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Ms. Mary Most Vanek
Executive Director
Public Employees Ret. Assoc. of MN
60 Empire Drive, Suite 200
St. Paul, MN 55103

August 25, 2011

Subject: Minneapolis Police Relief Association - Revised

Dear Mary:

The Minneapolis Police Relief Association (MPRA) is to be consolidated with the Minnesota Public Employees Police and Fire Fund (PERA P&F), pending approval by PERA, MPRA, and the City of Minneapolis, per legislation passed during the 2011 Special Session. As required by the legislation, we have estimated the present value of future benefits for MPRA as of January 1, 2012 and the annual employer contribution payable beginning in 2012.

First we determined the liability as of January 1, 2011 for the MPRA plan based on the MPRA assumptions and plan provisions, as summarized in the MPRA actuarial valuation report as of December 31, 2010, dated April 2011 and prepared by Van Iwaarden Associates. The primary assumptions and plan provisions are as follows:

- Discount Rate of 6%
- Annual post-retirement benefit increase of 4.0%
- 1983 GAM mortality table setback two years for males and set forward 1 year for females

The purpose of this step is to establish a baseline by replicating the liability in the MPRA valuation report. Mercer was able to closely match the liability determined by Van Iwaarden Associates ($406.5 million versus $406.4 million from Van Iwaarden Associates).

We then determined the liability as of January 1, 2011 for the MPRA plan based on updated unit values, a discount rate of 8.5%, post-2015 unit value increase assumption of 1.5% per year, and proposed PERA P&F mortality assumptions, and projected the liability to January 1, 2012. Other than mortality, we used the demographic assumptions that have been developed for the MPRA by Van Iwaarden Associates based on MPRA demographics, plan provisions, and experience.

For purposes of this analysis and based on your direction, we assumed that assets on January 1, 2012 will be equal to the December 31, 2010 asset value as shown in the January 1, 2011 valuation reports prepared by Van Iwaarden Associates.

The annual employer contribution after consolidation is defined as the amount necessary to amortize on a level dollar basis the estimated unfunded present value of benefits as of January 1, 2012 by December 31, 2031. The contribution is payable annually on July 15th, beginning in 2012. The resulting 2012 employer contribution for MPRA is $5,699,000. The employer contribution for 2013 and later will be based on an updated actuarial analysis as of January 1, 2012.

We used an amortization date of December 31, 2031 as prescribed in Article 6, Section 14, Subdivision 6 of the 2011 Special Session Omnibus Retirement Bill instead of the amortization target date of the P&F Plan (June 30, 2038) as described in Article 6, Section 16(a) of the 2011 Special Session Omnibus Retirement Bill. If you'd like additional calculations, please let us know.

A summary of the liability, assets, and annual employer contribution requirement along with the primary assumptions and plan provisions are summarized in the attached exhibits.

In May, Van Iwaarden Associates estimated the liability and employer contributions. A difference between that analysis and this report is that we recognized separate mortality assumptions for pre-retirement and post-disability periods. This change increased the liability slightly. Also, the legislation specified an annual contribution date of July 15 which is reflected herein; the previous analysis assumed contributions would be made on December 1.

If the market value of assets funding ratio of PERA P&F reaches 90%, the post-retirement increases will revert to inflation up to 2.5%. Consistent with the 2010 PERA P&F valuation, we assumed for purposes of this estimate that the PERA P&F post-retirement benefit increase will remain at the reduced level of inflation up to 1.5% indefinitely. **If the plan is estimated to reach a 90% funding level, the liabilities will reflect the expected increase in the post-retirement benefit increase (liabilities will be higher than the enclosed estimates).**

Important Notices

Mercer has prepared this report exclusively for the Public Employees Retirement Association of Minnesota (PERA), the Minneapolis Police Relief Association (MPRA), the City of Minneapolis (City), and the Legislative Commission on Pensions and Retirement (LCPR); Mercer is not responsible for reliance upon this report by any other party.

The only purpose of this letter is to determine the actuarial accrued liability and estimated annual employer contribution for the Minneapolis Police Relief Association under the assumptions and plan provisions outlined in this letter. This report may not be used for any other purpose; Mercer is not responsible for the consequences of any unauthorized use.

Decisions about benefit changes, granting new benefits, investment policy, funding policy, benefit security and/or benefit-related issues should not be made on the basis of this valuation, but only after careful consideration of alternative economic, financial, demographic and societal factors, including financial scenarios that assume future sustained investment losses.

The State Board of Investment (SBI) is solely responsible for selecting the plan's investment policies, asset allocations and individual investments. Mercer's actuaries have not provided any investment advice to PERA, MPRA, or the SBI.

A valuation report is only a snapshot of a Plan's estimated financial condition at a particular point in time; it does not predict the Plan's future financial condition or its ability to pay benefits in the future and does not provide any guarantee of future financial soundness of the Plan. Over time, a plan's total cost will depend on a number of factors, including the amount of benefits the plan pays, the number of people paid benefits, the period of time over which benefits are paid, plan expenses and the amount earned on any assets invested to pay benefits. These amounts and other variables are uncertain and unknowable at the valuation date.

Because modeling all aspects of a situation is not possible or practical, we may use summary information, estimates, or simplifications of calculations to facilitate the modeling of future events in an efficient and cost-effective manner. We may also exclude factors or data that are immaterial in our judgment. Use of such simplifying techniques does not, in our judgment, affect the reasonableness of valuation results for the plan.

To prepare these results, actuarial assumptions, as described in the attached exhibits, are used in a forward looking financial and demographic model to present a single scenario from a wide range of possibilities; the results based on that single scenario are included in the valuation. The future is uncertain and the plan's actual experience will differ from those assumptions; these differences may be significant or material because these results are very sensitive to the assumptions made and, in some cases, to the interaction between the assumptions.

Different assumptions or scenarios within the range of possibilities may also be reasonable and results based on those assumptions would be different. As a result of the uncertainty inherent in a forward looking projection over a very long period of time, no one projection is uniquely "correct" and many alternative projections of the future could also be regarded as reasonable. Two different actuaries could, quite reasonably, arrive at different results based on the same data and different views of the future. A "sensitivity analysis" shows the degree to which results would be different if you substitute alternative assumptions within the range of possibilities for those utilized in this report. We have not been engaged to perform such a sensitivity analysis and thus the results of such an analysis are not included in this report. At PERA's request, Mercer is available to perform such a sensitivity analysis.

Actuarial assumptions may also be changed from one valuation to the next because of changes in mandated requirements, plan experience, changes in expectations about the future and other factors. A change in assumptions is not an indication that prior assumptions were unreasonable when made.

Because valuations are a snapshot in time and are based on estimates and assumptions that are not precise and will differ from actual experience, contribution calculations are inherently imprecise. There is no uniquely "correct" level of contributions for the coming plan year.

Valuations do not affect the ultimate cost of the Plan, only the timing of contributions into the Plan. Plan funding occurs over time. Contributions not made this year, for whatever reason, including errors, remain the responsibility of the Plan sponsor and can be made in later years. If the contribution levels over a period of years are lower or higher than necessary, it is normal and expected practice for adjustments to be made to future contribution levels to take account of this with a view to funding the plan over time.

Data, computer coding and mathematical errors are possible in the preparation of a valuation involving complex computer programming and thousands of calculations and data inputs. Errors in a valuation discovered after its preparation may be corrected by amendment to the valuation or in a subsequent year's valuation.

Certain actuarial assumptions, including discount rates, mortality tables and others identified in this letter, are prescribed by Minnesota Statutes Section 356.215, the requirements of the Standards of Actuarial Work established by the LCPR and the Trustees . These parties are responsible for selecting the plan's funding policy, actuarial valuation methods, asset valuation methods, and assumptions. The policies, methods and assumptions used in this letter are those that have been so prescribed and are described in Appendix B. PERA is solely responsible for communicating to Mercer any changes required thereto.

To the best of our knowledge and belief, these results were valued in accordance with the requirements of Minnesota Statutes, Section 356.215, and the requirements of the Standards for Actuarial Work established by the LCPR, including one modification regarding decrement timing. The LCPR approved this modification prior to the preparation of the 2010 valuation reports in order to ensure consistency and comparability.

To prepare these results, Mercer has used and relied on financial data provided by MPRA and participant data supplied by Van Iwaarden Associates and summarized in the attached exhibits. PERA is responsible for ensuring that such participant data provides an accurate description of all persons who are participants under the terms of the plan or otherwise entitled to benefits as of the valuation date that is sufficiently comprehensive and accurate for the purposes of this report. Although Mercer has reviewed the data in accordance with Actuarial Standards of Practice No. 23, Mercer has not verified or audited any of the data or information provided.

Mercer has also used and relied on the plan documents, including amendments, and interpretations of plan provisions, supplied by Van Iwaarden Associates as summarized in the attached exhibits. The Trustees are solely responsible for the validity, accuracy and comprehensiveness of this information. If any data or plan provisions supplied are not accurate and complete, the results may differ significantly from the results that would be obtained with accurate and complete information; this may require a later revision of this letter. Moreover, plan documents may be susceptible to different interpretations, each of which could be reasonable, and that the different interpretations could lead to different results.

PERA should notify Mercer promptly after receipt of this letter if the Fund disagrees with anything contained in this letter or is aware of any information that would affect the results that has not been communicated to Mercer or incorporated therein. The results will be deemed final and acceptable to the Fund unless the Fund promptly provides such notice to Mercer.

Professional qualifications

We are available to answer any questions on the material in this letter or to provide explanations or further details as appropriate. The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report. 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,

Bonita J. Wurst

Gary D. Dickson

Bonita J. Wurst, ASA

Gary D. Dickson, FSA

Copy: Julie Thompson, Becky Wegleitner – Mercer

The information contained in this document (including any attachments) is not intended by Mercer to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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1. Assets

We used financial data submitted by the MPRA as of December 31, 2010 without further audit. Customarily, this information would not be verified by a plan's actuary. We have reviewed the information for internal consistency and general reasonableness.

Summary of assets (market value) *(thousands)*

		December 31, 2010
Cash and equivalents	$	6,203,155
Fixed Income		17,941,369
Corporate Stock		29,576,558
SBI		153,834,942
Mutual Funds		87,569,575
Other		8,340,096
Accrued/Payable		(2,456,870)
Net assets	**$**	**301,008,826**

2. Liabilities and contributions

($ Thousands)		January 1, 2012
1. Actuarial present value of projected benefits*	**$**	**357,000**
2. Projected market value of assets	$	301,009
3. Unfunded present value of projected benefits *(1. – 2.)*	$	55,991
4. Present value of future employer contributions under 353.65 Subdivision 3 *(8% x present value of future payroll)*	$	0
5. Amortization factor as of January 1, 2012		10.2677
6. Interest adjustment factor to reflect payment as of July 15		1.04518
7. Annual amortization amount payable annually on July 15 from 2012 to 2031 *[(4. – 3.) / 5. x 6.]*	$	5,699

* Rolled-forward from January 1, 2011 to January 1, 2012 based on the assumption that there have been no experience gains or losses.
** Assumed to equal the December 31, 2010 value per direction from the LCPR and PERA.

3. Appendices

Appendix: A. Participant data

We used the participant data supplied by Van Iwaarden Associates as of December 31, 2010. We have reviewed the participant data for internal consistency and general reasonableness, but we have not verified or audited any of the data or information provided.

Participant statistics

		December 31, 2010
Participants included in valuation		
▪ Active		8
▪ Disabled		0
▪ Inactive with immediate benefits		806
▪ Total		814
Active statistics		
▪ Average age		61.6
▪ Average years of service		38.2
Disabled statistics		
▪ Average age		N/A
▪ Total monthly benefits	$	N/A
▪ Average monthly benefits		N/A
Inactive immediate statistics		
▪ Average age		73.3
▪ Total monthly benefits	$	2,490,493
▪ Average monthly benefits		3,090

Appendix: B. Actuarial assumptions and methods

The following assumptions were used in valuing the liabilities and benefits under the Plan. Investment return and unit value increase assumptions are PERA P&F assumptions prescribed by Statutes or the LCPR. The mortality assumptions are proposed assumptions for PERA P&F. The remaining demographic assumptions were developed for MPRA by Van Iwaarden Associates based on MPRA demographics, plan provisions, and experience.

Investment return	
	8.5% compounded annually.
Mortality	
Healthy post retirement	RP 2000 annuitant generational mortality table with white collar adjustment.
Healthy pre-retirement	RP 2000 non-annuitant generational mortality with white collar adjustment, set back two years.
Disabled retiree	RP 2000 annuitant mortality table with white collar adjustment, set forward eight years.
Retirement	
	Active members are assumed to retire on January 1, 2012.
Withdrawal	
	None.
Disability	
	None.
Unit value/salary scale	
	All unit values after January 1, 2015 are assumed to increase 1.5% per year.
Percentage married and age difference	
	85% of active employees are assumed to be married. Actual spouse data is used for retirees. Where spouse birthdates are not on file, wives are assumed to be 3 years younger than husbands.

Appendix: C. Plan provisions

This summary of provisions reflects the interpretation of applicable Statutes for purposes of preparing this valuation. This interpretation is not intended to create or rescind any benefit rights in conflict with any Minnesota Statutes.

Normal retirement benefit

Monthly benefits are equal to the number of units multiplied by the unit values described herein. Units are based on service, as follows:

Service	Units
20	35.0 units
21	36.6 units
22	38.2 units
23	39.8 units
24	41.4 units
25 or more	43.0 units

Members must be at least age 50 with 5 years of service to receive this benefit.

Unit Values

Calendar year	Unit value
2011	$86.710
2012	104.651
2013	109.011
2014	114.825
2015	124.031

Unit values after 2015 are assumed to increase 1.5% per year.

Surviving spouse's benefit	
	Annual benefit based on 23 units for the surviving spouse of an active or retired member.
Surviving children's benefit	
	Annual benefit based on 8 units for each surviving child of an active or retired member. Benefits continue to age 18 or if the child is a full-time student, to age 22. The total benefit for surviving children and spouse combined is limited to 41 units.
Contributions	
	Member and employer contributions equal to 8% of the monthly unit value multiplied by 80 are required for each member. After 25 years of service, member contributions are paid to a separate health insurance account.

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