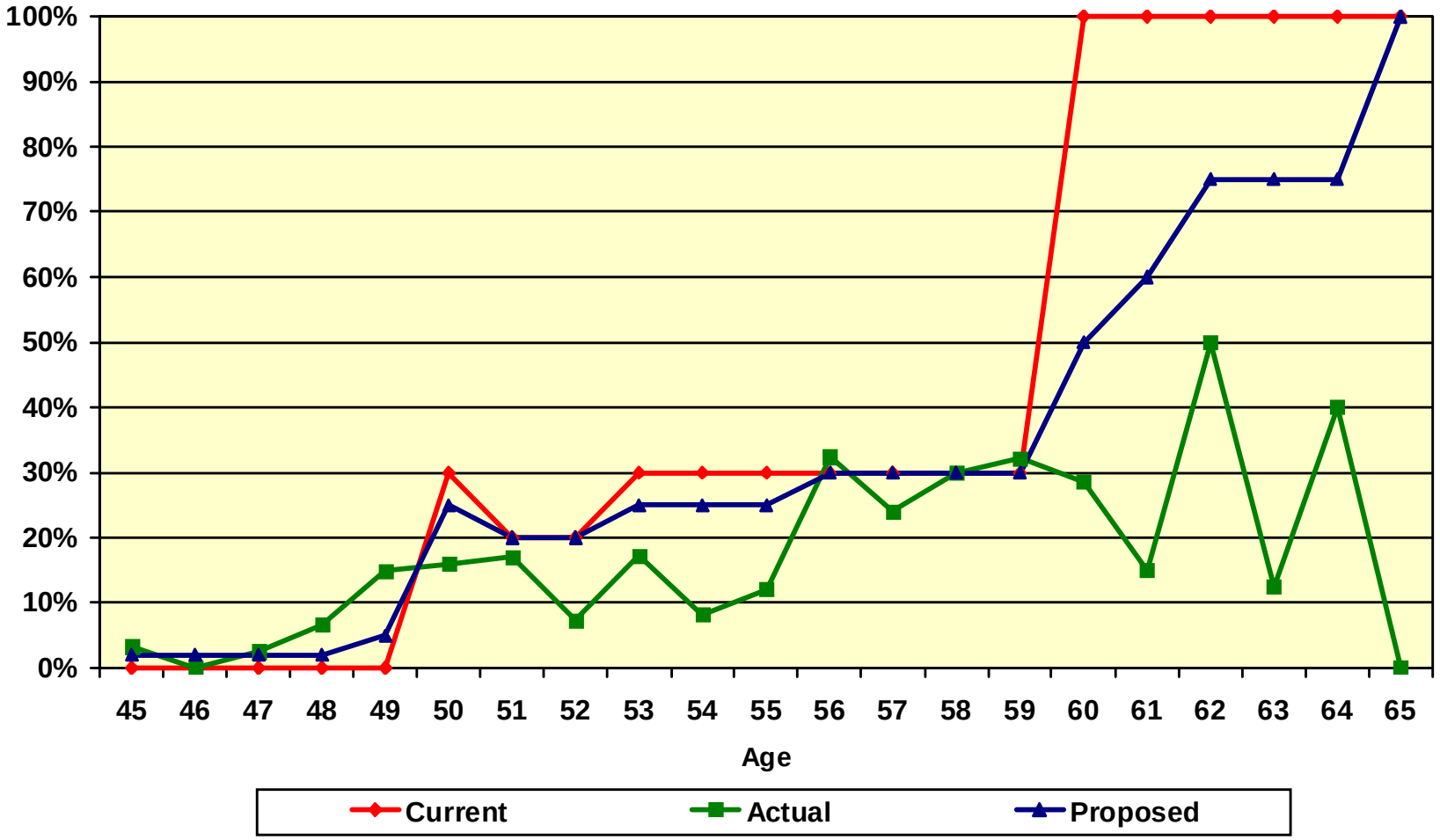


Chart 3
Retirement Rates - Safety Members



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 tables currently being used for post-service retirement mortality rates are the 1994 Group Annuity Mortality Table (separate tables for males and females) set back one year.

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, it is assumed that pre-retirement mortality follows the same tables used for post-retirement mortality. Based on actual deaths during the last three years, all Miscellaneous pre-retirement deaths are assumed to be ordinary (non-duty) while only 25% of Safety pre-retirement deaths are assumed to be ordinary and the rest are assumed to be duty deaths.

Post-Retirement Mortality (Service Retirements)

Among service retired members, the actual deaths compared to the expected deaths under the current and proposed assumptions for the last three years are as follows:

	Miscellaneous – Healthy*			Safety – Healthy		
Year Ending June 30	Current Expected Deaths	Actual Deaths	Proposed Expected Deaths	Current Expected Deaths	Actual Deaths	Proposed Expected Deaths
2008	150	174	147	13	16	13
2009	157	181	154	15	23	14
2010	163	167	161	15	12	15
Total	470	522	462	43	51**	42
Actual / Expected	111%		113%	119%		121%

* Includes beneficiaries of Miscellaneous and Safety members.

** During the July 1, 2004 to June 30, 2007 experience study, there were only 28 Safety deaths reported during that 3-year period.

The tables that we recommend for the Miscellaneous members and all beneficiaries is the RP-2000 Combined Healthy Mortality Table (separate tables for males and females) set back two years. For Safety members, we recommend the same tables as for Miscellaneous but set back one year. Of note is that the ratio of actual to expected deaths under the proposed assumptions is

higher than the 110% ratio that we would normally propose to allow for some margin for future mortality improvements. This is the case because the number of actual deaths during the most recent 3-year period is much higher than that during the last experience study period from 2004 to 2007.

Chart 4 compares actual to expected deaths for Miscellaneous members and all beneficiaries under the current and proposed assumptions for all pensioners over the last three years. Experience shows that there were more deaths than predicted by the current table over the last three years.

Chart 5 has the same comparison for Safety members.

Chart 6 shows the life expectancies under the current and the proposed tables for Miscellaneous members and all beneficiaries.

Chart 7 has the same information for Safety members.

Mortality Table for Member Contributions

We recommend that the mortality table used for determining contributions for Miscellaneous members be changed from the 1994 Group Annuity Mortality Table set back one year weighted 40% male and 60% female to the RP-2000 Combined Healthy Mortality Table set back two years weighted 40% male and 60% female. This is based on the proposed mortality table for Miscellaneous members and the actual gender distribution for the current Miscellaneous members.

For Safety members, we recommend the mortality table be changed from the 1994 Group Annuity Mortality Table set back one year weighted 75% male and 25% female to the RP-2000 Combined Healthy Mortality Table set back one year weighted 70% male and 30% female. This is based on the proposed mortality table for Safety members and the actual gender distribution for the current Safety members.

Chart 4
Post - Retirement Deaths (Miscellaneous)
Non - Disabled Members

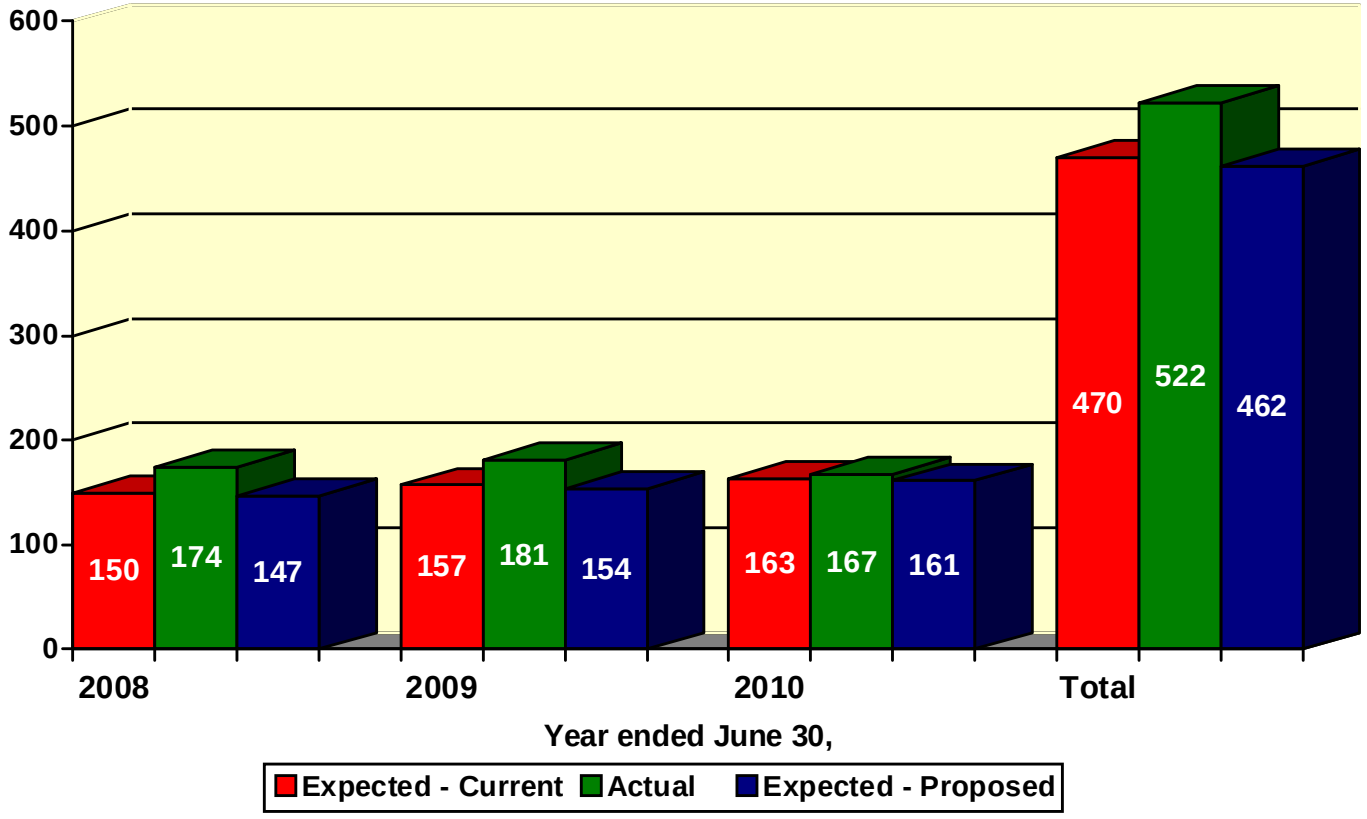


Chart 5
Post - Retirement Deaths (Safety)
Non - Disabled Members

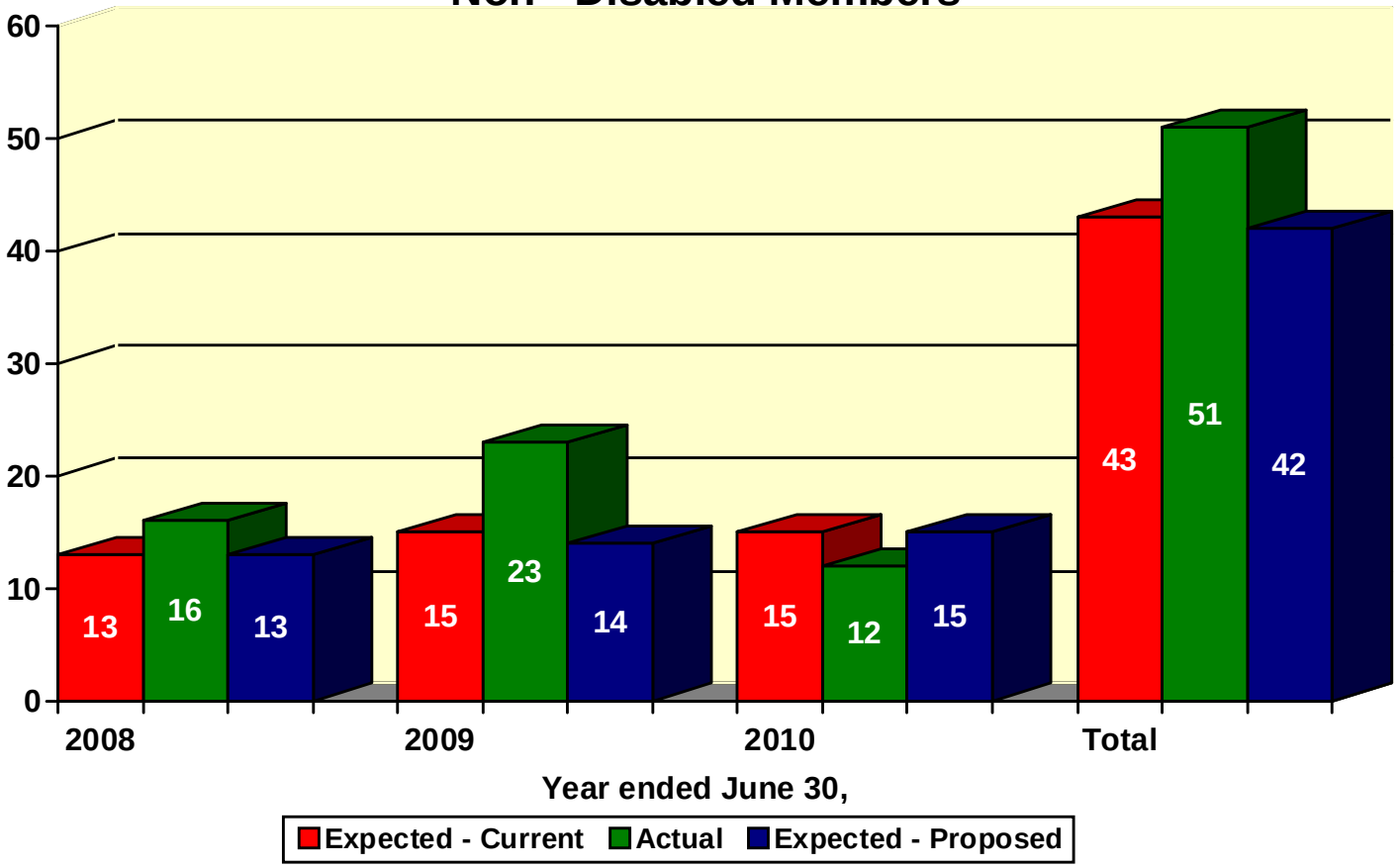


Chart 6
Life Expectancies (Miscellaneous)

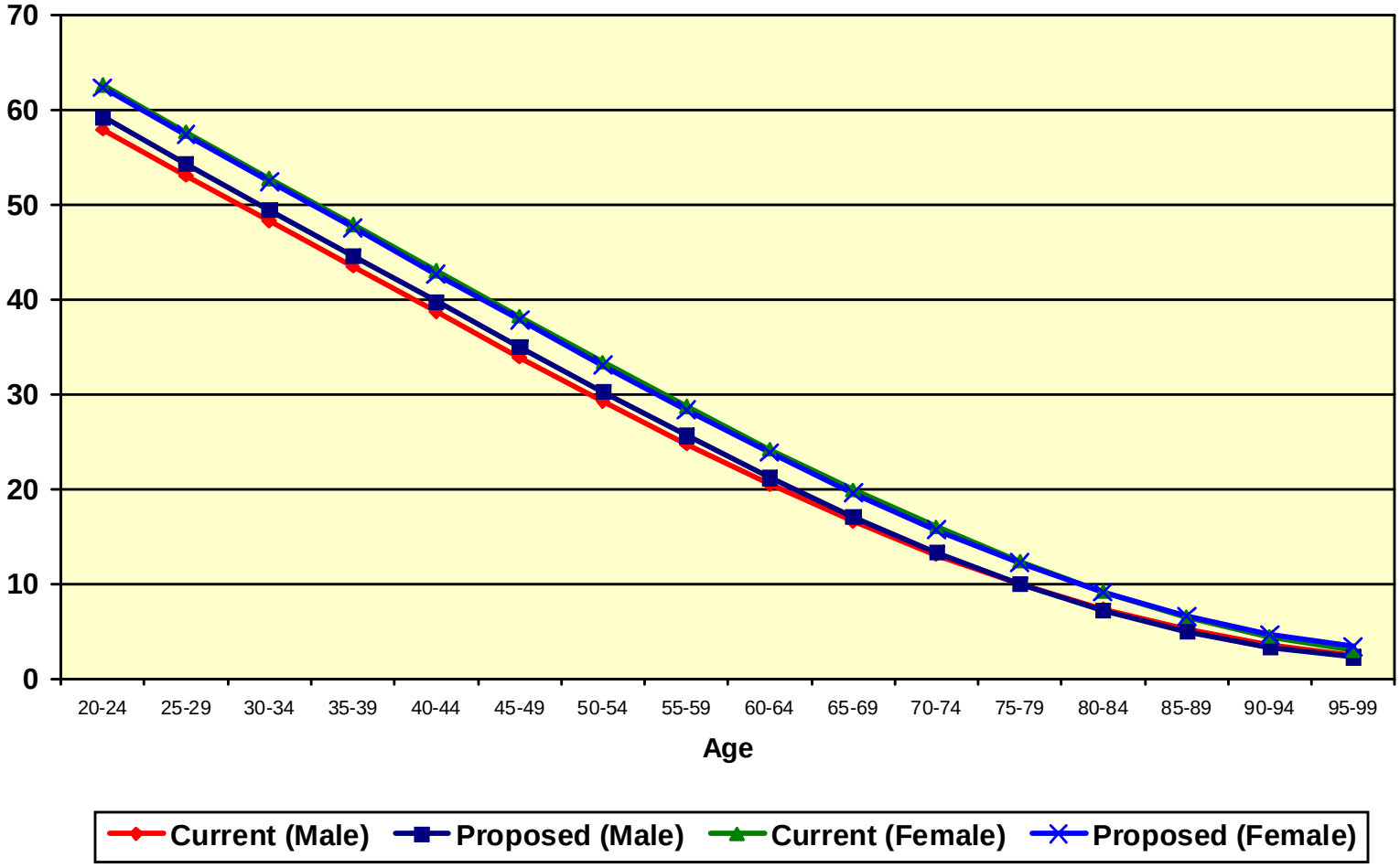
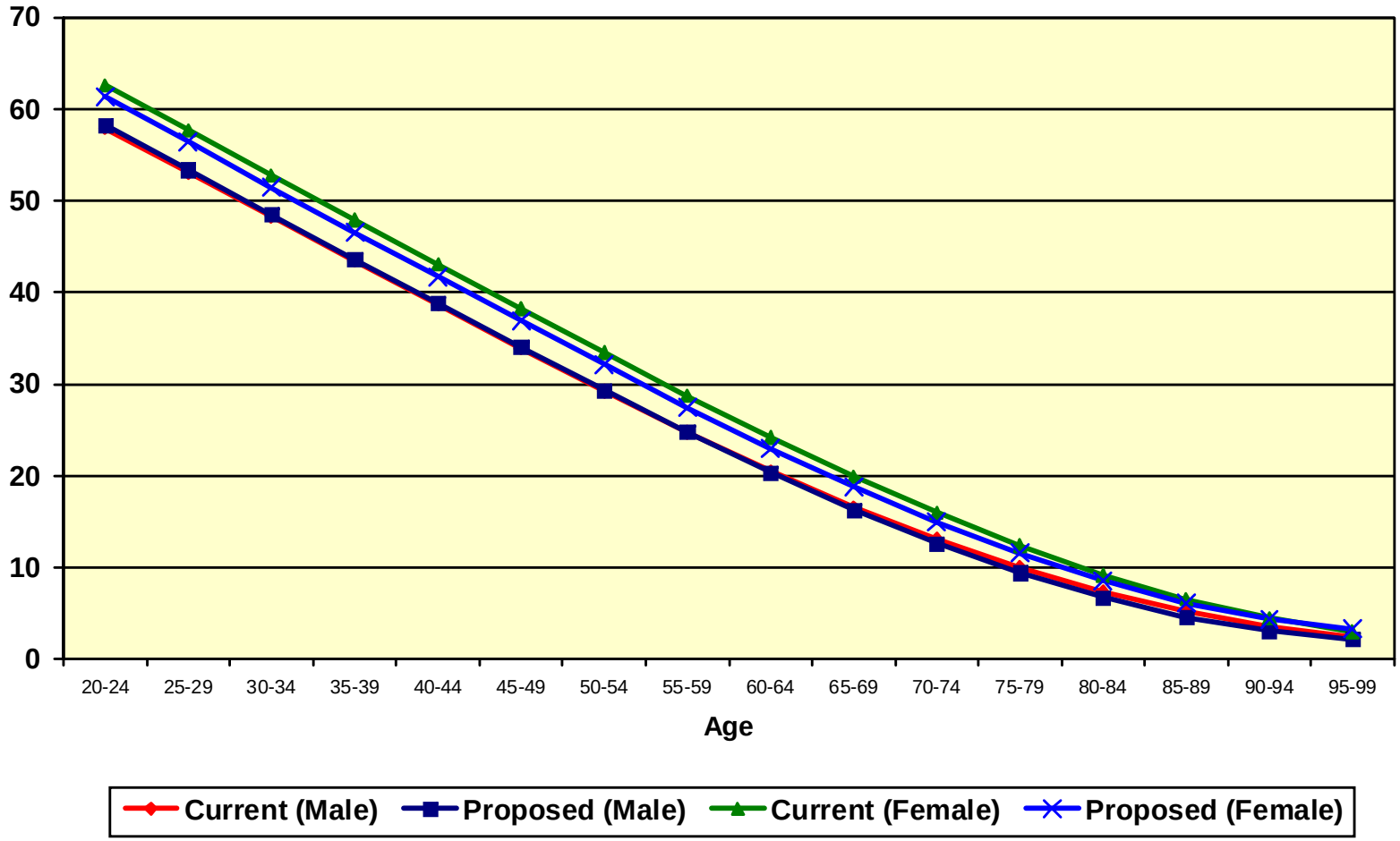


Chart 7
Life Expectancies (Safety)



D. MORTALITY RATES - DISABLED

Since death rates for disabled members can vary from those of healthy members, a different mortality assumption is often used. The table currently being used for Miscellaneous members is the 1981 Disability Mortality Table (Miscellaneous) with a three year set back. For Safety members, the 1994 Group Annuity Mortality Table set back one year is used, which is the same as the "healthy" mortality assumption.

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

	Miscellaneous – Disability			Safety – Disability		
Year Ending June 30	Expected Deaths	Actual Deaths	Proposed Expected Deaths	Expected Deaths	Actual Deaths	Proposed Expected Deaths
2008	21	34	26	2	8	2
2009	21	25	25	3	6	3
2010	21	27	26	3	2	3
Total	63	86	77	8	16**	8
Actual / Expected	137%		112%	200%		200%

** During the July 1, 2004 to June 30, 2007 experience study, there were only 10 Safety disability deaths reported during that 3-year period.

We recommend that the mortality table for disabled Miscellaneous members be changed from the 1981 Disability Mortality Table (Miscellaneous) with a three year set back to the RP-2000 Disabled Retiree Mortality Table (separate tables for males and females) set forward one year. We will continue to monitor this assumption.

Chart 8 compares actual to expected deaths under both the current and proposed assumptions for disabled Miscellaneous members over the last three years.

We recommend that the mortality table for disabled Safety members be changed from 1994 Group Annuity Mortality Table (separate tables for males and females) set back one year to the RP-2000 Combined Healthy Mortality Table (separate tables for males and females) set back one year. These tables are the same tables we are recommending for the healthy Safety retirees. We are not recommending an increase in the expected mortality rates for the disabled Safety members because the 16 deaths reported during the current experience study period were much higher than the 10 deaths reported for the prior experience study period. We will monitor this assumption to

see if an increase in the expected disabled mortality rates is warranted at the next experience study.

Chart 9 compares actual to expected deaths under both the current and proposed assumptions for disabled Safety members over the last three years.

Chart 10 and 11 show the life expectancies under both the current and proposed tables for Miscellaneous and Safety, respectively.

Chart 8
Post - Retirement Deaths
Disabled Miscellaneous Members

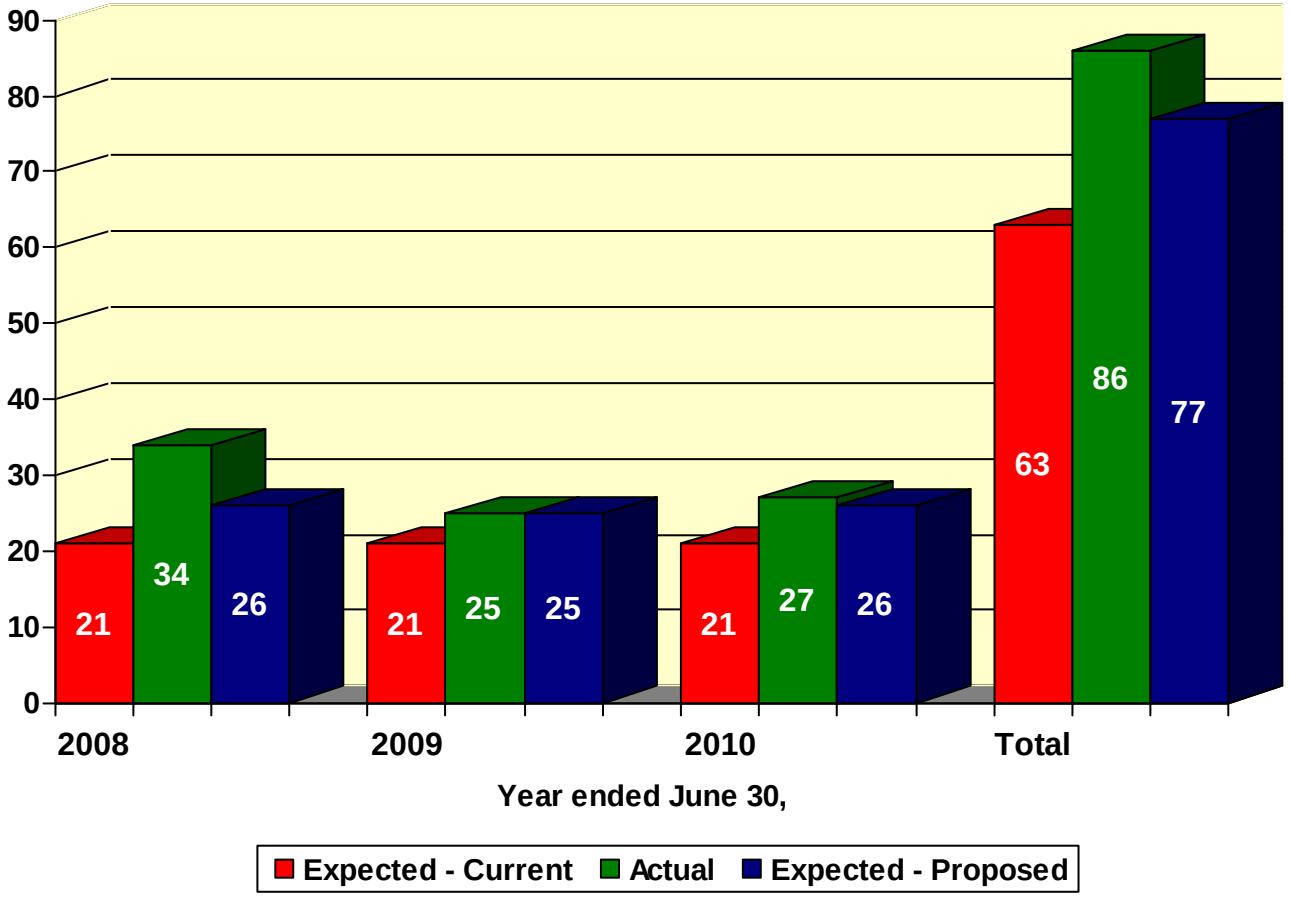


Chart 9
Post - Retirement Deaths
Disabled Safety Members

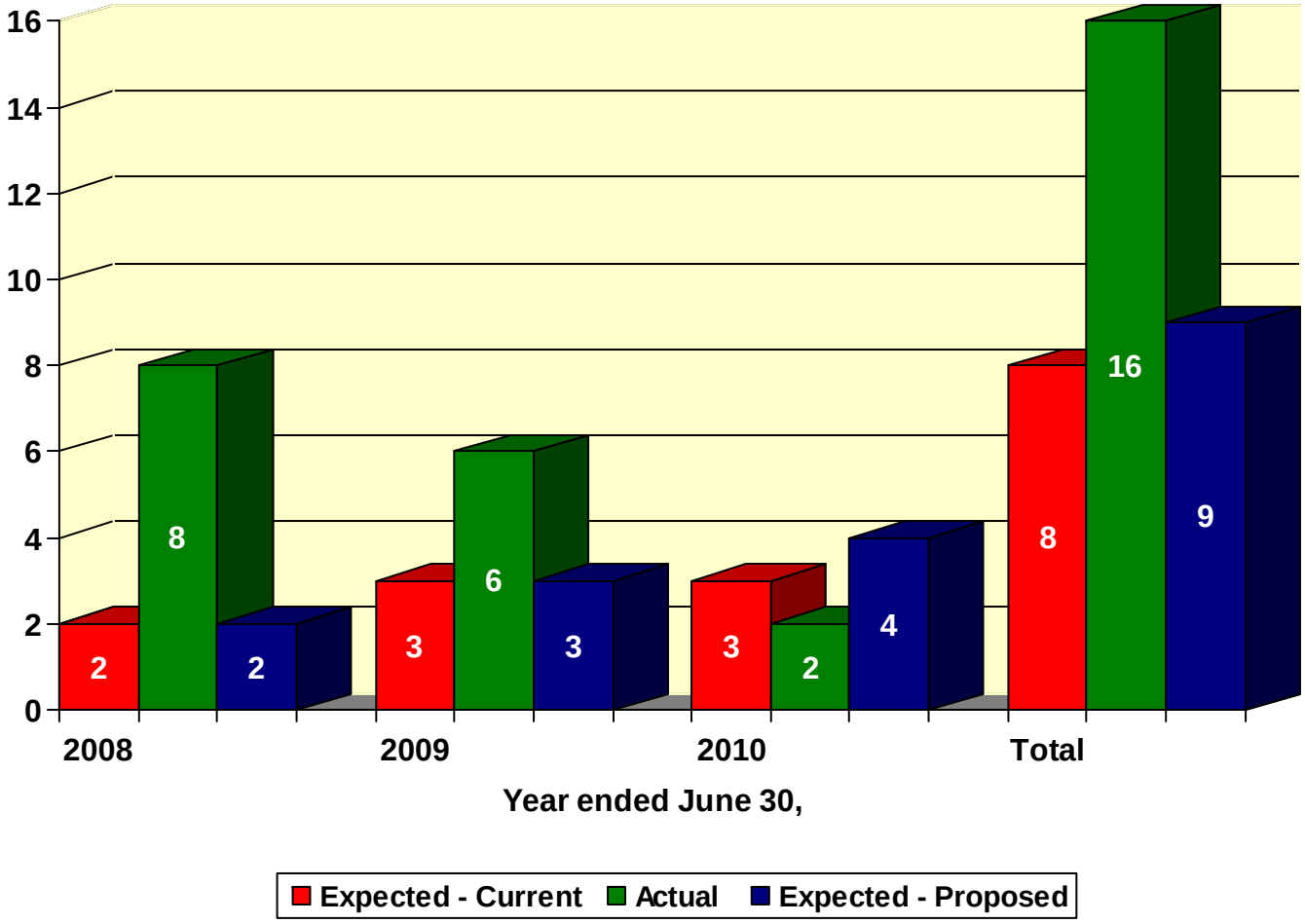


Chart 10
Life Expectancies (Miscellaneous Disabled)

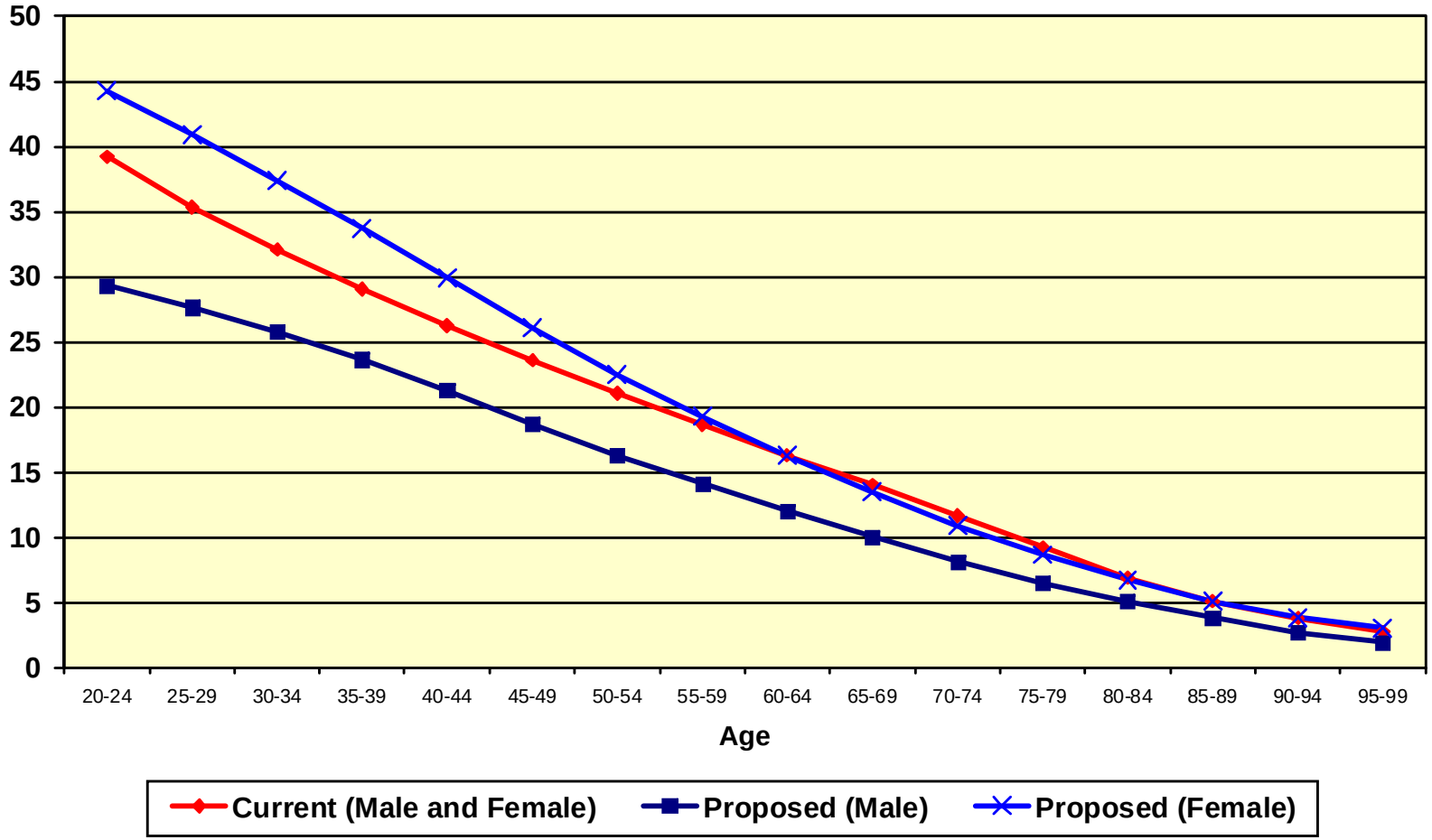
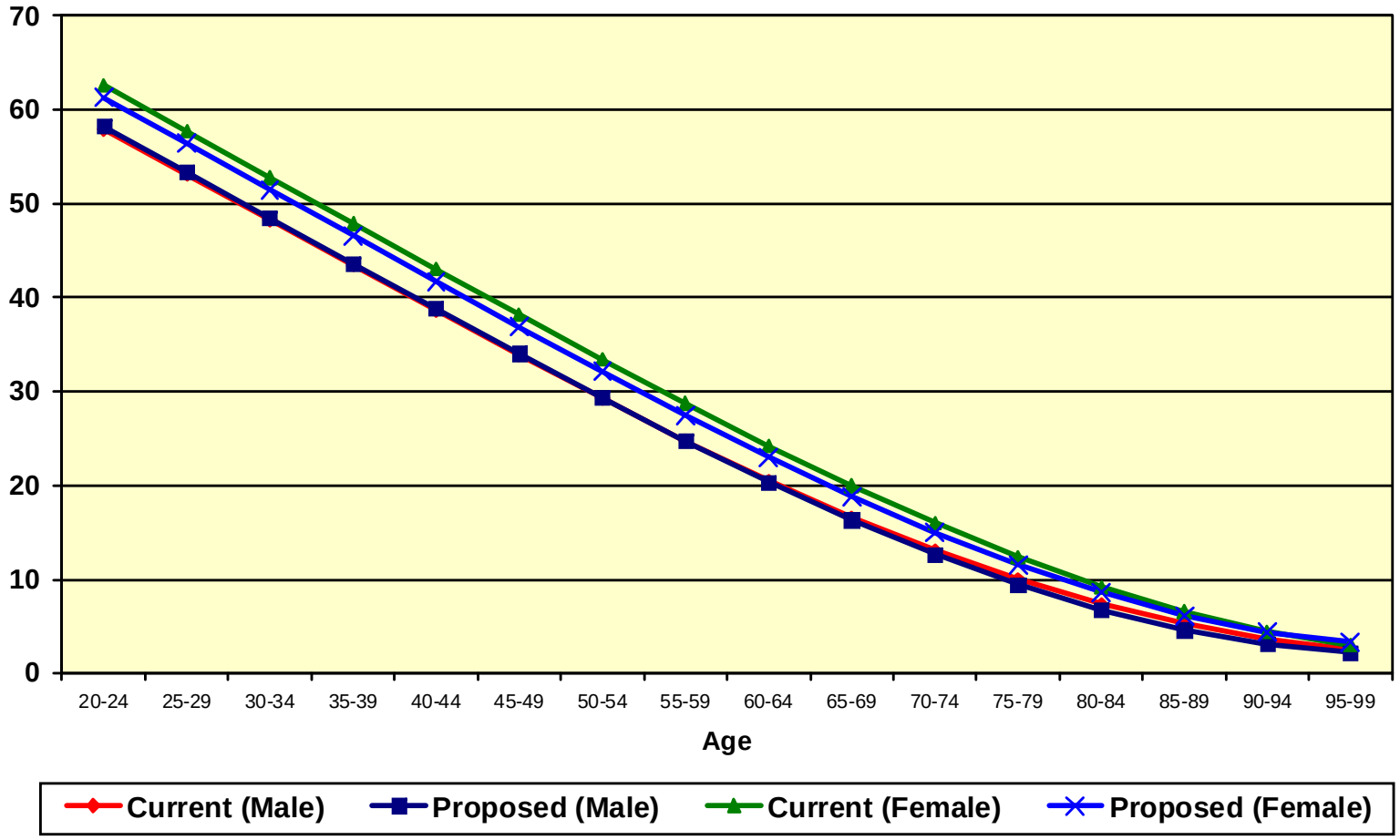


Chart 11
Life Expectancies (Safety Disabled)



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 50% of Miscellaneous members and 40% of Safety members would elect a refund of contributions while the remaining 50% and 60%, respectively, would elect a deferred retirement benefit.

Because of the significant reduction-in-force that occurred during the 2009/2010 plan year, we believe that including terminations from that year to set the long term termination rates would significantly over estimate the number of future terminations. Therefore, we have only used the experience from the remaining two-year period (i.e., from June 30, 2007 to June 30, 2009) to review the termination rates. The termination experience over the last two years for Miscellaneous and Safety members separated between those members with under five years of service and those with five or more years of service is as follows:

Rates of Termination (Miscellaneous)
(Fewer than Five Years of Service)

Years of Service	Current Rate	Observed Rate	Proposed Rate
0	15.00%	10.75%	15.00%
1	9.00	7.72	9.00
2	8.00	6.04	8.00
3	6.00	6.36	6.00
4	5.00	5.92	5.00

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

Years of Service	Current Rate	Observed Rate	Proposed Rate
0	10.00%	9.70%	10.00%
1	6.00	9.72	6.00
2	5.00	4.43	5.00
3	4.00	3.80	4.00
4	3.00	0.48	3.00

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

Age	Current Rate	Observed Rate	Proposed Rate
20 – 24	5.00%	0.00%	5.00%
25 – 29	4.75	7.01	4.75
30 – 34	4.50	3.63	4.50
35 – 39	4.25	3.36	4.25
40 – 44	3.50	2.19	3.50
45 – 49	2.50	2.23	2.50
50 – 54	1.70	4.19	1.70
55 – 59	1.50	3.98	1.50
60 – 64	0.00	4.07	0.00
65 – 69	0.00	8.70	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	2.11	3.00
30 – 34	3.00	2.25	3.00
35 – 39	2.50	1.16	2.50
40 – 44	2.00	1.37	2.00
45 – 49	1.50	1.26	1.50
50 – 54	0.00	3.57	0.00
55 – 59	0.00	4.17	0.00
60 – 64	0.00	16.67	0.00

Chart 12 compares actual to expected terminations of the past two years for both the current and proposed assumptions for Miscellaneous members and Safety members.

Chart 13 shows the current, along with the proposed withdrawal rates for Miscellaneous members with less than five years of service.

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

Chart 15 shows the current, along with the proposed termination rates for Miscellaneous members with five or more years of service.

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

Based upon the recent experience, we recommend no changes to the withdrawal rates for Miscellaneous and Safety members. Based on the recent experience that only 27% of the vested Miscellaneous and 29% of the vested Safety members who terminate employment actually elected to leave their contributions on deposit so that they would be eligible to receive a deferred retirement benefit, we recommend maintaining the assumption that 50% and 60% of members who terminate employment elect a deferred retirement benefit for Miscellaneous and Safety, respectively. We will also continue to assume that all termination rates are zero at any age where members are assumed to retire. That means that, at these ages, the members will either retire (and commence receiving a benefit) or continue working.

Chart 12
Actual Number of Terminations Compared to Expected

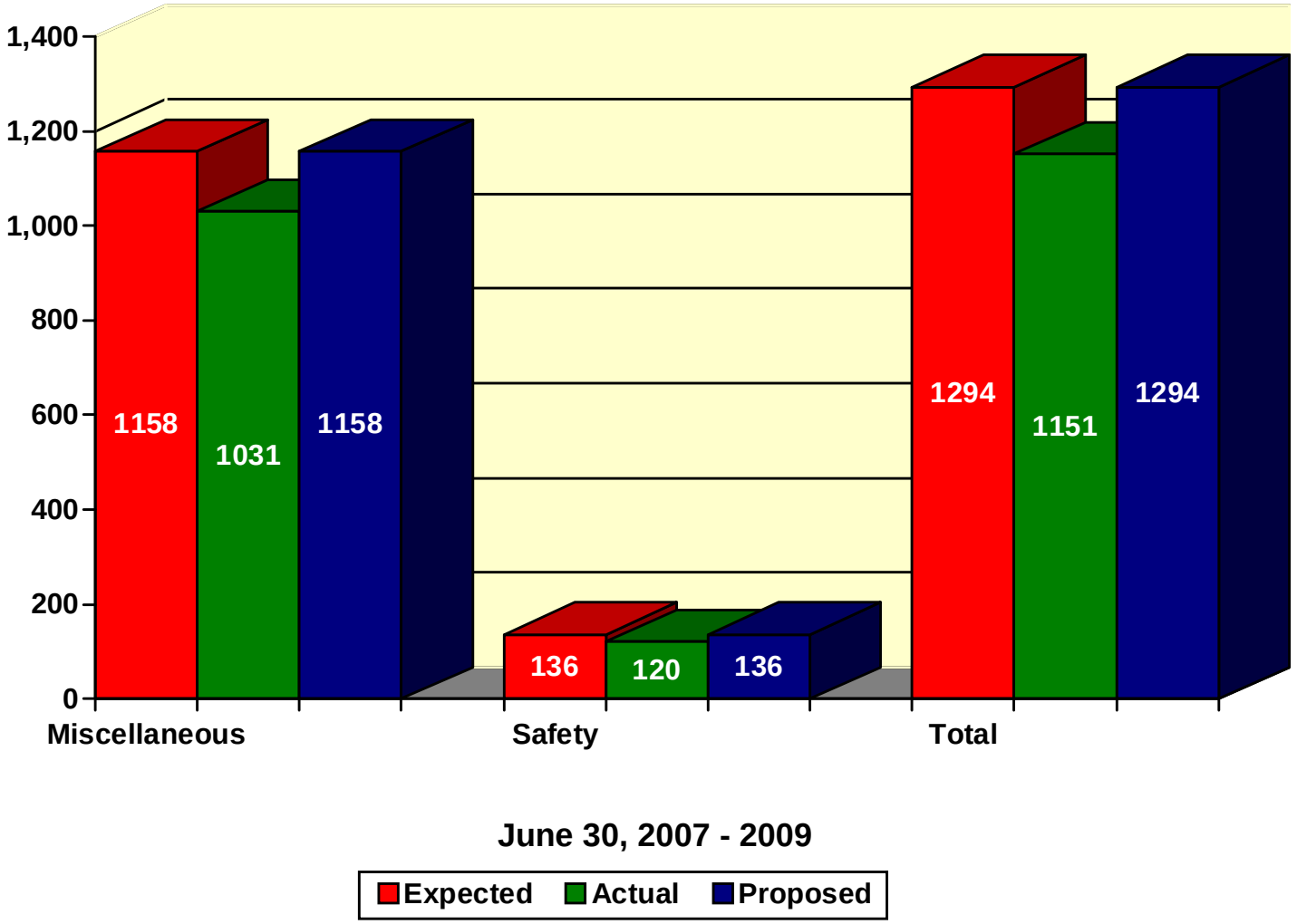


Chart 13
Termination Rates - Miscellaneous Members
(Less than Five Years of Service)

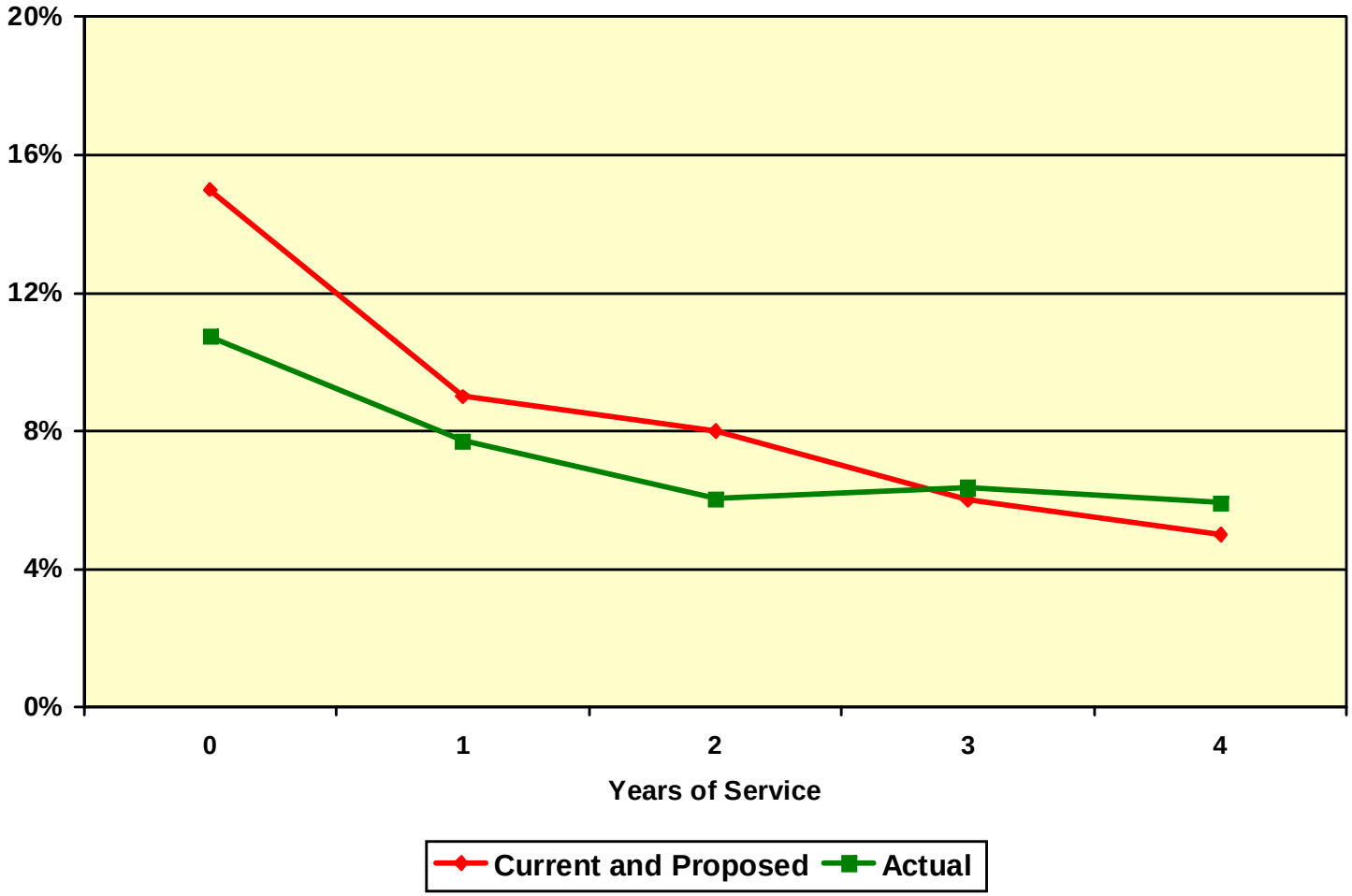


Chart 14
Termination Rates - Safety Members
(Less Than Five Years of Service)

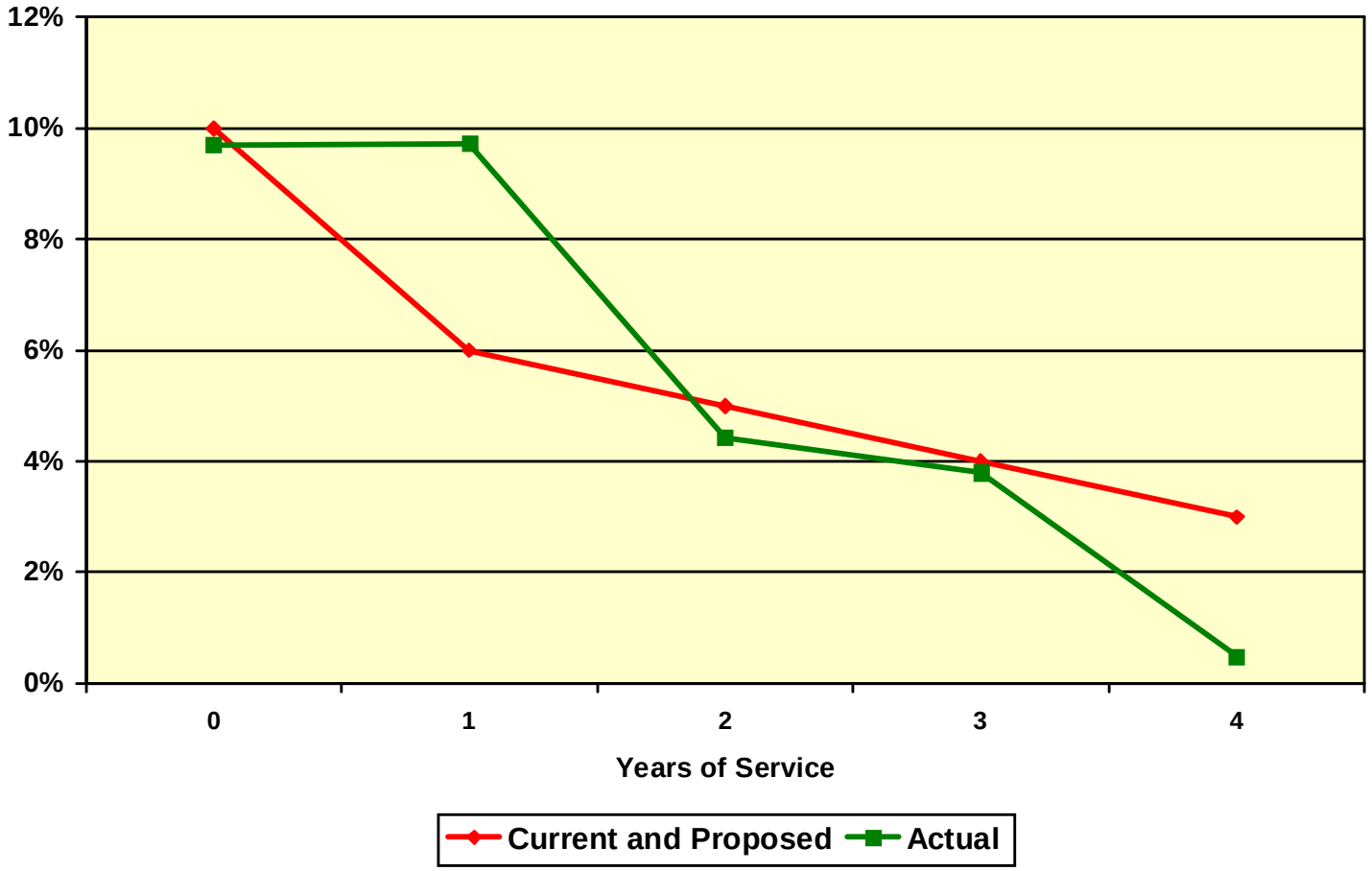


Chart 15
Termination Rates - Miscellaneous Members
(Five or More Years of Service)

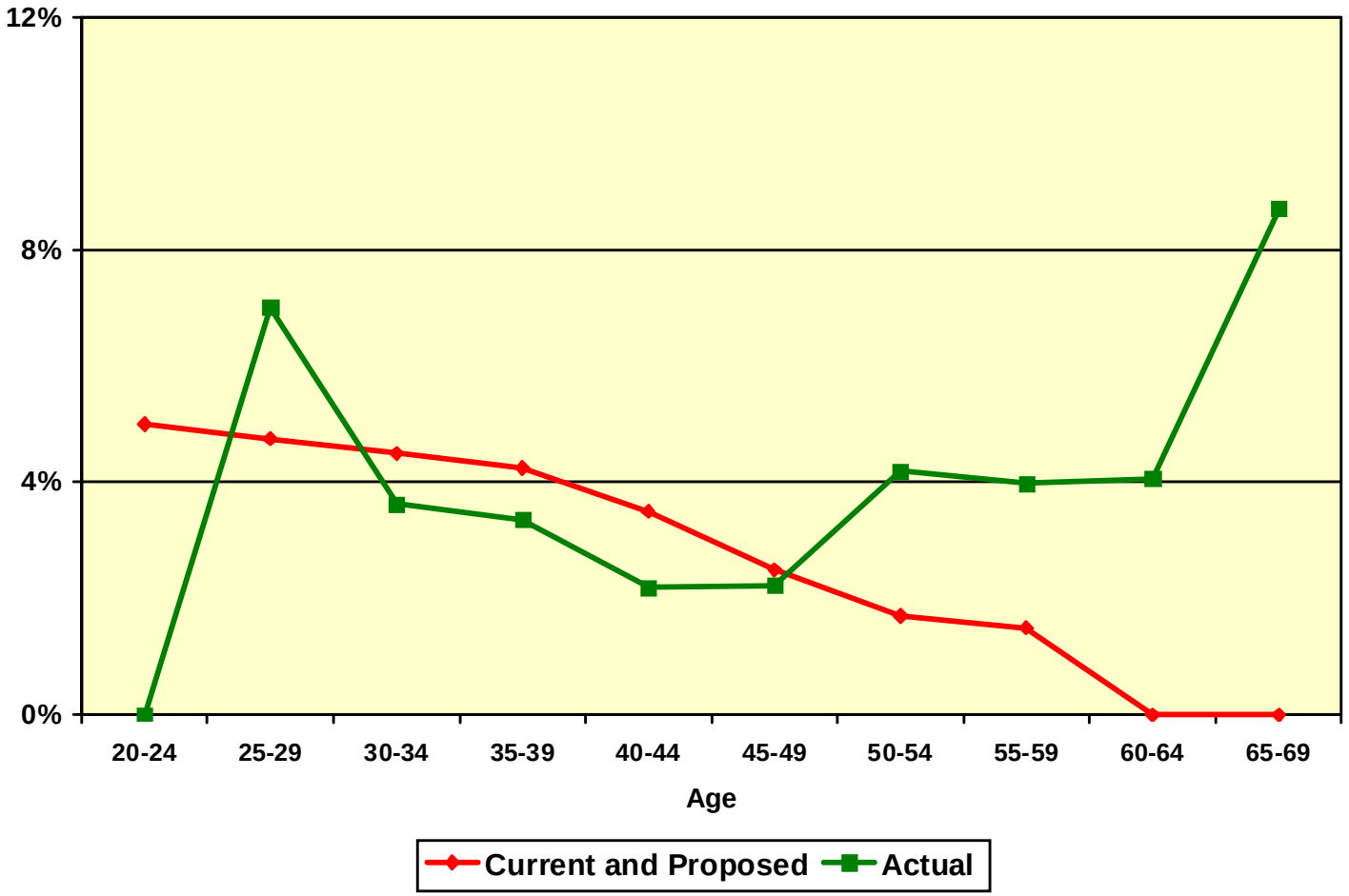
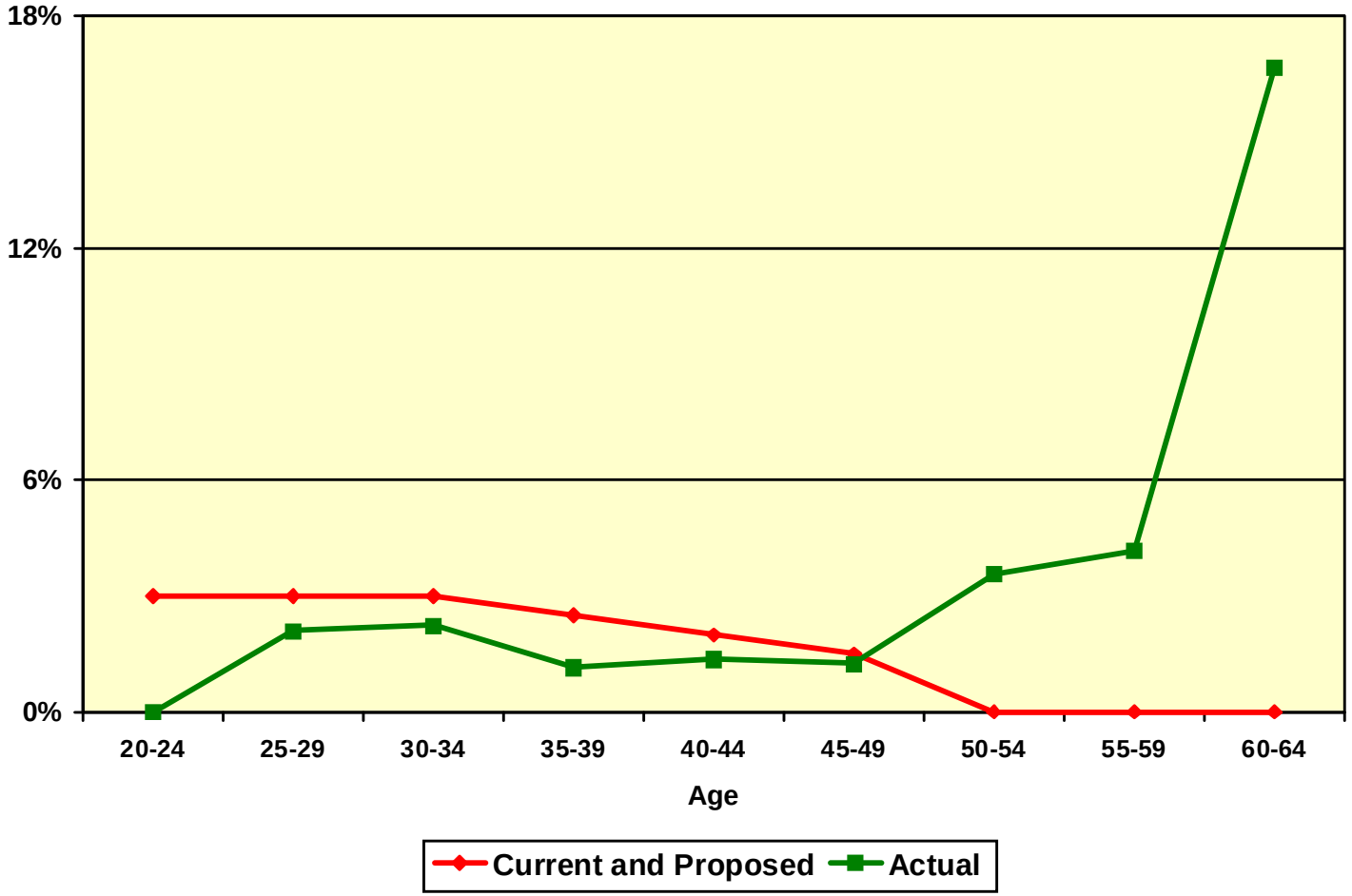


Chart 16
Termination Rates - Safety Members
(Five or More Years of Service)



F. DISABILITY INCIDENCE RATES

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

Rates of Disability Incidence (Miscellaneous)

Age	Current Rate	Observed Rate	Proposed Rate
20 – 24	0.00%	0.00%	0.00%
25 – 29	0.02	0.00	0.02
30 – 34	0.04	0.00	0.04
35 – 39	0.08	0.04	0.06
40 – 44	0.12	0.06	0.10
45 – 49	0.20	0.22	0.20
50 – 54	0.30	0.28	0.30
55 – 59	0.50	0.36	0.40
60 – 64	1.00	0.44	0.75
65 – 69	1.20	0.84	1.10

Rates of Disability Incidence (Safety)

Age	Current Rate	Observed Rate	Proposed Rate
20 – 24	0.20%	0.00%	0.10%
25 – 29	0.20	0.00	0.10
30 – 34	0.30	0.15	0.25
35 – 39	0.50	0.20	0.40
40 – 44	0.60	0.53	0.55
45 – 49	0.80	0.49	0.70
50 – 54	1.00	0.48	0.90
55 – 59	2.50	2.18	2.20
60 – 64	0.00	0.00	0.00

Chart 17 compares the actual number of ordinary and duty 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.

Chart 18 shows actual disablement rates, compared to the assumed and proposed rates for Miscellaneous members.

Since 17% of disabled Miscellaneous members received a duty disability, we recommend that the current 20% assumption used to anticipate duty disability retirement be maintained. The remaining 80% of Miscellaneous disabled members are assumed to receive an ordinary disability.

Chart 19 graphs the same information as Chart 18, but for Safety members. Since 88% of disabled Safety members received a duty disability, we recommend that the current 80% assumption used to anticipate duty disability retirement be increased to 90%. The remaining 10% of Safety disabled members will be assumed to receive an ordinary disability.

Chart 17
Actual Number of Disabilities Compared to Expected

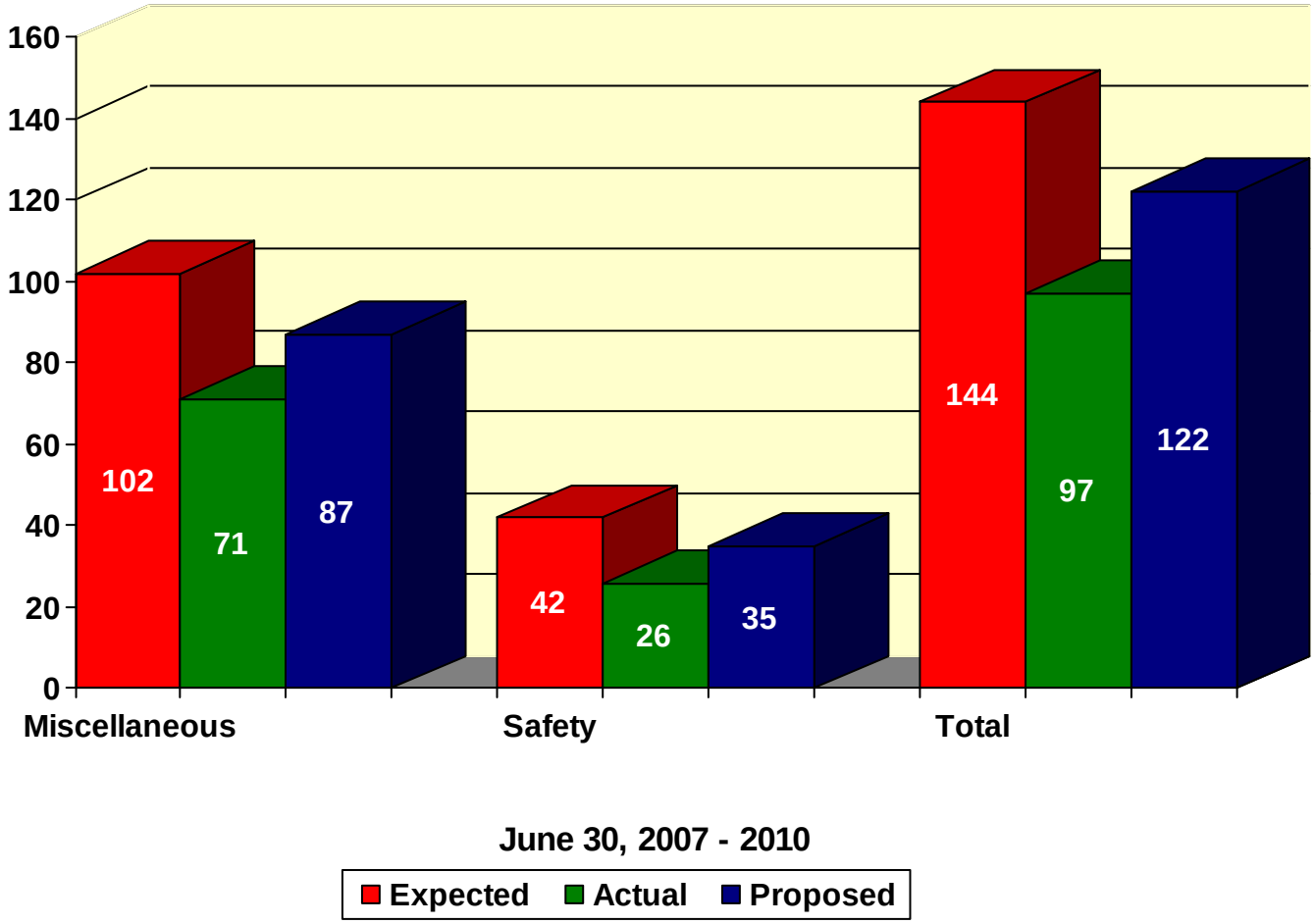


Chart 18
Disablement Rates for Miscellaneous Members

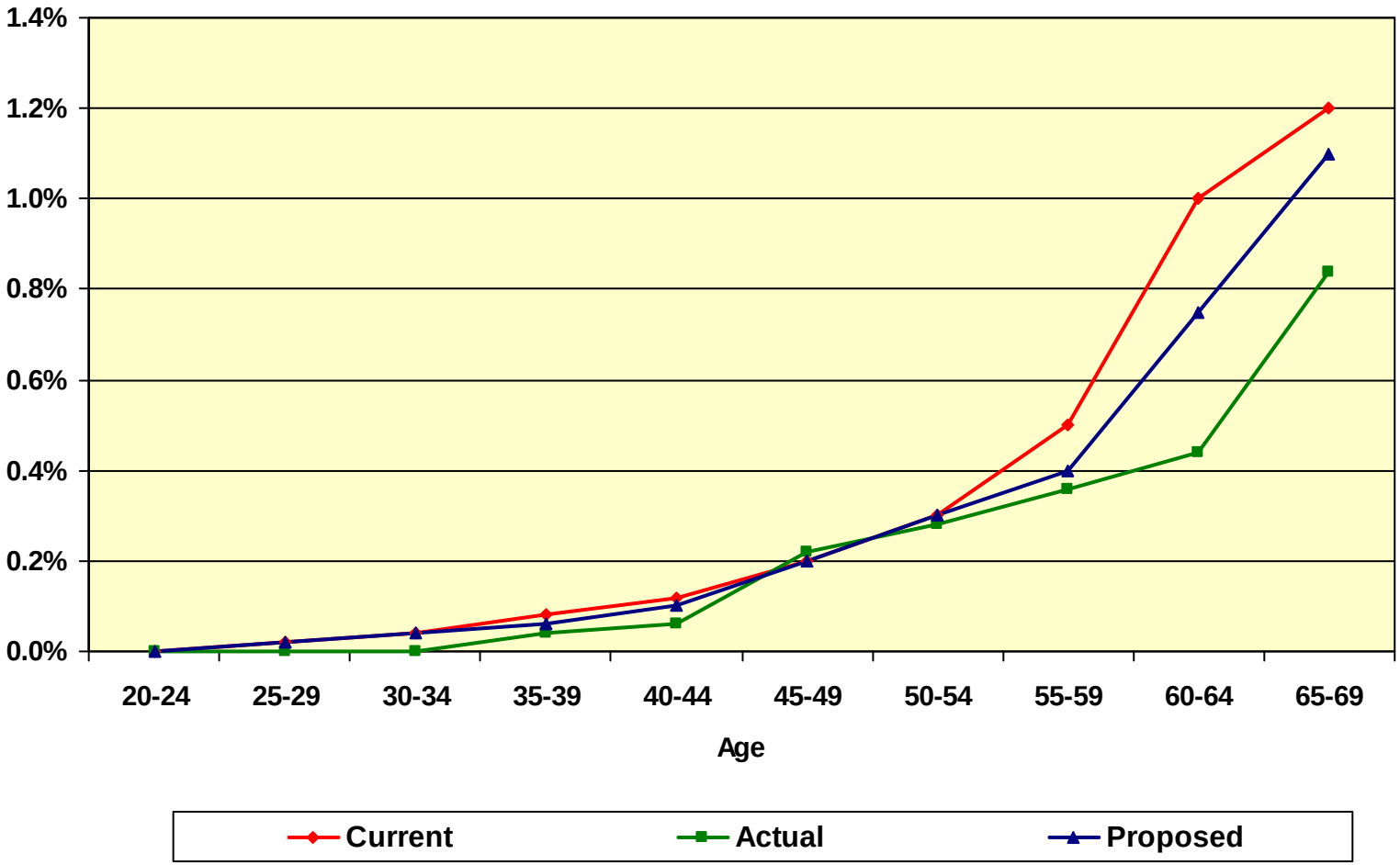
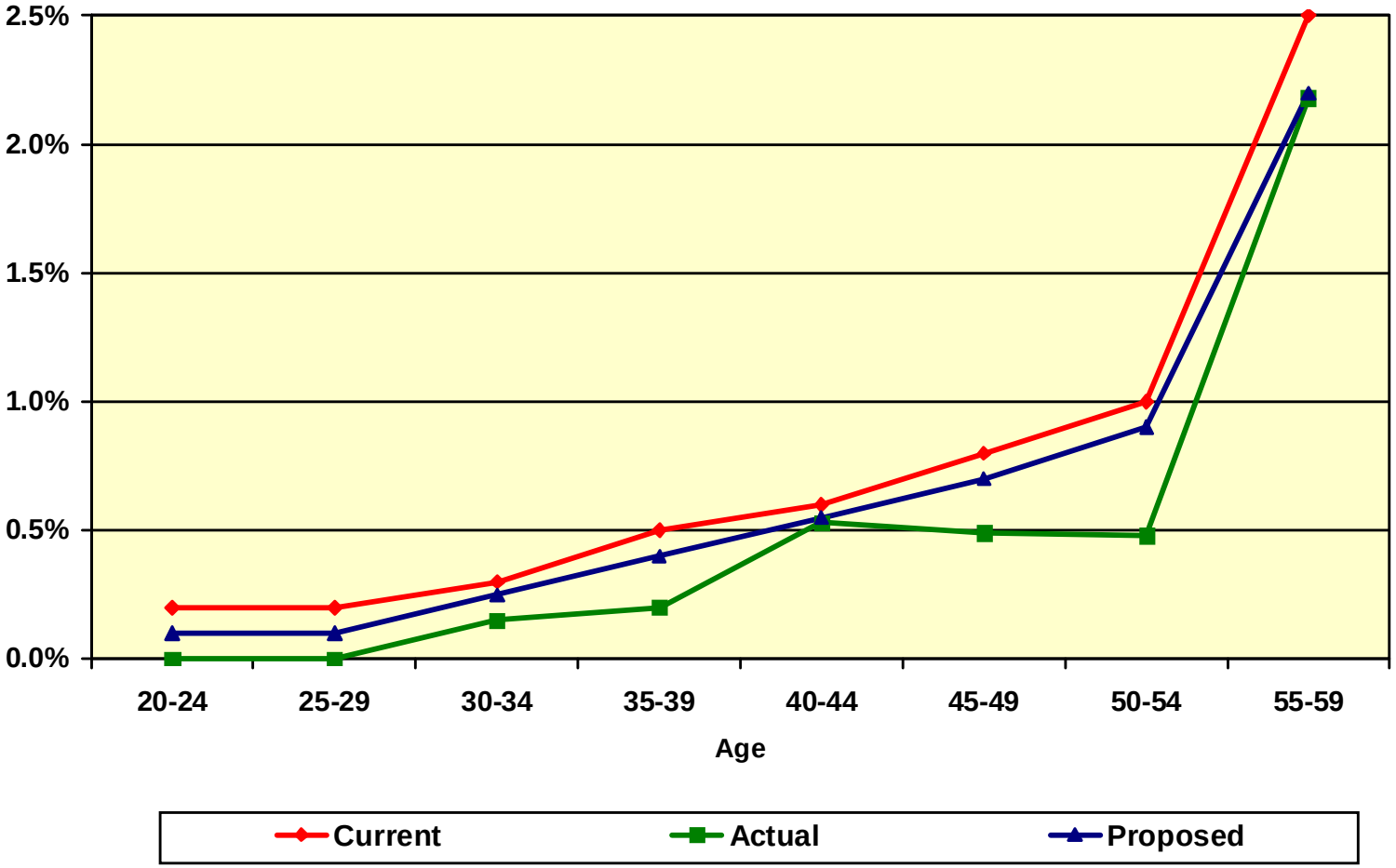


Chart 19
Disablement Rates for Safety Members



G. MERIT AND PROMOTIONAL SALARY INCREASES

The System'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
- Merit and promotional increases.

The inflationary increases are assumed to follow the general inflation assumption discussed in our separate economic assumption report, where we are recommending a 3.50% inflation assumption for the June 30, 2011 valuation. We also discussed in that report our recommended assumption of 0.25% real "across the board" pay increases for the June 30, 2011 valuation. Therefore, the total inflation and real "across the board" increase of 3.75% is used as the assumed annual rate of payroll growth at which payments to the UAAL are assumed to increase.

The merit and promotional 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 Miscellaneous and Safety members. This is accomplished by:

- Measuring each member's actual salary increase over each year of the experience period;
- Categorizing these increases into age groups;
- 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."

We are recommending no changes in the merit and promotional assumptions for both Miscellaneous and Safety members. At the July 1, 2004 to June 30, 2007 experience analysis, Segal recommended an increase in the merit and promotional assumptions for both Miscellaneous and Safety members. During our presentation of the recommended assumptions, representatives from the County pointed out several one-time adjustments in salaries (e.g., pay equity adjustments and promotional increases as a result of replacement of certain members who retired after the County's then recent benefit formula improvements) that would distort the results from that analysis.

As a result of those discussions, the Board decided to only include one-half of the recommended increase in the merit and promotional assumptions and to allow more time to isolate these one-time changes to the salary increases during July 1, 2004 to June 30, 2007. We have included those results plus the experience during July 1, 2010 to June 30, 2010 in this analysis.

The following table shows the average increases over the two three-year experience periods (July 1, 2004 through June 30, 2007 and July 1, 2007 through June 30, 2010) before removing the inflationary component:

	Average Increase (%)			
	Miscellaneous Members		Safety Members	
Age Group	July 1, 2004 to June 30, 2007	July 1, 2007 to June 30, 2010	July 1, 2004 to June 30, 2007	July 1, 2007 to June 30, 2010
20-24	8.79	9.77	12.64	12.47
25-29	8.74	9.62	10.14	11.16
30-34	7.59	8.16	7.34	8.80
35-39	6.48	7.18	6.51	7.08
40-44	5.85	6.48	6.04	6.64
45-49	5.25	6.21	5.55	6.55
50-54	4.95	5.67	5.24	6.99
55-59	4.70	5.40	5.20	6.70
60-64	4.49	5.24	4.46	5.34
65-69	4.46	4.66	-	-
70+	3.48	4.57	-	-

Again, for the three-year period from July 1, 2004 through June 30, 2007, we have isolated and removed those one-time adjustments that were previously communicated to us.

The increase in average salary for all ages over these two three-year periods was about 1.49% from 2004 to 2007 and 6.63% from 2007 to 2010 for Miscellaneous members and 2.44% from 2004 to 2007 and 7.04% from 2007 to 2010 for Safety members. The following table shows the resulting average merit and promotional increases for the two three-year periods:

	Average Merit and Promotional Increase (%)			
	Miscellaneous Members		Safety Members	
Age Group	July 1, 2004 to June 30, 2007	July 1, 2007 to June 30, 2010	July 1, 2004 to June 30, 2007	July 1, 2007 to June 30, 2010
20-24	7.19	2.99	10.00	5.06
25-29	7.14	2.84	7.54	3.85
30-34	6.00	1.46	4.80	1.65
35-39	4.91	0.55	3.99	0.05
40-44	4.29	-0.11	3.53	-0.37
45-49	3.70	-0.36	3.05	-0.45
50-54	3.40	-0.87	2.74	-0.04
55-59	3.16	-1.12	2.70	-0.31
60-64	2.95	-1.27	1.99	-1.59
65-69	2.93	-1.82	-	-
70+	1.96	-1.89	-	-

As the Board can observe from the above results, the net increases from 2007 to 2010 tend to be much smaller than the net increases from 2004 to 2007. One primary reason is that our method to evaluate the salary increase is heavily dependent on the assumption that the number of active employees has remained relatively stable from one year to the next. As we have indicated in the termination rates section of this report, there was a significant reduction-in-force that occurred during the 2009/2010 Plan year.

Since the System had increases in Unfunded Actuarial Accrued Liability (UAAL) from salary experience in the 2008 and 2009 valuations that were only partially offset by subsequent decrease in UAAL from salary experience in 2010, we would not recommend reductions in the merit and promotional assumptions.

Based on all of the above considerations, we are recommending no change in the current merit and promotional assumptions. However, we want to point out that some California Public retirement systems that have recently reviewed this assumption have elected to use service instead of age as the predictor on future salary increases. While we will include this analysis in future studies, we would not recommend considering any change to use service instead of age in predicting salary increase until more stable data is available for this analysis.

The following table shows the current and recommended merit and promotional assumptions based on this recent experience:

Current vs. Proposed Merit and Promotional Salary Increase (%)

	Miscellaneous Members		Safety Members	
Age Group	Current	Proposed	Current	Proposed
20-24	6.60	6.60	5.60	5.60
25-29	4.15	4.15	4.90	4.90
30-34	3.50	3.50	3.35	3.35
35-39	2.90	2.90	2.30	2.30
40-44	2.60	2.60	2.10	2.10
45-49	2.30	2.30	1.80	1.80
50-54	1.85	1.85	1.70	1.70
55-59	1.45	1.45	1.55	1.55
60-64	1.30	1.30	-	-
65-69	1.10	1.10	-	-

Charts 20 and 21 provide a graphical comparison of the current, actual experience and proposed merit and longevity increases.

Chart 20
Merit and Promotional Salary Increase Rates
for Miscellaneous Members

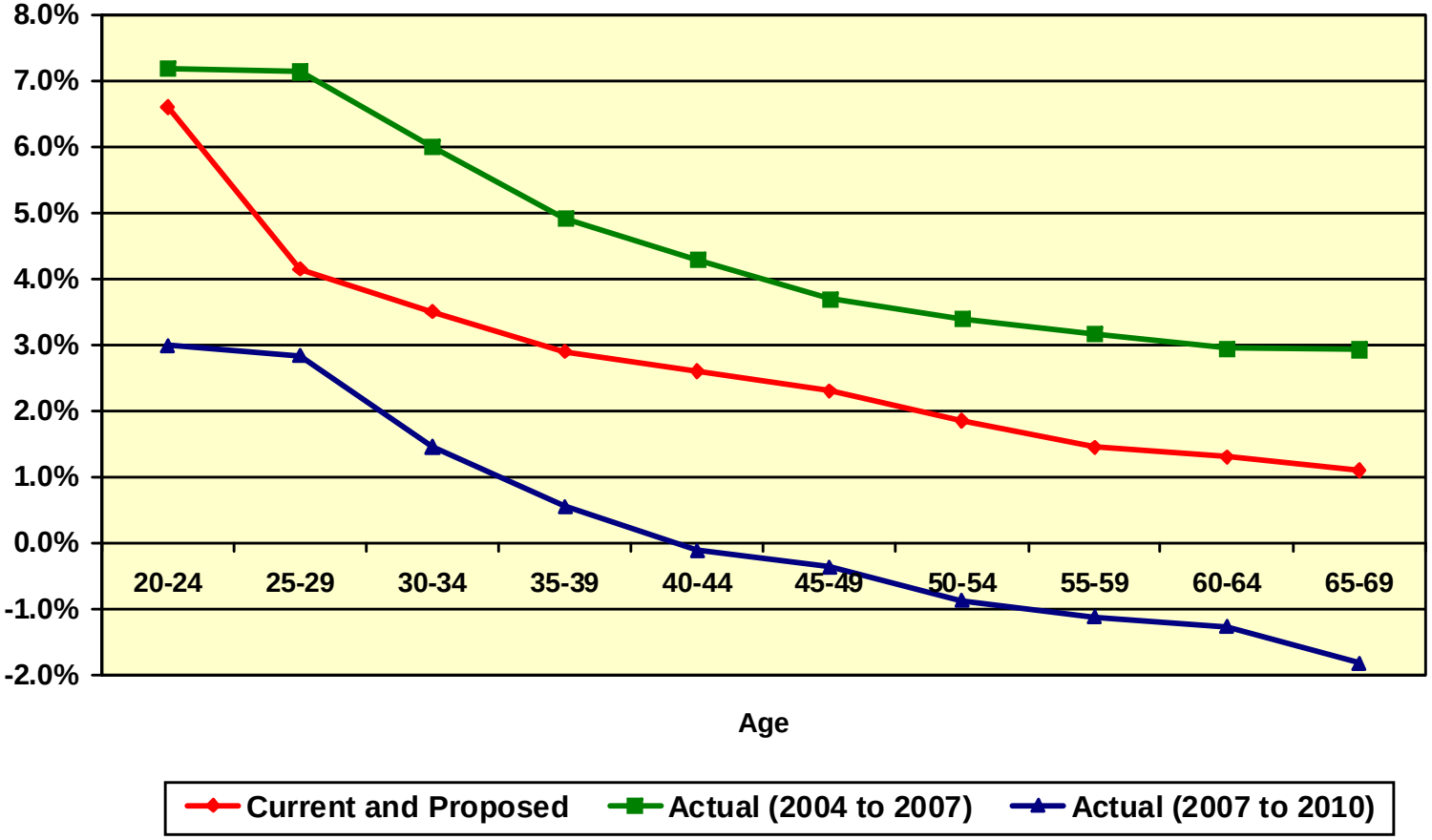
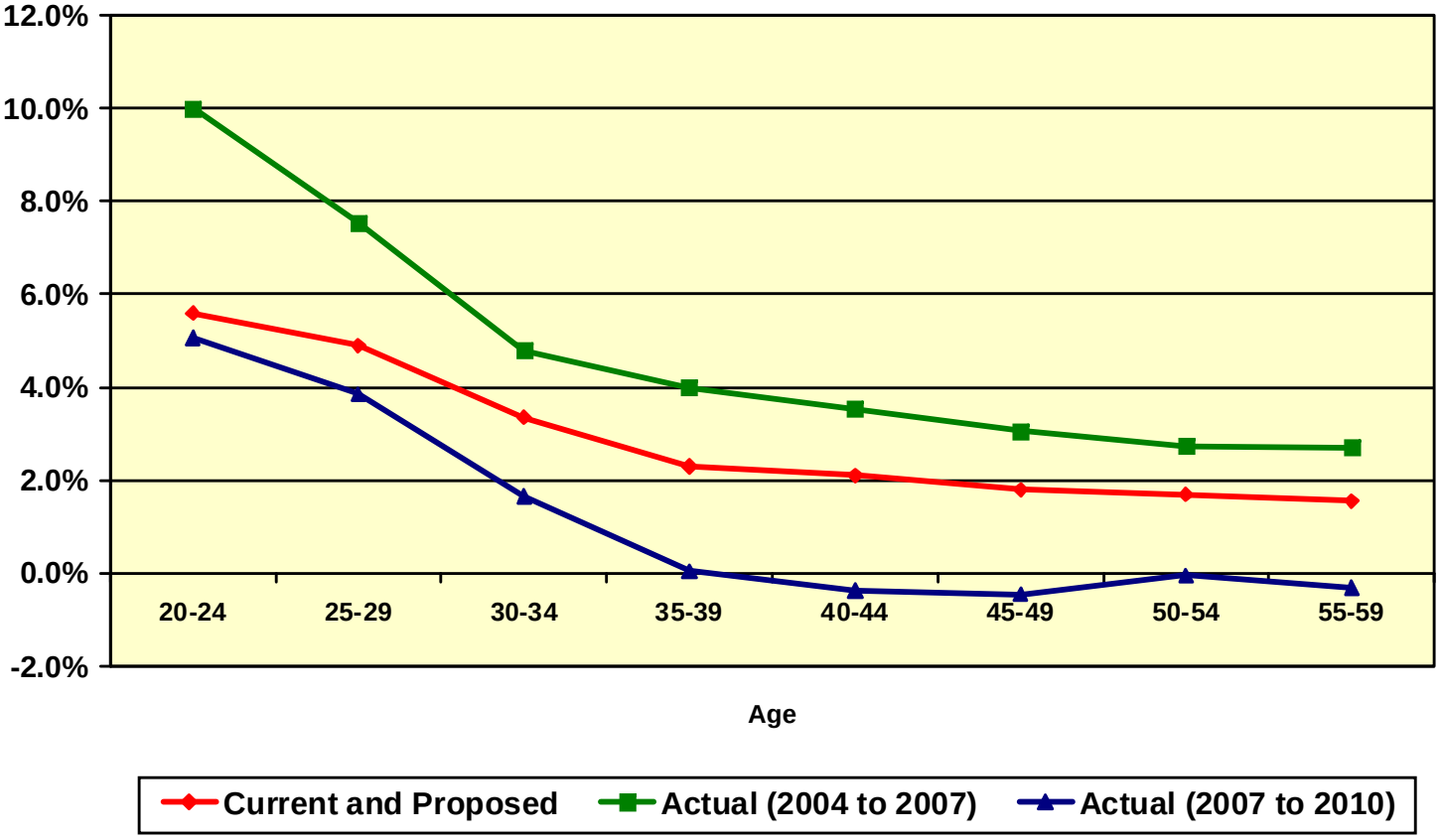


Chart 21
Merit and Promotional Salary Increase Rates for Safety Members



H. 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 Miscellaneous and Safety members as well as non-disabled and disabled members.

Miscellaneous New Retirees (Non-Disabled)

Year of Retirement	Current Assumption	Actual Rate	Proposed Assumption
2007 – 2010	1.50%	1.49%	1.50%

Safety New Retirees (Non-Disabled)

Year of Retirement	Current Assumption	Actual Rate	Proposed Assumption
2007 – 2010	2.00%	2.35%	2.25%

Miscellaneous New Retirees (Disabled)

Year of Retirement	Current Assumption	Actual Rate	Proposed Assumption
2007 – 2010	0.00%	0.02%	0.00%

Safety New Retirees (Disabled)

Year of Retirement	Current Assumption	Actual Rate	Proposed Assumption
2007 – 2010	0.00%	0.51%	0.25%

Based on this experience we recommend increasing the assumption to 2.25% for Safety healthy retirees and introducing a 0.25% assumption for Safety disabled retirees. We recommend no change to the assumption for Miscellaneous healthy retirees and Miscellaneous disabled retirees.

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

I. AVERAGE ENTRY AGES

SCERS members who entered the plan after January 1, 1975 pay member contribution rates based on an average entry age of all members in the Miscellaneous or the Safety plan.

Based on the plan's experience, we are recommending no change in the average entry age of 36 and 29 for Miscellaneous and Safety, respectively.

APPENDIX A

CURRENT ACTUARIAL ASSUMPTIONS

Mortality Rates

Healthy: For Miscellaneous Members and Beneficiaries: 1994 Group Annuity Mortality Table set back one year.

For Safety Members and Beneficiaries: 1994 Group Annuity Mortality Table set back one year.

Disabled: For Miscellaneous Members: 1981 Miscellaneous Disability Mortality Table set back three years.

For Safety members: 1994 Group Annuity Mortality Table set back one year.

Member Contribution Rates: For Miscellaneous members: 1994 Group Annuity Mortality Table set back one year weighted 40% male and 60% female.

For Safety members: 1994 Group Annuity Mortality Table set back one year weighted 75% male and 25% female.

Termination Rates Before Retirement:

	Rate (%) Mortality			
	Miscellaneous		Safety	
Age	Male	Female	Male	Female
25	0.06	0.03	0.06	0.03
30	0.08	0.03	0.08	0.03
35	0.08	0.04	0.08	0.04
40	0.10	0.07	0.10	0.07
45	0.15	0.09	0.15	0.09
50	0.23	0.13	0.23	0.13
55	0.40	0.21	0.40	0.21
60	0.71	0.39	0.71	0.39
65	1.29	0.76	1.29	0.76

All Miscellaneous pre-retirement deaths are assumed to be non-duty. For Safety, 25% preretirement deaths are assumed to be non-duty and the rest are assumed to be duty.

Termination Rates Before Retirement (continued):

	Rate (%)	
	Disability	
Age	Miscellaneous[1]	Safety[2]
20	0.00	0.20
25	0.01	0.20
30	0.03	0.26
35	0.06	0.42
40	0.10	0.56
45	0.17	0.72
50	0.26	0.92
55	0.42	1.90
60	0.80	0.00

(1) 20% of Miscellaneous disabilities are assumed to be duty disabilities. The other 80% are assumed to be ordinary disabilities.

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

Termination Rates Before Retirement (continued):

Rate (%)

Termination (< 5 Years of Service)

Years of Service	Miscellaneous	Safety
0	15.00	10.00
1	9.00	6.00
2	8.00	5.00
3	6.00	4.00
4	5.00	3.00

Termination (5+ Years of Service) *

Age	Miscellaneous	Safety
20	5.10	3.00
25	4.85	3.00
30	4.60	3.00
35	4.35	2.70
40	3.80	2.20
45	2.90	1.70
50	2.02	0.00
55	1.58	0.00
60	0.00	0.00

* 50% of the Miscellaneous members and 40% of the Safety members are assumed to elect a refund of member contribution balance while the remaining 50% and 60% of Miscellaneous and Safety members, respectively, are assumed to elect a deferred retirement benefit. No withdrawal is assumed after a member is assumed to retire.

Retirement Rates:

	Rate (%)		
Age	Miscellaneous Tier 1	Miscellaneous Tiers 2 & 3	Safety
50	6.00	3.00	30.00
51	5.00	2.00	20.00
52	5.00	2.00	20.00
53	5.00	4.00	30.00
54	9.00	5.00	30.00
55	10.00	6.00	30.00
56	12.00	8.00	30.00
57	16.00	10.00	30.00
58	25.00	20.00	30.00
59	27.00	20.00	30.00
60	29.00	22.00	100.00
61	32.00	23.00	100.00
62	41.00	41.00	100.00
63	46.00	46.00	100.00
64	48.00	48.00	100.00
65	52.00	52.00	100.00
66	46.00	46.00	100.00
67	52.00	52.00	100.00
68	60.00	60.00	100.00
69	75.00	75.00	100.00
70	100.00	100.00	100.00

Retirement Age and Benefit for Deferred Vested Members:

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

Miscellaneous Age:	59
Safety Age:	54

We assume that 55% of future Miscellaneous and 65% of future Safety deferred vested members will continue to work for a reciprocal employer. For reciprocals, we assume 5.65% 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; 55% of female members.

Age of Spouse:

Female (or male) spouses are 3 years younger (or older) than their spouses.

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:

Miscellaneous:	1.50%
Safety:	2.00%

Disability Retirements:

Miscellaneous:	0.00%
Safety:	0.00%

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:

7.75%; net of administration and investment expenses.

Employee Contribution Crediting Rate:

Interest up to the current 5-year Treasury rate, if such earnings are available. However, the difference in earnings between the target crediting rate and the 5-year Treasury rate will be applied to the other valuation reserves so that the overall valuation reserve target crediting rate is maintained at 7.75%.

Consumer Price Index:

Miscellaneous and Safety Tier 1 benefits are assumed to increase at 3.40% per year. Miscellaneous Tier 3 and Safety Tier 2 benefits are assumed to increase at 2.0% per year. Miscellaneous Tier 2 receive no COLA increases.

Salary Increases:

Annual Rate of Compensation Increase (%)

Inflation: 3.50%, plus "across the board" salary increases of 0.25% per year; plus the following merit and promotional increases.

Age	Miscellaneous	Safety
20	7.80	6.01
25	5.13	5.12
30	3.73	3.97
35	3.17	2.78
40	2.66	2.24
45	2.36	1.86
50	2.00	1.74
55	1.58	1.64
60	1.39	0.00

APPENDIX B

PROPOSED ACTUARIAL ASSUMPTIONS

Mortality Rates:

Healthy: For Miscellaneous Members and Beneficiaries: RP-2000 Combined Healthy Mortality Table set back two years.

For Safety Members: RP-2000 Combined Healthy Mortality Table set back one year.

Disabled: For Miscellaneous Members: RP-2000 Disabled Retiree Mortality Table set forward one year.

For Safety members: RP-2000 Combined Healthy Mortality Table set back one year.

Member Contribution Rates: For Miscellaneous members: RP-2000 Combined Healthy Mortality Table set back two years weighted 40% male and 60% female.

For Safety members: RP-2000 Combined Healthy Mortality Table set back one year weighted 70% male and 30% female.

Termination Rates Before Retirement:

Rate (%)

Mortality

	Miscellaneous		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	0.07	0.04
40	0.10	0.06	0.10	0.06
45	0.13	0.09	0.14	0.10
50	0.19	0.14	0.20	0.16
55	0.29	0.22	0.32	0.24
60	0.53	0.39	0.59	0.44
65	1.00	0.76	1.13	0.86

All Miscellaneous pre-retirement deaths are assumed to be non-duty. For Safety, 25% pre-retirement deaths are assumed to be non-duty and the rest are assumed to be duty.

Termination Rates Before Retirement (continued):

	Rate (%)	
	Disability	
Age	Miscellaneous[1]	Safety[2]
20	0.00	0.10
25	0.01	0.10
30	0.03	0.19
35	0.05	0.34
40	0.08	0.49
45	0.16	0.64
50	0.26	0.82
55	0.36	1.68
60	0.61	0.00

(1) 20% of Miscellaneous disabilities are assumed to be duty disabilities. The other 80% are assumed to be ordinary disabilities.

(2) 90% of Safety disabilities are assumed to be duty disabilities. The other 10% are assumed to be ordinary disabilities.

Termination Rates Before Retirement (continued):

Rate (%)

Termination (< 5 Years of Service)

Years of Service	Miscellaneous	Safety
0	15.00	10.00
1	9.00	6.00
2	8.00	5.00
3	6.00	4.00
4	5.00	3.00

Termination (5+ Years of Service) *

Age	Miscellaneous	Safety
20	5.10	3.00
25	4.85	3.00
30	4.60	3.00
35	4.35	2.70
40	3.80	2.20
45	2.90	1.70
50	2.02	0.00
55	1.58	0.00
60	0.00	0.00

* 50% of the Miscellaneous members and 40% of the Safety members are assumed to elect a refund of contribution balance while the remaining 50% and 60% of Miscellaneous and Safety members, respectively are assumed to elect a deferred retirement benefit. No withdrawal is assumed after a member is assumed to retire.

Retirement Rates:

	Rate (%)		
Age	Miscellaneous Tier 1	Miscellaneous Tiers 2 & 3	Safety
45	0.00	0.00	2.00
46	0.00	0.00	2.00
47	0.00	0.00	2.00
48	0.00	0.00	2.00
49	0.00	0.00	5.00
50	6.00	2.00	25.00
51	4.00	2.00	20.00
52	4.00	2.00	20.00
53	4.00	3.00	25.00
54	7.00	4.00	25.00
55	10.00	6.00	25.00
56	12.00	6.00	30.00
57	15.00	8.00	30.00
58	20.00	13.00	30.00
59	24.00	15.00	30.00
60	29.00	18.00	50.00
61	32.00	20.00	60.00
62	35.00	30.00	75.00
63	40.00	35.00	75.00
64	45.00	40.00	75.00
65	50.00	45.00	100.00
66	45.00	45.00	100.00
67	45.00	45.00	100.00
68	50.00	50.00	100.00
69	60.00	60.00	100.00
70	100.00	100.00	100.00

Retirement Age and Benefit for Deferred Vested Members:

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

Miscellaneous Age:	59
Safety Age:	53

We assume that 50% of future Miscellaneous and 60% of future Safety deferred vested members will continue to work for a reciprocal employer. For reciprocals, we assume 5.65% 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; 55% of female members.

Age of Spouse:

Female (or male) spouses are 3 years younger (or older) than their spouses.

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:

Miscellaneous:	1.50%
Safety:	2.25%

Disability Retirements:

Miscellaneous:	0.00%
Safety:	0.25%

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:

7.75%; net of administration and investment expenses.

Employee Contribution Crediting Rate:

Interest up to the current 5-year Treasury rate, if such earnings are available. However, the difference in earnings between the target crediting rate and the 5-year Treasury rate will be applied to the other valuation reserves so that the overall valuation reserve target crediting rate is maintained at 7.75%.

Consumer Price Index:

Miscellaneous and Safety Tier 1 benefits are assumed to increase at 3.40% per year. Miscellaneous Tier 3 and Safety Tier 2 benefits are assumed to increase at 2.0% per year. Miscellaneous Tier 2 receive no COLA increases.

Salary Increases:

Annual Rate of Compensation Increase (%)

Inflation: 3.50%, plus "across the board" salary increases of 0.25% per year; plus the following merit and promotional increases.

Age	Miscellaneous	Safety
20	7.80	6.01
25	5.13	5.12
30	3.73	3.97
35	3.17	2.78
40	2.66	2.24
45	2.36	1.86
50	2.00	1.74
55	1.58	1.64
60	1.39	0.00

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