

**City of Los Angeles Fire and Police
Pension Plan**

ACTUARIAL EXPERIENCE STUDY

**Analysis of Actuarial Experience
During the Period
July 1, 2004 through June 30, 2007**

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THE SEGAL COMPANY
120 Montgomery Street, Suite 500 San Francisco, CA 94104-4308
T 415.263.8200 F 415.263.8290 www.segalco.com

October 17, 2007

Board of Retirement
City of Los Angeles Fire and Police Pension Plan
360 East Second Street, Suite 400
Los Angeles, CA 90012-4203

**Re: Review of Non-economic Actuarial Assumptions for the June 30, 2007
Actuarial Valuation**

Dear Members of the Board:

We are pleased to submit this report of our review of the actuarial experience of the City of Los Angeles Fire and Police Pension Plan. This study utilizes the census data from the last three actuarial valuations ending June 30, 2007. The study includes the proposed actuarial assumptions to be used effective with the June 30, 2007 and later valuations.

Please note that we have not reviewed the economic assumptions as those were reviewed with you in detail last year and revised for the June 30, 2006. We recommend continued use of the 2006 economic assumptions in the 2007 and later valuations.

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

Theodore J. Shively, ASA, MAAA, EA
Vice President and 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 the gain or loss for a single year.

The use of realistic actuarial assumptions is important in maintaining adequate funding, while paying adequate 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 compare the actual experience during this three-year period with that expected under the current assumptions. 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." This Standard 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, termination rates, disability incidence rates, and salary increases.

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

Economic Assumptions – Inflation, investment return, salary increases, and medical trend. These assumptions were reviewed in detail in our November 8, 2006 “Review of the June 30, 2004 Experience Study. That report recommended assumption changes which were adopted for use in the June 30, 2006 valuations.

Recommendation: We recommend continued use of the economic assumptions adopted for the June 30, 2006 valuations except for (1) merit and promotion salary increases (discussed in this report) and (2) medical trend (discussed in a separate report letter dated October 17, 2007).

Retirement Rates - The probability of retirement at each age at which participants are eligible to retire.

Recommendation: We recommend changing the current rates to better reflect past experience.

Mortality Rates - The probability of dying at each age. Mortality rates are used to project life expectancies.

Recommendation: We recommend adjusting the rates to reflect decreased mortality rates. We recommend using the same tables for the pre-retirement mortality assumption as used for the post-retirement mortality and assume all pre-retirement deaths are service connected.

Termination Rates - The probability of leaving employment at each age and receiving either a refund of contributions or a deferred vested retirement benefit.

Recommendation: We recommend reducing the current rates to better reflect past experience.

Disability Incidence Rates - The probability of becoming disabled at each age.

Recommendation: We recommend changing the current rates to better reflect past experience. We also recommend introducing a 90% assumption of all disability to be used to anticipate duty disability retirement.

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 increasing the merit and promotion component of these rates to reflect past experience.

Section II provides some background on basic principles and the methodology used for the experience study. A detailed discussion of the experience 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, 2007 valuation are 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., withdrawal 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 promotion 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 withdrawal from service, we compare the number of employees who actually withdraw in a certain age and/or service category (i.e., the number of “decrements”) with those who could have withdrawn (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 withdrawal in that age group is $50 \div 500$ 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 withdrawal 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. RETIREMENT RATES

The age at which a member retires 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.

For both Fire and Police members we used experience collected during the three-year period. The actual service (non-disability) retirement experience for active participants over the past three years is provided on the following page, followed by the current and proposed retirement rates.

For this experience study, consistent with prior practice, the DROP program is not explicitly recognized in the assumptions. DROP participants are considered active members until they leave DROP and begin receiving retirement benefits. We will review the appropriateness of this approach (as compared to using explicit DROP related assumptions) in the upcoming actuarial study to evaluate the cost neutrality of the DROP program.

The following rates are the observed rate based on the actual experience:

Actual Rates of Retirement

Fire		
Age	Tiers 2 & 4	Tiers 3 & 5
41	0.00%	0.00%
42	0.00	0.00
43	0.00	0.00
44	0.00	0.00
45	5.88	0.00
46	3.23	0.00
47	0.00	0.00
48	4.88	0.00
49	7.14	0.00
50	0.00	1.85
51	0.00	0.38
52	5.26	1.42
53	0.00	2.66
54	0.00	4.86
55	5.26	10.24
56	11.76	7.53
57	11.11	12.18
58	8.33	13.51
59	0.00	16.42
60	14.29	28.09
61	33.33	26.92
62	0.00	19.61
63	0.00	28.89
64	0.00	34.38
65	0.00	40.32

Current Assumed Rates of Retirement

Fire		
Age	Tiers 2 & 4	Tiers 3 & 5
41	1.00%	0.00%
42	1.00	0.00
43	1.00	0.00
44	1.10	0.00
45	1.15	0.00
46	1.20	0.00
47	1.25	0.00
48	1.40	0.00
49	1.60	0.00
50	2.00	20.00
51	2.75	18.00
52	3.60	16.00
53	4.70	14.00
54	5.75	12.00
55	7.30	10.00
56	8.86	8.86
57	9.85	9.85
58	10.94	10.94
59	12.16	12.16
60	13.52	13.52
61	15.03	15.03
62	16.70	16.70
63	18.56	18.56
64	20.63	20.63
65	100.00	100.00

Proposed Assumed Rates of Retirement

Fire		
Age	Tiers 2 & 4	Tiers 3 & 5
41	1.00%	0.00%
42	1.00	0.00
43	1.00	0.00
44	1.00	0.00
45	1.00	0.00
46	1.00	0.00
47	1.00	0.00
48	2.00	0.00
49	2.00	0.00
50	2.00	8.00
51	2.00	8.00
52	4.00	8.00
53	4.00	8.00
54	4.00	8.00
55	6.00	10.00
56	10.00	10.00
57	10.00	10.00
58	10.00	12.00
59	10.00	15.00
60	20.00	20.00
61	20.00	20.00
62	20.00	20.00
63	25.00	25.00
64	30.00	30.00
65	100.00	100.00

Actual Rates of Retirement

Police

Age	Tiers 2 & 4	Tiers 3 & 5
41	0.00%	0.00%
42	7.69	0.00
43	15.15	0.00
44	15.38	0.00
45	10.00	0.00
46	7.69	0.00
47	3.23	0.00
48	11.22	0.00
49	4.94	0.00
50	5.41	8.53
51	3.92	7.76
52	5.71	6.13
53	11.11	7.12
54	22.22	9.54
55	10.53	13.88
56	15.79	13.33
57	9.09	19.16
58	33.33	21.76
59	50.00	28.57
60	50.00	28.81
61	0.00	24.39
62	25.00	28.36
63	33.33	30.61
64	0.00	32.26
65	0.00	41.30

Current Assumed Rates of Retirement

Police		
Age	Tiers 2 & 4	Tiers 3 & 5
41	6.00%	0.00%
42	6.00	0.00
43	6.00	0.00
44	6.00	0.00
45	6.00	0.00
46	7.16	0.00
47	8.32	0.00
48	9.47	0.00
49	10.63	0.00
50	11.79	25.00
51	12.95	22.50
52	14.11	20.00
53	15.26	18.00
54	16.42	16.00
55	17.58	15.42
56	18.74	16.11
57	19.89	16.84
58	21.05	17.60
59	22.21	18.40
60	23.37	19.23
61	24.53	20.10
62	25.68	21.01
63	26.84	21.96
64	28.00	22.95
65	100.00	100.00

Proposed Assumed Rates of Retirement

Police		
Age	Tiers 2 & 4	Tiers 3 & 5
41	6.00%	0.00%
42	6.00	0.00
43	10.00	0.00
44	10.00	0.00
45	8.00	0.00
46	8.00	0.00
47	8.00	0.00
48	9.00	0.00
49	9.00	0.00
50	8.00	15.00
51	8.00	15.00
52	8.00	15.00
53	15.00	15.00
54	15.00	15.00
55	15.00	15.00
56	15.00	15.00
57	15.00	18.00
58	25.00	20.00
59	25.00	25.00
60	25.00	25.00
61	25.00	25.00
62	25.00	25.00
63	25.00	25.00
64	30.00	30.00
65	100.00	100.00

Chart 1 compares actual experience with the current and proposed assumed rates of retirement for Fire Tier 2 and Tier 4 members. Chart 2 has similar data for Fire Tier 3 and Tier 5 members. Chart 3 has similar data for Police Tier 2 and Tier 4 members. Chart 4 has similar data for Police Tier 3 and Tier 5 members.

In prior valuations, deferred vested members were assumed to retire at age 50. The average age at retirement over the prior two years was 50.6 for all defined vested members. We recommend maintaining the assumed retirement age for deferred vested participants.

In prior valuations, it was assumed that 86% of all active members would be married when they retired. According to experience of members who retired during the last three years, about 85% of all members were married at retirement. We recommend maintaining this assumption.

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 are assumed to be of the opposite sex to the member.

Chart 1
Retirement Rates - Fire Tiers 2 & 4

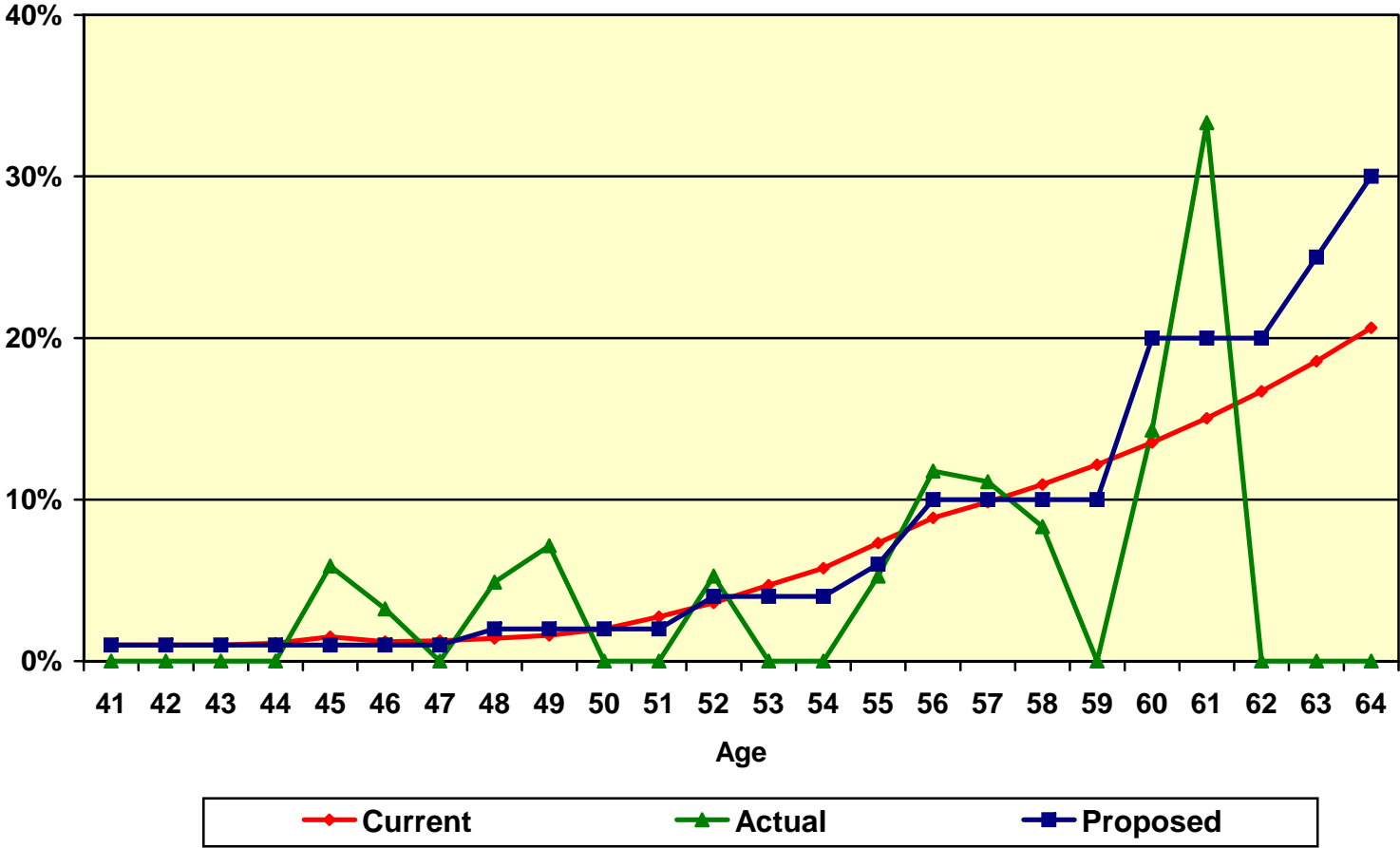


Chart 2 Retirement Rates - Fire Tiers 3 & 5

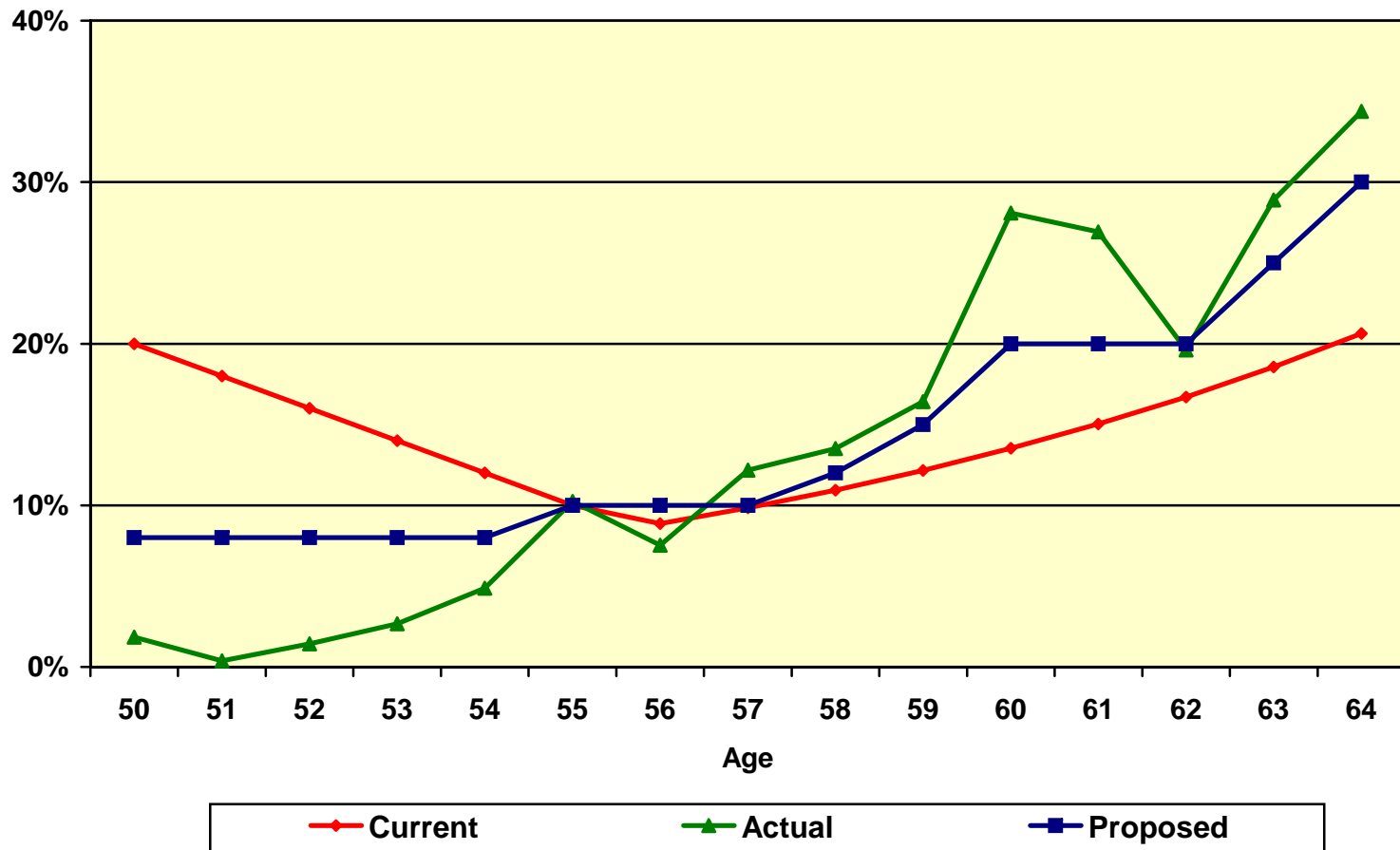


Chart 3 Retirement Rates - Police Tiers 2 & 4

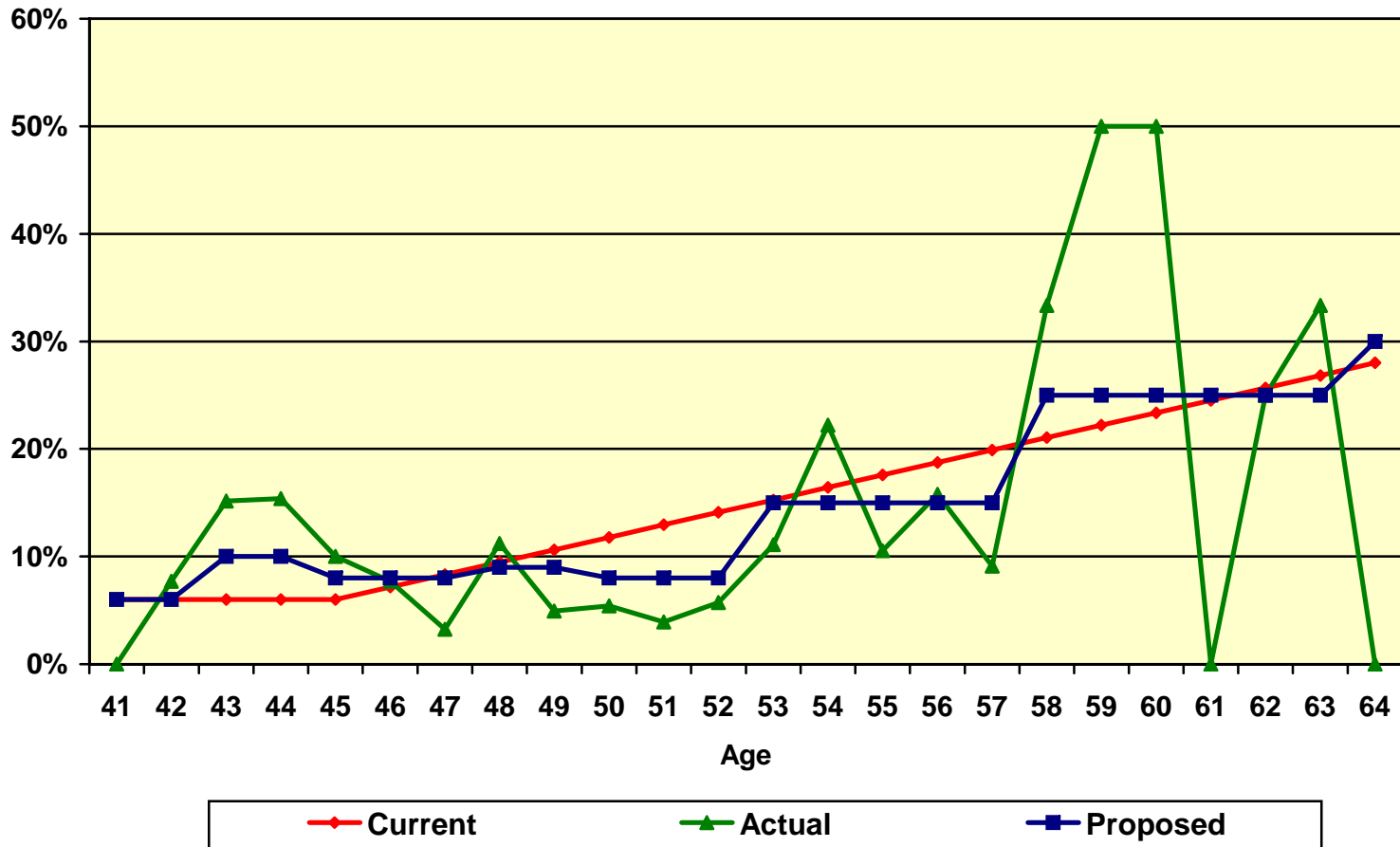
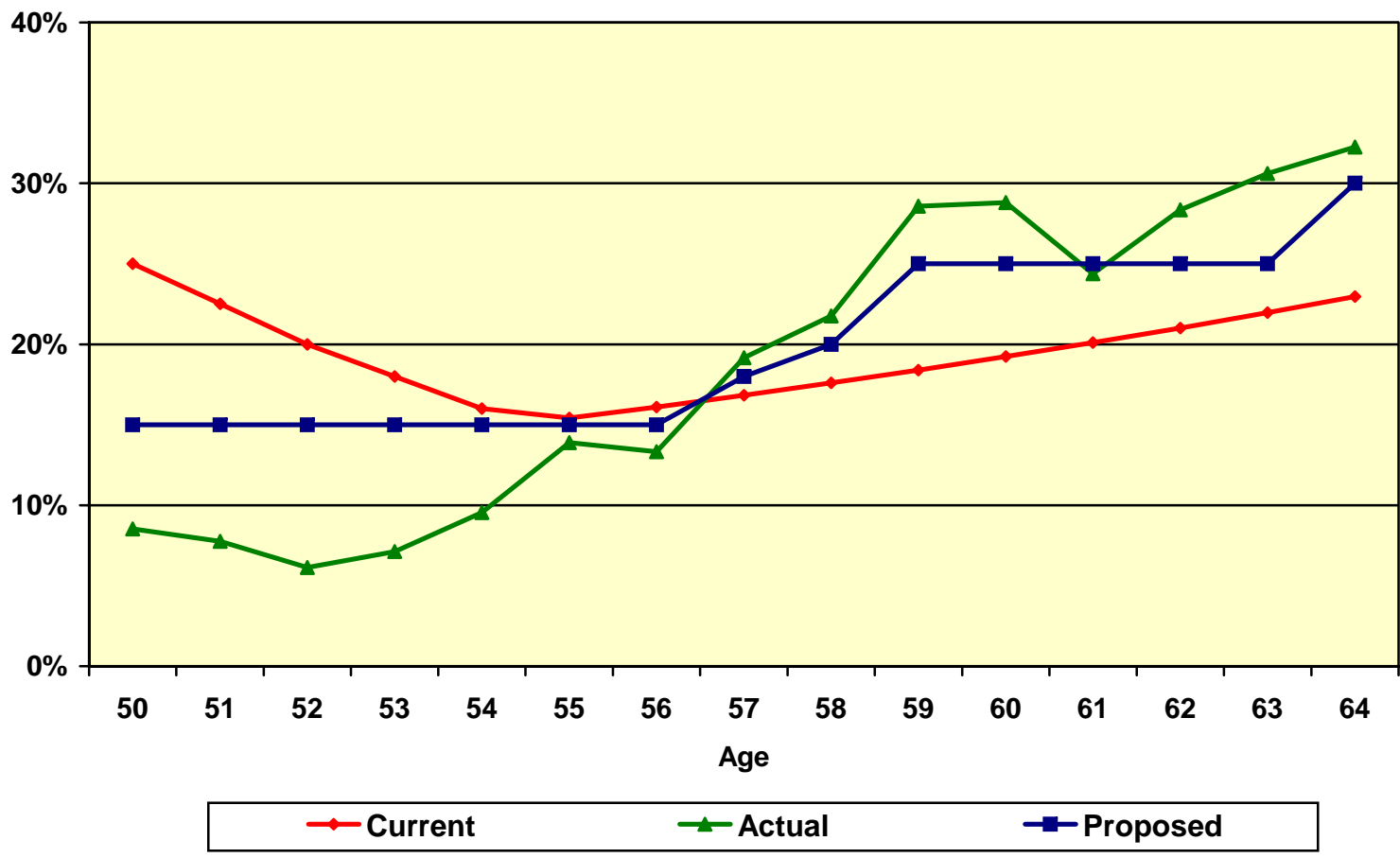


Chart 4
Retirement Rates - Police Tiers 3 & 5



B. 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 for service (i.e., who did not retire on a disability pension). The tables currently being used for post-service retirement mortality rates for both members and beneficiaries are the 1994 Uninsured Pensioner Mortality Table for males, set back two years for males and set back four years for females.

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 and post-retirement mortality will follow the same tables. We also assume that all pre-retirement deaths are duty related.

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 is as follows:

Year Ended June 30	Healthy Retirees		
	Actual Deaths	Current Expected Deaths	Proposed Expected Deaths
2005	230	197	188
2006	186	201	192
2007	201	206	196
Total	617	604	576
Actual / Expected		102%	107%

Chart 5 compares actual to expected deaths for all members under the current and proposed assumptions over the last three years. Experience shows that there were about the same number of deaths as predicted by the current table.

For retirees, the ratio of actual to expected deaths was 102%. We recommend changing to the RP-2000 Combined Healthy Mortality Table (separate tables for males and females) with a two-year set back. This will bring the actual to expected ratio to 107%, providing an additional margin for future mortality improvements that is more consistent with industry practice. We will continue to monitor this assumption in future studies.

Post-Retirement Mortality (Beneficiaries)

Among beneficiaries, the actual deaths compared to the expected deaths under the current and proposed assumptions for the last three years is as follows:

Year Ended June 30	Beneficiaries		
	Actual Deaths	Current Expected Deaths	Proposed Expected Deaths
2005	150	112	118
2006	116	114	120
2007	150	118	125
Total	416	344	363
Actual / Expected		121%	115%

Chart 6 compares actual to expected deaths for all beneficiaries under the current and proposed assumptions over the last three years. Experience shows that there were more deaths than predicted by the current table, as the ratio of actual to expected deaths was 121%. We recommend changing to the RP-2000 Combined Healthy Mortality Table (separate tables for males and females) with no set back. This will bring the actual to expected ratio to 115%. We will continue to monitor this assumption in future studies.

Charts 7 and 8 shows the life expectancies under the current and the proposed tables for members beneficiaries.

Chart 5
Post - Retirement Deaths
Service Retirements

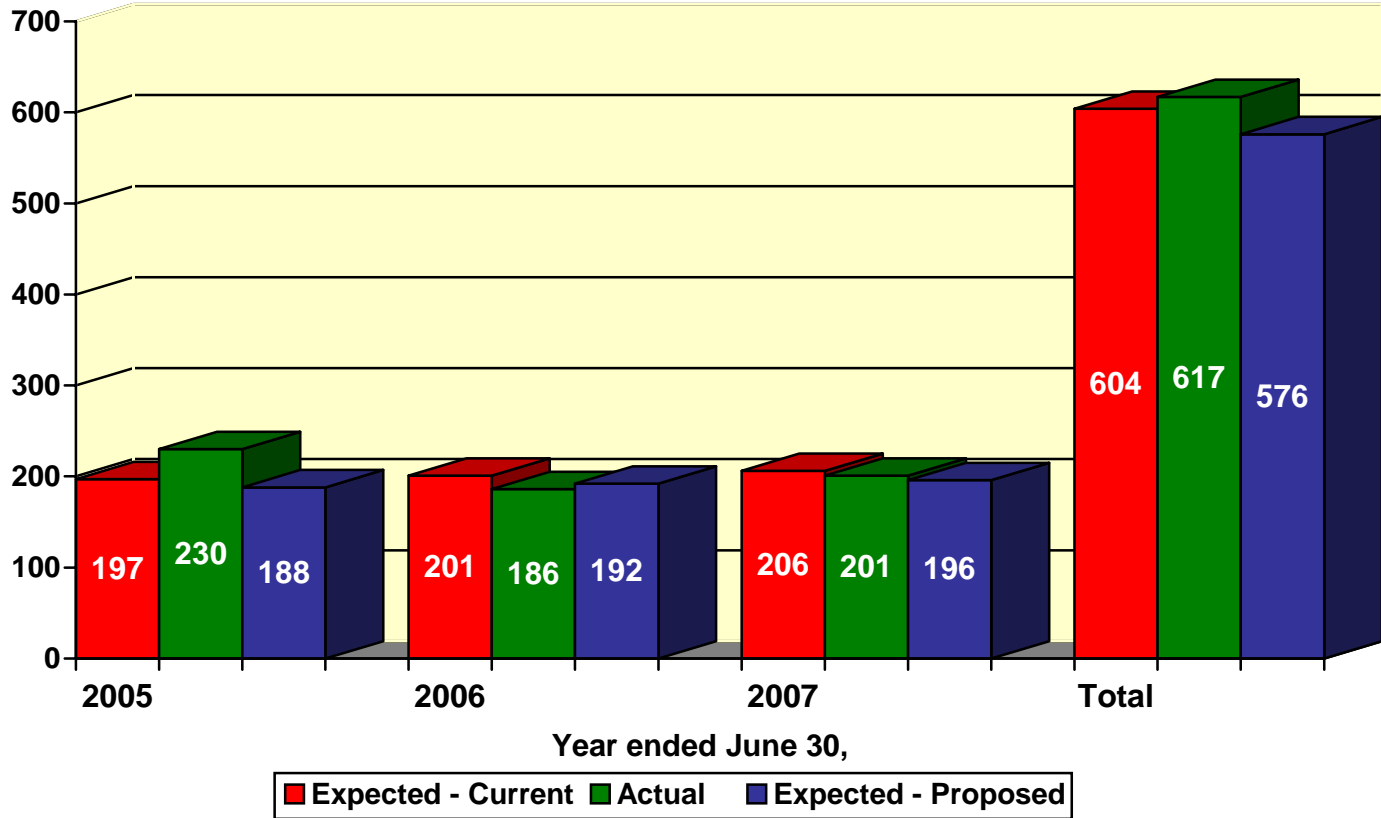


Chart 6
Post - Retirement Deaths
Beneficiaries

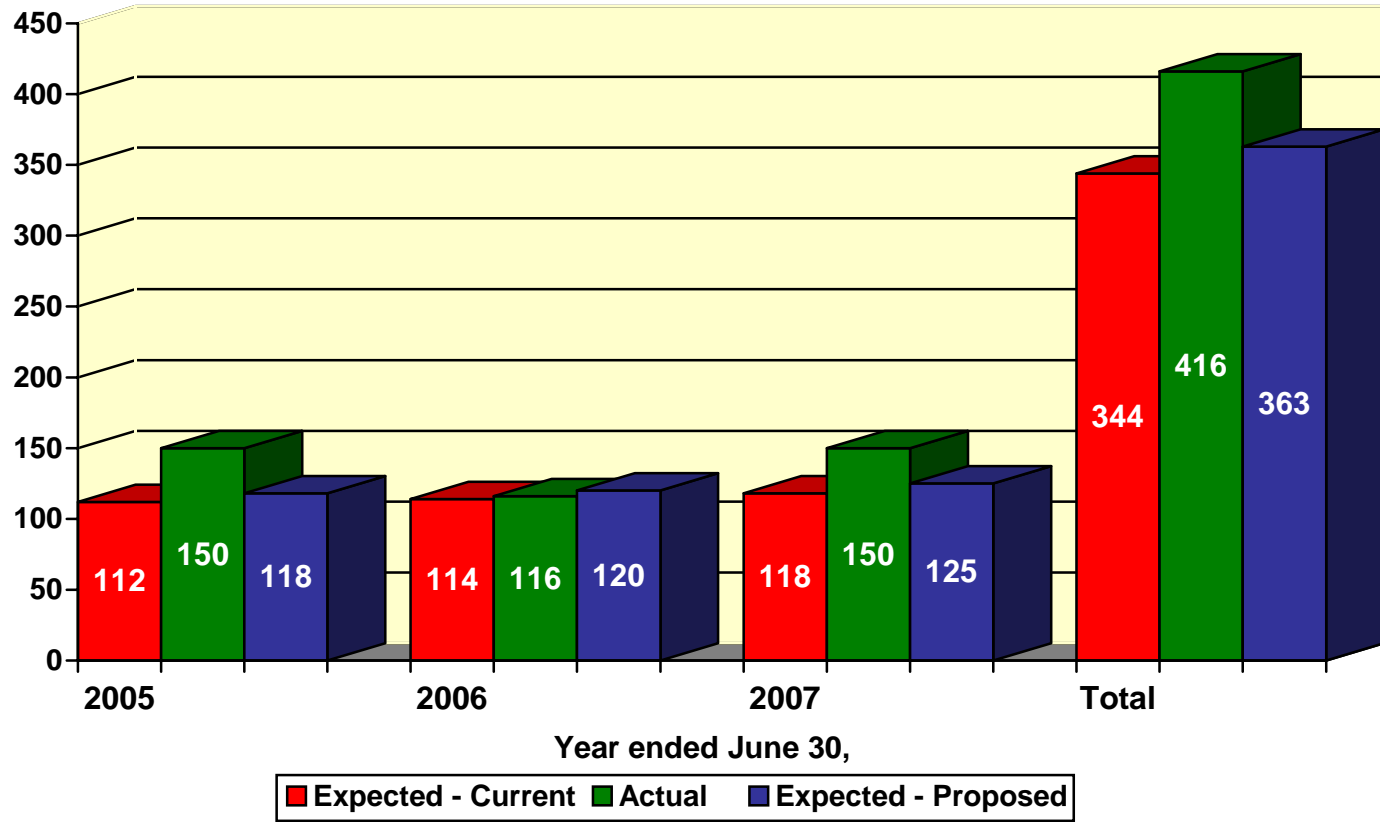


Chart 7
Life Expectancies (Male Members and Beneficiaries)

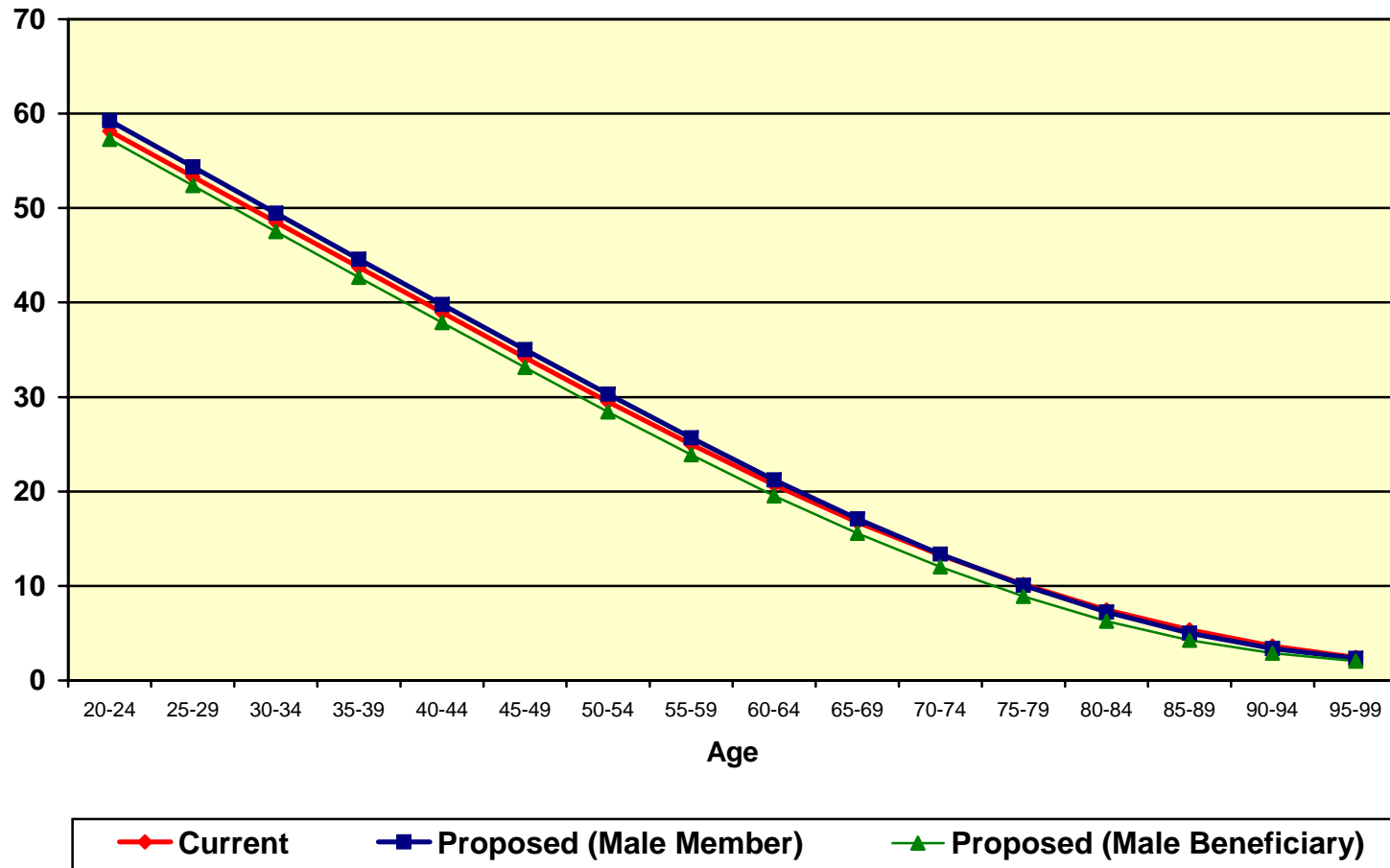
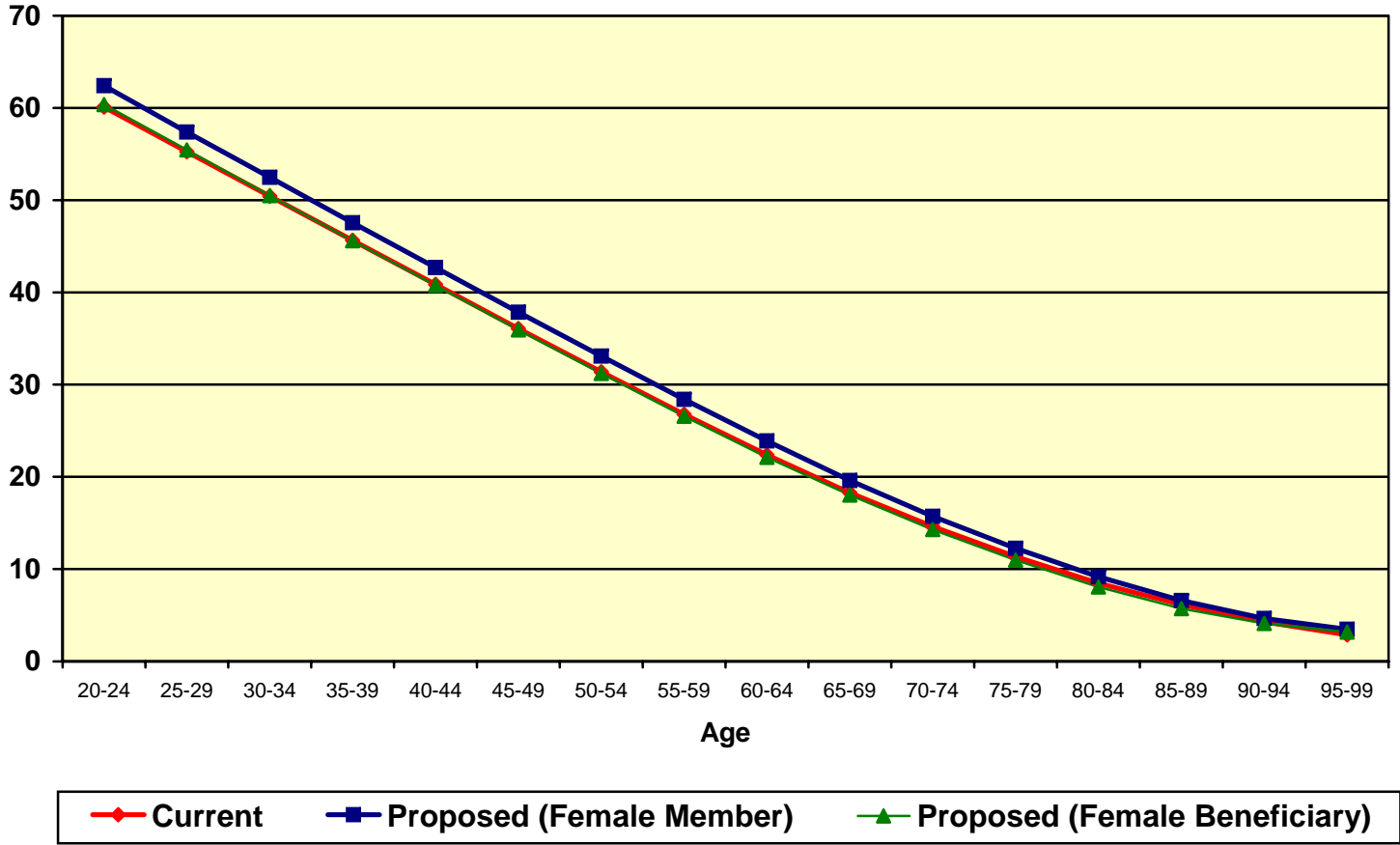


Chart 8
Life Expectancies (Female Members and Beneficiaries)



C. MORTALITY RATES - DISABLED

Since death rates for disabled members can be higher than for healthy members, a different mortality assumption is often used. The table currently being used is the 1994 Uninsured Pensioner Mortality Table for males set forward two years.

The number of actual deaths compared to the number expected under the current and proposed assumptions for the last three years has been as follows:

Year Ended June 30	Disabled		
	Actual Deaths	Current Expected Deaths	Proposed Expected Deaths
2005	65	61	52
2006	51	63	53
	52	66	56
Total	168	190	161
Actual / Expected		88%	104%

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

For disabled retirees, the ratio of actual to expected deaths was 88%. We recommend changing to the RP-2000 Combined Healthy Mortality Table (separate tables for males and females) with a one-year set forward. This will bring the actual to expected ratio to 104%. We will continue to monitor the assumption for disableds closely to see if the mortality rates need to be adjusted.

Chart 9 shows the life expectancies under the current and proposed tables for disabled male members. Chart 10 shows the same information for disabled female members.

Chart 8
Post - Retirement Deaths
Disabled Members

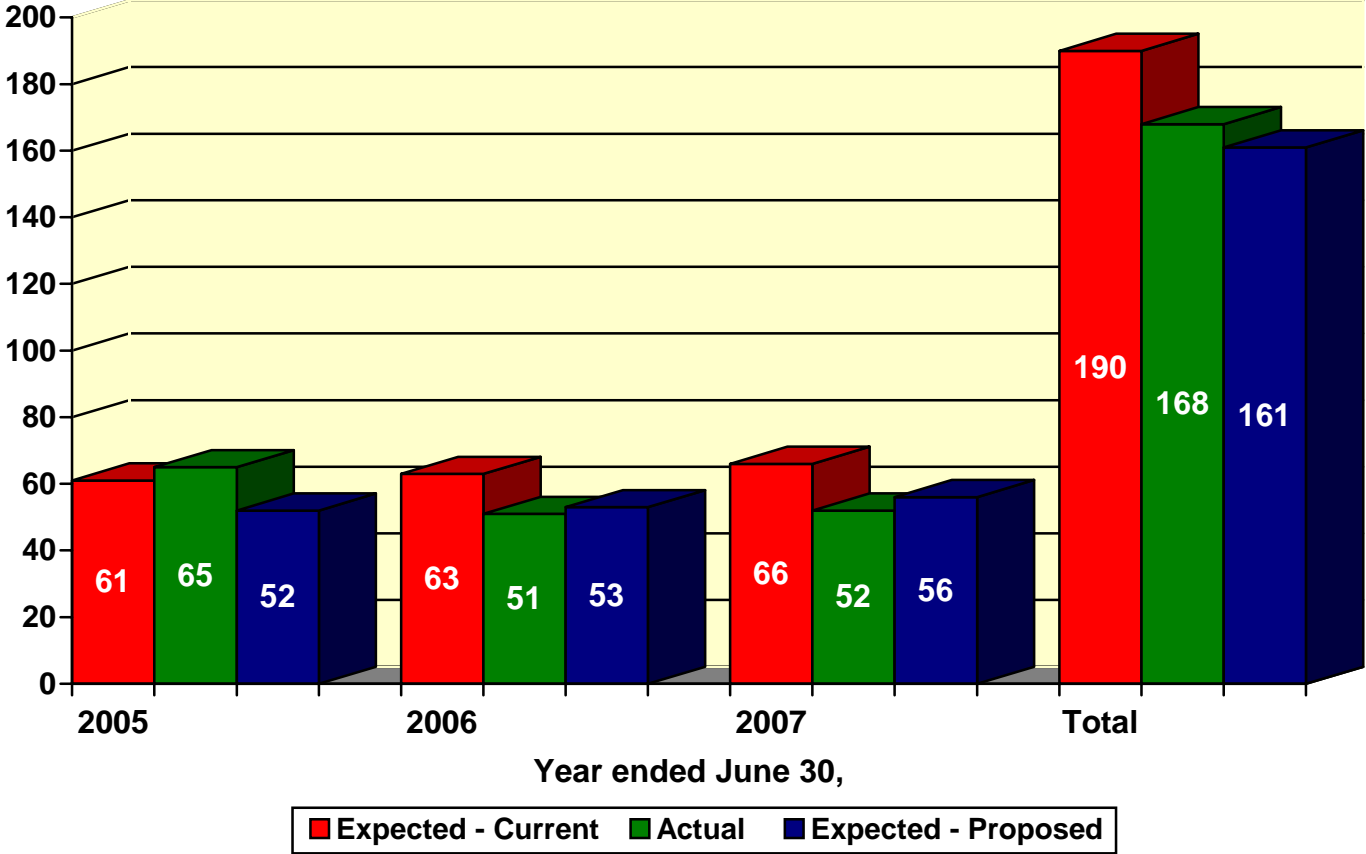


Chart 9
Life Expectancies (Disabled Male)

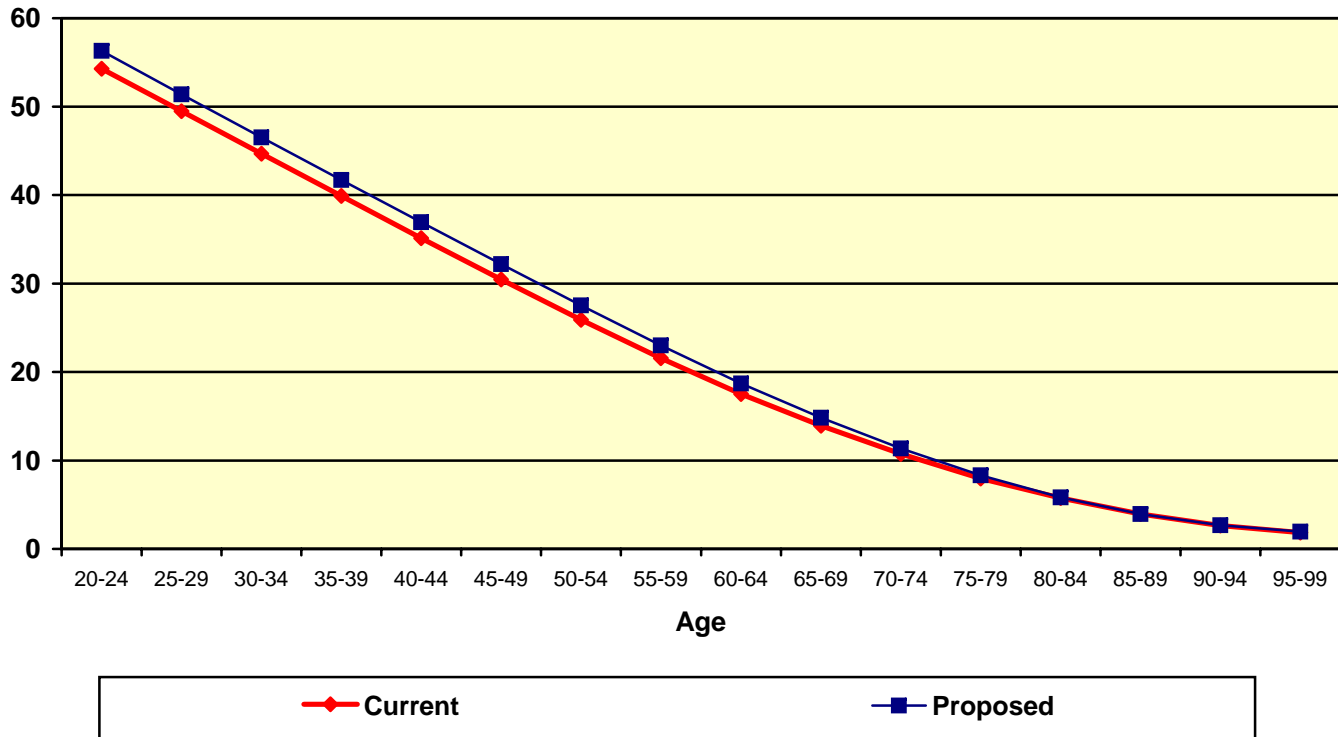
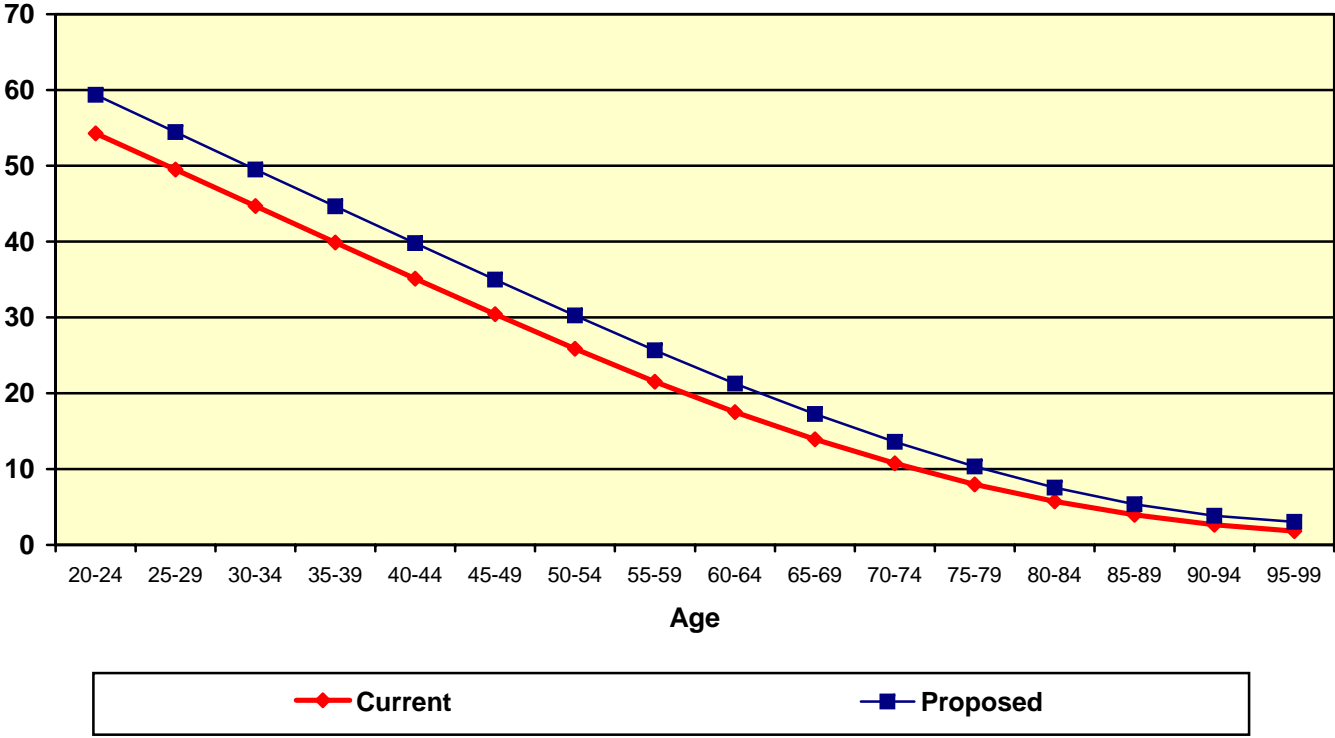


Chart 10
Life Expectancies (Disabled Female)



D. TERMINATION RATES

Termination rates include all terminations for reasons other than death, disability, or retirement. Under the current assumptions, there are separate sets of assumptions for withdrawal and for vested termination to predict, respectively, those members who are anticipated to withdraw their contributions (withdrawal) or leave their contributions on deposit and receive a deferred vested benefit (vested termination). With this experience study, we are recommending changing the current assumptions.

The termination experience over the last three years for Fire and Police members, is shown on the next three pages.

Rates of Withdrawal (Fire)
(Fewer than Five Years of Service)

<u>Years of Service</u>	<u>Current Assumed Rates</u>	<u>Observed Rates</u>	<u>Proposed Assumed Rates</u>
0 - 1	5.50%	9.54%	8.00%
1 - 2	5.50	0.95	4.00
2 - 3	5.50	0.53	3.00
3 - 4	5.50	1.00	2.00
4 - 5	5.50	0.59	2.00

(More than Five Years of Service)

<u>Age</u>	<u>Current Assumed Rates</u>	<u>Observed Rates</u>	<u>Proposed Assumed Rates</u>
20 - 24	5.80%	0.00%	2.00%
25 - 29	2.90	0.00	2.00
30 - 34	1.57	0.00	1.20
35 - 39	0.83	0.66	0.70
40 - 44	0.41	0.46	0.45
45 - 49	0.20	0.10	0.20
50 - 54	0.00	0.18	0.00
55 - 59	0.00	0.35	0.00

Rates of Withdrawal (Police)
(Fewer than Five Years of Service)

<u>Years of Service</u>	<u>Current Assumed Rates*</u>	<u>Observed Rates</u>	<u>Proposed Assumed Rates</u>
0 - 1	5.50%	8.61%	8.00%
1 - 2	5.50	3.03	4.50
2 - 3	5.50	1.94	3.50
3 - 4	5.50	3.10	3.50
4 - 5	5.50	1.95	3.00

**For members ages 26 and below, the current assumed rate for members with more than five years of service is used.*

(More than Five Years of Service)

<u>Age</u>	<u>Current Assumed Rates</u>	<u>Observed Rates</u>	<u>Proposed Assumed Rates</u>
20 – 24	7.51%	0.00%	3.00%
25 – 29	5.39	0.54	3.00
30 – 34	3.54	2.02	2.50
35 – 39	2.18	1.35	2.00
40 – 44	1.54	0.84	1.50
45 – 49	1.50	0.51	1.00
50 – 54	0.00	0.18	0.00
55 – 59	0.00	0.00	0.00

Chart 11 compares the total actual to expected terminations over the past three years for both the current and proposed assumptions for Fire members.

Chart 12 graphs the same information as Chart 11, but for Police members.

Chart 13 shows the current and proposed withdrawal rates for Fire members with less than five years of service.

Chart 14 shows the same information as Chart 12, but for Police members.

Chart 15 shows the current and proposed withdrawal rates for Fire members with five or more years of service.

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

Based upon the recent experience as captured in Charts 11 and 12, we recommend reducing the current assumptions for withdrawal rates for both Fire and Police members.

Chart 11
Actual Number of Terminations Compared
to Expected (Fire)

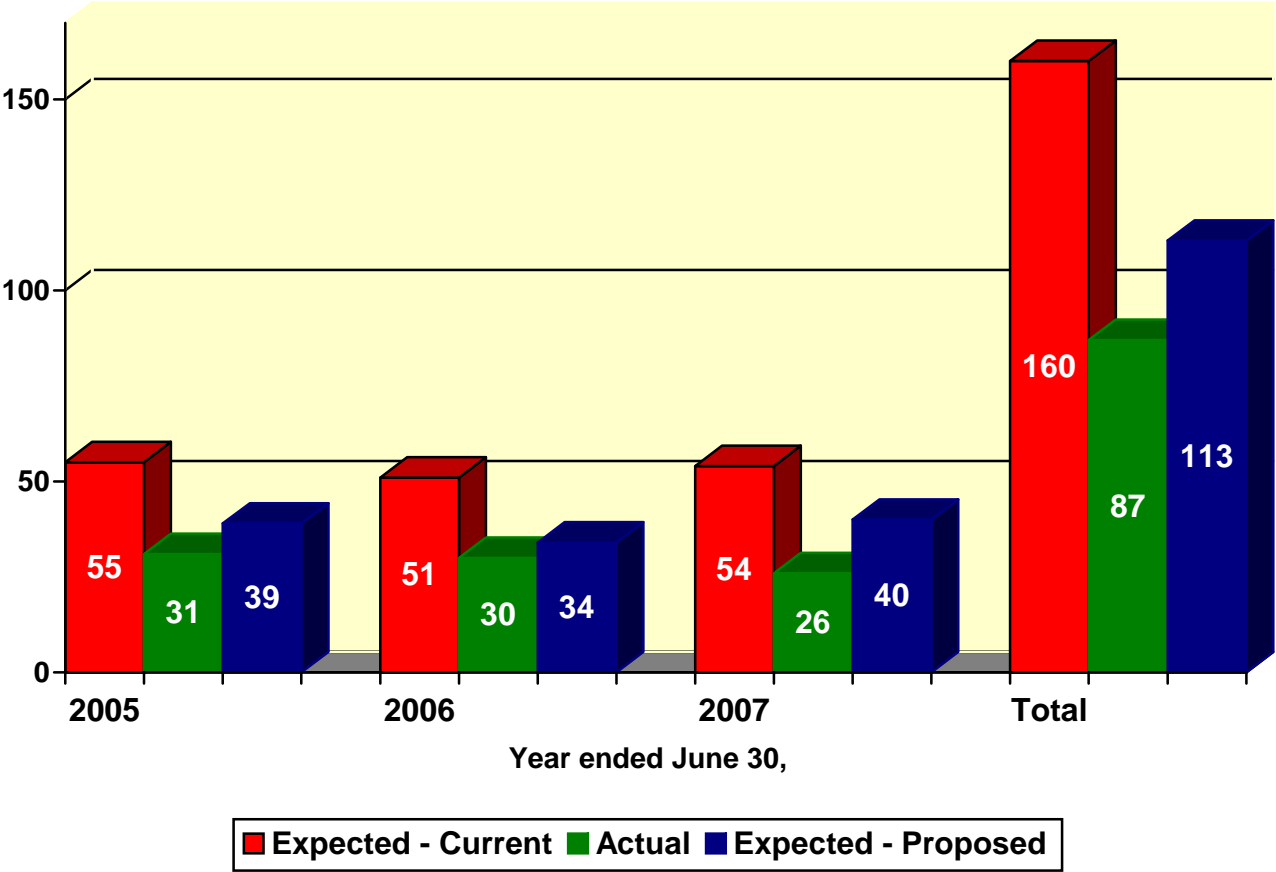


Chart 12
Actual Number of Terminations Compared
to Expected (Police)

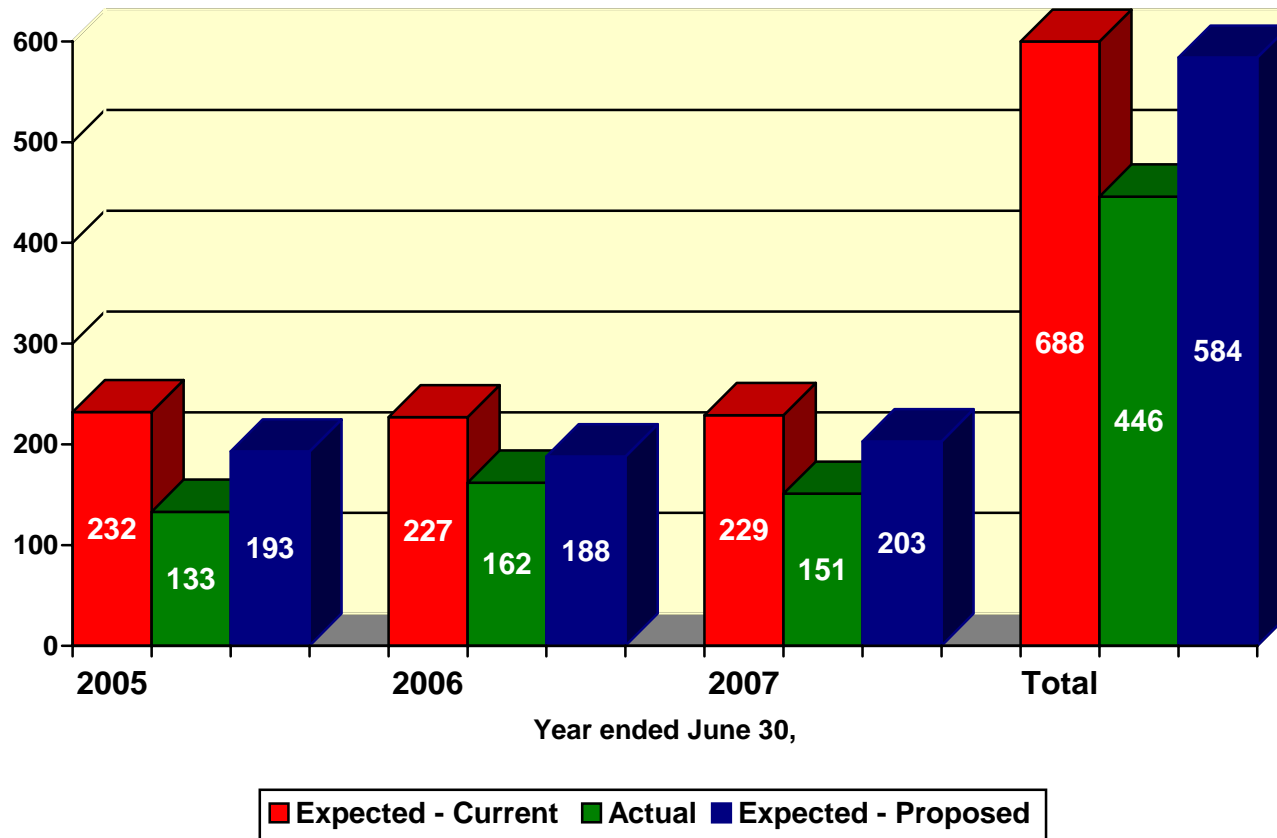


Chart 13
Withdrawal Rates - Fire
(Less Than Five Years of Service)

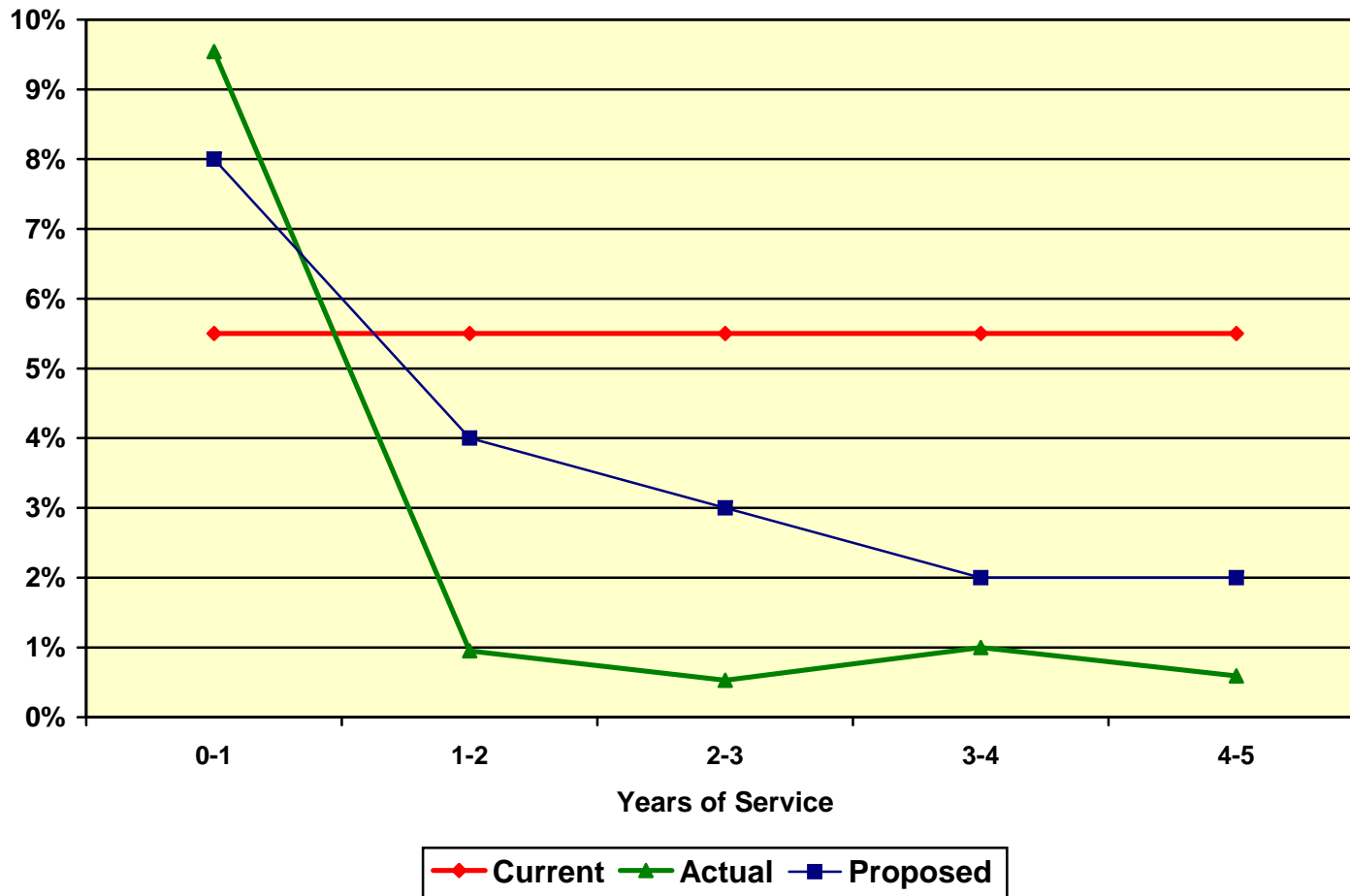


Chart 14
Withdrawal Rates - Police
(Less than Five Years of Service)

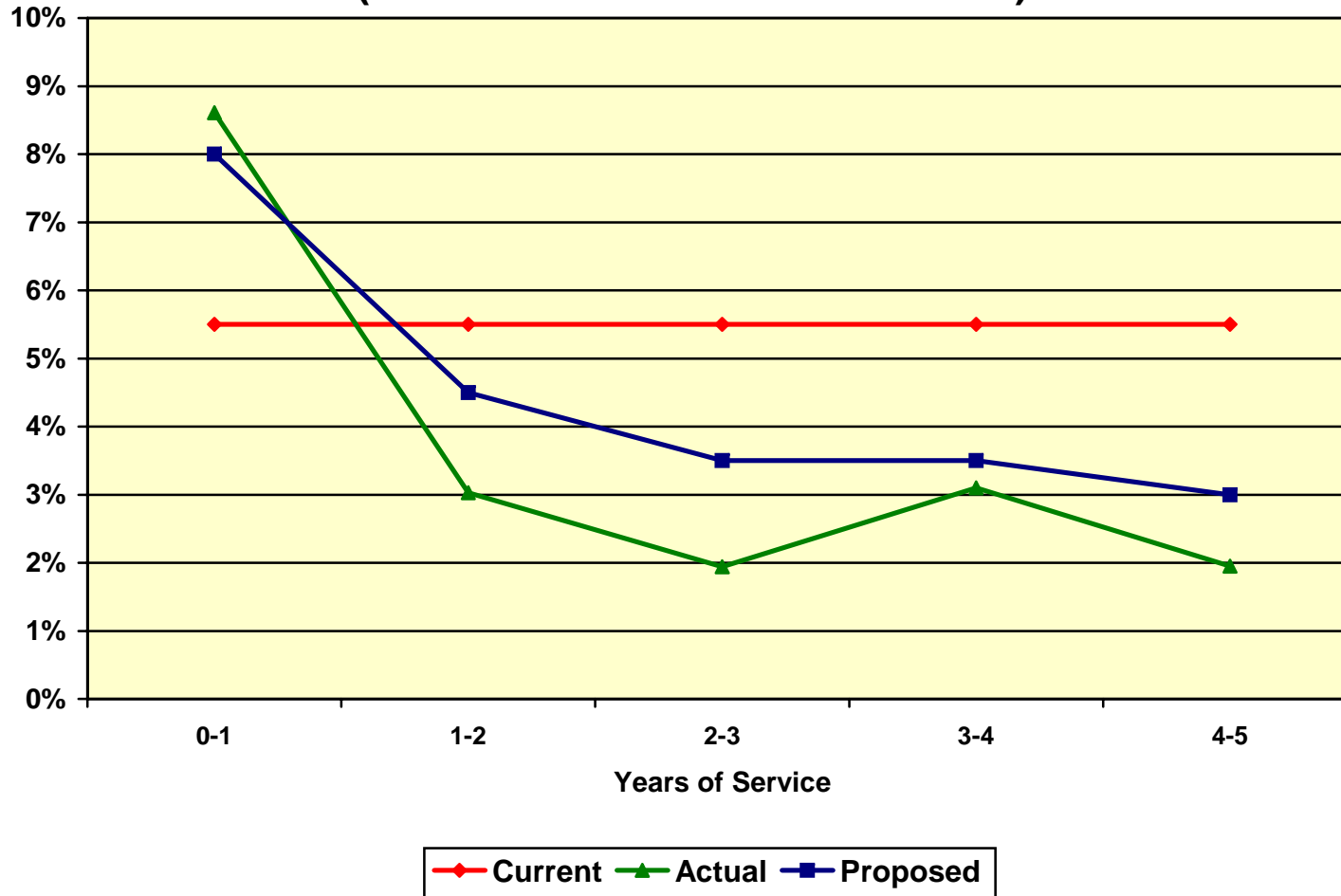


Chart 15
Withdrawal Rates - Fire
(More Than Five Years of Service)

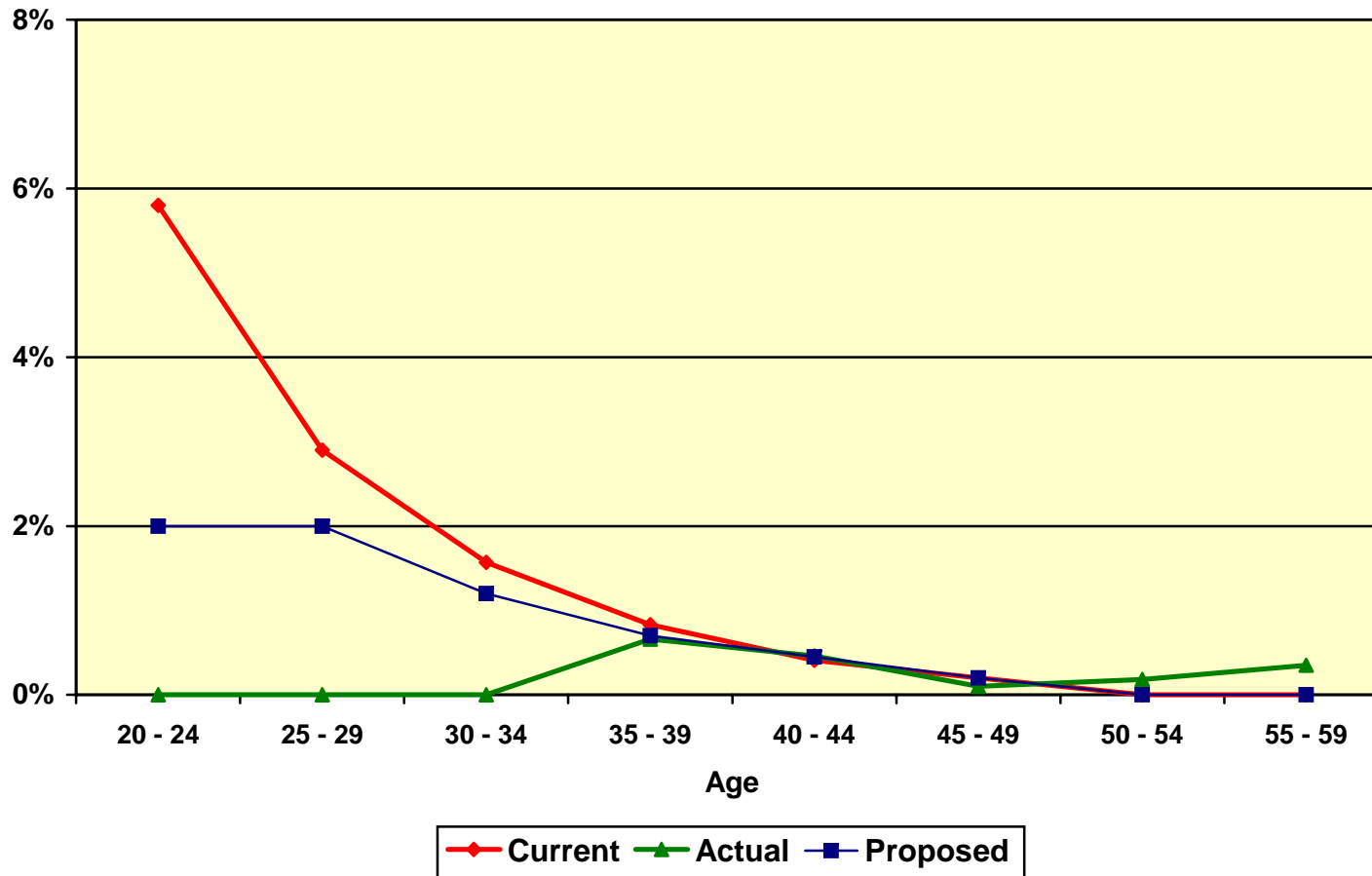
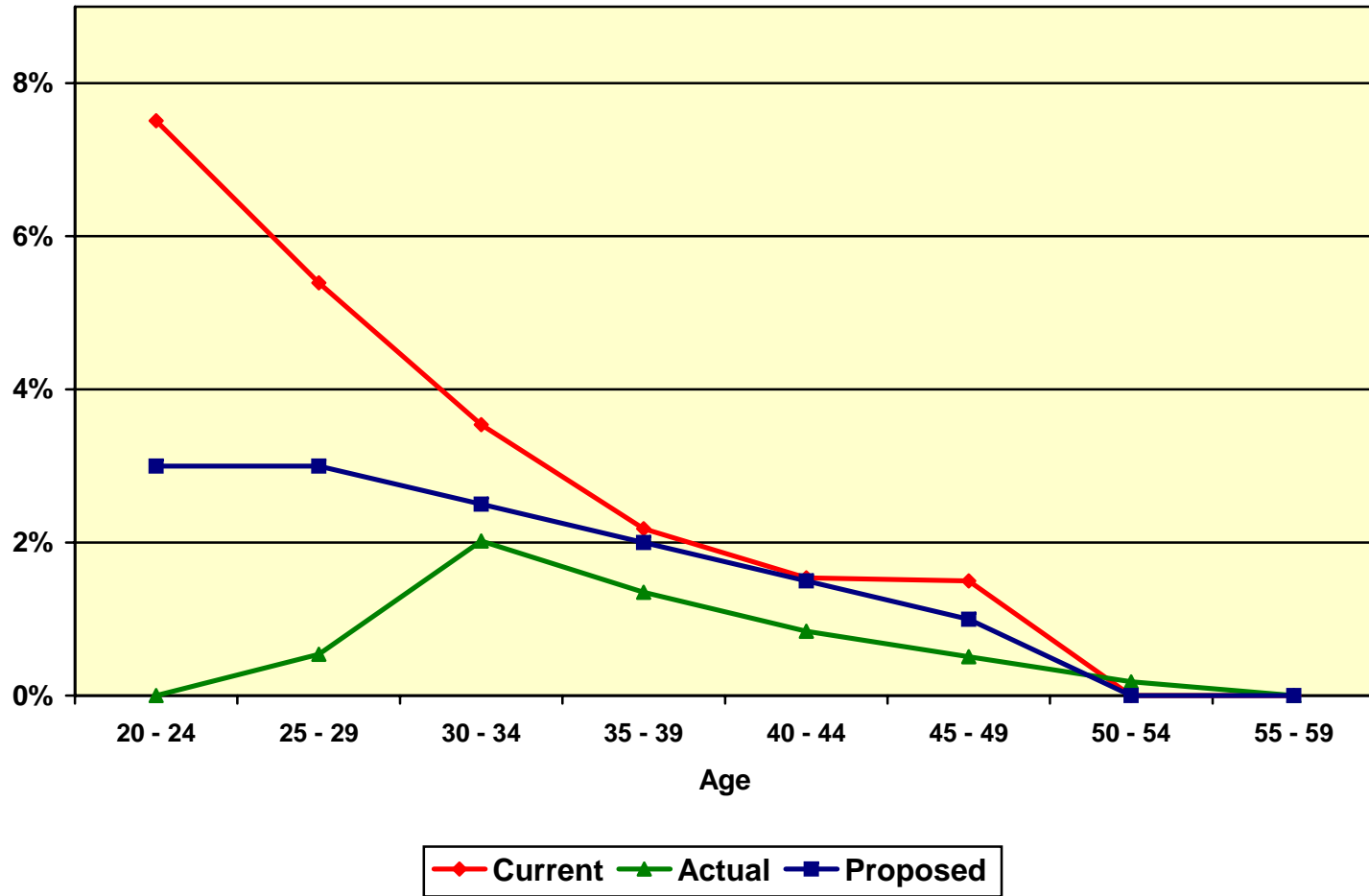


Chart 16
Withdrawal Rates - Police
(More than Five Years of Service)



E. DISABILITY INCIDENCE RATES

When a member becomes disabled, he or she may be entitled to a service connected disability benefit or a non-service connected disability benefit. The following summarizes the actual incidence of disabilities over the past three years compared to the current and proposed assumptions for disability incidence:

Rates of Disability Incidence (Fire)

<u>Age</u>	<u>Current Assumed Rates</u>	<u>Observed Rate</u>	<u>Proposed Assumed Rates</u>
20 – 24	0.02%	0.00%	0.02%
25 – 29	0.02	0.00	0.02
30 – 34	0.04	0.31	0.04
35 – 39	0.08	0.00	0.08
40 – 44	0.19	0.17	0.19
45 – 49	0.43	0.24	0.35
50 – 54	0.87	0.44	0.70
55 – 59	3.37	2.42	3.00
60 – 64	8.38	7.14	8.00

Rates of Disability Incidence (Police)

<u>Age</u>	<u>Current Assumed Rates</u>	<u>Observed Rate</u>	<u>Proposed Assumed Rates</u>
20 – 24	0.02%	0.00%	0.02%
25 – 29	0.03	0.54	0.05
30 – 34	0.07	0.26	0.15
35 – 39	0.13	0.20	0.18
40 – 44	0.30	0.56	0.40
45 – 49	0.46	0.62	0.55
50 – 54	0.63	0.42	0.60
55 – 59	1.36	1.68	1.50
60 – 64	1.42	1.72	1.65

Chart 17 compares the actual number of disabilities for Fire members 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 graphs the same information as Chart 17, but for Police members.

Chart 19 shows actual disablement rates, compared to the assumed (current) and proposed rates for Fire members.

Chart 20 graphs the same information as Chart 19, but for Police members.

Since about 90% of disabled members received a duty disability, we recommend introducing an assumption that 90% of all disabilities will be duty disabilities..

Chart 17
Actual Number of Disabilities Compared to
Expected (Fire)

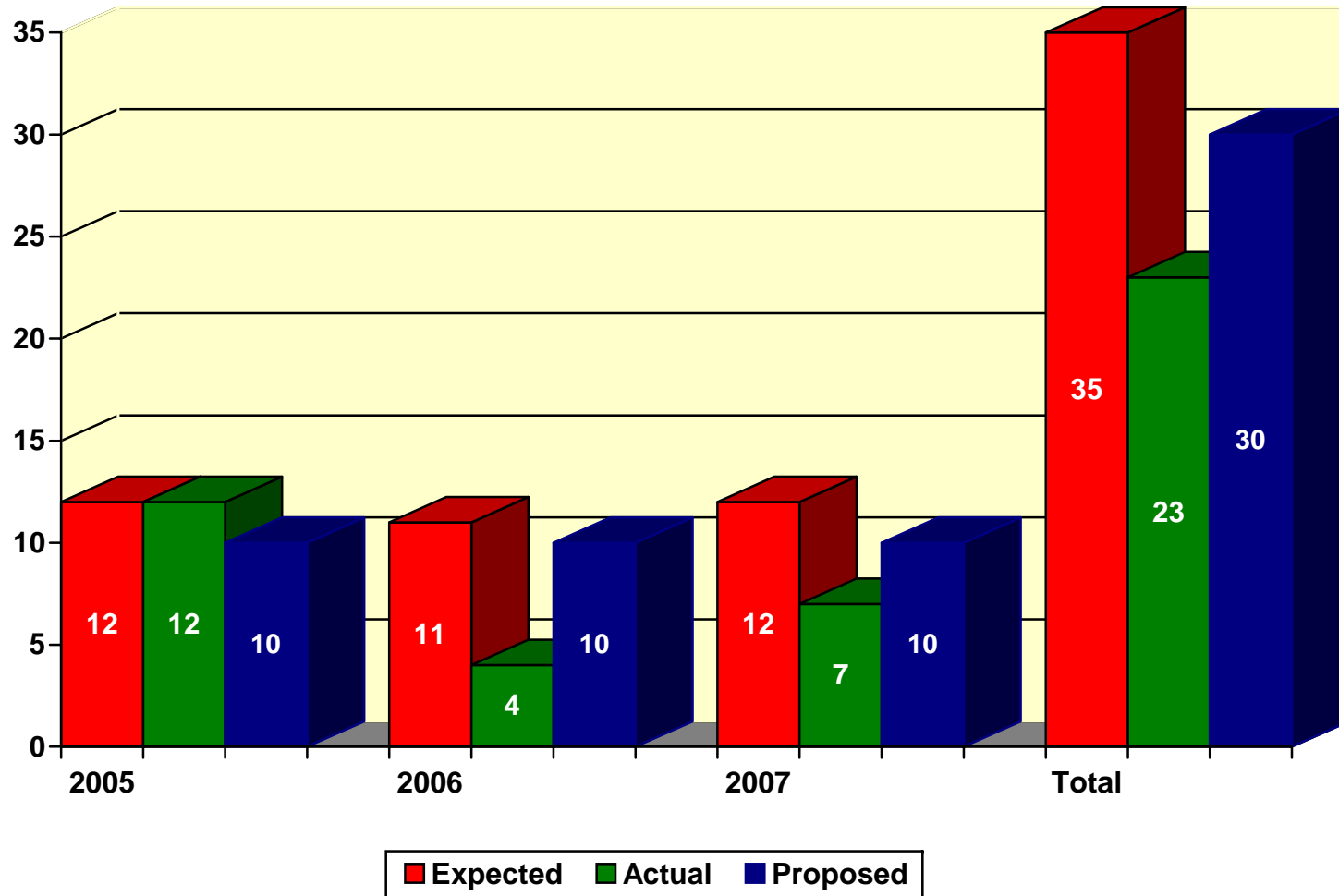


Chart 18
Actual Number of Disabilities Compared to
Expected (Police)

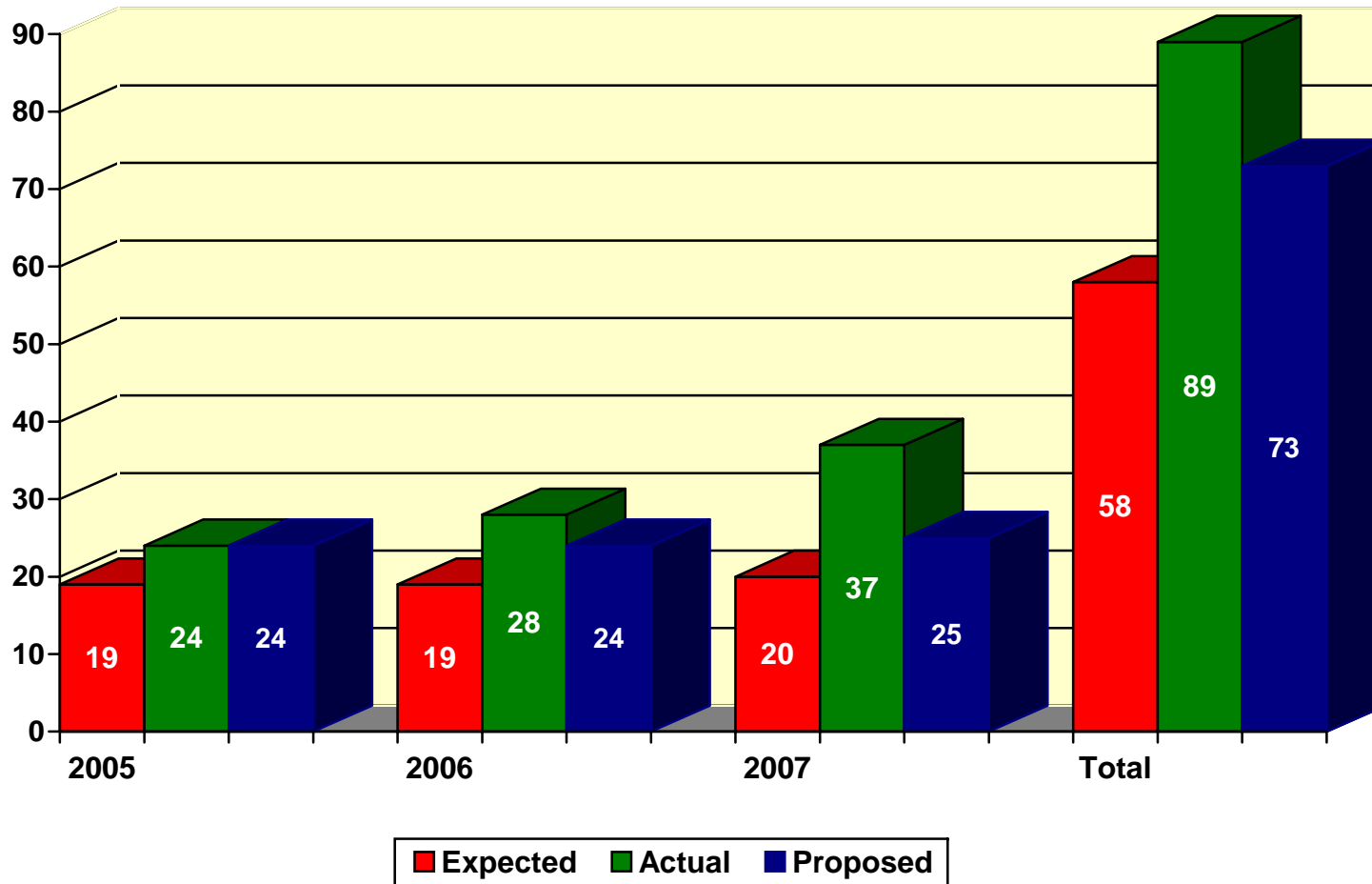


Chart 19

Disablement Rates for Fire

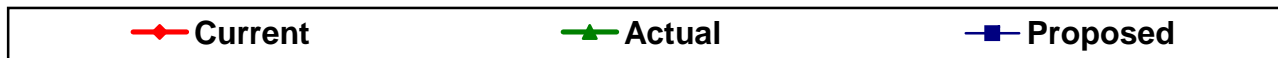
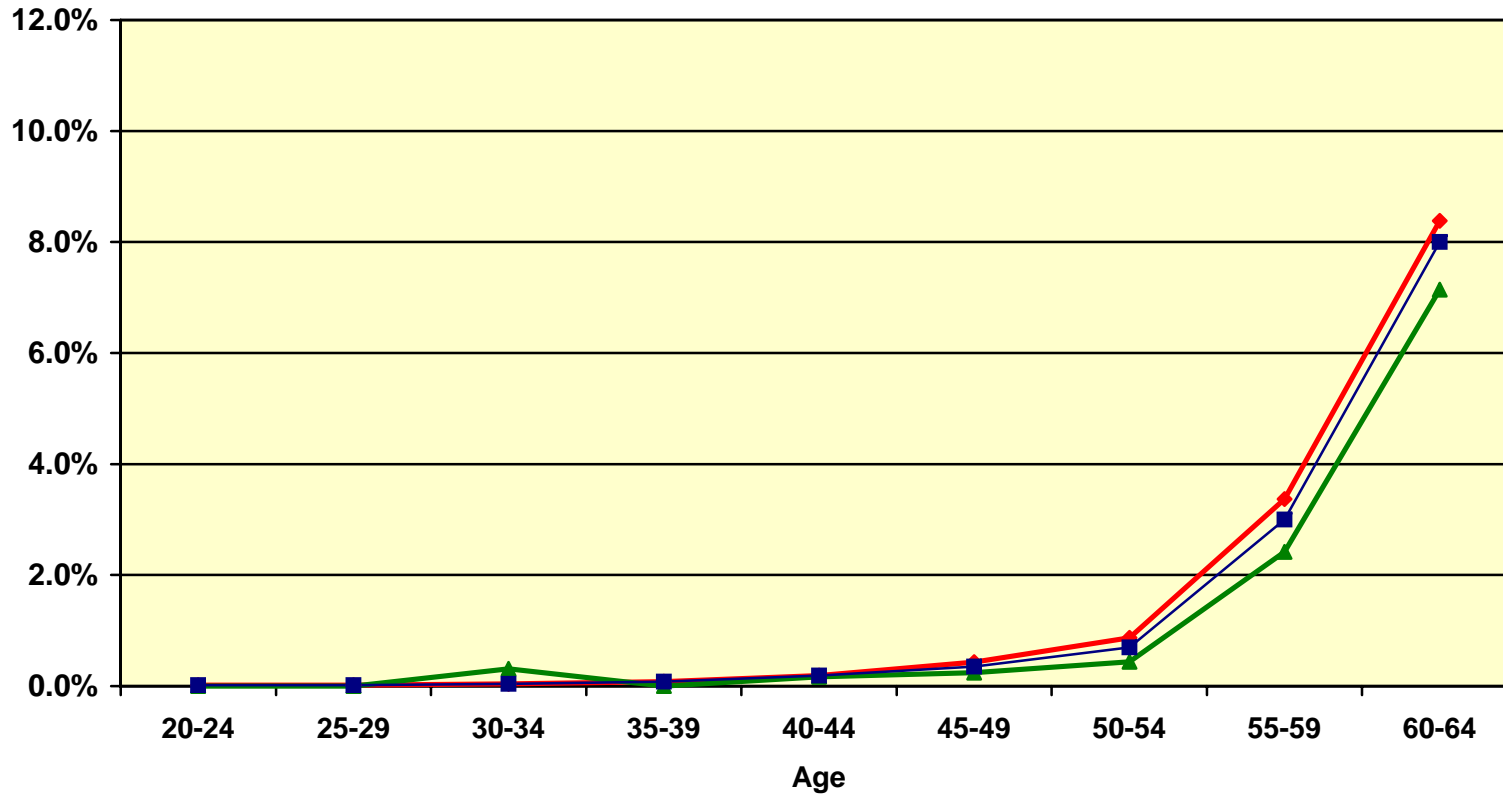
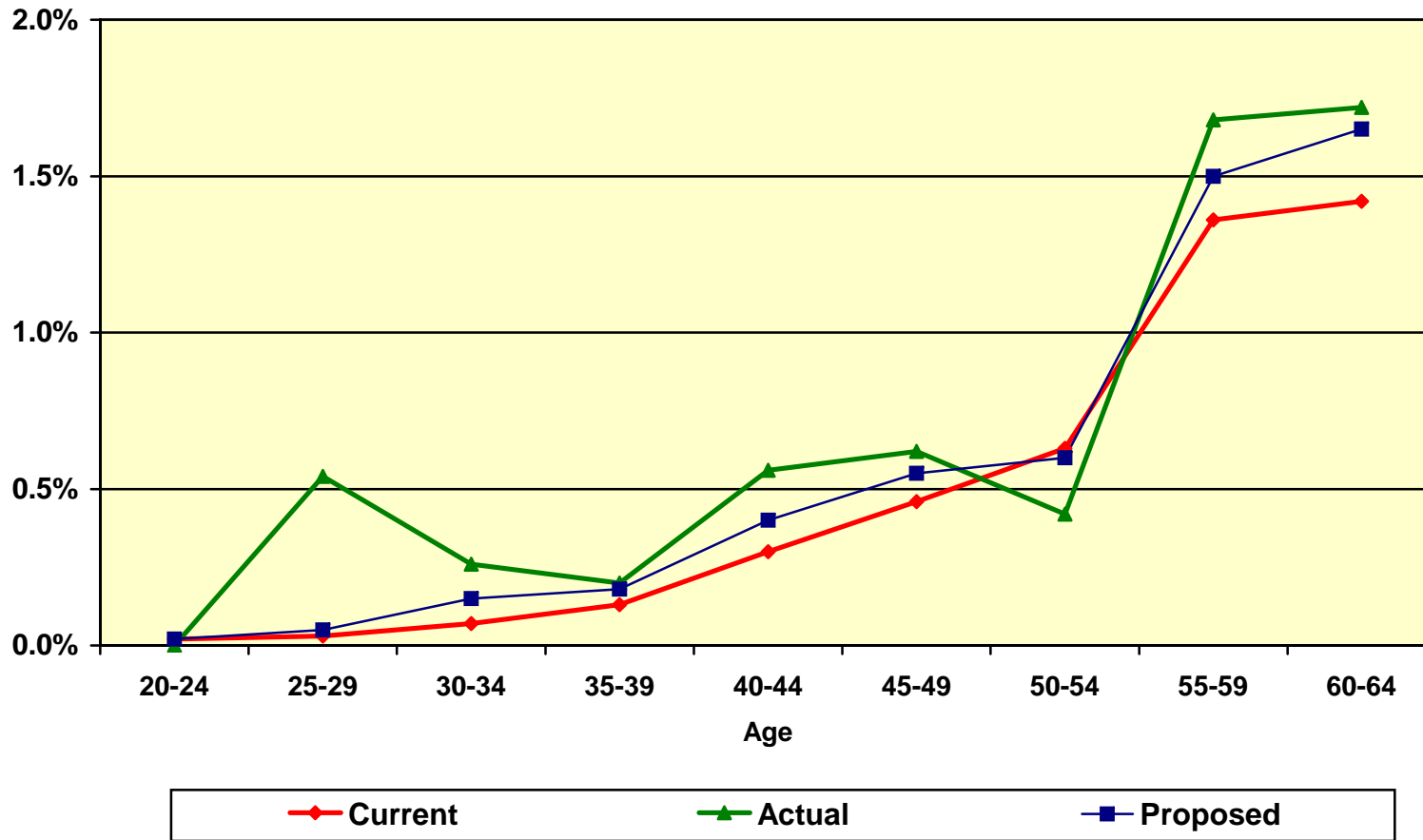


Chart 20
Disablement Rates for Police



F. MERIT AND PROMOTION 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 promotion increases.

The inflationary increases are assumed to follow the general annual inflation assumption of 3.75% and a real "across the board" pay increase assumption of 0.50%. Therefore, the total annual inflation and real "across the board" increase of 4.25% is used as the assumed annual rate of payroll growth at which payments to the UAAL are assumed to increase.

The annual merit and promotion 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 in combination for Fire and Police 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 general salary increases (representing inflation and "across the board" components) from these increases. These general increases are 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."

Based on our analysis, we are recommending increases in the merit and promotion assumptions for members.

The following table shows the average annual increases over the three-year experience period (July 1, 2004 through June 30, 2007) before removing the general increases (inflationary and “across the board” components):

<u>Age Group</u>	<u>Average Increase</u>
20-24	11.21%
25-29	9.89%
30-34	6.81%
35-39	5.48%
40-44	4.48%
45-49	3.96%
50-54	3.56%
55-59	3.23%
60-64	3.07%
65-69	3.08%

The annual increase in average salary over this three -year period was about 2.8% for members. After removing these general inflationary and “across the board” increases, the following table shows the average annual merit and promotion increases for the three-year period:

<u>Age Group</u>	<u>Average Merit and Promotional Increase</u>
20-24	8.18%
25-29	6.90%
30-34	3.91%
35-39	2.61%
40-44	1.64%
45-49	1.13%
50-54	0.74%
55-59	0.42%
60-64	0.26%
65-69	0.27%

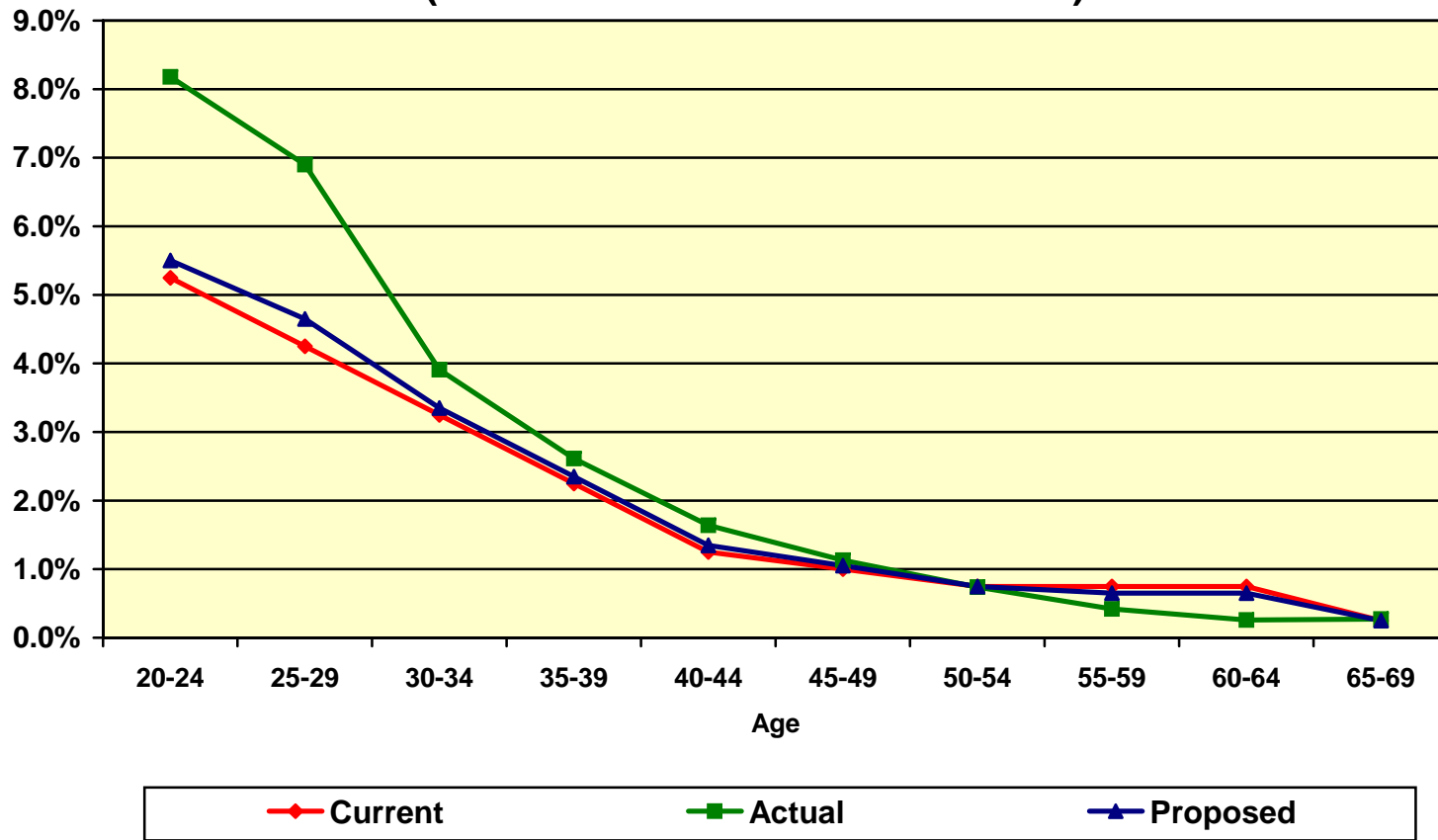
The following table shows the current and recommended annual merit and promotion assumptions based on this recent experience:

Current vs. Proposed Merit and Promotional Increases

<u>Age Group</u>	<u>Current</u>	<u>Recommended</u>
20-24	5.25%	5.50%
25-29	4.25%	4.65%
30-34	3.25%	3.35%
35-39	2.25%	2.35%
40-44	1.25%	1.35%
45-49	1.00%	1.05%
50-54	0.75%	0.75%
55-59	0.75%	0.65%
60-64	0.75%	0.65%
65-69	0.25%	0.25%

Charts 21 and 22 provide a graphical comparison of the current, actual experience and recommended merit and promotion increases.

Chart 21
Merit and Promotion Salary Increase Rates
(More than Five Years of Service)



APPENDIX A

CURRENT ACTUARIAL ASSUMPTIONS

Mortality Rates

Healthy: 1994 Uninsured Pensioner Mortality Table for males set back two years for male members and beneficiaries. 1994 Uninsured Pensioner Mortality Table for males set back four years for female members and beneficiaries.

Disabled: 1994 Uninsured Pensioner Mortality Table for males set forward two years for members.

Termination Rates Before Retirement:

Pre-Retirement Mortality:

Rate (%)						
Mortality						
Age	Fire			Police		
	Ordinary	Service	Other*	Ordinary	Service	Other*
20	0.00	0.01	0.00	0.06	0.01	0.03
25	0.00	0.02	0.00	0.06	0.02	0.02
30	0.01	0.02	0.02	0.06	0.02	0.02
35	0.01	0.03	0.02	0.06	0.03	0.03
40	0.02	0.03	0.04	0.08	0.03	0.04
45	0.02	0.04	0.04	0.08	0.04	0.05
50	0.03	0.04	0.04	0.09	0.04	0.05
55	0.04	0.05	0.06	0.12	0.05	0.07
60	0.05	0.05	0.08	0.15	0.05	0.08

**Death while eligible for service and disability retirement.*

Termination Rates Before Retirement (continued):

Rate (%)				
Disability				
Age	Fire		Police	
	Ordinary	Service	Ordinary	Service
20	0.00	0.02	0.00	0.02
25	0.00	0.02	0.00	0.02
30	0.00	0.02	0.02	0.03
35	0.02	0.05	0.02	0.07
40	0.02	0.11	0.03	0.20
45	0.03	0.27	0.03	0.37
50	0.03	0.60	0.03	0.53
55	0.04	2.00	0.03	1.07
60	0.05	4.67	0.03	1.33

Rate (%)		
Withdrawal (< 5 Years of Service)		
Age	Fire	Police
20	5.50	8.40
25	5.50	6.22
30	5.50	5.50
35	5.50	5.50
40	5.50	5.50
45	5.50	5.50
50	5.50	5.50
55	5.50	5.50
60	5.50	5.50

Rate (%)		
Withdrawal (5+ Years of Service) *		
Age	Fire	Police
20	7.75	8.40
25	3.78	6.22
30	1.99	4.24
35	1.11	2.65
40	0.54	1.69
45	0.26	1.50
50	0.00	0.00
55	0.00	0.00
60	0.00	0.00

**No withdrawal is assumed after a member is eligible for retirement.*

Termination Rates Before Retirement (continued):

Retirement Rates:

Age	Rate(%)			
	Fire		Police	
	Tiers 2&4	Tiers 3&5	Tiers 2&4	Tiers 3&5
41	1.00	0.00	6.00	0.00
42	1.00	0.00	6.00	0.00
43	1.00	0.00	6.00	0.00
44	1.10	0.00	6.00	0.00
45	1.15	0.00	6.00	0.00
46	1.20	0.00	7.16	0.00
47	1.25	0.00	8.32	0.00
48	1.40	0.00	9.47	0.00
49	1.60	0.00	10.63	0.00
50	2.00	20.00	11.79	25.00
51	2.75	18.00	12.95	22.50
52	3.60	16.00	14.11	20.00
53	4.70	14.00	15.26	18.00
54	5.75	12.00	16.42	16.00
55	7.30	10.00	17.58	15.42
56	8.86	8.86	18.74	16.11
57	9.85	9.85	19.89	16.84
58	10.94	10.94	21.05	17.60
59	12.16	12.16	22.21	18.40
60	13.52	13.52	23.37	19.23
61	15.03	15.03	24.53	20.10
62	16.70	16.70	25.68	21.01
63	18.56	18.56	26.84	21.96
64	20.63	20.63	28.00	22.95
65	100.00	100.00	100.00	100.00

Retirement Age and Benefit for Deferred Vested Members: For current deferred vested members, the retirement assumption is age 50. We assume that all deferred vested members receive a deferred vested benefit.

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/Domestic Partner: 86%

Age of Spouse: Wives are 3 years younger than their husbands.

Future Benefit Accruals: 1.0 year of service per year.

Consumer Price Index: Increase of 3.75% per year; benefit increases due to CPI subject to a 3.0% maximum for Tiers 3 through 5.

Member Contribution and Matching Account Crediting Rate: 5.00%

Net Investment Return: 8.00%, net of investment and administrative expenses

Salary Increases:

Annual Rate of Compensation Increase

Inflation: 3.75% per year; plus 0.50% “across the board” salary increases; plus the following Merit and Longevity increases based on age.

Age	Additional Salary Increase
20	5.25%
25	4.25%
30	3.25%
35	2.35%
40	1.25%
45	1.00%
50	0.75%
55	0.75%
60	0.75%

DROP Program: There are no explicit DROP related assumptions. DROP members are treated as active employees until the end of their DROP period. This approach is unchanged from previous valuations.

Actuarial Value of Assets: The market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual and expected returns on a market value basis and is recognized over a five year period. The actuarial value of assets can not be less than 80% or greater than 120% of the market value of assets.

Actuarial Cost Method: Entry Age Normal Actuarial Cost Method. Entry Age is the current age minus Vesting Credit. Actuarial Accrued Liability is calculated on an individual basis and is based on costs allocated as a level percentage of compensation. The Normal Cost is calculated on an aggregate basis by taking the Present Value of Future Normal Costs divided by the Present Value of Future Salaries to obtain a normal cost rate. This normal cost rate is then multiplied by the total of current salaries.

Funding Policy: The City of Los Angeles Fire & Police Pension Plan makes contributions equal to the Normal Cost adjusted by amount to amortize any Surplus or Unfunded Actuarial Accrued Liability. Both the Normal Cost and the Actuarial Accrued Liability are determined under the Entry Age Normal cost method. Any change in Surplus or Unfunded Actuarial Accrued Liability due to actuarial gains or losses are amortized over separate fifteen year periods as a level percentage of payroll. Any change in Surplus or Unfunded Actuarial Accrued Liability from plan amendments or plan assumption changes are amortized over separate thirty year periods as a level percentage of payroll. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by service. For Tier 1, the Unfunded Actuarial Accrued Liability is amortized using level dollar amortization ending on June 30, 2037. For Tier 2, the Unfunded Actuarial Accrued Liability is amortized using level percent of payroll amortization ending on June 30, 2037 as a percent of total valuation payroll.

APPENDIX B

PROPOSED ACTUARIAL ASSUMPTIONS

Mortality Rates

- Healthy:** RP-2000 Combined Healthy Mortality Table (separate for males and females) set back two years.
- Disabled:** RP-2000 Combined Healthy Mortality Table (separate for males and females) set forward one year.
- Beneficiaries:** RP-2000 Combined Healthy Mortality Table (separate for males and females) with no age adjustment.

Termination Rates Before Retirement:

Rate (%)		
Mortality		
Age	Male	Female
20	0.03	0.02
25	0.04	0.02
30	0.04	0.02
35	0.06	0.04
40	0.10	0.06
45	0.13	0.09
50	0.19	0.14
55	0.29	0.22
60	0.53	0.39

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

Termination Rates Before Retirement (continued):

Rate (%)		
Disability		
Age	Fire	Police
20	0.02%	0.01%
25	0.02	0.04
30	0.03	0.11
35	0.06	0.17
40	0.15	0.31
45	0.29	0.49
50	0.56	0.58
55	2.08	1.14
60	6.00	1.59

Rate (%)		
Withdrawal (< 5 Years of Service)		
Years of Service	Fire	Police
0 - 1	8.00%	8.00%
1 - 2	4.00	4.50
2 - 3	3.00	3.50
3 - 4	2.00	3.50
4 - 5	2.00	3.00

Rate (%)		
Withdrawal (5+ Years of Service) *		
Age	Fire	Police
20	2.00%	3.00%
25	2.00	3.00
30	1.52	2.70
35	0.90	2.20
40	0.55	1.70
45	0.30	1.20
50	0.00	0.00
55	0.00	0.00
60	0.00	0.00

**No withdrawal is assumed after a member is eligible for retirement.*

Termination Rates Before Retirement (continued):

Retirement Rates:

Age	Rate(%)			
	Fire		Police	
	Tiers 2&4	Tiers 3&5	Tiers 2&4	Tiers 3&5
41	1.00%	0.00%	6.00%	0.00%
42	1.00	0.00	6.00	0.00
43	1.00	0.00	10.00	0.00
44	1.00	0.00	10.00	0.00
45	1.00	0.00	8.00	0.00
46	1.00	0.00	8.00	0.00
47	1.00	0.00	8.00	0.00
48	2.00	0.00	9.00	0.00
49	2.00	0.00	9.00	0.00
50	2.00	8.00	8.00	15.00
51	2.00	8.00	8.00	15.00
52	4.00	8.00	8.00	15.00
53	4.00	8.00	15.00	15.00
54	4.00	8.00	15.00	15.00
55	6.00	10.00	15.00	15.00
56	10.00	10.00	15.00	15.00
57	10.00	10.00	15.00	18.00
58	10.00	12.00	25.00	20.00
59	10.00	15.00	25.00	25.00
60	20.00	20.00	25.00	25.00
61	20.00	20.00	25.00	25.00
62	20.00	20.00	25.00	25.00
63	25.00	25.00	25.00	25.00
64	30.00	30.00	30.00	30.00
65	100.00	100.00	100.00	100.00

Retirement Age and Benefit for Deferred Vested Members: For current deferred vested members, the retirement assumption is age 50. We assume that all deferred vested members receive a deferred vested benefit.

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/Domestic Partner: 86%

Age of Spouse: Wives are 3 years younger than their husbands.

Future Benefit Accruals: 1.0 year of service per year.

Consumer Price Index: Increase of 3.75% per year; benefit increases due to CPI subject to a 3.0% maximum for Tiers 3 through 5.

Member Contribution and Matching Account Crediting Rate: 5.00%

Net Investment Return: 8.00%, net of investment and administrative expenses

Salary Increases:

Annual Rate of Compensation Increase

Inflation: 3.75% per year; plus 0.50% “across the board” salary increases; plus the following Merit and Longevity increases based on age.

Age	Additional Salary Increase
20	5.84%
25	4.99%
30	3.87%
35	2.75%
40	1.75%
45	1.17%
50	0.87%
55	0.69%
60	0.65%

DROP Program: We continue to assume the DROP plan is cost neutral. DROP members are treated as active employees until the end of their DROP period. This approach is unchanged from previous valuations.

Actuarial Value of Assets: The market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual and expected returns on a market value basis and is recognized over a five year period. The actuarial value of assets can not be less than 80% or greater than 120% of the market value of assets.

Actuarial Cost Method: Entry Age Normal Actuarial Cost Method. Entry Age is the current age minus Vesting Credit. Actuarial Accrued Liability is calculated on an individual basis and is based on costs allocated as a level percentage of compensation. The Normal Cost is calculated on an aggregate basis by taking the Present Value of Future Normal Costs divided by the Present Value of Future Salaries to obtain a normal cost rate. This normal cost rate is then multiplied by the total of current salaries.

Funding Policy: The City of Los Angeles Fire & Police Pension Plan makes contributions equal to the Normal Cost adjusted by amount to amortize any Surplus or Unfunded Actuarial Accrued Liability. Both the Normal Cost and the Actuarial Accrued Liability are determined under the Entry Age Normal cost method. Any change in Surplus or Unfunded Actuarial Accrued Liability due to actuarial gains or losses are amortized over separate fifteen year periods as a level percentage of payroll. Any change in Surplus or Unfunded Actuarial Accrued Liability from plan amendments or plan assumption changes are amortized over separate thirty year periods as a level percentage of payroll. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by service. For Tier 1, the Unfunded Actuarial Accrued Liability is amortized using level dollar amortization ending on June 30, 2037. For Tier 2, the Unfunded Actuarial Accrued Liability is amortized using level percent of payroll amortization ending on June 30, 2037 as a percent of total valuation payroll.

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