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Ms. Mary Vanek
Executive Director
Public Employees Ret. Assoc. of MN
60 Empire Drive, Suite 200
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August 11, 2010

Subject: Police and Fire Plan – Impact of Proposed Assumption Changes

Dear Mary:

We estimated the financial effect of proposed assumption changes to the Public Employees Police and Fire Fund. The results are described below and are based on our July 1, 2009 valuation results. The actuarial accrued liability funding ratio as of July 1, 2009 was 83.2% and the required contribution was 30.0% of pay. Note that all results shown are on an actuarial value of assets basis.

Step 1 – Mortality Table Updates

A summary of the current and recommended mortality rates is shown below:

Assumption	Current Assumption	Recommended Assumption
Healthy Postretirement Mortality	1983 Group Annuity Mortality	RP 2000 annuitant generational mortality, white collar adjustment
Males	Set back 1 year	No adjustment
Females	Set back 1 year	No adjustment
Disabled Retired Mortality	1965 RRB rates through age 40. For ages 41 to 59, graded rates between 1965 RRB rates and the healthy postretirement mortality table. For ages 60 and later, the healthy postretirement mortality table.	RP2000 annuitant mortality table, white collar adjustment Set forward 8 years for males Set forward 8 years for females .
Healthy Pre-retirement Mortality	1983 Group Annuity Mortality	RP 2000 non-annuitant generational mortality, white collar adjustment
Males	Set back 6 years	Set back 2 years
Females	Set back 6 years	Set back 2 years

With the updated mortality tables, the actuarial accrued liability funding ratio drops from 83.2% to 80.1% and the required contribution increases from 30.0% of pay to 33.2% of pay. The impact on the July 1, 2009 valuation is as follows:

	Increase/(Decrease) in Required Contribution (Percent of Pay)		
	Normal Cost	**Supplemental**	**Total**
Mortality Table Update	**1.4%**	**1.8%**	**3.2%**

Step 2 – Update Retirement Rates, Withdrawal Rates, Assumed Age Difference, and Form of Benefit Assumptions

In addition to the mortality table update described in Step 1 above, retirement rates are adjusted as shown below, withdrawal rates for the three year select period are updated as shown below, the assumed age difference for males is changed from 4 years to 3 years, and the form of benefit assumptions are updated as shown below.

Summary of Recommended Retirement Rates

	Retirement Rates	
Age	**Current**	**Recommended**
50	10%	13%
51	10%	10%
52	10%	10%
53	10%	10%
54	10%	13%
55	30%	30%
56	20%	20%
57	20%	20%
58	20%	20%
59	20%	20%
60	25%	25%
61	25%	25%
62	35%	35%
63	35%	35%
64	35%	35%
65	50%	50%
66	50%	50%
67	50%	50%
68	50%	50%
69	50%	50%
70	100%	100%

Summary of Recommended Select Withdrawal Rates

	Select Withdrawal Rates	
Year of Service	Current	Recommended
1	3.5%	8.0%
2	3.5%	5.0%
3	3.5%	3.5%

Summary of Recommended Form of Payment Assumptions

	Percent of Married Members Electing			
	Current (June 30, 2009)		Recommended	
Annuity Form	Males	Females	Males	Females
Straight Life	15%	70%	15%	60%
25% Joint & Survivor	0%	0%	10%	5%
50% Joint & Survivor	40%	15%	20%	15%
75% Joint & Survivor	0%	0%	20%	5%
100% Joint & Survivor	45%	15%	35%	15%

The resulting actuarial accrued liability funding ratio is 79.9% and the required contribution is 33.5% of pay. The impact on the July 1, 2009 required contribution is as follows:

	Increase/(Decrease) in Required Contribution (Percent of Pay)		
	Normal Cost	Supplemental	Total
Mortality Table Update	1.4%	1.8%	3.2%
Retirement Rates, Withdrawal Rates, Age Difference, and Form of Benefit Updates	0.2%	0.1%	0.3%
Total	**1.6%**	**1.9%**	**3.5%**

Step 3 – Update Salary Scale and Payroll Growth

In addition to the assumption changes in Steps 2 and 3 described above, we updated the salary scale from an age based table to a service based table as shown below. In addition, we changed the payroll growth assumption (used in the amortization of the unfunded liability) from 4.50% to 3.75%.

Salary Scale

Current Assumption		Proposed Assumption	
Age	**Rate**	**Service**	**Rate**
20	11.00%	1	13.00%
21	11.00%	2	11.00%
22	10.50%	3	9.00%
23	10.00%	4	8.00%
24	9.50%	5	6.50%
25	9.00%	6	6.10%
26	8.70%	7	5.80%
27	8.40%	8	5.60%
28	8.10%	9	5.40%
29	7.80%	10	5.30%
30	7.50%	11	5.20%
31	7.30%	12	5.10%
32	7.10%	13	5.00%
33	6.90%	14	4.90%
34	6.70%	15	4.80%
35	6.50%	16	4.80%
36	6.30%	17	4.80%
37	6.10%	18	4.80%
38	5.90%	19	4.80%
39	5.70%	20	4.80%
40	5.50%	21	4.70%
41	5.40%	22	4.60%
42	5.30%	23+	4.50%
43	5.20%		
44	5.10%		
45	5.00%		
46	4.95%		
47	4.90%		
48	4.85%		
49	4.80%		
50+	4.75%		

The resulting actuarial accrued liability funding ratio is 80.3% and the required contribution is 33.0% of pay. The impact on the July 1, 2009 required contribution is as follows:

	Increase/(Decrease) in Required Contribution (Percent of Pay)		
	Normal Cost	**Supplemental**	**Total**
Mortality Table Update	1.4%	1.8%	3.2%
Retirement Rates, Age Difference, and Form of Benefit Updates	0.2%	0.1%	0.3%
Salary Scale and Payroll Growth Changes	(1.1%)	0.6%	(0.5%)
Total	**0.5%**	**2.5%**	**3.0%**

Mercer has prepared this letter exclusively for the Public Employees Retirement Association to determine the actuarial accrued liability and contribution requirements under the assumptions and plan provisions outlined in this letter. This letter may not be used or relied upon by any other party or for any other purpose; Mercer is not responsible for the consequences of any unauthorized use.

This material includes or is derived from projections of future funding and/or accounting costs and/or benefit related results. To prepare these projections or results, various sets of actuarial assumptions, including those described in our actuarial valuation report dated December 2009, were used to project a limited number of scenarios from a range of possibilities. However, the future is uncertain, and the plan's actual experience will likely differ from the assumptions utilized and the scenarios presented; these differences may be significant or material. In addition, different assumptions or scenarios may also be within the reasonable range and results based on those assumptions would be different. This letter has been created for a limited purpose, is presented at a particular point in time and should not be viewed as a prediction of the plan's future financial condition. To prepare the results shown in this letter, various actuarial methods, as described in Mercer's actuarial valuation report dated December 2009, were used.

Because actual plan experience will differ from the assumptions, decisions about benefit changes, investment policy, funding amounts, benefit security and/or benefit-related issues should be made only after careful consideration of alternative future financial conditions and scenarios and not solely on the basis of the valuation report or this letter.

This letter is based on July 1, 2009 participant data supplied by the Fund and plan provisions as described in Mercer's actuarial valuation report dated December 2009 except as noted in this letter. The Fund is solely responsible for the validity, accuracy and comprehensiveness of this information. If the data or plan provisions supplied are not accurate and complete, the results described in this letter may differ significantly from the results that would be obtained with accurate and complete information.

Professional qualifications

We are available to answer any questions on the material contained in the report, or to provide explanations or further details, as may be appropriate. The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this letter. In addition, Mr. Dickson meets the requirements of "approved actuary" under Minnesota Statutes, Section 356.215, Subdivision 1, Paragraph (c). We are not aware of any direct or material indirect financial interest or relationship, including investments or other services that could create a conflict of interest, that would impair the objectivity of our work.

Sincerely,

Bonnie Wurst

Bonita J. Wurst, ASA, EA, MAAA

Gary D Dickson

Gary Dickson, FSA, EA, MAAA

Enclosure

Copy: Julie Thompson, Becky Wegleitner, Sheri Wroblewski – Mercer

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