MEMORANDUM

TO: Legislative Commission on Pensions and Retirement

FROM: Robert E. Perkins

DATE: February 15, 1988

SUBJ: Recommendations of Commission Actuary

As a result of our work in 1987, we have the following recommendations:

1. Increase Statutory contributions for the Minneapolis Teachers Retirement Fund.

2. Increase Statutory contributions for the St. Paul Teachers Retirement Fund.

3. Review the mortality experience of the PERA participants in the Minnesota Post Retirement Investment Fund (MPRIF) with the objective of creating a more appropriate mortality table.

The purpose of this memorandum is to describe the current situation and provide reasons for adopting the recommendations.

1. Increase Statutory Contributions for the Minneapolis Teachers Retirement Fund.

A. Current Situation

1. The current Statutory contributions depend on whether the member is entitled to Basic benefits or Coordinated benefits. The Statutory contribution rates are shown below:

	Statutory Contribution	
	Basic	Coordinated
Employee	8.50%	4.50%
Employer	13.35	4.50
Total	21.85%	9.00%

2. The Statutory contribution rate for the plan is decreasing as a result of the transition from Basic to Coordinated benefits. The Basic benefit is restricted to a closed group and the Coordinated benefit is provided to all new members. The next table illustrates the effect of this transition.

	Statutory Contribution		
	1985	1986	1987
Employee	7.93%	7.81%	7.60%
Employer	12.06	11.83	11.36
Total	19.99%	19.64%	18.96%

3. The required contribution calculated by the Commission Actuary decreased in 1987 as a result of plan changes adopted by the Legislature during the 1987 session.

	Required Contribution		
	1985	1986	1987
Normal Cost	16.28%	16.22%	13.33%
Supplemental Contribution	14.22	14.41	14.62
Expenses	1.28	1.39	1.39
Total	31.78%	32.02%	29.34%

4. The Statutory contributions continue to fall significantly short of the required contributions.

	Deficiency		
	1985	1986	1987
	11.79%	12.38%	10.38%
	$10.3M	$12.1M	$11.3M

5. Although contributions have remained deficient, the accrued liability funding ratio has increased over the last three years, primarily as the result of favorable investment return. These ratios are shown below:

	Accrued Liability Funding Ratio		
	1985	1986	1987
	49.3%	50.8%	53.7%

B. Recommendation

We recommend that the funding of the Minneapolis Teachers Retirement Fund be strengthened by increasing Statutory contributions to the level of the required contributions.

C. Discussion

1. A projection of assets shows that the fund will continue to grow until the year 2003. After that date, the fund will decline rapidly. The 1987 projection reflects a higher than expected asset value due to favorable investment results. It also reflects a much higher benefit disbursement level in future years to current retirees as a result of the 1987 plan changes.

2. The 1987 plan changes permit the Board of Trustees to pay out fund earnings in excess of 8% in the form of permanent benefit increases. Under the first year of the program, the Board declared an 8% increase in benefits under this provision. Whenever investment gains are used to improve benefits, the need for adequate contributions is increased.

3. The funding ratio has increased from 49.3% to 53.7% over the last three years. However, this trend has occurred during a period of very favorable investment results and does not reflect the changes in the stock market over the past several months.

4. Minnesota Statutes require that the retirement plan should be funded as a level percentage of pay. These deficiencies will produce a larger unfunded actuarial accrued liability which is scheduled to be amortized by the year 2009. The asset projection shows that by the year 2009 the fund will be declining rapidly and will be approximately the size of today's fund.

2. Increase Statutory Contributions for St. Paul Teachers Retirement Fund.

A. Current Situation

1. The St. Paul Teachers Retirement Fund has had a deficient Statutory contribution rate over the last three years. Although the shortfall is not as dramatic as for Minneapolis, additional contributions should be made in order to reach the required contribution level.

2. The current Statutory contributions depend on whether the member is entitled to Basic benefits or Coordinated benefits. The Statutory contribution rates are shown below:

	Statutory Contribution	
	Basic	Coordinated
Employee	8.00%	4.50%
Employer	12.63	4.50
Total	20.63%	9.00%

3. The Statutory contribution rate for the plan is decreasing as a result of the transition from Basic to Coordinated benefits. The Basic benefit is restricted to a closed group and the Coordinated benefit is provided to all new members. The next table illustrates the effect of this transition.

	Statutory Contribution		
	1985	1986	1987
Employee	7.12%	6.96%	6.83%
Employer	10.59	10.22	9.91
Total	17.71%	17.18%	16.74%

4. The required contribution calculated by the Commission Actuary is shown below:

	Required Contribution		
	1985	1986	1987
Normal Cost	11.74%	11.42%	11.56%
Supplemental Contribution	9.87	8.97	8.37
Expenses	.34	.38	.46
Total	21.95%	20.77%	20.39%

5. The Statutory contributions continue to fall significantly short of the required contributions.

Deficiency		
1985	1986	1987
4.24%	3.59%	3.65%
$3.2M	$3.0M	$3.3M

6. Although contributions have remained deficient, the accrued liability funding ratio has increased over the last three years, primarily as the result of favorable investment return. These ratios are shown below:

Accrued Liability Funding Ratio		
1985	1986	1987
52.0%	57.1%	61.3%

B. Recommendation

The Statutory contribution to the St. Paul Teachers Retirement Fund represents 82% of the required contribution level. An increase in the Statutory contribution should be considered in order to reduce this deficiency.

C. Discussion

1. The annual deficiency over each of the last three years has been in excess of $3 million.

2. The funding ratio has increased from 52.0% to 61.3% over the last three years. However, this trend has occurred during a period of very favorable investment results and does not reflect the changes in the stock market over the past several months.

3. The projection of assets over the next 25 years shows an ever increasing fund. However, the growth of the fund appears to be slowing down by the year 2011.

4. Minnesota Statutes require that the retirement plan should be funded as a level percentage of pay. These deficiencies will produce a larger unfunded actuarial accrued liability which is scheduled to be amortized by the year 2010. Insufficient payments at this time will require much higher contributions as a percentage of pay before 2010 assuming that investment gains are not sufficient to make up the difference.

3. Review the mortality experience of the PERA participants in the Minnesota Post Retirement Investment Fund (MPRIF) with the objective of creating a more appropriate mortality table.

A. Current Situation

1. The PERA General and the PERA Police and Fire Funds have reported mortality losses in MPRIF over the last two years of $23.0M and $3.0M, respectively.

2. Part of the reported mortality loss can be attributed to overly generous joint and survivor benefits. That problem was corrected about a year ago. The table below tracks the experience over the last two years.

	1985-86	1986-87
General		
Subsidy on Joint & Survior Benefits	$ 9.4M	$ 3.6M
Other Sources	3.8	6.2
Total Mortality Loss	$ 13.2M	$ 9.8M
Police & Fire		
Subsidy on Joint & Survivor Benefits	$ 1.2M	$ .6M
Other Sources	.7M	.5M
Total Mortality Loss	$ 1.9M	$ 1.1M

Over the same two year period, the General fund has experienced 11% fewer deaths than expected. When retired members and survivors live longer than expected, they increase the liabilities of the fund. The Police & Fire fund experience showed 12% more deaths than expected, which appears to contradict the mortality loss that is shown above. The reason for the inconsistency is unknown at this time.

B. Recommendation

We recommend further review of the mortality experience with the objective of creating a more appropriate mortality table which would reduce or eliminate these mortality losses in the near term.

C. Discussion

1. Over the past two years, PERA General has experienced mortality losses (after adjusting for the subsidy) of .83% of their June 30, 1987 MPRIF reserves. Corresponding numbers for MSRS and TRA are .27% and -.07%, respectively.

2. Among the three major state funds, PERA General has the lowest ratio of actual deaths to expected deaths (89%). Corresponding ratios for MSRS General and TRA are 93% and 91%, respectively.

3. MPRIF is a pooled fund whose investment earnings are allocated to the eligible fund for participants. Therefore, it is important that none of the funds produced consistently larger mortality gains or losses than the others. This is especially true for the three large state funds whose experience should be fairly stable.

REP/kp

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