

**San Diego City
Employees' Retirement System**

**Experience Study Results
and Recommendations**

**For the period covering
July 1, 2004 – June 30, 2007**

Produced by Cheiron

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LETTER OF TRANSMITTAL

July 18, 2008

Board of Administration
San Diego City Employees' Retirement System
401 West A Street, Suite 400
San Diego, CA 92101

Dear Members of the Board:

At your request, we have completed an experience study of the San Diego City Employees' Retirement System. Our study compared assumed versus actual experience with respect to mortality, membership turnover, disability, retirement, salary increase and investment returns between July 1, 2004 and June 30, 2007.

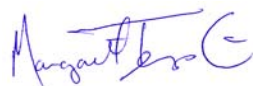
All findings and recommendations in this study, unless otherwise stated, are related to all three plan sponsors, the City, Unified Port District and Airport Authority. This report presents the results of our study as well as recommendations for changes to several of the actuarial assumptions to be employed in future valuations of SDCERS.

In conclusion, we certify that, to the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable actuarial standards set out by the Actuarial Standards Board and Actuarial Standards of Practice (ASOPs) Nos. 4, 27 and 35. As such, it reflects the actuary's responsibility under Section 5.8 of ASOP No. 4 "for assessing the implications of the overall results, in terms of short- and long-range benefit security and expected cost progression." In preparing our report, we relied without audit, on information supplied by SDCERS' staff. This information includes, but is not limited to, plan provisions, employee data, and financial information.

Sincerely,
Cheiron



Gene Kalwarski, FSA, EA, MAAA
Principal Consulting Actuary



Margaret Tempkin, FSA, EA, MAAA
Actuary



SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM EXPERIENCE STUDY

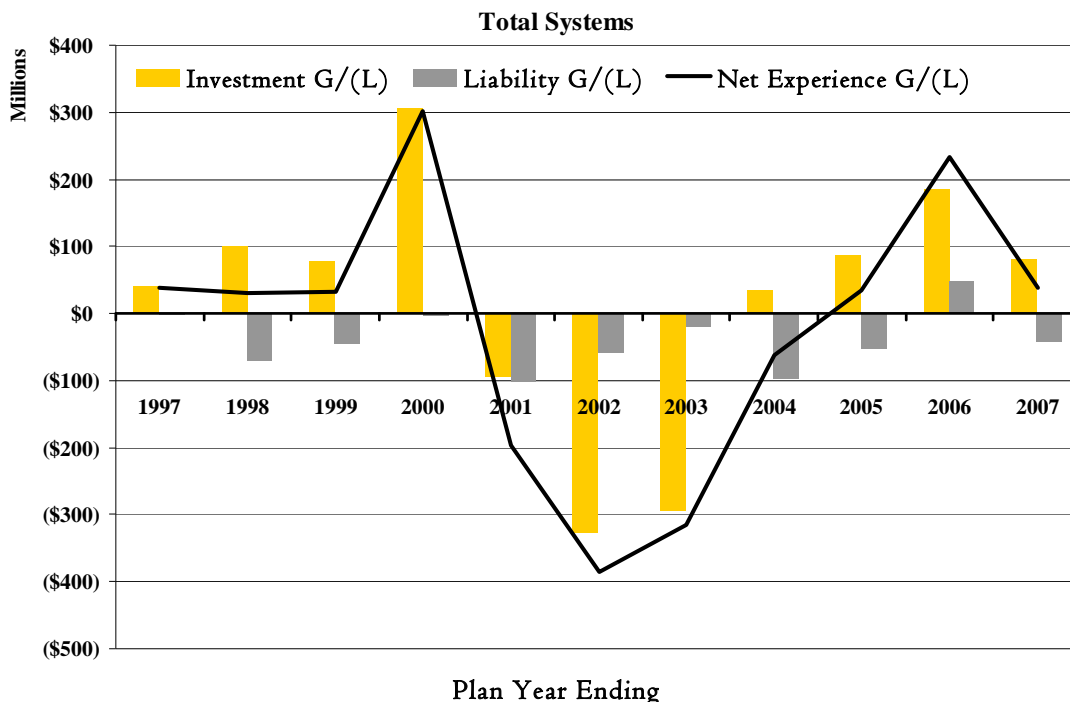
SECTION I BOARD SUMMARY

At the request of the Board of Administration, Cheiron has performed a study of the experience of the San Diego City Employees' Retirement System. This experience study examines the System's experience during the three year period July 1, 2004 through June 30, 2007, "The Study Period". This report presents the results of our study as well as recommendations for changes to several of the actuarial assumptions to be employed in future valuations of SDCERS.

We studied the System's experience with respect to both "demographic" and "economic" assumptions. Demographic assumptions deal with expected membership behavior. These include the retirement rates, termination rates, disability rates, mortality, and miscellaneous assumptions including reciprocity, marital status, and purchased service rates. Economic assumptions deal with System wide elements such as investment returns, inflation, and administrative expenses. Salary increases can be considered either demographic (membership oriented) or economic (given the inflation component). For this study we included salary experience under the economic portion of the study.

Our study combines all three plan sponsors split into two groups, General and Safety employees. The reason we combined all three plan sponsors is because the relatively small size of the Unified Port District and Airport Authority employee groups would produce, if studied independently, statistically unreliable experience study results.

Before summarizing the key results of our experience study, we present in the chart below a historical review comparing for all plan sponsors combined, actual experience to anticipated experience based on the assumptions used in past actuarial valuations. The gold bars in the chart represent annual investment experience gains or losses (G/(L)), and the gray bars represent the annual liability (demographic) experience gains or losses (G/(L)).



SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM EXPERIENCE STUDY

SECTION I BOARD SUMMARY

In summary, the chart indicates that for ten out of eleven years, the demographic assumptions employed in each year's actuarial valuation produced a liability experience loss, which means that the assumptions underestimated liabilities. The average annual liability loss during this period was \$40.3 million, or 1.1% of the average annual actuarial liability over that period. With respect demographic experience over the study period, experience in the aggregate was close to what the assumptions anticipated.

On the investment side, the chart indicates that investment performance exceeded the assumed rate of return in eight of the eleven years. The average annual investment gain over the 11 year period was \$17.9 million or 0.6% of the average annual market value of assets over that 11 year period.

Summary of principal experience study results and recommendations:

1. During the study period, actual retirements significantly exceeded anticipated retirements. As a result we recommend increasing the rates of retirement and further changing the assumption to be based on service as opposed to the age of a member. The impact of increasing retirement rates will increase SDCERS' liabilities and costs.
2. Actual withdrawals during the period were higher than assumed at all ages and service groups. We recommend increasing the termination rates assumed across all ages and service groups. The impact of increasing termination rates will reduce SDCERS' liabilities and costs.
3. Disability incidence was slightly lower than expected for the study period. We recommend decreasing the disability rates slightly to reflect the lower than anticipated experience. Lowering the disability rates will slightly decrease SDCERS' liabilities and costs.
4. Actual inactive mortality for the study period was higher than expected. We recommend updating the mortality assumptions for all General and Safety members. The impact using our proposed table will increase the expected number of deaths and ultimately reduce SDCERS' liabilities and costs.
5. While investment returns were well in excess of those assumed (8.00%) both during the study period as well as for the last decade, we do not recommend setting this assumption based on historical rates. Future intermediate term earnings expectations for the SDCERS as reported by the investment consultant are between 7.6%-7.8%, and there is an increasing trend by public sector plans to lower their discount rates. As a result, we recommend that the current 8.00% return, be lowered to 7.75%. Lowering the discount rate assumption increases SDCERS' liabilities and costs.
6. Based on a national study performed by the National Association of State Retirement Administrators (NASRA), the median inflation assumption used by large public sector retirement systems in FY 2006 was 3.5%, and SDCERS' investment consultant predicts 2.75% for an intermediate inflation assumption. These compare to SDCERS' current inflation assumption of 4.25%. We recommend lowering the current assumption slightly, to 4.0%, recognizing that there presently is a real risk of rising inflation. Lowering the inflation assumption to 4.0% decreases SDCERS' liabilities and costs.

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM EXPERIENCE STUDY

SECTION I BOARD SUMMARY

7. Total salary increases (Merit and Inflation) were about as expected for both General and Safety members. This result came about from two offsetting items, inflation and merit. The inflationary component of the salary increases (the annual across the board increase), was lower than the assumed of 4.25%, however, the actual merit (step increase) component of the salary increases was higher than expected. Item six above lists our inflation recommendation (4.0% inflation). With respect to the merit component, we recommend no change.

The financial impact of all recommended changes will be determined after the June 30, 2008 actuarial valuation is completed. Based on the June 30, 2007 valuation data, we estimate that the net impact of all our recommended changes will produce results very close to those determined on the current assumptions.

On the following page we present Table I-1 summarizing all keys findings and recommendations arising from this study.

The balance of this report presents the rationale for our recommendations. In Section II, we present detailed analysis and exhibits supporting the various changes to the demographic assumptions. In Section III, we present similar information with respect to the economic assumptions. Appendix A presents additional graphic information on the results of this experience study and the current and proposed assumptions can be found in their entirety in Appendices B & C, respectively.

**SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM
EXPERIENCE STUDY**

**SECTION I
BOARD SUMMARY**

**Table I – 1
Recommended Changes to Economic and Demographic Assumptions
(All General and Safety Employees)**

	Current Assumption	Recommended Change
<u>Demographic</u>		
Retirement Rates	Retirement Rates by Age	Retirement Rates by Years of Service; increased retirement rates
Termination Rates	Termination Rates by Age and Service	Termination Rates by Age and Service, increased termination rates
Disability Rates	Disability Rates by Age	Disability Rates by Age; decreased Disability Rates
Active Mortality Rates	UP1994 with 5 Year Setback (Male only for Safety members)	RP2000 projected to 2008 for actives (Male only for Safety actives with 2 Year Set Forward)
Healthy Retiree Mortality Rates	UP1994 with 5 Year Setback	RP2000 combined table (2 Year Set Forward for Safety members)
Disabled Mortality Rates	UP1994 with 5 Year Set Forward Safety UP1994 with 2 Year Set Forward	No Change
<u>Miscellaneous Demographic</u>		
Reciprocity	20%	No Change
Marital Status	80% Men/ 50% Women; Males 4 years older than female spouse	No Change
Purchased Service Rates	Rates developed after Nov. 2003 for City members and June 2004 for UPD and Airport Authority members	1) Based on Age & Service of members, 2) Apply new demographic and economic assumption recommendations in determining cost
<u>Economic</u>		
Inflation	4.25%	4.00%
Rate of Investment Return	8.00%	7.75%
Salary Increase Rate	4.25% Inflation plus additional Merit Component based on Service	4.00% Inflation; No Change to additional Merit Component

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section II Demographic Assumptions

In this section, we present the key findings of our experience review of the demographic assumptions used by SDCERS, including our recommended changes for each assumption. The demographic assumptions included in this review were:

1. Retirement (from Service, DROP, and Disability)
2. Termination from Active Employment (Other than Death, Disability, or Retirement)
3. Disability (Industrial and Non Industrial)
4. Mortality (Active, Retired Healthy, and Retired Disabled)
5. Miscellaneous
 - Reciprocity (members who terminate and work for a subsequent eligible employer)
 - Joint and Survivor Election Percentage and Spouse Age Difference
 - Purchased service rates

For each of the first four sets of assumptions noted above, we determined an actual to expected occurrence ratio at each age (sometimes further segregated by service or sex). For example, if during the study period there were 1,000 General employees at age 50, and of that group six became disabled, we would compare that result to the number of disablements expected under our disability assumption. If the expected value was five members, the ratio of actual to expected would be 1.2 (i.e. 6/5).

If the actual to expected ratio is greater than one, our assumption at that age is too low; if it is less than one, the assumption is too high.

1. Retirement

A. Current Assumptions

All General Employees

Normal Retirement assumptions for City General employees start at the earlier of age 62 with 10 years of service or age 55 with 20 years of service. UPD and Airport Authority General employees start at the earlier of age 62 with 5 years of service or age 55 with 20 years of service.

All Safety Employees

Normal Retirement assumptions for City Safety employees start at the earlier of age 55 with 10 years of service or age 50 with 20 years of service. UPD Safety employees start at the earlier of age 55 with 5 years of service or age 50 with 20 years of service.

The current retirement rates for all employee groups vary based on age. Once a General employee reaches age 70, or a Safety employee reaches age 62, we assume 100% probability of retirement. In addition, if a Safety member has attained both age 55 and completed at least 30 years of service, 100%

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section II Demographic Assumptions

retirement is assumed. The current and proposed retirement assumptions for all employee groups are presented in detail in Appendices B and C.

B. Experience

All General and Safety Employees

Table II-1 is split by employee group and compares the number of actual to expected retirements over the study period. The ratio reflects how well the assumption performed as the closer the ratio is to 1.00 the more accurate it was in predicting participant retirement behavior.

Table II – 1						
Current Retirement Assumptions						
Age Range	<u>All General Employees</u>			<u>All Safety Employees</u>		
	Actual	Expected	Ratio	Actual	Expected	Ratio
50-54	--	--	--	266	62	4.29
55-59	476	107	4.45	64	55	1.16
60-64	175	114	1.54	8	14	0.57
65-69	43	38	1.13	1	1	1.00
70+	11	47	0.23	0	0	0.00
Totals	705	306	2.30	339	132	2.57

The current assumptions for both employee groups are based on age, as shown in the table above. In addition, Safety members with both an attained age of 55 and at least 30 years of service have a 100% retirement assumption. Overall, for both the General and Safety employees, the actual retirements during the study period were much higher than expected. Both groups of employees also have a much higher ratio of actual to expected retirements at lower age ranges.

In addition to the comparison of expected versus actual experience for total retirements, we also studied the number of DROP retirements compared to normal retirements. Table II-2 shows the split of DROP versus normal retirements for all General and Safety employees.

Table II – 2						
Current Retirement Assumptions						
Age Range	<u>All General Employees</u>			<u>All Safety Employees</u>		
	Normal Retirements	DROP Retirements	Total Retirements	Normal Retirements	DROP Retirements	Total Retirements
50-54	--	--	--	40	226	266
55-59	142	334	476	8	56	64
60-64	61	114	175	2	6	8
65-69	23	20	43	1	0	1
70+	10	1	11	0	0	0
Totals	236	469	705	51	288	339

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Section II Demographic Assumptions

For General employees and especially for Safety employees, a significantly larger number of retirements were from DROP.

C. Recommendations

All General and Safety Employees

The experience shown above for General and Safety members shows higher ratios of actual to expected retirements at younger ages, as well as a larger number of DROP retirements compared to total retirements. This experience suggests that employees are retiring at younger ages based on service attained; therefore we recommend changing the assumed percentage of participants who take retirement to be based on years of service instead of based on age.

Table II-3 shows the proposed assumptions for both General and Safety employees over the study period. By changing the rates to be based on service instead of age will make expected retirements more in line with actual retirements.

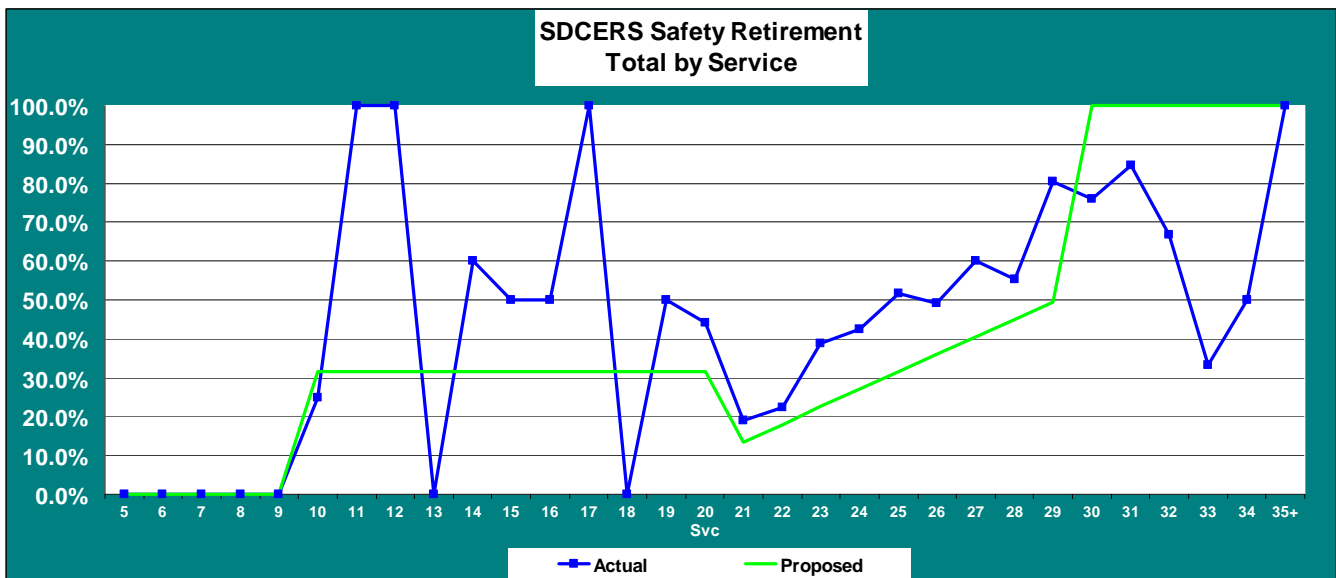
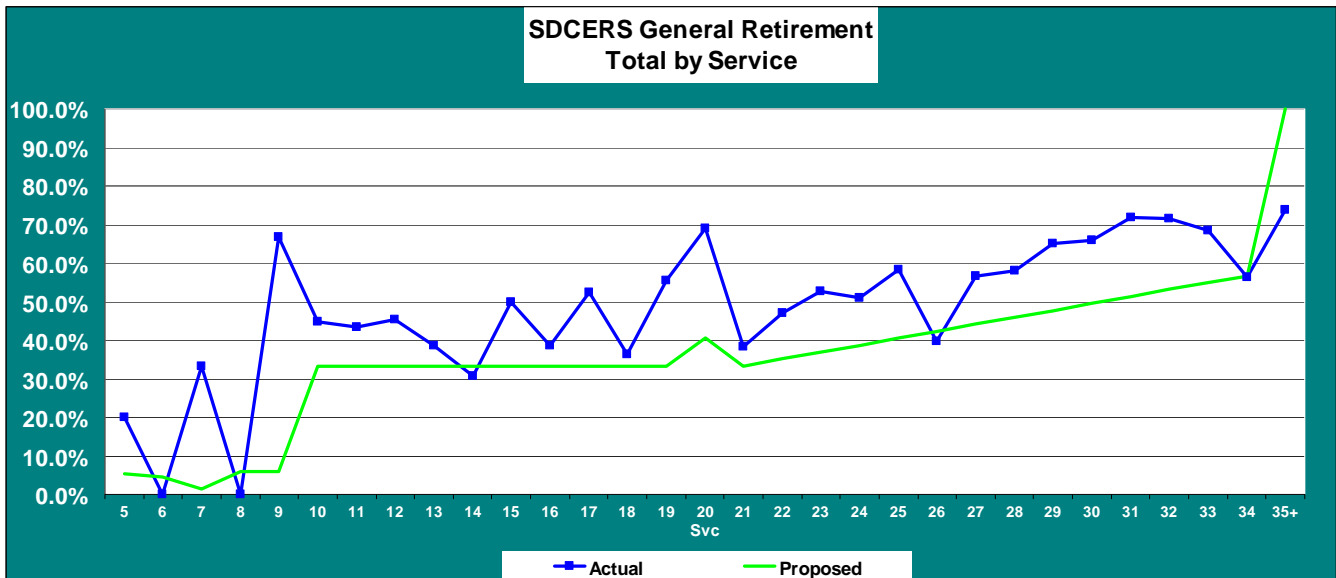
Table II – 3 Proposed Retirement Assumptions							
Service Range	<u>All General Employees</u>			Service Range	<u>All Safety Employees</u>		
	Actual	Proposed	Ratio		Actual	Proposed	Ratio
<10	7*	1	7.00*	--	--	--	--
10-19	94	71	1.32	<10	1*	0	N/A*
20	111	65	1.71	10-25	139	90	1.54
21-34	403	315	1.28	26-29	142	99	1.43
35+	90	122	0.74	30+	57	76	0.75
Totals	705	574	1.23	Totals	339	265	1.28

**The 7 General retirees and 1 Safety Retiree with less than 10 years of service have all attained age 70 or above.*

The next two graphs, based on service, compare the proposed assumptions to the System's actual experience during the study period for all retirees in both General and Safety. Because the current rates are based on age, we cannot show them in the graphs below. The recommended change to service based rates for both employee groups brings the proposed number of retirements much closer to the actual experience for the study period, as shown by the green line in the graphs below.

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section II Demographic Assumptions



2. Termination from Active Employment

A. Current Assumptions

All General and Safety Employees

Current termination assumptions for all General and Safety employees are service only based for all service less than five years. With five or more years of service and above the assumption is based on age only and declines to 0 at age 60. The current and proposed termination assumptions for all employee groups are presented in detail in Appendices B and C.

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Section II Demographic Assumptions

B. Experience

All General and Safety Employees

The results of the study of termination rates are summarized in Table II-4.

Service Range	<u>All General Employees</u>			<u>All Safety Employees</u>		
	Actual	Expected	Ratio	Actual	Expected	Ratio
0-1	167	57	2.93	52	7	7.43
1-2	138	42	3.29	25	6	4.17
2-3	143	50	2.86	14	5	2.80
3-4	152	54	2.81	25	7	3.57
4-5	123	25	4.92	26	4	6.50
5+	923	204	4.52	241	26	9.27
Totals	1,646	432	3.81	383	55	6.96

The actual termination experience by service only was significantly higher than the expected experience for both General and Safety employees.

C. Recommendations

All General and Safety Employees

Based on the experience shown above for all General and Safety members, we recommend increasing the termination rates for both groups of employees.

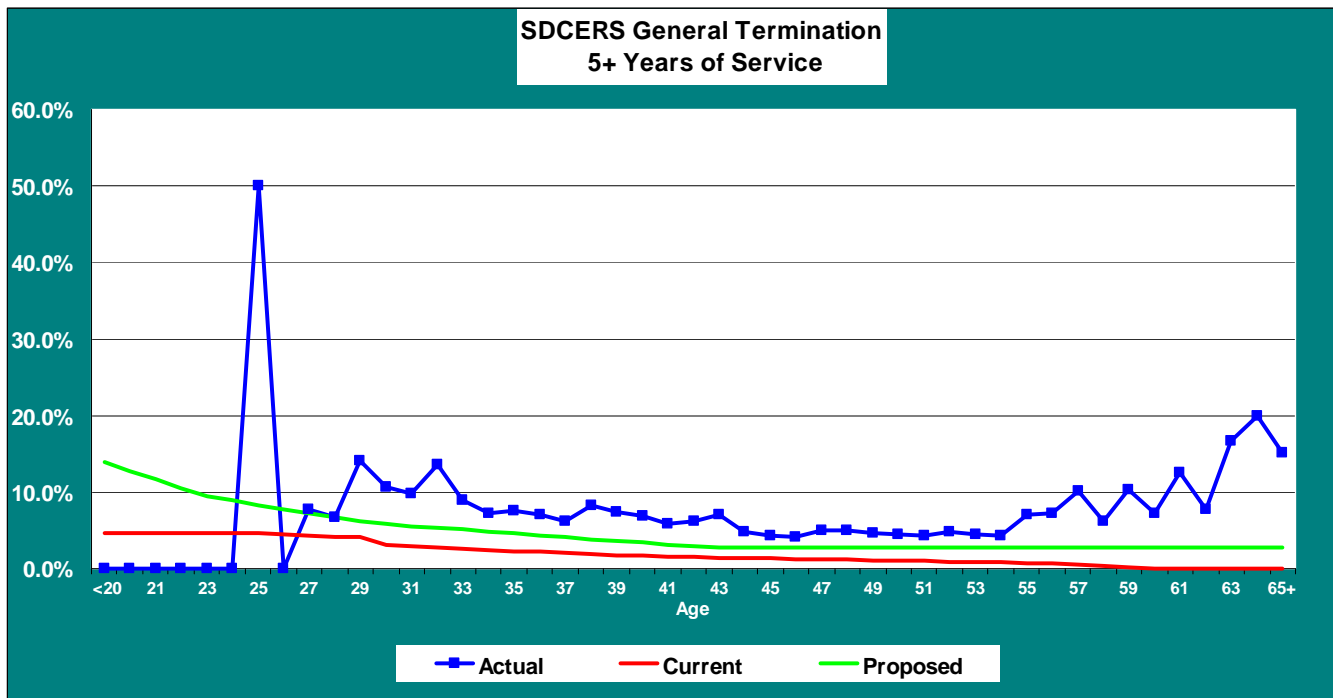
Table II-5 shows the proposed assumptions for both General and Safety employees over the study period. By increasing the termination rates, the assumptions will become more in line with the actual terminations.

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section II Demographic Assumptions

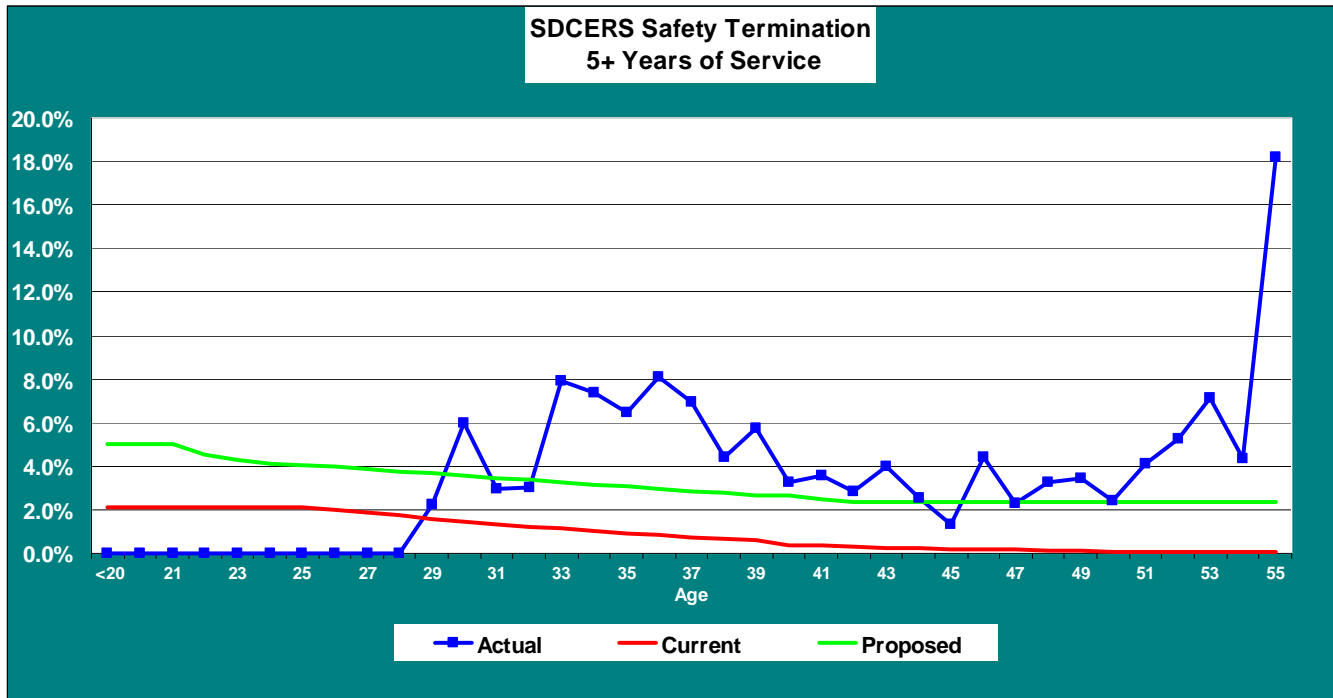
Service Range	<u>All General Employees</u>			<u>All Safety Employees</u>		
	Actual	Proposed	Ratio	Actual	Proposed	Ratio
0-1	167	100	1.67	52	28	1.86
1-2	138	83	1.66	25	21	1.19
2-3	143	86	1.66	14	14	1.00
3-4	152	79	1.92	25	17	1.47
4-5	123	64	1.92	26	15	1.73
5+	923	483	1.91	241	154	1.56
Totals	1,646	895	1.84	383	249	1.54

The graphs that follow show the detailed current and proposed assumptions compared to actual for all service 5 years and above for both General and Safety employees (all graphs below 5 years of service are shown in Appendix A). As shown in the graphs, the proposed termination rates for both employee groups (Green lines) are closer to actual experience than the current termination rates.



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Section II Demographic Assumptions



3. Disability

A. Current Assumptions

All General and Safety Employees

Current industrial disability assumptions for all General and Safety employees are based on age. The rates decline to 0 at age 65 for all General employees and at age 55 for all Safety employees. Non-industrial disability retirement is subject to a service requirement and the rates are based on age as well. 70% of the general disabilities and 85% of the safety disabilities are assumed to be industrial disability retirements. The current and proposed disability assumptions for all employee groups are presented in detail in Appendices B and C.

B. Experience

All General and Safety Employees

Table II-6 shows the total disabled employees for all Safety and General members. We show them in total because disability affects a relatively small number of employees. Table II-6 shows the current disability rates produce higher expected disabilities than SDCERS has experienced during the study period.

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section II Demographic Assumptions

Table II – 6						
Current Disability Assumptions						
	<u>All General Employees</u>			<u>All Safety Employees</u>		
	Actual	Expected	Ratio	Actual	Expected	Ratio
Total	33	84	0.39	19	77	0.25

Table II-7 shows the actual industrial disabilities compared to the expected industrial disabilities based on the actual disabilities over the study period. Table II-7 shows the current experience is lower than SDCERS' assumptions.

Table II – 7						
Current Industrial Disability Assumptions						
	<u>All General Employees</u>			<u>All Safety Employees</u>		
	Actual	Expected	Ratio	Actual	Expected	Ratio
Total	18	23	0.78	14	16	0.87

C. Recommendations

All General and Safety Employees

Table II-8 shows the total expected disabilities as a result of the proposed rates by age over the study period. Because the current disability assumptions are higher than SDCERS has experienced, we recommend reducing the disability assumptions for both General and Safety employees to be more in line with actual experience.

Table II – 8						
Proposed Disability Assumptions						
	<u>All General Employees</u>			<u>All Safety Employees</u>		
	Actual	Proposed	Ratio	Actual	Proposed	Ratio
Total	33	64	0.52	19	56	0.34

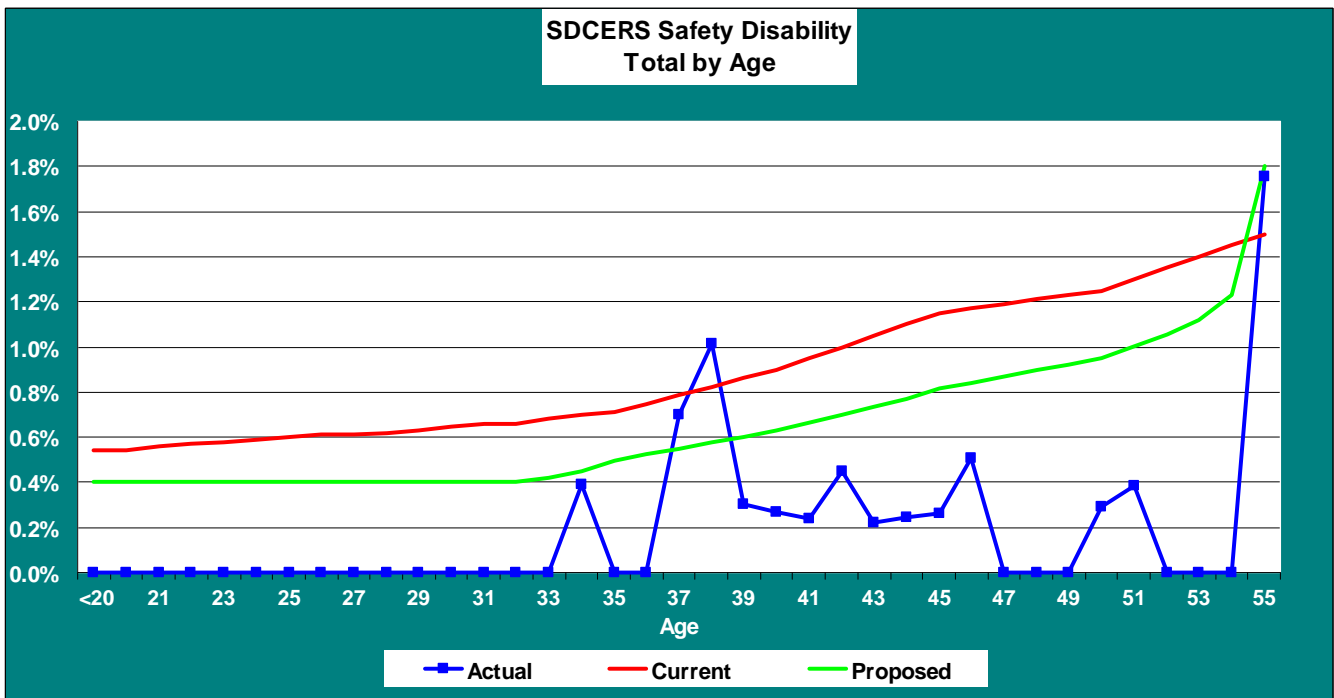
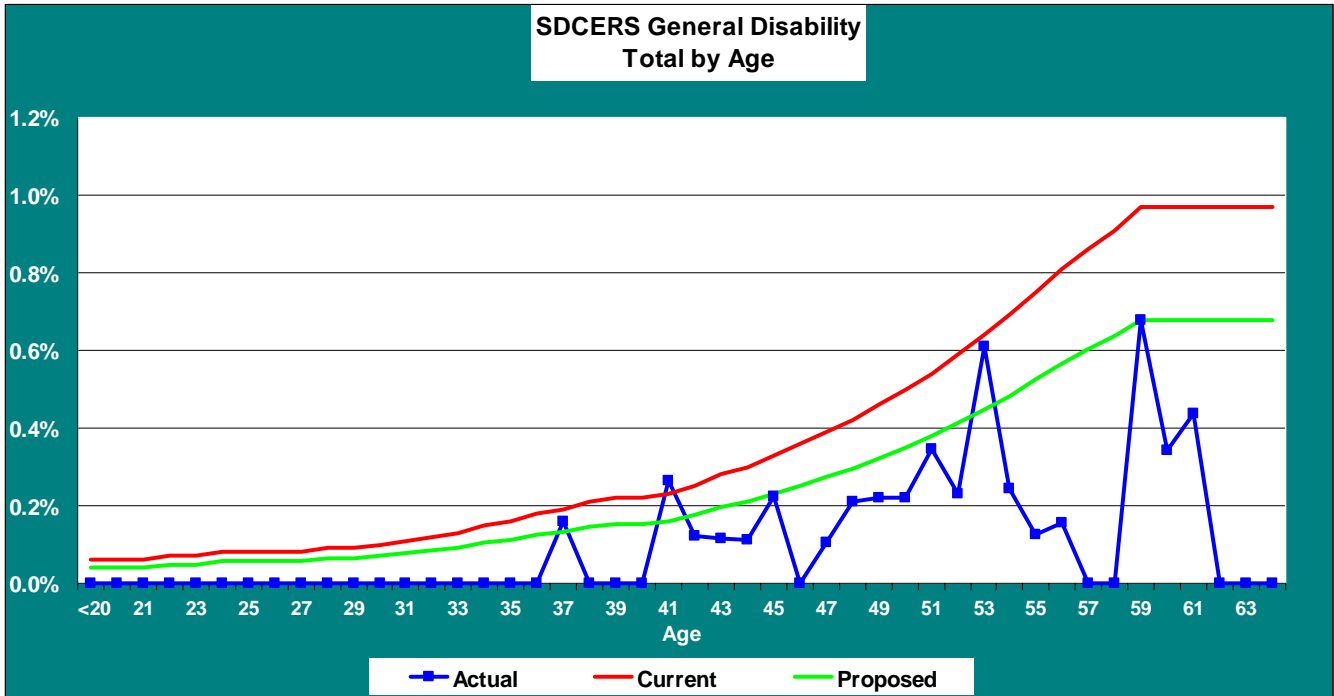
Because the current industrial disability assumptions produce higher expected industrial disabilities than SDCERS has experienced, we recommend reducing the industrial disability assumptions for both General and Safety employees to be more in line with actual experience. We recommend reducing the industrial disabilities to 60% of the general disabilities and 80% of the safety disabilities.

Table II – 9						
Proposed Industrial Disability Assumptions						
	<u>All General Employees</u>			<u>All Safety Employees</u>		
	Actual	Proposed	Ratio	Actual	Proposed	Ratio
Total	18	20	0.91	14	15	0.92

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Section II Demographic Assumptions

The graphs below show the proposed assumptions for both groups of employees are closer to actual experience.



SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section II Demographic Assumptions

4. Mortality

A. Current Assumptions

All General and Safety Employees Active Lives

Current mortality assumptions for all General employees use the Uninsured Pensioner 1994 (UP1994) table set back five years (male and female). “Set back five years” means that if a member is currently age 50 the actuary uses the age 45 mortality rate. The current assumption for all Safety employees follows the Male UP 1994 table set back five years. The current and proposed mortality assumptions for all employee groups are presented in detail in Appendices B and C.

All General and Safety Retired Healthy Lives

Current mortality assumptions for all healthy retired members use the Uninsured Pensioner 1994 (UP1994) table set back two years (male and female). The current and proposed mortality assumptions for all employee groups are presented in detail in Appendices B and C.

All General and Safety Retired Disabled Lives

Current mortality assumptions for all disabled General members use Uninsured Pensioner 1994 (UP1994) male only table set forward five years. Disabled Safety members use Uninsured Pensioner 1994 (UP1994) male only table set forward two years. The current and proposed mortality assumptions for all employee groups are presented in detail in Appendices B and C.

B. Experience

All General and Safety Employees Active Lives

Deaths among actives lives are typically too small a group to obtain meaningful statistics on pre-retirement mortality in a three year period. Table II-10 shows the actual to expected deaths over the study period.

Table II – 10						
Current Mortality Assumptions by Age (Actives)						
Age Range	<u>General Employees</u>			<u>Safety Employees</u>		
	Actual	Expected	Ratio	Actual	Expected	Ratio
Totals	16	29	0.57	3	9	0.33

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section II Demographic Assumptions

All General and Safety Retired Healthy Lives

Mortality for retirees and beneficiaries gives us a larger group to analyze actual versus expected experience. Table II-11, split by Male and Females, shows actual and expected experience among General members for both retirees and beneficiaries.

Age Range	<u>General Male Employees</u>			<u>General Female Employees</u>		
	Actual	Expected	Ratio	Actual	Expected	Ratio
<60	2	5	0.40	3	2	1.50
60-69	28	23	1.22	14	9	1.56
70-79	46	51	0.90	31	22	1.41
80-89	113	75	1.51	98	65	1.51
90-99	36	26	1.38	45	33	1.36
100+	0	0	0.00	0	2	0.00
Totals	225	180	1.25	191	133	1.44

The actual mortality among retirees and beneficiaries (male and female) for General members is higher than expected by the UP1994 table with a five-year setback. Table II-12 shows similar results for retirees and beneficiaries for Safety members.

Age Range	<u>Safety Male Employees</u>			<u>Safety Female Employees</u>		
	Actual	Expected	Ratio	Actual	Expected	Ratio
<60	4	7	0.57	5	1	5.00
60-69	10	13	0.77	3	2	1.50
70-79	16	14	1.14	4	5	0.80
80-89	44	21	2.10	28	17	1.65
90-99	15	8	1.88	15	9	1.67
100+	0	0	0.00	0	0	0.00
Totals	89	63	1.41	55	34	1.62

The actual mortality among retirees and beneficiaries (male and female) for Safety members is also higher than expected by the Male UP1994 table with a five-year setback.

All General and Safety Retired Disabled Lives

Mortality for disabled lives gives us a large enough group to analyze actual versus expected experience. Table II-13, split by General and Safety, shows actual and expected experience among the disabled lives.

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section II Demographic Assumptions

Table II – 13						
Current Mortality Assumptions by Age (Disabled)						
Age Range	<u>General Employees</u>			<u>Safety Employees</u>		
	Actual	Expected	Ratio	Actual	Expected	Ratio
<60	6	5	1.20	2	5	0.40
60-69	6	8	0.75	7	15	0.47
70-79	15	15	1.00	13	19	0.68
80-89	13	16	0.81	13	13	1.00
90-99	3	3	1.00	3	3	1.00
100+	0	0	0.00	0	0	0.00
Totals	43	46	0.93	38	55	0.69

The actual mortality among disabled lives (male and female) for both General and Safety members was lower than expected.

C. Recommendations

All General and Safety Employees Active Lives

As stated above, our active mortality measurement is too small statistically to draw a meaningful conclusion. However, to be consistent with our recommendation on retired lives, which follows, we recommend changing the active mortality to the Society of Actuaries recently published RP2000 table projected with the AA scale to 2008. The proposed experience for all General and Safety active employees is shown in Table II-14.

Table II – 14						
Proposed Mortality Assumptions by Age (Actives)						
Age Range	<u>General Employees</u>			<u>Safety Employees</u>		
	Actual	Proposed	Ratio	Actual	Proposed	Ratio
Totals	16	35	0.46	3	11	0.27

All General and Safety Retired Healthy Lives

Because the current mortality assumptions are lower than actual experience, we recommend replacing the UP1994 mortality table with the more recent RP2000 table. We recommend that the assumption for all General healthy retirees use the RP2000 Healthy Combined table, for both male and females. Table II-15 shows actual and proposed experience for all General healthy retirees and beneficiaries.

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section II Demographic Assumptions

Table II – 15						
Proposed Mortality Assumptions by Age (Retirees and Beneficiaries)						
Age Range	<u>General Male Employees</u>			<u>General Female Employees</u>		
	Actual	Proposed	Ratio	Actual	Proposed	Ratio
<60	2	5	0.40	3	3	1.00
60-69	28	23	1.22	14	12	1.17
70-79	46	57	0.81	31	30	1.03
80-89	113	95	1.19	98	86	1.14
90-99	36	36	1.00	45	42	1.07
100+	0	0	0.00	0	1	0.00
Totals	225	216	1.04	191	174	1.10

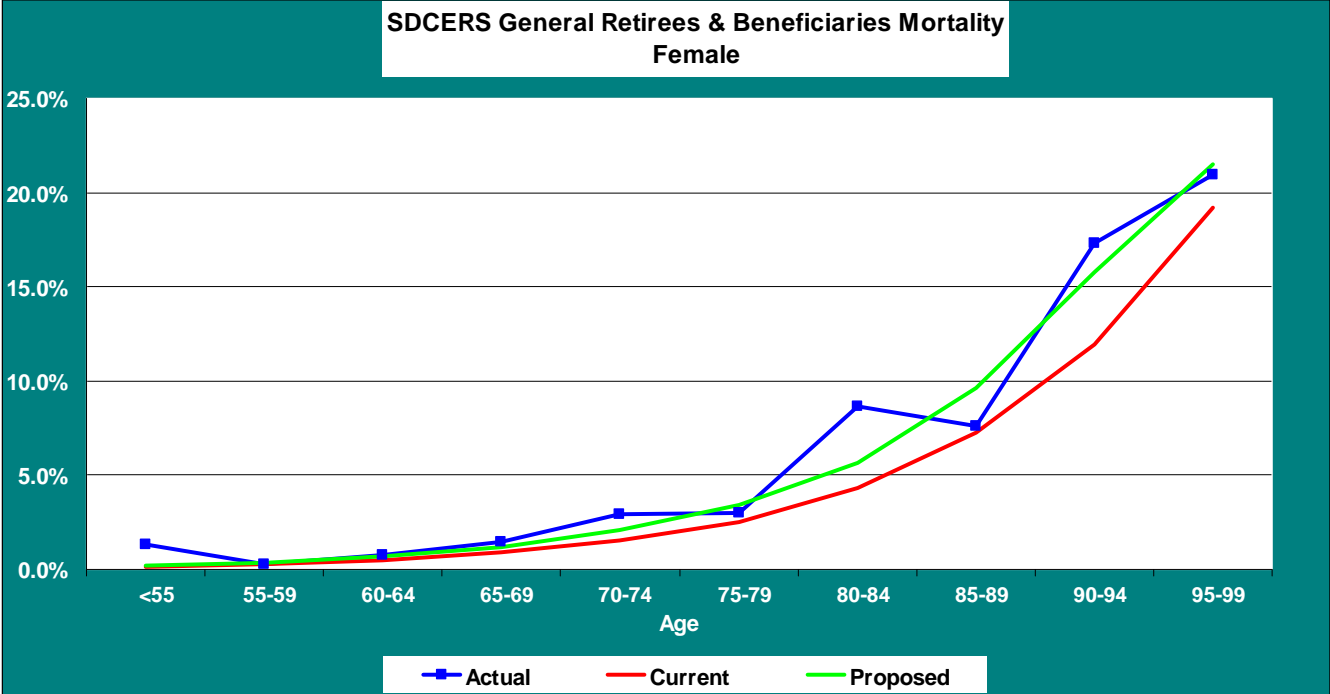
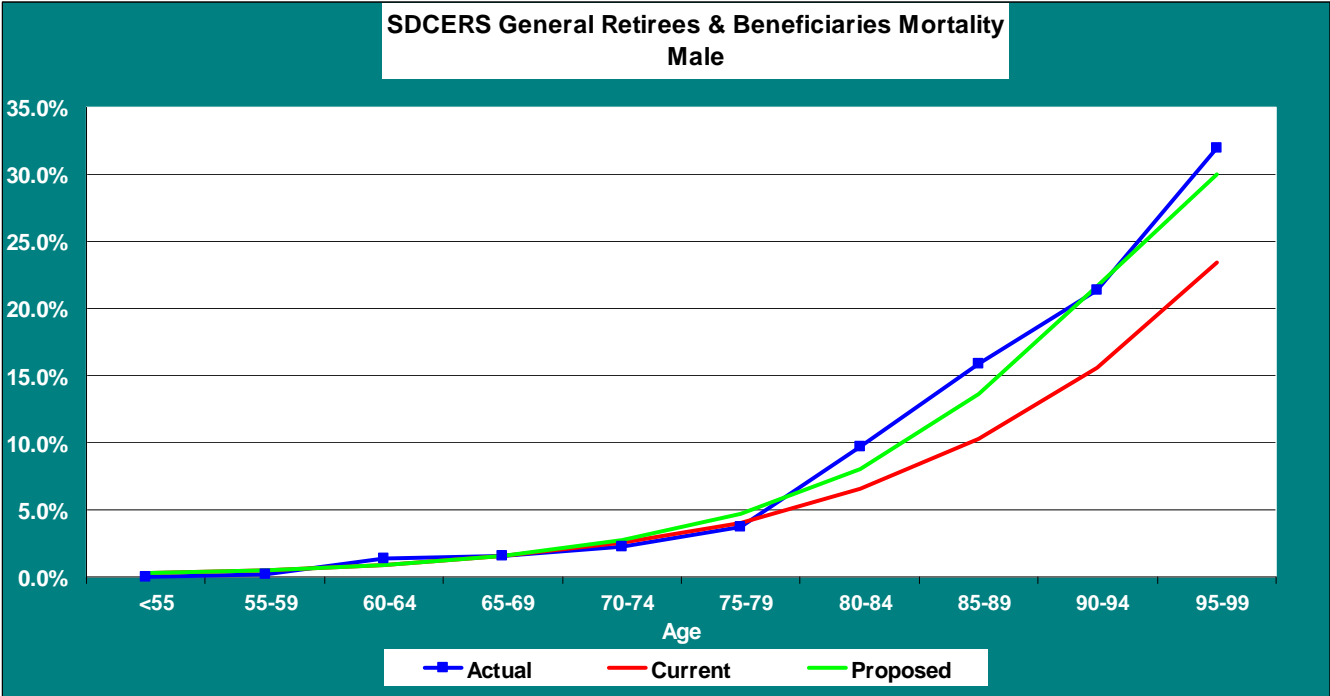
We recommend the RP2000 Healthy table (Male only) set forward two years for all Safety healthy retirees and beneficiaries. Table II-16 shows actual and proposed experience for all Safety healthy retirees and beneficiaries over the study period.

Table II – 16						
Proposed Mortality Assumptions by Age (Retirees and Beneficiaries)						
Age Range	<u>Safety Male Employees</u>			<u>Safety Female Employees</u>		
	Actual	Proposed	Ratio	Actual	Proposed	Ratio
<60	4	8	0.50	5	1	5.00
60-69	10	17	0.59	3	3	1.00
70-79	16	19	0.84	4	8	0.50
80-89	44	33	1.33	28	28	1.00
90-99	15	12	1.25	15	13	1.15
100+	0	0	0.00	0	0	0.00
Totals	89	89	1.00	55	53	1.04

Overall, the change to the RP2000 tables for both Safety and General employees shows a more reasonable reflection of actual experience. Below are the graphs for General and Safety members (male and female) that show how the proposed RP2000 tables are more in line with actual experience.

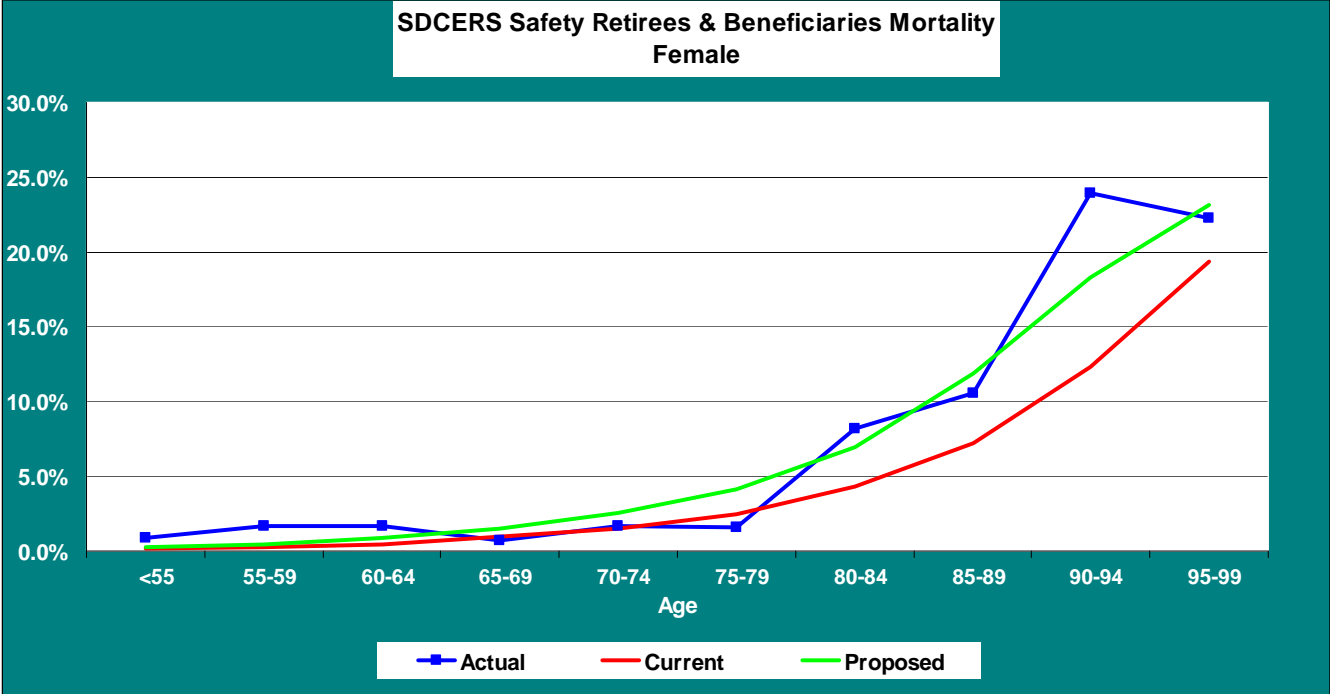
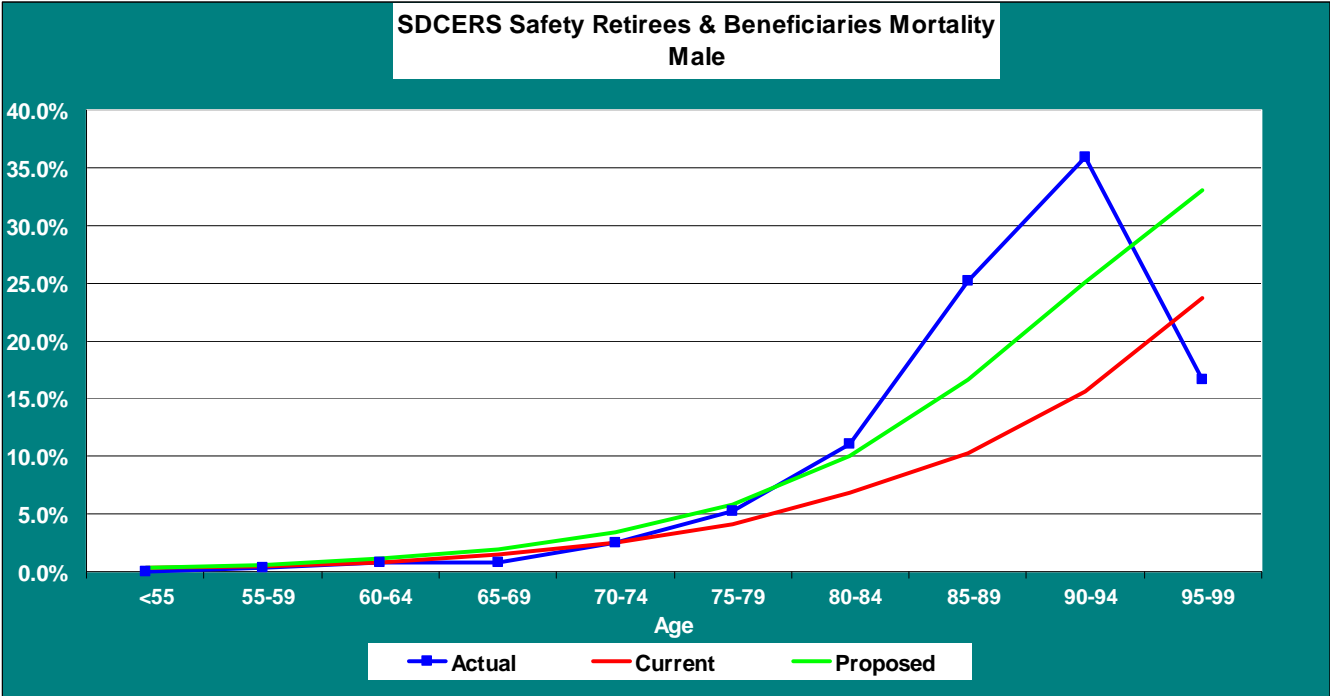
SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section II Demographic Assumptions



SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section II Demographic Assumptions

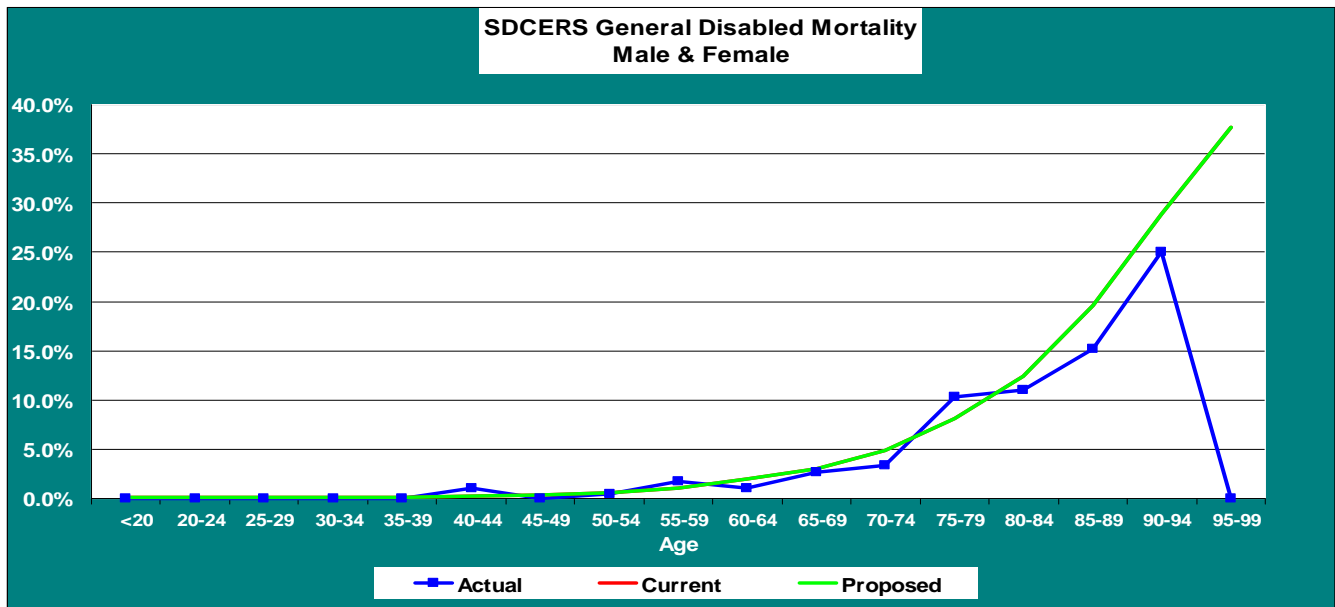


SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

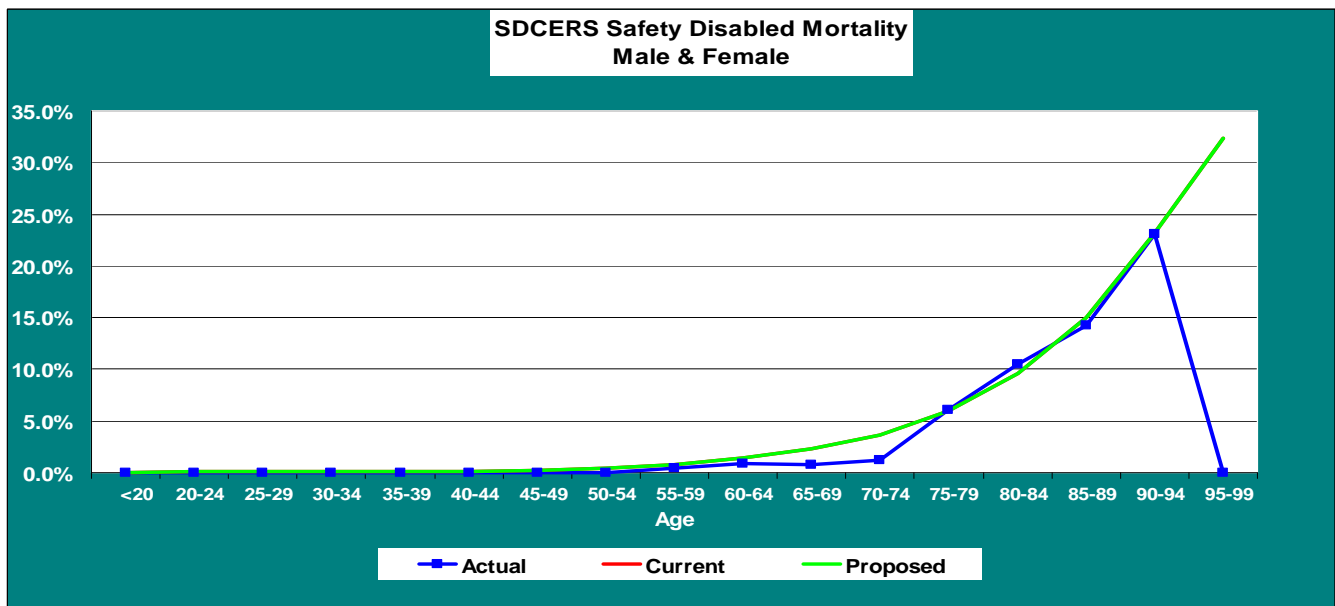
Section II Demographic Assumptions

All General and Safety Retired Disabled Lives

Since the disabled mortality experience was close to expected, we recommend no change to the current disabled mortality tables (UP1994 male only, set forward five years for General employees and set forward two years for Safety employees). The two graphs below show the disabled mortality for General and Safety (males and females). The current and proposed lines in the graphs are the same since we recommend no change.



Current and proposed assumptions are the same since no change is recommended



Current and proposed assumptions are the same since no change is recommended

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section II Demographic Assumptions

5. Miscellaneous

- **Reciprocity**

- A. Current Assumptions

All General and Safety Employees

The current reciprocity assumption is that 20% of all terminated employees with 10 or more years of service are assumed to subsequently work for a reciprocal employer. As a result, in performing our annual valuations, we increase the vested benefit for terminated employees by assuming continued increases in future pay.

- B. Experience

All General and Safety Employees

Reciprocity data could be studied in two ways; first by examining active members who are currently eligible for reciprocity; and second by examining members who have retired from deferred vested status to see if their benefit increased due to reciprocity. Data was available on the active members eligible for reciprocity but it was not material enough to reach any valid conclusions. Data was not available on retirees whose benefit might have increased due to reciprocity.

- C. Recommendations

We recommend no change to the current 20% reciprocity assumption.

- **Joint and Survivor Election Percentage and Spouse Age Difference**

- A. Current Assumptions

All General and Safety Employees

For all General and Safety employees, 80% of males and 50% of females are assumed to elect the joint and survivor option. In addition, female spouses are assumed to be four years younger than male spouses.

- B. Experience

All General and Safety Employees

In order to analyze the percent married assumption, we looked at the total number of retirees who elected a joint and survivor benefit compared to total retirees for all General and Safety members for the study period.

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section II Demographic Assumptions

For males, the average percent of retirees electing a joint and survivor benefit was 78% for General and 85% for Safety members. For females, the average percentages for General and Safety members were 51% and 54%, respectively.

We also looked at current retirees who elected a Joint and Survivor benefit to analyze the four year age difference between all General and Safety employees and their spouses. We split this analysis into male and female employees. The average age difference for male employees was 3.5 years older than their spouses, and the average age difference for female employees was 1.0 year younger than their spouses. Overall this produced a total age difference of males being 2.7 years older than their spouses.

C. Recommendations

All General and Safety Employees

We recommend no change to the joint and survivor election percentage nor the spouse age difference.

- **Purchased Service Rates**

A. Current Assumptions

All Employees

The Purchase of Service Credit program (PSC) allows eligible members to purchase additional service credit for periods of time when the member did not contribute to SDCERS. Because retirement benefits are based in part on years of service credit, a PSC may increase the benefit. All PSC contracts must be paid in full prior to retirement, termination or entering into DROP.

PSC types related to employment

Service credit may be purchased for a variety of time periods during which an employee was not making contributions to SDCERS, including:

- Military Leave
- Long-Term Disability Leave
- Family and Medical Leave (FMLA) periods
- Special leaves of absence without pay, with the member's job to be saved
- Any period before reinstatement by the Civil Service Commission

PSC of previously refunded contributions

If a member terminated employment and received a refund of retirement contributions, that member may "redeposit" these contributions via a PSC if he/she becomes re-employed by the City of San Diego. By buying back refunded contributions including interest, a member re-establishes the service credit he/she had accumulated.

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section II Demographic Assumptions

Five-year additional PSC

Note: This option is only available to members hired before February 16, 2007 (currently under litigation).

Eligible members may purchase up to five years of additional service credit. The cost of the additional five years is a specific percentage of the member's annual salary for each year purchased.

Tables II-17 and II-18 show the current purchased service rates which are applied against a participant's salary at the time of purchase, for each year of service purchased.

Table II – 17	
City of San Diego Membership Group	Current Purchase Service Rates
General Members	27%
Safety Members	37%
Legislative Members	50%

Table II – 18	
UPD & APA Membership Group	Current Purchase Service Rates
General Members	32%
Safety Members	38%
Executive Members	34%

B. Experience

All Employees

Extensive analyses of purchased service rates were performed in 2007. The key findings of those analyses were that on an individual by individual basis, there were situations where some members overpaid and some members underpaid, but the overall current rates were sufficient.

C. Recommendations

All Employees

We have two recommendations for changing the cost of purchasing service credits in the future:

- 1) Base the cost of purchasing service for each member on the specific age and service of each member purchasing service credits.
- 2) Apply the newly recommended demographic and economic assumptions from this study in determining the cost of purchasing service.

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section III Economic Assumptions

We considered the following to be "economic" assumptions in our analysis:

1. Inflation
2. Investment Return
3. Salary Growth

Both the investment and salary growth assumptions are interrelated with the inflation rate. The rate of investment return consists of two components; the "real rate" of return and the inflation component. Similarly, the rate of salary growth is separated into different components: the inflation rate, a merit increase (seniority) and sometimes there is a component set aside for "productivity" gains.

In developing recommendations for these assumptions, several factors are considered:

- historical data in general (i.e. the markets)
- historical experience of the plan
- outlook for the future
- assumptions used by other public sector plans.

1. Inflation

A. Current Assumptions

All General and Safety Employees

An inflation assumption of 4.25% compounded annually is used for all General and Safety employees.

B. Experience

1. Historical Experience in General

Based on the Consumer Price Index for all Urban Consumers (U.S. City Average (CPI-U)), Table III-1 shows the inflation rates for the past 20 years:

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section III Economic Assumptions

Table III – 1	
U.S. City Average (CPI-U)	
Year Ending June 30	Increase in CPI-U
1988	4.0%
1989	5.2%
1990	4.7%
1991	4.7%
1992	3.1%
1993	3.0%
1994	2.5%
1995	3.0%
1996	2.8%
1997	2.3%
1998	1.7%
1999	2.0%
2000	3.7%
2001	3.2%
2002	1.1%
2003	2.1%
2004	3.3%
2005	2.5%
2006	4.3%
2007	2.7%
Compound Averages:	
1988-2007	3.1%
1998-2007	2.7%
2004-2007	3.2%

2. Historical Experience of the Plan

Often, the inflation experience of a pension plan could be measured by looking at annual cost of living increases (COLA) and annual “across the board” pay increases. For SDCERS, however, the COLA experience is of limited value because they are capped at 2%. With respect to across the board pay increases, Table III-2 shows the actual experience for SDCERS for the past 4 years.

Table III – 2							
Annual Across the Board Pay Increases							
Pay Increase Effective During Year	City of San Diego				Unified Port District		Airport Authority
	General & Elected	Fire	Lifeguard	Police	General & Executive	Safety	General & Executive
2007	4.0%	0.0%	4.0%	7.0%	3.0%	4.9%	4.5%
2006	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%	4.0%
2005	0.0%	0.0%	0.0%	0.0%	2.5%	4.5%	4.0%
2004	3.0%	2.0%	3.0%	3.0%	4.0%	4.0%	4.0%
Geometric Ave	1.73%	0.50%	1.73%	2.46%	3.12%	4.10%	4.12%

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section III Economic Assumptions

With the exception of UPD Safety and Airport Authority General and Executive members, all inflationary pay increases have been below the assumed rate of inflation of 4.25%.

3. Outlook for the Future

As shown earlier, historical inflation has been in the 2.5% – 3.5% range depending upon the starting period for the measurement. Most economic forecasters still predict that long term, the inflation rate will remain in that range, or at least lower than the current 4.25% assumption utilized by SDCERS. However, with the recent escalation of oil prices and the current recession, many experts contend that we are about to experience a period of increasing inflation. One measure of expected inflation rates is the difference in yield between conventional treasury bonds and treasury index linked securities (TIPS) at the same maturity. Table III-3 shows the yields on both types of bonds and the implied inflation expectation as of June 20, 2008.

Time to Maturity	Conventional Yield	TIPS Yield	Implied Inflation
5 years	3.64%	1.08%	2.56%
10 years	4.20%	1.73%	2.47%
20 years	4.81%	2.24%	2.57%

Data Source Federal Reserve, Constant Maturity Yields, Weekly Series

4. Other Public Sector Plans

Based on the 2006 survey conducted by the National Association of State Retirement Administrators, large public sector retirement systems are using on average an inflation assumption of 3.5%.

C. Recommendations

Based on the above factors there is justification for lowering SDCERS' inflation rate anywhere from 25 to 75 basis points, (i.e. from 4.25% to 4.00% or 3.50%). However, given the fact that we may be facing a rise in inflation, and that another experience study will be performed within five years, we recommend an inflation rate of 4.0%.

2. Rate of Investment Return

A. Current Assumptions

All General and Safety Employees

SDCERS' assets are assumed to earn 8% net of expenses.

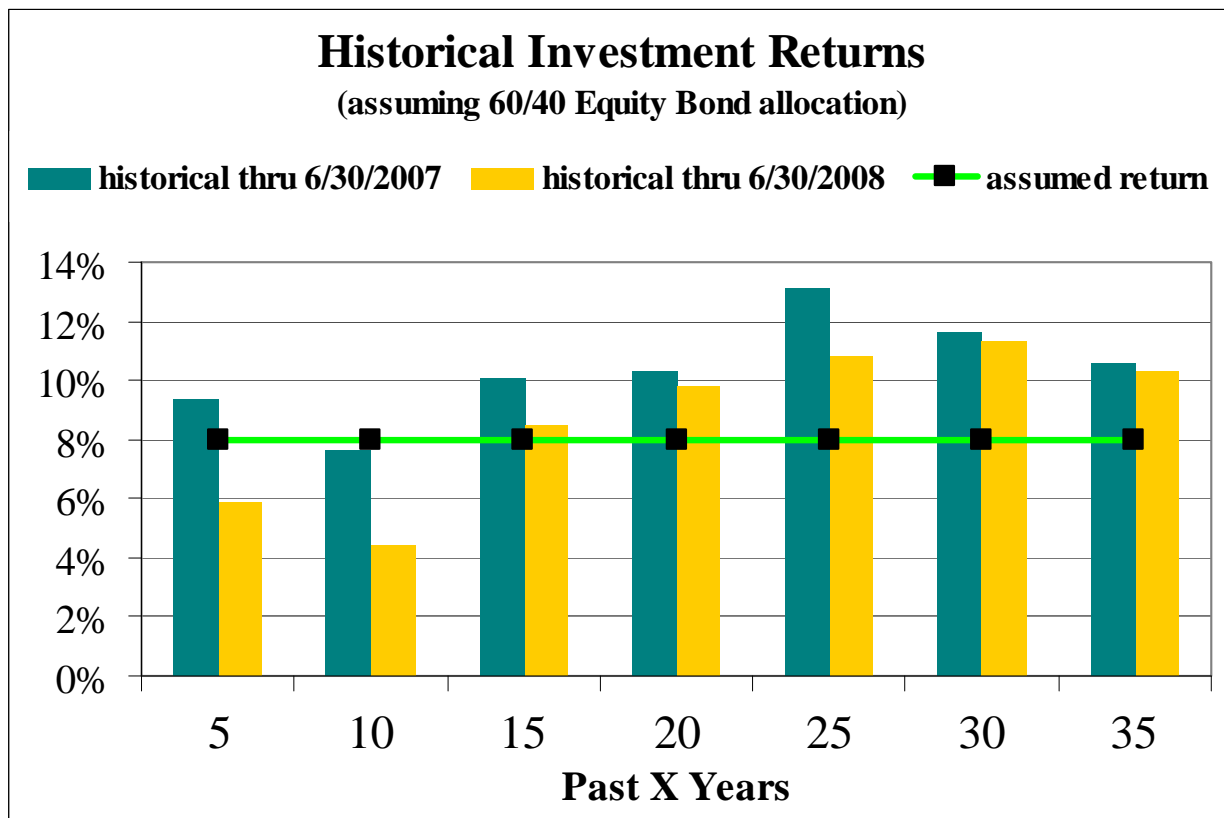
SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section III Economic Assumptions

B. Experience

1. Historical Experience in General

The next chart presents historical investment returns over the past 5, 10, 15, 20, 25, 30, and 35 years through June 30, 2007, and then through June 30, 2008. In each case the historical market returns are measured at 60% of the Standard and Poor's 500 Equity returns and 40% of the Lehman Aggregate Bond Index¹.



If measuring through June 30, 2007, except for the past ten-year period the chart shows that all other historical periods produced returns in excess of the assumed 8.0% used by SDCERS. However, by just changing the measured ending period to be through June 30, 2008, both the last five-year and ten-year indices' experience is below the assumed 8.0%.

2. Historical Experience of the Plan

Table III-4 provides the rates of investment returns experienced by the System during the last 10 fiscal years. Rates of return were computed as the ratio of the net investment earnings to market value of asset.

¹ Prior to 1976 (the index inception date) the bond index is based on long term corporate bonds

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section III Economic Assumptions

Current Assumption: 8.0% per annum

Year Ending June 30,	Return
1998	14.64%
1999	9.59%
2000	15.18%
2001	-0.75%
2002	-2.40%
2003	5.44%
2004	20.21%
2005	10.80%
2006	12.73%
2007	16.50%
Last 10 Years	10.19%
Last 5 Years	13.14%

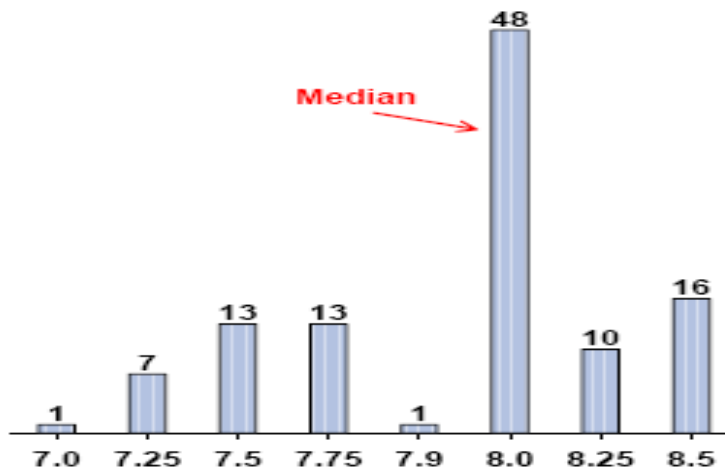
The investment returns on a 5 and 10 year basis have surpassed the current assumption.

3. Outlook for the Future

SDCERS' investment consultant, Callan Associates, recently conducted a study of SDCERS' Asset Allocation Analysis for 2008. Based on the current portfolio mix, they expect a future return of 7.6%, but after implementing some changes to the allocation the expectation grows to 7.8%.

4. Other Public Sector Plans

The findings from the Public Fund Survey for FY2006 performed by the National Association of State Retirement Administrators (NASRA), as shown in the graph below, shows that the median investment return used by public sector plans is 8.0%.



SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section III Economic Assumptions

Finally, since the NASRA study was completed, there has been a downward trend in the investment assumption used by many large public sector plans.

C. Recommendations

All General and Safety Employees

Based on historical returns, both in the general markets and actual for SDCERS, as well as other plans' assumptions, SDCERS' current 8% assumption is justified. Nevertheless, the future expectation for SDCERS is less than 8.0%, and there is a national trend of other large public sector plans to lower their investment assumption. As a result of those factors, we recommend a lower return assumption of 7.75%.

3. Rate of Salary Growth

A. Current Assumptions

All General and Safety Employees

The current salary assumption for all General and Safety employees is the combination of an inflation assumption of 4.25%, with an additional merit component based on years of service. The additional merit component for General and Safety members is shown in Appendix B.

B. Experience

All General and Safety Employees

Under item one of this section we presented the historical experience for the inflation component of salary increases. Tables III-5 shows the merit only portion and Table III-6 shows combined merit and inflation salary growth rate experienced by the System during the study period.

Table III – 5						
Current Salary Assumption - Merit Only						
Years of Service Range	<u>All General Employees</u>			<u>All Safety Employees</u>		
	Actual	Expected	Ratio	Actual	Expected	Ratio
0	8.83%	4.80%	1.84	14.12%	7.67%	1.84
1	6.55%	3.84%	1.71	12.13%	6.71%	1.81
2	5.21%	2.88%	1.81	7.41%	5.76%	1.29
3	3.78%	1.92%	1.97	5.20%	3.36%	1.55
4	3.00%	0.96%	3.13	3.60%	1.92%	1.88
5+	2.52%	0.48%	5.25	2.56%	0.48%	5.33

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Section III Economic Assumptions

Table III – 6						
Current Salary Assumption – Merit and Inflation						
Years of Service Range	<u>All General Employees</u>			<u>All Safety Employees</u>		
	Actual	Expected	Ratio	Actual	Expected	Ratio
0	11.08%	9.25%	1.20	16.63%	12.25%	1.36
1	8.39%	8.25%	1.02	14.56%	11.25%	1.29
2	6.46%	7.25%	0.89	8.83%	10.25%	0.86
3	5.13%	6.25%	0.82	6.38%	7.75%	0.82
4	4.64%	5.25%	0.88	5.14%	6.25%	0.82
5+	3.96%	4.75%	0.83	4.17%	4.75%	0.88

C. Recommendations

All General and Safety Employees

Merit increases for all categories of membership have been significantly greater than the expected merit increase assumption used in the valuation. However, the reverse happened with the inflation component, and even our recommended lowering of the inflation assumption to 4.0% was significantly greater than the measured experience. In addition to these measured statistics on pay increases, one needs to factor in the City's financial position. For this latter reason, as well as the fact that the inflationary component of pay increases is still high, we recommend no change to the merit increase assumption. But this assumption is one we will monitor annually, and should emerging experience indicate a need for a change, we will be prompt in bringing this to the attention of the Board.

Based on our recommendation for lowering inflation to 4.0% and no change to the merit assumption, the total proposed salary assumption rates for all General and Safety employees are shown in Table III-7.

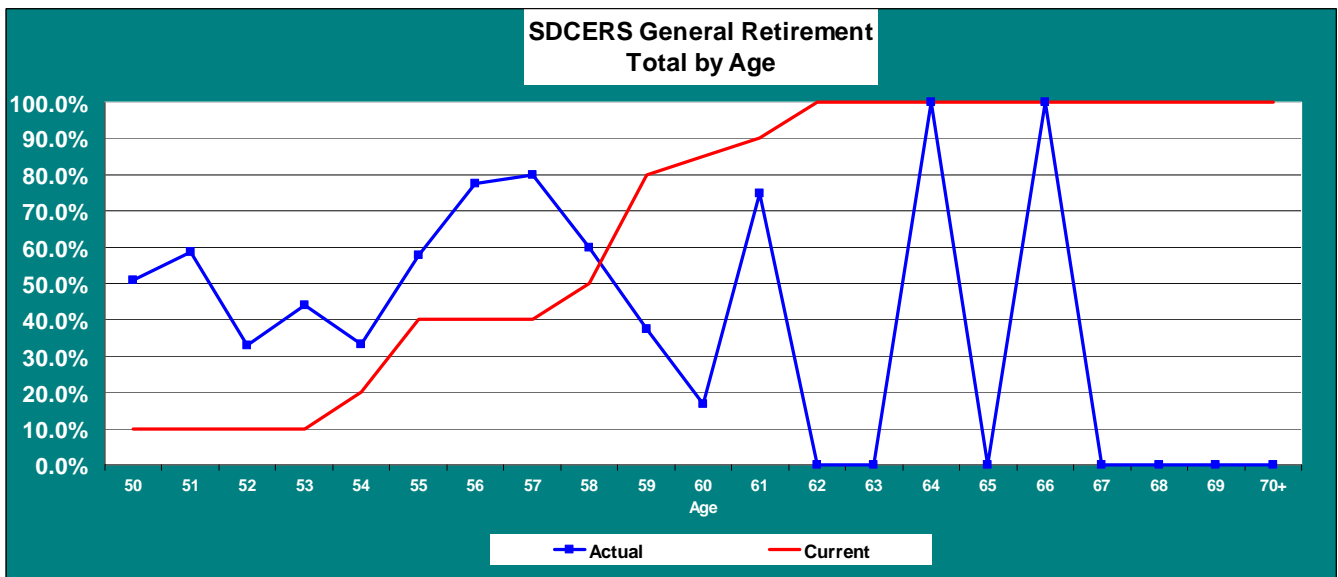
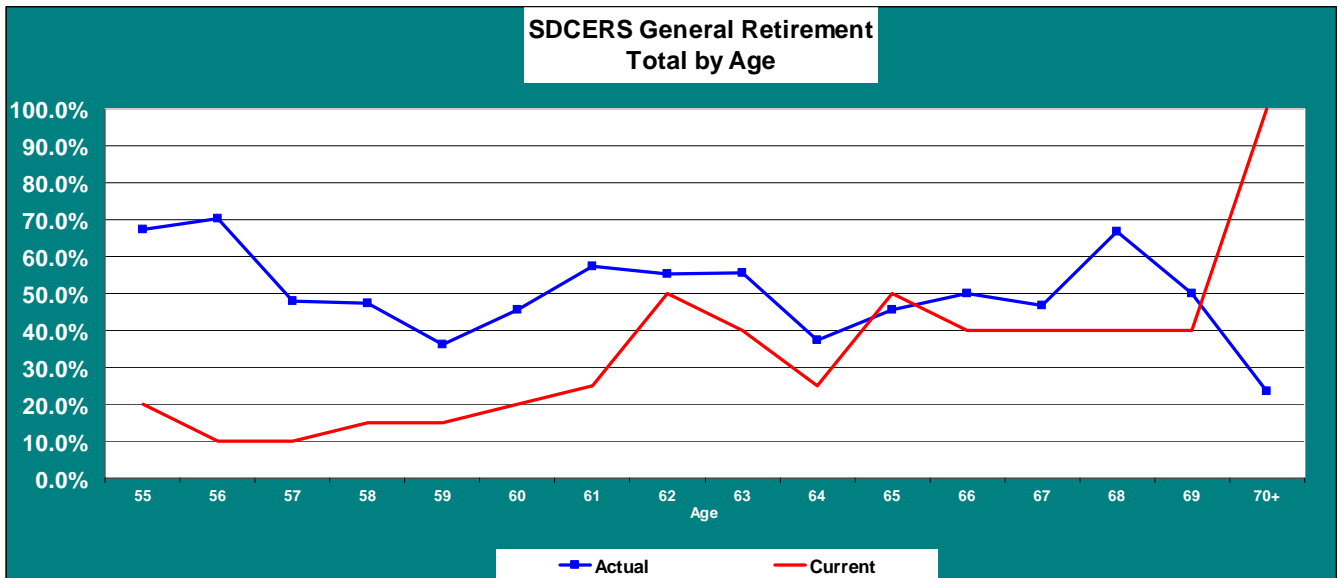
Table III – 7						
Proposed Salary Assumption – Merit and Inflation						
Years of Service Range	<u>All General Employees</u>			<u>All Safety Employees</u>		
	Actual	Proposed	Ratio	Actual	Proposed	Ratio
0	11.08%	9.00%	1.23	16.63%	12.00%	1.39
1	8.39%	8.00%	1.05	14.56%	11.00%	1.32
2	6.46%	7.00%	0.92	8.83%	10.00%	0.88
3	5.13%	6.00%	0.86	6.38%	7.50%	0.85
4	4.64%	5.00%	0.93	5.14%	6.00%	0.86
5+	3.96%	4.50%	0.88	4.17%	4.50%	0.93

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix A Graphs of Demographic Assumptions

We provide reproductions of the graphs provided in the body of the report in a larger format for ease of viewing in this Appendix A.

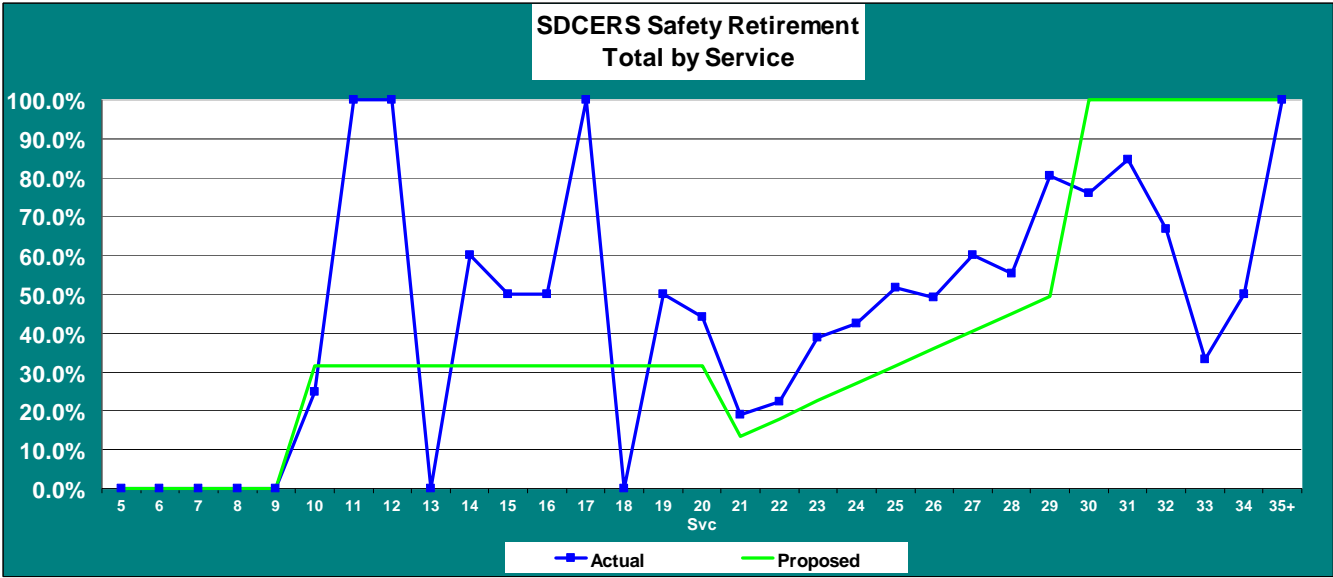
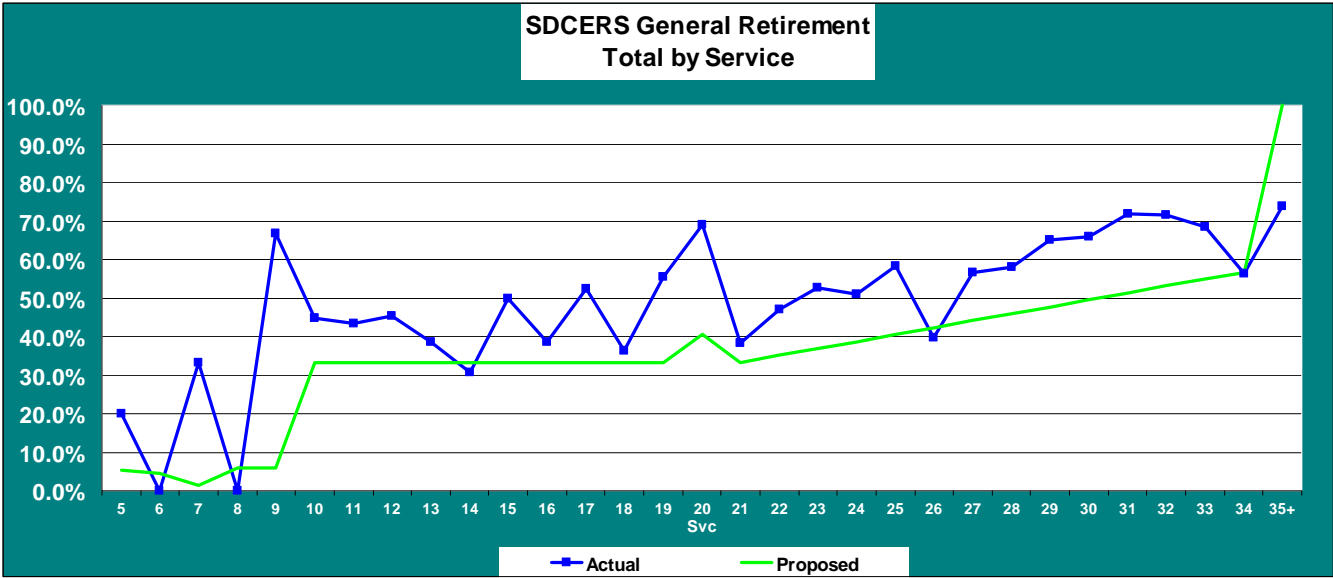
1. Retirement Graphs (Current/Proposed)



SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix A Graphs of Demographic Assumptions

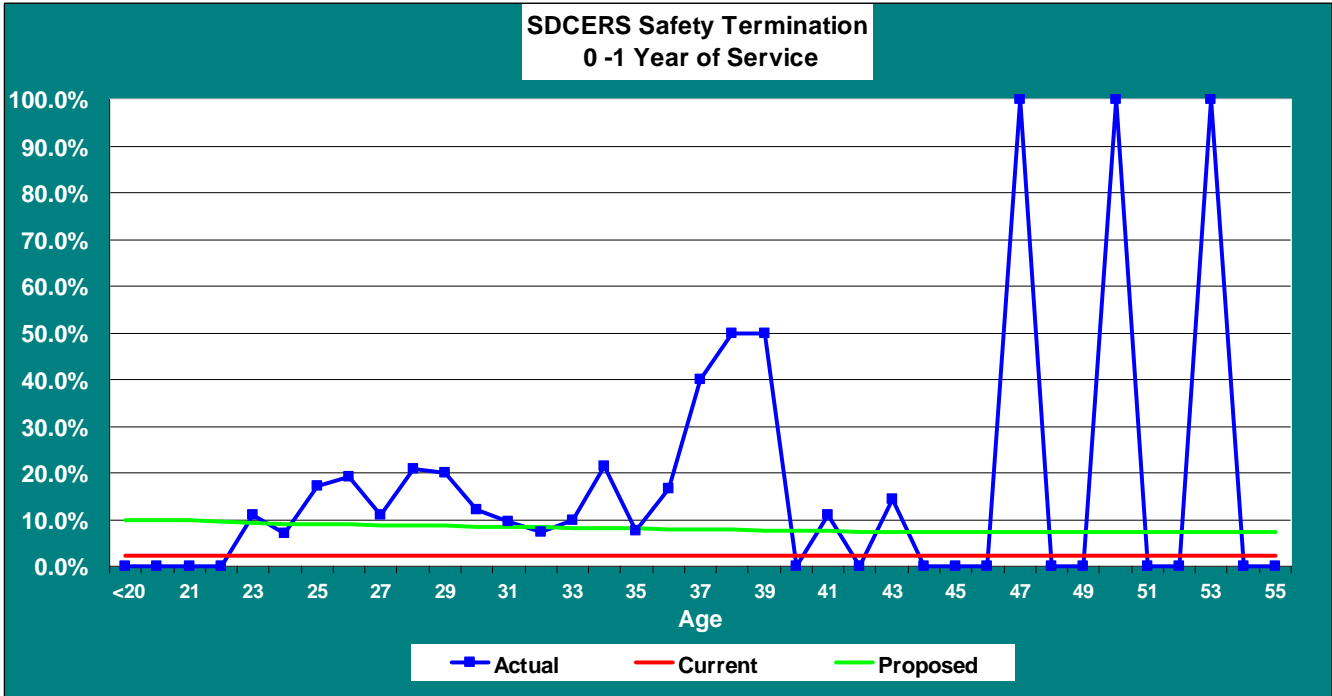
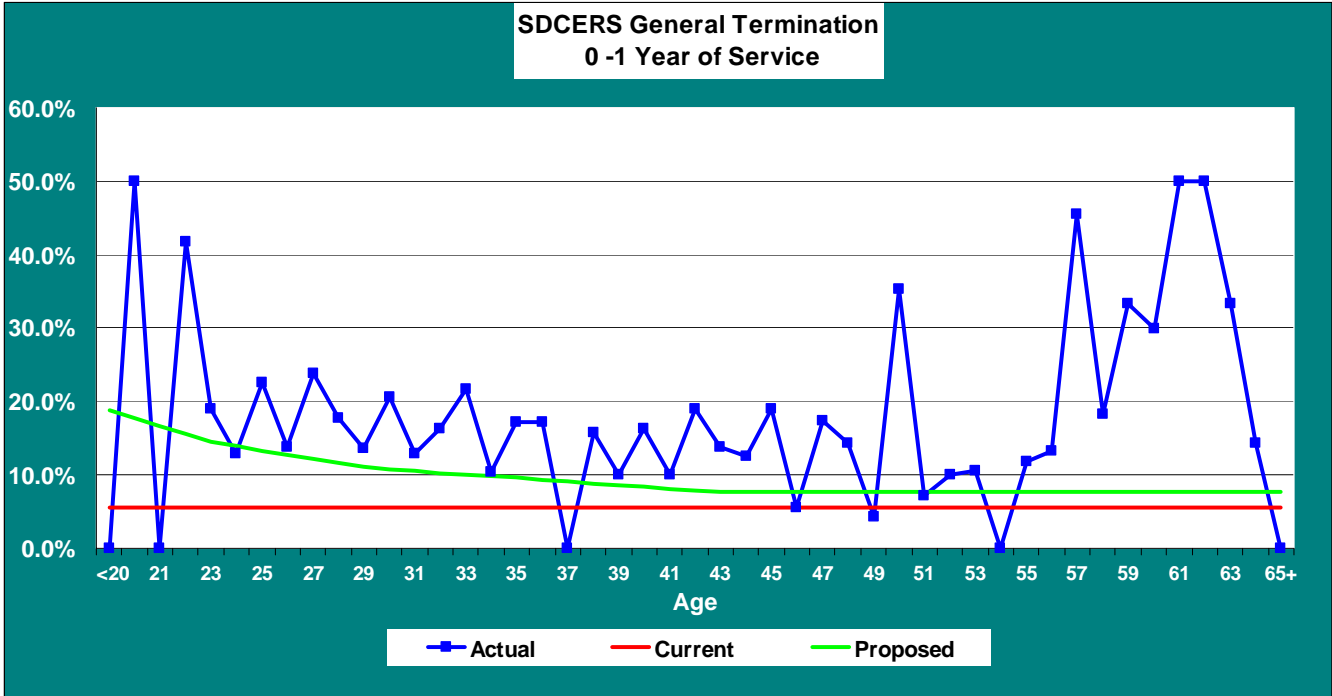
Retirement Graphs (Current/Proposed) continued



SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix A Graphs of Demographic Assumptions

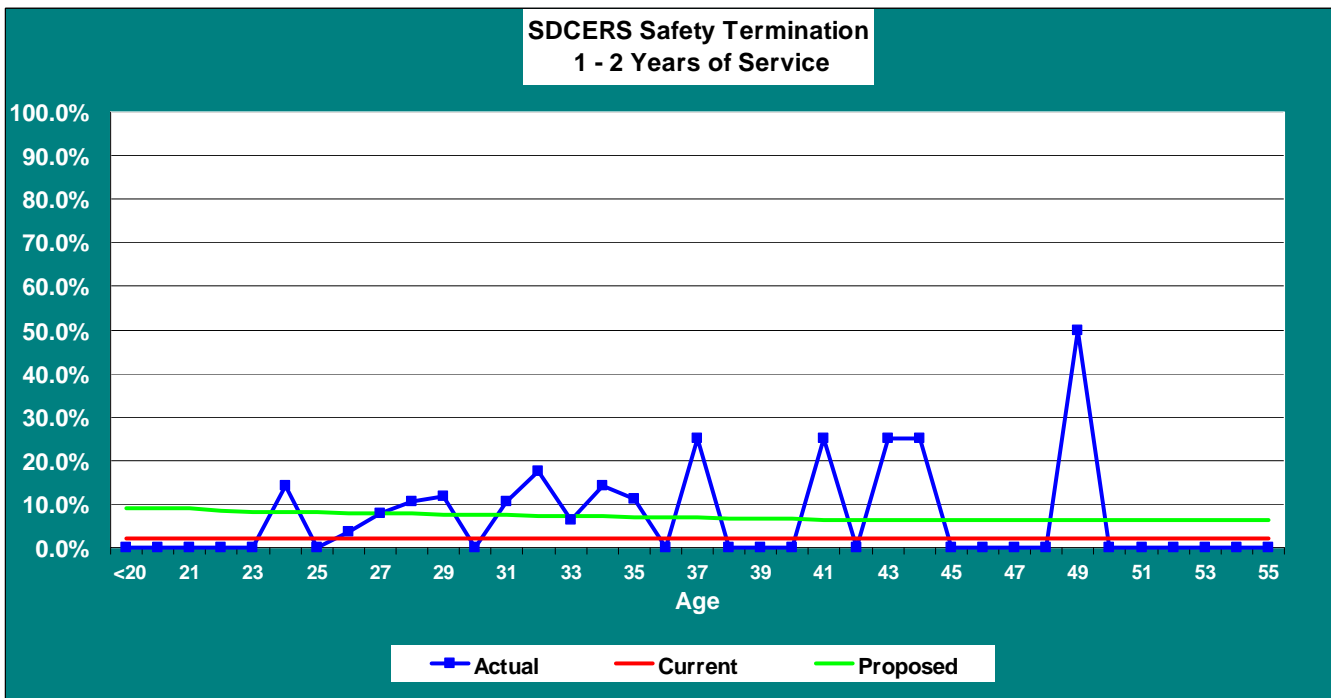
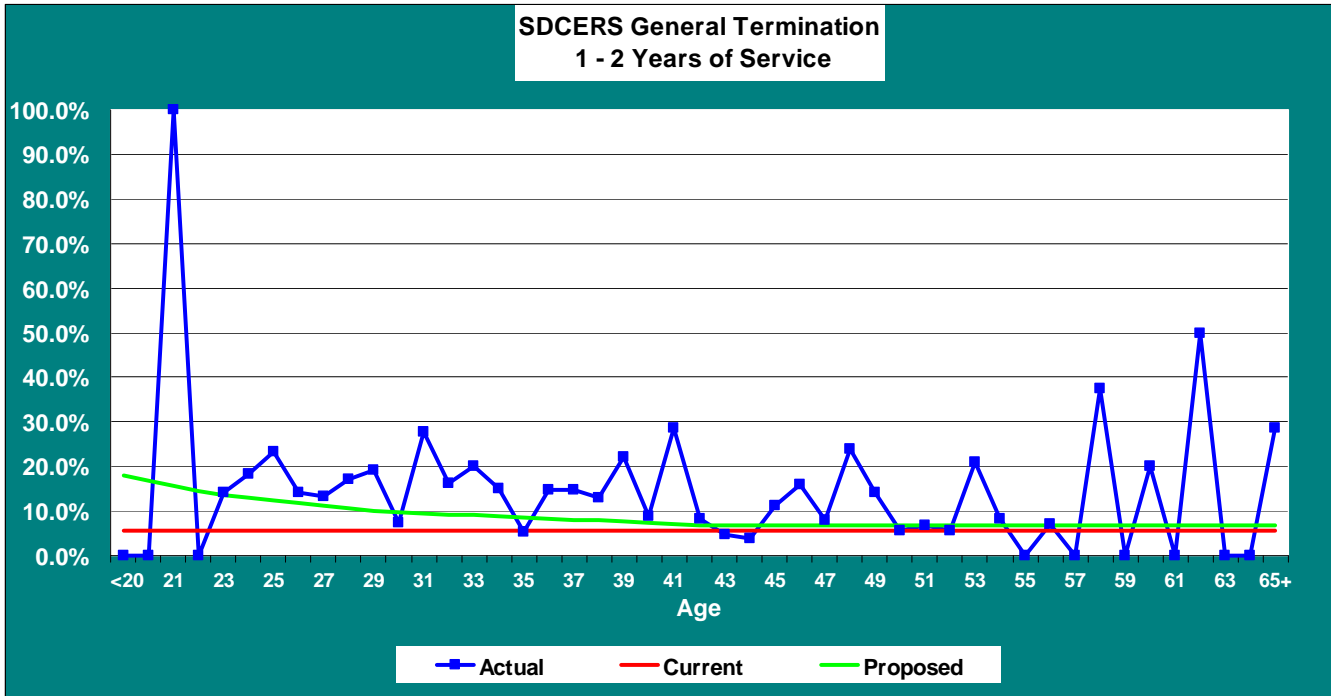
2. Withdrawal Graphs (Current/Proposed)



SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix A Graphs of Demographic Assumptions

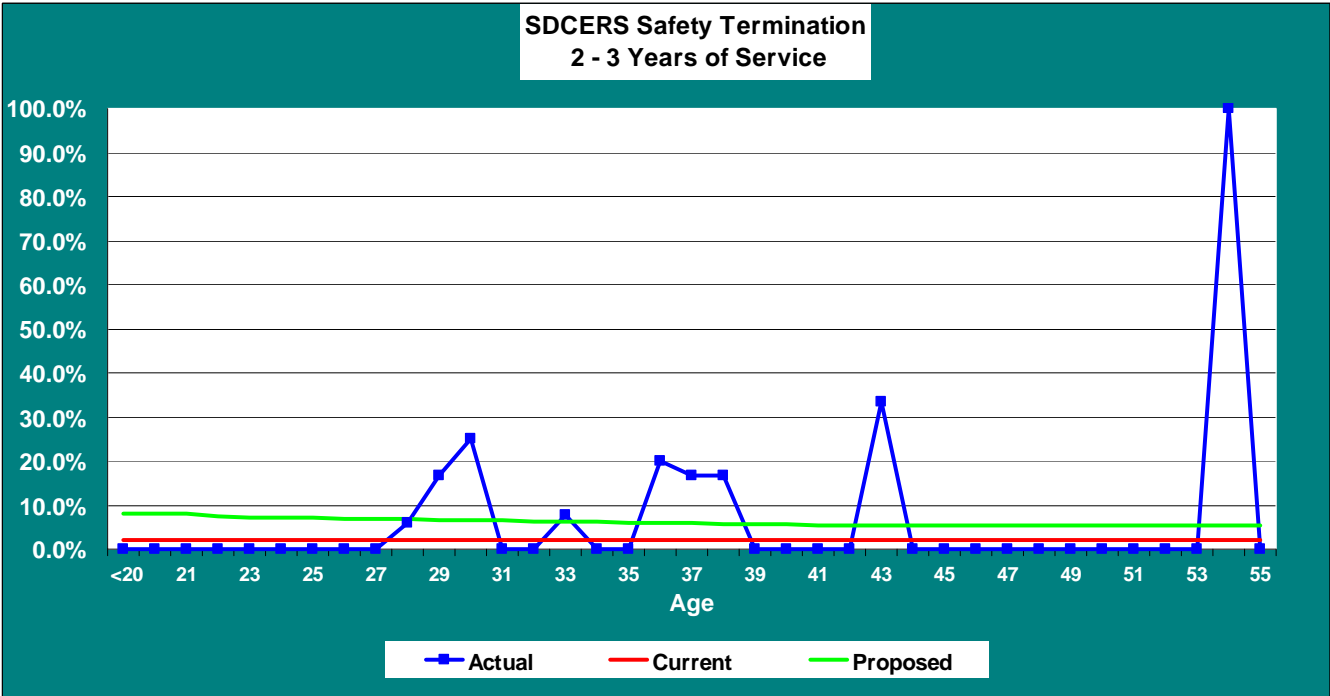
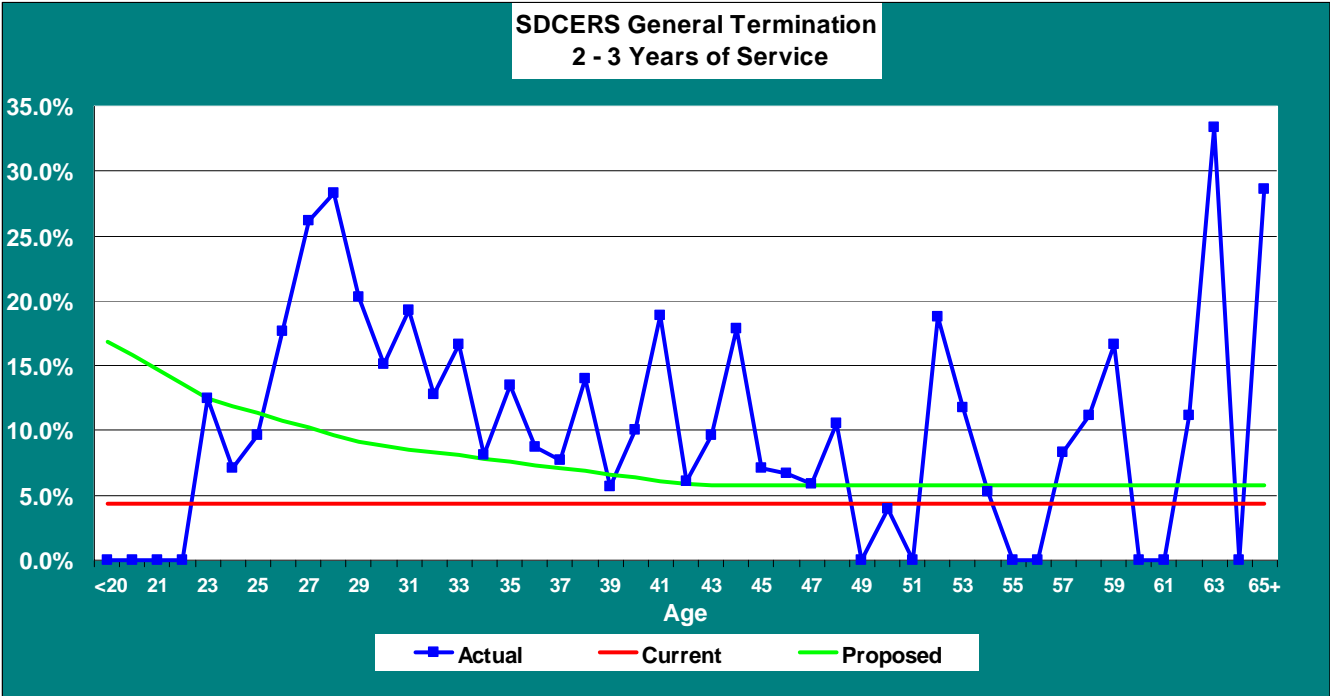
Withdrawal Graphs (Current/Proposed) continued



SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix A Graphs of Demographic Assumptions

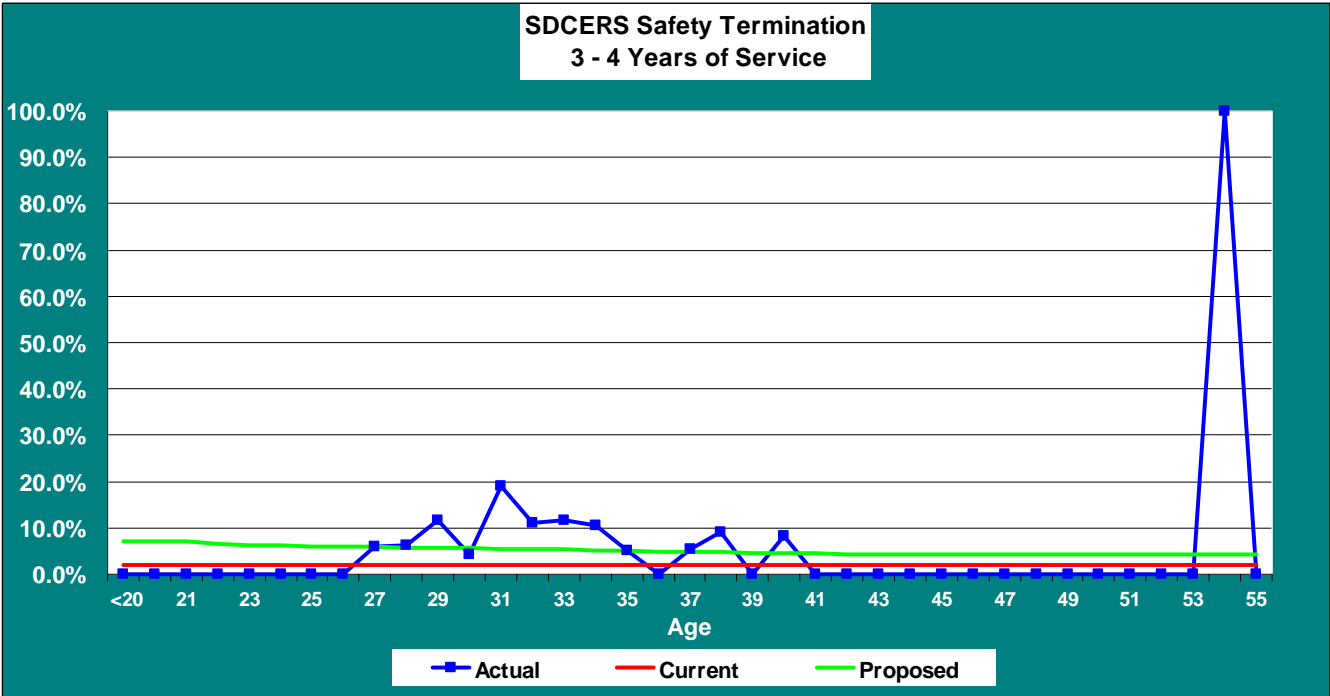
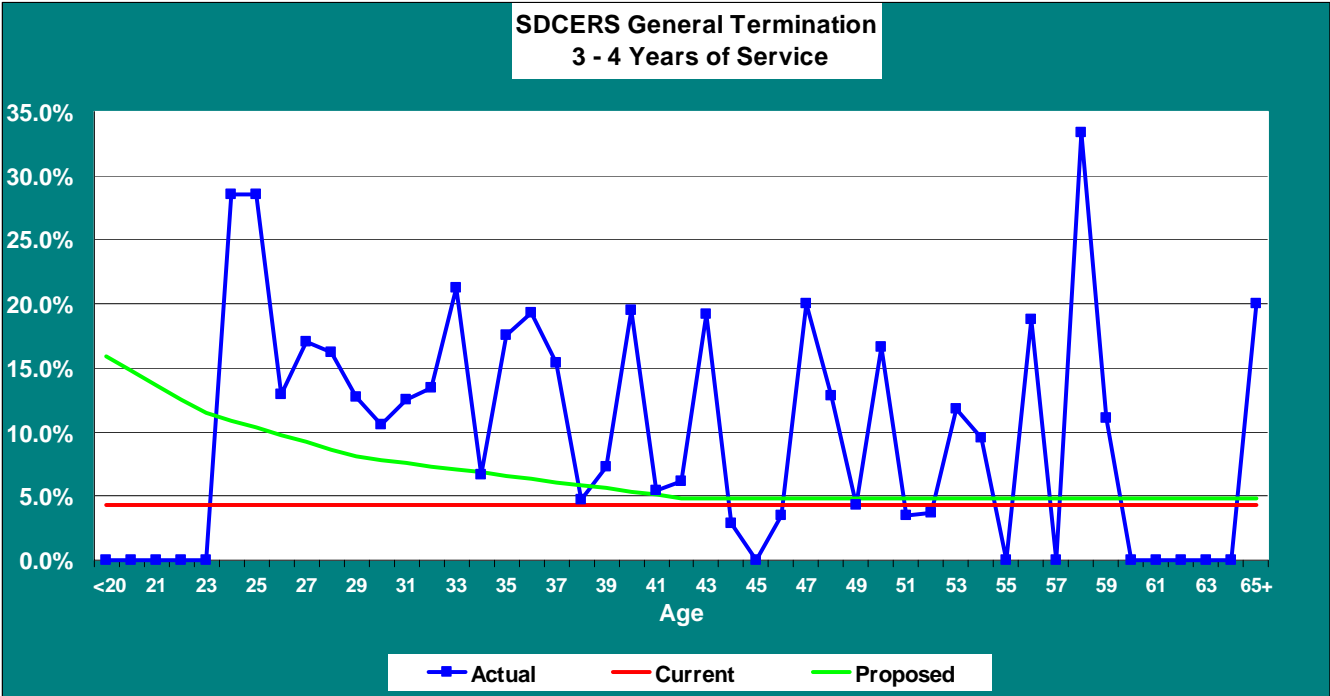
Withdrawal Graphs (Current/Proposed) continued



SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix A Graphs of Demographic Assumptions

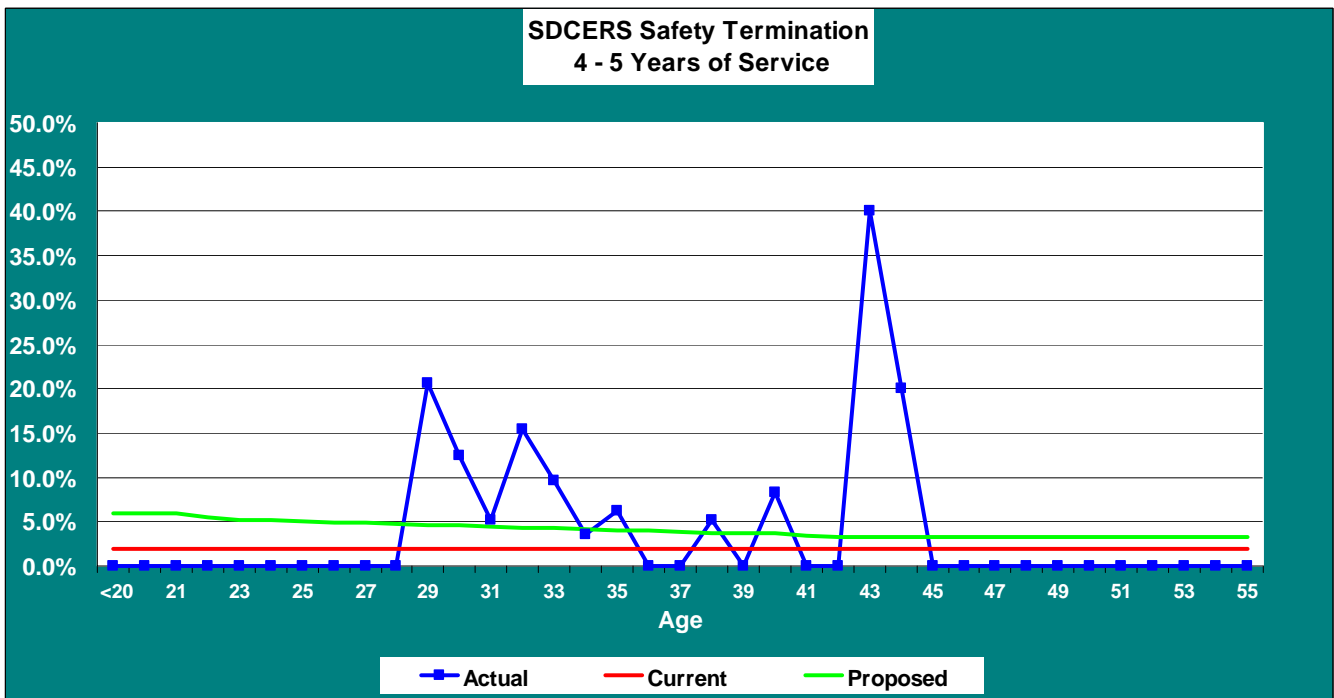
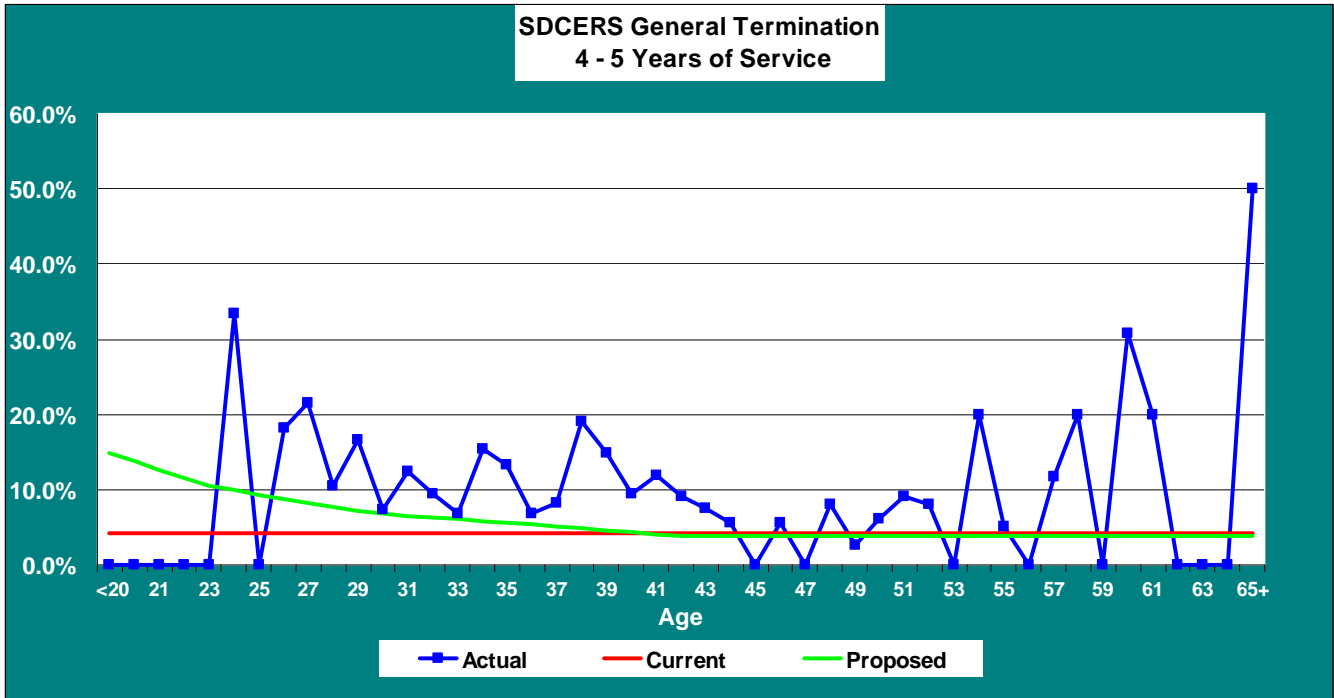
Withdrawal Graphs (Current/Proposed) continued



SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix A Graphs of Demographic Assumptions

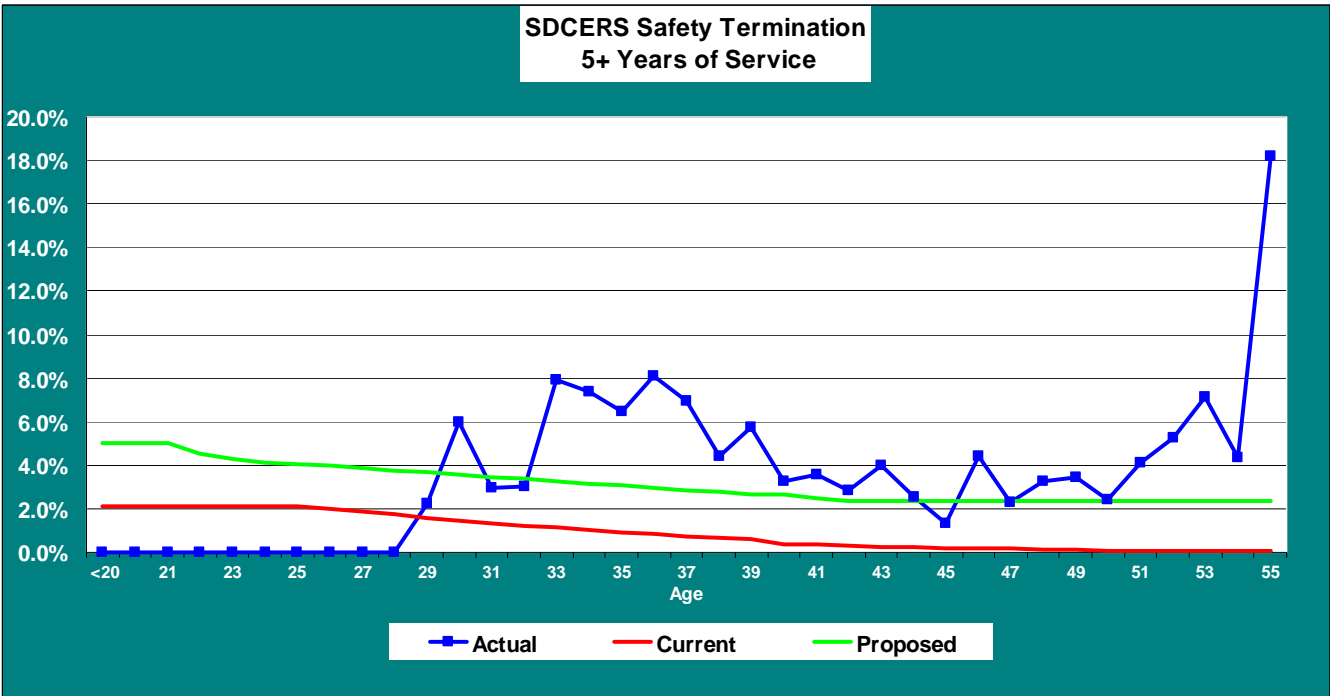
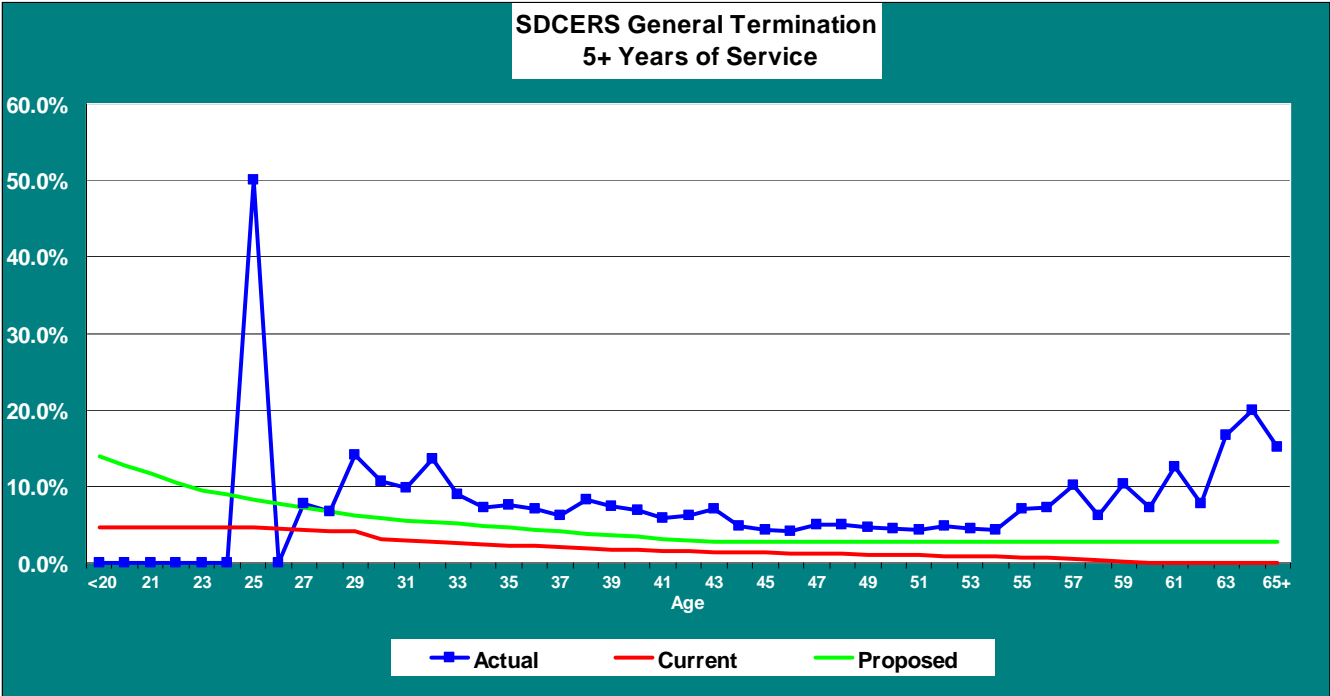
Withdrawal Graphs (Current/Proposed) continued



SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix A Graphs of Demographic Assumptions

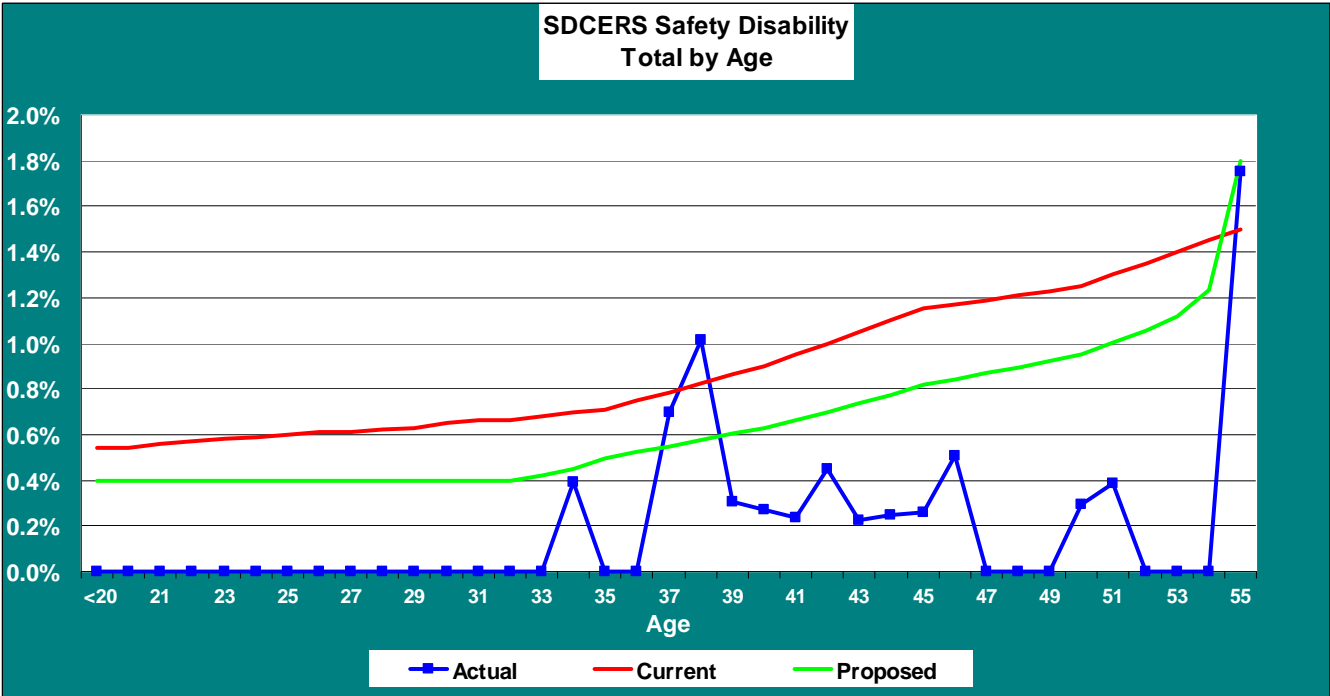
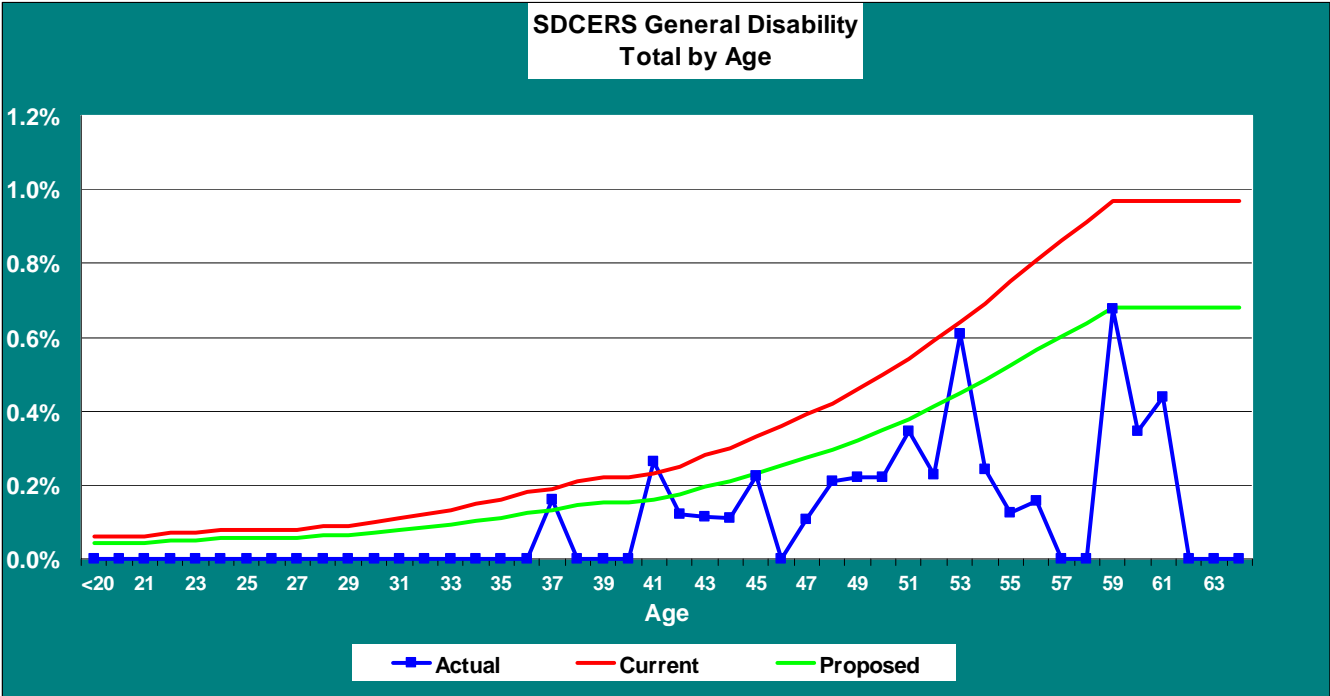
Withdrawal Graphs (Current/Proposed) continued



SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix A Graphs of Demographic Assumptions

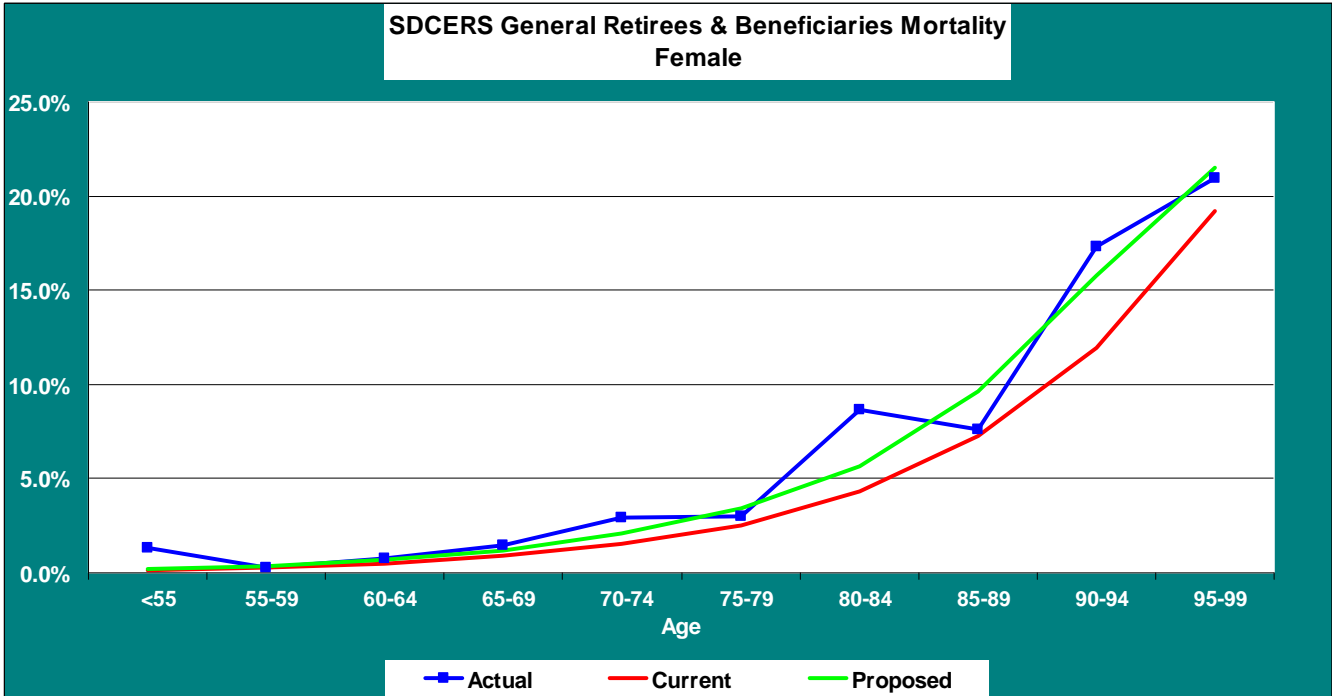
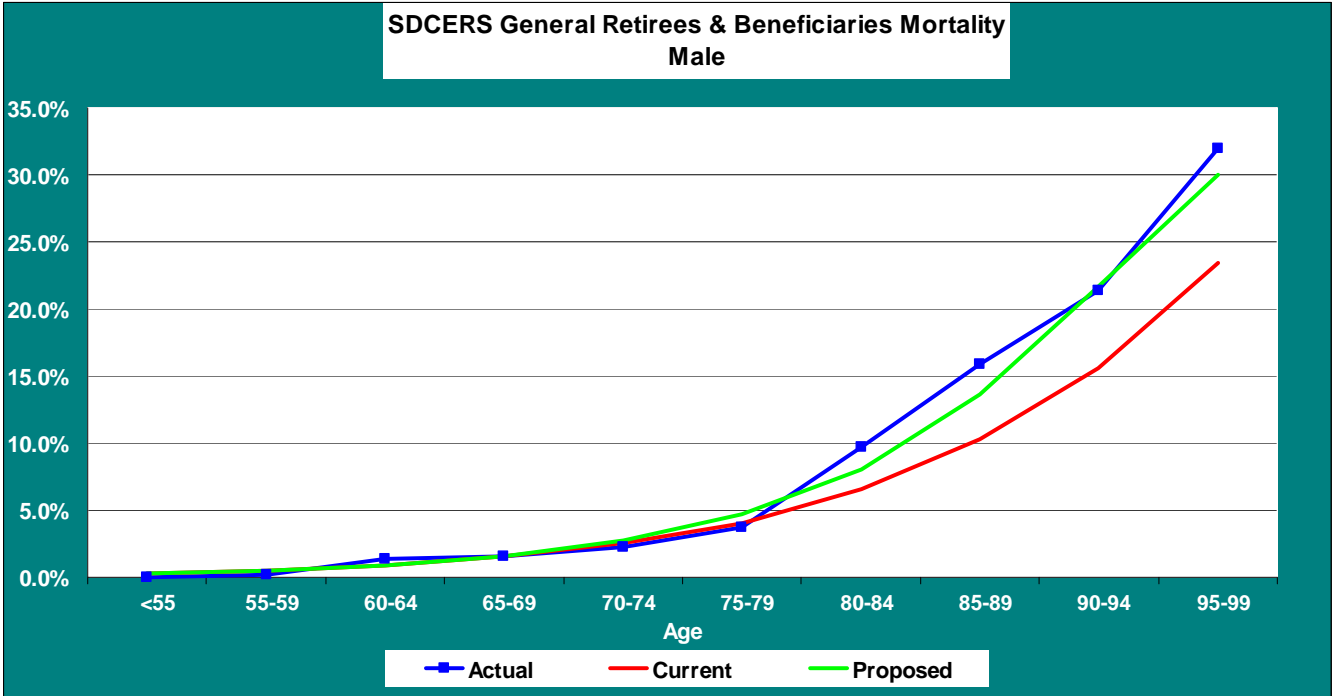
3. Disability Graphs



SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix A Graphs of Demographic Assumptions

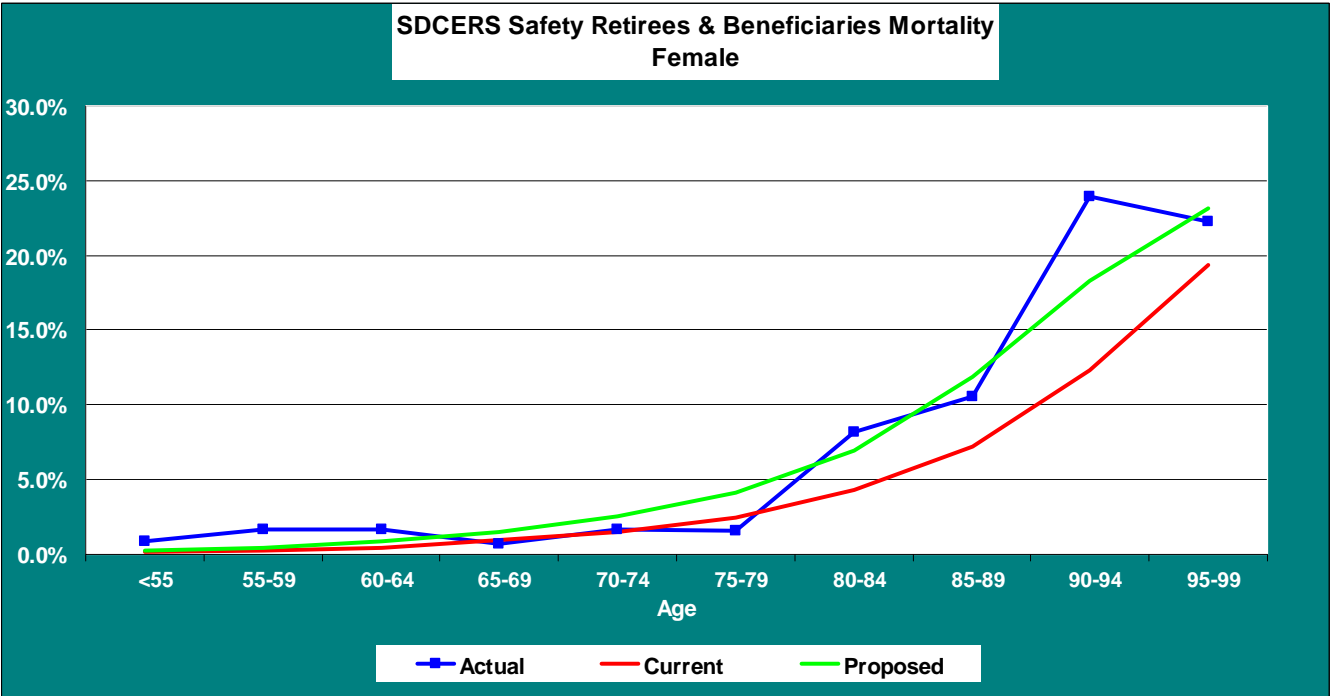
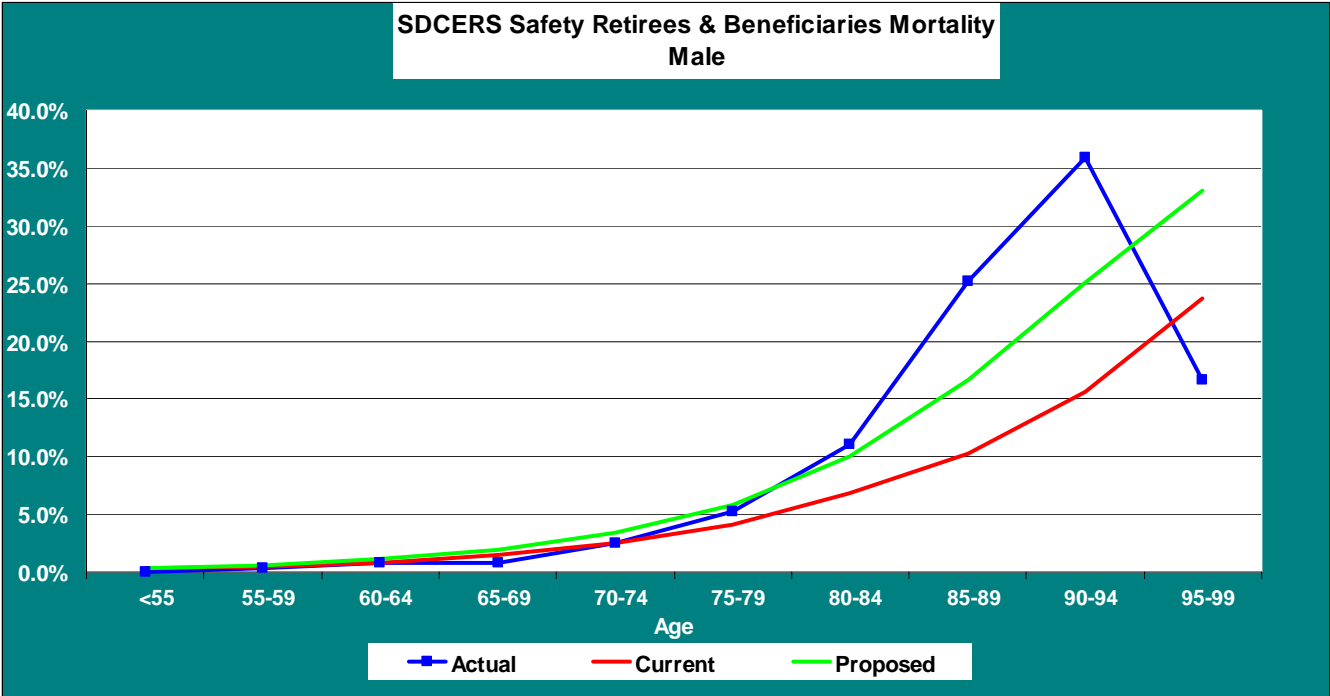
4. Mortality Graphs (Retirees and Beneficiaries, Male and Female)



SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix A Graphs of Demographic Assumptions

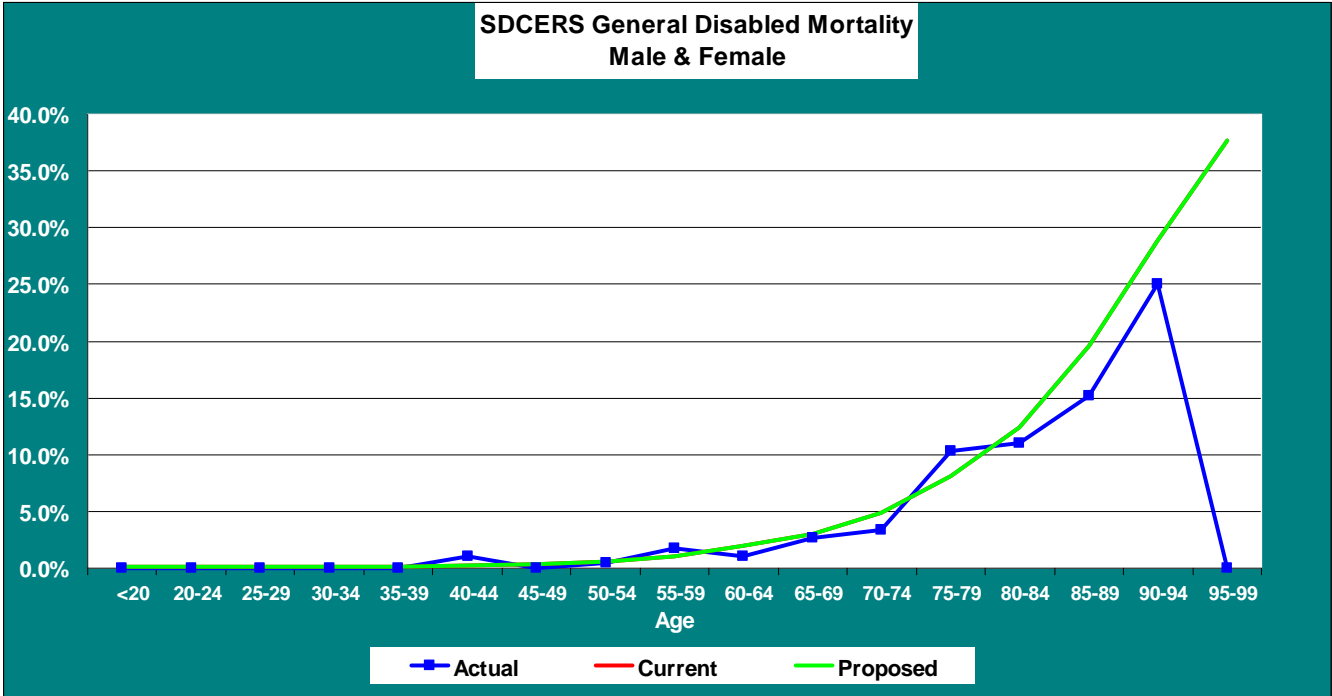
Mortality Graphs (Male and Female Retirees) continued



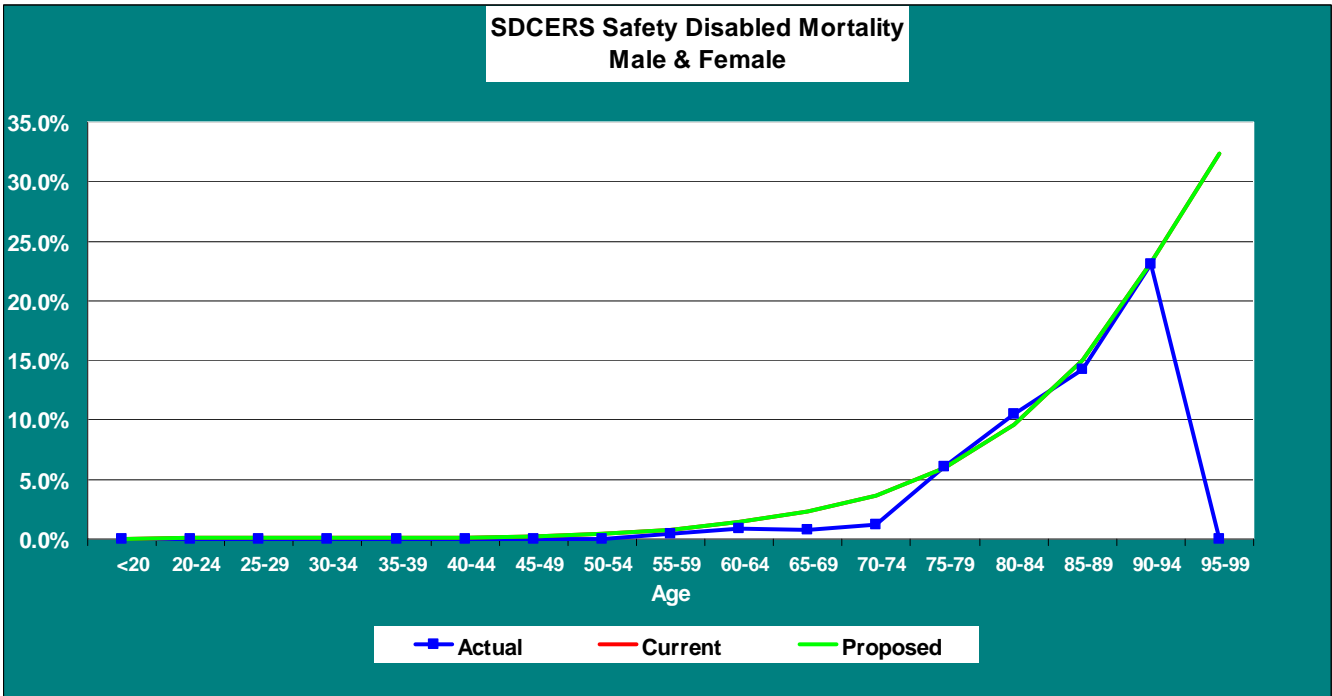
SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix A Graphs of Demographic Assumptions

Mortality Graphs (Male and Female Disabled) continued



Current and proposed assumptions are the same since no change is recommended

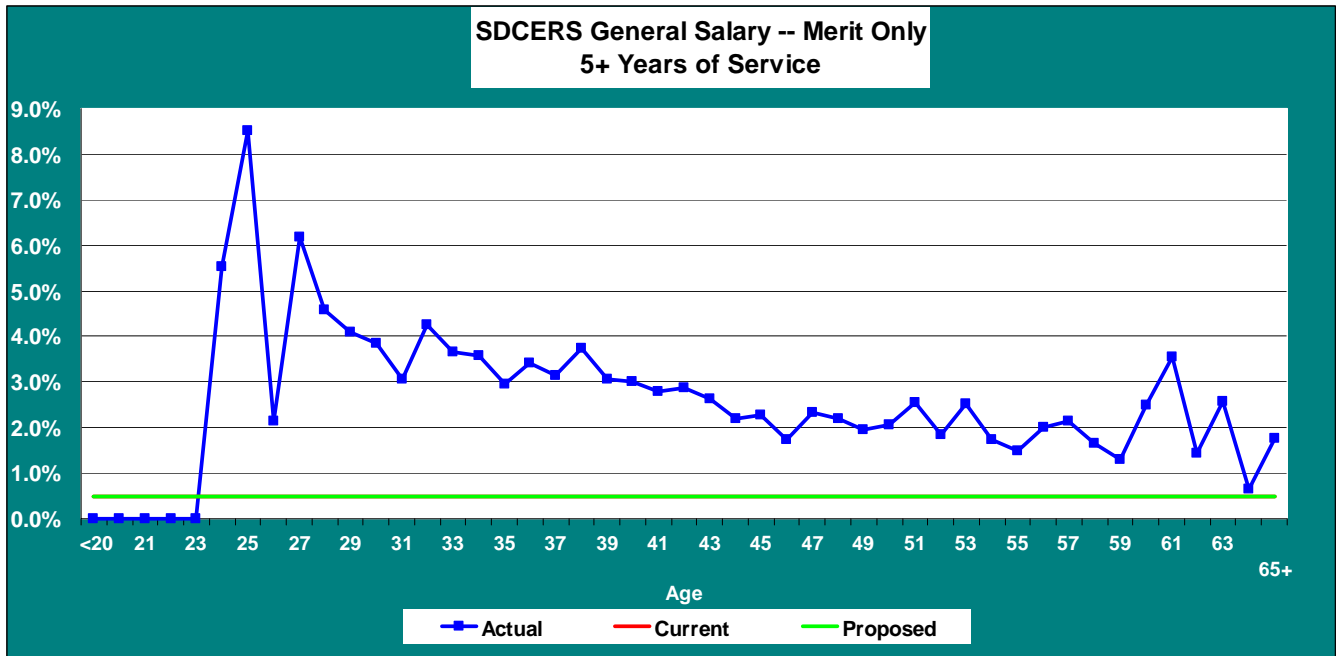


Current and proposed assumptions are the same since no change is recommended

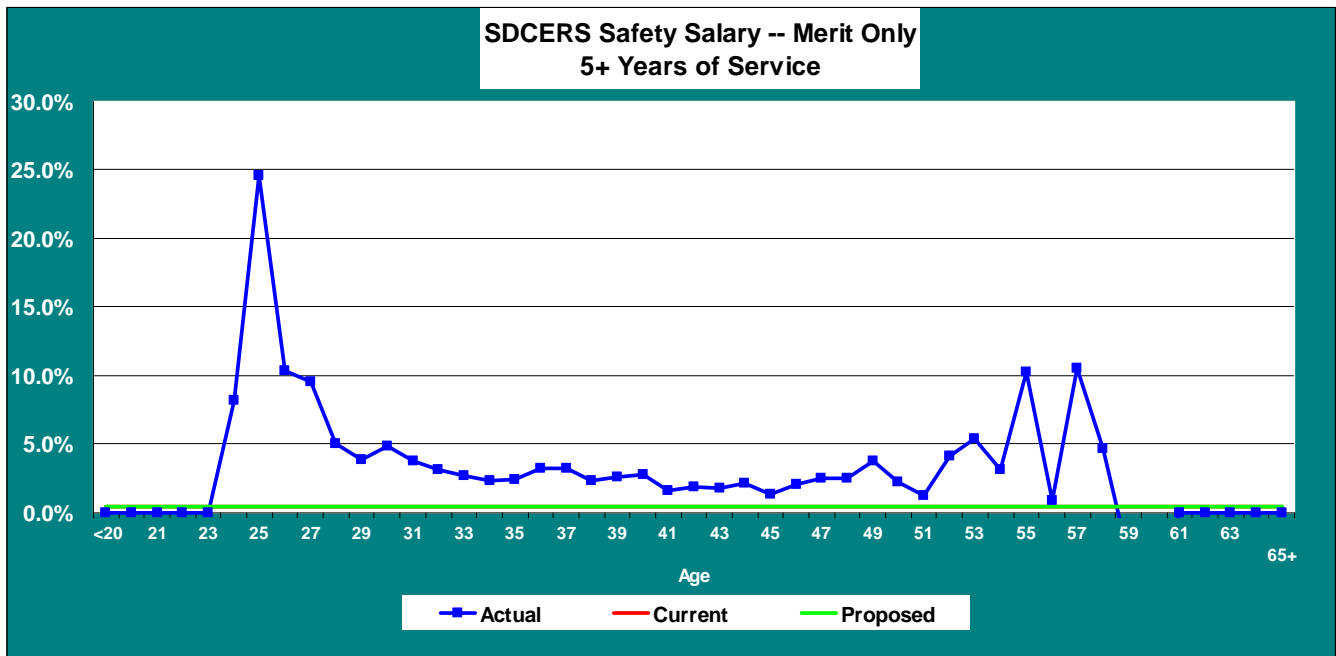
SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix A Graphs of Demographic Assumptions

5. Rate of Salary Growth (Merit Only)



Current and proposed assumptions are the same since no change is recommended

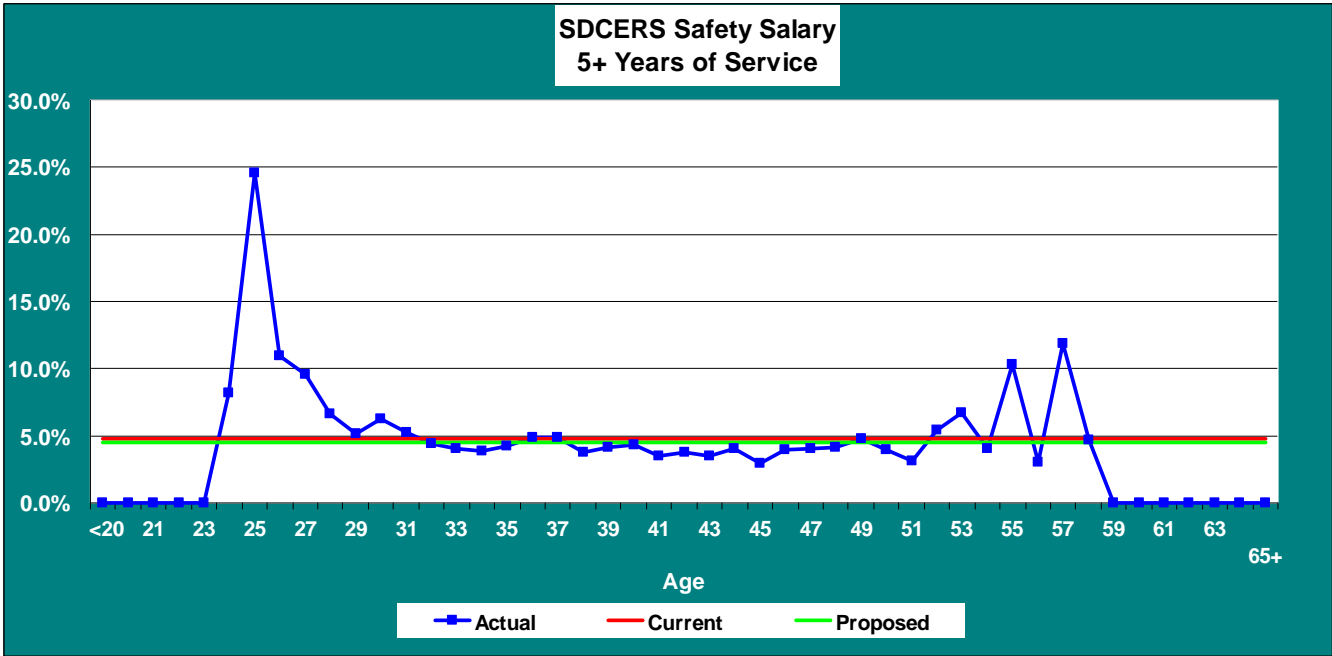
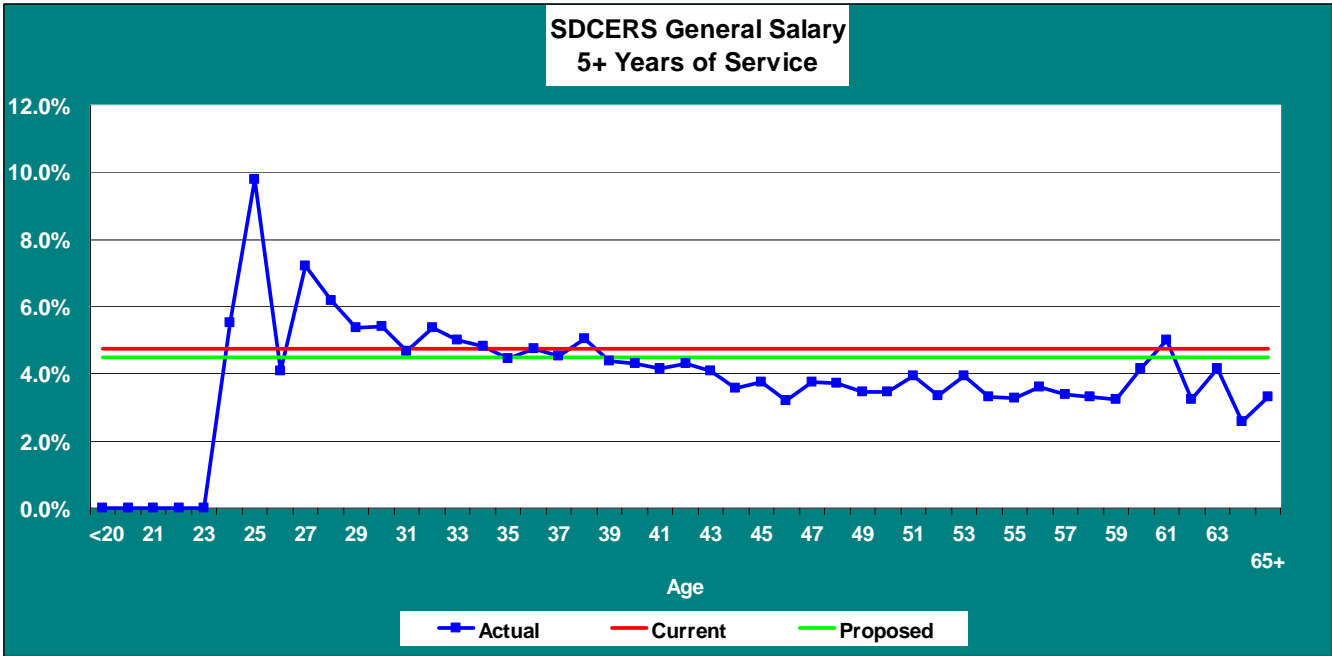


Current and proposed assumptions are the same since no change is recommended

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix A Graphs of Demographic Assumptions

Rate of Salary Growth (Inflation Plus Merit) continued



SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix B Current Actuarial Assumptions

1. Investment Return Assumption

SDCERS' assets are assumed to earn 8% net of expenses.

2. Inflation Rate

An inflation assumption of 4.25% compounded annually is used for projecting the total annual payroll growth for amortization of the UAL. It also represents the difference between the investment return rate and the assumed real rate of return.

3. Interest Credited to Member Contributions

8.0%, compounded annually.

4. Salary Increase Rate

Inflation component 4.25%

The additional merit component:

Years of Service at Valuation Date	General	Safety
0	5.00%	8.00%
1	4.00%	7.00%
2	3.00%	6.00%
3	2.00%	3.50%
4	1.00%	2.00%
5+	0.50%	0.50%

5. Cost-of-Living Increase in Benefits

Assumed to be 2% per annum, compounded annually.

There is a closed group of Special Safety Officers for whom we assume an annual adjustment equal to inflation (4.25% per year).

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix B Current Actuarial Assumptions

6. COLA Annuity Benefit

For active members, there is a 2.5% load on valued benefits to anticipate the impact of the annuitized employee COLA contributions at retirement.

7. Member Refunds

All or part of the employee contribution rate is subject to potential offset by the employer. That offset and the related accumulated interest are not to be refunded to employees at termination. The liability for potential refunds is reduced to reflect this.

8. Rates of Termination

Service	Age	General	Safety
0	All	5.63%	2.20%
1	All	5.53	2.20
2	All	4.33	2.15
3	All	4.33	2.05
4	All	4.24	2.00
5+	20	4.62	2.12
	25	4.62	2.12
	30	3.13	1.48
	35	2.32	0.93
	40	1.65	0.39
	45	1.34	0.20
	50	1.03	0.07
	55	0.77	0.03
	60	0.00	0.00

20% of terminating employees, with 10+ years of service at termination, are assumed to subsequently work for a reciprocal employer and receive 4.75% pay increases per year.

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix B Current Actuarial Assumptions

9. Rates of Disability

Age	General	Safety
20	0.06%	0.54%
25	0.08	0.60
30	0.10	0.65
35	0.16	0.71
40	0.22	0.90
45	0.33	1.15
50	0.50	1.25
55	0.75	1.50
60	0.97	--

70% of the General disabilities and 85% of the Safety disabilities are assumed to be industrial disability retirements. Non-industrial disability retirement is subject to a service requirement.

10. Rates of Mortality for Active Lives

General members follow the Uninsured Pensioner 1994 (UP1994) set back five years (male and female). Set back five years means that when a member is currently age 50 the actuary uses the age 45 mortality rate. Safety members follow the Male UP 1994 set back five years.

Age	General		Safety
	Male	Female	
20	0.04%	0.02%	0.04%
25	0.05	0.03	0.05
30	0.07	0.03	0.07
35	0.09	0.04	0.09
40	0.09	0.05	0.09
45	0.12	0.08	0.12
50	0.17	0.10	0.17
55	0.28	0.15	0.28
60	0.48	0.25	0.48
65	0.86	0.48	0.86
70	1.56	0.93	1.56

All active member deaths are assumed to be duty-related for Safety members and not duty-related for other members.

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix B Current Actuarial Assumptions

11. Rates of Mortality for Retired Healthy Lives

All retired healthy members use the Uninsured Pensioner 1994 (UP1994) table set back two years (male and female).

Age	Male	Female
40	0.10%	0.06%
45	0.15	0.09
50	0.23	0.13
55	0.39	0.21
60	0.68	0.36
65	1.23	0.72
70	2.14	1.26
75	3.35	1.97
80	5.40	3.41
85	8.87	5.90
90	13.65	10.09

12. Rates of Mortality for Retired Disabled Lives

Disabled General members use Uninsured Pensioner 1994 (UP1994) male only table set forward five years. Disabled Safety members use Uninsured Pensioner 1994 (UP1994) male only table set forward two years.

Age	General	Safety
25	0.09%	0.08%
30	0.09	0.09
35	0.12	0.10
40	0.17	0.13
45	0.28	0.20
50	0.48	0.35
55	0.86	0.60
60	1.56	1.09
65	2.55	1.94
70	4.00	3.06

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix B Current Actuarial Assumptions

13. Rates of Retirement

Age	General	Elected Officials	Safety
50	--	--	10%
51	--	--	10
52	--	--	10
53	--	15%	10
54	--	1	20
55	20%	5	40
56	10	3	40
57	10	4	40
58	15	5	50
59	15	6	80
60	20	60	85
61	25	25	90
62	50	37	100
63	40	23	100
64	25	34	100
65	50	68	100
66	40	69	100
67	40	74	100
68	40	80	100
69	40	90	100
70	100	100	100

In addition, if a Safety member has both attained age 55 and completed at least 30 years of service, 100% retirement is assumed.

For vested deferred members, we assume that retirement will occur provided they have at least 10 years of service (4 years for Elected Officers; 5 years for both Airport Authority and UPD employees, excluding the 5 year permissible purchased service) on the later of attained age or:

General Members: Earlier of age 62 or age 55 and 20+ years of service.

Elected Officers: Earlier of age 55 or age 53 and 8+ years of service.

Safety Members: Earlier of age 55 or age 50 and 20+ years of service.

If the inactive member is not vested, the liability is the member's contributions with interest.

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix B Current Actuarial Assumptions

14. Family Composite Assumptions

80% of men and 50% of women were assumed married at retirement. A female spouse is assumed to be 4 years younger than her male spouse.

15. Member Contributions for Spousal Continuance

All active members contribute towards a 50% survivor continuance. However, members who are unmarried at retirement may either be refunded that specific part of their contributions, or they may leave such contributions on account and receive an incremental benefit that is the actuarial equivalent of such contributions.

16. Deferred Member Benefit

The benefit was estimated based on information provided by SDCERS' staff. The data used to value the estimated deferred benefit were date of birth, date of hire, date of termination, and last pay. Based on the data provided, service credit, highest average salary, and deferred retirement age were estimated. The estimates were used to compute the retirement benefit, upon which the liabilities are based. For those members without sufficient data or service, accumulated member contribution balances, with interest, were used as the actuarial accrued liability.

17. Other

The contribution requirements and benefit values of a plan are calculated by applying actuarial assumptions to the benefit provisions and member information, using the actuarial funding methods described in the 2007 Actuarial Valuation Report.

Actual experience of SDCERS will not coincide exactly with assumed experiences, regardless of the choice of the assumptions, the skill of the actuary or the precision of the many calculations made. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments to the computed contribution rate. From time to time it becomes appropriate to modify one or more of the assumptions, to reflect experience trends, but not random year-to-year fluctuations.

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix C Proposed Actuarial Assumptions

All changes from the current assumptions found in Appendix B are highlighted below.

1. Investment Return Assumption

SDCERS' assets are assumed to earn 7.75% net of expenses.

2. Inflation Rate

An inflation assumption of 4.00% compounded annually is used for projecting the total annual payroll growth for amortization of the UAL. It also represents the difference between the investment return rate and the assumed real rate of return.

3. Interest Credited to Member Contributions

7.75%, compounded annually.

4. Salary Increase Rate

Inflation component 4.00%

The additional merit component:

Years of Service at Valuation Date	General	Safety
0	5.00%	8.00%
1	4.00%	7.00%
2	3.00%	6.00%
3	2.00%	3.50%
4	1.00%	2.00%
5+	0.50%	0.50%

5. Cost-of-Living Increase in Benefits

Assumed to be 2% per annum, compounded annually.

There is a closed group of Special Safety Officers for whom we assume an annual adjustment equal to inflation (4.00% per year.)

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix C

Proposed Actuarial Assumptions

6. COLA Annuity Benefit

For active members, there is a 2.5% load on valued benefits to anticipate the impact of the annuitized employee COLA contributions at retirement.

7. Member Refunds

All or part of the employee contribution rate is subject to potential offset by the employer. That offset and the related accumulated interest are not to be refunded to employees at termination. The liability for potential refunds is reduced to reflect this.

8. Rates of Termination

Age	General	Safety
20	12.78%	5.00%
25	8.33	4.07
30	5.83	3.57
35	4.60	3.07
40	3.36	2.67
45	2.78	2.33
50	2.78	2.33
55	2.78	2.33
60	2.78	2.33

*Add 1% to every age for each year of service under 5 years

20% of terminating employees, with 10+ years of service at termination, are assumed to subsequently work for a reciprocal employer and receive 4.50% pay increases per year.

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix C

Proposed Actuarial Assumptions

9. Rates of Disability

Age	General	Safety
20	0.04%	0.40%
25	0.06	0.40
30	0.07	0.40
35	0.11	0.50
40	0.15	0.63
45	0.23	0.82
50	0.35	0.95
55	0.53	1.80
60	0.68	--

60% of the General disabilities and 80% of the Safety disabilities are assumed to be industrial disability retirements. Non-industrial disability retirement is subject to a service requirement.

10. Rates of Mortality for Active Lives

General members follow the RP2000 Combined Healthy table (male and female) projected to 2008. Safety members follow the Male RP2000 projected to 2008, set forward two years. Set forward two years means that when a member is currently age 50 the actuary uses the age 52 mortality rate.

Age	General		Safety
	Male	Female	
20	0.03%	0.02%	0.03%
25	0.03	0.02	0.04
30	0.04	0.02	0.05
35	0.07	0.04	0.09
40	0.10	0.06	0.11
45	0.14	0.10	0.15
50	0.18	0.15	0.23
55	0.31	0.25	0.41
60	0.59	0.49	0.78
65	1.14	0.93	1.45
70	1.97	1.61	2.42

All active member deaths are assumed to be duty-related for Safety members and not duty-related for other members.

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix C

Proposed Actuarial Assumptions

11. Rates of Mortality for Retired Healthy Lives

All retired healthy members use the RP2000 Combined Healthy table (male and female). Safety members use the RP2000 Combined Healthy table set forward two years (male and female).

Age	General		Safety	
	Male	Female	Male	Female
40	0.11%	0.07%	0.12%	0.09%
45	0.15	0.11	0.17	0.13
50	0.21	0.17	0.27	0.20
55	0.36	0.27	0.47	0.35
60	0.67	0.51	0.88	0.67
65	1.27	0.97	1.61	1.22
70	2.22	1.67	2.73	2.07
75	3.78	2.81	4.69	3.41
80	6.44	4.59	8.05	5.63
85	11.08	7.74	13.60	9.63
90	18.34	13.17	21.66	15.76

12. Rates of Mortality for Retired Disabled Lives

Disabled General members use Uninsured Pensioner 1994 (UP1994) male only table set forward five years. Disabled Safety members use Uninsured Pensioner 1994 (UP1994) male only table set forward two years.

Age	General	Safety
25	0.09%	0.08%
30	0.09	0.09
35	0.12	0.10
40	0.17	0.13
45	0.28	0.20
50	0.48	0.35
55	0.86	0.60
60	1.56	1.09
65	2.55	1.94
70	4.00	3.06

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix C

Proposed Actuarial Assumptions

13. Rates of Retirement

Service	General	Safety
10-19	33%	32%
20	41	32
21	33	14
22	35	18
23	37	23
24	39	27
25	41	32
26	42	36
27	44	41
28	46	45
29	48	50
30	50	100
31	51	100
32	53	100
33	55	100
34	57	100
35+	100	100

In addition, if a Safety member has both attained age 55 and completed at least 30 years of service, 100% retirement is assumed.

For vested deferred members, we assume that retirement will occur provided they have at least 10 years of service (5 years for both Airport Authority and UPD employees, excluding the 5 year permissible purchased service) on the later of attained age or:

General Members: Earlier of age 62 or age 55 and 20+ years of service.

Safety Members: Earlier of age 55 or age 50 and 20+ years of service.

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix C

Proposed Actuarial Assumptions

Proposed rates of retirement for Elected Officials did not change, and are shown in the table below

Elected Officials: Earlier of age 55 or age 53 and 8+ years of service.

Age	Elected Officials
50	--
51	--
52	--
53	15%
54	1
55	5
56	3
57	4
58	5
59	6
60	60
61	25
62	37
63	23
64	34
65	68
66	69
67	74
68	80
69	90
70	100

For vested deferred Elected Officials, we assume that retirement will occur provided they have at least 4 years of service on the later of attained age or the earlier of age 55 or age 53 and 8+ years of service.

If the inactive member is not vested, the liability is the member's contributions with interest.

14. Family Composite Assumptions

80% of men and 50% of women were assumed married at retirement. A female spouse is assumed to be 4 years younger than her male spouse.

SAN DIEGO CITY EMPLOYEES' RETIREMENT SYSTEM

Appendix C

Proposed Actuarial Assumptions

15. Member Contributions for Spousal Continuance

All active members contribute towards a 50% survivor continuance. However, members who are unmarried at retirement may either be refunded that specific part of their contributions, or they may leave such contributions on account and receive an incremental benefit that is the actuarial equivalent of such contributions.

16. Deferred Member Benefit

The benefit was estimated based on information provided by SDCERS staff. The data used to value the estimated deferred benefit were date of birth, date of hire, date of termination, and last pay. Based on the data provided, service credit, highest average salary, and deferred retirement age were estimated. The estimates were used to compute the retirement benefit, upon which the liabilities are based. For those members without sufficient data or service, accumulated member contribution balances, with interest, were used as the actuarial accrued liability.

17. Other

The contribution requirements and benefit values of a plan are calculated by applying actuarial assumptions to the benefit provisions and member information, using the actuarial funding methods described in the 2007 Actuarial Valuation Report.

Actual experience of SDCERS will not coincide exactly with assumed experiences, regardless of the choice of the assumptions, the skill of the actuary or the precision of the many calculations made. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments to the computed contribution rate. From time to time it becomes appropriate to modify one or more of the assumptions, to reflect experience trends, but not random year-to-year fluctuations.