

**THE JUDICIAL RETIREMENT SYSTEM  
OF NEW JERSEY  
REPORT ON AN INVESTIGATION OF EXPERIENCE  
PREPARED AS OF JUNE 30, 2008**

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May 14, 2009

State House Commission  
The Judicial Retirement System  
of New Jersey  
Trenton, New Jersey 08625-0295

Members of the Commission:

This year an actuarial investigation of the mortality and service experience of the members and beneficiaries of the retirement system was made in accordance with the provisions of Section 31 of Chapter 140, P.L. 1973. This Section specifies that such an investigation shall be made once in every three-year period. The results of this investigation, which examined the experience of the System from July 1, 2005 to June 30, 2008 are described in the attached report.

Please note that we have examined only the demographic and current salary increase assumptions and have not addressed the other economic assumptions, namely the interest rate assumption and the cost-of-living assumption.

To the best of our knowledge, this experience investigation report is complete and accurate. The experience investigation was performed by, and under the supervision of, independent qualified actuaries who are members of the American Academy of Actuaries with experience in performing experience investigations for public retirement systems.

We are available at the Board's convenience to discuss this report.

Respectfully submitted,



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**REPORT ON AN INVESTIGATION OF THE EXPERIENCE OF THE  
JUDICIAL RETIREMENT SYSTEM OF NEW JERSEY  
PREPARED AS OF JUNE 30, 2008**

**I. INTRODUCTION**

Section 31 of Chapter 140, P.L. 1973 of the New Jersey Statutes provides that once in every three-year period the actuary shall examine in detail the mortality and service experience of the members and beneficiaries of the Retirement System. This investigation is designed to ensure that the tables used for determining expected liabilities of the Retirement System are consistent with recent experience. If tables are not updated periodically, the liabilities of the System may be overstated or understated, and resulting contributions either too large or too small to fund the actual accruing liabilities.

This report summarizes the Retirement System's experience for the period from July 1, 2005 to June 30, 2008. Experience for active male and female members and disabled members were combined for the study. Mortality experience among service retired members and beneficiaries were based on gender. In instances where the data being examined appeared inconsistent with prior results or incomplete, we made no recommendation. These items will be reviewed closely when the next scheduled experience study is prepared as of June 30, 2011 and proposed changes, if warranted, will be recommended at that time.

Also, as noted earlier, we have included an examination of the current salary increase assumption in this study.

## II. EXAMINATION OF EXPERIENCE

As noted earlier, the examination this year covers the three-year period from July 1, 2005 to June 30, 2008. Where appropriate, we have made reference to trends that were first identified in prior studies.

The experience among active members has been compared with the experience expected according to the current active service and retirement tables. The experience among retired members and beneficiaries has also been compared with the experience expected according to the current mortality tables.

In the case of withdrawals, the current assumption is that no termination will occur prior to retirement. The information presented shows the actual number of vested and non-vested terminations. In investigating the experience with respect to death, male and female members were examined separately. With regard to disability and retirement, members were treated in one group. The expected number of separations from service on account of withdrawal, death, disability and service retirement were calculated by multiplying the rates of separation used as a basis for the active service tables by the number of those exposed to risk. The actual number of those who had separated from service was then compared with the expected number. If the ratio of actual to expected is 1.000, the tables have exactly predicted what actually occurred. If the ratio of actual to expected is greater than 1.000, then the tables have underestimated actual experience. If the ratio is less than 1.000, then the tables have overstated actual experience.

Finally, in accordance with the current salary increase assumption, the expected salaries of those members who remain in service from year to year were obtained and these expected salaries were compared with the actual salaries. Again, a ratio of actual to expected of 1.000 would indicate that actual salary increases were identical to anticipated increases while a ratio greater than 1.000 indicates that salaries

have increased faster than anticipated and a ratio less than 1.000 indicates that salaries have increased slower than anticipated.

The following tables examine the experience for active and inactive employees.

**(A) ACTIVE PLAN EXPERIENCE**

The first portion of this section contains a summary of active plan experience which examines the following rates:

- Withdrawal Rates
- Death Rates
- Disability Rates
- Service Retirement Rates
- Salary Increase Rates

**TABLE 1**

**COMPARISON OF ACTUAL AND EXPECTED SEPARATIONS  
FROM ACTIVE SERVICE**

**VESTED AND NON-VESTED WITHDRAWALS**

<b>Central Age of Group</b>	<b>Exposures</b>	<b>Actual Terminations</b>	<b>Expected Terminations</b>	<b>Ratio of Actual to Expected</b>
35	0	0	0.00	0.0000
40	2	0	0.00	0.0000
45	71	1	0.00	0.0000
50	172	1	0.00	0.0000
55	267	2	0.00	0.0000
58	68	0	0.00	0.0000
59	65	1	0.00	0.0000
<b>Total</b>	<b>645</b>	<b>5</b>	<b>0.00</b>	<b>0.0000</b>



**TABLE 2**  
**COMPARISON OF ACTUAL AND EXPECTED SEPARATIONS**  
**FROM ACTIVE SERVICE**

**DEATHS**

<b>Sex</b>	<b>Central Age of Group</b>	<b>Exposures</b>	<b>Actual Deaths</b>	<b>Expected Deaths</b>	<b>Ratio of Actual To Expected</b>
Male	20	0	0	0.00	0.0000
	25	0	0	0.00	0.0000
	30	0	0	0.00	0.0000
	35	0	0	0.00	0.0000
	40	2	0	0.00	0.0000
	45	31	0	0.04	0.0000
	50	111	0	0.25	0.0000
	55	238	0	0.94	0.0000
	60	321	1	1.97	0.5076
	65	216	1	1.94	0.5155
	68	20	0	0.25	0.0000
	69	27	0	0.37	0.0000
	<b>Total</b>	<b>966</b>	<b>2</b>	<b>5.76</b>	<b>0.3472</b>
Female	20	0	0	0.00	0.0000
	25	0	0	0.00	0.0000
	30	0	0	0.00	0.0000
	35	0	0	0.00	0.0000
	40	0	0	0.00	0.0000
	45	40	0	0.04	0.0000
	50	68	0	0.12	0.0000
	55	90	0	0.24	0.0000
	60	69	0	0.29	0.0000
	65	30	0	0.19	0.0000
	68	2	0	0.02	0.0000
	69	3	0	0.03	0.0000
	<b>Total</b>	<b>302</b>	<b>0</b>	<b>0.93</b>	<b>0.0000</b>

**TABLE 3**  
**COMPARISON OF ACTUAL AND EXPECTED SEPARATIONS**  
**FROM ACTIVE SERVICE**  
**DISABILITY RETIREMENTS**

<b>Central Age of Group</b>	<b>Exposures</b>	<b>Actual Disabilities</b>	<b>Expected Disabilities</b>	<b>Ratio of Actual to Expected</b>
35	0	0	0.00	0.0000
40	2	0	0.00	0.0000
45	71	0	0.05	0.0000
50	179	0	0.21	0.0000
55	328	0	0.65	0.0000
60	390	0	1.28	0.0000
65	246	2	1.14	1.7544
68	22	0	0.13	0.0000
69	30	0	0.20	0.0000
<b>Total</b>	<b>1,268</b>	<b>2</b>	<b>3.66</b>	<b>0.5464</b>

**TABLE 4**  
**COMPARISON OF ACTUAL AND EXPECTED SEPARATIONS**  
**FROM ACTIVE SERVICE**  
**RATES OF RETIREMENT**

Type	Age	Exposures	Actual Retirements	Expected Retirements	Ratio of Actual to Expected
Retirements at age 60 with 20 years of judicial service or age 65 with 15 years of judicial service	60	7	2	2.10	0.9524
	61	5	1	1.00	1.0000
	62	11	3	2.20	1.3636
	63	12	3	2.40	1.2500
	64	13	1	2.60	0.3846
	65	34	10	8.50	1.1765
	66	19	4	3.80	1.0526
	67	15	4	3.00	1.3333
	68	15	0	3.00	0.0000
	69	14	0	2.80	0.0000
Total		145	28	31.40	0.8917
Retirements after age 59 with less than 12 years of judicial service	60	42	2	0.00	0.0000
	61	40	0	0.00	0.0000
	62	31	1	0.00	0.0000
	63	20	0	0.00	0.0000
	64	15	0	0.00	0.0000
	65	14	0	0.00	0.0000
	66	13	0	0.00	0.0000
	67	13	2	0.00	0.0000
	68	5	0	0.00	0.0000
	69	10	0	0.00	0.0000
Total		203	5	0.00	0.0000

**TABLE 4**  
**(Continued)**

**COMPARISON OF ACTUAL AND EXPECTED SEPARATIONS  
FROM ACTIVE SERVICE**

**RATES OF RETIREMENT**

<b>Type</b>	<b>Age</b>	<b>Exposures</b>	<b>Actual Retirements</b>	<b>Expected Retirements</b>	<b>Ratio of Actual to Expected</b>
Retirements after age 59 with 12 or more years of judicial service (but not age 60 with 20 years of judicial service or age 65 with 15 years of judicial service)	60	30	0	0.00	0.0000
	61	30	1	0.00	0.0000
	62	31	0	0.00	0.0000
	63	34	0	0.00	0.0000
	64	29	0	0.00	0.0000
	65	9	1	2.25	0.4444
	66	4	0	0.00	0.0000
	67	2	0	0.00	0.0000
	68	2	0	0.00	0.0000
	69	6	0	0.00	0.0000
	<b>Total</b>	<b>177</b>	<b>2</b>	<b>2.25</b>	<b>0.8889</b>
Early retirement prior to age 60 with 5 years of judicial service and 25 or more years of aggregate public service	Under 53	6	0	0.00	0.0000
	53	8	0	0.00	0.0000
	54	5	0	0.00	0.0000
	55	11	0	0.00	0.0000
	56	15	0	0.00	0.0000
	57	22	0	0.00	0.0000
	58	17	0	0.00	0.0000
	59	13	0	0.00	0.0000
		<b>Total</b>	<b>97</b>	<b>0</b>	<b>0.00</b>

**TABLE 5**  
**COMPARISON OF ACTUAL AND EXPECTED**  
**ACTIVE SALARY INCREASES**

CENTRAL AGE OF GROUP	SALARY INCREASE			Ratio of Actual to Expected
	Actual Salary from Previous Year	Actual	Expected	
40	\$ 0	\$ 0	\$ 0	0.000
45	5,180,000	5,388,000	5,462,310	0.986
50	16,578,511	17,253,557	17,482,040	0.987
55	39,148,345	40,692,481	41,281,930	0.986
60	53,607,392	55,674,261	56,528,995	0.985
65	45,016,378	46,680,080	47,469,771	0.983
Greater than 67	7,720,109	7,993,473	8,140,855	0.982
<b>Total</b>	<b>\$ 167,250,735</b>	<b>\$ 173,681,852</b>	<b>\$ 176,365,901</b>	<b>0.985</b>

## **INACTIVE PLAN EXPERIENCE**

The second portion of this section contains a summary of inactive plan experience which examines the following rates:

- Service Retirement and Beneficiary Mortality Rates
- Disability Mortality Rates

TABLE 6

**COMPARISON OF ACTUAL AND EXPECTED CASES OF DEATH  
AMONG SERVICE RETIRED MEMBERS AND BENEFICIARIES**

<b>Sex</b>	<b>Central Age of Group</b>	<b>Exposures</b>	<b>Actual Deaths</b>	<b>Expected Deaths</b>	<b>Ratio of Actual to Expected</b>
Male	20	5	0	0.0021	0.0000
	25	0	0	0.0000	0.0000
	30	0	0	0.0000	0.0000
	35	0	0	0.0000	0.0000
	40	0	0	0.0000	0.0000
	45	0	0	0.0000	0.0000
	50	1	0	0.0035	0.0000
	55	3	0	0.0139	0.0000
	60	32	0	0.2518	0.0000
	65	113	3	1.3152	2.2810
	70	198	3	4.0889	0.7337
	75	202	4	6.7216	0.5951
	80	148	4	5.9414	0.6732
	85	85	6	4.9306	1.2169
	90	52	8	6.3005	1.2697
	<b>Total</b>	<b>839</b>	<b>28</b>	<b>29.5695</b>	<b>0.9469</b>
Female	20	0	0	0.0000	0.0000
	25	0	0	0.0000	0.0000
	30	0	0	0.0000	0.0000
	35	0	0	0.0000	0.0000
	40	0	0	0.0000	0.0000
	45	1	0	0.0016	0.0000
	50	3	0	0.0045	0.0000
	55	9	0	0.0229	0.0000
	60	19	0	0.0831	0.0000
	65	44	2	0.3163	6.3231
	70	77	1	0.9862	1.0140
	75	90	2	2.1660	0.9234
	80	77	3	3.1155	0.9629
	85	92	2	5.3514	0.3737
	90	86	15	9.4276	1.5911
	<b>Total</b>	<b>498</b>	<b>25</b>	<b>21.4751</b>	<b>1.1641</b>

**TABLE 7**  
**COMPARISON OF ACTUAL AND EXPECTED CASES OF DEATH**  
**AMONG DISABLED MEMBERS**

<b>Central Age of Group</b>	<b>Exposures</b>	<b>Actual Deaths</b>	<b>Expected Deaths</b>	<b>Ratio of Actual to Expected</b>
20	0	0	0.0000	0.0000
25	0	0	0.0000	0.0000
30	0	0	0.0000	0.0000
35	0	0	0.0000	0.0000
40	0	0	0.0000	0.0000
45	0	0	0.0000	0.0000
50	3	0	0.0215	0.0000
55	0	0	0.0000	0.0000
60	0	0	0.0000	0.0000
65	5	1	0.1712	5.8411
70	2	0	0.1278	0.0000
75	4	0	0.3424	0.0000
80	2	0	0.2989	0.0000
85	4	1	0.7777	1.2858
90	1	1	0.3651	2.7390
<b>Total</b>	<b>21</b>	<b>3</b>	<b>2.1046</b>	<b>1.4254</b>



### **III. COMMENTS AND GENERAL RECOMMENDATION OF ACTUARIES**

#### **RATES OF WITHDRAWAL**

The current assumption is that no vested (meeting the vested eligibility requirement of five or more years of judicial service and ten or more years of aggregate public service) or non-vested (prior to meeting the vesting requirement) terminations will occur. Table 1 illustrates that there were 5 terminations out of 645 exposures, or approximately 0.8%, during the study period. This is in line with the experience from the prior three studies and supports the current assumption. Therefore, we do not recommend any change to the assumed rates of withdrawal.

#### **RATES OF DEATH AMONG ACTIVE MEMBERS**

The data (summarized in Table 2) examined during the three-year measurement period shows that the experience for male and female active members are within an acceptable range of that expected. However, due to the small number of members exposed and continued mortality improvement in the general population, we propose the use of a recently published mortality table.

#### **RATES OF DISABILITY RETIREMENT**

Table 3 shows that actual disabilities for active members were within an acceptable range of that expected and no change is recommended to the assumed rates of disability among active members.

#### **RATES OF SERVICE RETIREMENT**

The current assumption is that 30% at age 60, 25% at age 65 and 20% at all other ages of the active members who have attained age 60 with 20 years of judicial service or who have attained age 65 with 15 years of judicial service will retire each year up to age 70. At age 70, all remaining active members are assumed to retire. Also, there is an additional 25% probability that judges who are at least age 60 and

have more than 12 years of judicial service (but not age 60 with 20 years of judicial service or age 65 with 15 years of judicial service) will retire at age 65.

The first section of Table 4 presents the experience for members who are age 60 or over with at least 20 years of judicial service or who are at least age 65 with 15 or more years of judicial service. Actual retirements for the three-year period were about 89% of that expected (roughly 19% of those eligible actually retired when 22% was expected). This is within an acceptable range of that expected and no change is recommended to the current assumed rates of retirement.

The second section of Table 4 summarizes the experience for members who are at least age 60 and have less than 12 years of judicial service. Although no retirements were expected from this group during the three year study period, 5 judges actually retired. However, this incidence of retirement is relatively small and we are not recommending any change to this assumption at this time.

The next section of Table 4 contains the experience for retirements of members with 12 or more years of judicial service (but not age 60 with 20 years of judicial service or age 65 with 15 years of judicial service). The number of actual retirements is within an acceptable range of that expected, therefore, we do not recommend any change to the assumed rates of retirement within this group.

Similarly, the last section of Table 4 summarizes the data for members who meet the Early Retirement eligibility (prior to age 60 while serving as a judge with 5 consecutive years of judicial service and 25 or more years of aggregate public service). The current assumption is that there are no retirements for this group. There were 0 actual retirement out of 97 exposures. This is as expected and we do not recommend any changes in this assumption.

### **RATES OF SALARY INCREASE**

Table 5 shows that the current salary increase assumption of 5.45% per year is higher than the actual salary increase experience during the study period. The actual salary increase rate is 3.85% while we expected a rate of 5.45%. In addition, based on historical data we have accumulated for our five previous experience studies, it appears that members of the system do not receive salary increases on an annual basis. Therefore, we are recommending a change to the salary scale assumption from the current 5.45% to 4.50% per year.

### **RATES OF MORTALITY AMONG RETIRED MEMBERS AND BENEFICIARIES**

The data for healthy inactive mortality, which is summarized in Table 6, shows that the actual mortality experience among service retired male and female members and beneficiaries are within the acceptable range of that expected. However, due to the small number of members exposed and continued mortality improvement in the general population, we propose the use of a recently published mortality table.

Table 7 shows that the experience for death among disabled members is well in line with that expected and no changes are recommended.

#### IV. PROPOSED NEW ASSUMPTIONS

The experience investigation for the period from July 1, 2005 through June 30, 2008 was based on information received from the Division of Pensions and Benefits for the June 30, 2006 through June 30, 2008 valuations. Based on an examination of the three-year study period, we are proposing the following changes:

<u>Rates</u>	<u>Proposed Changes</u>
Vested and Non-Vested Withdrawals	No Change
Active Death	RP-2000 Combined Healthy Mortality Tables*
Disability	No Change
Retirement	
<ul style="list-style-type: none"> <li>• Age 60 with 20 years of judicial service or age 65 with 15 years of judicial service</li> </ul>	No Change
<ul style="list-style-type: none"> <li>• Age 60 with less than 12 years of judicial service</li> </ul>	No Change
<ul style="list-style-type: none"> <li>• Age 60 with twelve or more years of judicial service (but not meeting the 60/20 or 65/15 eligibility)</li> </ul>	No Change
<ul style="list-style-type: none"> <li>• Less than age 60 with 5 years of judicial service and 25 or more years of public service</li> </ul>	No Change
Salary Increase	Decrease
Inactive Mortality	
<ul style="list-style-type: none"> <li>• Retired male and female members and beneficiaries</li> </ul>	RP-2000 Combined Healthy Mortality Tables*
<ul style="list-style-type: none"> <li>• Disability retirements</li> </ul>	RP-2000 Disabled Tables**

\* The proposed assumption includes a 5-year setback for the male mortality table and a 3-year setback for the female mortality table.

\*\* The proposed assumption includes a 2-year set forward for both male and female mortality tables.

The following tables give a comparison of the present, actual and proposed rates of separation from active service and rates of mortality for retired members at quinquennial ages.

**TABLE 8****COMPARISON OF ACTUAL AND EXPECTED RATES OF SEPARATION  
FROM ACTIVE SERVICE****VESTED AND NON-VESTED WITHDRAWALS**

<b>Central Age of Group</b>	<b>Current Rates</b>	<b>Actual Rates</b>	<b>Proposed Rates: No Change</b>
35	0.00000	0.00000	0.00000
40	0.00000	0.00000	0.00000
45	0.00000	0.01408	0.00000
50	0.00000	0.00581	0.00000
55	0.00000	0.00749	0.00000
60	0.00000	0.00000	0.00000
65	0.00000	0.00000	0.00000
68	0.00000	0.00000	0.00000
69	0.00000	0.00000	0.00000

**TABLE 9**  
**COMPARISON OF ACTUAL AND EXPECTED RATES OF SEPARATION**  
**FROM ACTIVE SERVICE**

**DEATHS**

<b>Sex</b>	<b>Central Age of Group</b>	<b>Current Rates</b>	<b>Actual Rates</b>	<b>Proposed Rates</b>
Male	20	0.00037	0.00000	0.00028
	25	0.00039	0.00000	0.00034
	30	0.00046	0.00000	0.00038
	35	0.00061	0.00000	0.00046
	40	0.00085	0.00000	0.00077
	45	0.00126	0.00000	0.00108
	50	0.00222	0.00000	0.00151
	55	0.00393	0.00000	0.00222
	60	0.00615	0.00312	0.00373
	65	0.00929	0.00463	0.00688
68	0.01239	0.00000	0.01001	
69	0.01387	0.00000	0.01128	
Female	20	0.00020	0.00000	0.00019
	25	0.00025	0.00000	0.00019
	30	0.00034	0.00000	0.00023
	35	0.00047	0.00000	0.00035
	40	0.00067	0.00000	0.00056
	45	0.00103	0.00000	0.00086
	50	0.00165	0.00000	0.00133
	55	0.00257	0.00000	0.00204
	60	0.00428	0.00000	0.00353
	65	0.00714	0.00000	0.00676
68	0.00970	0.00000	0.00971	
69	0.01092	0.00000	0.01095	

**TABLE 10**  
**COMPARISON OF ACTUAL AND EXPECTED RATES OF SEPARATION**  
**FROM ACTIVE SERVICE**  
**DISABILITY RETIREMENTS**

Central Age of Group	Current Rates	Actual Rates	Proposed Rates: No Change
35	0.00026	0.00000	0.00026
40	0.00034	0.00000	0.00034
45	0.00063	0.00000	0.00063
50	0.00115	0.00000	0.00115
55	0.00193	0.00000	0.00193
60	0.00326	0.00000	0.00326
65	0.00477	0.00813	0.00477
68	0.00599	0.00000	0.00599
69	0.00652	0.00000	0.00652



**TABLE 11**  
**COMPARISON OF ACTUAL AND EXPECTED RATES OF SEPARATION**  
**FROM ACTIVE SERVICE RETIREMENTS**

<b>Type</b>	<b>Central Age of Group</b>	<b>Current Rates</b>	<b>Actual Rates</b>	<b>Proposed Rates: No Change</b>
Age 60 with 20 years of judicial service or age 65 with 15 years of judicial service	60	0.30000	0.28571	0.30000
	61	0.20000	0.20000	0.20000
	62	0.20000	0.27273	0.20000
	63	0.20000	0.25000	0.20000
	64	0.20000	0.07692	0.20000
	65	0.25000	0.29412	0.25000
	66	0.20000	0.21053	0.20000
	67	0.20000	0.26667	0.20000
	68	0.20000	0.00000	0.20000
	69	0.20000	0.00000	0.20000
After age 59 with less than 12 years of judicial service	60	0.00000	0.04762	0.00000
	61	0.00000	0.00000	0.00000
	62	0.00000	0.03226	0.00000
	63	0.00000	0.00000	0.00000
	64	0.00000	0.00000	0.00000
	65	0.00000	0.00000	0.00000
	66	0.00000	0.00000	0.00000
	67	0.00000	0.15385	0.00000
	68	0.00000	0.00000	0.00000
	69	0.00000	0.00000	0.00000
After age 59 with twelve or more years of judicial service (but not age 60 with 20 years of judicial service or age 65 with 15 years of judicial service)	60	0.00000	0.00000	0.00000
	61	0.00000	0.03333	0.00000
	62	0.00000	0.00000	0.00000
	63	0.00000	0.00000	0.00000
	64	0.00000	0.00000	0.00000
	65	0.25000	0.11111	0.25000
	66	0.00000	0.00000	0.00000
	67	0.00000	0.00000	0.00000
	68	0.00000	0.00000	0.00000
	69	0.00000	0.00000	0.00000
Prior to age 60 with 5 years of judicial service and 25 or more years of aggregate public service	50	0.00000	0.00000	0.00000
	51	0.00000	0.00000	0.00000
	52	0.00000	0.00000	0.00000
	53	0.00000	0.00000	0.00000
	54	0.00000	0.00000	0.00000
	55	0.00000	0.00000	0.00000
	56	0.00000	0.00000	0.00000
	57	0.00000	0.00000	0.00000
	58	0.00000	0.00000	0.00000
	59	0.00000	0.00000	0.00000

**TABLE 12**  
**COMPARISON OF ACTUAL AND EXPECTED**  
**SALARY INCREASES**

Central Age of Group	Current Rates	Actual Rates	Proposed Rates
40	5.45%	N/A	4.50%
45	5.45%	4.02%	4.50%
50	5.45%	4.07%	4.50%
55	5.45%	3.94%	4.50%
60	5.45%	3.86%	4.50%
65	5.45%	3.70%	4.50%
Greater than 67	5.45%	3.54%	4.50%

TABLE 13

**COMPARISON OF ACTUAL AND EXPECTED RATES OF MORTALITY  
AMONG RETIRED MEMBERS AND BENEFICIARIES**

**MALES**

<b>Central Age of Group</b>	<b>Current Rates</b>	<b>Actual Rates</b>	<b>Proposed Rates</b>
45	0.00156	0.00000	0.00108
50	0.00282	0.00000	0.00151
55	0.00477	0.00000	0.00222
60	0.00720	0.00000	0.00373
65	0.01132	0.02655	0.00688
70	0.02000	0.01515	0.01290
75	0.03366	0.01980	0.02235
80	0.04000	0.02703	0.03824
85	0.06000	0.07059	0.06539
90 and over	0.11000	0.15385	0.11182

**FEMALES**

<b>Central Age of Group</b>	<b>Current Rates</b>	<b>Actual Rates</b>	<b>Proposed Rates</b>
45	0.00103	0.00000	0.00086
50	0.00165	0.00000	0.00133
55	0.00257	0.00000	0.00204
60	0.00428	0.00000	0.00353
65	0.00714	0.04545	0.00676
70	0.01266	0.01299	0.01223
75	0.02428	0.02222	0.02088
80	0.04000	0.03896	0.03446
85	0.06000	0.02174	0.05700
90 and over	0.08000	0.17442	0.09732

TABLE 14

**COMPARISON OF ACTUAL AND EXPECTED RATES OF MORTALITY  
OF DEATH AMONG DISABLED MEMBERS**

**MALES**

<b>Central Age of Group</b>	<b>Current Rates</b>	<b>Actual Rates</b>	<b>Proposed Rates</b>
45	0.00477	0.00000	0.02513
50	0.00720	0.00000	0.03156
55	0.01132	0.00000	0.03804
60	0.02000	0.00000	0.04508
65	0.03366	0.20000	0.05467
70	0.05531	0.00000	0.06973
75	0.08969	0.00000	0.09244
80	0.13436	0.00000	0.11201
85	0.19118	0.25000	0.15532
90 and over	0.26529	1.00000	0.21683

**FEMALES**

<b>Central Age of Group</b>	<b>Current Rates</b>	<b>Actual Rates</b>	<b>Proposed Rates</b>
45	0.00477	0.00000	0.00900
50	0.00720	0.00000	0.01349
55	0.01132	0.00000	0.01865
60	0.02000	0.00000	0.02415
65	0.03366	0.20000	0.03150
70	0.05531	0.00000	0.04306
75	0.08969	0.00000	0.05978
80	0.13436	0.00000	0.08267
85	0.19118	0.25000	0.11505
90 and over	0.26529	1.00000	0.16058

## V. COST IMPACT OF THE PROPOSED ASSUMPTIONS

Since this study generally addresses only demographic assumptions. We have presented the potential cost impact of the proposed assumptions both with and without the recommended changes to the salary increase assumption. Under both scenarios, the overall effect of the proposed changes would be an increase in the normal contribution and the accrued liability payment. The following chart presents a summary of the liabilities and contributions under the current and proposed assumptions as of July 1, 2008:

	<b>Current</b>	<b>Proposed</b>
<b>(A) Without Recommended Salary Decrease:</b>		
Actuarial Accrued Liability	\$ 553,284,647	\$ 561,310,360
Additional Accrued Liability		\$ 8,025,713
Unfunded Accrued Liability/(Surplus)	\$ 169,325,934	\$ 177,351,647
<u>Required Contribution:</u>		
• Normal Cost	\$ 18,566,849	\$ 19,068,911
• Accrued Liability	10,291,096	10,778,873
• Total Contribution	\$ 28,857,945	\$ 29,847,784
Additional Annual Contribution		\$ 989,839
<b>(B) Reflecting the Recommended Salary Decrease:</b>		
Actuarial Accrued Liability	\$ 553,284,647	\$ 555,989,630
Additional Accrued Liability		\$ 2,704,983
Unfunded Accrued Liability/(Surplus)	\$ 169,325,934	\$ 172,030,917
<u>Required Contribution:</u>		
• Normal Cost	\$ 18,566,849	\$ 18,625,977
• Accrued Liability	10,291,096	10,455,496
• Total Contribution	\$ 28,857,945	\$ 29,081,473
Additional Annual Contribution		\$ 223,528

The calculations were based on the same data and actuarial methods, including an 8.25% interest rate, as were used in the July 1, 2008 valuation.

**VI. COMPLETE SET OF PROPOSED ASSUMPTIONS**

**Table 1**  
**Active Termination Tables**

Age	Vested and Non-Vested Withdrawals	Deaths		Disability
		Male	Female	
20	0.00000	0.00027	0.00018	0.00019
21	0.00000	0.00028	0.00019	0.00020
22	0.00000	0.00030	0.00019	0.00020
23	0.00000	0.00032	0.00019	0.00020
24	0.00000	0.00033	0.00019	0.00021
25	0.00000	0.00034	0.00019	0.00021
26	0.00000	0.00036	0.00020	0.00021
27	0.00000	0.00037	0.00020	0.00021
28	0.00000	0.00037	0.00021	0.00022
29	0.00000	0.00038	0.00021	0.00022
30	0.00000	0.00038	0.00022	0.00022
31	0.00000	0.00038	0.00024	0.00023
32	0.00000	0.00038	0.00025	0.00024
33	0.00000	0.00039	0.00026	0.00024
34	0.00000	0.00041	0.00031	0.00026
35	0.00000	0.00044	0.00035	0.00026
36	0.00000	0.00050	0.00039	0.00028
37	0.00000	0.00056	0.00043	0.00028
38	0.00000	0.00063	0.00047	0.00030
39	0.00000	0.00070	0.00051	0.00030
40	0.00000	0.00077	0.00055	0.00033
41	0.00000	0.00084	0.00060	0.00036
42	0.00000	0.00090	0.00065	0.00043
43	0.00000	0.00096	0.00071	0.00047
44	0.00000	0.00102	0.00077	0.00054
45	0.00000	0.00108	0.00085	0.00064
46	0.00000	0.00114	0.00094	0.00071
47	0.00000	0.00121	0.00103	0.00080
48	0.00000	0.00130	0.00112	0.00091
49	0.00000	0.00140	0.00122	0.00102
50	0.00000	0.00151	0.00133	0.00114
51	0.00000	0.00162	0.00143	0.00126
52	0.00000	0.00173	0.00155	0.00142
53	0.00000	0.00186	0.00168	0.00157
54	0.00000	0.00200	0.00185	0.00177
55	0.00000	0.00214	0.00202	0.00197
56	0.00000	0.00245	0.00221	0.00218
57	0.00000	0.00267	0.00242	0.00218
58	0.00000	0.00292	0.00272	0.00269
59	0.00000	0.00320	0.00309	0.00296
60	0.00000	0.00362	0.00348	0.00326
61	0.00000	0.00420	0.00392	0.00354
62	0.00000	0.00469	0.00444	0.00383
63	0.00000	0.00527	0.00506	0.00412
64	0.00000	0.00595	0.00581	0.00442
65	0.00000	0.00675	0.00666	0.00473
66	0.00000	0.00768	0.00765	0.00510
67	0.00000	0.00876	0.00862	0.00550
68	0.00000	0.01001	0.00971	0.00599
69	0.00000	0.01128	0.01095	0.00652

**Table 2**  
**Active Service Retirement Tables**

Age	Age 60 with 20 Years Judicial Service or Age 65 with 15 Years Judicial Service	After Age 59 with Less than 12 Years Judicial Service	After Age 59 with More than 12 Years Judicial Service (but not 60/20JS or 65/15JS)	Prior to age 60 with 5 Years Judicial Service and 25 Years Public Service
50	0.00000	0.00000	0.00000	0.00000
51	0.00000	0.00000	0.00000	0.00000
52	0.00000	0.00000	0.00000	0.00000
53	0.00000	0.00000	0.00000	0.00000
54	0.00000	0.00000	0.00000	0.00000
55	0.00000	0.00000	0.00000	0.00000
56	0.00000	0.00000	0.00000	0.00000
57	0.00000	0.00000	0.00000	0.00000
58	0.00000	0.00000	0.00000	0.00000
59	0.00000	0.00000	0.00000	0.00000
60	0.30000	0.00000	0.00000	0.00000
61	0.20000	0.00000	0.00000	0.00000
62	0.20000	0.00000	0.00000	0.00000
63	0.20000	0.00000	0.00000	0.00000
64	0.20000	0.00000	0.00000	0.00000
65	0.25000	0.00000	0.25000	0.00000
66	0.20000	0.00000	0.00000	0.00000
67	0.20000	0.00000	0.00000	0.00000
68	0.20000	0.00000	0.00000	0.00000
69	0.20000	0.00000	0.00000	0.00000



**Table 3**  
**Salary Increases**

Age	Salary Increase	Age	Salary Increase
20	0.045	45	0.045
21	0.045	46	0.045
22	0.045	47	0.045
23	0.045	48	0.045
24	0.045	49	0.045
25	0.045	50	0.045
26	0.045	51	0.045
27	0.045	52	0.045
28	0.045	53	0.045
29	0.045	54	0.045
30	0.045	55	0.045
31	0.045	56	0.045
32	0.045	57	0.045
33	0.045	58	0.045
34	0.045	59	0.045
35	0.045	60	0.045
36	0.045	61	0.045
37	0.045	62	0.045
38	0.045	63	0.045
39	0.045	64	0.045
40	0.045	65	0.045
41	0.045	66	0.045
42	0.045	67	0.045
43	0.045	68	0.045
44	0.045	69	0.045

Table 4

## Mortality Table for Retired Members and Beneficiaries

Age	Healthy Retired Members and Beneficiaries		Disability Retirement	
	Male	Female	Male	Female
40	0.00077	0.00055	0.02257	0.00745
41	0.00084	0.00060	0.02257	0.00745
42	0.00090	0.00065	0.02257	0.00745
43	0.00096	0.00071	0.02257	0.00745
44	0.00102	0.00077	0.02385	0.00818
45	0.00108	0.00085	0.02512	0.00896
46	0.00114	0.00094	0.02640	0.00977
47	0.00121	0.00103	0.02769	0.01063
48	0.00130	0.00112	0.02898	0.01153
49	0.00140	0.00122	0.03027	0.01248
50	0.00151	0.00133	0.03156	0.01346
51	0.00162	0.00143	0.03286	0.01446
52	0.00173	0.00155	0.03415	0.01550
53	0.00186	0.00168	0.03544	0.01654
54	0.00200	0.00185	0.03673	0.01760
55	0.00214	0.00202	0.03803	0.01865
56	0.00245	0.00221	0.03933	0.01971
57	0.00267	0.00242	0.04067	0.02077
58	0.00292	0.00272	0.04204	0.02184
59	0.00320	0.00309	0.04347	0.02294
60	0.00362	0.00348	0.04498	0.02408
61	0.00420	0.00392	0.04658	0.02529
62	0.00469	0.00444	0.04831	0.02660
63	0.00527	0.00506	0.05017	0.02803
64	0.00595	0.00581	0.05221	0.02959
65	0.00675	0.00666	0.05445	0.03132
66	0.00768	0.00765	0.05691	0.03323
67	0.00876	0.00862	0.05961	0.03534
68	0.01001	0.00971	0.06258	0.03763
69	0.01128	0.01095	0.06584	0.04014
70	0.01274	0.01216	0.06941	0.04285
71	0.01441	0.01345	0.07329	0.04577
72	0.01608	0.01486	0.07751	0.04890
73	0.01787	0.01674	0.08207	0.05223
74	0.01980	0.01858	0.08695	0.05578

**Table 4**  
**Mortality Table for Retired Members and Beneficiaries**  
(Continued)

Age	Healthy Retired Members and Beneficiaries		Disability Retirement	
	Male	Female	Male	Female
75	0.02221	0.02066	0.09215	0.05954
76	0.02457	0.02297	0.09764	0.06354
77	0.02728	0.02546	0.10339	0.06779
78	0.03039	0.02811	0.10937	0.07231
79	0.03390	0.03097	0.11554	0.07713
80	0.03783	0.03411	0.12188	0.08230
81	0.04217	0.03759	0.12834	0.08784
82	0.04691	0.04151	0.13492	0.09379
83	0.05212	0.04588	0.14160	0.10020
84	0.05793	0.05078	0.14837	0.10710
85	0.06437	0.05629	0.15523	0.11451
86	0.07204	0.06251	0.16219	0.12246
87	0.08049	0.06952	0.16923	0.13097
88	0.08972	0.07745	0.18341	0.14005
89	0.09978	0.08638	0.19977	0.14970
90	0.11076	0.09634	0.21661	0.15992
91	0.12280	0.10730	0.23366	0.17043
92	0.13604	0.11915	0.25069	0.18280
93	0.15059	0.13168	0.26749	0.19451
94	0.16642	0.14460	0.28391	0.20538
95	0.18341	0.15762	0.29985	0.21524
96	0.19977	0.17043	0.31530	0.22395
97	0.21661	0.18280	0.33021	0.23139
98	0.23366	0.19451	0.34456	0.23747
99	0.25069	0.20538	0.35863	0.24483
100	0.26749	0.21524	0.37169	0.25450
101	0.28391	0.22395	0.38304	0.26604
102	0.29985	0.23139	0.39200	0.27905
103	0.31530	0.23747	0.39789	0.29312
104	0.33021	0.24483	0.40000	0.30781
105	0.34456	0.25450	0.40000	0.32272
106	0.35863	0.26604	0.40000	0.33744
107	0.37169	0.27905	0.40000	0.35154
108	0.38304	0.29312	0.40000	0.36462