

EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND
ACTUARIAL EXPERIENCE STUDY
FOR THE SIX-YEAR PERIOD ENDING JUNE 30, 2010
SUPPLEMENT COVERING THE MUNICIPAL EMPLOYEES'
RETIREMENT SYSTEM (MERS)

TABLE OF CONTENTS

Section I	Introduction.....	2
Section II	Analysis of Experience and Recommendations	4
Section III	Actuarial Impact of Recommendations	8
Section IV	Summary of Assumptions and Methods Incorporating the Recommended Assumptions.....	10
Section V	Summary of Data and Experience.....	21

SECTION I
INTRODUCTION

Section I Introduction

This Supplement is considered part of the Experience Study prepared for ERSRI and to be read in conjunction with the main report covering ERSRI (State Employees and Teachers). It includes a review of our analysis for most of the actuarial assumptions and methods for the Municipal Employees' Retirement System (MERS). However, this Supplement is not as comprehensive as the main report. Some of the actuarial assumptions, for example, price inflation and investment return assumption are set once for all of the plans, and these are not discussed here. Some of the detailed analysis in the main report is not repeated here.

Organization of Report

Section II contains our findings and recommendations for actuarial assumptions specific to MERS. The impact of adopting our recommendations on liabilities and contribution rates is shown in Section III. Section IV presents a summary of all the actuarial assumptions and methods, including the recommended changes. Finally, tables summarizing the analysis of the assumptions are in Section V.

SECTION II

ANALYSIS OF EXPERIENCE AND RECOMMENDATIONS

Section II

Analysis of Experience and Recommendations

Inflation rate

We recommend using the same 2.75% assumption recommended for ERSRI.

Investment return rate

We recommend using the same 7.50% assumption recommended for ERSRI.

Salary increase rates

As with ERSRI, the salary assumption consists of two pieces

1. The wage inflation assumption for long-service employees
2. The service-related schedule added to wage inflation for shorter-service employees

The next two subsections will discuss these components of the salary assumption.

Salary increase assumptions for long-service employees (wage inflation)

For general MERS employees, we currently assume a 4.50% rate for wage inflation (3.00% price inflation, plus 1.50% productivity). For the police and fire units, we assume wage inflation of 4.75% (3.00% price inflation plus 1.75% productivity).

The analysis we carried out shows that after the step rate period, salary increases leveled off at about 3.7% for general employees and at about 4.0% for police and fire employees. During the study period, price inflation averaged about 2.4% per year. Therefore, actual productivity increases were about 1.3% for general employees and about 1.6% for police/fire employees. Consistent with the recommended changes for ERSRI, we have recommended a decrease in the productivity component by 0.50% for both groups. This, combined with the lower inflation assumption, produce long term salary assumptions of 4.00% for general employees and 4.25% for police and fire units.

Salary increase assumptions for shorter-service employees

For general employees, we had been adding a service-related increase only for members with less than ten years of service and the analysis showed this should be extended to fifteen years. In addition, the analysis for both groups showed that the current service-related increases were reasonable and only minor tweaks were needed. The analyses of the service-related increases are shown on pages 33-34 and the new assumptions are shown on pages 13-14.

Payroll growth rate

We are recommending decreasing the payroll growth rate from 4.25% to 3.75%, just as we did for ERSRI.

Analysis of Experience and Recommendations - Continued

Post-retirement mortality rates (non-disabled)

We currently use the same mortality assumption for MERS retirees that we use for state employees and are recommending the same changes for MERS that were recommended for ERSRI.

Disabled mortality rates

All of the ERSRI plans use the same disabled mortality tables. The analysis of this assumption was discussed in the ERSRI report.

Active mortality rates

Like the post-retirement mortality rates, this assumption is the same for state employees and MERS employees, and the groups were combined for our analysis.

Disability rates

We analyzed disability separately for males and females, for general employees and police/fire employees, and for ordinary and accidental disability.

For general employees, the analysis shows a reasonably close match between the current assumption and experience. Therefore, we are recommending only a slight decrease in the accidental disability rates for females. The other disability incidence assumptions will remain unchanged.

For police and fire employees our current assumptions are unisex, i.e., the same rates are used for males and females. For ordinary disability, we are recommending no change from the current assumption. For accidental disability, there were fewer disabilities than expected. Therefore, we are recommending lowering the rates of accidental disability slightly.

Details of the analysis are shown on pages 24-29. The recommended new assumptions are on page 16.

Retirement rates

The retirement rates are only applied to members eligible for retirement. Separate assumptions are set for general employees and for police/fire employees. The police/fire units which have elected the 20-year retirement option have a different retirement assumption than the other police/fire employees.

For general employees we follow the same approach we use for ERSRI, splitting the retirement rates into one service-based table, for members who reach 30 years of service before age 58, and a second age-based table for all others. We assume general employees retire by age 70.

For this assumption, an A/E ratio between 90% and 100% is desirable for conservatism. For general employees who reach 30 years of service before age 58, the experience showed more retirements than expected, with A/E ratios of 113% for males and 111% for females. For members who reach

Analysis of Experience and Recommendations - Continued

age 58 first, the opposite was true and there were fewer retirements than expected, with A/E ratios of 68% for males and 89% for females.

Therefore, we have made appropriate adjustments for the two groups of assumptions, with the net impact pretty much an offset to each other. The proposed retirement rates for general employees are shown on page 18 and the analysis is shown on pages 35-36 and 38-39.

For police and fire, we have assumption based on years of service, and the experience showed more retirements than the current assumption expected. We have made adjustments accordingly.

Section VI, provides the proposed police/fire retirement rates are shown in Section VI, on page 19, and the analysis is shown on pages 37.

Termination rates

Separate termination rates are used for general employees and police/fire, and separate assumptions are used for males and females. As with ERSRI, we currently use termination rates that are a function of service.

The current assumptions were reasonable for all groups. We have made slight adjustments at specific levels of service for general employees, but made no adjustments for police and fire.

The actual new rates are show on pages 17. Details of the analysis are shown on the tables at pages 30-32.

Marriage Assumption

We are recommending no change to the percentage of members assumed to be married at death from 85%, just as we did for ERSRI.

Other assumptions

There are other technical and minor assumptions made in the course of a valuation, such as the timing of terminations and retirements during the year, and the timing of salary increases. We reviewed these and are recommending no changes.

Actuarial cost method

We continue to believe the individual Entry Age Normal cost method (EAN) is appropriate, and we are recommending no change.

Actuarial Value of Assets

The method used to determine the actuarial asset value for MERS is the same one used for ERSRI (i.e. a 5-year smoothing method without corridor).

SECTION III

ACTUARIAL IMPACT OF RECOMMENDATIONS

Section III

Impact of Proposed Changes to Actuarial Assumptions

It is beyond the scope of this report to provide the detailed effect of the recommended assumptions on each MERS unit. However, we do provide below some summary information.

Please note the following information is based on draft results as all of the detailed results for each unit had not been finalized as of the publication of this report. Even though the actual number for individual units may change as the results of the June 30, 2010 valuation are finalized, the following results are a good representation of the magnitude of the changes from the recommended assumptions.

Item	Before Assumption Changes	After Assumption Changes
Average normal cost (pct. of salary)	14.86%	17.70%
Unfunded actuarial accrued liability (UAAL, millions)	\$237.2	\$430.6
Funded ratio	83.4%	73.5%
Weighted average contribution rate	13.43%	21.76%
Total FY 2013 contributions (millions)	\$41.1	\$66.6

As shown, the changes in the assumptions will result in a substantial increase in the actuarial accrued liability (and UAAL) and employer contribution rates.

We believe the Board's decision about whether or not to adopt our recommendations should be based on the appropriateness of each recommendation individually, not on their collective effect on the contribution rate or the actuarial liabilities.

SECTION IV

SUMMARY OF ASSUMPTIONS AND METHODS INCORPORATING THE RECOMMENDED ASSUMPTIONS

Section IV

Summary of Assumptions and Methods Incorporating the Recommended Assumptions

I. Valuation Date

The valuation date is June 30th of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

II. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal (EAN) actuarial cost method. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) a rate that will amortize the unfunded actuarial accrued liability (UAAL).

The employer normal cost rate is the total normal cost rate, less the member contribution rate. The total normal cost rate is the level percentage-of-pay contribution which would theoretically pay for all benefits if it had been made each year from the inception of the plan and if there had never been any changes of benefits, any changes of assumptions or methods, or any experience gains or losses. The normal costs are determined on an individual basis.

The actuarial accrued liability is the difference between the actuarial present value of all future benefits and the actuarial present value of future normal costs. It is the amount to which the normal costs would have accumulated under the assumptions described in the preceding paragraph. The unfunded actuarial accrued liability (UAAL) is the difference between the actuarial accrued liability and the actuarial value of assets.

The amortization contribution rate is the level percentage of payroll required to reduce the UAAL to zero over the remaining amortization period. The UAAL is being amortized over the remainder of a closed 30-year period from June 30, 1999. The employer contribution rate determined by this valuation will not be effective until two years after the valuation date. The determination of the contribution rate reflects this deferral. The unfunded actuarial accrued liability (UAAL) and covered payroll are projected forward for two years, and we then determine the amortization charge required to amortize the UAAL over the remaining amortization period from that point. In projecting the UAAL, we increase the UAAL for interest at the assumed rate and we decrease it for the amortization payments. The amortization payments for these two years are determined by subtracting the current employer normal cost from the known contribution rates for these years, based on the two prior actuarial valuations. Contributions are assumed to be made monthly throughout the year.

Summary of Assumptions and Methods - Continued

III. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. The actuarial value is calculated in the aggregate for all units combined, and then it is allocated to each unit in ratio to that unit's market value.

IV. Actuarial Assumptions

A. Economic Assumptions

1. Investment return: 7.50% per year, compounded annually, composed of an assumed 2.75% inflation rate and a 4.75% net real rate of return. This rate represents the assumed return, net of all investment and administrative expenses.
2. Salary increase rate: For general employees, the sum of (i) a 4.00% wage inflation assumption (composed of a 2.75% price inflation assumption and a 1.25% additional general increase), and (ii) a service-related component as shown below:

General Employees		
Years of Service	Service-Related Component	Total Increase
0	4.00%	8.00%
1	3.00	7.00
2	2.75	6.75
3	2.50	6.50
4	2.25	6.25
5	2.00	6.00
6	1.25	5.25
7	0.75	4.75
8-9	0.50	4.50
10-14	0.25	4.25
15 or more	0.00	4.00

Summary of Assumptions and Methods - Continued

For police/fire employees, the sum of (i) a 4.25% wage inflation assumption (composed of a 2.75% price inflation assumption and a 1.50% additional general increase), and (ii) a service-related component as shown below:

Police/Fire Employees		
Years of Service	Service-Related Component	Total Increase
0	10.00%	14.25%
1	9.00	13.25
2	6.00	10.25
3	3.00	7.25
4	2.50	6.75
5	2.00	6.25
6	0.50	4.75
7	0.50	4.75
8	0.25	4.50
9	0.25	4.50
10 or more	0.00	4.25

Salary increases are assumed to occur once a year, on July 1. Therefore the pay used for the year following the valuation date is equal to the reported pay for the prior year, increased by the salary increase assumption. For employees with less than one year of service, the reported rate of pay is used rather than the fiscal year salary paid.

3. Payroll growth rate: In the amortization of the unfunded actuarial accrued liability, payroll is assumed to increase 3.75% per year. This increase rate is solely due to the effect of wage inflation on salaries, with no allowance for future membership growth.

Summary of Assumptions and Methods - Continued

B. Demographic Assumptions

1. Post-retirement mortality rates:
 - a. Male employees: 115% of the RP-2000 Combined Healthy for Males with White Collar adjustments, projected with Scale AA.
 - b. Female employees: 95% of the RP-2000 Combined Healthy for Females with White Collar adjustments, projected with Scale AA.
 - c. Disabled males – 60% of the PBGC Table Va for disabled males eligible for Social Security disability benefits
 - d. Disabled females – 60% of the PBGC Table VIa for disabled females eligible for Social Security disability benefits.

2. Pre-retirement mortality (combined ordinary and duty):
 - a. Male employees: 75% of RP-2000 Combined Healthy for Males with White Collar adjustments.
 - b. Female employees: 75% of RP-2000 Combined Healthy for Females with White Collar adjustments.

Sample rates are shown below:

Number of Deaths per 100		
Age	Males	Females
25	0.03	0.02
30	0.03	0.02
35	0.04	0.03
40	0.07	0.05
45	0.10	0.08
50	0.15	0.12
55	0.25	0.19
60	0.42	0.35
65	0.83	0.65
70	1.45	1.14

Summary of Assumptions and Methods - Continued

3. Disability rates: Sample rates (per 100) are shown below. Ordinary disability rates are not applied to members eligible for retirement.

Age	General Employees, Ordinary, Males	General Employees, Accidental, Males	General Employees, Ordinary, Females	General Employees, Accidental, Females	Police & Fire, Ordinary, Males and Females	Police & Fire, Accidental, Males and Females
25	0.63	0.23	0.27	0.08	0.43	2.55
30	0.77	0.28	0.33	0.09	0.55	3.30
35	1.05	0.38	0.45	0.12	0.73	4.35
40	1.54	0.55	0.66	0.18	1.10	6.60
45	2.52	0.90	1.08	0.29	1.80	10.80
50	4.27	1.53	1.83	0.49	3.03	18.15
55	7.07	2.53	3.03	0.81	3.03	18.15
60	9.87	3.53	4.23	1.13	3.03	18.15
65	0.00	0.00	0.00	0.00	3.03	18.15

Summary of Assumptions and Methods - Continued

4. Termination rates (for causes other than death, disability, or retirement) are a function of the member's service. Termination rates are not applied to members eligible for retirement. Rates are shown below:

Service	Male General Employees	Female General Employee	Police & Fire, Males & Females
0	0.1750	0.1800	0.1000
1	0.1087	0.1143	0.0528
2	0.0922	0.0973	0.0481
3	0.0778	0.0824	0.0436
4	0.0655	0.0695	0.0394
5	0.0552	0.0584	0.0354
6	0.0465	0.0491	0.0316
7	0.0394	0.0412	0.0281
8	0.0337	0.0348	0.0249
9	0.0293	0.0296	0.0219
10	0.0260	0.0255	0.0191
11	0.0236	0.0223	0.0166
12	0.0220	0.0199	0.0143
13	0.0209	0.0181	0.0123
14	0.0204	0.0169	0.0105
15	0.0201	0.0159	0.0090
16	0.0200	0.0152	0.0077
17	0.0198	0.0145	0.0067
18	0.0195	0.0137	0.0059
19	0.0187	0.0127	0.0000
20	0.0175	0.0112	0.0000
21	0.0156	0.0092	0.0000
22	0.0129	0.0065	0.0000
23	0.0092	0.0030	0.0000
24	0.0044	0.0000	0.0000

Summary of Assumptions and Methods - Continued

5. Retirement Rates: Separate male and female rates for general employees. For members who reach 30 years of service before age 58, service-based rates are used. For other members, age-based rates are used.

General Employees							
Males				Females			
Service (00/30)		Age (58/10)		Service (00/30)		Age (58/10)	
Service	Ret. Rate	Age	Ret. Rate	Service	Ret. Rate	Age	Ret. Rate
30	30.0%	58	12.0%	30	30.0%	58	12.0%
31	30.0%	59	10.0%	31	25.0%	59	10.0%
32	25.0%	60	10.0%	32	10.0%	60	10.0%
33	25.0%	61	10.0%	33	10.0%	61	10.0%
34	25.0%	62	30.0%	34	10.0%	62	20.0%
35	25.0%	63	20.0%	35	15.0%	63	15.0%
36	25.0%	64	20.0%	36	20.0%	64	15.0%
37	25.0%	65	20.0%	37	25.0%	65	20.0%
38	35.0%	66	25.0%	38	25.0%	66	25.0%
39	50.0%	67	25.0%	39	25.0%	67	25.0%
40	100.0%	68	25.0%	40	100.0%	68	25.0%
		69	30.0%			69	25.0%
		70	30.0%			70	20.0%
		71	30.0%			71	20.0%
		72	30.0%			72	20.0%
		73	30.0%			73	20.0%
		74	30.0%			74	20.0%
		75	100.0%			75	100.0%

Summary of Assumptions and Methods - Continued

5. Retirement Rates (continued): Unisex, service based rates are used for police and fire. Rates depend on whether the unit has elected the optional 20-year retirement provisions. All members are assumed to retire upon reaching age 65 with at least ten years of service.

Police and Fire		
Service	Units with the Optional 20-year retirement election	Units without the Optional 20-year retirement election
20	12.0%	
21	10.0%	
22	10.0%	
23	10.0%	
24	12.0%	
25	14.0%	50.0%
26	16.0%	16.0%
27	18.0%	18.0%
28	20.0%	20.0%
29	20.0%	20.0%
30+	35.0%	35.0%

State of Rhode Island
Actuarial Valuation – June 30, 2005

C. Other Assumptions

1. Percent married: 85% of employees are assumed to be married.
2. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
3. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.
4. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.
5. Recovery from disability: None assumed.
6. Remarriage: It is assumed that no surviving spouse will remarry and there will be no children's benefit.
7. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available.
8. Investment and administrative expenses: The assumed investment return rate represents the anticipated net return after payment of all investment and administrative expenses.
9. Inactive members: Liabilities for inactive members are approximated as a multiple of their member contribution account balances. For nonvested inactive members, the multiple is 1.0. For vested inactive members, the multiple is 8.0 for members with 25 or more years of service, 3.0 for members age 45 or older, and 1.0 for other vested members younger than age 45.
10. Decrement timing: For all members, decrements are assumed to occur at the middle of the year.

Summary of Assumptions and Methods - Continued

V. Participant Data

Participant data was supplied on electronic files. There were separate files for (i) active and inactive members, and (ii) members and beneficiaries receiving benefits.

The data for an active members included birthdate, sex, service, salary and employee contribution account balance. For retired members and beneficiaries, the data included date of birth, sex, spouse's date of birth (where applicable), amount of monthly benefit, date of retirement, and a form of payment code.

Salary supplied for the current year was based on the earnings for the year preceding the valuation date. This salary was adjusted by the salary increase rate for one year. However, for members with less than one year of service, the current rate of salary was used. This salary was adjusted by the salary increase rate for one year.

Assumptions were made for missing or inconsistent data, as warranted. These had no material impact on the results presented.

SECTION V

SUMMARY OF DATA AND EXPERIENCE

List of Tables

Disability experience for male general employees (ordinary disability)	23
Disability experience for female general employees (ordinary disability)	24
Disability experience for police/fire employees (ordinary disability)	25
Disability experience for male general employees (accidental disability)	26
Disability experience for female general employees (accidental disability)	27
Disability experience for police/fire employees (accidental disability)	28
Termination experience for male general employees	29
Termination experience for female general employees	30
Termination experience for police/fire employees	31
Salary experience for general employees	32
Salary experience for police/fire employees	33
Service based retirement experience for male general employees	34
Service based retirement experience for female general employees	35
Service based retirement experience for police/fire employees	36
Age based retirement experience for male general employees	37
Age based retirement experience for female general employees	38

**GENERAL EMPLOYEES
MALE ORDINARY DISABILITY EXPERIENCE**

Age	Actual Retirement	Total Count	Actual Rate	Assumed Rate		Expected Retirement		Actual/Expected	
				Current	Proposed	Current (3) * (5)	Proposed (3) * (6)	Current (2) / (7)	Proposed (2) / (8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Under 20	-	-	N/A	0.0000	0.0000	-	-	N/A	N/A
20-24	-	9	0.0000	0.0005	0.0005	-	-	N/A	N/A
25-29	-	187	0.0000	0.0007	0.0007	-	-	N/A	N/A
30-34	-	379	0.0000	0.0009	0.0009	-	-	N/A	N/A
35-39	-	900	0.0000	0.0012	0.0012	1	1	0%	0%
40-44	1	1,764	0.0006	0.0019	0.0019	3	3	33%	33%
45-49	4	2,231	0.0018	0.0032	0.0032	7	7	57%	57%
50-54	16	2,593	0.0062	0.0054	0.0054	14	14	114%	114%
55-59	8	1,441	0.0056	0.0082	0.0082	11	11	73%	73%
60-64	2	229	0.0087	0.0111	0.0111	2	2	100%	100%
65-69	1	-	N/A	0.0000	0.0000	-	-	N/A	N/A
70-74	1	-	N/A	0.0000	0.0000	-	-	N/A	N/A
75 and over	-	-	N/A	0.0000	0.0000	-	-	N/A	N/A
Totals	33	9,733				38	38	87%	87%

**GENERAL EMPLOYEES
FEMALE ORDINARY DISABILITY EXPERIENCE**

Age	Actual Retirement	Total Count	Actual Rate	Assumed Rate		Expected Retirement		Actual/Expected	
				Current	Proposed	Current (3) * (5)	Proposed (3) * (6)	Current (2) / (7)	Proposed (2) / (8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Under 20	-	-	N/A	0.0000	0.0000	-	-	N/A	N/A
20-24	-	6	0.0000	0.0002	0.0002	-	-	N/A	N/A
25-29	-	84	0.0000	0.0003	0.0003	-	-	N/A	N/A
30-34	-	347	0.0000	0.0004	0.0004	-	-	N/A	N/A
35-39	1	821	0.0012	0.0005	0.0005	-	-	N/A	N/A
40-44	3	1,842	0.0016	0.0008	0.0008	2	2	150%	150%
45-49	3	3,319	0.0009	0.0014	0.0014	5	5	60%	60%
50-54	5	4,588	0.0011	0.0023	0.0023	11	11	45%	45%
55-59	7	2,590	0.0027	0.0035	0.0035	9	9	78%	78%
60-64	3	319	0.0094	0.0048	0.0048	1	1	300%	300%
65-69	1	-	N/A	0.0000	0.0000	-	-	N/A	N/A
70-74	-	-	N/A	0.0000	0.0000	-	-	N/A	N/A
75 and over	-	-	N/A	0.0000	0.0000	-	-	N/A	N/A
Totals	23	13,916				28	28	82%	82%

**POLICE AND FIREFIGHTERS
MALE ORDINARY DISABILITY EXPERIENCE**

Age	Actual Disabilities	Total Count	Actual Rate	Assumed Rate		Expected Disabilities		Actual/Expected	
				Current	Proposed	Current	Proposed	Current (2) / (7)	Proposed (2) / (8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Under 20	-	-	N/A	0.0003	0.0003	-	-	N/A	N/A
20-24	-	4	0.0000	0.0003	0.0003	-	-	N/A	N/A
25-29	-	236	0.0000	0.0005	0.0005	-	-	N/A	N/A
30-34	-	830	0.0000	0.0006	0.0006	1	1	0%	0%
35-39	1	1,464	0.0007	0.0009	0.0009	1	1	100%	100%
40-44	1	1,776	0.0006	0.0014	0.0014	2	2	50%	50%
45-49	1	1,082	0.0009	0.0023	0.0023	2	2	50%	50%
50-54	1	142	0.0070	0.0030	0.0030	-	-	N/A	N/A
55-59	-	-	N/A	0.0030	0.0030	-	-	N/A	N/A
60-64	-	-	N/A	0.0030	0.0030	-	-	N/A	N/A
65-69	-	-	N/A	0.0030	0.0030	-	-	N/A	N/A
70-74	-	-	N/A	0.0030	0.0030	-	-	N/A	N/A
75 and over	-	-	N/A	0.0030	0.0030	-	-	N/A	N/A
Totals	4	5,534				6	6	67%	67%

**GENERAL EMPLOYEES
MALE DUTY DISABILITY EXPERIENCE**

Age	Actual Retirement	Total Count	Actual Rate	Assumed Rate		Expected Retirement		Actual/Expected	
				Current	Proposed	Current (3) * (5)	Proposed (3) * (6)	Current (2) / (7)	Proposed (2) / (8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Under 20	-	-	N/A	0.0000	0.0000	-	-	N/A	N/A
20-24	-	112	0.0000	0.0002	0.0002	-	-	N/A	N/A
25-29	-	453	0.0000	0.0003	0.0002	-	-	N/A	N/A
30-34	-	617	0.0000	0.0004	0.0003	-	-	N/A	N/A
35-39	-	1,262	0.0000	0.0005	0.0004	1	1	0%	0%
40-44	1	2,212	0.0005	0.0008	0.0007	2	2	50%	50%
45-49	2	2,738	0.0007	0.0014	0.0012	4	3	50%	67%
50-54	2	4,742	0.0004	0.0023	0.0019	10	9	20%	22%
55-59	9	2,528	0.0036	0.0035	0.0029	9	7	100%	129%
60-64	1	1,048	0.0010	0.0048	0.0040	5	4	20%	25%
65-69	-	-	N/A	0.0000	0.0000	-	-	N/A	N/A
70-74	-	-	N/A	0.0000	0.0000	-	-	N/A	N/A
75 and over	-	-	N/A	0.0000	0.0000	-	-	N/A	N/A
Totals	15	15,712				31	26	48%	58%

**GENERAL EMPLOYEES
FEMALE DUTY DISABILITY EXPERIENCE**

Age	Actual Retirement	Total Count	Actual Rate	Assumed Rate		Expected Retirement		Actual/Expected	
				Current	Proposed	Current (3) * (5)	Proposed (3) * (6)	Current (2) / (7)	Proposed (2) / (8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Under 20	-	-	N/A	0.0000	0.0000	-	-	N/A	N/A
20-24	-	72	0.0000	0.0001	0.0001	-	-	N/A	N/A
25-29	-	318	0.0000	0.0001	0.0001	-	-	N/A	N/A
30-34	-	649	0.0000	0.0001	0.0001	-	-	N/A	N/A
35-39	-	1,285	0.0000	0.0002	0.0001	-	-	N/A	N/A
40-44	-	2,771	0.0000	0.0003	0.0002	1	1	0%	0%
45-49	1	4,306	0.0002	0.0005	0.0004	2	2	50%	50%
50-54	1	6,862	0.0001	0.0008	0.0006	5	4	20%	25%
55-59	2	4,170	0.0005	0.0012	0.0009	5	4	40%	50%
60-64	2	1,774	0.0011	0.0016	0.0013	3	2	67%	100%
65-69	-	-	N/A	0.0000	0.0000	-	-	N/A	N/A
70-74	-	-	N/A	0.0000	0.0000	-	-	N/A	N/A
75 and over	-	-	N/A	0.0000	0.0000	-	-	N/A	N/A
Totals	6	22,207				16	13	38%	46%

**POLICE AND FIREFIGHTERS
DUTY DISABILITY EXPERIENCE**

Age	Actual Disabilities	Total Count	Actual Rate	Assumed Rate		Expected Disabilities		Actual/Expected	
				Current	Proposed	Current	Proposed	Current (2) / (7)	Proposed (2) / (8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Under 20	-	1	0.0000	0.0021	0.0018	-	-	N/A	N/A
20-24	-	115	0.0000	0.0024	0.0021	-	-	N/A	N/A
25-29	1	685	0.0015	0.0033	0.0029	2	2	50%	50%
30-34	1	1,121	0.0009	0.0043	0.0037	5	4	20%	25%
35-39	8	1,951	0.0041	0.0061	0.0053	12	11	67%	73%
40-44	13	2,228	0.0058	0.0097	0.0083	21	18	62%	72%
45-49	10	1,128	0.0089	0.0160	0.0137	18	15	56%	67%
50-54	6	145	0.0414	0.0212	0.0181	3	3	200%	200%
55-59	3	-	N/A	0.0212	0.0181	-	-	N/A	N/A
60-64	-	-	N/A	0.0212	0.0181	-	-	N/A	N/A
65-69	-	-	N/A	0.0212	0.0181	-	-	N/A	N/A
70-74	-	-	N/A	0.0212	0.0181	-	-	N/A	N/A
75 and over	-	-	N/A	0.0212	0.0181	-	-	N/A	N/A
Totals	42	7,374				61	53	69%	79%

GENERAL EMPLOYEES
SERVICE BASED WITHDRAWAL EXPERIENCE - MALE

Service	Actual Withdrawal	Total Count	Actual Rate	Assumed Rate		Expected Withdrawal		Actual/Expected	
				Current	Proposed	Current	Proposed	Current (2) / (7)	Proposed (2) / (8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	237	1,290	0.1837	0.1750	0.1750	226	226	105%	105%
2	233	1,889	0.1233	0.0959	0.1087	181	205	129%	114%
3	152	1,825	0.0833	0.0825	0.0922	151	168	101%	90%
4	118	1,690	0.0698	0.0713	0.0778	120	132	98%	89%
5	103	1,504	0.0685	0.0618	0.0655	93	99	111%	104%
6	64	1,344	0.0476	0.0541	0.0552	73	74	88%	86%
7	53	1,278	0.0415	0.0480	0.0465	61	59	87%	90%
8	51	1,180	0.0432	0.0431	0.0394	51	46	100%	111%
9	43	1,084	0.0397	0.0395	0.0337	43	37	100%	116%
10	22	994	0.0221	0.0368	0.0293	37	29	59%	76%
11	31	976	0.0318	0.0350	0.0260	34	25	91%	124%
12	21	901	0.0233	0.0338	0.0236	30	21	70%	100%
13	18	874	0.0206	0.0330	0.0220	29	19	62%	95%
14	28	866	0.0323	0.0326	0.0209	28	18	100%	156%
15	19	810	0.0235	0.0323	0.0204	26	17	73%	112%
16	16	768	0.0208	0.0319	0.0201	24	15	67%	107%
17	17	718	0.0237	0.0312	0.0200	22	14	77%	121%
18	11	660	0.0167	0.0302	0.0198	20	13	55%	85%
19	10	604	0.0166	0.0285	0.0195	17	12	59%	83%
20	10	552	0.0181	0.0261	0.0187	14	10	71%	100%
21	3	492	0.0061	0.0227	0.0175	11	9	27%	33%
22	5	417	0.0120	0.0182	0.0156	8	7	63%	71%
23	6	364	0.0165	0.0124	0.0129	5	5	120%	120%
24	5	329	0.0152	0.0052	0.0092	2	3	250%	167%
25	2	300	0.0067	0.0052	0.0044	2	1	100%	200%
Totals	1,278	23,709				1,308	1,264	98%	101%

**GENERAL EMPLOYEES
SERVICE BASED WITHDRAWAL EXPERIENCE - FEMALE**

Service (1)	Actual Withdrawal (2)	Total Count (3)	Actual Rate (4)	Assumed Rate		Expected Withdrawal		Actual/Expected	
				Current (5)	Proposed (6)	Current (7)	Proposed (8)	Current (2) / (7) (9)	Proposed (2) / (8) (10)
1	250	1,384	0.1806	0.1800	0.1800	249	249	100%	100%
2	298	2,459	0.1212	0.1069	0.1143	263	281	113%	106%
3	224	2,494	0.0898	0.0906	0.0973	226	243	99%	92%
4	202	2,447	0.0826	0.0769	0.0824	188	202	107%	100%
5	162	2,300	0.0704	0.0653	0.0695	150	160	108%	101%
6	117	2,148	0.0545	0.0558	0.0584	120	126	98%	93%
7	105	2,051	0.0512	0.0481	0.0491	99	101	106%	104%
8	78	1,928	0.0405	0.0420	0.0412	81	79	96%	98%
9	58	1,755	0.0330	0.0374	0.0348	66	61	88%	95%
10	41	1,583	0.0259	0.0341	0.0296	54	47	76%	88%
11	45	1,445	0.0311	0.0318	0.0255	46	37	98%	122%
12	33	1,340	0.0246	0.0304	0.0223	41	30	80%	111%
13	26	1,297	0.0200	0.0297	0.0199	39	26	67%	101%
14	26	1,257	0.0207	0.0295	0.0181	37	23	70%	114%
15	19	1,217	0.0156	0.0295	0.0169	36	21	53%	93%
16	15	1,160	0.0129	0.0297	0.0159	34	18	44%	81%
17	22	1,067	0.0206	0.0297	0.0152	32	16	69%	135%
18	14	956	0.0146	0.0295	0.0145	28	14	50%	101%
19	6	857	0.0070	0.0287	0.0137	25	12	24%	51%
20	9	753	0.0120	0.0273	0.0127	21	10	43%	94%
21	10	634	0.0158	0.0250	0.0112	16	7	63%	140%
22	1	548	0.0018	0.0217	0.0092	12	5	8%	20%
23	3	424	0.0071	0.0170	0.0065	7	3	43%	109%
24	1	386	0.0026	0.0110	0.0030	4	1	25%	88%
25	0	323	0.0000	0.0032	0.0000	1	0	0%	0%
Totals	1,765	34,213				1,875	1,769	94%	100%

**POLICE AND FIREFIGHTERS
SERVICE BASED WITHDRAWAL EXPERIENCE**

Service (1)	Actual Withdrawal (2)	Total Count (3)	Actual Rate (4)	Assumed Rate		Expected Withdrawal		Actual/Expected	
				Current (5)	Proposed (6)	Current (3) * (5) (7)	Proposed (3) * (6) (8)	Current (2) / (7) (9)	Proposed (2) / (8) (10)
1	43	384	0.1120	0.1010	0.1010	39	39	111%	111%
2	37	685	0.0540	0.0537	0.0537	37	37	101%	101%
3	24	664	0.0361	0.0490	0.0490	33	33	74%	74%
4	22	625	0.0352	0.0444	0.0444	28	28	79%	79%
5	22	589	0.0374	0.0399	0.0399	23	23	94%	94%
6	26	548	0.0474	0.0355	0.0355	19	19	134%	134%
7	17	537	0.0317	0.0317	0.0317	17	17	100%	100%
8	16	508	0.0315	0.0282	0.0282	14	14	112%	112%
9	15	423	0.0355	0.0250	0.0250	11	11	142%	142%
10	10	442	0.0226	0.0220	0.0220	10	10	103%	103%
11	16	438	0.0365	0.0193	0.0193	8	8	189%	189%
12	17	457	0.0372	0.0169	0.0169	8	8	221%	221%
13	15	449	0.0334	0.0148	0.0148	7	7	226%	226%
14	3	439	0.0068	0.0126	0.0126	6	6	54%	54%
15+	7	447	0.0157	0.0110	0.0110	5	5	142%	142%
Totals	290	7,635				264	264	110%	110%

**Salary Scale Assumption
General Employees**

Average Long Service			
Year	Increase	CPI	Productivity
2001	3.09%	3.25%	-0.16%
2002	5.42%	1.07%	4.36%
2003	2.82%	2.11%	0.70%
2004	3.38%	3.27%	0.12%
2005	3.20%	2.53%	0.67%
2006	4.92%	4.32%	0.60%
2007	4.81%	2.69%	2.12%
2008	3.88%	5.02%	-1.14%
2009	3.54%	-1.43%	4.97%
2010	1.52%	1.05%	0.46%
Average	4.35%	2.37%	1.28%
Proposed	4.00%	2.75%	1.25%

Years of Service	Average Pay Increase	Less Actual Inflation and Productivity Components	Actual Step-Rate/Promotional Component	Proposed Step-Rate/Promotional Component
1	0.01%	-3.65%	-3.64%	4.00%
2	3.74%	-3.65%	0.09%	3.00%
3	6.76%	-3.65%	3.11%	2.75%
4	6.54%	-3.65%	2.89%	2.50%
5	5.90%	-3.65%	2.25%	2.25%
6	5.97%	-3.65%	2.32%	2.00%
7	5.34%	-3.65%	1.69%	1.25%
8	4.28%	-3.65%	0.63%	0.75%
9	4.19%	-3.65%	0.54%	0.50%
10	4.67%	-3.65%	1.01%	0.50%
11	4.30%	-3.65%	0.65%	0.25%
12	3.72%	-3.65%	0.07%	0.25%
13	3.71%	-3.65%	0.06%	0.25%
14	3.83%	-3.65%	0.17%	0.25%
15	4.16%	-3.65%	0.51%	0.25%
16+	3.65%	-3.65%	0.00%	0.00%

Years of Service	Average Pay Increase	Less Actual Inflation and Productivity Components	Actual Step-Rate/Promotional Component	Proposed Step-Rate/Promotional Component
1	0.01%	-3.65%	-3.64%	4.00%
2	3.74%	-3.65%	0.09%	3.00%
3	6.76%	-3.65%	3.11%	2.75%
4	6.54%	-3.65%	2.89%	2.50%
5	5.90%	-3.65%	2.25%	2.25%
6	5.97%	-3.65%	2.32%	2.00%
7	5.34%	-3.65%	1.69%	1.25%
8	4.28%	-3.65%	0.63%	0.75%
9	4.19%	-3.65%	0.54%	0.50%
10	4.67%	-3.65%	1.01%	0.50%

**Salary Scale Assumption
Police and FireFighters**

Average Long Service			
Year	Increase	CPI	Productivity
2001	3.24%	3.25%	-0.01%
2002	4.46%	1.07%	3.40%
2003	3.81%	2.11%	1.70%
2004	4.05%	3.27%	0.79%
2005	0.74%	2.53%	-1.79%
2006	8.87%	4.32%	4.55%
2007	5.76%	2.69%	3.08%
2008	2.79%	5.02%	-2.23%
2009	3.24%	-1.43%	4.66%
2010	3.52%	1.05%	4.66%
Average	5.36%	2.37%	1.66%
Proposed	4.25%	2.75%	1.50%

Years of Service	Average Pay Increase	Less Actual Inflation and Productivity Components	Actual Step-Rate/Promotional Component	Proposed Step-Rate/Promotional Component
1	10.20%	-4.03%	6.17%	10.00%
2	13.32%	-4.03%	9.29%	9.00%
3	10.53%	-4.03%	6.50%	6.00%
4	7.29%	-4.03%	3.26%	3.00%
5	6.52%	-4.03%	2.49%	2.50%
6	6.34%	-4.03%	2.31%	2.00%
7	4.64%	-4.03%	0.61%	0.50%
8	4.65%	-4.03%	0.62%	0.50%
9	3.94%	-4.03%	-0.09%	0.25%
10	3.81%	-4.03%	-0.22%	0.25%
11+	4.03%	-4.03%	0.00%	0.00%

GENERAL EMPLOYEES
MALE RETIREMENT EXPERIENCE - SERVICE BASED

For members who reach 30 years of service before age 58

Service Year	Actual Retirement	Total Count	Actual Rate	Assumed Rate		Expected Retirement		Actual/Expected	
				Current	Proposed	Current	Proposed	Current (2) / (7)	Proposed (2) / (8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
30	23	90	0.256	0.300	0.300	27	27	85%	85%
31	25	77	0.325	0.250	0.300	19	23	130%	109%
32	14	63	0.222	0.150	0.250	9	16	148%	88%
33	12	50	0.240	0.150	0.250	8	13	160%	92%
34	8	37	0.216	0.150	0.250	6	9	144%	89%
35	7	35	0.200	0.250	0.250	9	9	80%	78%
36	9	24	0.375	0.250	0.250	6	6	150%	150%
37	4	19	0.211	0.250	0.250	5	5	84%	80%
38	5	15	0.333	0.250	0.350	4	5	133%	100%
39	4	7	0.571	0.250	0.500	2	4	229%	100%
40	1	2	0.500	1.000	1.000	2	2	50%	50%
41	-	1	0.000	1.000	1.000	1	1	0%	0%
42	1	1	1.000	1.000	1.000	1	1	100%	100%
43	-	-	N/A	1.000	1.000	-	-	N/A	N/A
44	-	-	N/A	1.000	1.000	-	-	N/A	N/A
45	-	-	N/A	1.000	1.000	-	-	N/A	N/A
46	-	-	N/A	1.000	1.000	-	-	N/A	N/A
47	-	-	N/A	1.000	1.000	-	-	N/A	N/A
48	-	-	N/A	1.000	1.000	-	-	N/A	N/A
49	1	3	0.333	1.000	1.000	3	3	33%	33%
Other	-	-	N/A	0.000	0.000	-	-	N/A	N/A
Total	114	424	0.269			101	124	113%	92%

GENERAL EMPLOYEES
FEMALE RETIREMENT EXPERIENCE - SERVICE BASED
For members who reach 30 years of service before age 58

Service Year	Actual Retirement	Total Count	Actual Rate	Assumed Rate		Expected Retirement		Actual/Expected	
				Current	Proposed	Current	Proposed	Current (2) / (7)	Proposed (2) / (8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
30	13	40	0.325	0.200	0.300	8	12	163%	108%
31	9	35	0.257	0.150	0.250	5	9	171%	100%
32	2	27	0.074	0.075	0.100	2	3	99%	67%
33	3	30	0.100	0.075	0.100	2	3	133%	100%
34	2	28	0.071	0.075	0.100	2	3	95%	67%
35	3	25	0.120	0.150	0.150	4	4	80%	75%
36	2	19	0.105	0.200	0.200	4	4	53%	50%
37	5	16	0.313	0.200	0.250	3	4	156%	125%
38	4	15	0.267	0.150	0.250	2	4	178%	100%
39	1	7	0.143	0.150	0.250	1	2	95%	50%
40	1	4	0.250	1.000	1.000	4	4	25%	25%
41	-	1	0.000	1.000	1.000	1	1	0%	0%
42	-	1	0.000	1.000	1.000	1	1	0%	0%
43	-	1	0.000	1.000	1.000	1	1	0%	0%
44	-	-	N/A	1.000	1.000	-	-	N/A	N/A
45	-	-	N/A	1.000	1.000	-	-	N/A	N/A
46	-	-	N/A	1.000	1.000	-	-	N/A	N/A
47	-	-	N/A	1.000	1.000	-	-	N/A	N/A
48	-	-	N/A	1.000	1.000	-	-	N/A	N/A
49	-	-	N/A	1.000	1.000	-	-	N/A	N/A
Other	-	-	N/A	0.000	0.000	-	-	N/A	N/A
Total	45	249	0.181			41	55	111%	82%

**POLICE & FIRE UNITS WITH THE OPTIONAL 20-YEAR RETIREMENT
RETIREMENT EXPERIENCE - SERVICE BASED**
For members who reach 20 years of service

Service Year	Actual Retirement	Total Count	Actual Rate	Assumed Rate		Expected Retirement		Actual/Expected	
				Current	Proposed	Current	Proposed	Current (2) / (7)	Proposed (2) / (8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
20	18	224	0.080	0.150	0.120	34	27	54%	67%
21	31	192	0.161	0.100	0.100	19	19	161%	161%
22	12	135	0.089	0.050	0.100	7	14	178%	89%
23	7	113	0.062	0.050	0.100	6	11	124%	62%
24	12	102	0.118	0.050	0.120	5	12	235%	98%
25	12	71	0.169	0.100	0.140	7	10	169%	121%
26	11	78	0.141	0.120	0.160	9	12	118%	88%
27	9	59	0.153	0.140	0.180	8	11	109%	85%
28	5	51	0.098	0.160	0.200	8	10	61%	49%
29	9	34	0.265	0.180	0.200	6	7	147%	132%
30 or more	27	84	0.321	0.350	0.350	29	29	92%	92%
Total	153	1,143	0.134			139	163	110%	94%

GENERAL EMPLOYEES
MALE RETIREMENT EXPERIENCE - AGE BASED
For members who reach age 58 before 30 years of service

Age	Actual Retirement	Total Count	Actual Rate	Assumed Rate		Expected Retirement		Actual/Expected	
				Current	Proposed	Current (3) * (5)	Proposed (3) * (6)	Current (2) / (7)	Proposed (2) / (8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
58	26	285	0.091	0.150	0.120	43	34	60%	76%
59	29	237	0.122	0.100	0.100	24	24	121%	121%
60	14	216	0.065	0.100	0.100	22	22	64%	64%
61	16	214	0.075	0.100	0.100	21	21	76%	76%
62	50	201	0.249	0.300	0.300	60	60	83%	83%
63	29	161	0.180	0.250	0.200	40	32	73%	91%
64	23	122	0.189	0.250	0.200	31	24	74%	96%
65	20	110	0.182	0.250	0.200	28	22	71%	91%
66	22	100	0.220	0.300	0.250	30	25	73%	88%
67	23	87	0.264	0.300	0.250	26	22	88%	105%
68	17	69	0.246	0.300	0.250	21	17	81%	100%
69	17	56	0.304	0.300	0.300	17	17	100%	100%
70	13	37	0.351	0.200	0.300	7	11	186%	118%
71	6	27	0.222	0.200	0.300	5	8	120%	75%
72	10	23	0.435	0.200	0.300	5	7	200%	143%
73	2	16	0.125	0.200	0.300	3	5	67%	40%
74	1	13	0.077	0.200	0.300	3	4	33%	25%
Subtotal	318	1,974	0.161			386	355	82%	90%
75 & Over	19	110	0.173	0.200	0.300	110	110	17%	17%
Total	337	2,084	0.162			496	465	68%	72%

GENERAL EMPLOYEES
FEMALE RETIREMENT EXPERIENCE - AGE BASED

For members who reach age 58 before 30 years of service

Age	Actual Retirement	Total Count	Actual Rate	Assumed Rate		Expected Retirement		Actual/Expected	
				Current	Proposed	Current (3) * (5)	Proposed (3) * (6)	Current (2) / (7)	Proposed (2) / (8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
58	53	579	0.092	0.150	0.120	87	69	61%	77%
59	54	518	0.104	0.100	0.100	52	52	104%	104%
60	38	472	0.081	0.100	0.100	47	47	81%	81%
61	47	419	0.112	0.100	0.100	42	42	112%	112%
62	74	398	0.186	0.200	0.200	80	80	93%	93%
63	52	308	0.169	0.150	0.150	46	46	113%	113%
64	42	254	0.165	0.150	0.150	38	38	111%	111%
65	37	218	0.170	0.200	0.200	44	44	84%	84%
66	58	178	0.326	0.200	0.250	36	45	161%	129%
67	36	138	0.261	0.200	0.250	28	35	129%	103%
68	27	108	0.250	0.200	0.250	22	27	123%	100%
69	17	79	0.215	0.200	0.250	16	20	106%	85%
70	18	62	0.290	0.200	0.200	12	12	150%	150%
71	8	43	0.186	0.200	0.200	9	9	89%	89%
72	4	34	0.118	0.200	0.200	7	7	57%	57%
73	4	31	0.129	0.200	0.200	6	6	67%	67%
74	7	31	0.226	0.200	0.200	6	6	117%	117%
Subtotal	576	3,870	0.149			578	585	100%	98%
75 & Over	29	103	0.282	0.200	0.200	103	103	28%	28%
Total	605	3,973	0.152			681	688	89%	88%

